Comments Heard by US Medical Students About Family Practice

Doug Campos-Outcalt, MD; Janet Senf, PhD; Randa Kuto, MD

Background and Objectives: This study was conducted to explore the hypothesis that negative comments from faculty and residents about family practice are related to the recent decline in student selection of this specialty. Methods: A questionnaire was sent to all family physicians and an equal number of other primary care physicians who graduated from one of 24 medical schools in 1997–1999. Twelve schools had increasing proportions of graduates choosing family practice in the study period, and 12 had decreasing proportions. The questionnaire asked about negative comments heard about family practice and other primary care specialties. Results: Most graduates heard negative comments about family practice during medical school, and many students heard these comments often. However, the frequency and content of negative comments was not related to increases or decreases in the proportion of students choosing family practice. Negative comments were heard more frequently about family practice than about other primary care specialties. Negative comments increased in frequency during the study period. The negative comments on the questionnaire heard most often were that family physicians cannot master the content of the specialty and that they are not as smart as other physicians. Compared to other graduates, those with an initial interest in family practice who chose another specialty more frequently reported hearing that family physicians can’t master the specialty content. There was an inverse relationship between the number of groups (students, residents, and faculty) that negative comments were heard from and ranking of family medicine faculty on respectability, influence, and competence. Conclusions: After 3 decades of being an officially recognized specialty, family practice is not recognized by some other medical school faculty as an equal to other primary care disciplines, and these faculty frequently express this view to students. While the frequency of these negative comments is increasing and is related to trainees’ perceptions of family medicine faculty, it does not explain the recent decline in student interest in family practice. There is some evidence that students who change their career plans away from family practice might be concerned with their ability to master the specialty content. The prevalence of negative comments is related to trainees’ perceptions of family medicine faculty.

(Fam Med 2003;35(8):573-8.)

US medical school graduates’ interest in family practice as a specialty has been declining since 1998. Prior to that year, starting in 1992, there had been a steady rise in the number of US graduates choosing family practice in the National Resident Matching Program (NRMP), increasing from 1,374 in 1991 to 2,340 in 1997.1

In 1998, the number of US graduates matching in family practice fell to 2,179, a 6.9% decline. In each subsequent year, there has been a decline in both the number of positions offered and the number of US graduates matching in family practice. Between 1998 and 2001, there was a 35.3% decline in the number of US graduating seniors choosing family practice (826 fewer students). The largest decline occurred in 2001, when 17.4% fewer students matched in family practice than the year before.1,2 In 2002, only 10.5% of US graduates matching in the NRMP matched in a family practice program. This is the lowest proportion since 1991, when it was slightly below 11%.3

From the Maricopa County Department of Public Health, Phoenix (Dr Campos-Outcalt); and the Department of Family and Community Medicine, University of Arizona (Dr Campos-Outcalt, Senf, and Kuto).
These trends are troublesome for the US health care system. Out of all the primary care specialists, family physicians are the most likely to remain in primary care practice and to locate in rural areas. A decline in the production of family physicians, resulting from a declining number of residency positions offered, will have negative effects on the specialty and geographic distribution of physicians, and rural areas in particular will feel the effects. Of 2,298 counties in the United States that are not fully designated as a primary care health professions shortage area, more than half (1,332) would be so designated if they did not have their family physicians.6

The medical practice environment remains in evolution, with managed care becoming unpopular with both the public and the medical profession. It may be that managed care and its tenets (such as gate keeping) are all associated with family practice and primary care in the minds of faculty and students, although there is no research addressing this question. Scope-of-practice controversies continue to be discussed, and students may perceive that family practice is being squeezed in both directions—by specialists from one side and by managed care and nonphysician providers from the other side.

This study was conducted as part of a series of investigations funded by the American Academy of Family Physicians (AAFP). This study’s purpose was to explore why recent US medical students have been selecting family practice as a specialty in increasingly smaller numbers. The study tests the hypothesis that negative comments (pertaining to competency, scope of practice, and managed care) by medical school faculty and residents, about family practice, are associated with a decline in medical student interest in family practice.

