Results of the 2005 National Resident Matching Program: Family Medicine

Perry A. Pugno, MD, MPH, CPE; Gordon T. Schmittling, MS; Gerald T. Fetter, Jr; Norman B. Kahn, Jr, MD

The results of the 2005 National Resident Matching Program (NRMP) reflect a currently stable level of student interest in family medicine residency training in the United States. Compared with the 2004 Match, 19 more positions (66 fewer US seniors) were filled in family medicine residency programs through the NRMP in 2005, at the same time as four fewer (18 fewer US seniors) in primary care internal medicine, seven more in pediatrics-primary care (three fewer US seniors), and 12 fewer (21 fewer US seniors) in internal medicine-pediatrics programs. In comparison, 25 more positions (four more US seniors) were filled in anesthesiology but two fewer (14 fewer US seniors) in diagnostic radiology, two "marker" disciplines that have shown increases over the past several years. Many different forces, including student perspectives of the demands, rewards, and prestige of the specialty, the turbulence and uncertainty of the health care environment, lifestyle issues, and the impact of faculty and resident role models, continue to influence medical student career choices. Seven more positions (57 more US seniors) were filled in categorical internal medicine while 48 more positions (68 more US seniors) were filled in categorical pediatrics programs, where trainees perceive options for either practicing as generalists or entering subspecialty fellowships, depending on the market. With the needs of the nation, especially for rural and underserved populations, continuing to offer opportunities for family physicians, family medicine experienced another slight increase through the 2005 NRMP. The 2005 NRMP results suggest that interest in family medicine and primary care careers continues to be stable.

(Fam Med 2005;37(8):555-64.)

Family physicians meet the medical needs of people in American society. According to the recent Future of Family Medicine study,[1] what family physicians are prepared to deliver is just what Americans want. Family physicians are the only medical specialists who distribute themselves throughout America's communities in the same proportion as the population. The American Academy of Family Physicians (AAFP) is dedicated to assuring that there is a well-trained family physician available for everyone in America who wants and needs one. The AAFP is committed to assuring high-quality, innovative education for residents and medical students that embodies the art, science, and socioeconomics of family medicine.[2]

Through its comprehensive Student Interest Initiative, the AAFP has developed and implemented numerous projects since 1988 to increase student awareness of and interest in family medicine. Student activity on campuses and in family medicine interest groups and participation as student members of the AAFP continue each year. In 2005, student AAFP membership reached 18,700, nearly one third of all US medical students. The presence of departments of family medicine in all but 11 US medical schools, the establishment of required clinical clerkships in family medicine in more than 80% of medical schools, and increased opportunities for family medicine elective experiences have improved the environment of medical education.[3,4]

Despite those efforts, however, from the results of the 2005 National Resident Matching Program (NRMP), it is clear that US student interest in primary

From the director, Division of Medical Education (Dr Pugno); director, Division of Research and Information Services (Mr Schmittling); manager, Student Interest, Medical Education (Mr Fetter); and vice president, Science and Education (Dr Kahn), American Academy of Family Physicians, Leawood, Kan.

care, particularly in family medicine, remains of concern. Student perceptions of the demands, rewards, and prestige of the specialty, market changes, lifestyle priorities, and the influence of faculty and resident role models appear to be drawing medical students away from family medicine as a career choice.

2005 NRMP Results: Family Medicine

Family medicine residency programs offered 2,782 first-year positions through the 2005 NRMP, a decrease of 102 from 2004. On Match Day 2005, 2,292 of these positions were filled through the Match, an increase of 19 from 2004 for a fill rate of 82.4%, compared with 78.8% in 2004, 76.2% in 2003, 79.0% in 2002, 76.3% in 2001, and 81.2% in 2000 (Figure 1). A total of 66 fewer US seniors matched into family medicine residencies in 2005, compared with 2004 (1,132 versus 1,198)[5,6] (Figure 2).

Of those US seniors who successfully matched in 2005, 8.2% matched in family medicine, compared with 8.8% in 2004, 9.2% in 2003, 10.5% in 2002, 11.2% in 2001, and 13.6% in 2000. Of all participating US seniors in the 2005 NRMP, 7.7% matched in family medicine, compared with 8.2% in 2004, 8.6% in 2003, 9.9% in 2002, 10.5% in 2001, and 12.8% in 2000.[5,6] In 2005, the Pacific region had the highest fill rate in family medicine (93.3%), while the West North Central region had the lowest fill rate in family medicine (74.3%)[5] (Figure 3).

