

Family Medicine Spokane Rural Training Track: 24 Years of Rural-based Graduate Medical Education

Robert K. Maudlin, PharmD; Gary R. Newkirk, MD

Twenty percent of the US population lives in rural communities, but only about 9% of the nation's physicians practice in those communities. There is little doubt that the more highly specialized physicians are, the less likely they are to practice or settle in rural areas. There is clearly a population threshold below which it is not feasible for specialist (in contrast to generalist) physicians to pursue the specialty in which they have trained. Much of rural America falls below that threshold. This leaves large geographic areas of America to the primary care physician. The proportional supply of family physicians to specialists increases as urbanization decreases. Family physicians are the largest single source of physicians in rural areas. Family medicine residency programs based in rural locations provide a critical mechanism for addressing rural primary care needs. Graduates from rural residency programs are three times more likely to practice in rural areas than urban residency program graduates. There are two primary goals of training residents in rural areas: producing more physicians who will practice in rural areas and producing physicians who are better prepared for the personal and professional demands of rural practice. Rural Training Tracks, where the first year of residency is completed in an urban setting and the second and third years at a rural site (1-2 model), initially proposed by Family Medicine Spokane in 1985, have been highly successful in placing and maintaining more than 70% of their graduates in rural communities. Similar and modifications of the "Spokane RTT model" have been established around the country. Now, more than 24 years of educational experience has been accumulated and can be applied to further development of these successful family medicine residency programs.

(Fam Med 2010;42(10):723-8.)

In 1972, Family Medicine Spokane (FMS) was established as a collaborative effort by the University of Washington School of Medicine (UWSOM), four Eastern Washington community hospitals in Spokane, and the Spokane County Medical Society. FMS was one of the initial four family medicine residency programs started by the UWSOM (a family medicine residency network that now includes 16 residency programs in Washington, Wyoming, Alaska, Montana, and Idaho [WWAMI]). Eastern Washington is characterized by having only 22 of Washington's 100 largest towns. There are only six towns with populations between

10,000 and 25,000, four between 25,000–50,000 and five greater than 50,000. Spokane has a population of 206,900 (only Seattle is larger)¹ and is the major health care referral center from the Washington Cascade Mountains, across the Idaho panhandle and through Western Montana.

FMS is a "traditional" urban-based family medicine residency program with an educational objective to train, place, and maintain its graduates in rural and urban underserved communities in the Pacific North and Intermountain West. The FMS curriculum emphasizes the broad spectrum of family medicine and procedural competency. Rotations include obstetrics (4–6 months required including 1–4 months high risk), surgery (2 months), emergency medicine (2 months), acute intensive and cardiac care (2 months), pediatrics (4 months), orthopedics/sports medicine (2 months), and rural and urban clerkships (2 months). To further the FMS educational objectives, in 1985 an obstetrical

fellowship was also established that offered an extensive 12-month high-risk OB experience for graduates of family medicine residency programs.

There have been 235 graduates of FMS, of whom 198 (86%) practice in WWAMI and Oregon. A total of 112 (49%) currently practice in rural communities (defined as a community of less than 25,000 population located more than 25 miles from a town larger than 25,000). More than 80 family physicians have completed the OB fellowship, most practicing in rural communities throughout the United States, where they provide full spectrum obstetrical services.

In the mid-1980s it was noted that despite a clear mission to select residents with a stated interest in rural practice, only 50% of FMS graduates actually did so. Although this was about twice the national average for family medicine residency graduates, half of our graduates had changed their minds regarding rural practice during residency. Faculty discussions, follow-up graduate surveys, meetings with the UWSOM, and discussions with family physicians practicing in rural Eastern Washington lead to the following conclusions: FMS was a traditional urban-based residency, the majority of training was conducted in large tertiary care hospitals, the primary teachers/mentors were not family physicians, and ambulatory continuity care was difficult to achieve in the Spokane residency's Family Medicine Clinic. Further, the need for primary care in the immediate urban environment where FMS residents trained continued to increase and compete with the region's rural communities.