Methods

Selection of Schools for Study

Using data collected annually by the AAFP, we determined the proportion of each US medical school graduating class entering a family practice residency in each of 3 years: 1997, 1998, and 1999. Puerto Rican schools were excluded, leaving 118 schools. We calculated the proportion of increase or decrease of students entering family practice in each school from 1997 to 1999.

Schools were placed into one of three categories by size: less than 100 graduates, 100 to 150 graduates, and more than 150 graduates. The four schools with the largest proportionate increases, and the four schools with the largest proportionate decreases in the number of students entering family practice in each of the three categories were identified and became the study schools (12 with increases and 12 with decreases). The schools were stratified by size to minimize the effect of small school size, where a relatively small number of students can result in significant changes in class percentages.

The 24 schools were located in 20 different states representing all regions of the country. Similarly, schools with increases and schools with decreases were spread across all regions, and in two states, there was both a school with an increase and a school with a decrease.

Selection of Students

The 24 schools selected had a total of 1,428 graduates who entered family practice during the time period 1997–1999, inclusive. These family medicine graduates, plus all of the graduates who selected combined internal medicine/pediatrics, and a randomly selected, equal number of graduates who entered internal medicine or pediatrics were included in the study. The rationale for inclusion of the latter groups is that we felt they are most likely to have considered family practice and made a decision against it. The list of graduates was obtained from the American Medical Association.

Survey Instrument

A questionnaire was constructed that included items on the “climate” for primary care at the school, including negative comments. One set of questions asked about negative comments about family practice heard during medical school from faculty, residents, and students. The first question asked how often these comments were heard: often, sometimes, or never. Graduates in the other primary care (OPC) specialties were also asked how often they heard negative comments about their chosen specialty.

The next question asked how often six specific comments were heard: (1) Family physicians are HMO doctors, (2) Family physicians are not as smart as others, (3) Family physicians will be replaced by midlevel practitioners, (4) Family physicians can’t master all they need to know, (5) Family physicians are needed in rural areas, and (6) Family physicians have better relations with patients. These were the comments we hypothesized would be made most often about family physicians. The first four comments are classified as negative comments and the last two as positive comments.

The next set of questions asked about graduates’ contact with and perceptions about family medicine faculty during medical school: whether they were respected, influential, clinically competent, and enthusiastic. For each characteristic, graduates were asked to rate family medicine faculty using a 5-point Likert scale, with 1 as the best rating and 5 the worst.

The questionnaire was pretested on family practice residents at the University of Arizona. It was then mailed to all graduates in the study group. Up to four mailings
were used. The first included the questionnaire, the second was a reminder postcard, the third included a replacement questionnaire, and the fourth was another postcard reminder with an e-mail address to use to request another questionnaire. Mailings began in May 2001 and ended in October 2001.

Data Analysis
The responses of graduates from the schools with increases in the proportion of graduates entering family practice (from this point referred to as schools with increases) were compared to those of graduates from the schools with decreases in the proportion entering family practice (from this point referred to as schools with decreases). Within each group (schools with increases and schools with decreases), family practice graduates were compared to OPC graduates. Time trends were analyzed by comparing the difference from 1997 to 1999 for respondents from schools with an increase to those from schools with a decrease. In addition, the responses of all family practice respondents were compared to those of all OPC respondents.

One variable was constructed based on the respondent’s reported specialty choice at entry to medical school and his/her current specialty. This variable had four options: students who entered interested in family practice and are now in family practice (firm FP), those who did not plan on family practice at entry but who are now in family practice (recruit to FP), those who considered family practice but who are now in some other specialty (lost to FP), and those who never planned family practice and are currently in some other specialty (never FP). The responses of the graduates in these four groups were then compared.

Another variable was constructed based on the number of groups (faculty, residents, students) from whom a graduate reported “often” hearing negative comments about family practice. This variable ranged from zero (reported often hearing negative comments from none of the groups) to three (reported often hearing negative comments from all three groups). This variable was then correlated with perceptions of graduates about family medicine faculty.

All analyses were performed using SPSS for Windows Version 10 or Version 11.® Statistical analyses included contingency tables and chi-square analysis for categorical variables and comparison of means (t test) for continuous variables.

