

Residency Education

Factors Affecting the Match Rate of Rural Training Tracks in Family Practice

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Background and Objectives: Rural training track (RTT) family practice residencies are designed to prepare family physicians for rural practice. Residents in these programs spend 1 year in an urban location, followed by 2 years in a rural setting. Anecdotally, one hears that some programs have problems filling their available positions for residents. No published studies have systematically evaluated this fill rate. This study determined the match rate of rural track family practice residencies and examined factors associated with higher rates. **Methods:** Questionnaires were mailed to program directors of all 28 rural track residencies identified in 1998 by the Residency Review Committee for Family Practice. Five programs proved ineligible, and 22 of the 23 eligible programs responded (96%). Directors provided information on fill rates and program characteristics from 1996 through 1998. Programs' reported fill rates were compared to rates previously reported for family practice residencies as a whole. Descriptive statistics were used to compare rural track programs that did and did not fill through and after the National Resident Matching Program (NRMP) (the "Match"). We also report data recently updated to reassess the situation for the 2001 Match. **Results:** Rural track residency programs offered 52 first-year positions in 1998. All positions were offered through the NRMP. From 1996 through 1998, programs had a mean Match rate of 61%, compared with a rate of 86% reported previously for all family practice residencies. RTT programs in more-desirable communities (as determined by location near a listing in Fortune Magazine's "Best Places to Live") and those in the western and northeastern United States filled more positions than programs in less-desirable locations and in the southern and central United States. There were no other differences in the characteristics of programs or their faculty between programs that filled their positions and those that did not. These same trends held true for the 2001 Match. **Conclusions:** In recent years, rural track residencies were less likely to match their first-year positions than other family practice residencies. Geographic and community characteristics seemed to influence the Match rate, whereas characteristics of programs and their faculty did not.

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A one-two rural training track (RTT) in family practice is a relatively new approach to training physicians for rural practice. The structure and outcomes of RTTs have been described,¹ but how effectively they fill their training positions has not.

In one-two RTTs, residents spend their first year training in a large urban medical center, followed by 2 years in a distant, smaller rural setting. These programs were designed to help medically underserved rural communities increase their supply of physicians and to better prepare these physicians for rural practice by provid-

ing them with a unique rural training experience.^{1,2} Recent studies suggest that this strategy has been successful. Whereas 30% of all family practice residency graduates practice in rural communities, 76% of RTT graduates are in rural practice.^{1,3}

Previous studies have reported that 30% of RTTs have unfilled residency positions.¹ Other studies have identified factors associated with the National Resident Matching Program (NRMP) (the "Match") fill rate success for family practice residencies of all types.⁴ No studies, however, have systematically examined the fill rates of RTTs. This study quantified the fill rate of first-year positions (PGY-1) of RTTs from 1996 through 1998 and examined factors associated with the fill rate. The findings were reevaluated with data from the recent Match of 2001.

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Methods

In January 1999, we mailed questionnaires to directors of all 28 family practice residency programs identified in 1998 as RTTs by the Residency Review Committee for Family Practice. Directors of programs that did not respond to our questionnaire within a month were called and encouraged to return the survey.

Program directors provided data on various program characteristics, such as years of operation, number of graduates, mean resident salary, size of program’s rural hospital, and number of faculty. A medical procedure score (range 0–19) was calculated for each program based on the number of 19 specific inpatient and outpatient procedures that residents are taught. Program directors also provided data on program Match rates (percentage of first-year positions filled through the NRMP) and fill rates (percentage of first-year positions filled through and outside the NRMP).

RTT communities were defined as “desirable” if they were within 50 miles of any of the 50 small or large towns listed in *Money Magazine’s* “Best Places to Live” in 1999 (www.money.com/money/depts/real-estate/best_places/). A 50-mile distance was chosen since it represented a reasonable distance for a resident or spouse to travel for work or recreation. The Best Places ranking of communities is based on the quality of weather, economic health, housing affordability, quality of health care, low crime rate, available transportation, quality of schools, available leisure activities, and cultural opportunities.

Programs with fill rates of 100%, 50%–99%, and less than 50% were compared on a variety of community, program, curriculum, and faculty characteristics. Because the study sample was small (only 23 programs) and contained virtually the entire population of RTTs, we used only descriptive statistics, not inferential statistics. Variables seeming to affect programs’ Match rates were noted.

Some programs had more the one rural site. For these programs, data on the Match rates and program characteristics for each site were averaged and reported as if for one program.

To assess the stability of our findings over time, we examined the 2001 Match rate, using data published by the NRMP and analyzed by geographic region. Two previously listed programs were not listed in the 2001 NRMP Match results and were confirmed to have closed by 2001, according to information provided by their former parent institutions.

Results

Questionnaires were mailed to all 28 listed RTT programs. Five programs were deemed ineligible, including two programs that had not yet enrolled residents, two programs that did not regard themselves as RTTs,

and one program that had already closed. Of the remaining 23 eligible programs, 22 (96%) responded.

In 1998, these programs reportedly offered a total of 52 first-year (PGY-1) positions, all through the NRMP. Eight programs matched all positions, eight matched 50%–99% of their positions, and six matched less than 50% of their positions. In the years 1996, 1997, and 1998, the average program Match rate for all RTT PGY-1 positions was 61%, compared with a previously reported Match rate of 88% for family practice positions of all types⁵—the fill rate, that is, adding positions filled outside the Match to those filled through the Match was 90% for RTT, compared to a fill rate for family practice positions overall of 97%.⁶

RTTs located within 50 miles of desirable communities were more likely to completely match their first-year positions. All programs matching 100% of their positions were in desirable areas, whereas only two of the six programs matching less than half of their positions were in desirable areas (Figure 1). RTTs located in the western and northeastern United States were also more likely to match their first-year positions than programs in the southern and central United States (Tables 1 and 2).

