Who Goes Into Family Medicine?

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A study was designed to identify criteria that could help select applicants to medical school with a lasting commitment to family medicine and to test the application of such criteria to predict career choice. The sample included 43 residents and physicians who chose family medicine when they entered medical school and five residents who decided on family medicine later. From the initial group, 19 remained stable in their choice of family medicine, and 24 switched to another specialty. Medical school folders and telephone interviews were used as data sources. The characteristics of stable family physicians and those who became specialists were identified, and the predictive power of these criteria was tested with 30 graduates selected at random. Based only on their entrance records, 25 of the 30 graduates were correctly identified as future family physicians or specialists. The use of these criteria in the admission process is discussed in terms of increasing the number of students who will become stable family physicians.

During the past 15 years major efforts have been made to increase the number of family physicians in the United States. These efforts were supported by the creation of primary care programs in medical schools and residencies in family medicine. Although more primary care programs than traditional programs attract students whose initial career goal is family practice, many students switch to another specialty before they become residents. Switches occur in spite of the well-publicized oversupply of specialists.

Why do medical students lose interest in family medicine? Why does loss of interest occur even in those programs where the environment supports and reinforces pursuit of family medicine? The purpose of this study was to identify criteria that could help select applicants to medical school who have a lasting commitment to family medicine and to test the application of such criteria to career stability.

BACKGROUND

Factors contributing to a stable career choice in family medicine have been described in the literature. Babbott et al[1] report from a nationwide survey that although family medicine is by far the most popular choice of entering students, 38% change to a specialty and 44% to another primary care career. Edwards et al[2] estimate the mean stability rate to be 34% from entrance to residency.

Family medicine attracts students who desire close patient contact and a small, independent, broad-based practice with time for family life.[3] Demographic characteristics, such as the father's occupation and income, size of hometown, student's age, sex, and marital status, have also been related to choosing family medicine.[4] Funkenstein[5] points out, however, that if students perceive a medical career as economically viable, they may elect to pursue it even if it is not compatible with their basic characteristics.

The reasons for switching to another career are varied and numerous. Some students fear that the clinical activities of family physicians will be restricted, that earnings will be limited, and that they will lack influence within the medical hierarchy.[6] A significant decrease in positive attitudes toward family medicine was observed during the fourth year of medical school,[2] which was explained by students detecting negative factors in family practice during curricular experiences and interaction with role models. Assigning students to special courses or programs has not been effective in stemming the tide of switching to a specialty.[7–9]

It was hypothesized that the key to greater stability in a family practice career goal may rest with the selection process.[10]

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TABLE 1. COMPARISON OF ENTRANCE DATA

Characteristics	Stable in Family Medicine (n=19) No. (%)	Shift to a Specialty (n=24) No. (%)	P
Sex			
Male	11 (58)	11 (46)	
Female	8 (42)	13 (54)	
Age			
≤25 years	8 (42)	14 (58)	
≥26 years	11 (58)	10 (42)	
Parents' education			
College or more	18 (47)	27 (56)	
High school or less	20 (53)	21 (44)	
Married	13 (68)	12 (50)	
Town size			
Population <100,000	13 (68)*	10 (42)*	.05
Population >100,000	6 (32)	14 (58)	
College			
Public	19 (100)*	15 (62)*	.01
Private	0 (0)	9 (38)	
Science			
Grade point average	3.37*	3.76*	.05

Asterisks indicate significant differences between stable and switching graduates.

METHODS

This retrospective study asked practicing physicians their reasons for staying in family medicine or for shifting to a specialty. Entrance data contained in the medical school folders of these physicians were also considered. The generalizability of the results is limited because the sample was taken from a single institution and includes only 48 subjects, but the study design compensates for this limitation by testing the predictive validity of the findings with a different sample.