Awareness that FMS was actually providing disincentives in meeting its educational objective of increasing the number of rural family physicians caused FMS to conceptualize a new rural-based model of residency training. In 1986 the Accreditation Council for Graduate Medical Education (ACGME) approved the FMS Rural Training Track (FMSRTT) in Colville, WA as an "experimental pathway" of FMS, and the first resident began in July 1987. Adopting the 1-2 model, the first year of the FMSRTT is completed in Spokane with the traditional urban-based FMS residents. During this year, emphasis is placed on educational experiences best satisfied in an urban medical environment (Table 1). Since 1987, the FMSRTT has had ACGME approval to conduct training for the second and third years of residency in private medical practices and hospitals in the Washington State rural communities of Colville, Ellensburg, Goldendale, Moses Lake, and Omak. Although the FMSRTT shares training opportunities with the urban-based FMS program, in 1994, the ACGME acknowledged the FMSRTT was distinct from FMS and accredited it as a separate family medicine residency program. By not being considered an "experimental pathway" of FMS, the FMSRTT had its own ACGME Program Number. It was separately reviewed, and each

training site was required to individually meet the ACGME Program Requirements as part of an overall rural-based GME program. The FMSRTT uses the National Resident Matching Program (NRMP) to match one or two residents per year. The FMSRTT program director is also the program director of FMS.

There are two primary goals of training residents in rural areas: producing more physicians who will practice in rural areas and producing physicians who are better prepared for the personal and professional demands of rural practice.² There have been 35 graduates of the FMSRTT, of whom 33 (94%) practice in Washington, Alaska, Idaho, and Oregon. Twenty-seven (77%) practice in rural communities. The FMSRTT has placed its graduates in rural communities at three times the national average of 24% for family medicine residency programs.³ "1-2" RTTs have nationally placed 76% of their graduates in rural practice.⁴

Additionally, since the establishment of the first "1-2" rural training track in Colville, WA, there has been a proliferation of RTT sites nationally, with the maximum reaching 35 programs in 2000. Since 2002, the number of ACGME-accredited "1-2" RTT programs has declined. Current data indicate that 19 programs have closed, three have converted to rural-based 4-4-4 programs, and with newly accredited programs added, the number currently stands at 25 (Personal communication with Randall Longenecker, MD, Mad River Family Practice, program director of the Ohio State University Rural Program).

Within WWAMI, RTTs in Glasgow, MT, Ellensburg, WA, Goldendale, WA, Moses Lake, WA, and Omak, WA, have closed. Currently, RTTs exist in Colville, WA, Caldwell, ID, and Treasure Valley, ID, and one is being planned for Rexburg, ID.

RTT Challenges, Pitfalls, and Concerns

Although RTTs have been very successful with highly desirable outcomes in placing physicians in rural practice, there are important questions that need to be addressed regarding the sustainability of this model of graduate medical education in family medicine. Current discussion points and experience gained from the FMSRTT include the following:

(1) Are there ACGME accreditation concerns about RTT programs, and how has this affected the evolution of the FMSRTT? When the concept of the RTT was initially introduced to the ACGME in 1985, there were no guidelines provided within the program requirements for such a model. Afforded this degree of latitude, relying on the educational experience of FMS and with some degree of common sense the initial RRC site reviews resulted in accreditation of five FMSRTT sites in Colville, Ellensburg, Goldendale, Moses Lake, and Omak, WA. One resident was based at each site

Table 1

Family Medicine Spokane (FMS) Rural Training Track Curriculum (4-week Rotations):
A “1-2” Residency Program (13 4-week Block Rotations)

<i>First-year Resident (Spokane)</i>	<i>Second-year Resident (Colville)</i>	<i>Third-year Resident (Colville)</i>
Family medicine	Obstetrics (high risk) Spokane	Obstetrics (high risk) Spokane
Obstetrics	Obstetrics (high risk) Spokane	Family medicine
Obstetrics	Family medicine	Family medicine
Obstetrics (high risk)	Family medicine	Geriatric medicine
FMS Hospital Service	Family medicine	Ophthalmology/urology
FMS Hospital Service	Community medicine	Internal medicine
Inpatient pediatrics	Emergency medicine	Elective
Inpatient pediatrics	General surgery	General surgery
Outpatient pediatrics	Orthopedics/sports medicine	Orthopedics/sports medicine
Intensive Care Unit	Cardiology	Cardiology
Emergency medicine	Pulmonary medicine	Pulmonary medicine
Gynecology	Gastroenterology	Gastroenterology
Ear, nose, and throat (ENT) and dermatology	Elective	Elective

and was followed by a new resident at the second-year level when the third-year resident graduated. Residents were scheduled away from the FMSRTT site for three 4-week rotations in both the second and third years for additional obstetrics, pediatrics, neonatology, and electives to meet the ACGME Program Requirements for Graduate Medical Education in Family Medicine.

