

A Survey of Students who Chose Family Practice Residencies

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This paper presents the results of questionnaires sent to medical students at Wayne State University who chose family practice residency programs. It discusses three main areas: (1) choice of family practice as a specialty, (2) choice of a particular family practice residency program, and (3) future plans.

Role models, the student's family, student membership in the American Academy of Family Physicians, the student's hometown, and Family Practice Club meetings were all important factors in the decision to become a family physician.

The current residents' opinions of their program, the residency director, the quality of the current residents, and the location of the program were rated as quite important in the choice of a particular residency program. Most residents served their residency in their home state. Economic factors and university affiliation were not felt to be influential in program choice.

A typical student plans to pursue family practice in a group that employs physician's assistants or nurse practitioners. He/she would also like to practice in his/her home state in either a rural area or a small city. Very few students were interested in either solo practice or academic family medicine.

Why do medical students choose to become family physicians? Much has been written about specialty choice and the factors which affect it. Anderson,¹ Kritzer and Zimet,² Schwartz and Cantwell,³ and Gough⁴ all present excellent discussions of the factors influencing specialty choice. This paper presents an analysis of some of these factors with respect to family practice.

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Very little has been written about how medical students choose family practice residencies and this study examines this issue in more detail. Also dealt with are the future plans of the students surveyed. Their plans are especially important in light of the increasing concern over physician maldistribution.^{5,6}

Methods

Questionnaires were sent to the 33 Wayne State University seniors who chose family practice residencies. This approach may have missed some students choosing other programs who will ultimately become family physicians, but it was felt

| Population Range | Number of Respondents |
|---------------------|-----------------------|
| 0 - 10,000 | 3 |
| 10,001 - 50,000 | 7 |
| 50,001 - 250,000 | 8 |
| 250,001 - 1,000,000 | 4 |
| > 1,000,000 | 5 |
| Total | 27 |

that it would be significant to survey only those who definitely plan to be family physicians.

The actual questionnaire was designed for keypunch capability although the data in this study were not keypunched.* Both short-answer and open-ended formats were used on the questionnaire. Questions relating to the following areas were used: (a) autobiographical information, (b) reasons for the selection of family practice as a specialty, (c) factors that influenced the choice of a particular family practice residency, and (d) future plans in family medicine. Some of the questions had many parameters and the seniors were asked to rate them on the following arbitrary rating scale: 1-influential in their decision to become family physicians, 2-slightly influential, 3-neutral, 4-slightly detrimental, and 5-detrimental. A rating of 6 was used if the student felt that a particular parameter did not apply. On a question about attitudes of the various medical specialties toward family practice a slightly different rating scale was used. A rating of 1 indicated a favorable attitude toward family practice, 2 indicated a neutral attitude, and 3 registered an unfavorable attitude toward family practice. An average value was calculated for each specialty.

The questionnaires, which were sent by mail, included a stamped, addressed, return envelope and a covering letter. There was a suggested deadline of three weeks. After this deadline, an attempt was made to contact by telephone all those who

had not responded (approximately 16). This increased the return rate to 27 out of 33.

Results

There were 239 medical students graduated from Wayne State University in 1976. Of these, 33 (14.8 percent) selected a residency in family practice. Of the 33 in family practice residency programs, 28 were male and 5 were female. This represented 14.7 percent of the females and 13.6 percent of the males in the Wayne State graduating class and showed that there was no significant difference between the percentage of men and the percentage of women entering family practice. It was statistically significant that a large percentage of men returned the questionnaire while only a small percentage of the women did so.

Seventeen of the respondents included their age. The range of ages was 24 to 30 years with the mode being 26 and the mean being 26.1. There were 20 respondents who were married, and of these, 45 percent had one to three children. None of the respondents in this sample had been divorced.

Twenty of those who selected residencies in family practice were residents of the state of Michigan. Fifteen were from towns ranging in size from greater than 10,000 to less than 250,000 (Table 1).

