Allergy and Immunology GME Surveys 2002

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The Center for Health Workforce Studies
University at Albany, State University of New York
School of Public Health
(518) 402-0250
http://chws.albany.edu

PREFACE

In order to better understand the trends and dynamics affecting the supply, demand, and distribution of allergists in the United States, the Center for Health Workforce Studies at the School of Public Health, University at Albany, State University of New York, at the request of the American Academy for Allergy, Asthma, and Immunology, has examined a variety of aspects of the allergist workforce. Beginning in 1998, the Center has tracked the evolution of the allergist workforce through a number of surveys of practicing allergists, allergy, and immunology fellowship program directors, and recent graduates of allergy and immunology fellowship programs.

The Center has produced a number of reports on the results of these surveys, including: a historical report, "The Supply, Demand and Distribution of Allergists and Immunologists in the United States, A Descriptive Analysis," (May 1999); "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 report on 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); two graduate medical education tracking reports, "Allergy and Immunology GME Surveys 2000," (January 2001) and "Allergy and Immunology GME Surveys 2001," (February 2002); and an overview of second year internal medicine and pediatric residents' interest in allergy and immunology "Specialty Choices Among Second Year Medicine and Pediatric Residents," (February 2002).

The current report examines the results of surveys of allergy and immunology fellowship program directors and recent graduates of these programs in 2002. The results from these surveys provide valuable, up-to-date information on the supply of new allergists as well as demand for their services. Collected on an annual basis, trends in these data can be identified and conclusions drawn about dynamics that may affect the allergy physician workforce.

The Center for Health Workforce Studies is dedicated to the collection, analysis, and distribution of health workforce data to assist health, professional and educational organizations, policy makers, and the public understand issues related to the supply, demand,

and use of health workers. This report was prepared by Mark Beaulieu, Gaetano J. Forte, 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.

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Summary of the Results of the Survey of Allergy and Immunology Fellowship Program Directors in 2002

The responses to the allergy and immunology fellowship training program director survey in 2002 reveal a number of findings. First, there has been a recent swing from contraction to expansion in the size of fellowship programs. Beginning in the mid-1990s, the number of fellows training in allergy and immunology declined, reaching a bottom in 1997. While the number of fellows in training was roughly the same in 2000 as it was in 1997, more directors reported increasing the size of their programs than reported reducing the size of their programs. Past reports from directors clearly suggested that a bottom had been reached and that programs were poised to increase the number of new allergists trained each year. The results from the fellowship training program director survey in 2002 indicate that the expansion of training positions in allergy and immunology has begun.

Second, program directors continue to perceive strong interest in allergy and immunology among pediatric and internal medicine residents. Trainees look upon the specialty positively and their view of allergy and immunology is improving over time, according to the surveyed directors. The continued excellent reputation that allergy and immunology enjoys is likely to serve the specialty well in the future as it expands. Positive views and interest in the specialty are likely to generate a sufficient number of qualified applicants to fill new training slots. The 2002 survey results indicate that the number of applications and the quality of those applicants has increased for most training programs.

Third, program directors report that demand for recent graduates of allergy and immunology fellowship programs is high and do not anticipate a change in the near future. The current findings are consistent with those of past surveys, which suggests that the practice opportunities for new allergists continue to be abundant.

Fourth, despite the gnerally good job market, there are indications that the geographical areas around training sites are becoming saturated and unable to support many additional allergists. That is, the market for new allergists is tighter in areas close to allergy and immunology fellowship training sites than the market in other geographical areas. Program directors report that while practice opportunities in areas close to their training sites do exist for new allergists,

they are fewer than in other areas of the country. It should be stressed, however, that program directors continue to perceive a strong national market for allergists.

Key Findings

- In the past two years, more programs saw a decrease than an increase in the number of fellows entering training. However, even after the large increase in the number of fellows entering training between 1999-2000 and 2000-01, about one-fourth of the program directors reported an increase in the number of fellows entering training (25% between 2000-01 and 2001-02 and 27% between 2001-02 and 2002-03). Thus, even after a large number of programs reported an increase in size, there was still a good proportion of programs increasing in size over the last 2 years.

- Over three-fourths (78%) of training programs received more applications in the 2002-03 academic year than they did in the 2001-02 academic year. Only 15% of the training programs reported a decrease in the number of applications over the same time period. Adding this increase in applications to the finding that 52% of program directors reported that pediatric residents, along with 28% of program directors reporting that internal medicine residents, view the specialty of allergy and immunology very positively, indicates that the recent trend in improving views of the specialty among other physicians in training is continuing. Finally, 63% of program directors reported that the views of the specialty by pediatric residents have improved, while 73% of the program directors reported that the views of internal medicine residents of the allergy and immunology specialty have improved.

- Three-quarters (75%) of the allergy and immunology program directors reported that their graduates in 2001 had no difficulties finding positions. Almost two-fifths (38%) of program directors anticipated that their graduates in 2002 would have fewer difficulties than those in 2001. The current results are similar to the to the reports in 2001 (78% and 31%, respectively).

- Allergy and immunology fellowship program directors continue to assess the national job market for allergists as much better than the job market within 50 miles of their training sites. Moreover, allergy and immunology fellowship program directors reported a tighter job market within 50 miles of their training sites in 2002 than in 1999, 2000, and 2001.

Results of the Survey of Allergy and Immunology Fellowship Program Directors in 2002

This section is organized around a number of key, ongoing issues in allergy and immunology graduate medical education, including: trends in fellowship program size, attractiveness of allergy and immunology as a subspecialty, and the experiences of recent allergy and immunology graduates in the job market.

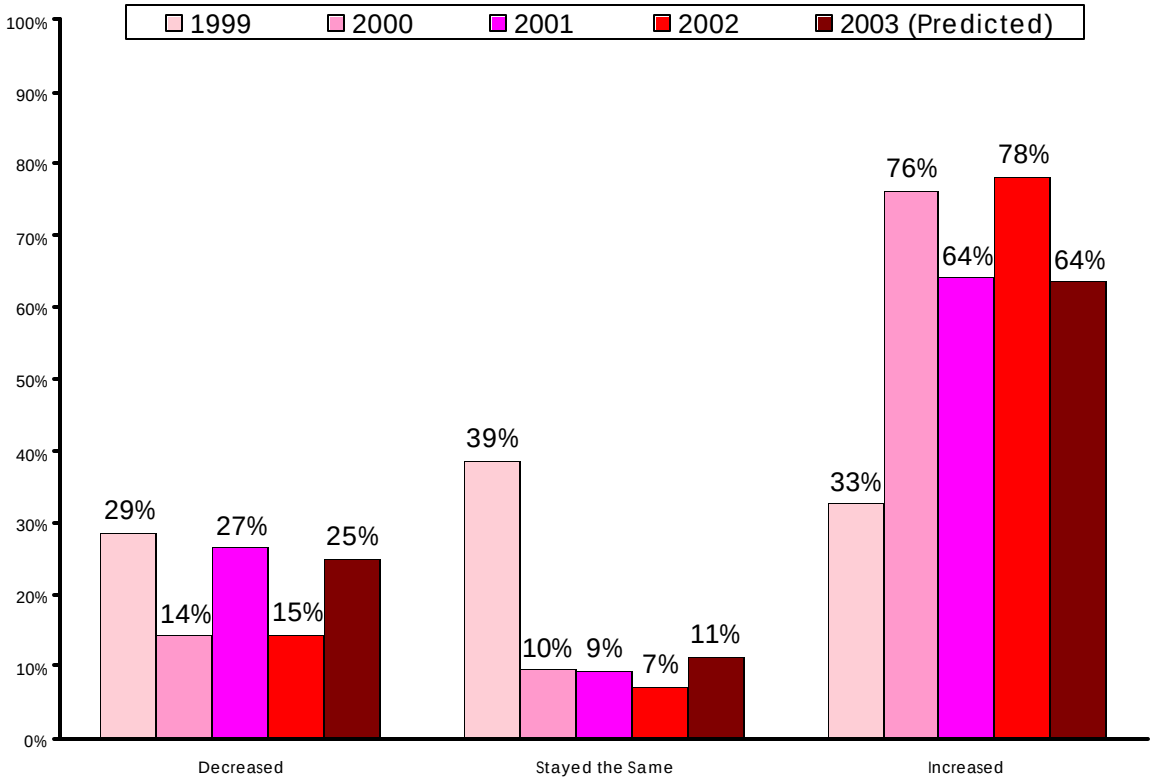
Program directors are in a unique position to assess both changes in the job market and the attractiveness of the subspecialty to residents in internal medicine and pediatrics. Program directors can also provide valuable insights into recent changes in allergy and immunology programs (i.e., positions, applications, entering fellows, and fellows completing training). Finally, program directors can provide a unique view of the job market for allergy and immunology residents completing their training. Thus, they are a good source of information on the aforementioned key issues in graduate medical education.

The Center received responses from 56 (80%) of the 70 active allergy and immunology fellowship programs in the United States in 2002. For complete technical details on the survey of fellowship program directors, please see Appendices A and B. The following sections analyze the responses the Center received from the 56 programs, as well as comment on the 2002 responses compared to previous surveys. It should be noted that the response rate to the survey in 2002 was higher than in 2001 (61%), but still lower than in 1999 (92%) and 2000 (90%). As a result, some of the small differences observed across years (e.g. comparing 2001 to 2002) do not reach statistical significance. The results, however, remain informative with a focus on overall trends, rather than specific year-to-year differences.

1. Trends in Fellowship Program Size

As reported elsewhere (Forte et al. 2000), graduate medical education in allergy and immunology decreased in the mid-1990s through the late 1990s, with signs that a bottom had been reached in 1997 when the number of fellows in training was just 64% of the number training in 1990. In the year 2000, the number of fellows in training was still at the same level as it was in 1997. An indication that the number of fellows in allergy and immunology was likely to continue to increase was that 78% of the programs were receiving more applications for the academic year 2002-03 than they did in 2001-02 (Figure 1). Only 15% received fewer

Figure 1. Change in Applications between Academic Years, 2000-2004



applications in 2002-03 than they did in 2001-02. More programs saw a decrease in applications from the previous year in 2001-02 (27%) than in 2002-03 (15%). An even more compelling finding supports the view that the turn around in the number of fellows will continue is that 64% of the program directors anticipate an increase in the number of applications between the current academic year (2002-03) and the next academic year (2003-04).

The vast majority (95%) of training program directors reported that the qualifications of applicants to their programs were good or excellent in 2002 (Figure 2). Over half (57%) of the directors reported that the applicants had excellent qualifications. While there are no previous data from earlier surveys to compare with the results from the current survey, the high quality of applicants is a positive sign for the specialty.

The trend in the percentage of strong candidates is not as clear as it is for positions and applications (Figure 3). Thirty-seven (37%) percent of the program directors stated that there was a lower percentage of strong candidates in 2002-03 than in 2001-02. However, the same percentage reported that there was an increase in the percentage of strong candidates. The percentage of programs reporting an increase in strong candidates between 2001-02 and

2002-03 (37%) was lower than the change between 2000-01 and 2001-02 (43%) and lower than the expected increase between 2002-03 and 2003-04 (50%). Due to the limited number of years present for this question, it is difficult to interpret these numbers. However, the expectations of the program directors seem to indicate that there has been an increase in the quality of applicants (43% increase between 2000-01 and 2001-02, 37% increase between 2001-02 and 2002-03, and 50% increase between 2002-03 and 2003-04). The program directors were equally likely or more likely to report an increase in the quality of applicants for each academic year than they were to report a decrease in the quality of applicants.

Based on program directors' responses about the number of fellows entering programs during the most recent academic year (2001-02) and the coming academic year (2002-03) it appears that the number of fellows entering allergy and immunology training is stabilizing (Figure 4). Half (50%) of the programs reported an increase in the number of fellows entering training in 2000. Fewer programs reported increases in the number of fellows entering training in later years (2001: 25% and 2002: 27%). However, the number of fellows entering training may be declining once again. For the past 3 years, more programs have reported a decrease in the number of fellows entering training (2000: 20%; 2001: 34%; and 2002: 38%).

Fellows entering training in allergy and immunology can have prior training in pediatrics, internal medicine, or combined pediatrics and internal medicine. Figure 5 presents the trend for pediatric fellows entering allergy and immunology programs. The number of pediatric fellows entering training has been relatively constant for the last 3 academic years. A relatively constant percentage of programs are reporting decreases in the number of pediatric fellows entering training (1999: 29%; 2000: 20%; 2001: 23%; and 2002: 27%). At the same time, over the last 3 academic years, the percentage of programs reporting an increase in the number of pediatric fellows has remained similar (2000: 26%; 2001: 24%; 2002: 21%).

Similar to the results for total fellows entering training, forty-two (42%) percent of program directors reported an increase in the number of internal medicine fellows entering training in the 2000-01 academic year (Figure 6). The number of programs reporting an increase in the number of internal medicine fellows entering training in 2001 dropped to 17% and then increased to 27% in 2002. The changes in the number of internal medicine residents entering

Figure 2. Training Program Directors' Assessments of the Qualifications of Applicants, 2002