As the RTT model of residency training gained momentum around the country, the ACGME was faced with developing standardized requirements for these programs and having them comply with the program requirements of the more traditional residency programs. In 1996, the following new requirements were introduced by the ACGME:

(a) Special urban or rural tracks must have at least one resident at each of the second and third levels to ensure some degree of on-site peer interaction.

(b) Whenever one resident is seeing patients in the family medicine center, a preceptor must be available to provide active precepting of the resident and may engage in other activities to a maximum of 50%. When two or more residents are present seeing patients there must be a family physician available full time to precept without any other obligations.

(c) All family medicine residency programs will be expected to comply with the requirement for 24 months of continuity in the second and third years. During those years, residents may be assigned to distant rotations for 2 months.

Table 2

Current Status of Family Medicine Spokane Rural Training Track Sites

<i>FMSRTT Site</i>	<i>Year Accredited</i>	<i>Status</i>	<i>Number of Graduates</i>	<i>Reason for Closure</i>
Colville	1987	Currently open	20	Not applicable
Ellensburg	1987	Closed in 1993	2	Requirement to take resident every year. Did not have facilities or faculty to comply.
Omak	1988	Closed in 1997	3	Requirement to take resident every year. Did not have financial resources to comply.
Goldendale	1989	Closed in 2008	10	Rural hospital gave up OB. Unable to comply with continuity OB.
Moses Lake	1996	Closed in 1997 without opening	0	Requirement to take resident every year. Did not have faculty, facilities, or financial ability to comply.

These three changes in the program requirements had a profound effect on the FMSRTTs, resulting directly or indirectly in the closure of the sites in Ellensburg, Moses Lake, and Omak (Table 2)

Areas of ACGME concern/citations for noncompliance for FMSRTT have changed over time. Initial concern over faculty resources, meeting curricular requirements, and family medicine center compliance are no longer issues for the FMSRTT. Recent citations noted not providing faculty with rotation goals and objectives, not providing residents with timely feedback regarding performance on rotations, continuity home visit experiences, structured curriculum in community medicine, and adequate documentation of monitoring duty hours. The FMSRTT has subsequently addressed all of these concerns. The Colville RTT was most recently reviewed by the Residency Review Committee for Family Medicine in May 2009 and received 5 years of full accreditation.

(2) Are there lessons to be learned in rural site selection from the FMSRTT experience?

In our experience, the essential feature of all FMSRTT sites has been the existence of a stable medical community willing to collaborate with the FMSRTT leadership in establishing the residency program and a family physician leader able to command respect from colleagues, community physicians, and hospital leadership. We have based all FMSRTTs within rural group practices. All of the group physicians do not need to be family physicians; however, they all have to be willing to teach residents. Among the group needs are to be family physicians practicing acute, intensive, and emergency care medicine, OB, pediatrics, surgery, behavioral medicine, elder care, and procedural medicine. There also needs to be other community resources available to satisfy the ACGME Program Requirements for GME in Family Medicine including a base of patients to provide each resident with a continuity practice, a hospital at the RTT site that provides acute, intensive, and emergency medical care, and OB and surgery leadership that is supportive of the educational requirements of the FMSRTT. The hospital is required to collaborate with the FMSRTT leadership in securing GME funding, which needs to be utilized to provide sustaining support for the operating costs of the FMSRTT.

Having established five RTTs all sharing the above requirements, it became apparent how different from one another they were. The group practices providing the primary faculty and the family medicine centers have ranged from five family physicians (Goldendale) to a 30-physician multispecialty group (Colville) serving populations of 9,000 (Goldendale) to nearly 40,000 (Colville). The rural communities have ranged from populations of 3,700 (Goldendale) and 5,000 (Colville)

to 17,326 (Ellensburg). There have been Rural Health Clinics and Critical Access Hospitals (Colville and Goldendale). However, only two FMSRTTs have had long-term success training residents, Goldendale for 19 years (but now closed) and Colville for 23 years.