Figure 1

Family Medicine Positions Offered and Filled in March, 1992–2005

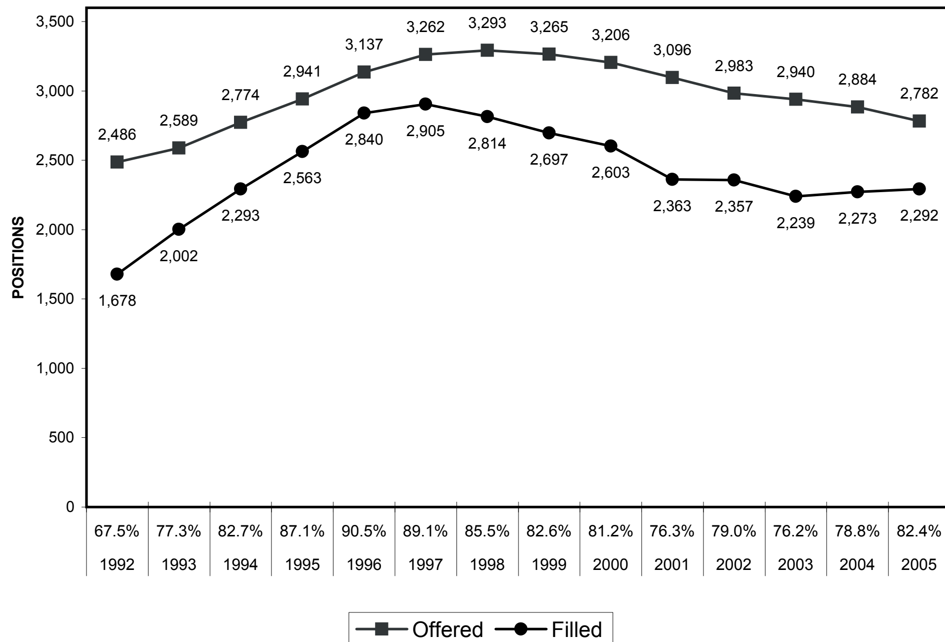


Figure 2

Family Medicine Positions Offered and Filled
With US Seniors in March, 1992–2005

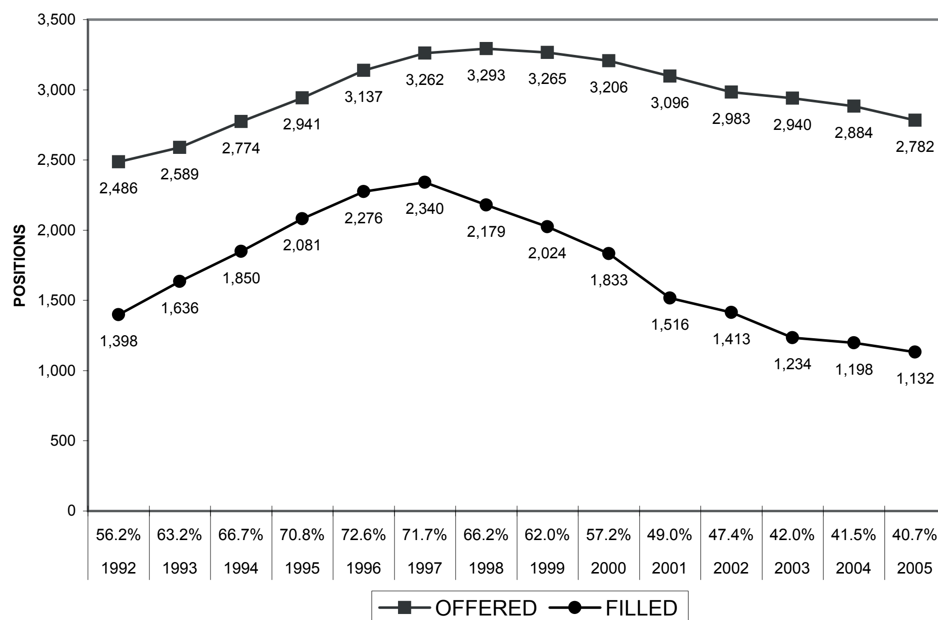
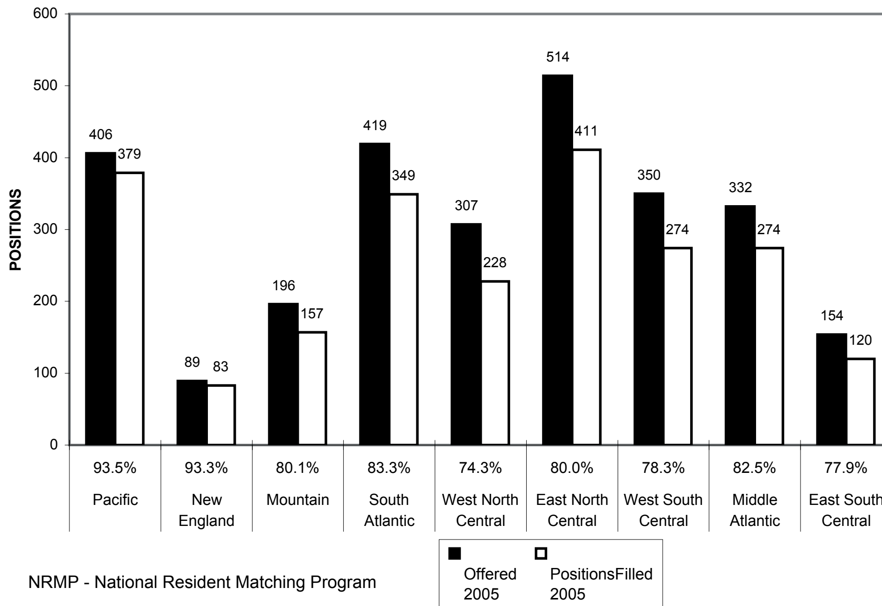


Figure 3

2005 NRMP Family Medicine Results by Regions



2005 (2,327) in pediatrics (all types), compared with 2004 (2,284), and the number of US seniors increased by 64 from 1,684 in 2004 to 1,748 in 2005. Categorical pediatrics programs matched 1,679 US seniors in 2005, 68 more than the 1,611 matched in 2004 (Figure 4). In 2005, 87 positions were offered in pediatrics-primary care programs, down from 95 in 2004, of which 45 were filled with US seniors, compared with 48 in 2004.[5,6]

More international medical graduates (IMGs) continue to match in internal medicine (1,985 into categorical, preliminary, primary care, and internal medicine-pediatrics), compared with pediatrics (377) and family medicine (838). Similarly, among the matched IMGs, the percentage of non-US citizens is higher in internal medicine (78.6%), compared with pediatrics (69.8%) and family medicine (66.6%).[5] Among the 24 major specialties of medicine, family medicine ranks seventh in the percentage of IMG residents (Figure 6). Compared with the 15 subspecialties of internal medicine, family medicine would rank 13th in the percentage of IMG residents (Figure 7).

In addition to US MD seniors in 2005 who filled 49.4% of matched positions in family medicine, 1,160 other graduates matched in family medicine in 2005, compared with 1,075 in 2004, 1,005 in 2003, 944 in 2002, 847 in 2001, and 770 in 2000. These include 558 (484 in 2004) non-US citizens educated internationally (24.3%), 242 (271 in 2004) graduates of colleges of osteopathic medicine (10.6%), 280 (257 in 2004) US citizens educated internationally (12.2%), 60 (55 in 2004) physicians who graduated from US medical schools prior to 2004 (2.6%), 16 (eight in 2004) "fifth pathway" students (0.7%), and four (six in 2004) Canadian medical school graduates (0.2%).[5,6]

Comparison With Other Disciplines

More US seniors matched in categorical internal medicine residencies, increasing by 57 from 2,602 in 2004 to 2,659 in 2005. Also, 55 more US seniors chose preliminary internal medicine positions (students who choose to complete 1 year of internal medicine before continuing in another specialty): 1,526 in 2005, compared with 1,471 in 2004, 1,468 in 2003, and 1,298 in 2002[5,6] (Figure 4).

