

Graduate Medical Education Financing: Sustaining Medical Education in Rural Places

Key Points

Rural Training Track (RTT) graduate medical education (GME) programs have shown success at preparing family physicians for rural practice, but financial difficulties have contributed to program closures. RTT directors and administrators across the U.S. were surveyed to understand their finances, including funding sources and expenditures. Key findings included:

- Many RTT program administrators lack important knowledge of their programs' finances. Although more than four fifths of rural residency program or site directors had access to a detailed budget, a substantial minority of respondents did not know general information about common sources of funding or expenditures. For example, more than a third did not know the percentage of full-time equivalent (FTE) effort for which rural program directors received paid compensation, and many did not know how much time staff and faculty spent volunteering to support the program.
- Many RTT programs carry greater financial responsibility for program deficits than their urban program sponsors. More than a third of rural sites reported greater responsibility for program deficits than their urban

program sponsors, and one fifth reported equally shared responsibility.

- RTT programs reported dependence on numerous sources of in-kind contributions. Nearly two thirds of programs relied on in-kind administrative support. Nearly a third of programs reported more than 1.0 FTE of volunteer faculty time.
- The level of financial support for program administration varied greatly. About two thirds of rural program directors were paid more than 0.20 FTE for administration, while some received little compensation for administrative services.
- Complex and unstable funding arrangements, along with difficulty accessing important financial information, pose a challenge to the long-term viability of some family medicine RTT residency programs. In a changing healthcare environment with an increasing emphasis on value, a full accounting of costs and benefits is essential for demonstrating program value to sponsoring institutions and communities served.

Background

The "1-2" model of Rural Training Track (RTT) residency programs in family medicine has demonstrated success in educating physicians who are prepared and motivated to provide care for rural populations.¹⁻³ Resident physicians in a 1-2 RTT program typically spend at least two of three years training in a rural location that is separate from and more rural than the larger residency program with which it is affiliated.⁴ Family medicine residency programs in general have long faced challenges to their sustainability as evidenced by a quickening of program closures in the early 2000s⁵ and a decline in RTT programs from 35 in 2000 to just 25 in 2010,¹ though numbers have grown in recent years. Financial difficulties have contributed significantly

to these closures.⁵ Unfortunately, GME financial data are frequently proprietary, funding models and relationships are diverse and complex, and costs and liabilities can be difficult to quantify. For these reasons, obtaining a clear picture of how graduate medical education (GME) programs are financed has often proven to be a perplexing task, yet such understanding is necessary for long-term viability.⁶

This study used financial information collected from RTTs to understand their sources of revenue, select program expenses, and the financial relationships between rural program sites and urban program sponsors. Program administrators and directors for all 37 RTTs known to be operating in December 2014 were sent an online survey

Exhibit 1. Sources of funding for RTT programs (most recently completed fiscal year) as reported by RTT program administrators*

Source	Received direct or indirect GME funds?			Received 20% or more of revenue from this source?		
	Yes	No	Don't know	Yes	No	Don't know
Medicare	80%	20%	0%	40%	45%	15%
State grants or other funding	40%	40%	20%	25%	40%	35%
Medicaid	40%	40%	20%	15%	55%	30%
Teaching Health Center GME	25%	50%	25%	20%	60%	20%
Private philanthropy	20%	65%	15%	0%	80%	20%
CHAMPVA‡ / TRICARE	5%	70%	25%	5%	70%	25%
HRSA† Children's Hospitals GME	5%	70%	25%	5%	70%	25%
Service contracts	5%	70%	25%	5%	75%	20%
Local tax district or special tax support	0%	75%	25%	0%	80%	20%
Other non-governmental support not listed elsewhere	0%	70%	30%	0%	80%	20%
Other: PCRE§	5%	90%	5%	5%	90%	5%

*One program did not respond; n = 20.

‡ Civilian Health and Medical Program of the Veteran's Health Administration

† Health Resources and Services Administration

§ Primary Care Residency Expansion, a HRSA program to increase the number of primary care physicians¹⁰

with telephone and email follow-up of non-respondents. The findings reported here represent data on 21 RTTs (57%).⁷

Findings

The Sponsor-RTT Relationship

- Nearly half of responding programs (9) were sponsored by academic medical centers, followed by Federally Qualified Health Centers (5), and other institutions such as teaching hospitals (5).⁸
- More than four out of five programs (81%) reported that sponsors shared a detailed budget with the rural site director or rurally located program director. This study did not explore how much input the rural director had in constructing the budget.
- Twenty percent of programs reported that financial responsibility for program deficits was equally shared between urban sponsors and rural sites. Forty percent

reported that urban programs had more responsibility, and 35% reported that the rural site had more responsibility.⁹

GME Funding

- For nearly every funding source, several respondents reported not knowing whether the program received that type of funding, whether the source was at least 20% of revenue, or both (Exhibit 1). For example, 20% of respondents did not know if their programs received state funding and 35% did not know if it equaled at least 20% of revenue.
- The most common direct or indirect GME funding sources reported were Medicare (80% of programs), state funding (40%), Medicaid (40%), Teaching Health Center funding (25%), and private philanthropy (20%). The first four were also the most common sources reported to constitute 20% or more of program revenue.