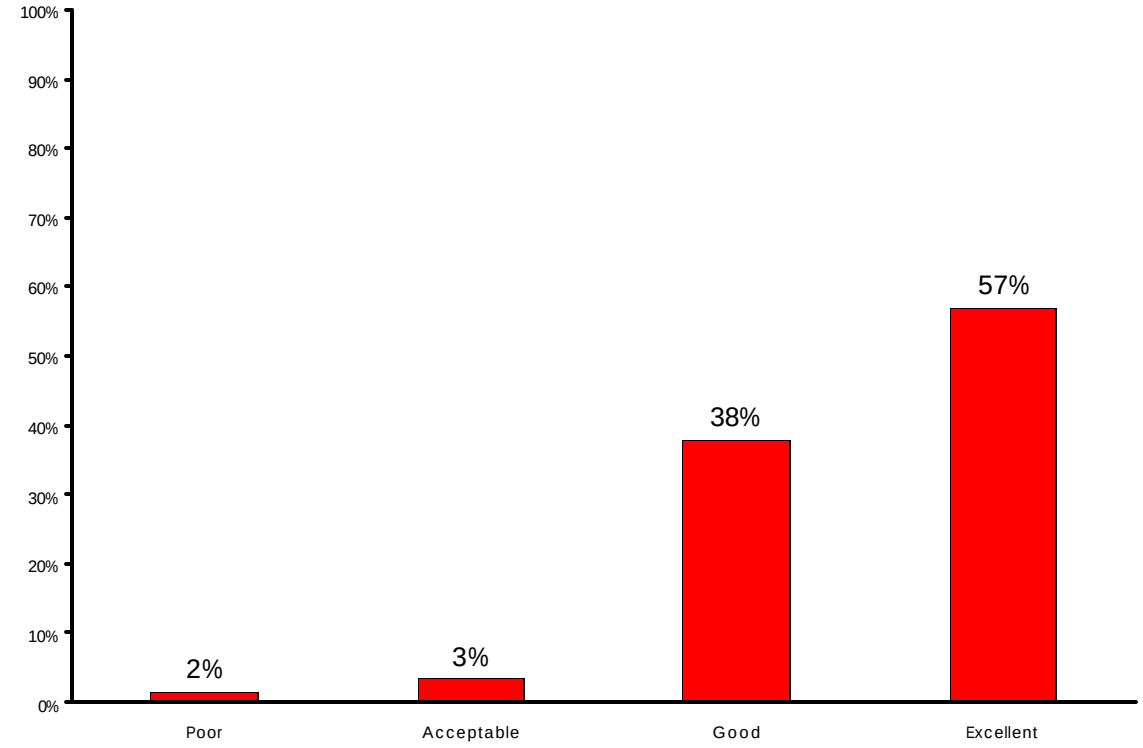


Figure 3. Change in the Percentage of Strong Candidates Over Time, 2001-2003

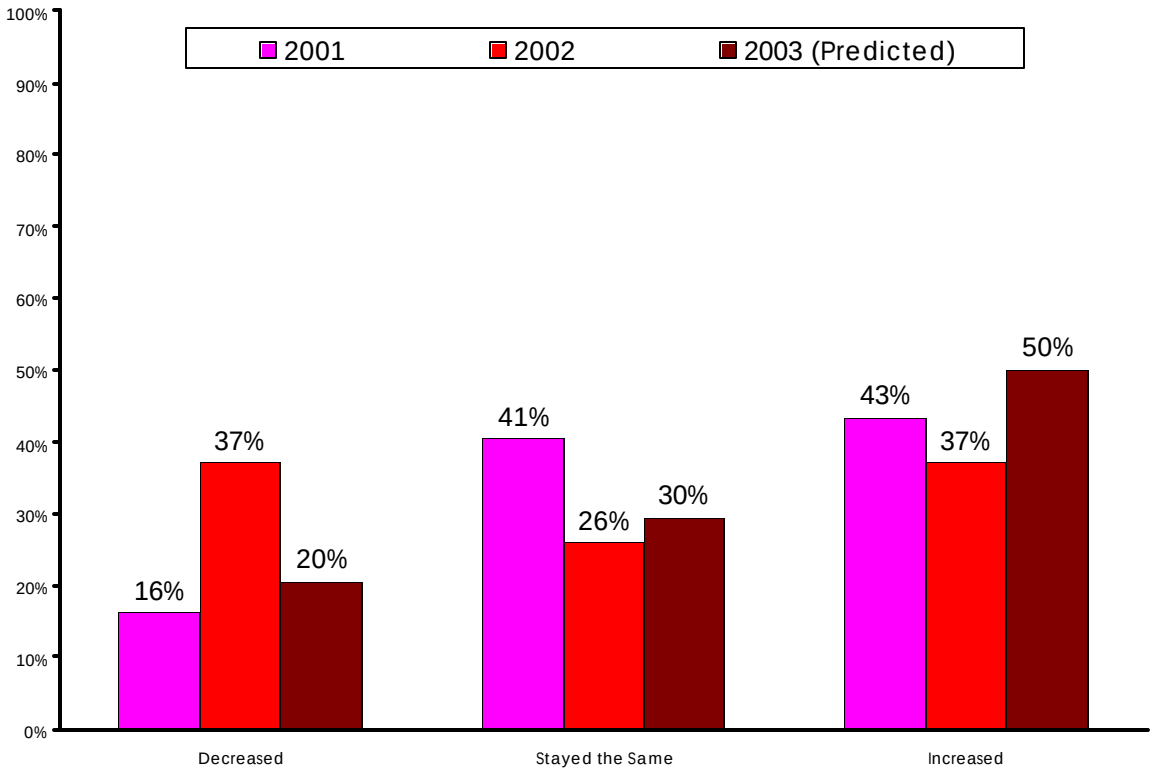


Figure 4. Change Among Training Programs in Total Fellows Entering Training Compared to Prior Year, 1999-2002

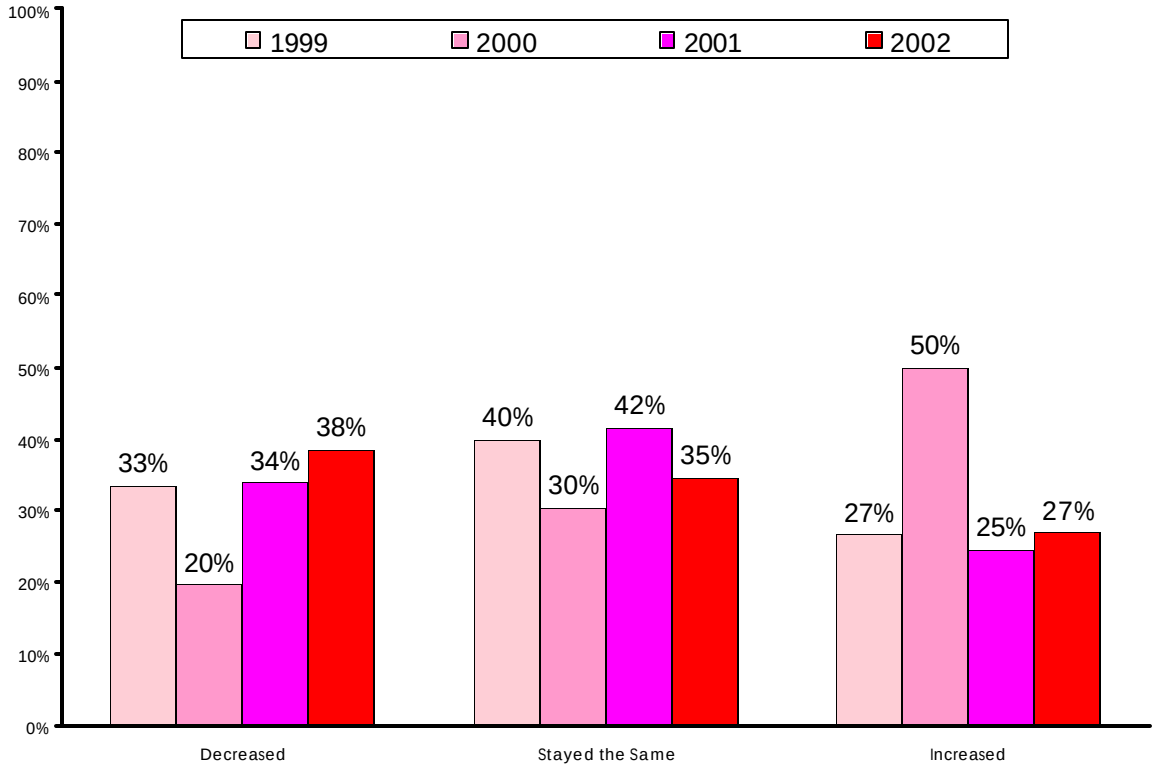
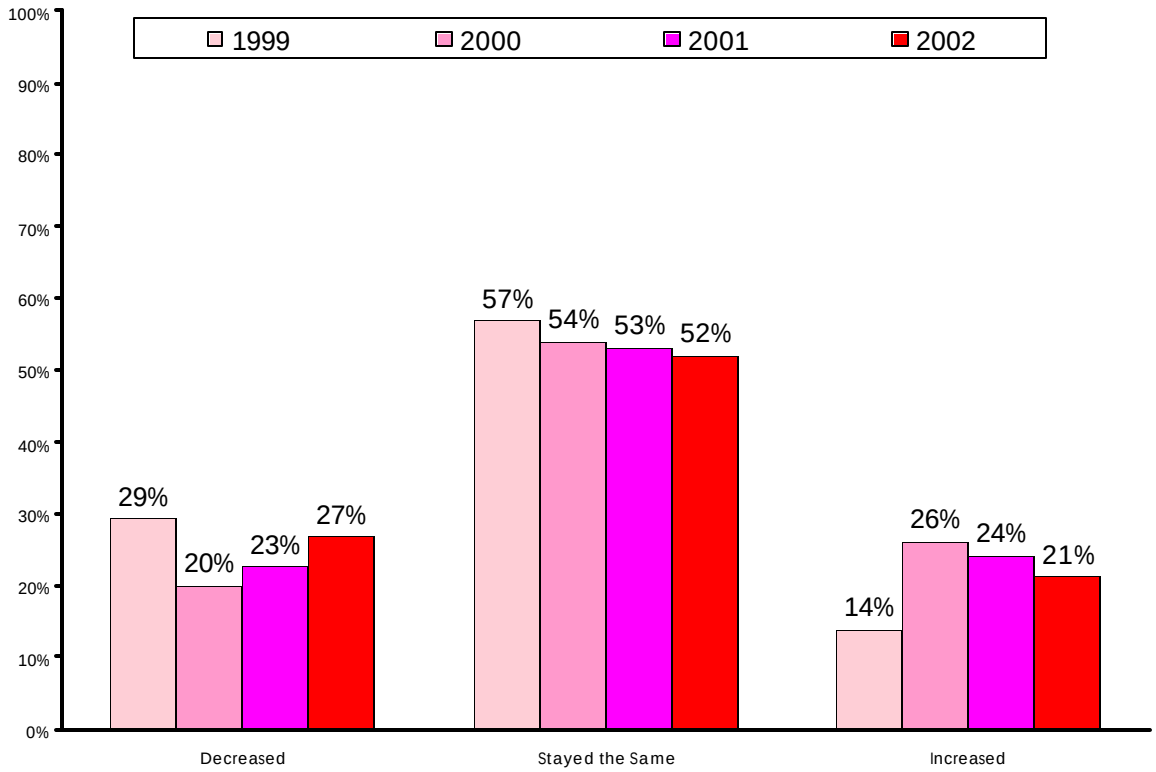


Figure 5. Change Among Training Programs in Pediatric Fellows Entering Training Compared to Prior Year, 1999-2002



training are similar to the change in the total number of residents entering training. Thus, the large change in the total number of residents entering training is largely due to the change in the number of internal medicine residents entering training in 2000.

Figure 7 presents the change in the number of fellows with combined training in pediatrics and internal medicine entering training. The program directors reported very little change in the number of fellows with combined training in pediatrics and internal medicine. For every year, at least 67% of the program directors reported the same number of fellows with combined pediatrics and internal medicine entering training. The only year where there were fewer programs increasing than decreasing was 2002 (21% reported a decrease whereas 12% reported an increase).

As would be expected from the large increase in fellows entering training in 2000-01, there was a large percentage of programs reporting an increase in fellows graduating in 2002. Over half (55%) of the program directors reported an increase in the number of graduates in 2002 (Figure 8). Almost half (49%) of the programs reported expectations of a decrease in the number of graduates the following academic year (2003).

Figure 6. Change Among Training Programs in Internal Medicine Fellows Entering Training Compared to Prior Year, 1999-2002

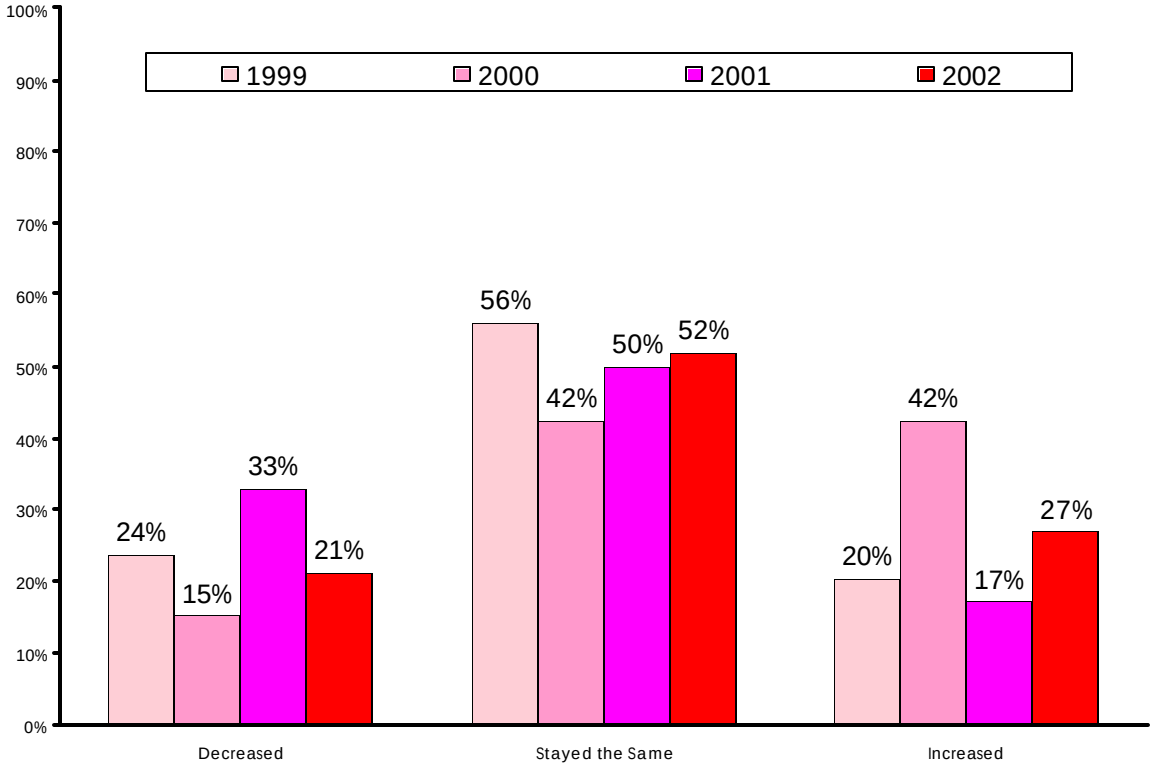


Figure 7. Change Among Training Programs in Combined Pediatric/Internal Medicine Fellows Entering Training Compared to Prior Year, 2000-2002