Results
The response rate was 51.5%; 2,985 questionnaires were mailed, 155 were returned as undeliverable, and 1,457 were completed and returned. The response rate by school ranged from 33%–73%. The mean age of respondents was 31.8 years and of nonrespondents was 31.3 (P=.002). There was no difference in response rate by gender or year of graduation or between schools with increases and decreases. The response rate by specialty was family practice 57.6%, internal medicine/pediatrics 56.3%, pediatrics 50.4%, and internal medicine 38.3% (P<.001).

Relationship Between Negative Comments and Specialty Choice
The proportion of graduates reporting hearing negative comments about family practice is listed in Table 1. Those in family practice reported often hearing negative comments more frequently than did those in OPC specialties. Both family practice and OPC graduates reported often hearing negative comments from residents more frequently than from faculty or students. However, while those in OPC specialties reported often hearing these comments from faculty much less often than did family practice graduates, there were no significant differences between schools with increases and decreases over time. There was an overall increase over time in the percentage reporting often hearing negative comments (increase of 6.9% between 1997 and 1999, P=.03). Hearing negative comments was not related to being an FP recruit or FP loss.

Source of Negative Comments
The proportion of family practice graduates hearing negative comments about family practice differs markedly from OPC graduates who heard negative comments about their chosen specialty. The proportion of those in OPC who heard negative comments often about their chosen specialty from faculty was 1.8%, from residents 3.9%, and from students 4.1%. The proportion reporting sometimes hearing negative comments from faculty was 42.5%, from residents 55.3%, and from students 55.4%.

For those in family practice, the frequency of hearing negative comments was related to the size of their school, with students at large schools more likely to hear negative comments often from students (30% versus 21% at medium schools and 16% at small schools, P=.002). Size of school was not related to negative comments from residents or faculty.

Types of Negative Comments
The proportion hearing each specific comment is listed in Table 2. Those in family practice heard all comments, negative and positive, more often. The two comments that became more frequent with time were #3 (Family physicians will be replaced by midlevels) going from 10.8% in 1997 to 16.3% in 1999 (P=.014), and #4 (Family physicians can't master the content of the specialty) going from 39.8% to 52% (P=.001). Time trends were the same for schools with increases and decreases.
Table 1
Negative Comments Heard About Family Practice

<table>
<thead>
<tr>
<th></th>
<th>Family Practice</th>
<th>OPC Specialties</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>From faculty</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Often</td>
<td>197 (25.5)</td>
<td>56 (10.1)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Sometimes</td>
<td>428 (55.4)</td>
<td>303 (54.4)</td>
<td></td>
</tr>
<tr>
<td>Never</td>
<td>148 (19.1)</td>
<td>198 (35.5)</td>
<td></td>
</tr>
<tr>
<td>From residents</td>
<td></td>
<td></td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Often</td>
<td>243 (31.6)</td>
<td>107 (19.3)</td>
<td></td>
</tr>
<tr>
<td>Sometimes</td>
<td>443 (57.6)</td>
<td>369 (66.6)</td>
<td></td>
</tr>
<tr>
<td>Never</td>
<td>83 (10.8)</td>
<td>78 (14.1)</td>
<td></td>
</tr>
<tr>
<td>From students</td>
<td></td>
<td></td>
<td>.005</td>
</tr>
<tr>
<td>Often</td>
<td>171 (22.2)</td>
<td>103 (18.6)</td>
<td></td>
</tr>
<tr>
<td>Sometimes</td>
<td>467 (60.6)</td>
<td>382 (69.1)</td>
<td></td>
</tr>
<tr>
<td>Never</td>
<td>132 (17.1)</td>
<td>68 (12.3)</td>
<td></td>
</tr>
</tbody>
</table>

