



Specialty Choices Among Second Year Medicine and Pediatric Residents




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Preface

The Center for Health Workforce Studies at the School of Public Health, University at Albany, State University of New York, has conducted a number of surveys to examine a variety of aspects related to allergist workforce issues at the request of the American Academy for Allergy, Asthma, and Immunology. The data collection and analyses generated by the Center have identified and examined the trends and dynamics affecting the supply, demand, and distribution of allergists at the present time and in the future.

The Center has generated a number of reports on the analyses of the responses to various surveys, including: a historical report, “The Supply, Demand and Distribution of Allergists and Immunologists in the United States: A Descriptive Analysis,” (May 1999); a profile of practicing allergists, “Physicians Providing Allergy and Immunology services in the United States: Results of the Survey of Physicians Providing Allergy and Immunology Services in the United States, 1999,” (March 2000); a comprehensive assessment of the specialty, “The Allergy and Immunology Physician workforce 2000,” (June 2000); a brief examination of managed care and allergy practice, “Managed Care and Allergy and Immunology Practice,” (February 2001); and two graduate medical education tracking reports, “Allergy and Immunology GME Surveys 2000, (January 2001) and “Allergy and Immunology GME Surveys 2001,” (January 2002).

The current report summarizes the Center’s efforts to address an important issue for allergy and immunology: factors that influence specialty choice among medical residents. To examine this issue, the Center conducted a literature review to generate a list of factors that are influential to specialty choice, especially in relation to general medicine (family practice, internal medicine, pediatrics) and further subspecialization in the discipline of allergy and immunology. A survey of second year (PGY-2) internal medicine and pediatric residents was also conducted by the Center to solicit, firsthand, current information about the factors that influence specialty choice. Finally, the Center identified and examined the most influential factors on specialty choice and developed recommendations of potential strategies to increase interest in allergy and immunology among medical residents.



The Center for Health Workforce Studies is dedicated to the collection, analysis, and distribution of health workforce data to assist health professionals, educational organizations, policy makers, and the public with their understanding of the issues related to the supply, demand, and use of health workers and professionals. This report was prepared by Karilyn Puccio, Gaetano J. Forte, Mark Beaulieu, Michael Ayers, and Edward S. Salsberg.

The views expressed in this report are those of the Center for Health Workforce Studies and do not necessarily represent positions or policies of the School of Public Health, University at Albany, the State University of New York, or the American Academy of Allergy, Asthma, and Immunology.

February 2002

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Overview and Summary

In its previous examinations of the allergy and immunology workforce, the Center for Health Workforce Studies found that there was an impending crisis in allergy and immunology in the late 1990s: many practicing allergists in the United States were preparing to retire, while production of new allergists had significantly decreased. These dynamics were occurring at the same time as the incidence and prevalence of conditions most commonly treated by allergists were increasing. To begin to remedy this situation, the Center recommended that steps be taken to increase the number of new allergists to be trained each year. To do this effectively, the factors that affect a physician's specialty choice, especially in relation to allergy and immunology, must be better understood. Since all new allergists must also have prior training in internal medicine or pediatrics, determining the factors that affect physicians' specialty choices among this group is the most appropriate focus. Once these factors are assessed, strategies can be developed to encourage young physicians to enter the specialty at a greater rate.

The Center undertook a two-part study to determine the factors that influence the selection of allergy and immunology of medical students and residents.

1. A Literature Review on Physician Specialty Choices;
2. A Survey of Second Year Residents in Internal Medicine and Pediatrics.

Key Findings

- ◆ A variety of factors can both positively and negatively influence specialty choice. The most influential factors include:
 - * Medical Student Exposure and Experience with the Specialty;
 - * Medical School Program and Promotion of the Specialty;
 - * Intellectual Content and Perception of the Specialty;
 - * Employment and Practice Opportunities; and
 - * Lifestyle Satisfaction
- ◆ The amount of time spent in a clerkship and the perception of the specialty while on the job, were both influential to specialty choice. However, for residents interested in allergy and immunology, rotation experience, although important, was not the most influential factor for their specialty choice. The literature and the results of the survey suggest that an active rotation experience that incorporates discussions with people in the field, breaking down negative perceptions and increasing positive experiences will effectively attract people to a specialty.

- ◆ One hundred percent (100%) of the residents who planned to subspecialize ranked medical content as an extremely important factor to their specialty choice. Promoting the medical and intellectual content of the allergy and immunology subspecialty will benefit all programs related to the specialty.
- ◆ Residents interested in allergy and immunology consider general employment opportunities to be a major influence related to their plans to subspecialize. The allergy and immunology field is expanding and residents are responding to this growth in employment opportunities. Flexibility of practice location and the ability to balance personal and professional lifestyles were important factor factors as well.

Literature Review: Factors Influencing Specialty Choice

In order to develop a better understanding of why physicians decide to work in a specific specialty, a literature review was conducted to assess what factors influence their decision. It is also useful to review the factors that influence physician satisfaction and stability within their specialty. Historically, the literature on specialty choice focuses on primary care specialties and the evaluation of strategies to increase the selection of primary care specialties by medical students and residents. As a result, the literature regarding a physician's decision to subspecialize is wanting. The implications and limitations of the prior literature should provide directions for further research. Moreover, the literature review can provide guidance in survey design especially with regard to which factors will be included on the survey instrument.