When questioned about when they first considered family practice, most said that it was before medical school (Table 2). The final decision to become a family physician was made by the majority in the third and fourth years of the medical school curriculum (Table 3).

There were no statistically significant differ-

*Copies of the questionnaire are available from the authors.

Table 2. Stage of Career When Student First Considered Family Practice

| | |
|-------------------------|-----------|
| Premedical | 21 |
| Year I Medical School | 0 |
| Year II Medical School | 2 |
| Year III Medical School | 3 |
| Year IV Medical School | 1 |
| Total | 27 |

Table 3. Stage of Career When Student Definitely Decided to Pursue Family Practice

| | |
|-------------------------|-----------|
| Premedical | 3 |
| Year I Medical School | 4 |
| Year II Medical School | 1 |
| Year III Medical School | 9 |
| Year IV Medical School | 10 |
| Total | 27 |

ences between those who considered family practice as premedical students (early deciders) and those who first considered family practice in medical school (late deciders). It was suggestive that the "early deciders" were from smaller hometowns than the "late deciders." The "early deciders" rated their hometown family physician as a greater influence in their health career decision than did the "late deciders." As would be expected, the individuals who considered family practice while premedical students made their decision to become family physicians earlier in medical school. Fourteen of the 21 students who were already considering family practice/primary care at the time of the admissions interview were asked about this interest during the interview.

Ten of the seniors sampled felt admission procedures should be altered to encourage more medical students to enter family practice/primary care. Representative comments of these seniors were: "Admit more students from rural areas, maybe" and "I'm not sure how to do it but I think we need more family physicians. It's true that a straight A student doesn't necessarily have the character of a family physician. Therefore, it seems to me that instead of looking for straight A's and how many research papers they have written, one should look for a competent, hard-working individual with the character of a family physician."

Sixteen said they would be opposed to any changes in the admissions procedures. Most students felt that this was too early to decide on a particular career choice. "I feel people should decide on a specialty, including family medicine, only after exposure to all areas of medicine." "I feel people should have freedom of specialty choice, but I do feel there should be a factor considering diverse backgrounds and the likelihood of a student entering a needy area."

The seniors were asked to evaluate the importance of various factors in their decision to become family physicians (Table 4). Preceptorships were considered by most students to be a very important factor and the hometown family physician was also ranked highly. When these two items were considered together, 22 ranked at least one of them as being strongly influential. Twenty-five ranked a preceptorship or hometown family physician as slightly influential or very influential.

Membership in the American Academy of Family Physicians as a student affiliate was ranked slightly influential or influential to the 19 who were members. Wives and children were influential to 13 of the 20 married students. No students were discouraged from entering family practice by their wives or children. The medical school curriculum was ranked as slightly detrimental.

All Wayne State University medical students are required to take a primary care preceptorship in the third year. Seventeen of the seniors had served their preceptorships with family physicians (Table 5). There were no significant differences between these students and those who were with other primary care specialists.

The students rated the primary care preceptors as having a very favorable attitude toward family physicians (Table 6). Psychiatry and pediatrics also received an overall favorable rating in their attitude toward family practice. Surgery, obstetrics/gynecology, and internal medicine were rated as generally having an unfavorable attitude toward the family physician.

Two thirds of the respondents stated that they had considered specialties other than family practice before making their final decision (Table 7). Internal medicine and surgery were most often considered. There was no significant difference between those who considered other specialties

Table 5. Primary Care Preceptors by Specialty

| | |
|-------------------|------------|
| Family practice | 17 |
| Pediatrics | 4 |
| Internal Medicine | 5 |
| Other | 2 |
| Total | 28* |

*Total is 28 because one student had two preceptors.