The primary reasons for closure of several FMSRTT sites were ACGME requirements to have at least one resident in both the second and third years at the rural site, to have dedicated faculty to precept the residents' ambulatory practice, and the requirement for each graduate to have 10 continuity patient deliveries. Closed sites typically did not have the available faculty, facility, or financial resources to support two residents. One site, although eligible, elected to not pursue GME funding, which placed an excessive financial burden on the rural hospital and practice, eventually leading to closure. One site had been unsuccessful for several years in recruiting an adequate number of providers of OB care for the community. With declining numbers of deliveries and low reimbursement the rural hospital elected to close labor and delivery services. With the loss of OB care and the inability to find an alternative option, the FMSRTT leadership elected to close this site.

Colville, WA, was the nation's first RTT site and continues to select one resident per year through the NRMP. The Northeast Washington Medical Group (NEWMG) serves as the residents' ambulatory practice and provides the majority of faculty. NEWMG serves as a referral base for nearly 40,000 providing 74,400 annual patient visits. NEWMG has a medical staff of 30 physicians, including 12 family physicians, cardiology, gastroenterology, pulmonary, internal medicine, surgery, orthopedics, urology, emergency medicine, dermatology, and gynecology. It is a Rural Health Clinic (RHC). Mount Carmel Hospital is a Critical Access Hospital (CAH) and serves as the center of inpatient resident education. Together, NEWMG and Mount Carmel Hospital serve as a regional medical center for Northeast Washington.

There is strong community support for the Colville RTT as it has directly provided seven graduates to NEWMG and indirectly helps recruit subspecialty physicians by providing them the opportunity to teach residents. All NEWMG physicians are clinical faculty at the UWSOM, are expected to provide evidence-based care, and have learned new procedures in order to teach residents. These factors are felt to have improved access to quality health care services provided by NEWMG and at Mount Carmel Hospital.

Colville has also been able to provide a strong financial base for the RTT. Both RHC and CAH receive cost-based reimbursement for their clinical services. Mount Carmel receives GME reimbursement that is directly provided to the FMSRTT, and resident-rendered patient care supports teaching expenses (Tables 3 and 4).

Table 3

Family Medicine Spokane Rural Training Track Budget 2009-2010

Revenue	
Washington State Legislature	\$52,605
RTT site (Colville) support @ \$85,630/resident	\$171,260
Spokane Hospital and FMS support	\$131,333
Total Revenue	\$355,198
Expenses	
Resident, faculty, and staff wage/benefits	\$297,544
Consultants at RTT site (Colville)	\$2,500
Travel	\$3,000
Educational costs	\$46,154
Resident recruitment	\$2,000
Supplies and equipment	\$1,000
Administrative, faculty/site development/evaluation	\$3,000
Total Expenses	\$355,198

The FMSRTT is considering selecting two residents per year. Expanding an existing site requires an assessment of the educational and financial resources, facilities, and a strong dedication by rural leadership. FMSRTT leadership and rural stakeholders at Colville are planning to enlarge the Colville site to a 2-2-2 program.

(3) Is there current applicant interest in RTTs based on the FMSRTT’s experience? Applicant interest in the FMSRTT has historically been high. Utilizing the NRMP, one or two first-year residents have been selected annually. In 2009–2010, there were more than 200 applicants, 35 invitations for interview, and 24 interviews for the one position in the Colville RTT. All applicants are initially interviewed in Spokane and then travel to Colville where they are interviewed by faculty and residents. The majority of these applicants are interested in both FMS and the FMSRTT. The FMSRTT prepares its own rank list for the NRMP. Thirty-three of the 36 FMSRTT residents have entered the program via the NRMP. With increased interest in family medicine nationwide and regionally (15.3% of UWSOM students entered family medicine residency programs in 2010), the FMSRTT anticipates continued interest in future years, which should bode well for RTTs nationwide.

(4) How well do FMSRTT residents do on the ABFM In Training Examination (ITE) and with board certification? Over the past 8 years, the number of FMSRTT residents taking the ITE has declined from six per

Table 4

FMSRTT (Colville) Resident Annual Clinic Production 2008–2009

FMSRTT second-year resident clinic production	\$103,346
FMSRTT third-year resident clinic production	\$139,607
FMS second-year residents on clerkship in Colville	\$25,409
Total annual resident clinic production*	\$268,362

*Retained by Northeast Washington Medical Group, Colville WA to support educational costs associated with the FMSRTT.