Exposure and Experience with the Specialty

In an introductory guide to medical careers, Bernal et al. (1994) advises prospective students, looking to determine which specialty is right for them, to gain exposure to the specialty while on the job and to get to know more about the day-to-day experiences of the physicians themselves. Many of the studies presented here deal with strategies to increase student interest in a specialty by providing them with additional exposure to and experience in care provision.

Brearley et al. (1982) studied the effects of premedical and medical education on the likelihood that one will choose to specialize in family practice. The study used a questionnaire completed and submitted by 134 first year family practice residents. The factors most likely to influence the selection of the family practice specialty were participation in a family practice clerkship and association with family practice physicians. Increasing the student's exposure to family practice through clerkships and faculty presence were recommended to increase the proportion of students choosing to specialize in family practice.

Babbott et al. (1991) focused specifically upon the attitudes of medical students on careers in internal medicine. They used questionnaire results from a sample of over 10,000 respondents in 1988. The authors concluded that the clerkship year of medical school has the greatest impact on specialty choice, as most medical students make their final choices about their specialty during that year. Students selecting internal medicine were more likely to cite the intellectual and challenging aspects of the field as the basis for their selection. The most common reasons for avoiding internal medicine seemed to pertain to on-the-job experiences (time, effort, personality, and bad experiences with patients).

According to Kassebaum and Haynes (1992), a required third-year family practice clerkship of at least four weeks is associated with a higher percentage of students choosing training and specialty certification in family practice. The research conducted by Kassebaum and Haynes looked only at the length of the training program and did not assess whether the medical student had a prior interest in family practice.

Kaufman et al. (1989) assessed the outcome of University of New Mexico's Medical School clerkship program that emphasized heavy community involvement. The clerkship program emphasized student-orientated learning (live training and problem solving) to encourage students to go into primary care. Kaufman et al. found that students who participated in the program were more likely to select family medicine and keep their initial specialization. Furthermore, the student driven approach to learning allowed the participating students to receive higher grades for their clinical clerkships and experience less distress.

Campos-Outcalt et al. (1992) studied the effects of required third year clerkship programs in family practice and the likelihood of selecting family practice as a specialty. The data was from a sample of 714 students in the National Resident Matching Program. Nine percent (9%) of all students switched to family practice during the clerkship. Most of the students who were pursuing family practice as a specialty maintained the same specialty.

Bauer et al. (1997) considered the effects of ambulatory internal medicine clerkships on the likelihood that medical students would change their perceptions about internal medicine, or select internal medicine as a specialty. The study was conducted in 1990-1991 at the University of Texas Medical School in San Antonio with 196 third year students.

The ambulatory internal medicine rotation required students to spend six half-days per week assisting internists as they evaluated patients in a public walk-in clinic. Through the experience with the internists at the ambulatory care clinic, students stated that they found internal medicine to be extremely demanding and low status work. The negative perception of internal medicine was not changed as a result of the clerkship. On the other hand, even though the perception remained unchanged, there was an increase in the number of students selecting internal medicine at graduation.

Medical Structure and Promotion of the Specialty

Martini et al. (1994) used a broad range of data, including surveys, site visits, and retrospective studies of medical schools and practicing generalist physicians (10 years removed from graduation) to determine what factors influenced medical students to select a generalist career. The authors found that for most medical students, the program availability and structure of the medical school had the greatest influence on their selection of a generalist specialty. Despite placing greater emphasis on structural factors, the authors did state that the personal characteristics of students, such as the desire to help others, were important predictors of choosing a generalist specialty.

Furthermore, Martini et al. (1994) found that medical schools that were new or public were more likely than others to graduate students in generalist fields. Public schools often stated that it was their intention to graduate more generalists. Likewise, Barzansky (2000) found that one of the best predictors of increased production of primary care physicians is public ownership of the medical school. Both research groups also stated that while public ownership of a medical school is influential, in turn, a number of other variables also correlate, including percentage of state residents in the student body, the presence of a family medicine clerkship and a stated mission to increase general practitioners.

Bland et al. (1995) conducted an extensive literature review on the determinants of a primary care specialty choice. The authors found a wide range of factors that both positively and negatively influence specialty choice. On one hand, the authors yet again revealed that students who were required, in their medical training, to spend more time in family practice were more likely to select primary care. The length of the clerkship increases the desire of the medical student to enter the specialty. In order to increase interest in primary care, the authors recommend that medical schools adopt active strategies to influence students to select family practice, including increased required family practice clerkships, career counseling, and changing admission policies to favor those interested in primary care. On the other hand, Bland et al. found no correlation between medical schools that had a higher proportion of teachers focusing on family medicine or an early exposure program to family practice and a student's decision to choose a primary care specialty. Their investigation suggested that few schools produce a majority of primary care practitioners and even specially designed primary tracks seldom produce more than 60% primary care graduates.

Two years after the Bland et al. publication, new research was conducted by Senf et al. (1997) measuring the impact of medical school characteristics on choosing a primary care specialty. Senf et al. found that schools that had special programs for primary care and a high proportion of rural students were more likely to have a greater percentage of students selecting primary care specialties. Special programs were offered when there was funding for such programs and when more of the faculty member were in family medicine. Funding for family medicine also predicted the likelihood of having a higher percentage of faculty members in primary care. The authors conclude that the most efficient way to increase the number of primary care graduates “is to increase the number of matriculating students who are interested in generalist careers” (p. 532).