Table 4. Parameters Affecting Choice of Family Practice as a Medical Career

| | 1 | 2 | 3 | 4 | 5 | 6 | \bar{x} |
|--|------|----|----|---|---|---|-----------|
| Preceptorship | # 18 | 4 | 3 | | 1 | 1 | 1.54 |
| Student membership AAFP | # 4 | 11 | 4 | | | 8 | 2.00 |
| Spouse and children | # 5 | 8 | 5 | | | 9 | 2.00 |
| Hometown family physician | # 7 | 7 | 8 | | | 5 | 2.04 |
| Hometown | # 6 | 2 | 12 | | | 7 | 2.30 |
| Family practice club meetings | # 3 | 7 | 7 | 1 | 1 | 8 | 2.47 |
| Premedical education | # 5 | 4 | 8 | 1 | 2 | 7 | 2.55 |
| Parents | # 3 | 5 | 15 | 1 | 1 | 2 | 2.68 |
| Peer group attitudes | # 1 | 9 | 11 | 4 | | 2 | 2.72 |
| Year III curriculum | # 3 | 9 | 7 | 4 | 2 | 2 | 2.72 |
| Year IV curriculum | # 4 | 5 | 10 | 1 | 3 | 4 | 2.74 |
| Year II curriculum | # 1 | 14 | 6 | 1 | 5 | | 3.32 |
| Year I curriculum | # 1 | 14 | 4 | 2 | 6 | | 3.33 |
| Medical school family practice faculty | # 1 | 2 | 12 | 6 | 5 | 1 | 3.46 |

Key: 1-influential, 2-slightly influential, 3-neutral, 4-slightly detrimental, 5-detrimental, 6-does not apply
 \bar{x} is the mean value for the item excluding the "does not apply" ratings

and those who did not.

All 25 respondents (one did not answer this item) ranked family practice first on the National Intern and Resident Matching Program (NIRMP) matching list. (Table 8). One student ranked internal medicine second, three students listed non-family practice programs as their third choice. Two more students listed nonfamily practice programs fourth or lower.

Two graduating medical students took family practice residencies in the US Navy and thus did not participate in the NIRMP match. Of the remaining 25 medical students, 24 were offered positions in the residency programs of one of their top two choices. It was statistically significant that no medical students from out-of-state entered Michigan family practice residency programs. Six

out-of-state students returned to their native states for family practice residency training. Thus two thirds of the survey respondents elected to train in their home state.

In choosing a family practice residency program, the most important single factor was judged to be the opinion of the residents already in that program (Table 9). The residency director, the geographical location of the program, and the attitude of the other specialists toward family medicine were about equal in importance. Salary and benefits were not a major concern. University affiliation was seen as a detriment by about one fifth of the students. This comment was included by one of the respondents: "I think university affiliation hurts a family practice residency as you may play second-fiddle to the other specialties.

Table 6. Attitudes of Other Specialists Toward Family Practice

| | 1 | 2 | 3 | \bar{x} |
|-------------------------|----|----|----|-----------|
| Primary care preceptors | 25 | 2 | | 1.07 |
| Psychiatry | 18 | 8 | 1 | 1.37 |
| Pediatrics | 12 | 8 | 7 | 1.81 |
| Obstetrics/gynecology | 5 | 14 | 8 | 2.11 |
| Surgery | 3 | 13 | 10 | 2.19 |
| Medicine | 4 | 12 | 11 | 2.26 |

Key: 1-implies favorable attitude toward family practice, 2-implies neutral attitude, 3-implies unfavorable attitude.
 \bar{x} is the mean value for the item

Also, most university hospitals will not let family physicians practice in them.”

When asked if they plan to practice in Michigan, 15 of the medical students in this survey replied affirmatively. It was significant to the 95th confidence level that 14 out of 20 residents of the state of Michigan wanted to practice in Michigan while only one out of seven students from other states wanted to practice in Michigan. The out-of-state student who was interested in practicing in Michigan was from Toledo, Ohio, which is approximately ten miles south of the Michigan-Ohio border.