OPC—other primary care

Table 2
Comments About Family Physicians Heard “Often” By Students

<table>
<thead>
<tr>
<th></th>
<th>Family Practice</th>
<th>OPC Specialties</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>#   (%)</td>
<td># (%)</td>
<td></td>
</tr>
<tr>
<td>Are HMO doctors</td>
<td>34 (4.4)</td>
<td>19 (3.4)</td>
<td>NS</td>
</tr>
<tr>
<td>Are not as smart</td>
<td>191 (24.8)</td>
<td>65 (11.6)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Replaced by midlevels</td>
<td>135 (17.4)</td>
<td>43 (7.7)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Can’t master content</td>
<td>349 (45.1)</td>
<td>241 (43.0)</td>
<td>.025</td>
</tr>
<tr>
<td>Needed in rural areas</td>
<td>582 (75.4)</td>
<td>373 (66.7)</td>
<td>.002</td>
</tr>
<tr>
<td>Have better patient relations</td>
<td>419 (54.3)</td>
<td>176 (31.6)</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

HMO—health care organization

OPC—other primary care

NS—not significant

Table 3
Comments Heard Often, by Family Practice Groupings

<table>
<thead>
<tr>
<th>Family physicians (are):</th>
<th>Firm FP # %</th>
<th>FP Recruits # %</th>
<th>FP Loss # %</th>
<th>Never FP # %</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>HMO doctors</td>
<td>12 (4.4)</td>
<td>22 (4.4)</td>
<td>3 (5.3)</td>
<td>9 (3.9)</td>
<td>NS</td>
</tr>
<tr>
<td>Not as smart</td>
<td>60 (22.1)</td>
<td>131 (26.3)</td>
<td>10 (17.5)</td>
<td>19 (8.2)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Being replaced by midlevels</td>
<td>51 (18.7)</td>
<td>84 (16.8)</td>
<td>5 (8.9)</td>
<td>18 (7.8)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Can’t master content</td>
<td>118 (43.2)</td>
<td>231 (46.2)</td>
<td>33 (57.9)</td>
<td>97 (41.8)</td>
<td>.007</td>
</tr>
<tr>
<td>Needed in rural areas</td>
<td>220 (80.6)</td>
<td>362 (72.5)</td>
<td>47 (82.5)</td>
<td>137 (59.6)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Have better patient relations</td>
<td>164 (60.3)</td>
<td>255 (51.0)</td>
<td>23 (40.4)</td>
<td>59 (25.7)</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

HMO—health maintenance organization

Firm FP—students who entered medical school with an interest in family practice and subsequently entered family practice

FP recruit—students who did not enter medical school with an interest in family practice but who subsequently entered family practice

FP loss—students who entered medical school with an interest in family practice but who subsequently entered another specialty

Never FP—students who did not enter medical school with an interest in family practice and entered another specialty

Positive Comments
It should be pointed out that graduates also reported often hearing positive comments about family practice; 72% of respondents reported hearing often that family physicians are needed in rural areas, and 45% reported hearing often that family physicians have better relations with patients; the frequency of positive comments did not change over time.

Comments About Family Medicine Faculty
The mean rating for all graduates’ perceptions was significantly inversely related to the number of groups from which negative comments were often heard (Table 4). The more groups that negative comments were heard from, the less favorably the family medicine faculty were perceived.

Discussion
The main finding of this study was that even though a large proportion of recent medical school graduates reported often hearing negative comments about family physicians during their medical school training, these comments did not appear to significantly affect specialty choice. Nonetheless, negative comments are made by faculty, residents, and students and appear to be increasing in frequency. Family physicians report hearing these comments more frequently than do OPC physicians.

It is possible that those students who say they are going into family practice...
practice hear more negative comments because residents, other students, and especially faculty try to talk them out of their specialty choice. This explanation is consistent with findings of a study in 1993 conducted at one medical school where students reported hearing negative comments about family practice around the time of decisions about residency. An alternative explanation is that students intending on a family practice career are more sensitive about hearing such comments or are more prone to remember such comments years later.

Those who enter OPC specialties report often hearing negative comments about their chosen specialty much less frequently than do those who enter family practice. This indicates that family practice may be viewed more negatively than OPC specialties by the medical school community. This is consistent with a previous study that found that family practice graduates reported “badmouthing” about their specialty more frequently than did graduates entering pediatrics. However, no data were reported for those entering internal medicine.

Some types of comments are heard more frequently than others. The negative comment heard most frequently, of those asked, pertains to the perception that the content of family practice is too much to master competently. Many medical school faculty and physicians in training do not believe that the content needed to provide care to most community-based patients is attainable during a 3-year family practice residency.