In-kind Support

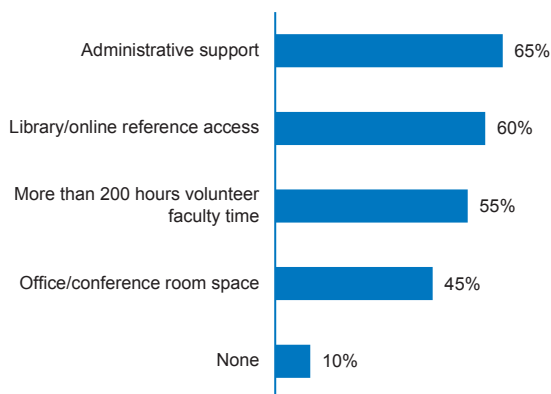
- Most programs reported receiving several types of in-kind support that would significantly impact the program if it went away (Exhibit 2), including administrative support (65%), library or online reference access (60%), and volunteer physician or non-physician faculty members contributing a combined total of more than 200 hours (55%). Nearly half of programs reported receiving significant office or conference room space (45%), while 10% reported no in-kind support that would have a significant impact if it went away.¹¹

Program Expenditures and Effort

The survey queried programs about several measures of program costs and effort, including physician recruitment expenses, program director remuneration and paid effort, and volunteer administrative and faculty effort:

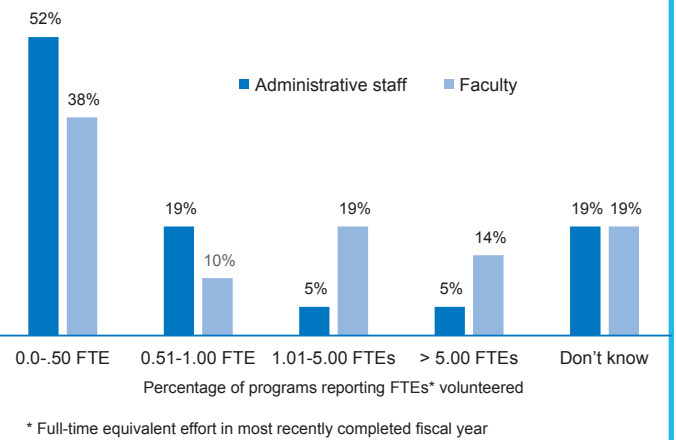
- Entities (including hospitals, practices, or others) in the rural communities of 4 programs (19%) reportedly spent more than \$100,000 in the most recent fiscal year on physician recruitment, that is, for providers in the community who may teach residents. Nearly half (48%) of programs reported community expenditures on physician recruitment of \$50,000 or less; a third did not know the amount.
- 37% of respondents reported that rural program or site directors received more than \$30,000 in the most recent fiscal year for administrative services, 21% received an amount up to \$30,000, and 11% reported no remuneration. Nearly a third (32%) of respondents did not know.

Exhibit 2. In-kind support reported by RTT programs that would significantly impact programs if it went away*



One program did not respond; n = 20

Exhibit 3. Total FTEs volunteered in support of RTT programs*



- About two thirds (67%) of respondents reported that rural program or site directors were paid more than a 0.20 full-time equivalent (FTE) level of effort for program administrative duties in the most recent fiscal year, 48% of whom received more than 0.30 FTE. 38% were paid from 0.11 to 0.30 FTE, and 10% from 0 to 0.10 FTE (one respondent did not know).¹²
- While nearly a fifth (19%) of programs did not know how much time administrative staff or faculty (physician or non-physician) volunteered in support of the program (Exhibit 3), most (52%) reported half an FTE or less for administrative staff and 38% reported 0.5 FTE or less for faculty. Nevertheless, 3 programs (14%) reported more than 5 FTEs of volunteer faculty time, and 3 programs (14%) reported from 0.51 to 1 FTE volunteer time contributed by administrative staff.

Limitations

This study has some limitations. We did not have a way to assess how representative the 21 responding programs were of the entire sample of 37 programs. The survey relied on individual perceptions that are subject to potential bias or inaccuracy.