The number of past graduates and number of beds in the programs’ rural hospital were not associated with programs’ Match rates (Table 3). There was a trend for younger programs and those with shorter geographic distances between PGY-1 and PGY-2 hospitals to fill at higher rates. The number of medical procedures programs teach, the number of rural family medicine faculty practicing obstetrics, the number of faculty teaching more than 25% time, and the number of rural behaviorist faculty were not associated with Match rates (Table 4).

Figure 1

Match Rate and Community Desirability, 1996–1998

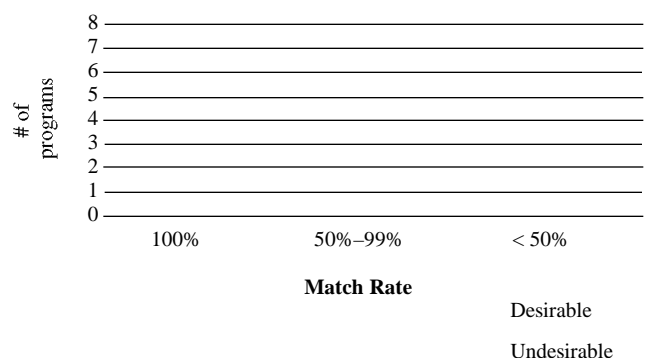


Table 1

Program Match Rate and Geographical Region, 1996–1998

	100% Match	>50% Match	<50% Match
Northeast	1	1	0
West	4	3	1
Central	2	2	1
South	1	2	4

Table 2

Positions Matched and Geographical Region, 1996–1998

	Positions Offered	Positions Matched	Match Rate
Northeast	12	11	92%
West	27	21	78%
Central	34	21	62%
South	39	17	44%

2001 Update

Of the 22 RTT programs surveyed in 1998, 20 remained open in 2001 and collectively offered 46 PGY-1 positions.⁷ Of these positions, 23 (50%) filled through the Match, compared with 76% for family practice programs as a whole.⁷ The proportion of programs filling all of their PGY-1 positions in 2001 was 20%, lower than the 36% that filled all positions in 1996–1998. The decline in fill rates for RTTs parallels the decline in the fill rate for family practice residencies of all types, from 86% in 1998 to 76% in 2001.

The geographic pattern for Match rate filling in 2001 was similar to that of the 1996–1998 period, with the highest rates in the northeastern (100%) and western (67%) United States and lower rates in the southern (46%) and central (31%) United States. Also similar to the situation in the late 1990s, RTTs located in more-

desirable areas continued to match more of their PGY-1 positions in 2001: Match rates were 56% in programs in desirable areas versus 42% in programs in less-desirable areas.

Discussion

This study shows that between 1996 and 1998, and still in 2001, RTT programs matched and filled their first-year positions at lower rates than those reported elsewhere for family practice residencies overall. It also shows that RTTs located in desirable areas and in the western and northeastern United States were more likely to match and fill than programs in less-desirable areas and other regions.

It has been suggested that RTTs have difficulty recruiting residents because many programs are relatively new and still establishing their reputation.¹ While this

Table 3

Match Rate and Program Factors, 1996–1998

	100% MATCH (n=8) Mean ± SD	50%–99% MATCH (n=8) Mean ± SD	<50% MATCH (n=6) Mean ± SD
Age—years	3 ± 2	5 ± 4	5 ± 4
PGY-1 salary	\$34,993 ± \$2,635	\$33,679 ± \$1,341	\$32,504 ± \$1,753
Rural hospital # of beds	90 ± 54	134 ± 80	105 ± 79
Distance from PGY-1 to PGY-2 hospital, miles	72 ± 63	120 ± 77	132 ± 93

SD—standard deviation

Table 4

Match Rate and Faculty Factors, 1996–1998

	100% MATCH (n=8) Mean ± SD	50%–99% MATCH (n=8) Mean ± SD	<50% MATCH (n=6) Mean ± SD
Procedure score	15 ± 2	16 ± 2	13 ± 4
# of obstetrics faculty	5 ± 3	6 ± 5	4 ± 4
# of behaviorists	1 ± 0	2 ± 2	1 ± 1
# of faculty teaching > 25% time	2 ± 1	3 ± 2	3 ± 2

SD—standard deviation

may dissuade some applicants, data from our study suggest that younger programs in fact have higher Match rates. It is possible that there is a “founder effect,” in which a new program’s initial enthusiasm succeeds in “selling” the program to applicants, but the enthusiasm and Match success wane after the first few years. Further, this study strongly suggests that geography plays a more-important role. Available data indicates that this is also true for other family practice programs.⁴

This study has some limitations. First, it is based largely on self-reported survey data and thus is subject to reporting bias. Second, although the study calculates Match rates for a 3-year period, some of the RTTs are less than 3 years old. A study with a longer time horizon would yield more-stable Match rate estimates.

Conclusions

Because of the established success of RTTs in placing physicians in underserved rural areas, their number has grown from approximately 16 in 1996 to 23 in 1998. Generally, these programs have stayed true to their mission to train physicians to work in rural areas.¹ Despite many challenges, particularly in filling their funded positions, most have survived, and the RTT model has been adopted by a growing number of established residency programs. Nevertheless, some programs have closed for any of a variety of reasons, including difficulty in recruiting residents.

This study points out that location seemingly influences recruitment. If feasible, programs in the planning stage should choose to locate training for their second- and third-year residents in the most desirable

locations possible and as close to the sites where residents spend their first training year. Many programs, however, do not have the luxury of choosing the most-desirable location. For these programs, optimizing their training and educational experience and actively recruiting students who express an interest in rural medicine may remain the best strategies to attaining high fill rates.

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