Eighteen fewer US seniors chose careers in primary care internal medicine through the 2005 Match (170), compared with 2004 (188). Twenty-one fewer US seniors chose combined internal medicine-pediatrics training in 2005 (275), compared with 2004 (296)[5,6] (Figure 5). Forty-three more positions were filled in

July Fill Rate

Since 1987, more positions have been offered in family medicine residencies in July than are offered through the NRMP in March. This July increase was due to program expansion between 1990 and 1998 and to the net addition of newly accredited programs that became ready to accept first-year residents (Figure 8). Since 1998, this difference may be partially due to the number of positions filled outside of the NRMP process. The highest July fill rate (98.7%) was in 1984, after which July fill rates decreased to 88.3% in 1991.[6] The 2005 July fill rate in family medicine residencies was 96.8% (3,282 of 3,389), a decrease of 112 positions offered and an increase of seven positions filled, compared with 2004, when the July fill rate was 93.5%.[7]

On July 1, 2005, 9,780 residents were training in 459 programs, an average of 21.3 per program, compared with 9,825 (21.2 per program) in 2004, 9,995 (21.1 per program) in 2003, 10,130 (21.7 per program) in 2002, 10,262 (21.9 per program) in 2001, 10,503 (22.3 per program) in 2000, 10,632 (22.4 per program) in 1999, 10,687 (23.0 per program) in 1998, 8,513 (20.8) in 1994,

and a nadir of 7,279 (19.1) in 1988. There are currently 3,282 first-year residents, an average of 7.2 per program, compared with 3,275 (7.1 per program) in 2004, 3,329 (7.0 per program) in 2003, 3,360 (7.2 per program) in 2002, 3,399 (7.2 per program) in 2001, and 3,475 (7.4 per program) in 2000.[7]

Figure 4

Comparison of Potentially Non-Primary Care Positions Filled With US Seniors in March, 1997–2005

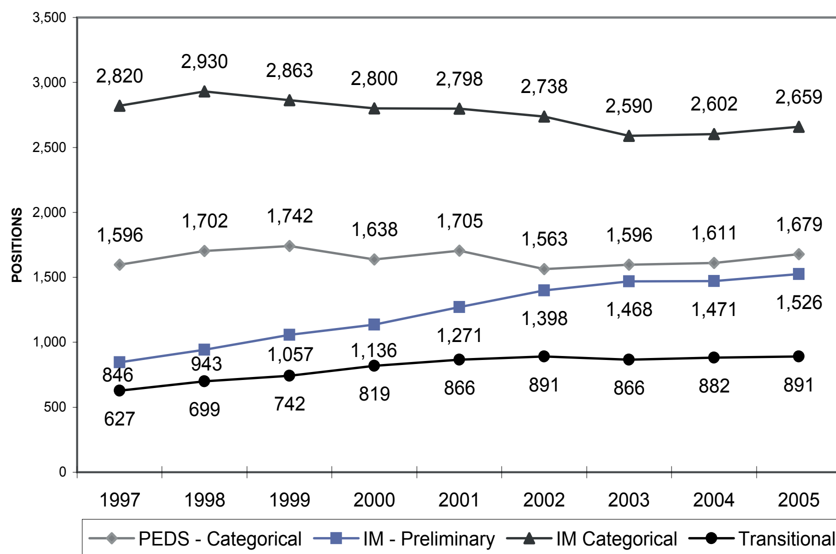
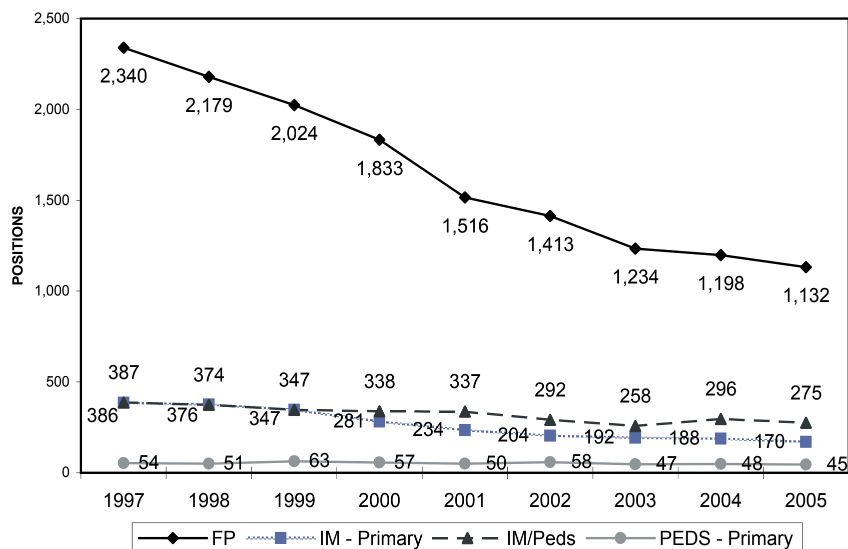


Figure 5

Comparison of Primary Care Positions Filled With US Seniors in March, 1997–2005



Graduates of colleges of osteopathic medicine filled 520 first-year positions (15.8%) in July 2005, compared with 498 (15.2%) in 2004, 481 (14.4%) in 2003, 452 (13.5%) in 2002, 461 (13.6%) in 2001, 378 (10.9%) in 2000, 355 (10.0%) in 1999, 362 (10.1%) in 1998, and 232 (7.6%) in 1994.[7] In 1981, the DO fill rate was 2%.[5,6] This increase in osteopathic graduates selecting allopathic family medicine programs is likely to be due to the recent increase in dually accredited residency programs, from 26 in 2003 to 51 in 2005.[8]