Regarding possible practice settings, a rural location or a town of less than 100,000 was the most desirable. The smaller the student's town of origin, the more likely he/she was to choose a rural setting. There was no statistically significant difference in these groups, however.

When discussing type of practice preferred, 18 students indicated that they were interested in a group that would also employ allied health-care professionals such as physician's assistants and/or nurse practitioners. Seven preferred a physicians-only group, two were interested in solo practice, and two were interested in academic family practice.

Nineteen were American Academy of Family Physicians student affiliate members. Twenty-five were interested in being members of the American Academy of Family Physicians during their residency training.

Discussion

At Wayne State University 14.8 percent of the graduating class chose family practice. The Office of the Registrar at Wayne State reports this to be much closer to 20 percent. This discrepancy is due to the inclusion of students who chose flexible residencies, some of whom had no intention of doing family practice or general practice. Held⁷ reports 23 percent of the classes of 1971 and 1972 at the University of Colorado went into family practice. Keettel⁸ states that 27 percent of the class of 1966 at the University of Iowa went into general practice. Donovan⁹ reports that no medical students at the University of Rochester entered family practice in the classes of 1966, 1967, and 1969. Probably the most reliable data in this area are the actual specialties practiced several years after medical school graduation. Schwartz et al³ report that of all US medical graduates in 1960, 13.9 percent were in general practice after ten years. Spitzer et al¹⁰ report that 39.0 percent of the University of Toronto graduates of 1958 were doing general practice in Canada 15 years after graduation.

Renshaw and Pennell¹¹ state that 12 percent of the actively practicing women physicians in the United States are in general practice. At Wayne State University 14.7 percent of the women entered family practice.

Coker et al¹² suggest that older students and those who had families were more likely to go into general practice. Three fourths of the respondents at Wayne State were married. The Wayne State

Table 7. Other Specialties Considered Before Choosing Family Practice

| | |
|------------------------|---|
| Internal medicine | 9 |
| General surgery | 7 |
| Obstetrics/gynecology | 5 |
| Pediatrics | 4 |
| Surgery subspecialties | 3 |
| Radiology | 3 |
| Psychiatry | 1 |

Of the 27 respondents, 18 stated they had considered other specialties. These 18 respondents answered with the above 32 choices.

medical students who went into family practice were not significantly older than those who chose other specialties.

Cullison,⁵ Paiva,¹³ Schumacher¹⁴ all give evidence that family physicians were most likely to come from small towns.

Since most students change their specialty choice between their first and fourth years of medical school,^{7,13-16} it seems that there are factors during the medical school training which must influence these decisions. Anderson¹ and Levine¹⁷ point out that the area of interpersonal interactions with respect to medical career decision is largely unexplored. The sociology literature discusses the importance of peer groups and role models but this information has largely been ignored in discussion of medical career choice. Coker et al¹⁸ studied faculty influence on medical student career decisions and found that it varied depending upon the specialty of the faculty member. He did not study family practice faculty because in 1960, when he did his study, North Carolina did not have a family practice faculty.

A large majority of Wayne State University senior students entering family practice stated that either their preceptorship or hometown family physician was influential in their decision to become a family physician. This is strong evidence for the importance of a role model in the decision

to become a family physician.

Membership in the American Academy of Family Physicians and attending the Family Practice Club meetings were ranked as influential in the decision to become family physicians—again indicating that social interactions are important factors in choosing family practice.

The family practice faculty and the curriculum of years I and II were rated as detrimental to the choice of family practice as a specialty. There were several reasons for this. The family practice exposure at Wayne State was low. When the class of 1976 was in its first two years, much of the family practice teaching was done by the community medicine faculty. The students were very dissatisfied with these instructors. Many changes have been made in the program at Wayne State and these criticisms may no longer be valid. It has been the authors' experience that students in other medical schools are highly critical of family practice lectures in years one and two. Perhaps years one and two are not the most appropriate years to teach family medicine. It seems from these data that preceptorships are the most viable method available to the medical school for encouraging students to enter family medicine.