A study by Baransky et al. (1997) indicated that in 1997, out of 125 US medical schools, 47 gave admission preference to students expressing interest in primary care. The authors of this study also summarized changes in US medical schools over the previous year. They found that there was an increase in faculty members, students entering emergency medicine, and students entering family practice.

New York Medical College and East Carolina University School of Medicine were the focus of a study by Grayson et al. (1999) on attempts to increase the likelihood of selecting a primary care specialty. The two colleges selected significantly changed their curricula as a result of the Robert Wood Johnson Foundation’s Generalist Physicians Initiative (GPI). Both schools have dramatically increased the number of students selecting primary care careers and improved primary care programs. A variety of tactics were used to modify the curriculum. The schools adhered to the recommendations of national organizations (e.g., COGME) on how to promote primary care initiatives. They sought financial support from external sponsors as well using tuition. Their continual evaluation of the program allowed for early detection of problems. Both schools worked to enhance the prestige of careers in primary care by developing new promotional campaigns. Lastly, they had their students work with community physicians through clinical appointments. Students attending these medical schools had the opportunity to experience family practice firsthand.

Intellectual Content of the Specialty

Friedberg and Glick (2000) found that medical school was not the most influential factor influencing career choice (although it was a significant factor). Characteristics of the specialty itself were found to be more important. Most non-primary care students did not switch to primary care following their clerkships and the authors suggest that too extensive a clerkship program may discourage students from selecting a primary care program. Some of the non-primary care students suggested that they would be more likely to choose primary care if the primary care program integrated primary care with another discipline.

Schafer et al. (2000) found that fewer family physicians remain with family practice after their clerkships than either internal medicine or pediatric students after their respective clerkships. The data was taken from a sample of 397 graduating medical students at the University of California at San Francisco responding to a survey in 1996-1998. Students who rejected family practice did so because they felt that the field had low prestige, low intellectual content, and was potentially too broad. The authors recommend that medical schools work to increase the level of prestige of the specialty and to counter the impression that it is substantively too broad to master.

Nieman et al. (1989) argued that medical students do not always select the specialty they actually prefer. In a survey of 429 North Carolina third year medical students, career choices were compared with actual personal preferences. Of the specialties selected by medical students, internal medicine had the most students who would have preferred another specialty. Curriculum was the major factor influencing selection of family practice.

Perception of the Specialty

Block et al. (1996) conducted a survey to determine the attitudes toward primary care held by medical students, residents, faculty, training directors, chairs and deans. Primary care was perceived as having a low level of prestige and requiring less medical expertise than non-primary care specialties. Primary care practitioners were also believed to provide less adequate medical care.

In the mid-1990s, there was a significant increase in the number of medical students selecting primary care specialties. Ellsberry et al. (1996) looked at fourth-year student self report data from the 1995 National Internship and Residency Match Program to determine student

perception of primary care specialties. The authors found that specialty choice was positively influenced by preferences for holistic care, patient interaction and health promotion. Women were more likely to select a primary care career because they were more likely to consider the job market and societal need. Once again, another group of researchers found that primary care students were impacted by clinical experiences in training.

Often the original perception that a medical student has of a specialty will change with experience and time spent in medical school. In a study of US medical graduates in 1991 and 1994, Kassebaum and Szenas (1995) found that roughly 80% of graduates in their sample had changed the specialty they had initially declared upon entrance into medical school. For every specialty in question, a minority of students who had originally chosen that specialty at matriculation graduated in that same specialty. In considering the generalist fields, the authors found that matriculants were more likely to stick with their original choice if it was family practice than for other generalists (i.e., general pediatrics and general internal medicine). Yet overall, the authors found that there was a substantial amount of indecision during medical school for students considering all specialties.

Miller et al. (1996) found that medical students perceive family practice differently than family physicians. In comparing the two groups, medical students and physicians differed in their perceptions regarding lifestyle characteristics, practice characteristics and the level of patient care associated with family practice. As students gained experience their perceptions converged to those of the physicians. Furthermore, as the perceptions of the students and physicians converged, the number of students interested in family medicine declined. The data was derived from a survey conducted with a sample of Ohio medical students in their first three years and a random sample of Ohio family physicians.

Changing Physician Market

In order to understand the kinds of changes that prospective medical graduates might be responding to when choosing a specialty, it is important to be aware of changes in the marketplace. Seifer et al. (1996) studied the changes in the characteristics of the physician marketplace. Marketplace demand for specialists experienced a substantial decline, with the exception of pediatric specialists. Interest in generalists was increasing, although among generalists, internists and pediatricians were experiencing a decline, while family practitioners

were experiencing a substantial increase in demand. The data was derived from a content analysis of job advertisements in seven medical journals between 1984 and 1995.

Kassebaum and Szenas (1995) point to the changing labor market for physicians, during the 1990s, as a key cause of student indecisiveness when choosing a specialty. Specifically, the growth of managed care (during the years immediately preceding the 1995 study) made medical students less comfortable with specialized positions. When this study was published, medical students increasingly selected general fields, especially family practice, in order to make themselves more attractive to managed care employers.

While not directly related to specialty choice, it is relevant to look at physicians practicing in the market and what affects their career path. Wilke (1991) studied the factors that influence practice change among young physicians (here defined as physicians under 40 and in their second through fifth year of practice). About 10% of physicians change their practice in the first three years and about a third change their practice within the first five years. Wilke added that this turnover rate is actually low compared with other workers their age. Physicians employed in HMOs were most likely to change to another practice type. As a general rule, physicians move from larger group employment in the direction of self-employment as they change their practices. Physicians starting in self-employment were least likely to change practices. Physicians with high debt were more likely to change to self-employments, while married women were less likely to change practices. Wilke also concludes that discrimination does not appear to play a role in practice changes of women and minorities (finding that there are no consistent differences in practice change patterns among these groups, except for married women).