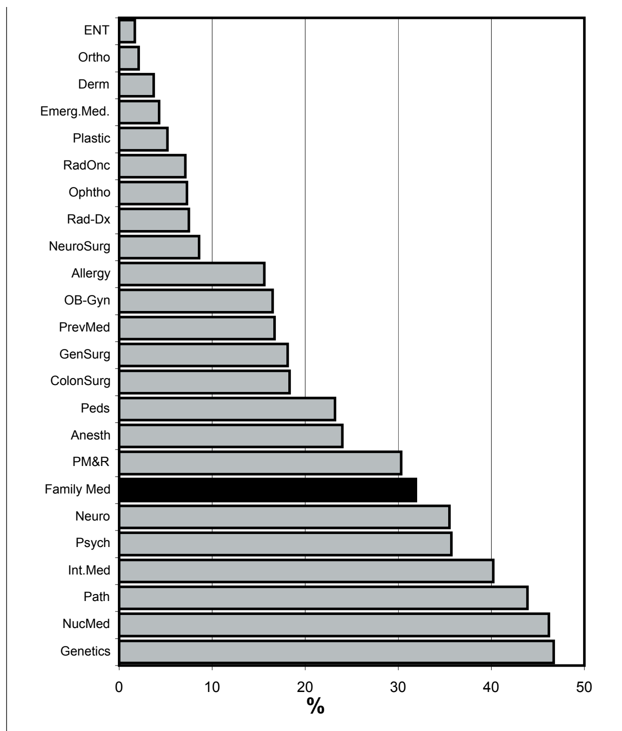
In July 2005, 1,299 (39.6%) of the 3,282 first-year family medicine residents were IMGs, compared with 1,257 (38.4%) in 2004, 1,241 (37.3%) in 2003, 1,087 (32.4%) in 2002, 1,001 (29.4%) in 2001, 789 (22.7%) in 2000, 659 (18.6%) in 1999, and 523 (14.7%) in 1998. A total of 698 (21.3%) first-year residents were non-US citizen IMGs, compared with 618 (18.9%) in 2004, 579 (17.4%) in 2003, 466 (13.9%) in 2002, 430 (12.6%) in 2001, and 351 (10.1%) in 2000. A total of 601 (18.3%) were US citizen IMGs, compared with 639 (19.5%) in 2004, 662 (19.9%) in 2003, 621 (18.5%) in 2002, 571 (16.8%) in 2001, and 438 (12.6%) in 2000.[6,7] Interestingly, of the 461 IMGs (compared to 516 in 2004) who entered PGY-1 positions in family medicine residencies after the 2005 Match, 69.6% (compared with 74.0% in 2004) were US citizens. Factors affecting this year's differences are likely to be the increased involvement of osteopathic medical graduates and the continued challenges associated with noncitizens obtaining visas to train in the United States (Figure 9).

Discussion

After 6 consecutive years of increases (1992–1997) and 4 consecutive years (1994–1997) of all-time records set in positions filled in family medicine residency programs, then followed by 6 consecutive years of decline, 2005 represents the second increase in positions filled in family medicine through the NRMP since 1997. Reviewing the Match performance of other specialties for the same time period suggests varying

Figure 6

% IMGs in ACGME Residencies, August 1, 2003

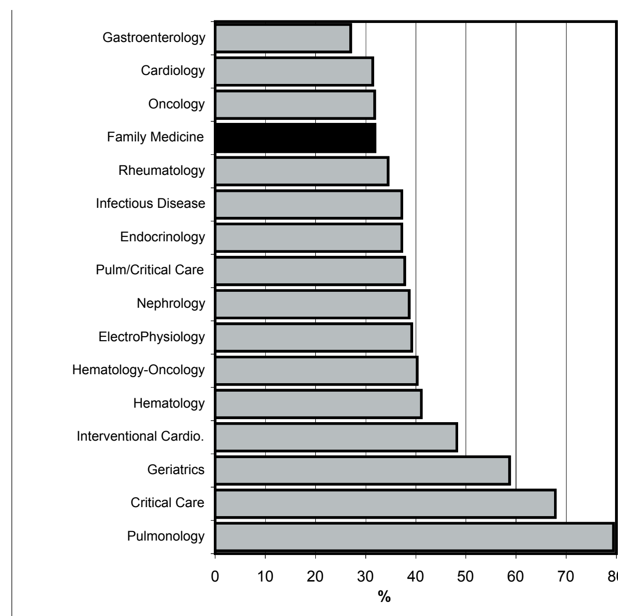


IMG—international medical graduate
ACGME—Accreditation Council for Graduate Medical Education

Source: The percentage of international medical graduates training in ACGME-accredited residency programs on August 1, 2003. JAMA 2004;292(9):1099-113.

Figure 7

% IMGs in ACGME Residencies, August 1, 2003



IMG—international medical graduate
ACGME—Accreditation Council for Graduate Medical Education

Source: The percentage of international medical graduates training in ACGME-accredited residency programs on August 1, 2003. JAMA 2004;292(9):1099-113.

trends. For example, anesthesiology decreased from 163 US seniors in 1994 to 43 in 1996. That trend reversed by increasing from 118 in 1998 to 326 US seniors in 2005. Diagnostic radiology matched 243 US seniors in 1996, dropped to 79 in 1997, then increased to 114 in 2000 and 124 in 2001, decreased to 108 in 2002, and again increased to 116 in 2003 and 121 in 2004[5,6] and decreased again to 107 in 2005.

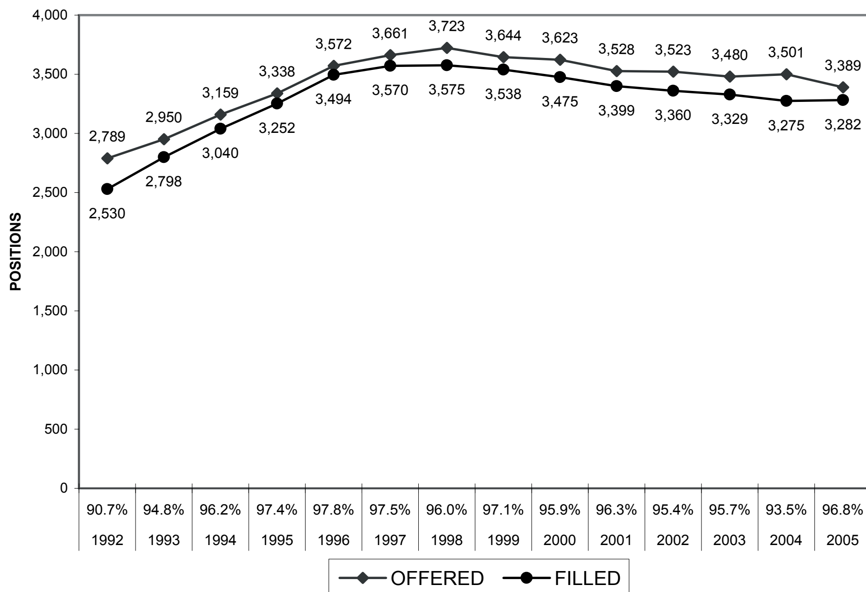
By comparison, family medicine had increased steadily for 6 years from 1991 through 1997. Family medicine gained 966 US seniors in the Match over that period. However, although the overall Match numbers increased again in 2005, over the past 8 years, family medicine has lost 1,208 US seniors in the Match or 51.6% of the record number of US seniors matching in 1997.[5,6]