Implications

Despite the fact that a large majority of RTT family medicine residency programs reported having access to a detailed budget, a substantial minority of survey respondents did not know important information about the type and

magnitude of critical funding sources, expenditures, and personnel contributions. In most cases, respondents selecting “don’t know” for financial items on the survey did report having detailed budget access. Possible reasons for non-reporting include that the responses to financial questions were not provided by a program director or appropriate administrator with the required knowledge or that the information was not easily accessible, complete, or understood, such that the survey questions were an undue burden on the respondent. Though we were not able to observe the survey-taking process directly, we learned from communication with several respondents that program directors who assisted in providing the requested information found that financial questions were the most difficult to answer. Some program directors did not know the answers.

If RTT programs, and family medicine residencies more generally, are unable to retrieve information on funding and contributed level of effort easily, they may find it challenging to address threats to financial viability.¹³ This lack of knowledge may be a risk for the program as it is contrary to the advice of closed residency program directors to “keep comprehensive records of the program’s financial contributions to the host institution” and “keep the leadership apprised of the program’s financial contributions and community importance.”¹⁵ A full accounting of costs and benefits is essential for demonstrating value both to sponsoring institutions and communities served.^{14, 15}

Potential resource vulnerabilities included the dependence of some programs on several sources of in-kind contributions, low compensation for program directors’ administrative time, and reliance on staff and faculty to volunteer significant amounts of time. Twenty percent of RTT programs reported depending on the Teaching Health Center (THC) GME program, a part of the Patient Protection and Affordable Care Act,¹⁶ for at least 20% of their funding. THC funding has recently been reauthorized through 2017 for existing residency positions, but at a substantially reduced amount, approximately 50% of previous levels.¹⁷ Additionally, participation in THC GME, Primary Care Residency Expansion, or other programs when initiating a new program can in some circumstances make traditional GME reimbursement from Medicare sources unavailable in perpetuity.

This exploration of basic financial characteristics of RTT programs suggests that understanding GME financing may be challenging not only from the outside but also to those operating residency programs. RTT programs could therefore benefit from technical assistance to increase knowledge of residency finance, help guide programs through self-assessment, clarify rules and examples of

applied GME funding, and share best practices and industry standards of residency financing, including administrative time and community faculty compensation for teaching residents.

In addition, these programs and others in primary care GME could benefit from a simplification of GME finance. The Institute of Medicine offers one such proposal, but those recommendations have not been implemented.¹⁸ Direct funding of residency programs that largely function in outpatient settings could offer greater transparency and accountability in general, reduce the administrative burden (and therefore cost) of reporting and claiming these funds, and place program directors in a position of greater responsibility for and control of how these funds are spent. Greater transparency in GME finances could help residency program directors and administrators better respond to the constantly changing funding environment, offering hope for sustaining RTTs and other medical education programs in rural places.