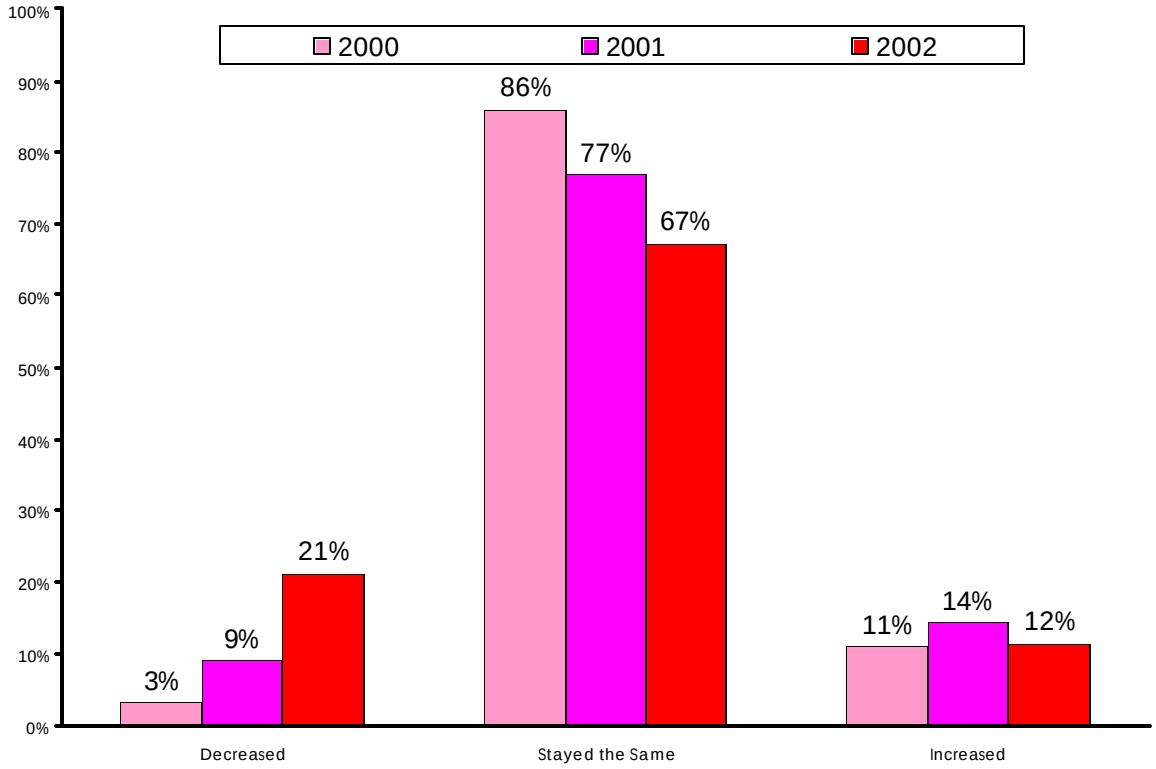
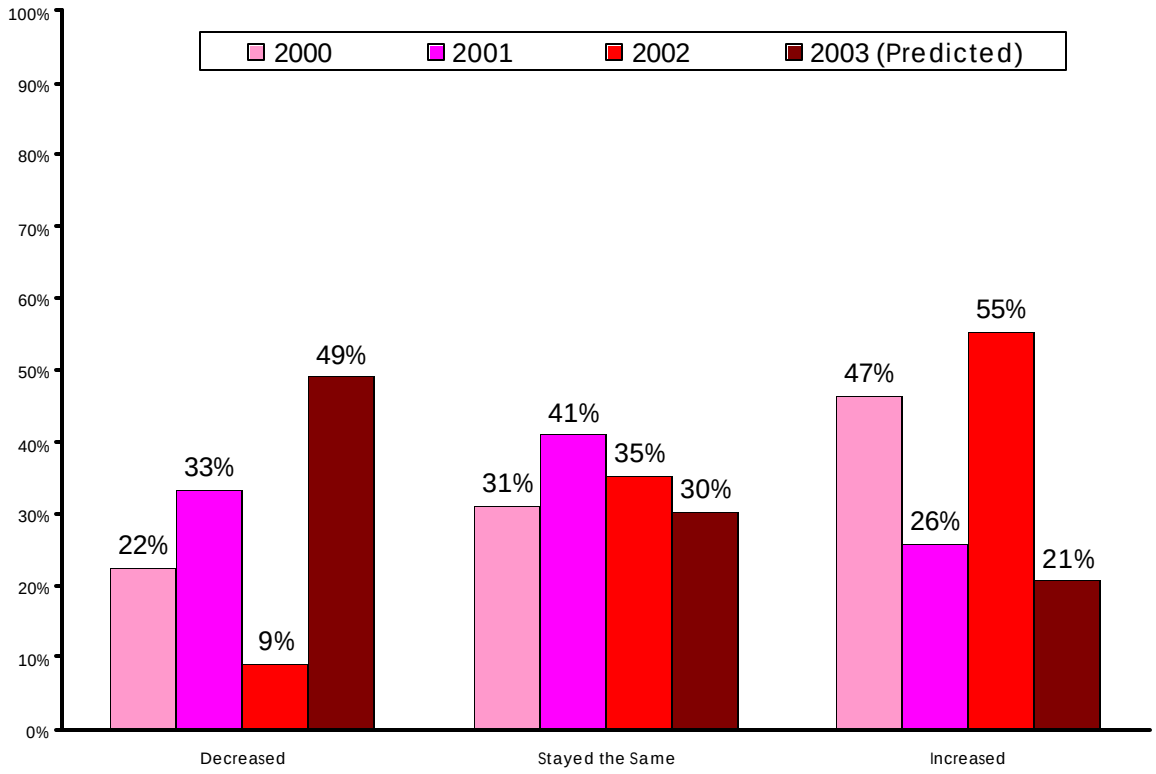


Figure 8. Change Among Training Programs in Total Fellows Graduating by Year of Graduation, 2000-2003



The percentage of program directors reporting an increase (30%) in the number of pediatric fellows graduating was similar to the percentages of program directors reporting a decrease (35%) or no change (35%) in 2002 and 2003 (Figure 9). The overall trend for the change in the number of pediatric fellows graduating is not clear. There was an increase in both the percentages of programs reporting an increase (23% in 2002 and 30% in 2003) and reporting a decrease in the number of pediatric fellows graduating (21% in 2002 and 35% in 2003).

Figure 10 presents the change in the number of internal medicine graduates. Forty-one (41%) of the programs reported an increase in the number of internal medicine graduates in 2002. This large percentage of programs showing an increase in the number of internal medicine fellows graduating should come as no surprise since a large percentage of programs reporting an increase in the number of internal medicine residents entering training in 2000. More programs reported a decrease (34%) in the number of internal medicine graduates in 2003 than reported an increase (21%).

Figure 9. Change Among Training Programs in Pediatric Fellows Graduating by Year of Graduation, 2000-2003

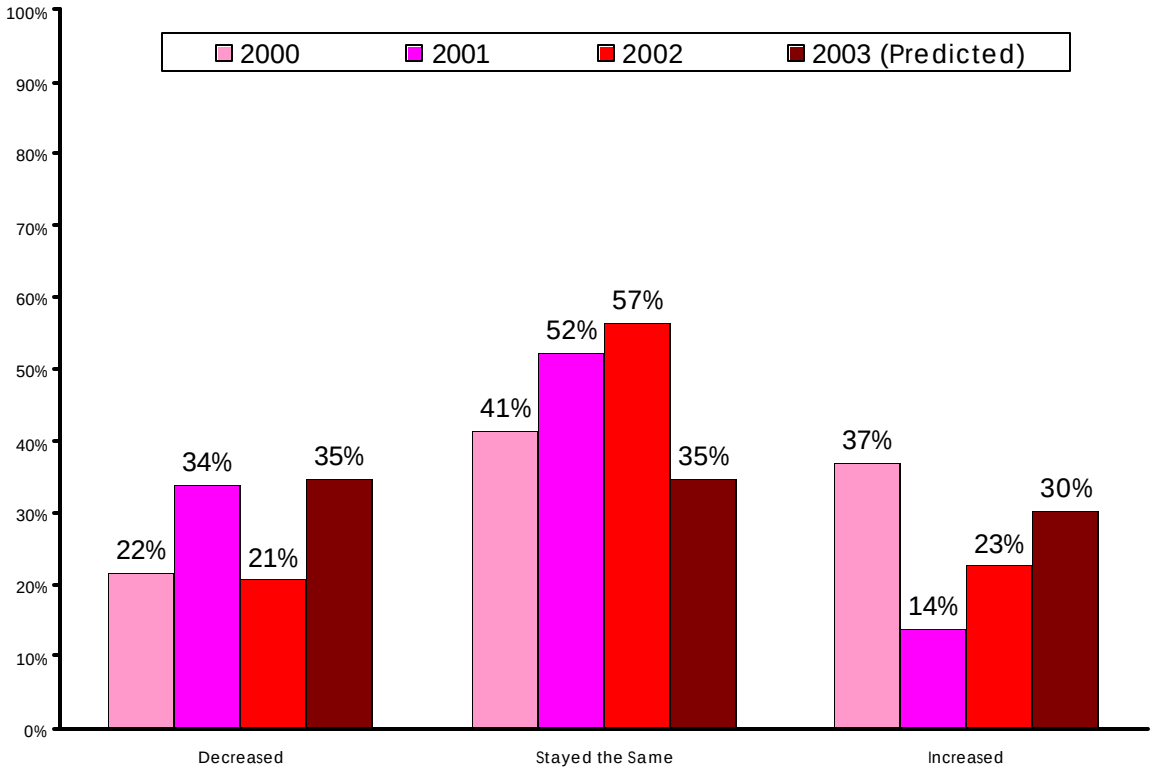


Figure 10. Change Among Training Programs in Internal Medicine Fellows Graduating by Year of Graduation, 2000-2003

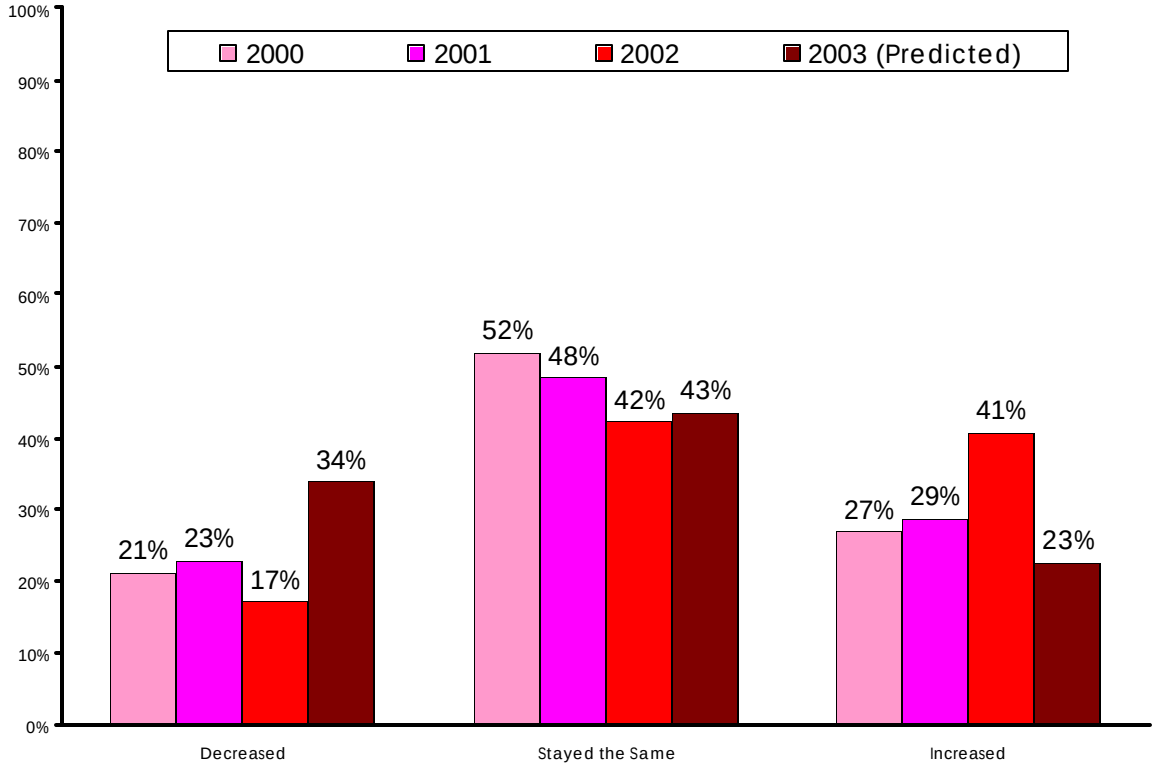
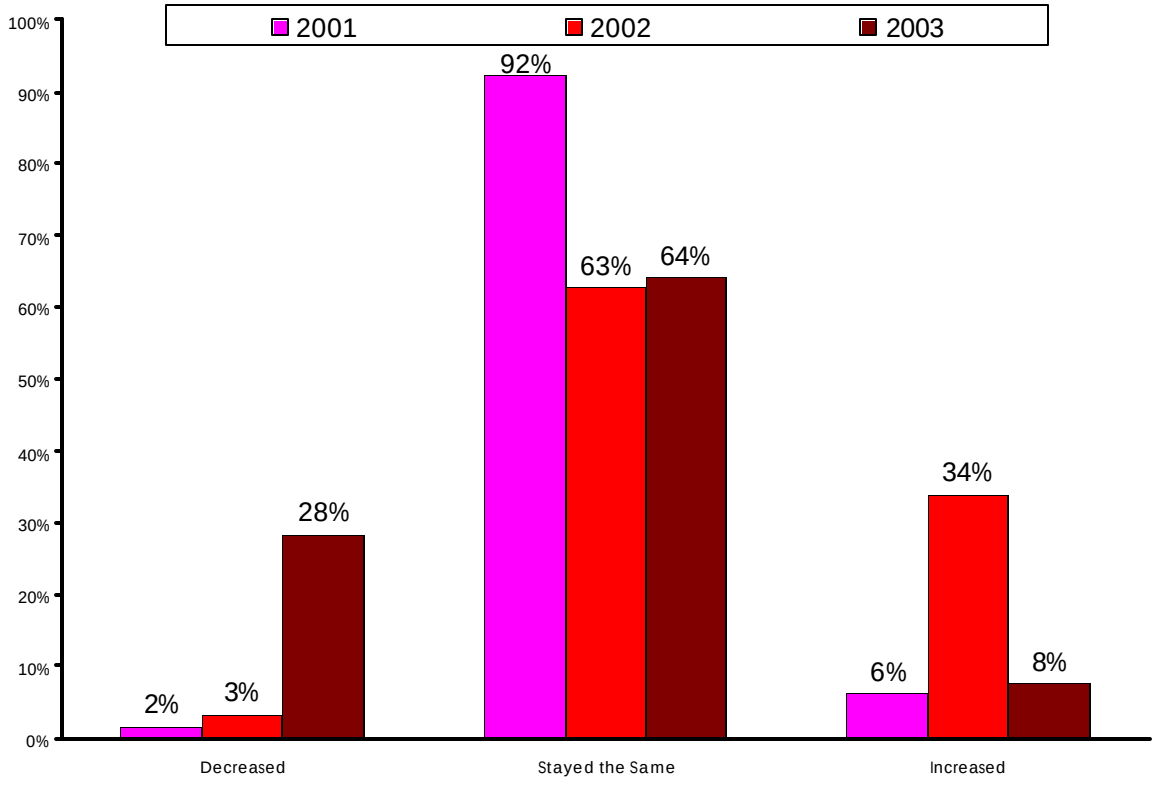


Figure 11. Change Among Training Programs in Combined Pediatric/Internal Medicine Fellows Graduating by Year of Graduation, 2001-2003



Program directors were most likely to report no change in the number of fellows graduating with prior combined training in pediatrics and internal medicine (Figure 11). Over 9 out of 10 (92%) of the programs reported no change in the number of fellows with combined pediatrics and internal medicine graduating in 2001. This percentage drops to 63% in 2002 and 64% for 2003. While 34% of the program directors reported an increase in combined fellows graduating in 2002, 28% of the programs reported a decrease for 2003.

2. Funding Sources and Faculty Characteristics

For the 2002 training program director survey, the Center added several new questions to the instrument. These questions focused on funding and faculty characteristics of current allergy and immunology training programs. This section presents the analysis of these new survey items.

Over three-fourths (78%) of the program directors reported at least one fellow in the program received funding through the institution (Figure 12). Training program directors were much less likely to report that fellows in their programs received funding from the following sources: training grant (21%), clinical fellowship (12%), and pharmaceutical companies (7%). Just under 3 out of 10 (29%) program directors reported that at least one fellow received funding from other sources.

Over half of the training program directors (55%) indicated that their programs received good or excellent funding for this year (Figure 13). A little less than a quarter (24%) reported that their funding for this year is adequate. About one-fifth (21%) stated that their funding was inadequate, with 19% reporting poor funding and only 2% reporting very poor support. Overall, this suggests that funding for allergy and immunology programs is strong.

Another funding concern is whether funding has changed over time for allergy and immunology programs. Figure (14) shows that the majority (72%) of programs saw no change in funding for this academic year. However, there were more programs that saw a decrease in funding than saw an increase (17% versus 10%). However, due to this being the first year this information was provided on the survey, it is not possible to compare these results with past surveys.

Not surprisingly, 98% of the training program directors reported that they had full-time paid faculty in their programs (Figure 15). About two-thirds (66%) indicated that they had part-time paid faculty. Full-time volunteer faculty within the program was rarely reported (3%). However, part-time volunteer faculty in the program was as common as part-time paid faculty (66%). Finally, 9% of the training program directors reported they had other faculty that did not fit the above descriptions.