Family medicine's primary care colleagues experienced varied trends in the 2005 Match as well. Internal medicine-primary care offered five fewer positions this year and, for the eighth year in a row, has experienced a steady decline in positions filled (528 in 1998, 505 in 1999, 445 in 2000, 369 in 2001, 321 in 2002, 298 in 2003, 284 in 2004, and 280 in 2005) and in positions filled by US seniors (376 in 1998, 347 in 1999, 281 in 2000, 234 in 2001, 204 in 2002, 192 in 2003, 188 in 2004, and 170 in 2005). Combined internal medicine-pediatric residencies filled 12 fewer positions (340 in 2005 versus 352 in 2004) and with 21 fewer US seniors (275 in 2005 versus 296 in 2004). In combined internal medicine-pediatrics, the fill rate was lower than in 2004 for both total positions (87.2% versus 88.0%) and for positions filled with US seniors (70.5% versus 74.0%). In internal medicine-categorical, more positions were offered in 2005, compared with 2004 (4,768 versus 4,751), with a higher fill rate than in 2004 for total positions (97.2% versus 97.4%), but a higher rate for positions filled with US seniors (55.8% versus 54.8%).[5,6]

In the 2005 Match, pediatrics similarly had variable results in both positions filled and those filled with US seniors. Pediatrics-primary care decreased its positions filled from 94 in 2004 to 87 in 2005. Its overall fill percentage increased from 98.9% in 2004 to 100% in 2005, and with an increase in positions filled with US seniors from 50.5% in 2004 to 51.7% in 2005.

Figure 8

Family Medicine Positions Offered and Filled in July, 1992–2005



Pediatrics-categorical increased both its overall positions filled in 2005 from the prior year (2,211 versus 2,163) and in those positions filled with US seniors (1,679 versus 1,611).[5,6]

Internal medicine-preliminary, for the eighth year in a row, increased its number of positions offered (1,987 versus 1,887) as well as the positions filled (1,803 versus 1,685) and those filled with US seniors (1,526 versus 1,471). Consequently, for internal medicine-preliminary, the overall fill percentage increased in 2005 (90.7% versus 89.3%), but the percentage filled with US seniors decreased (76.8% versus 78.0%). It is noteworthy that for transitional residency programs, fewer positions were offered this year than last (1,017 versus 1,065), with fewer positions filled overall (967 versus 990) and more filled with US seniors (891 versus 882). The percentage of transitional-year residencies filled with US seniors increased from 82.8% in 2004 to 87.6% in 2005.[5,6]

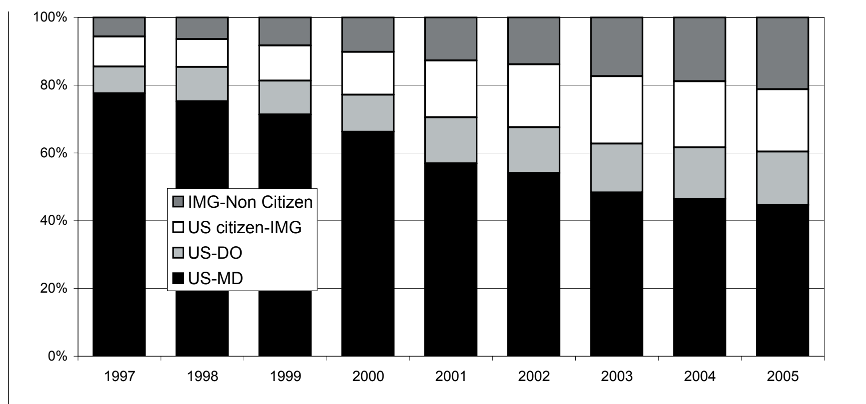
In 2005, there is a movement of US seniors away from family medicine, internal medicine-primary care, internal medicine-pediatrics, and pediatrics-primary care. From categorical internal medicine, where students have the option of either a subspecialty or a primary care career, the number of US seniors increased. US students are also choosing preliminary internal medicine and categorical pediatrics residencies where they are more likely to be headed for subspecialty careers.

Controversy persists within the OB-GYN community between those who view the specialty as primary care and those who perceive a more-surgical orientation. After 4 years of decreases from 1998 to 2001, and a slight increase in 2002, OB-GYN residencies in 2003 and 2004 experienced a decrease in positions filled with US seniors (743 in 2004 and 786 in 2003 versus 848 in 2002) but in 2005 increased in both total positions filled (1,083 in 2005 versus 1,066 in 2004)[5] and positions filled with US seniors (772 in 2005 versus 743 in 2004).

In the 2005 NRMP, of all the primary care programs, only family medicine experienced an increase in filled positions since 2004. All primary care programs except internal medicine-pediatrics experienced an increase in the rate of positions filled of those offered in 2005. The fill rate for family medicine increased 3.6%, internal medicine-primary care increased 0.3%, pediatrics-primary care increased 1.1%, but internal medicine-pediatrics decreased 3.7%.

Figure 9

Family Medicine Resident Types–July



IMG—international medical graduate

Contributors to Recent Trends

A study of the factors influencing medical students in their choice of family medicine was commissioned by the AAFP and conducted in 2002 by faculty of the University of Arizona Department of Family and Community Medicine. The "Arizona Study" provided a new evidence-based foundation from which to plan responses to declining student interest. Numerous studies continue to attempt to identify and understand drivers of student interest in family medicine.[9,10]

Multiple factors appear to contribute to the current 8-year trend of decreased interest by US seniors in family medicine. Increasingly apparent is the perception by students that family medicine lacks the prestige of other specialties within academic health centers.[1,11] Disparaging remarks made to medical students about an interest in family medicine by faculty and residents is a commonly cited experience.[12,13] This is unfortunately aggravated by the experiences of some students who indicate that their third-year clerkships in family medicine lack some of the intellectual rigor and direct clinical experience of other core clerkships.[3] This supports the misconception that being a family physician is "too easy" for the typically motivated medical student. Frequently, the additional set of knowledge, skills, and attitudes required to provide patient-oriented care is not captured and valued in a subspecialist-oriented medical curriculum.[14]

At the other end of the spectrum, some medical students report concerns associated with family medicine because it is "too hard," questioning physicians' capacity to master the content needed to practice comprehensive, evidence-based medicine.[1,11] In part, these concerns may explain the observation that students selecting internal medicine-pediatrics share many values with those selecting family medicine.[15] This perspective has been exacerbated by the challenges of primary care practice in an environment of increased penetration of over-managed care and burdensome regulatory oversight. Often, the inability to successfully translate the realities of a motivating and successful practice into medical students' experiences results in student experiences with family physicians that make their practices appear unattractive to students.[16-21] The extent to which physicians voice dissatisfaction can dissuade medical school graduates from choosing careers in primary care.[22]