Research conducted by Jennett et al. (1990) concluded that it is important to consider not only the individual characteristics of the physicians, but the experiences of those in training and in early stages of their careers when trying to explain physician career changes. The authors conduct a comprehensive study on why physicians make career changes after graduating medical school. Results were based upon a survey of 603 graduates of a medical school in Alberta, Canada, from 1973-1985. Just over a quarter (27%) reported major career changes. Nearly twice as many (35% to 18%) specialists made career changes as family physicians. Most of these changes were made during the first year of residency, and resulted from a range

of issues such as a general dissatisfaction, lifestyle compatibility, and practice experiences.

Satisfaction of Practicing in the Specialty

Linzer et al. (2000) used the Physician Worklife Study (see William et al., 1999) to compare the relationship between physician job satisfaction, time pressure, and HMO practice. HMO physicians reported significantly higher satisfaction with autonomy and administrative issues when compared with other practice types. In the case of resources and relationships with community, however, HMO physicians had lower satisfaction scores. Overall, the study concluded that HMO physicians were less satisfied with their jobs and were more likely to express an intention to leave their practices. Eighty-three percent (83%) of family physicians in HMOs felt they needed more time to serve new patients, as opposed to 54% in small group practices.

Burdi and Baker (1999) studied levels of job satisfaction among young physicians in two surveys (one in 1991 and one in 1996) conducted in California. Young physicians were any physicians who were under 45 and had 2-9 years of practice experience. An age-matched sample from 1996 (with the 1991 sample) included physicians who were under 45 and had graduated medical school between 1981 and 1991. The surveys were intended to determine whether 8 activities physicians take part in would be threatened by marketplace changes, satisfaction with current practice, and inclination to attend medical school again. On each count, the majority of young physicians stated that they had the freedom to engage in the activities. However, for most of the categories there was at least a 10% decline between 1991 and 1996.

Haas et al. (2000) studied the link between physician and patient satisfaction, based on a survey of Boston-area physicians. The researchers selected a bilingual sample of over 2,000 respondents. They found that physicians who considered themselves extremely satisfied with their work had higher evaluations from their patients for overall satisfaction and satisfaction with the previous visit. Furthermore, the study found that younger, healthier patients, and patients who worked part-time, were more satisfied; while minority patients and patients on a managed care plan were less satisfied.

McMurray et al. (1997) criticized past physician satisfaction studies for using nonrepresentative samples. Specifically, the authors criticize prior studies for not including adequate numbers of women, minorities, and inner-city physicians in their samples. Administrative issues inhibited satisfaction among physicians in managed care. Their findings suggest that day-to-day practice issues (such as, stress and paperwork) significantly influence physician satisfaction. Balance of work and family commitments was a significant inhibitor of satisfaction among women, while a sense of having a mission to serve the community was a more important positive influence on satisfaction among minorities.

Palepu et al. (2000) addressed the relationship between specialty choice and career satisfaction among underrepresented minority faculty. Less than 4% of medical school faculty was underrepresented minorities. Using a survey based on a stratified random sample taken in 1995, they found that underrepresented minority faculty did not vary much in mean compensation, but experienced considerably lower career satisfaction than did non-underrepresented minorities. They also found that while underrepresented minorities were more likely than non-underrepresented minorities to pursue careers in primary care, the disparity is shrinking; underrepresented minorities were more likely than non-underrepresented minorities to select medical specialties, but less likely to select surgical specialties.

Satisfaction with Lifestyle Associated with the Specialty

Medical students and practicing physicians consider the lifestyle associated with a specialty when considering their desire to commit to and remain in a specialty. Jarecky et al. (1991) stated that the instability in specialty selection is strongly related to student awareness of the lifestyles of the physicians in the various specialties. Their research is based upon a survey completed by 723 students from a single medical college in the fall of 1989. Jarecky et al. found that the most important reason for initial choice of specialty selection were (in order of overall preference) a perceived personality match with the specialty, technological aspects of the specialty, and time for family activities. Respondents who changed their specialties, however, were most likely to select time for leisure and family. The authors recommend real-life experiences in medical education as a means of helping students to identify the right specialty.

Opportunities and Programs to Increase Physicians in Underserved Areas

Specialty choice also has implications for the broader society. According to the findings of the Tenth Report of the Council on Graduate Medical Education (COGME 1998), the efficiency of the US health care system and access to care for the urban poor and rural populations depends upon the ratio of generalists to specialists. The report noted that one way to improve access to medical care would be to increase the number of generalist physicians available to practice in underserved areas.

In 1994, the Medical College of Georgia established a program to increase opportunities between generalist residents and practice opportunities, especially those in rural and underserved areas. They set up an Office of Recruitment and Retention (ORR), that provided information on rural practice, held practice opportunity fairs (in which students met with general practitioners), and provided legal consultation to residents intending to practice in rural settings. Hobbs et al. (1999) reviewed the success of ORR and found that between 1995 and 1997, 40% of the ORR's placements were in underserved areas. The article was published five years into the program, but the authors stated it was too early to make final statements about the success of the program. However, the authors observed that communities have used the office to recruit physicians and the students were using the office to select practice location. Although this article provides information on placement and not choice of specialty, it is relevant because the program enhances the likelihood that generalist students will successfully enter general practice after graduating.