Figure 12. Funding Sources of Allergy and Immunology Training Programs, 2002

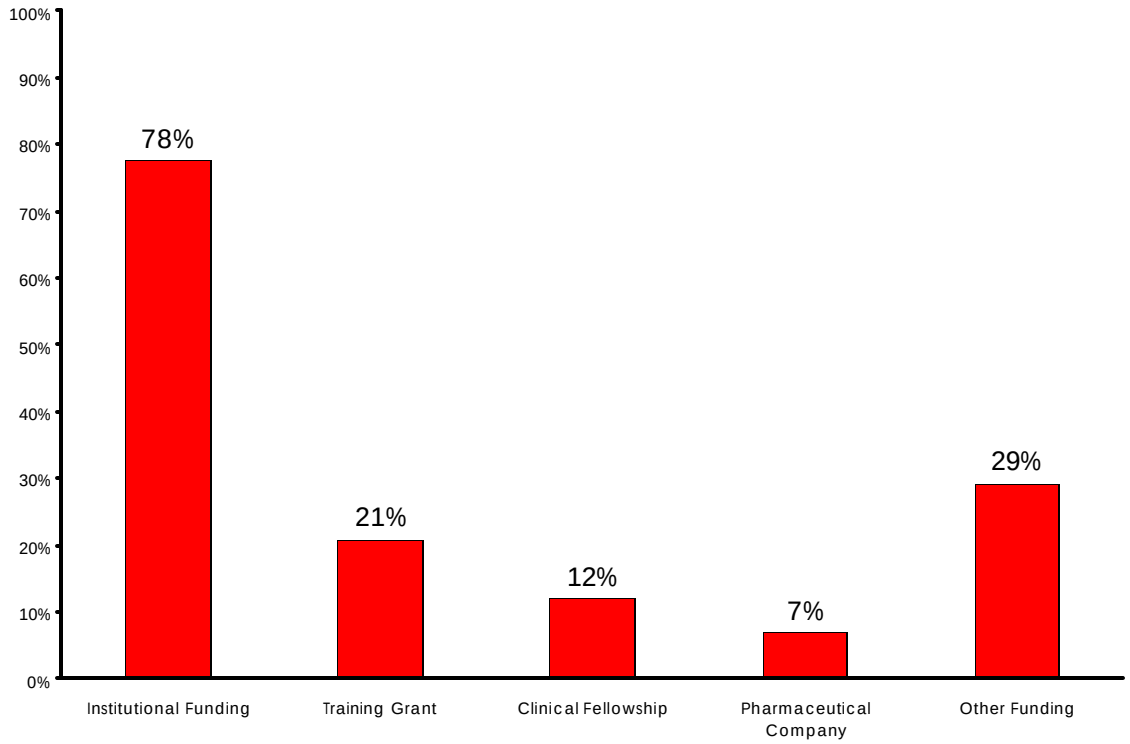


Figure 13. Training Program Directors' View of the Adequacy of Funding, 2002

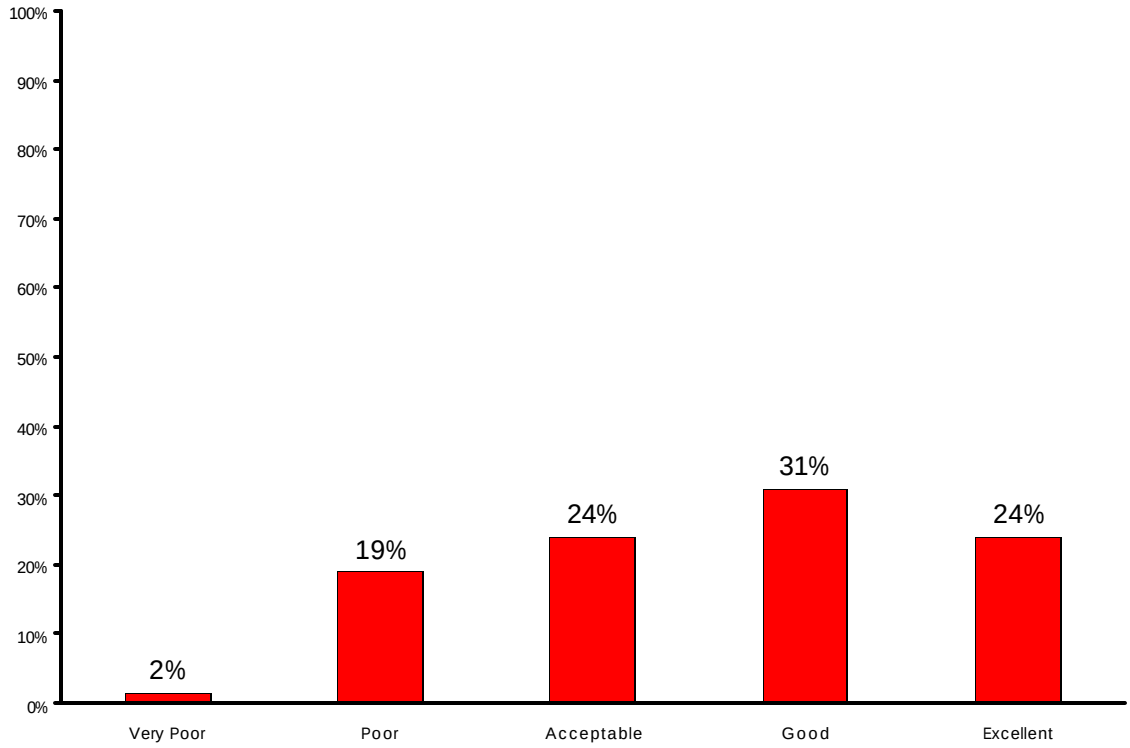


Figure 14. Change in Funding for Allergy and Immunology Programs from Previous Year, 2002

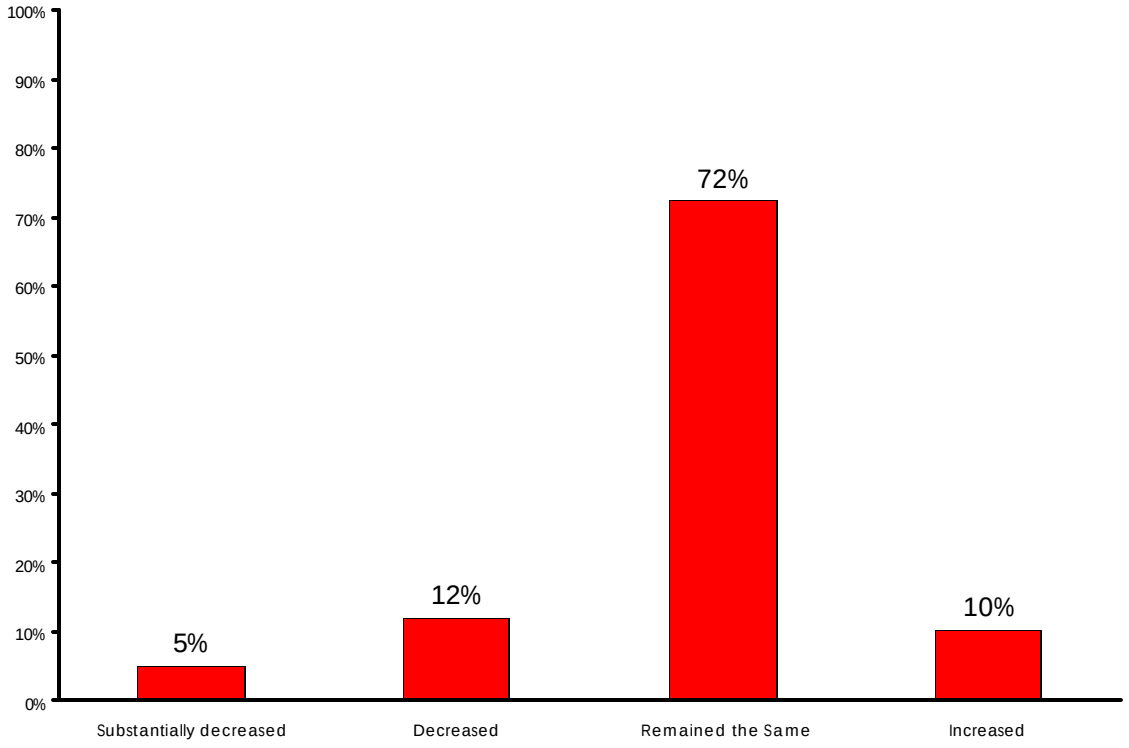


Figure 15. Allergy and Immunology Training Program Faculty Funding Distribution, 2002

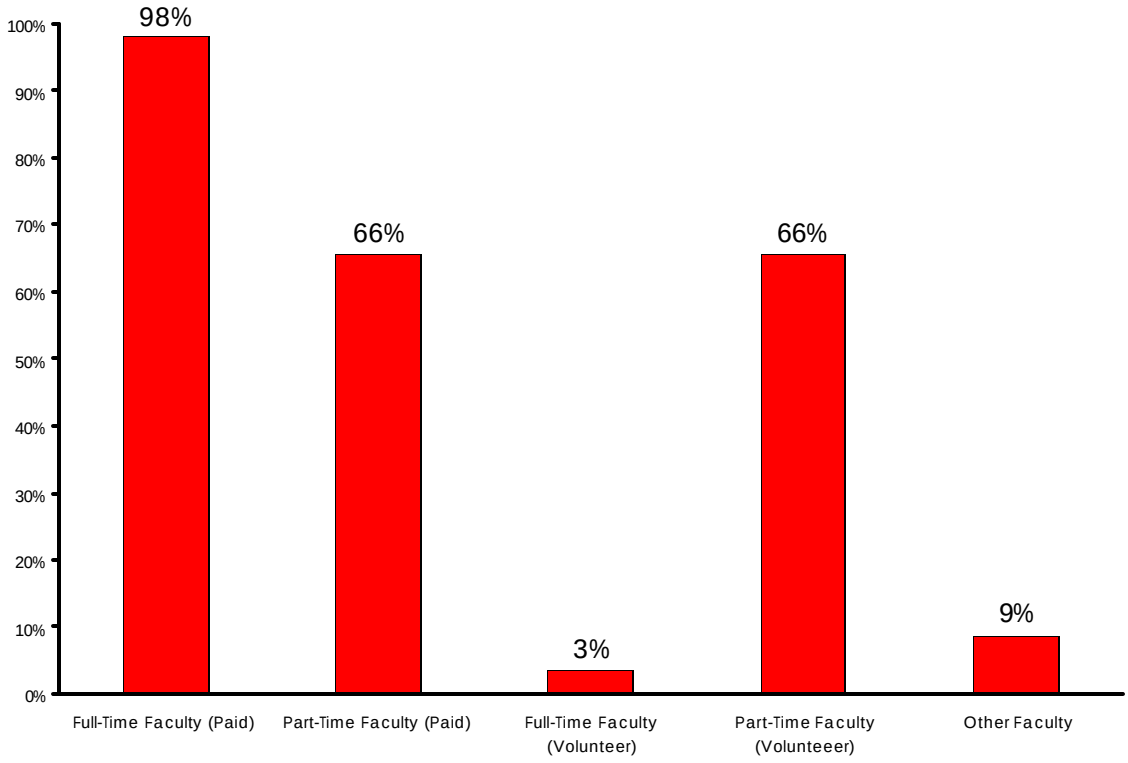
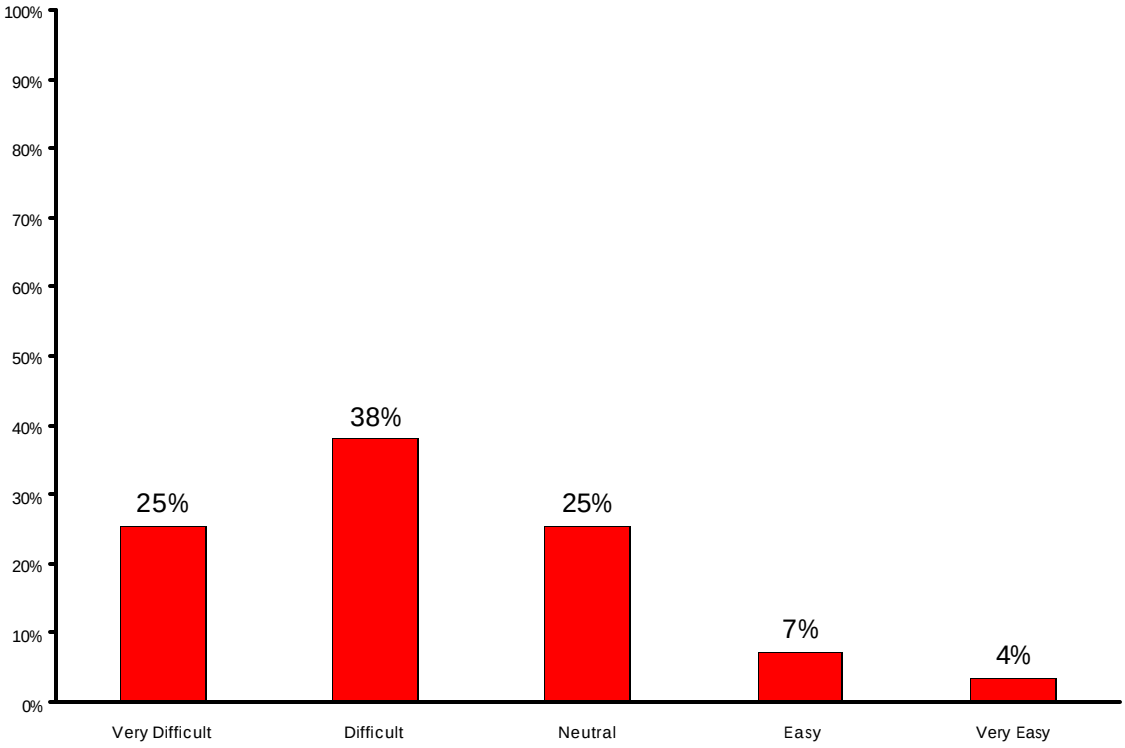


Figure 16. Recent Experience(s) Recruiting Qualified Faculty for Training Program, 2002



Finally, a majority of training program directors (64%) reported that they had recently experienced difficulty recruiting qualified faculty for their programs (Figure 16). Only 11% stated that their recent experience recruiting qualified faculty was easy. Again, it is not possible to compare these results with earlier surveys since the older surveys did not gather this information. However, these observations suggest that qualified faculty are not readily available to training programs.

3. Training Program Director Views on the Attractiveness of Allergy and Immunology as a Subspecialty

In the long term, the viability of allergy and immunology as a specialty depends, in part, on its ability to attract new, well-qualified physicians to the specialty. To become an allergist, a physician must first choose to subspecialize, and then choose allergy and immunology over other subspecialties. Thus, it is important to understand how the specialty is viewed by medical residents who are still considering whether to subspecialize.[1] Moreover, this understanding is crucial for developing strategies to encourage an increase in the number of well-qualified applicants to programs in order to increase production of new allergists.

For allergy and immunology, the important group of medical residents to consider are pediatric and internal medicine residents.[2] As shown in Figure 17, allergy and immunology program directors indicated that the specialty is viewed positively by pediatric and internal medicine residents. Over 80% of program directors stated that pediatric (87%) and internal medicine (83%) residents had somewhat positive or very positive views of the allergy and immunology specialty. This is similar to the results from the 2001 program directors survey where 85% of program directors reported that the specialty is viewed positively by pediatric and internal medicine residents. The percentages of programs directors indicating positive views of the specialty by pediatric and internal medicine residents is higher over the last 2 years than in previous years of the study. Only 10% of program directors stated that pediatric residents have a negative view of the specialty, while 8% reported negative views for internal medicine residents.