As medical school indebtedness continues to escalate to an average of more than $100,000 at graduation, consideration must be given to the motivation of the applicant pool toward primary care careers.[23] This may be especially true from the perspective of older nontraditional students, minorities, or students from disadvantaged backgrounds, all of whom have been more likely to choose careers in family medicine. As a result of the perception of nearly insurmountable debt, these potential applicants may be unwilling to even consider a career in medicine, thereby decreasing diversity in the workforce and exacerbating disparities in health care.[24] Except for a few model programs that preferentially select students likely to enter rural or medically underserved areas of practice, medical school admission committees may therefore be less often prioritizing among applicants whose characteristics are associated with the selection of primary care careers, particularly family medicine. The effect of this pipeline drain may minimize the apparent impact of educational debt on medical student specialty choice.[25-30]

The infrastructure of US medical education continues to play a powerful role in determining how many graduates enter family medicine residencies. The presence of a well-funded department of family medicine and the number of faculty are correlated with the higher percentage of medical students entering family medicine residencies[24-26,31-35] as well as internal medicine and pediatric residencies.[31] One of the most important variables for predicting the proportion of students at a medical school who choose family medicine is the proportion of faculty who are family physicians.[32] In 2005, 11 US medical schools remain without a department of family medicine. Similarly, the presence in the curriculum and the duration of a required clinical clerkship in family medicine are correlated with more students choosing family medicine residencies.[25,26,31-36] Medical school characteristics such as family medicine clerkships, communications skills courses, and curricula in medical ethics, humanities, and social sciences in medicine play a central role in the development of physicians committed to the well-being of others.[37] In February 1993, the Liaison Committee on Medical Education (LCME), which accredits US medical schools, created parity by recommending clinical curricula in family medicine along with the other five core disciplines (internal medicine, OB-GYN, pediatrics, psychiatry, and surgery).[38] More than a decade later, 13 LCME-accredited US medical schools still do not have required clinical clerkships in family medicine.[29,39]

The year 2005 is now the seventh in a row in which fewer positions were offered in family medicine through the Match than the year before (2,782 versus 2,884). For 2005, there was also a small decrease in the number of positions offered in July (3,389 in 2005 versus 3,501 in 2004), and there was another decrease in the number of functioning family medicine programs (459 in 2005 versus 464 in 2004). This decrease in programs is the result of a complex interplay of transitional forces in the marketplace. Among those changes are the continued reductions in federal support for GME through the Medicare program. Such financial pressures have been identified as pivotal in the closure of many family medicine residencies over the past 5 years.[40]

Finally, the turbulence of the US health care environment[41-46] and increasing student debt[47] support the appearance of medical students selecting careers that provide them both economic and practice security. High Match percentages in diagnostic radiology, anesthesiology, and emergency medicine support trends toward physician practice with a high income coupled with predictable work hours and lifestyle.[47] For many students, the level of compensation within a discipline may serve as a proxy for the prestige and market demand for that specialty. While greater than $140,000 per year on average, the current reported net income for family physicians remains significantly lower than for most other specialists.[48]

In 2005, 66 fewer US seniors chose family medicine through the NRMP than the previous year, while more US seniors chose internal medicine-preliminary and categorical pediatric residencies. High Match rates in transitional residencies and preliminary internal medicine programs provide trainees with the opportunity to further observe the health care environment and to take advantage of the career path options those preliminary training programs provide. This trend also appears to be impacting other nations, with the British Medical Association and Canada predicting a shortage of general practitioners and family physicians for many of the same reasons.[49,50]

As the specialty most identified with and attracting the largest number of students interested in primary care, it's not surprising that family medicine has experienced the largest share of the shift in interest among US medical students. The magnitude of this shift represents the 1,208 fewer US seniors choosing family medicine residencies in 2005, compared with 1997, or an average of 9.6 students per medical school.

Conclusions

The AAFP continues to focus efforts on analyzing the current generation of premedical and medical students, reflecting their interests and addressing their concerns.[51] The current number of family medicine residencies has decreased from 464 in 2004 to 459 in 2005, with fewer than 3,300 residents in each of the 3 years of training. This is approximately 300–600 below the number of annual graduates needed to achieve the projected family physician workforce needed for the nation.[52] Evidence is mounting that a health system built on a foundation of primary care is not only ideal in terms of patient care outcome,[53] but it is also what patients want.[54] In a recent national study, 30% of medical school deans and 54% of medical societies agree there is a national shortage of family physicians and general internists.[55] The 2004 reports from the federal Council on Graduate Medical Education[56] and the 2004 Workforce Report from the Robert Graham Center[57] both suggest an impending national physician shortage. The United States continues to cope with persistent pockets of underserved populations in rural areas, those populated by ethnic minority groups, and in areas of relatively low socioeconomic status. Generalists make up fewer than 40% of total physicians, while family physicians represent 40% of generalist physicians in the United States.[52] However, family physicians are the most likely specialty to practice as generalists, as well as to serve rural and underserved populations.[58-60] If all family physicians were withdrawn, 58% of all US counties would become Primary Care Health Professions Shortage Areas (PCHPSAs). By contrast, if all general internists, pediatricians, and obstetricians-gynecologists combined were similarly withdrawn, fewer than 8% of counties would become PCHPSAs.[60]

Subspecialists providing care to Medicare patients are less likely than generalists to provide comprehensive primary care services and focus on the management of a narrower range of diagnoses.[61] In addition, patients value the role of primary care physicians in providing first contact and continuous management of their care in complex integrated delivery systems.[11,62,63] The current imbalance of subspecialists versus generalists in the United States compromises the achievement of universal health care access for all and limits the nation's capacity to meet not only the demands of today's health care marketplace but also to meet the needs of the nation's most vulnerable populations.

Over the past 8 years, 12,529 US seniors did match to family medicine residencies in spite of the often-negative influences from within and outside of the medical education environment. Thus, the 1,132 US seniors who chose family medicine in the 2005 Match appear to be resistant to conflicting environmental messages and clear in their commitment to serving the nation as family physicians, perhaps because of both personal characteristics and medical school features that support their choice.

In May 2004, in conjunction with the organizations of family medicine and other stakeholders, a Student Interest Summit was conducted to develop strategies aimed at affecting the modifiable factors associated with student interest in family medicine as defined by this evidence. The Summit resulted in recommendations that are presently being implemented. Efforts are in process to attract and retain those students who are both intellectually qualified and demonstrate the personal attributes essential to a career in family medicine. Recommendations include the identification and integration into medical school curricula of exceptional practices to strengthen the attitudes and behaviors that characterize medical professionalism. Additionally, emphasis is being placed on recruiting, developing, and retaining competent, positive family physician role models to interact with medical students interested in family medicine.