FMSRTT—Family Medicine Spokane Rural Training Track

year to three per year with the closure of the Golden-dale RTT site. With the small number of residents in the FMSRTT, it may be difficult to make meaningful comparison to larger data sets from “traditional” family medicine residency programs. However, the program total score was above the national average for 5 years, below average for 2 years, and at the average for 1 year. Thirty-four of the 36 FMSRTT graduates passed their ABFM certification on the first attempt, and all graduates are currently board certified.

(5) What is the financial stability of the FMSRTT? The 2009–2010 annual budget for the FMSRTT is noted in Table 3. Providence Sacred Heart Medical Center and Children’s Hospital in Spokane support the first year of residency and receive the Direct and Indirect Medical Education, Medicaid, and Champus funding. Mount Carmel Hospital in Colville funds the cost of the second and third years of the FMSRTT. As a Critical Access Hospital, Mount Carmel Hospital GME payments are cost based and independent of the number of residents. The total GME cost is multiplied by the hospital utilization percentage of Medicare and Medicaid plus 1%. The Washington State legislature provides additional funding for GME. NEWMG receives payment and retains the revenue for resident-rendered patient care noted in Table 4.

(6) What has the FMSRTT learned about transitioning rural site leadership? At all FMSRTT sites, the site coordinator has been a full-time practicing family physician who has assumed the role of ensuring an educational environment compliant with the ACGME Program Requirements. Working in close collaboration with the FMSRTT program directors in Spokane, the site coordinator engages the local medical community as teaching physicians and ensures resident education, supervision, and evaluation in an environment that was

not initially structured to perform those functions. Most FMSRTT site coordinators are paid by the rural hospital or group practice to administer the program 1 day per week. All other faculty volunteer their time to serve as attendings and preceptors for residents. In addition to assuming the role of rural GME leadership, the site coordinators continue clinical practice providing care for their own patients. With the majority of RTTs having been established in the 1990s, many rural site leaders across the nation are now considering cutting back on their practice or retirement.⁵ With this trend, many RTTs are faced with finding new rural leadership. Since RTT sites often have fewer family physicians available, finding new leadership can be a major problem.

The Colville RTT had been fortunate to have had the same site coordinator since its inception, which has been a contributing factor to the site's long-term success. However, transitioning to new leadership was faced by Colville in 2009. Fortunately, a prior graduate of the Colville RTT that had served as faculty for 12 years agreed to become the new site coordinator.

Conclusions

The FMSRTT has served as a successful benchmark for rural-based GME in the United States since 1987. It has transcended many changes in ACGME accreditation policies in the intervening years and has continued to provide a high-quality, cost-efficient family medicine

residency program in keeping with its educational mission to train, place, and maintain its graduates in rural and urban underserved communities throughout the Pacific North and Intermountain West.

For 24 years the FMSRTT remains successful addressing the health care needs of rural America through the care provided by its graduates and the assistance it has provided to other family medicine education programs. It has taken the success of its parent residency, Family Medicine Spokane, to a higher level by utilizing the skill set of rural physicians doing what they enjoy most, caring for their patients and teaching the next generation of family physicians.

Corresponding Author: Address correspondence to Dr Maudlin, Family Medicine Spokane, 104 West Fifth Avenue, Suite 200 West, Spokane, WA 99204-4839. 509-624-2313. Fax: 509-459-0686. maudlir@fammedspokane.org.

References

1. Office of Financial Management: State of Washington. Rank of cities and towns; April 1, 2010. Population size.
2. Saver B, Bowman R, Crittenden R, Maudlin R, Hart L. Barriers to residency training of physicians in rural areas. WWAMI Rural Health Research Center 1998;(4) Working Paper #46:1-39.
3. Bowman R, Penrod J. Family medicine residency programs and the production of rural family physicians. *Fam Med* 1998;30(4):288-92.
4. Rosenthal T, McGuigan H, Osborne J, Holden D, Parsons M. One-two rural residency tracks in family practice: are they getting the job done? *Fam Med* 1997;30(2):90-3.