Additionally, a majority of the program directors reported that they perceive the views of pediatric (63%) and internal medicine (73%) residents as having become better over the last three years (Figure 18). While 37% of the directors reported no change in the view of the specialty by pediatric residents, no director reported that the view has become worse in the recent past. Only 2% of the directors reported that the view has become worse for internal

[1] While program directors' perceptions of how the specialty is viewed by medical residents is not a perfect measure of the attractiveness of the specialty to medical residents, program directors' experiences do provide valuable observations on medical resident attitudes. For more information on how the specialty is viewed by pediatric and internal medicine residents, please see *Specialty Choices Among Second Year Medicine and Pediatric Residents* (Puccio et al. 2002).

[2] All allergy and immunology fellows must complete an accredited residency program in pediatrics or internal medicine before they can begin fellowship training in allergy and immunology.

Figure 17. A/I Program Directors' Perceptions of Views of Pediatrics and Internal Medicine Residents, 1999-2001

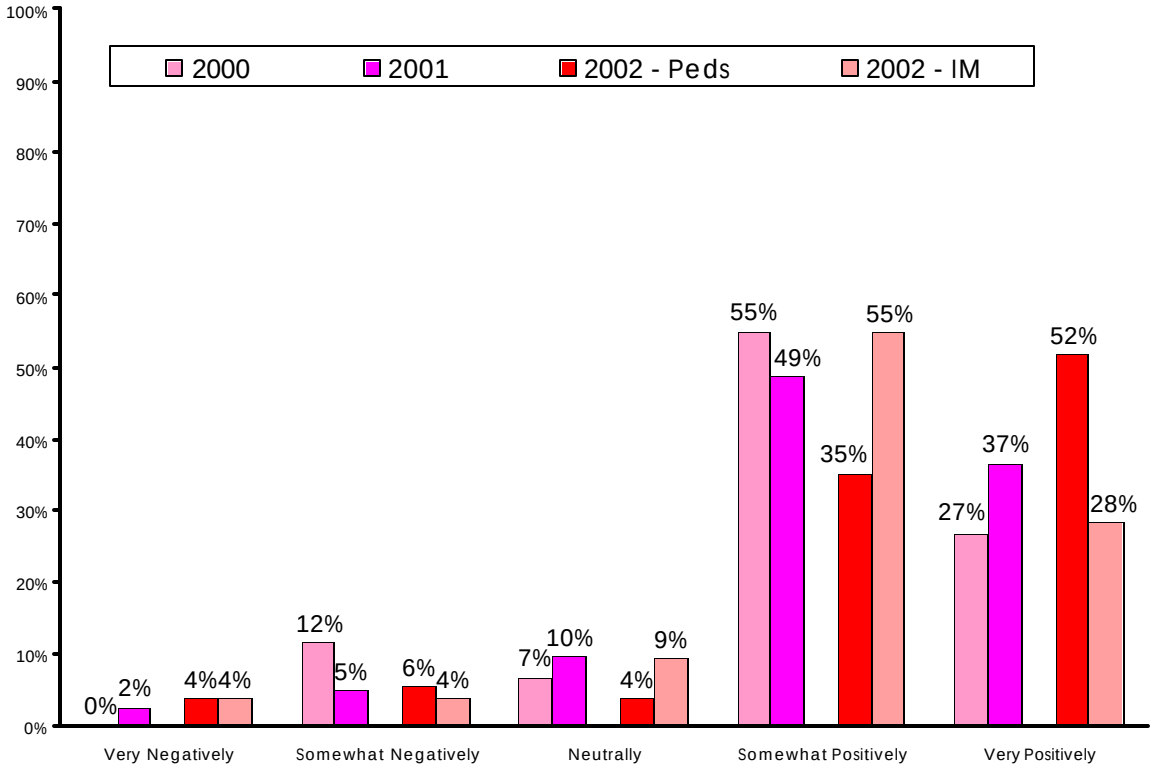
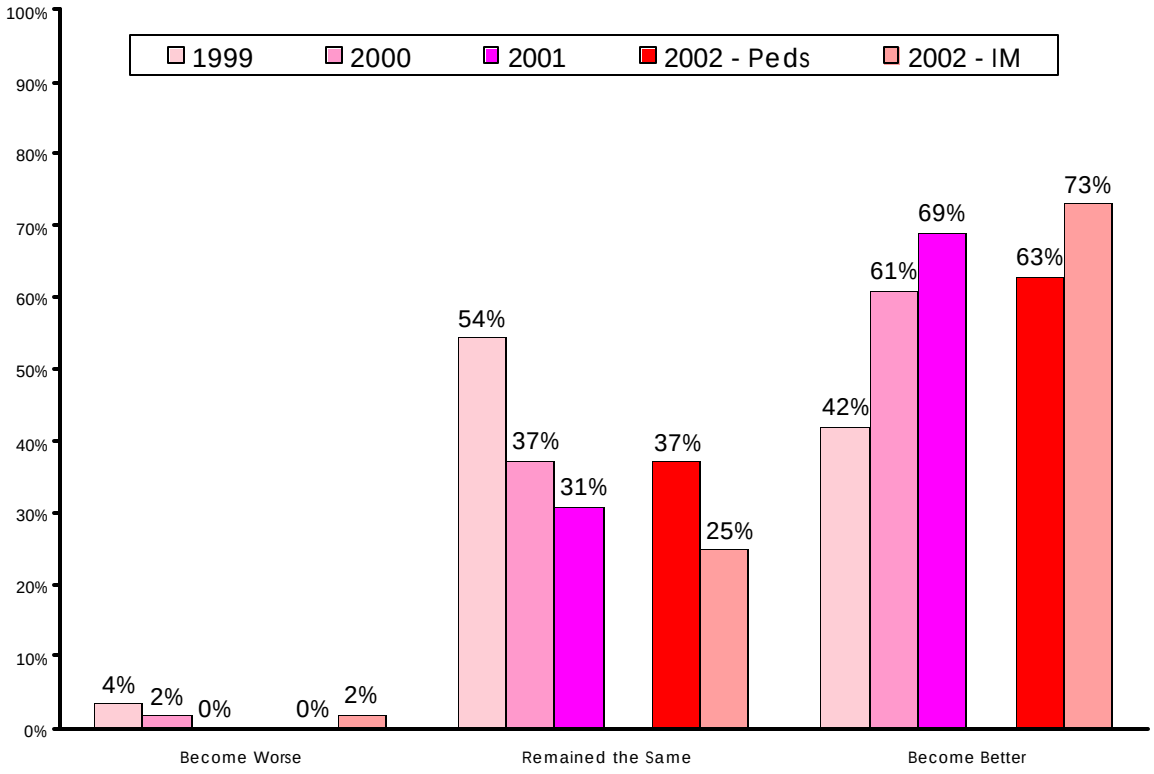


Figure 18. Change in A/I Program Directors' Perceptions of Views of Pediatrics and Internal Medicine Residents over Past Three Years, 1999-2001



medicine residents. Combined with previous surveys, the 2002 responses continue the trend toward an improving view of the specialty by potential applicants. These are positive indications for the specialty as movement toward program expansion is likely to be met with applicant interest.

4. Directors' Views of Recent Graduates' Experiences in the Job Market

Since allergy and immunology fellowship programs are small in size, with only a few fellows completing a particular program each year, program directors have a heightened awareness of the postgraduate plans and experiences of their graduating fellows. The views of the recently graduated fellows, themselves, on these issues are examined in the next chapter.

Program directors reported that over the past five years, almost three-fourths (71%) of their graduates on average go on to private practice (Figure 19). The second most frequent setting (22%) for new allergists to practice is an academic medical center. The historical data last year showed an indication of an upward trend in the proportion of graduates working in academic medical centers. The 2002 survey results were the first time that there was a decline in the percentage of new allergists entering practice in academic medical centers. The decline is small, and due to the low response rate in 2001, it is difficult to determine if there was actually a drop in new residents entering practice in academic medical centers. Above all, however, the responses in 2002 (and in previous years of the survey) confirmed previous indications that allergy and immunology fellowship programs produce patient care physicians in private practice.

Examining programs directors' perceptions of how much difficulty the recently graduated fellows had when seeking employment provides a good snapshot of demand for physicians providing allergy and immunology services. Three-quarters (75%) of the program directors reported that their year 2001 graduates had no difficulties finding full-time employment in allergy and immunology (Figure 20). A little less than a quarter (23%) reported some difficulty for new allergists and only 2% reported many difficulties. Both 2001 and 2002 are somewhat less positive than the previous year's survey (No difficulty responses: 89% in 2000; 79% in 2001; and 75% in 2002). This suggests that the market for new allergists may have been tighter in 2000 than in 1999 and that the market may have been slightly tighter in 2001 than in 2000. However, examining the overall trend, the proportion of program directors reporting no difficulties has remained at about the same level since 1998.

The relative level of difficulty program directors perceived for their 2001-02 graduates

Figure 19. Practice Settings of New Allergists in Past Five Years, Mean Percentages, 1999-2002

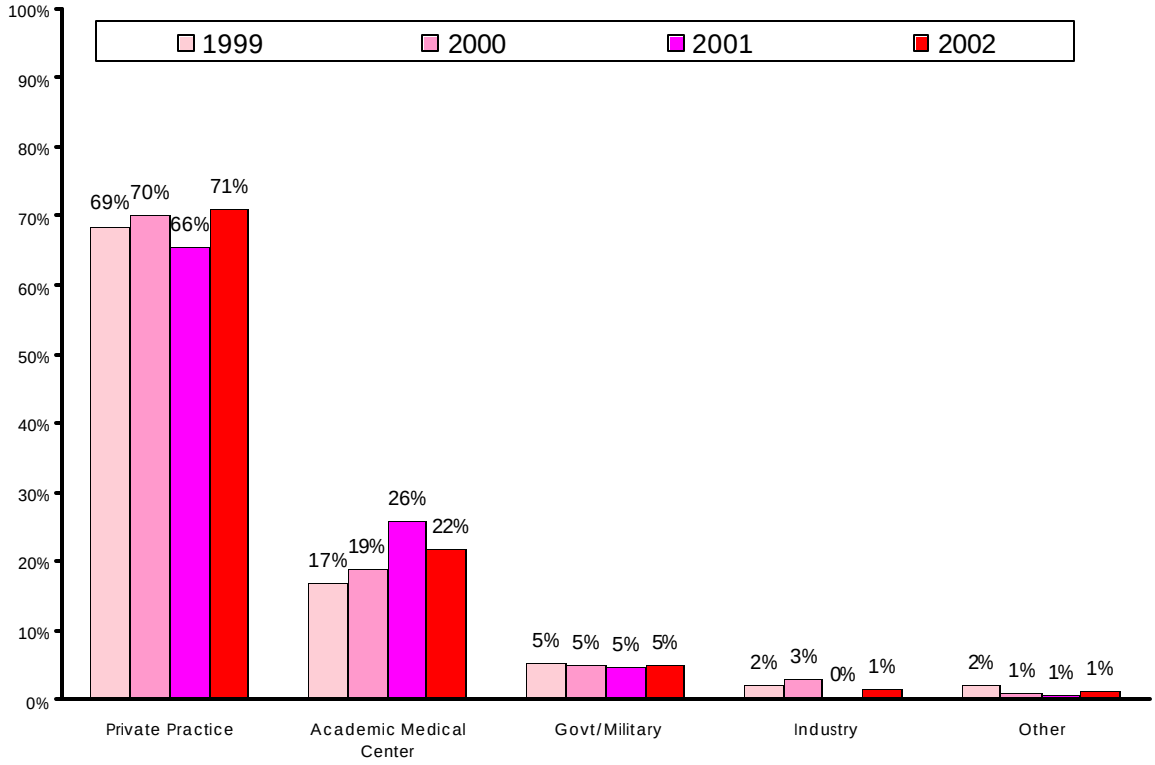
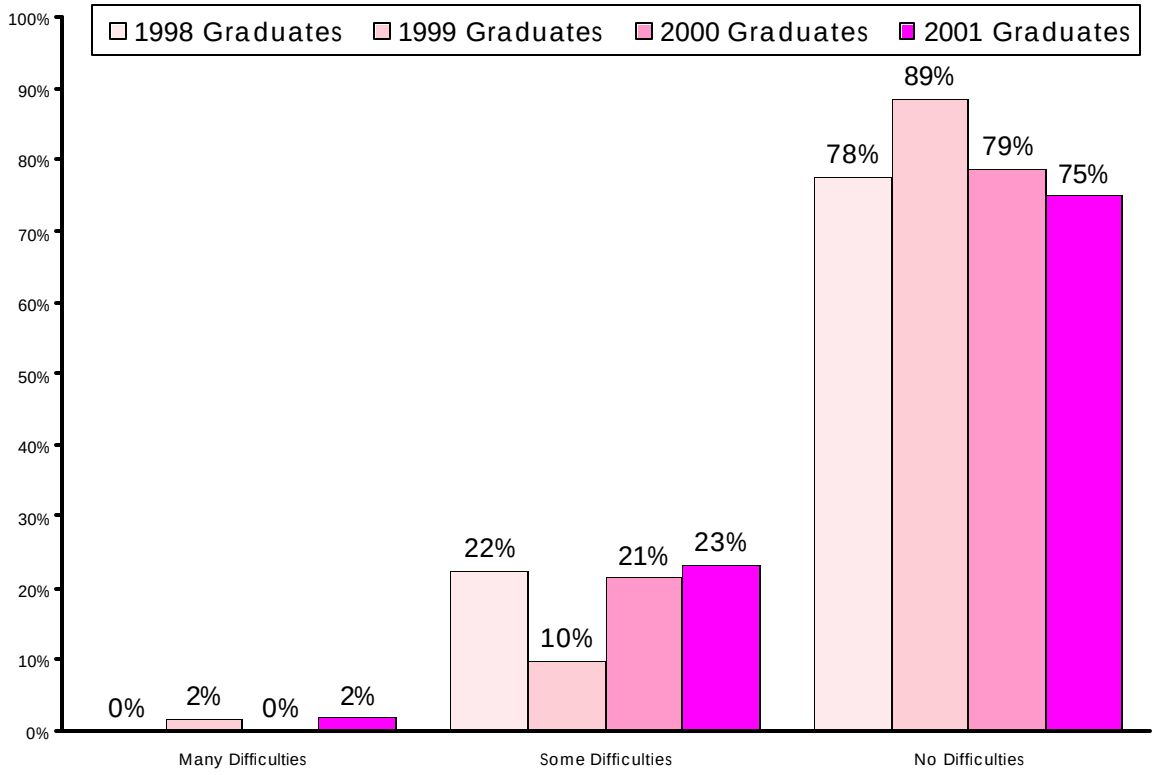


Figure 20. A/I Program Directors' Perceptions of Recent Graduates' Difficulty Finding Full-Time Employment Opportunities in A/I, 1998-2001



compared with the year previous is presented in Figure 21. As is evident, over a third (38%) of the directors reported that their graduates were having an easier time in the job market in 2001-02 than they were in the previous year. The remainder (63%) reported that the level of difficulty finding employment was about the same over the past two years. While there was a slight improvement in the job market for graduates from the 2001-02 academic year over graduates from the previous academic year, more program directors reported that their graduates were having an easier time in the job market in both 2000 and 1999. Thus, while the job market for new allergists may still be robust and improving, the rate of improvement may be slowing.

Finally, when asked to assess the local [within 50 miles of a particular training director's training site(s)] job market for allergists (Figure 22), only 11% of the program directors reported that there were a good number of positions available. Further, more than half (55%) of the directors reported that there were few or no positions available in the local market. This is the second year in a row where more program directors reported few or no positions available in the local job market. Their observations are indications of decay in the local job market around training sites for allergists over the last year.