The "family" of family medicine (AAFP, Association of Departments of Family Medicine, Association of Family Medicine Residency Directors, North American Primary Care Research Group, and Society of Teachers of Family Medicine) continues its challenge to identify strategic interventions that will support the interests of medical students seeking a career in family medicine. In response to that challenge, the Family Medicine Working Party undertook the Future of Family Medicine (FFM) project, with task forces to identify the core attributes of family medicine, to reform family medicine to meet consumer expectations, to determine systems of care to be delivered by family medicine, and to determine the training needed for family physicians to deliver core attributes and system services.[1]

Notable among the findings of the national market research conducted in the FFM project are that people in America value what family physicians offer, namely a personal medical home wherein they experience a continuous relationship. Within that primary medical relationship, people want, expect, and value a set of services, including acute care, chronic care, disease prevention, care in the hospital setting, and primary mental health care. Family physicians are both prepared to deliver what people want, expect, and value and are satisfied with their abilities to deliver it. The discipline faces a handful of now clearly identified challenges as it prepares for the next generation of care: clearly communicating about the specialty of family medicine to the public, organizing individual practices into a recognized brand, challenging the disrespectful climate of academia, enhancing reimbursement, and communicating the attractiveness of a career in family medicine.

Over the course of the past year, the "family" of family medicine organizations has been crafting strategies to carry out the recommendations to enhance student interest and initiate new programs to renew the specialty. Those strategies can be grouped into four areas of focus: (1) premedical students and medical school admissions, (2) communications and the public image of family medicine, (3) mentoring and role modeling initiatives, and (4) the medical school curriculum. Family medicine departments and residencies will soon have a new array of tools to promote the discipline and support student interest. Will the initiatives prompted by evidence from the "Arizona Study" and the Student Interest Summit or guided by recommendations from the FFM project affect the current trends? As long as family physicians continue to provide compassionate, continuing, comprehensive, and quality care to their patients in the context of their families and communities, aspiring physicians who share those same patient-centered values will continue to choose careers in family medicine. The results of the 2005 Match and the subsequent filling of residency positions in family medicine give cause for optimism that the decline in US seniors' interest in family medicine careers may be slowing and that with the student interest efforts of the "family" of family medicine, that trend will eventually reverse itself—to the ultimate benefit of the nation.

Corresponding Author: Address correspondence to Dr Pugno, American Academy of Family Physicians, 11400 Tomahawk Creek Parkway, Leawood, KS 66211. 913-906-6000. Fax: 913-906-6092. ppugno@aafp.org.

References

1. Martin JC, Avant, RF, Bowman MA, et al; Future of Family Medicine Project Leadership Committee. The future of family medicine: a collaborative project of the family medicine community [on-line]. Ann Fam Med 2004;2(suppl 1): S3-S32. Available at www.annfammed.org/cgi/content/full/2/suppl_1/S3.
2. American Academy of Family Physicians. 2004–2005 strategic plan. Leawood, Kan: American Academy of Family Physicians, 2005.
3. American Academy of Family Physicians. Report of the Task Force on Student Interest. Leawood, Kan: American Academy of Family Physicians, 2000.
4. Block SC, Clark-Chiarelli N, Peters AS, Singer JD. Academia's chilly climate for primary care. JAMA 1996;276:677-82.
5. National Resident Matching Program. Results and data: 2005 Match. Washington, DC: National Resident Matching Program, April 2005.
6. Pugno PA, McPherson DS, Schmittling GT, Fetter GT, Kahn NB Jr. Results of the 2004 National Resident Matching Program: family medicine. Fam Med 2004;36(8):562-70.
7. American Academy of Family Physicians. American Academy of Family Physicians' residency census survey. Reprint no. 150. Leawood, Kan: American Academy of Family Physicians, 2005.
8. American College of Osteopathic Family Physicians. Dual-accredited program listings. Arlington Heights, Ill: American College of Osteopathic Family Physicians, 2005.
9. Campos-Outcalt D, Senf JH, Kutob RM. A comparison of primary care graduates from schools with increasing production of family physicians to those from schools with decreasing production. Fam Med 2004;36(4):260-4.
10. Hueston HJ, Bradford WD, Shepherd TM. Family medicine and hospital specialty Match rates: does the economy have anything to do with it? Fam Med 2004;36(4):265-9.
11. Schafer S, Shore W, French L, Tovar J, Hughes S, Hearst N. Rejecting family practice: medical students switching to other specialties. Fam Med 2000;32(5):320-5.
12. Ahmed SM. All in the family of medicine. BMJ 2001;322:488.
13. Campos-Outcalt D, Senf JH, Kutob RM. Comments heard by US medical students about family practice. Fam Med 2003,35(8):573-8.
14. Noble J, Bithoney W, MacDonald P, et al. The core content of a generalist curriculum for general internal medicine, family practice, and pediatrics. J Gen Intern Med 1994;9(4 suppl):S31-S42.
15. Senf JH, Kutob RM, Campos-Outcalt D. Which primary care specialty? Factors that relate to a choice of family medicine, internal medicine, combined internal medicine-pediatrics, or pediatrics. Fam Med 2004;36(2):123-30.
16. Lynch DC, Newton DA, Grayson MS, Whitley TW. Influence of medical school on medical students' opinions about primary care practice. Acad Med 1998;73:433-5.
17. DeWitt DE, Curtis JR, Burke W. What influences career choices among graduates of a primary care training program. J Gen Intern Med 1998;13:257-61.
18. Martini CJM, Veloski JJ, Barzansky B, Xu G, Fields SK. Medical schools and student characteristics that influence choosing a generalist career. JAMA 1994;272:661-8.
19. Flocke SA, Orzano AJ, Selinger, HA, et al. Does managed care restrictiveness affect the perceived quality of primary care? A report from ASPN. J Fam Pract 1999;48:762-8.
20. White B. Are the edges of family practice being worn away? Fam Pract Manag 2000;7(2):35-40.
21. Sommers LC, Hacker TW, Schneider DM, Pugno PA, Garrett JB. A descriptive study of managed care hassles in 26 practices. West J Med 2001;174:175-9.