Notes

1. Patterson DG, Longenecker R, Schmitz D, Skillman SM, Doescher MP. Policy brief: training physicians for rural practice: capitalizing on local expertise to strengthen rural primary care. Seattle, WA: WWAMI Rural Health Research Center, University of Washington; Jan 2011. Accessed April 2, 2015 at <http://www.raconline.org/rtt/pdf/rural-family-medicine-training-early-career-outcomes-2012.pdf>.
2. Rosenthal TC. Outcomes of Rural Training Tracks: a review. *J Rural Health* Summer 2000;16(3):213-6.
3. Patterson DG, Longenecker R, Schmitz D, Phillips Jr RL, Skillman SM, Doescher MP. Rural residency training for family medicine physicians: graduate early-career outcomes, 2008-2013. Seattle, WA: WWAMI Rural Health Research Center, University of Washington; 2013. Accessed April 2, 2015 at <http://www.raconline.org/rtt/pdf/rural-family-medicine-training-early-career-outcomes-2013.pdf>.
4. The Rural Training Track Technical Assistance Program, funded by the Federal Office of Rural Health Policy, Health Resources and Services Administration, defines a 1-2 RTT as 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 (having a Rural Urban Commuting Area code of 4 or greater, except 4.1, 5.1, 7.1, 8.1, and 10.1), 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; or (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 (as defined by the ACGME Family Medicine Review Committee and the American Board of Family Medicine) in a rurally located continuity clinic or Family Medicine Practice site. (Accessed 4-2-15 at http://www.raconline.org/rtt/about_rttts).
5. Gonzalez EH, Phillips RL, Pugno PA. A study of closure of family practice residency programs. *Fam Med* 2003;35(10):706-10.
6. Lesko S, Fitch W, Pauwels J. Ten-year trends in the financing of family medicine training programs: considerations for planning and policy. *Fam Med* 2011;43(8):543-50.
7. Survey questionnaires were sent to 32 persons representing 37 RTTs (2 sponsoring institutions administer 7 RTT programs). The survey included questions about numerous topics including training sites, finances, resident recruitment, and graduates. 21 persons responded, a person response rate of 66%; usable financial information was received for 21 RTTs, or 57%. Percentages reported exclude non-responses from the denominator. This study was reviewed and approved by the University of Washington Human Subjects Division.
8. Two programs did not respond to this question.
9. One program reported that the medical group was responsible for deficits; one program did not respond.
10. <http://bhpr.hrsa.gov/grants/medicine/pcre.html> (accessed April 3, 2015).
11. Programs were allowed to list other kinds of support or specify "none."
12. According to the Accreditation Council on Graduate Medical Education, program directors receive at least 70% salary support (at least 28 hours per week) for administration, evaluation, teaching, resident precepting, and scholarship. However, rural site directors may not need to meet this qualification if they are not the program director. Accessed April 3, 2015 at http://www.acgme.org/acgmeweb/Portals/0/PDFs/Specialty-specific%20Requirement%20Topics/DIO-Expected_Time_PD.pdf.
13. Pugno PA, Gillanders WR, Lewan R, Lowe KD, Sweha A, Xakellis GC. Determining the true value of a family practice residency program. *Fam Pract Manag.* 2000;Jun;7(6):39-42.
14. Pugno PA, Gillanders WR, Kozakowski SM. The direct, indirect, and intangible benefits of graduate medical education programs to their sponsoring institutions and communities. *J Grad Med Educ.* 2010;Jun;2(2):154-159.
15. Riaz M, Palermo T, Yen M, Edelman NH. The projected responses of residency-sponsoring institutions to a reduction in medicare support for graduate medical education: a national survey. *Acad Med.* 2015;Mar 7. [Epub ahead of print]
16. Section 749A, Patient Protection and Affordable Care Act, 2010.
17. Robeznieks A. Teaching Health Center program may live to 'fight another day.' *Modern Healthcare.* 2015;Mar 26. Accessed May 19, 2015 at <http://www.modernhealthcare.com/article/20150326/NEWS/150329941>.
18. IOM (Institute of Medicine). 2014. Graduate medical education that meets the nation's health needs. Washington, DC: The National Academies Press. Accessed April 3, 2015 at <http://www.iom.edu/Reports/2014/Graduate-Medical-Education-That-Meets-the-Nations-Health-Needs.aspx>.

Authors

Davis G. Patterson, PhD*
 David Schmitz, MD†
 Randall Longenecker, MD‡
 David Squire, MPA§
 Susan M. Skillman, MS*

* University of Washington WWAMI Rural Health Research Center

† Family Medicine Residency of Idaho

‡ Ohio University Heritage College of Osteopathic Medicine

§ University of Utah School of Dentistry

Funding

This study was supported by the Federal Office of Rural Health Policy (FORHP), Health Resources and Services Administration (HRSA), U.S. Department of Health and Human Services (HHS) under cooperative agreement #1 UA9 RH 26027-01-00. The information, conclusions and opinions expressed in this policy brief are those of the authors and no endorsement by FORHP, HRSA, or HHS is intended or should be inferred.

Suggested citation

Patterson DG, Schmitz D, Longenecker R, Squire D, Skillman SM. *Graduate medical education financing: sustaining medical education in rural places*. Seattle, WA: WWAMI Rural Health Research Center, University of Washington, May 2015.

For More Information

Web site: <http://www.raconline.org/rtt/>

Rural Training Track Technical Assistance Program

c/o Amy Elizondo, Vice President for Program Services
 National Rural Health Association
 1025 Vermont Avenue NW, Suite 1100
 Washington, DC 20005
 Phone: 202-639-0550

Senior Project Advisor

Randall Longenecker, MD
 Assistant Dean, Rural and Underserved Programs
 Ohio University Heritage College of Osteopathic Medicine
 Irvine Hall 126
 Athens, Ohio 45701
 Phone: 740-597-3058
 E-mail: longenec@ohio.edu

Project Advisor

David Schmitz, MD
 Chief Rural Officer and Director of RTTs
 Family Medicine Residency of Idaho
 777 North Raymond Street
 Boise, Idaho 83704
 Phone: 208-954-8742
 E-mail: dave.schmitz@fmridaho.org

RTT Technical Assistance Program Consortium

National Rural Health Association, Lead Entity
 National Organization of State Offices of Rural Health
 Robert Graham Center for Policy Studies in Family Medicine
 and Primary Care
 Rural Assistance Center, North Dakota Center for Rural Health
 WWAMI Rural Health Research Center, University of
 Washington

Consultant

David Squire, MPA, University of Utah School of Dentistry