Jefferson Medical College in Philadelphia established the Physician Shortage Area Program (PSAP) in 1974 to increase primary care physicians in rural areas of Pennsylvania. At the time the program was initiated, three metropolitan counties in Pennsylvania contained half of the state's physicians, but only a quarter of the state's population. Nearly twenty years later, Rabinowitz (1993) evaluated the success of program in attaining its main goal: increasing the placement of primary care graduates in underserved areas. Rabinowitz found that a number of admission incentives were implemented to encourage practice in rural areas. Students with rural backgrounds were given preference in recruiting and admissions (overall, such students had comparable GPAs, but lower MCAT scores). Among other attributes were additional financial aid, a special faculty advisor, and a required nonmetropolitan clerkship. PSAP

graduates between 1978 and 1986 were four times as likely to practice family medicine, four times as likely to practice in rural areas and four times as likely to practice in underserved areas as were non-PSAP graduates. Overall, 85% of graduates were either practicing in a primary care specialty or practicing in a rural, small metropolitan, or area with a shortage of physicians. During the 1980s, however, there was decline in the number of students pursuing the PSAP. Selective admissions appear to be the most powerful factor influencing success in the program.

Pathman (1996) continued to look at the influence of selective admissions and a medical student's willingness to choose a certain specialty and work in an underserved area. He questioned previous studies that positively concluded that programs that place students in community clerkship programs, do in fact increase the number of practicing primary care physicians in underserved areas. Pathman suggested that people who were more likely to choose primary care and/or practice in underserved areas were also more likely to select schools that offer special community clerkship programs. In prior studies, pre-existing characteristics and career plans of students were generally not measured. Studies where students are randomly assigned to training programs have no curriculum effect. Manard and Lewis (1983) had previously found that a program's apparent success in producing particular types of practitioners was largely due to selective attraction.

Concluding Points

When assessing the literature regarding previous research on why and in what field medical students choose to specialize, it is evident that there are a variety of factors that can both positively and negatively influence their decision. The influential factors include: exposure and experience with the specialty, medical school program and promotion of the specialty, intellectual content and perception of the specialty, the market and demographic demand, lifestyle satisfaction, and overall physician satisfaction while practicing in the specialty. In order to support students who want to specialize, medical schools need to offer specific clerkships related to the specialty, increase faculty promotion of the specialty, and increase the incentives to specialize in a particular field. Integration of more than one factor will have the greatest influence on a medical students decision to specialize.

Second Year Medicine and Pediatric Residents and Their Specialty Choices

An original survey was conducted to assess the direct view of second year residents (PGY-2) training in an internal medicine or pediatric program in the United States. All physicians who enter the allergy and immunology training must first complete an internal medicine or pediatric training program. As a result, examining residents in an internal medicine or pediatric training program will provide the best indication of the factors that affect the choices of physicians entering the allergy and immunology training. Second year residents were selected on the assumption that they would have already made or would be in the process of making a decision on whether to go on to train in allergy and immunology or some other specialty, or to enter practice as a general internist or pediatrician.

Data and Methodology

Population List Source

An enumeration of the active, internal medicine and pediatric graduate medical programs accredited by the Accreditation Council for Graduate Medical Education in the United States was generated from the 2000-2001 American Medical Association Graduate Medical Education Directory. This enumeration generated 397 general internal medicine and 208 general pediatric programs.

Sample Selection

A random sample of internal medicine and pediatric programs stratified on the basis of whether a program was located at a hospital that also had an allergy and immunology fellowship program was selected for the survey. The selected sample consisted of 44 internal medicine programs (10 at institutions with allergy and immunology programs) and 23 pediatric programs (9 at institutions with allergy and immunology programs).

Programs located at hospitals that also had allergy and immunology fellowship programs were slightly over-sampled. Since allergy and immunology fellows make up less than 0.5% of the medical residents and fellows training in the United States, there would be a good chance that the selected sample would not include enough residents interested in allergy and immunology to make meaningful comparisons without having to draw an exceedingly large sample. While this over-sampling introduced a potential for over-estimates of second year internal medicine and pediatric residents' interest in allergy and immunology in particular, the determination of the factors influencing specialty choice in general would not be affected unless the presence of an allergy and immunology fellowship program is related to specialty choice more generally.

Survey Mailing Details

On January 5, 2001, directors of each of the selected internal medicine and pediatric training institutions without allergy and immunology programs were sent a package consisting of a cover letter, an appropriate number of survey instruments, and a corresponding number of return envelopes. The appropriate number of survey instruments was determined by estimating the number of second year residents in the program. The number of second year residents was estimated by dividing the total number of residents training in a program and dividing by the number of years the program takes to complete. In the cover letter, directors were asked to distribute the surveys to their second year residents. See Appendices A and B for copies of the survey instruments used in this study.

Because of the Center's previous history of contact with directors of allergy and immunology programs for its graduate medical education survey (1999-2001), survey materials for the selected internal medicine and pediatric programs located at hospitals with allergy and immunology programs were sent to the directors of the allergy and immunology program who were asked to pass them along to the appropriate director of the internal medicine and/or pediatrics program. It was believed that having the survey materials delivered by a program director at the same institution would encourage participation. These survey materials were sent to the allergy and immunology program directors on January 12, 2001.