22. Devoe J, Fryer GE, Horgraves JL, Phillips RL, Green LA. Does career dissatisfaction affect the ability of family physicians to deliver high-quality care? J Fam Pract 2002;51(3):223-8.
23. AAMC data book: statistical information related to medical schools and teaching hospitals, January 2003. Washington, DC: Association of American Medical Colleges, 2003:7,47.
24. American Medical Association. As debt builds, members speak out. AMA Voice 2005;July:6.
25. Bland CJ, Meurer LN, Maldonado G. Determinants of primary care specialty choice: a nonstatistical meta-analysis of the literature. Acad Med 1995;70:620-41.
26. Bowman MA, Haynes RA, Rivo ML, Killian CD, Davis H. Characteristics of medical students by level of interest in family practice. Fam Med 1996;28(10):713-9.
27. Newton DA, Grayson MS, Whitley TW. What predicts medical student career choice? J Gen Intern Med 1998;13:200-3.
28. Schubot DB, Cayley W, Eliason BC. Personal values related to primary care specialty aspirations. Fam Med 1996;28(10):726-31.
29. Pugno PA, Schmittling GT, Kahn NK Jr. Entry of US medical school graduates into family medicine residencies: 2004–2005 and 3-year summary. Fam Med 2005;37(8):546-54.
30. Godkin M, Quirk M. Why students chose family medicine: state schools graduating the most family physicians. Fam Med 1991;23:521-6.
31. US General Accounting Office. Report to Congressional requesters: medical education: curriculum and financing strategies need to encourage primary care training. GAO/HEHS-95-9. Washington, DC: US General Accounting Office, October 1994.
32. Campos-Outcalt D, Senf JH, Watkins AJ, Bastacky S. The effects of medical school curricula, faculty role models, and biomedical research support on choice of generalist physician careers: a review and quality assessment of the literature. Acad Med 1995;70:611-9.
33. Kahn NB Jr. Medical schools can indeed produce family physicians. Fam Med 1996;28(6):439-40.
34. Senf JH, Campos-Outcalt D, Watkins AJ, Bastacky S, Killian C. A systematic analysis of how medical school characteristics relate to graduates' choices of primary care specialties. Acad Med 1997;72:524-34.
35. Campos-Outcalt D, Senf JH. A longitudinal, national study of the effect of implementing a required third-year family practice clerkship or department of family medicine on the selection of family medicine by medical students. Acad Med 1999;74(9):1016-20.
36. Kassebaum DG, Haynes RA. Relationship between third-year clerkships in family medicine and graduating students' choice of family practice careers. Acad Med 1992;67:217-9.
37. Coulehan J, Williams PC. Vanquishing virtue: the impact of medical education. Acad Med 2001;76:598-605.
38. Liaison Committee on Medical Education. Functions and structure of a medical school. Accreditation and the Liaison Committee on Medical Education: standards for accreditation of medical education programs leading to the MD degree. Joint publication of the Association of American Medical Colleges (Washington, DC) and the American Medical Association (Chicago), 1993.
39. Barzansky B, Etzel SI. Educational programs in US medical schools, 2001–2002. JAMA 2002;288(9):1067-72.
40. Gonzalez EH, Phillips RL, Pugno PA. A study of closure of family practice residency programs. Fam Med 2003;35(10):706-10.
41. Uncertainty continues as health systems seek workable models. Fam Pract Manag 2000;7(1):23.
42. New physicians frustrated by coding, managed care, journal deluge. Fam Pract Manag 2000;7(1):22.
43. Kuzel AJ, Moore SS. Choosing a specialty during a generalist initiative: a focus group study. Fam Med 1999;31(9):641-6.
44. Seifer SD, Troupin B, Rubenfeld GD. Changes in marketplace demand for physicians. JAMA 1996;276:695-9.
45. Miller RD, Dunn MR, Whitcomb ME. Initial employment status of resident physicians completing training in 1995. JAMA 1997;277:1699-1704.
46. Terry K. Primary care feels the job squeeze. Med Econ 1999;July 12:194-205.
47. Proctor J. Medical school debt: making sense of life in the red. AAMC Reporter 2000;9(6):10-1.
48. American Academy of Family Physicians. Practice profile survey, 2005. Leawood, Kan: American Academy of Family Physicians, 2005.
49. Reuters Health, London, April 4, 2001.
50. Wright B, Scott C, Woloschuk W, Brenneis F. Career choice of new medical students at three Canadian universities: family medicine versus specialty medicine. CMAJ 2004;170(13):1920-4.
51. Garner JG, Scherger JE, Beasley JW, et al. Responses to questions about the specialty of family practice as a career. Am Fam Physician 1999;60(1):167-74.
52. American Academy of Family Physicians. Family physician workforce reform: recommendations of the American Academy of Family Physicians. AAFP reprint no. 305. Leawood, Kan: American Academy of Family Physicians, 1998.
53. Starfield B, Shi L, Grover A, Macinko J. The effects of specialists' supply on populations' health: assessing the evidence. Health Affairs 2005;March 15. Available at www.healthaffairs.org/cgi/content/abstract/hlthaff.w5.97.
54. Larson EB, Grumbach K, Roberts KB, Laine C. The future of generalism in medicine. Ann Intern Med 2005;142(8):689-90.
55. Cooper RA, Stoflet SJ, Wartman SA. Perceptions of medical school deans and state medical society executives about physician supply. JAMA 2003;290(22):2992-5.
56. Council on Graduate Medical Education. 16th report: physician workforce policy recommendations for the United States 2000–2020. Rockville, Md: Department of Health and Human Services, Health Resources and Services Administration, January 2005.
57. Green LA, Dodoo MS, Reddy G, et al. The physician workforce of the United States: a family medicine perspective, 2004. Washington, DC: Robert Graham Center, 2004. Available at: www.graham-center.org/x570.xml. Accessed July 18, 2005.
58. Kahn NB Jr, Schmittling G, Ostergaard DJ, Graham R. Specialty practice of family practice residency graduates, 1969–1993: a national study. JAMA 1996;275:713-5.
59. Burnett WH, Mark DH, Midtling JE, Zellner BB. Primary care physicians in underserved areas: family physicians dominate. West J Med 1995;163:532-6.
60. The United States relies on family physicians, unlike any other specialty (Policy Center One-Pager #5). Washington, DC: American Academy of Family Physicians Robert Graham Center: Policy Studies in Family Practice and Primary Care, April 14, 2000.
61. Rosenblatt RA, Hart LG, Baldwin L, Chan L, Schneeweiss R. The generalist role of specialty physicians: is there a hidden system of primary care? JAMA 1998;279:1364-70.
62 Grumbach K, Selby JV, Damberg C, et al. Resolving the gatekeeper conundrum: what patients value in primary care and referrals to specialists. JAMA 1999;282:261-6.
63. Green LA, Fryer GE, Yawn BP, Lanier D, Dovey SM. The ecology of medical care revisited. N Engl J Med 2001;344:2021-5.