It is significant that an individual faculty member can make great impact if he/she has large exposure to students. One member of the pediat-

| Program | Rank on List | | | |
|-----------------------|--------------|-----|-----|--------------|
| | 1st | 2nd | 3rd | 4th or lower |
| Family practice | 25* | 19 | 16 | 16 |
| Internal medicine | | | 2 | 1 |
| Flexible/rotating | | 1 | 1 | 1 |
| Pediatrics | | | | |
| Obstetrics/gynecology | | | | |
| Psychiatry | | | | |

*Two students of the 27 surveyed did not participate in the NIRMP.

rics faculty who was an attending physician for about one quarter of the graduating class was specifically named by five students as a person who discouraged family practice. This represents most of the unfavorable attitudes toward family practice that the students observed on the part of pediatricians. It is conceivable that all the unfavorable feelings perceived by the students were generated by this one attending faculty member.

Very little has been written regarding the choice of residency programs in family practice. This study would imply that in order to recruit residents the most important factor would be ensuring that the current residents are well satisfied and that they are competent, capable physicians. Financial inducement seems to be a very minor consideration and most students chose residency positions in their state of origin. There was a group of students who were very strongly opposed to university affiliation.

Two thirds of the respondents felt they would practice in their home state. Most felt they would like to be members of a group practice in either a small town or a small city (population less than 100,000). Only two respondents were considering academic family practice.

It has been reported that physicians ultimately

practice in or near their area of origin.^{5,10,19} It has also been observed that physicians practice where they took their postgraduate training.^{6,19,20} Longenecker et al²¹ reported that 63 percent of family practice faculty members teach within 100 miles of their previous practice location. The Wayne State data seem to support the above findings in that most students served their residency and planned to practice in their home state. Thus, it would seem that even though physicians are potentially highly mobile, they prefer to live in settings that are most familiar to them.

Over one half of all US medical schools are sponsored by state governments.⁶ This sponsorship is an effort to increase the number of physicians practicing in the state. Mason⁶ and Dei Rossi²⁰ both claim that this could be most effectively accomplished by support of both undergraduate and graduate programs of medical education.

Cullison's⁵ data suggest that only family physicians with a rural background are likely to practice in a rural area. The Wayne State data also suggest that those students from a rural background will most likely settle in a rural area. The above data suggest that the best method of increasing the number of physicians in an underserved rural area

Table 9. Parameters Affecting the Choice of a Particular Family Practice Residency Program

| | 1 | 2 | 3 | 4 | 5 | 6 | \bar{x} |
|--|------|----|----|---|---|---|-----------|
| Resident's opinion of their program | # 20 | 5 | 1 | | | 1 | 1.27 |
| Residency director | # 17 | 7 | 2 | | | 1 | 1.42 |
| Geographical location | # 17 | 7 | 3 | | | | 1.48 |
| Attitude of other specialties to family practice | # 15 | 8 | 2 | | | 2 | 1.48 |
| Personal qualifications of program residents | # 14 | 9 | 3 | | | 1 | 1.57 |
| Other specialty representation | # 15 | 8 | 3 | 1 | | | 1.63 |
| Family practice faculty | # 14 | 8 | 5 | | | | 1.67 |
| Family practice center | # 9 | 15 | 2 | | | 1 | 1.73 |
| Patient population seen by residents | # 12 | 10 | 5 | | | | 1.74 |
| Salary and benefits | # 5 | 5 | 13 | 3 | | 1 | 2.54 |
| University affiliation | # 7 | 4 | 8 | 1 | 4 | 3 | 2.63 |

Key: 1-influential, 2-slightly influential, 3-neutral, 4-slightly detrimental, 5-detrimental, 6-does not apply
 \bar{x} is the mean value for the item excluding the "does not apply" ratings

would be support of graduate training programs in family practice within the state, particularly in those underserved areas.

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