Due to the anonymous nature of the survey, no follow up was possible.

Results

Overview

Between January 22, 2001 and April 23, 2001, the Center received 239 responses from an estimated 1,130 second-year internal medicine and pediatric residents. At the program level, the Center received responses from second year residents at 19 of the 23 pediatric programs (82%), as well as 31 of the 44 internal medicine programs (70%) (n.s.). At the individual program level, the response rate was higher among pediatric residents (26%) than internal medicine residents (19%) ($p < .05$). Considering the total number of respondents (239), there were over twice as many internal medicine residents (161) than pediatric residents (78).

The gender of the respondents was almost equally distributed between males and females (51% and 49%, respectively). Of the residents who responded to the survey, 180 (or 78%) went to medical schools in the United States. A large majority of the respondents were either native-born US residents or naturalized US residents (79%).

Table 1. Overview of Survey Respondents

Characteristic	Respondents
Female	49%
United States Medical School Graduate	78%
Native Born or Naturalized US Citizen	79%
Training in Internal Medicine	67%
Training in Pediatrics	33%

Residents' Future Plans

All second year residents were asked about their plans after their current training. The categories the residents could choose from were: enter patient care, enter academic medicine, subspecialize, undecided and other. One hundred and fourteen (48%) of the 239 second-year residents indicated they were planning on subspecializing. When asked how committed to these plans they were (very committed, committed, not very committed, and likely to change), 96% responded that they were committed or very committed to their future plans.

Internal medicine residents were more likely to plan on subspecializing. Fifty-seven percent (57%) of internal medicine residents intended to subspecialize, while only 30% of pediatric residents intended to subspecialize. This is consistent with other data on subspecialization rates in New York and California (Nolan et al. 2001a; 2001b; 2002a; 2002b).

Residents Interested in Allergy and Immunology

Of the residents who planned to subspecialize, 41% were interested in allergy and immunology. Males (44%) were more likely to be interested in allergy and immunology subspecialty than females (35%). More U.S. medical school graduates (USMGs) were interested in allergy and immunology (49% and 20%, respectively). Native born and naturalized US citizens were a large majority (91%) of the second year residents interested in allergy and immunology. Permanent US residents were more likely to be interested in allergy and immunology than temporary US residents (43% and 32%, respectively). Pediatric residents were 33% more likely to be interest in allergy and immunology than internal medicine residents. Residents in programs at hospitals with allergy and immunology programs were less likely to report an interest in allergy and immunology than residents in programs at hospitals without an allergy and immunology program.

Factors Influencing Specialty Choice

All residents that *planned to subspecialize* were asked to rank by level of importance a number of factors that may affect their subspecialty choice. The range of levels the residents could choose from were not at all important, slightly important, very important or extremely important. Factors listed as very important or extremely important were considered influential to specialty choice.

Medical content of the specialty was listed as an influential factor for specialty choice by *all* respondents who planned to subspecialize.

All Respondents ranked the influence of a physician family member or friend and the need to pay off debt as the least important factors for specialty choice (21% and 18% ranked influence of Physician/friend as important and 21% and 25% ranked debt as important).

Table 2A and Table 2B present the ranked percentages, from highest to lowest, of influential factors in making specialty choices as reported by those residents planning to subspecialize. Table 2A focuses on those residents interested in allergy and immunology, while Table 2B focuses on those residents who are not interested in allergy and immunology.

Table 2A. Percentage of 2nd Year Residents Interested in Allergy and Immunology who Listed Factors as VERY IMPORTANT or EXTREMELY IMPORTANT

Factors Affecting Interest in Specialties	Percentage (Ranked Highest to Lowest)
Medical Content	100%
General Employment Opportunities	77%
Ability to Balance Personal/Professional Life	74%
Influence of a Mentor	74%
Rotation Experience	69%
Hospital Practice Opportunities	68%
Teaching Opportunities	62%
Continuity of Patient Care	59%
Flexibility of Practice Location	53%
Flexible Work Schedule	51%
Stable Work Schedule	49%
Private Practice Opportunities	49%
Research Opportunities	49%
Requirements to Be On Call	47%
Income Potential	40%
Prestige of a Specialty	23%
Need to Pay Off Debt	21%
Influence of a Physician Family Member/Friend	21%

Table 2B. Percentage of 2nd Year Residents NOT Interested in Allergy and Immunology who Listed Factors as VERY IMPORTANT or EXTREMELY IMPORTANT

Factors Affecting Interest in Specialties	Percentage (Ranked Highest to Lowest)
Medical Content	100%
Rotation Experience	72%
Ability to Balance Personal/Professional Life	65%
Influence of a Mentor	62%
Teaching Opportunities	62%
General Employment Opportunities	58%
Hospital Practice Opportunities	58%
Continuity of Patient Care	56%
Research Opportunities	56%
Income Potential	44%
Stable Work Schedule	40%
Requirements to Be On Call	40%
Prestige of a Specialty	40%
Private Practice Opportunities	39%
Flexible Work Schedule	38%
Flexibility of Practice Location	31%
Need to Pay Off Debt	25%
Influence of a Physician Family Member/Friend	18%

When considering only those residents interested in allergy and immunology, medical content was listed by all residents (100%) as an important factor for their specialty choice. General employment opportunities were ranked second with 77% of the residents rating it as important. The ability to balance personal and professional life was tied with influence of a mentor as the third-highest ranking influential factor. Rotation experience (69%) and hospital practice opportunities (62%) were also ranked high on the list of important factors influencing specialty decisions of residents interested in allergy and immunology.