There is a clear trend toward the perception of a strong national job market among program directors. Program directors were much more optimistic about the national job market (Figure 23). Over three-fourths (79%) of the program directors reported that there were a good number of jobs or better nationally. While this proportion is down from 93% in 2001, it is similar to the level in 2000 (76%) and above the level in 1999 (54%). It is a positive sign for the national job market that almost 8 out of 10 program directors still view the job market so positively.

The difference between the local and national allergist job market assessments suggests that the historical geographic distribution patterns among allergists have resulted in clusters of allergists. The areas around training sites have become (or are becoming) saturated with allergists. As will be shown in the next chapter, the recent graduates also reported this disparity at the local level and identified lack of opportunities in specific geographic locations as the reason for much of the difficulty they experienced in search for a practice position.

Figure 21. A/I Program Directors' Perceptions of Change in Job Market Opportunities for Current Academic Year Graduating Fellows Compared to Previous Academic Year Graduates, 2000-2002

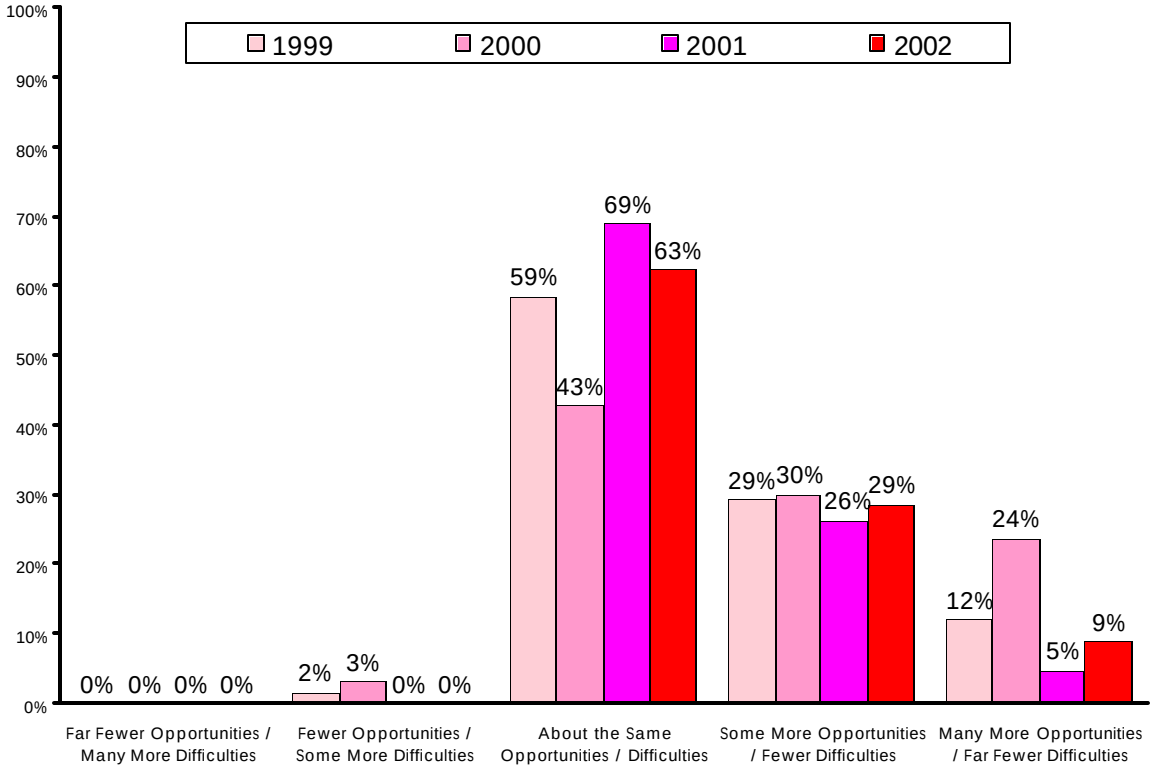


Figure 22. A/I Program Directors' Assessment of Practice Opportunities in A/I within 50 Miles of Their Training Site(s), 2000-2002

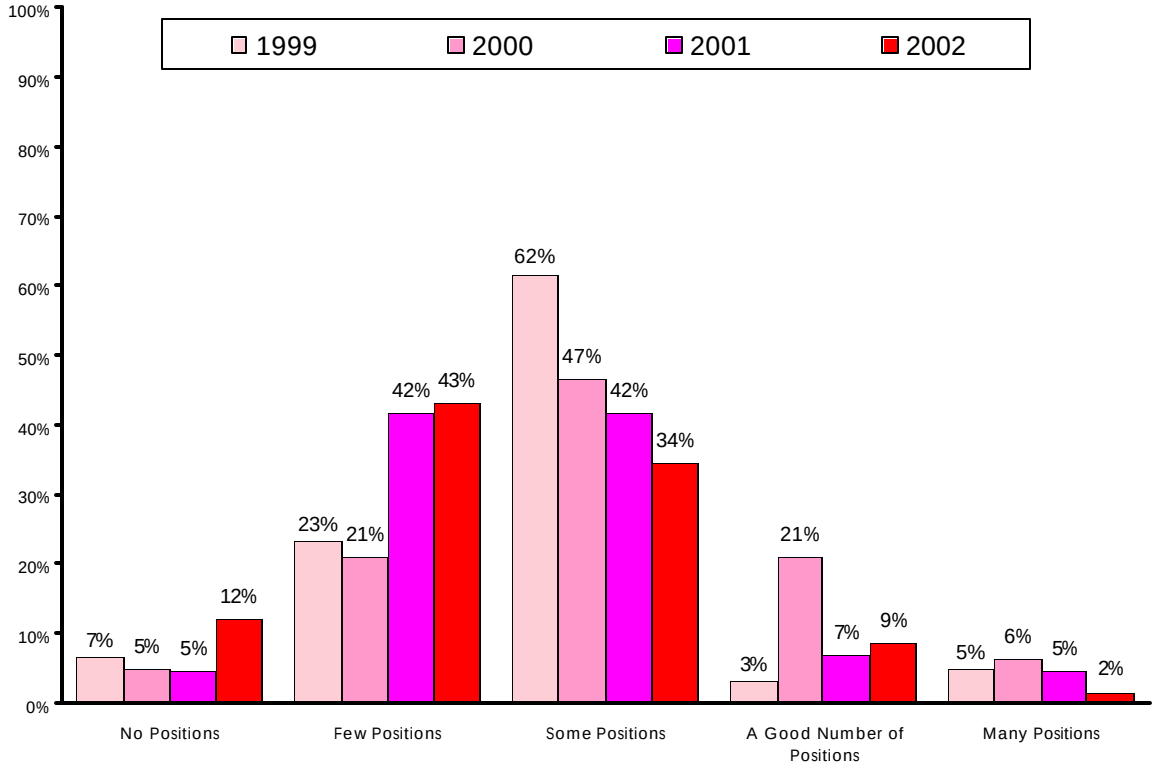
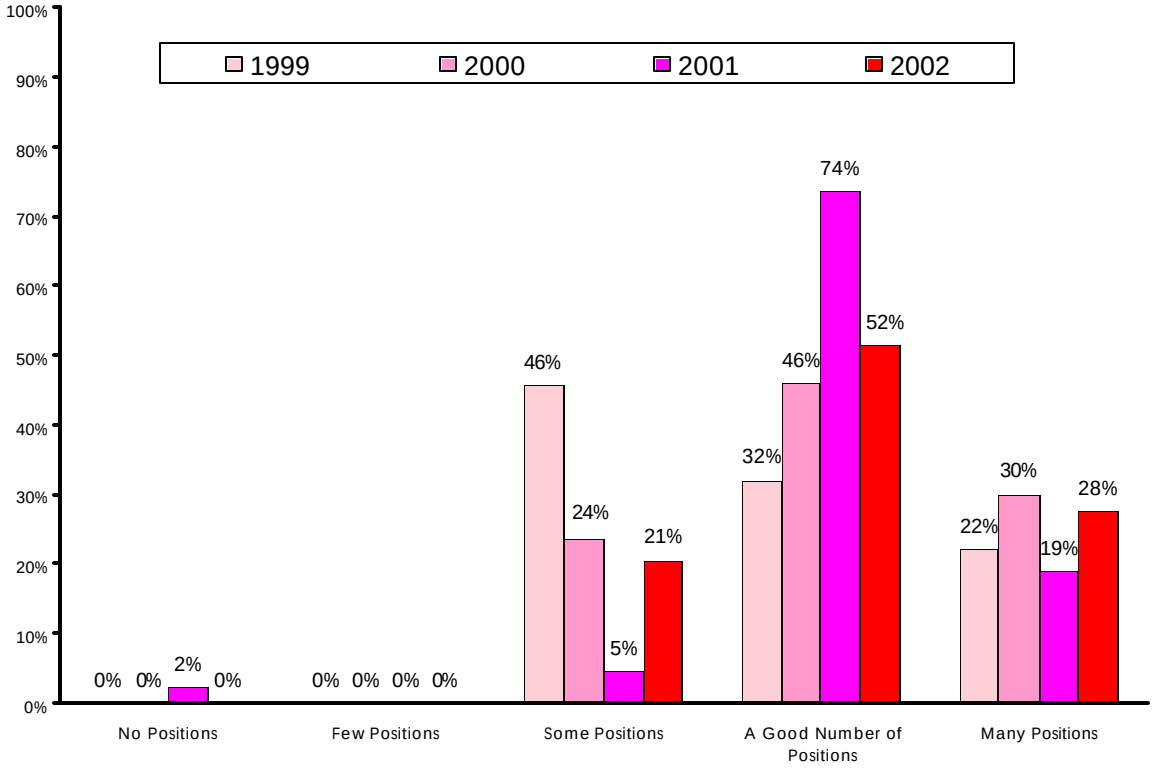


Figure 23. A/I Program Directors' Assessment of Practice Opportunities in A/I Nationally, 2000-2002



Conclusions

From the responses to the allergy and immunology fellowship program director survey in 2002, a number of findings are evident. First, there appears to be both an increase in the number of applicants and an improvement in the quality of candidates over the last few years. Both of these trends represent positive outcomes for the specialty of allergy and immunology. Allergy and immunology programs will be able to choose from more applicants and from a higher quality group of applicants.

Second, while results from past surveys have indicated a swing from contraction to expansion in the size of fellowship programs, it appears that the size of programs may be stabilizing. Beginning in the mid-1990s, the number of fellows training in allergy and immunology declined, reaching a bottom in 1997. In 2000, half of the program directors reported an increase in the number of fellows entering their programs. However, since that increase, program directors have been more likely to report a decrease in the number of fellows entering training than an increase in the number of fellows entering training. A similar pattern, with a two year lag, for graduates from allergy and immunology programs is found. There was a large percentage of programs reporting an increase in the number of graduates in 2002. As with fellows entering training, there was a larger percentage of programs reporting a decrease in program size the year after the large percentage of programs reported an increase in size (i.e., 2003 for graduates). Relatedly, program directors reported a good deal of difficulty in recruiting faculty to their programs. This difficulty may be a partial cause of the slower growth despite available candidates, jobs, and funding.

Third, program directors continued to perceive strong interest in allergy and immunology among pediatric and internal medicine residents. Trainees look upon the specialty positively and their view of allergy and immunology improved over past surveys and remained relatively consistent between last year's survey and this year's survey. While the perceived interest in the allergy and immunology may have leveled off, it has remained very high. One aspect of the newest survey was that one could examine the perceived level of interest by both pediatric and internal medicine fellows. Both specialties were viewed as having a strong interest in allergy and immunology. This bodes well for the future of the specialty. Positive views and interest in the specialty are likely to generate an abundance of qualified applicants to fill any existing and

newly created training slots. There is support for this possibility in this report. Both the number of applicants and the quality of applicants have been increasing in recent years.

Fourth, current and past reports suggest that the practice opportunities for new allergists continue to be abundant, indicating a healthy, robust job market now and in the near future for allergists. This is not surprising given the findings of previous work around the supply and demand for allergists (Forte et al. 2000; Forte and Salsberg, 2001).

Fifth, it is becoming more apparent that the market for new allergists is tighter in areas close to allergy and immunology fellowship training sites. Program directors reported that while practice opportunities in areas close to their training sites do exist for new allergists, they are much less abundant than in other areas of the country. This suggests that the areas around training sites are in the process of becoming saturated and unable to support any additional allergists. As will be presented in the next chapter, this interpretation receives support from the job search experiences of recent program graduates. It should be stressed, however, that program directors continued to perceive a strong national market for allergists.

Summary of Results of the Survey of Allergy and Immunology Fellows Completing Training in 2002

It is estimated that 125 fellows completed allergy and immunology training 2002. This is a significant increase compared to prior years. While the production of new allergists was declining in the mid-1990s, the class of 2002 is larger than those of 1999 (84), 2000 (108), and 2001 (109). The increase is welcome news as the supply of allergists in the United States continues to move toward a potential crisis with a greater number of allergists leaving practice than new allergists being produced (Forte et al. 2000). Based on the results of the survey of fellows completing allergy and immunology training in 2002, several other conclusions are apparent.

First, the number of USMG fellows completing training in allergy and immunology is increasing. In 2002, almost three quarters (74%) of the fellows completing allergy and immunology training were graduates of US medical schools. At the same time, the number of IMGs completing training in allergy and immunology is declining. In 2002, about one-fourth (26%) of the allergy and immunology fellows completing training were IMGs. Of those, three-fifths (60%) were J-1, J-2 exchange visitors who must either leave the United States after they complete their training or apply for a waiver of that requirement. While the percentage of IMGs that are J-1, J-2 exchange visitors is higher than in the past, the percentage of fellows that are IMGs is lower. These are positive indications for the specialty as the likelihood that J-1, J-2 exchange visitors will join the allergist supply is much lower than physicians who are either USMGs or naturalized/permanent resident IMGs. The decrease in the number of IMGs completing training in allergy and immunology and predicted continuation of this decline (Forte and Salsberg 2001) is a positive indicator for growth in the specialty. These trends observed in the survey responses correspond directly to the return of USMGs to allergy and immunology training in the last several years.

As was the case in the surveys of fellows completing training in 1999, 2000 and 2001, allergy and immunology fellowship programs continue to train *patient care physicians*. The overwhelming majority of fellows completing their allergy and immunology training in 2002 reported plans to enter patient care. Further, a little less than 9 out of 10 (88%) of these fellows had already secured practice positions at the time of the survey (Spring/Summer 2002). New

allergists most commonly reported finding private practice positions, that they expected to provide 20-49 hours per week in direct patient care, and that they would be compensated on a salary basis with incentives. However, a higher percentage of new allergists would receive a salary without incentives than graduating fellows from past years of the survey. For the most part, the new allergists of 2002 were satisfied with their choice of allergy and immunology as a career and would recommend the specialty to other physicians in training. These findings were consistent with those from prior surveys of fellows completing allergy and immunology training.

According to fellows completing training in 2002, where there are many practice opportunities available nationally, there are few opportunities in areas close to allergy and immunology training sites. Very few new allergists experienced difficulties finding a practice position. Among the new allergists who experienced difficulties, the reasons for difficulty were associated with lack of positions in desired locations and/or due to family considerations.

Further, while there appear to be practice opportunities in many communities and areas, it also appeas that other communities and areas may be near saturation in the supply of allergists. As was the case in 2001, more new allergists reported finding practice positions in areas that traditionally had few allergists, suggesting that the high concentration of allergists in certain regions of the country may be pushing allergists to look elsewhere for practice opportunities. In other words, particular regions of the country (e.g., New England) that had previously attracted allergists may represent tight, but not closed, labor markets for new allergists. At the same time, areas that traditionally have not had large concentrations of allergists may now be viable locations for new or growing practices (the South Atlantic region is an excellent example). The changing geographical distribution of new allergists bears watching in the coming years.