Entering students at the University of New Mexico School of Medicine can choose between two tracks: the traditional track and the primary care curriculum (PCC). All students in the PCC are volunteers, and more of them are attracted to family medicine at entrance than are those in the traditional track. Of 88 students in six consecutive PCC classes from 1983 to 1988, 43, or 48%, declared family medicine as their initial career goal, but 24 of this group switched to a specialty by the time they became residents. Five additional students, whose career choices were uncertain at entrance, chose family medicine at residency match.

Two data sources were used: (1) the medical school folders and (2) telephone interviews. Medical school folders yielded information as follows:

Demographic data included age, sex, parents' education and occupation, present family status, and location of childhood residence. *Academic information* included type of college attended, science grade point average, Medical College Admission Test scores, National Board of Medical Examiners Part I and II scores, clerkship reports, and the dean's letter of recommendation for residency. *Personality information* was chosen from interview notes at admission, the essay written by student for admission, leisure activities in college, work experiences, and personality test (Myers Briggs Type Indicator) scores. *Career choice* at entrance to medical school and at residency was included.

Telephone interviews were guided by 16 structured questions grouped into the following three categories: reasons for career choice, leisure interests, and personal values. All telephone interviews were tape recorded.

RESULTS

Which entry characteristics differentiate future family physicians from future specialists? Data pertaining to demographic and academic characteristics are shown in Table 1. The chi-square statistic was computed to compare frequencies if at least five persons were included in a category. Starred percentages indicate significant differences between stable and switching graduates.

What motivated stable graduates to stay with family medicine? There was a genuine desire to be of service to others, to provide comprehensive patient care, to be involved in community-based family care, and to work in a small community. Stable graduates also perceived as advantages the opportunity to learn new and specific procedures and to work with their hands. They saw themselves as mature and tolerant individuals and had confidence in their ability to become competent and caring physicians. The preceptorship experience provided during the primary care program strengthened their decision. Faculty in family medicine were viewed as significant and positive role models.

What influenced shifting physicians to change to a specialty? Those physicians who shifted in their career choice valued the challenge of medicine and wanted to focus in depth on a particular area. Their need to explore ideas was stronger than was their need for close patient contact. They expressed discomfort with the amount of information and knowledge required of family physicians. Although many who shifted away from family medicine were high achievers, they appeared to be less confident of their ability than were those in the stable group, and they tended to be more

self-critical. Those moving from family medicine to another specialty were seeking more certainty regarding their ability to select correct medical interventions. They also attempted to have more control over their time both in a professional and personal sense. Productivity pressures in family medicine, that is, seeing more patients with less time allocated for each, were feared to interfere with high-quality patient care. Exposure to the community preceptorship during medical school focused their attention on the breadth inherent in family medicine, the time pressures, and the limiting nature of small town life, all of which dissuaded them from pursuing family medicine.

What influenced "late-comers" to become residents in family medicine? Two late-comers intended to go into public health and became residents in family medicine as a gateway to this specialty. A third was attracted by the great variety of patients seen by family physicians, and a fourth was motivated by a desire to provide medical care in underserved areas. These students do not reflect a uniform profile except on two dimensions: all were raised in large cities and their parents had college educations.

Did preference for family medicine at entrance help to predict future career choice? Fewer than one half of those whose initial preference was family medicine remained stable in this goal; 56% shifted to another specialty.

DISCUSSION

Many of these findings have been supported in the literature, which suggests that these findings should be more widely applicable in the selection process than just in one medical school. Demographic and academic characteristics, particularly residence in a rural area or small town, father's education, and grade point average in college usually have good predictive validity for stability in family medicine.[3,11-13] The same trends are present in this study, but only three reached statistical significance because of the small sample size. The people orientation of family physicians, an important motivator for their career choice, has also been widely documented.[14,15]

Many schools have attempted to increase the number of family physicians by modifying the curriculum. For example, many primary care programs have introduced community preceptorships to expose students to family physicians early in medical school. In the primary care curriculum at the University of New Mexico, community preceptorship occurs at the end of the first year. During the interviews, mixed reactions were elicited from the graduates concerning the influence of this experience on their career choice. Stable graduates reacted positively, but shifting graduates found fault with several aspects of the practice and began to search for alternative career goals. It seems that an educational experience is received according to the person's needs. Shifters realized that the lack of depth inherent in family practice, along with time pressure and the amount and variety of knowledge required, was contrary to their needs to explore problems thoroughly and to achieve a high degree of certainty before intervention occurs.