The residents interested in allergy and immunology found the prestige of the specialty to be one of the least important factors for their specialty choice (only 23% ranked prestige as important).

Of the residents not interested in allergy and immunology, the most important factors related to their specialty choice were medical content (100%), rotation experience (72%), and ability to balance personal and professional life (65%).

Flexibility of practice location was ranked as an unimportant factor for those residents not interested in allergy and immunology (only 31% of residents ranked as important to their specialty choice).

Conclusion

Unmistakably there are a variety of factors that can both positively and negatively influence specialty choice. Residents considering whether or not to enter a specialty or subspecialty are faced with a decision that relates to personal needs, professional needs, and educational needs.

The majority of previous research on specialty choice focuses on the experience and exposure that medical students receive related to various specialties. The research suggests that the amount of time spent in a clerkship and the perception of the specialty, while on the job, are influential to specialty choice. The current study's survey results found that rotation experience was listed by over two-thirds of the residents who planned to subspecialize as influential to their specialty choice.

For residents interested in allergy and immunology, rotation experience, although important, was not the most influential factor for their specialty choice. In order to strengthen the influence of the rotation experience, hospitals with allergy and immunology programs should establish mentoring programs to promote the specialty for the interested internal medicine and pediatric residents. The influence of a mentor was an important factor for almost three-quarters of the residents interested in allergy and immunology. The literature and the results of the survey suggest that an active rotation experience that incorporates discussions with people in the field, removing negative perceptions and increasing positive experiences will effectively attract people to a specialty.

All residents who planned to subspecialize indicated that the medical content related to the specialty was an important factor for specialty choice. One hundred percent (100%) of the residents who planned to subspecialize ranked medical content as an extremely important factor to their specialty choice. The general implication of this finding is that people subspecialize in fields they find interesting. Promoting the medical and intellectual content of the allergy and immunology subspecialty will benefit all programs related to the specialty.



Moreover, using the medical content associated with the allergy and immunology subspecialty to increase interest, the thought arises that new public health campaigns should be developed integrating the role an allergist can play in the treatment and prevention of asthma.

The residents interested in allergy and immunology consider general employment opportunities to be a major influence related to their plan to subspecialize. More than three-quarters of the residents interested in allergy and immunology rated general employment opportunities as very important. This finding stands out because only 58% of the residents who are not interested in allergy and immunology ranked general employment opportunities as important. Demand for new allergy and immunology physicians is increasing and residents are responding to this growth in employment opportunities.

Furthermore, the literature also finds that rotation experiences that target communities in need of specialty care will increase medical students interest not only in the specialty, but also in practicing in underserved areas. Flexibility of practice location was an important factor for 58% of the residents interested in allergy and immunology, while only 31% of residents, who did not show an interest in allergy and immunology, felt it was important. The large percentage difference suggests that allergy and immunology programs should continue to promote the opportunity for employment growth and the variety of practice settings related to choosing the allergy and immunology specialty.

Lifestyle characteristics associated with a specialty were a major consideration of medical students and residents deciding whether to train in a particular specialty. Nearly three-quarters of the residents interested in allergy and immunology responded that the ability to balance their personal and professional life was an important factor related to specialty choice. Efforts to stimulate further interest in allergy and immunology should promote the flexible nature of allergy practice, especially in comparison to other specialties.

Future studies, regarding allergy and immunology, should look at the impact of public schools and a rotation experience in an underserved area to address their impact on specialty choice as well as practice location. More research is also necessary assessing the impact of an allergy and immunology fellowship program and satisfaction with the subspecialty. Surprisingly, the results of the survey found that the presence of an allergy and immunology fellowship program did not increase the likelihood of a resident being interested in an allergy and immunology career.



Finally, campaigns related to medical content, practice growth and lifestyle flexibility can be developed at the national level, perhaps sponsored by the Academy, as well as at the local level, perhaps tied to state and local allergy and immunology professional societies, or allergy and immunology fellowship programs. These campaigns have the opportunity to demonstrate to potential allergists that allergy practice is exciting, timely, and in the interest of the public good, as well as raise public awareness of the role that allergists play in the general treatment and prevention of a host of common ailments.

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Appendix A Survey of 2nd Year Internal Medicine Residents

This survey gathers information on the factors that influence a 2nd year medical resident's decision to subspecialize. Your responses and those of others will help the Center gauge physician workforce patterns, needs, and challenges in the coming decade. Please take a few moments to answer the following questions as fully as possible and place your survey in the included, self-addressed postage-paid envelope as soon as you can.

I. Demographics

- | | |
|--|--|
| 1. Gender:
<input type="checkbox"/> Male <input type="checkbox"/> Female | 2. Location of Medical School:
<input type="checkbox"/> United States <input type="checkbox"/> Canada
<input type="checkbox"/> Outside U.S./Canada |
| 3. Citizenship Status:
<input type="checkbox"/> Native Born U.S. <input type="checkbox"/> H-1, H-2, H-3 Temporary Worker
<input type="checkbox"/> Naturalized U.S. <input type="checkbox"/> J-1, J-2 Exchange Visitor
<input type="checkbox"/> Permanent Resident <input type="checkbox"/> Other: _____ | |

II. Subspecialty Plans

1. After my current training, I plan to: *(Mark all that apply)*
- | | | |
|---|--|--|
| <input type="checkbox"/> Enter Patient Care | <input type="checkbox"/> Enter Academic Medicine | <input type="checkbox"/> Subspecialize |
| <input type="checkbox"/> Undecided | <input type="checkbox"/> Other: _____ | |
2. How committed to these plans are you?
- | | | | |
|---|------------------------------------|---|---|
| <input type="checkbox"/> Very Committed | <input type="checkbox"/> Committed | <input type="checkbox"/> Not Very Committed | <input type="checkbox"/> Likely to Change |
|---|------------------------------------|---|---|

III. Subspecialty Interests

Below is a list of medicine subspecialties. For each subspecialty, please indicate your level of interest as a possible career choice.