Finally, many of the observations from the 2002 survey of fellows completing allergy and immunology training are consistent with those from the 1999, 2000, and 2001 surveys. Most importantly, the job market for new allergists continues to thrive, which suggests that efforts to expand the training of allergists in the United States are warranted.

Key Findings

- Female physicians made up a little over half (52%) of the fellows completing allergy and immunology training in 2002.

- A significant proportion (45%) of the fellows completing allergy and immunology training in 2002 were non-white.

- A little more than a quarter (26%) of the fellows completing allergy and immunology training in 2002 attended medical school outside of the United States. This is substantially lower than in the recent past. Of those, 60% were J-1, J-2 exchange visitors, 25% were naturalized United States citizens, and only15% were permanent United States residents.

- A majority (61%) of the fellows completing allergy and immunology training in 2002 previously trained in internal medicine, 34% previously trained in pediatrics, while 5% had previously trained in combined internal medicine/pediatrics programs.

- The vast majority (95%) of the fellows completing allergy and immunology training in 2002 reported that they will be practicing as patient care allergists to some degree following training. Thirty-six percent (36%) will be active in teaching and 28% in research. One percent (1%) reported planning to seek additional training as their major professional activity subsequent to their allergy and immunology fellowships.

- Of those going into patient care, 88% had already secured a position at the time of the survey (Spring/Summer 2002). Ninety-two percent (92%) of the USMGs and 76% of the IMGs had secured positions.

- Of the new patient care allergists who had found positions, 66% were in private practice, 20% in hospital settings, 11% as medical school faculty, 8% in government/ military positions, and 2% in other settings.

- A majority (58%) of the new patient care allergists who had found positions expected to spend 20-39 hours per week in direct patient care, while 30% expected to spend 40-49 hours per week in direct patient care.

- Many fellows completing allergy and immunology training reported finding practice positions in areas with relatively low allergist to population ratios (South Atlantic and East South Central Census Divisions). At the same time, few fellows completing allergy and immunology training reported finding positions in traditionally allergist-rich areas (New England and West South Central Census Divisions).

- The vast majority (84%) of the new patient care allergists who had secured a position reported that they expect to be compensated through a salary for their services. Moreover, 53% of the salaried allergists also reported that they expect incentives in addition to their salaries. The mean base salary for new allergists was just over $117,000, and a little more than a quarter (27%) expect to earn less than $100,000 in annual base salary.

- The vast majority (91%) of the new patient care allergists reported being satisfied with their levels of compensation, with over two-fifths (43%) reporting being very satisfied with their compensation.

- An overwhelming majority (98%) of new patient care allergists reported that they would recommend allergy and immunology to other physicians in training.

- Three-fourths (75%) of new allergists reported no difficulties finding satisfactory employment. Among those that reported difficulties, the difficulties stemmed from the types of positions (e.g., not in desired locations or settings) and/or family considerations, rather than from a lack of positions more generally. Further, only 7% of the new graduates reported having to change their practice plans due to limited practice opportunities.

- About two-fifths (42%) of fellows completing allergy and immunology in 2002 reported few or no practice opportunities within 50 miles of the site where they trained. Nationally, however, there were no fellows that reported few or no practice opportunities. Slightly more than one in five (21%) of the residents completing training reported few academic opportunities nationally, and there were no residents that reported no academic opportunities nationally.

Results of the Survey of Allergy and Immunology Fellows Completing Training in 2002

This section is organized around a number of key issues in allergy and immunology graduate medical education and the current allergy and immunology job market, including: demographics of recent graduates of allergy and immunology fellowship graduates, future plans (general and specific) of allergy and immunology fellowship graduates, and experiences of recent allergy and immunology fellowship graduates in the job market. Recently graduated fellows are in a unique position to assess the current state of the job market as they are in the midst of, or have just finished, securing practice positions. Moreover, recently graduated fellows can offer firsthand accounts of the ever-evolving job market. Thus, they provide an informed snapshot on the aforementioned key issues in graduate medical education and the job market.

The Center received responses from 76 (61%) of the estimated 125 allergy and immunology fellows completing training in the United States in 2002. For complete technical details on the survey of allergy and immunology fellows completing training, see Appendices C and D. The following sections analyze the responses the Center received from the 76 responding fellows. Additionally, since 2002 was the fourth year the survey was conducted, where available, responses from the 2002 survey are compared to those from the surveys conducted in previous years. While some of the small differences observed across years do not reach statistical significance, the results remain informative with a focus on overall trends, rather than specific year-to-year differences

1. Demographic Characteristics of Fellows Completing Training

Table 1 presents the gender, age, and race/ethnicity distributions of allergy and immunology fellows completing training in 2002. As is evident, a little over half (52%) of the graduates in 2002 were women. In terms of age, almost two-thirds (60%) of the fellows completing training were under the age of 35. This is expected as these physicians are at a relatively early stage of their careers. Finally, a majority of the graduating fellows in 2002 were whites (55%). The next largest were Asian/Pacific Islanders (16%) and those from the Indian subcontinent (12%). These proportions are consistent with previous years in terms of ranking, however, whites were a substantially higher proportion of fellows completing training in both 2001 and 2002 than in previous years. As in previous years as well, the proportion of under-represented minorities among graduates was very small (11%).

Table 1. Demographic Characteristics of A/I Fellows Completing Training 1999-2002

	1999	2000	2001	2002
Gender				
Male	44%	55%	51%	48%
Female	56%	45%	49%	52%
Age				
Less than 35 Years of Age	62%	55%	64%	60%
35 - 39 Years of Age	29%	26%	23%	29%
40 - 44 Years of Age	8%	13%	11%	3%
45 + Years of Age	2%	6%	2%	8%
Race/Ethnicity				
Asian/Pacific Islander	25%	34%	16%	16%
Black/African American (non-Hispanic)	2%	3%	2%	3%
Hispanic/Latino(a)	8%	6%	2%	8%
Indian Subcontinent	8%	8%	16%	12%
Middle Easterner	8%	5%	5%	3%
Other	4%	2%	2%	3%
White (non-Hispanic)	46%	42%	57%	55%

Between 1990 and 1997, graduate medical training in allergy and immunology experienced a sharp increase in the representation of IMGs in fellowship training (Forte et al. 1999). Since then the proportion of IMGs in training has fallen steadily as graduates of medical schools in the United States and Canada (USMGs) have begun to choose allergy and immunology as a specialty at a higher rate. Figure 24 shows the distribution of location of medical school attended by fellows completing training in 2002. Almost three-quarters (74%) of these fellows

were USMGs. This is the largest proportion of the four years for which data have been collected, which is expected because the proportion of IMGs in fellowship training has decreased steadily since 1997. Although the number of IMGs in training in the US has remained about the same since 1995, since 1997, the number of IMGs training in allergy and immunology programs has declined from 103 to 51 (50%).

One of the concerns in graduate medical education is the training of IMGs because many will return to their countries of origin once they complete their training due to federal visa and immigration restrictions (especially J-1, J-2 visa exchange visitors). Having a large proportion of such fellows in training, then, would decrease the effective production of allergists (new practicing allergists per fellow trained) in the United States. Figure 25 shows the citizenship status of the fellows completing training in 2002. Over three-fourths (78%) of the graduates in 2002 were United States citizens. Less than one-fifth (16%) were temporary workers or exchange visitors. Compared to previous years, the proportion of temporary and exchange visa holders has decreased.

Figure 24. Location of Medical School Attended of Fellows Completing Training, 1999-2002

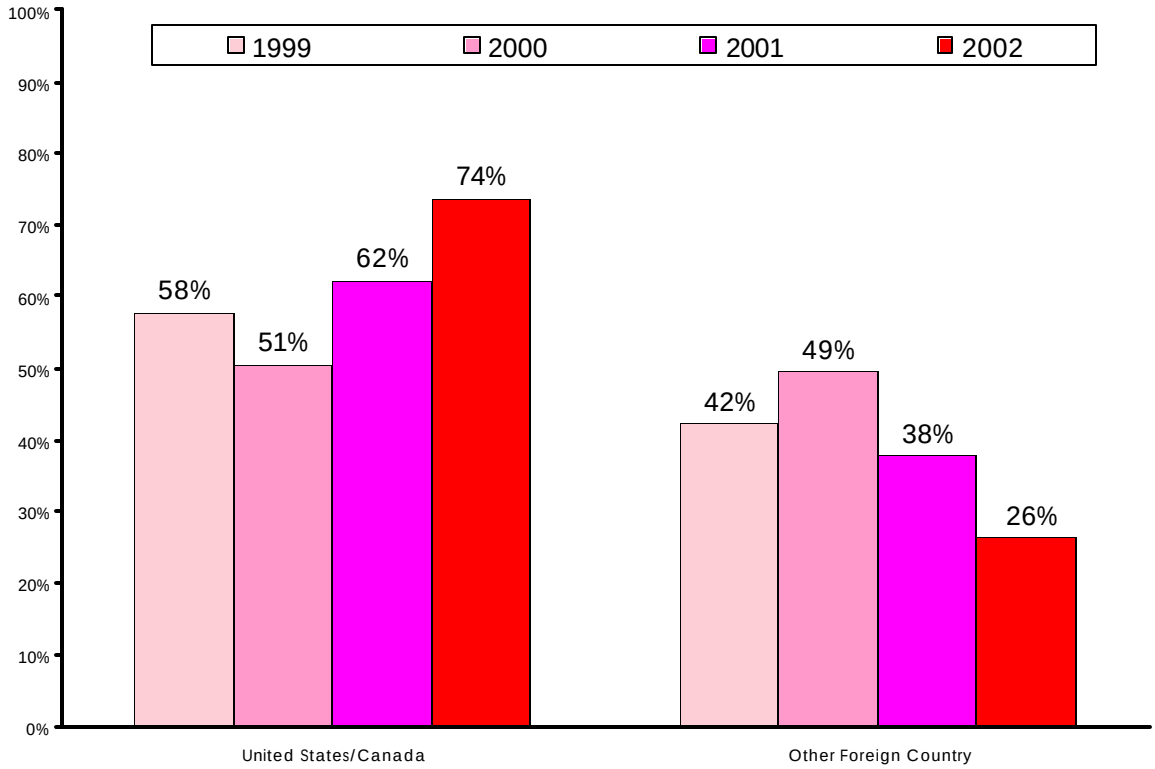


Figure 25. Citizenship of All Fellows Completing Training, 1999-2002

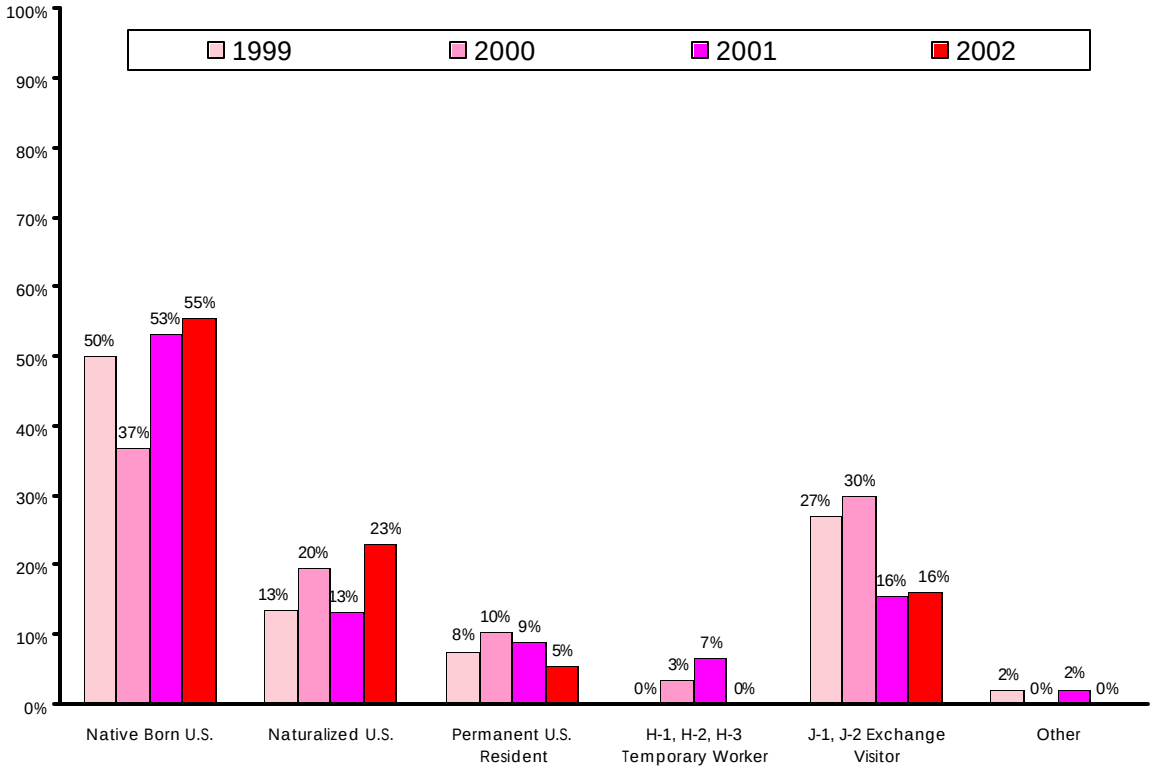
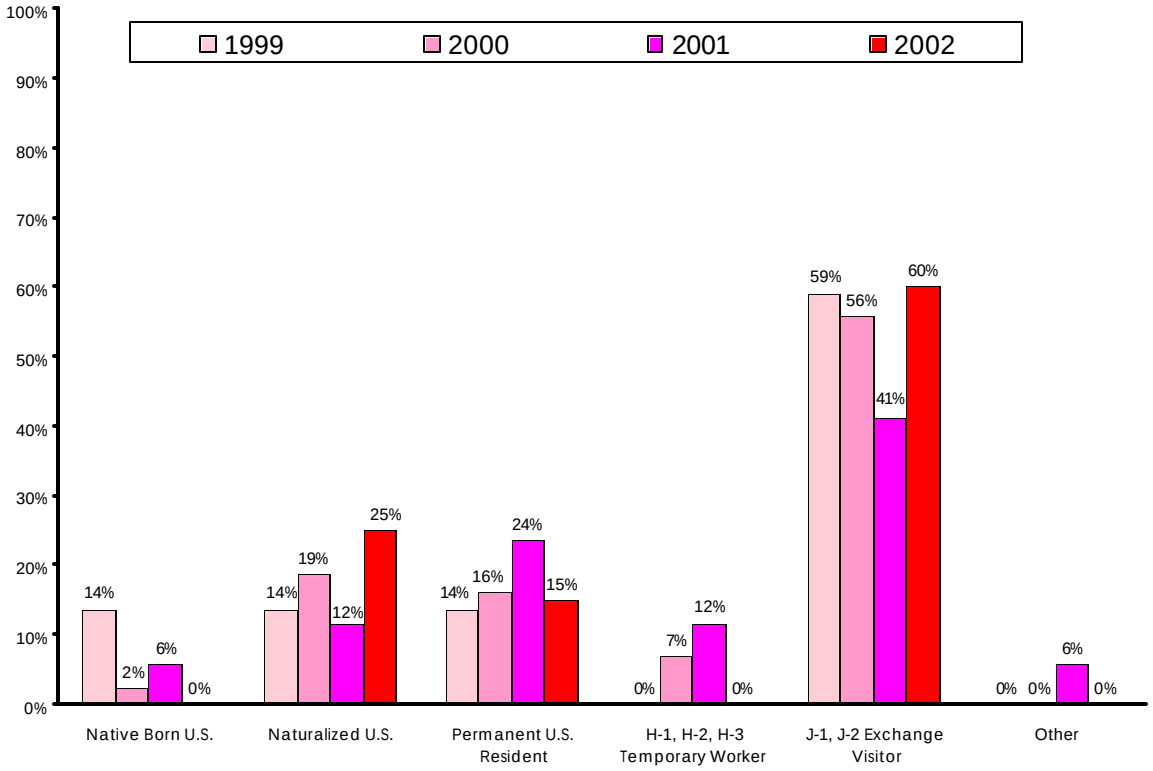


Figure 26. Citizenship of IMG Fellows Completing Training, 1999-2002



Upon further examination of the IMG fellows completing training, it is revealed that almost two-thirds (60%) of the IMGs were temporary or exchange visa holders (Figure 26). The percentage of temporary or exchange visa holder IMGs increased in 2002 after having declined in 2001. The percentage of IMGs that were temporary or exchange visa holders in 2002 is similar to the levels reported in the 1999 and 2000 surveys (59% and 63% respectively). Furthermore, the percentage of permanent residents decreased in 2002 (15%) to a level similar to the percentages of permanent residents in 1999 (14%) and 2000 (16%). However, there was an increase in the percentage of IMGs that were naturalized U.S. citizens in 2002 (12% in 2001 and 25% in 2002).