There are two comments being heard more frequently with time: that family physicians can’t master the specialty content and that family physicians will be replaced by midlevels. These comments appear contradictory (the content of unrestricted primary care is too difficult to master, but it will become the turf of less well-trained, midlevel professionals), but it is unclear if they are being made by the same faculty or if there are two different schools of negative opinion about the specialty.

The recent trends in schools with increases and decreases in proportions of graduates choosing family practice are not explained by the frequency of reported negative comments. In both school groups, many students are actively discouraged from going into family practice, but many choose family practice anyway, and this discouragement does not appear to affect their choice. Negative comments may affect students at some schools differently, and students who change their specialty choice away from family practice may be concerned about the competency issue. Negative comments do appear to be related to graduates’ perceptions of family medicine faculty. However, it is not clear if the negative comments cause students to perceive the family medicine faculty less favorably, if students who feel that family medicine faculty are less competent are more likely to remember negative comments, or if at schools where family medicine faculty are perceived less favorably, faculty and trainees feel more free to make negative comments.

**Limitations**

There are several limitations to this study. It relies on respondents to recall what happened years earlier in medical school and is, therefore, subject to recall bias. While many students report hearing negative comments, it is not possible to discern what proportion of faculty, residents, and students actually make these comments. It is possible that the views reflected by the comments are not widely held but instead loudly voiced by a few.

Since we included only primary care specialties in this study, we cannot compare the frequency of negative comments heard by family physicians about family practice to those heard by non-primary care graduates about their specialties. Indeed, Hunt and colleagues found that, at one medical school, surgery graduates had the highest proportion reporting frequently hearing negative comments about their specialty.

In addition, the response rate, especially in the schools with the lowest rates, is cause for caution. It is quite possible that graduates with more unpleasant experiences were more likely to respond.

**Conclusions**

While this study does document that graduates report often hearing negative comments about family practice and that the proportion reporting hearing these

---

### Table 4

<table>
<thead>
<tr>
<th>Family medicine faculty are:***</th>
<th>Zero Groups**</th>
<th>One Group</th>
<th>Two Groups</th>
<th>Three Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respected</td>
<td>2.3</td>
<td>2.9</td>
<td>3.2</td>
<td>3.7</td>
</tr>
<tr>
<td>Influential</td>
<td>2.5</td>
<td>2.9</td>
<td>3.2</td>
<td>3.6</td>
</tr>
<tr>
<td>Clinically competent</td>
<td>1.9</td>
<td>2.1</td>
<td>2.4</td>
<td>2.4</td>
</tr>
<tr>
<td>Enthusiastic</td>
<td>1.7</td>
<td>1.8</td>
<td>2.0</td>
<td>2.2</td>
</tr>
</tbody>
</table>

* All differences from zero groups to three groups significant at P<.001
** All scales measured with 1=best rating and 5=worst rating
*** Number of groups (students, residents, faculty) from whom negative comments were heard “often.”
comments is increasing, we cannot conclude that negativity toward the specialty is responsible for the recent decline in student interest. It is possible that faculty feel more free to express negative views about family practice as the perceived preference for the specialty by students declines.

It is, however, troubling that of all the primary care specialties, family practice appears to be a specific target of negative comments, especially since producing more family physicians has been a priority of the federal government and many states. This indicates that the medical school community and legislators may not be in agreement about health workforce problems and solutions. It is also troubling that after 30 years as a recognized specialty, an increasing presence in the nation’s medical schools, and a major role in teaching at many schools by family medicine faculty, many of the other faculty continue to view the specialty negatively, feel compelled to express this view to trainees, and that these comments may be affecting trainees’ perceptions of family medicine faculty. This represents a manifestation of the “hidden curriculum” that persists in medical schools and has proven difficult to alter.9

Acknowledgment: This study was funded by the American Academy of Family Physicians, Leawood, Kan.

References


Corresponding Author: Address correspondence to Dr Campos-Outcalt, 12229 S. Chinook, Phoenix, AZ 85044. 602-506-6879. dougcampos@mail.maricopa.gov.