The above observation fits in with the bulk of the curriculum-impact studies, which indicate that medical programs can help to maintain the career interests of students, but that special curricular offerings have, for the most part, failed to sway career choice.[7,9,16] It seems that the students' demographic, academic, and personal characteristics are largely responsible for stability or shifts away from family medicine. Ernst and Yett[4] support this conclusion based on their comprehensive review of the career choice literature in medicine: "Physicians' taste for specialties and locations, reflected in their background and personality traits, seem to affect their career decision more than either financial considerations or learning experiences."

Since demographic, academic, and personality characteristics are stable when students enter medical school, increasing the number of family physicians depends largely on selection. To investigate the validity of these selection criteria, a pilot study was undertaken.

Validation of Selection Criteria

The entrance documents of 30 medical school graduates selected at random from those who declared family medicine to be their initial career goal were reviewed. Entrance folders were sorted into two groups: prospective stable family physician or specialist. Since all 30 graduates were either already in practice or in the last year of their residency, it was possible to check career predictions against reality. Selection criteria for stable and shifting physicians are listed in the Appendix. Of 30 practicing physicians, the career choices of 25 were correctly identified as family medicine or specialist from entrance data. Thus, correct prediction occurred in 83% of the cases. According to a two-tailed binomial test, making 25 correct choices out of 30 is significant beyond the .01 level.

CONCLUSIONS

This study suggests that medical schools wishing to increase the number of graduates in family medicine should accept applicants with the following characteristics (Appendix):

1. Come from small town or rural background
2. Are over the age of 25 years, and are preferably married

3. Attended a public college
4. Have a strong motivation for direct, nurturant patient contact as evidenced by (1) service-related work experience or volunteer work, (2) dissatisfaction with object-oriented work, and (3) leisure activities involving other people
5. Exhibit a presence of humanistic over scientific interests as evidenced by books read, hobbies, community involvement, and extracurricular activities in college.

At this time, when social medicine, ambulatory care, prevention, wellness, and communication skills are increasingly emphasized in medical care, people orientation is a crucial ingredient in the education of physicians who value and are willing to offer comprehensive care. Medical schools would do well to adjust their selection process using criteria that are likely to result in more family physicians.

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APPENDIX

SELECTION CRITERIA

Instructions: Complete one form for each applicant. Write in column III those numbers and letters, corresponding to items in columns I and II, that apply to this applicant. Use criteria from *both* columns when relevant. Get information from the applicant's written document as well as the admission interview(s).

Applicant's Name: ______

I Criteria for Stable Family Medicine	II Criteria for Specialists	III Number	III Letter
Demographic	**Demographic**		
1 Sex: Male	A Male or female	____	____
2 Age: Over 25 years	B Any age	____	____
3 Married	C Single or married	____	____
4 Father: *not* professional	D Father professional	____	____
5 Grew up in small town or rural area	E Grew up in town or city	____	____
Academic	**Academic**		
6 Total MCAT 54 and below	F Total MCAT 55 and above	____	____
7 Science GPA 3.49 and below	G Science GPA 3.5 and above	____	____
8 Public college	H Public or private college for part or all of higher education	____	____
Leisure Activities	**Leisure Activities**		
9 Groups (scouts, community, religious, varsity, etc)	I Art, music, travel, sports	____	____
10 Sports		____	____
11 Hobbies: working with hands		____	____
Personality	**Personality**		
12 Self-confident	J Self-critical	____	____
13 Wants to help, nurture, serve	K Concerned with status/prestige	____	____
14 Humanistic over scientific interests	L More scientific than humanistic interests	____	____
15 Religious	M Seeks intellectual challenge	____	____

MCAT—Medical College Aptitude Test
GPA—Grade point average