Subspecialty	Level of Interest			
	Not Interested At All	Slightly Interested	Very Interested	Already Have Confirmed Plans for Additional Training in this Specialty
Allergy and Immunology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clinical Cardiac Electrophysiology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cardiovascular Disease	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Critical Care Medicine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Endocrinology, Diabetes & Metabolism	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gastroenterology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Geriatric Medicine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hematology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hematology and Oncology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Infectious Disease	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Interventional Cardiology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Medical Genetics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nephrology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nutrition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Oncology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pulmonary Disease	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pulmonary Disease/Critical Care Medicine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rheumatology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sports Medicine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

IV. Factors Affecting Choice of Specialty

Below is a list of factors that may affect your decision in choosing a subspecialty. For each, please indicate how important the factor is/has been in your experience.

Factors	Level of Importance			
	Not Important At All	Slightly Important	Very Important	Extremely Important
Medical Content of Specialty	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Influence of Mentor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
General Employment Opportunities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Private Practice Opportunities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hospital Practice Opportunities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Research Opportunities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Teaching Opportunities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rotation Experience	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Income Potential	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Prestige of Specialty	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stable Work Schedule	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Flexible Work Schedule	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Requirements to be On Call	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Influence of Physician Family Member/Friend	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Flexibility in Practice Location	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ability to Balance Personal/Professional Life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Continuity of Patient Care	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Need to Pay Off Indebtedness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

V. Insights

We realize that choosing a subspecialty may not be easily described by marking boxes. If you have any additional comments or experiences you wish to relate on factors affecting your decisions, please indicate them in the space provided below.

Thank you for taking the time to help in this study.

Appendix B Survey of 2nd Year Pediatric Residents

This survey gathers information about the factors that influence a 2nd year pediatric resident's decision to subspecialize. Your responses and those of others will help the Center gauge physician workforce patterns, needs, and challenges in the coming decade. Please take a few moments to answer the following questions as fully as possible and place your survey in the included, self-addressed postage-paid envelope as soon as you can.

I. Demographics

- | | |
|--|--|
| <p>1. Gender:</p> <p><input type="checkbox"/> Male <input type="checkbox"/> Female</p> | <p>2. Location of Medical School:</p> <p><input type="checkbox"/> United States <input type="checkbox"/> Canada</p> <p><input type="checkbox"/> Outside U.S./Canada</p> |
| <p>3. Citizenship Status:</p> <p><input type="checkbox"/> Native Born U.S. <input type="checkbox"/> H-1, H-2, H-3 Temporary Worker</p> <p><input type="checkbox"/> Naturalized U.S. <input type="checkbox"/> J-1, J-2 Exchange Visitor</p> <p><input type="checkbox"/> Permanent Resident <input type="checkbox"/> Other: _____</p> | |

II. Subspecialty Plans

1. After my current training, I plan to: *(Mark all that apply)*
- Enter Patient Care Enter Academic Medicine Subspecialize
- Undecided Other: _____
2. How committed to these plans are you?
- Very Committed Committed Not Very Committed Likely to Change

III. Subspecialty Interests

Below is a list of pediatric subspecialties. For each subspecialty, please indicate your level of interest as a possible career choice.

Subspecialty	Level of Interest			
	Not Interested At All	Slightly Interested	Very Interested	Already Have Confirmed Plans for Additional Training in this Specialty
Adolescent Medicine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Allergy and Immunology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Medical Genetics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Neonatal-Perinatal Medicine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pediatric Cardiology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pediatric Critical Care Medicine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pediatric Emergency Medicine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pediatric Endocrinology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pediatric Gastroenterology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pediatric Hematology/Oncology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pediatric Infectious Diseases	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pediatric Nephrology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pediatric Pulmonology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pediatric Rheumatology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pediatric Sports Medicine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

IV. Factors Affecting Choice of Specialty

Below is a list of factors that may affect your decision in choosing a subspecialty. For each, please indicate how important the factor is/has been in your experience.

Factors	Level of Importance			
	Not Important At All	Slightly Important	Very Important	Extremely Important
Medical Content of Specialty	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Influence of Mentor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
General Employment Opportunities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Private Practice Opportunities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hospital Practice Opportunities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Research Opportunities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Teaching Opportunities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rotation Experience	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Income Potential	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Prestige of Specialty	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stable Work Schedule	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Flexible Work Schedule	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Requirements to be On Call	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Influence of Physician Family Member/Friend	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Flexibility in Practice Location	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ability to Balance Personal/Professional Life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Continuity of Patient Care	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Need to Pay Off Indebtedness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

V. Insights

We realize that choosing a subspecialty may not be easily described by marking boxes. If you have any additional comments or experiences you wish to relate on factors affecting your decisions, please indicate them in the space provided below.

Thank you for taking the time to help in this study.