2. Medical Education and Training of Fellows Completing Training

In 2002, 3% of the fellows completing training were osteopaths (Figure 27). The percentage of fellows with osteopathic training appears to be relatively constant over the course of the surveys 6% in 1999, 1% in 2000, 0% in 2001, and 3% in 2002). The majority (61%) of fellows have completed graduate training in either internal medicine or in pediatrics (34%) (Figure 28). The distribution depicted in Figure 28 marks the continued position of internal medicine as the most common training background among fellows completing training. It should be noted that pediatrics was the most common training background among fellows completing training in 2000, but that was the only year where pediatric training was more common than internal medicine. The predominance of fellows trained in internal medicine is similar to the pattern of practicing allergists since the majority of practicing allergists are also more likely to have a background in internal medicine.

Figure 27. Medical School Education of Fellows Completing Training, 1999-2002

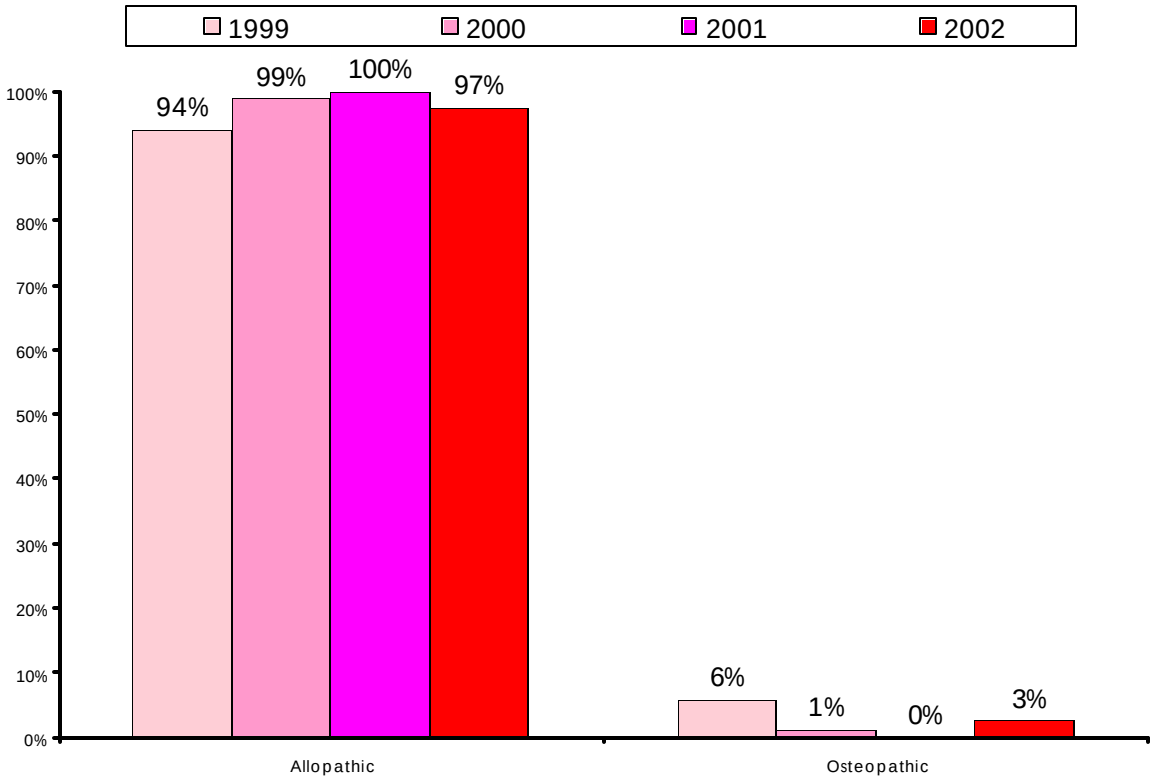
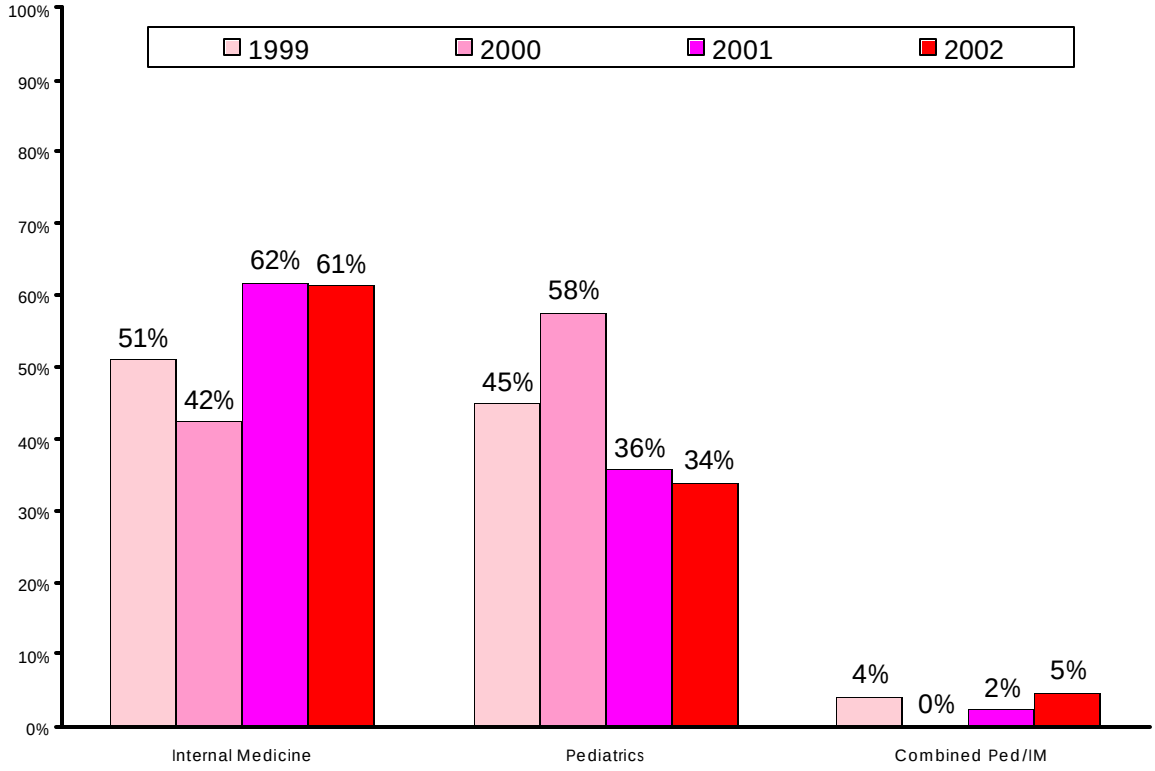


Figure 28. Previous Specialty Training of Fellows Completing Training, 1999-2002

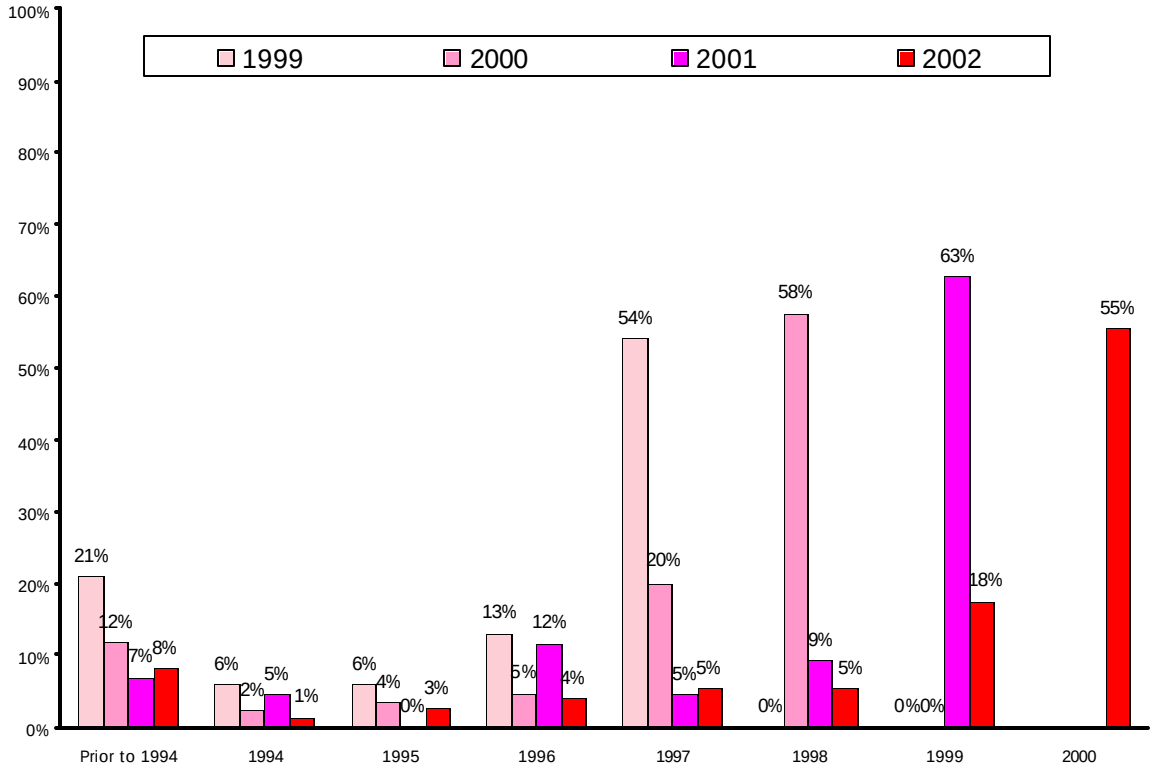


Most of the fellows completing training in 2002 had only been trained in allergy and immunology since their internal medicine and/or pediatrics training. A large percentage (55%) of these fellows had finished their residency training in 2000 (then completed their allergy and immunology training the historically-typical 2 years later in 2002) (Figure 29). This was the first year since the Center started doing the surveys that this percentage decreased. This finding is a little surprising since there was a decline in IMG fellows entering training in allergy and immunology. Since IMG fellows are more likely to subspecialize (thereby continuing their training) than USMGs, the proportion of fellows completing training with more than 2 years of training beyond the initial pediatrics and internal medicine preparation should decline. That was not the case with the 2002 results.

As was the case in previous years, there was some slight variation with respect to the number of years fellows completing training spent training in allergy and immunology (Figure 30). The overwhelming majority (87%) reported having spent the traditional 2 years in training (almost all allergy and immunology fellowship programs are 2-year programs), while a lower percentage (13%) reported having spent 3 years in training. As such, allergy and immunology

is a terminal program; that is once a physician completes allergy and immunology fellowship, s/he goes on to practice.[1]

Figure 29. Year Completed Initial Residency Training of Fellows Completing Training, 1999-2002



For the first time on the survey of allergy and immunology fellows completing, the 2002 survey collected data on the participation in the Chrysalis or NREP programs (Figure 31). The most common type of participation in the programs was mentor only (42%). Only 7% of the fellows completing training reported that they were both a participant and a mentor. None of the fellows reported that they were a participant only. Finally, 51% of the fellows completing allergy and immunology reported that they had no participation with the programs. Of those not participating, about 4 out 5 (78%) reported that they did not participate in the programs, but were familiar with the programs.

[1] Subspecializing further is possible (e.g., clinical and laboratory immunology), but physicians tend not to repeat allergy and immunology training.

Figure 30. Years A/I Training Completed of Fellows Completing Training, 1999-2002

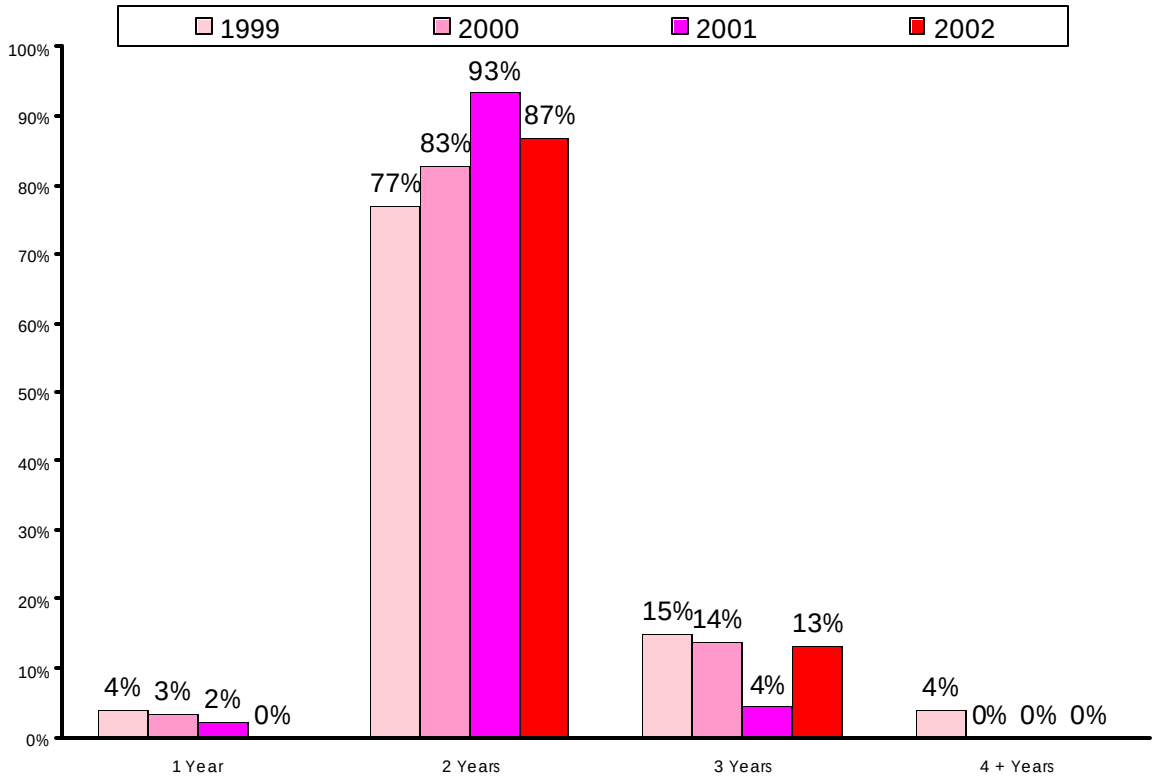
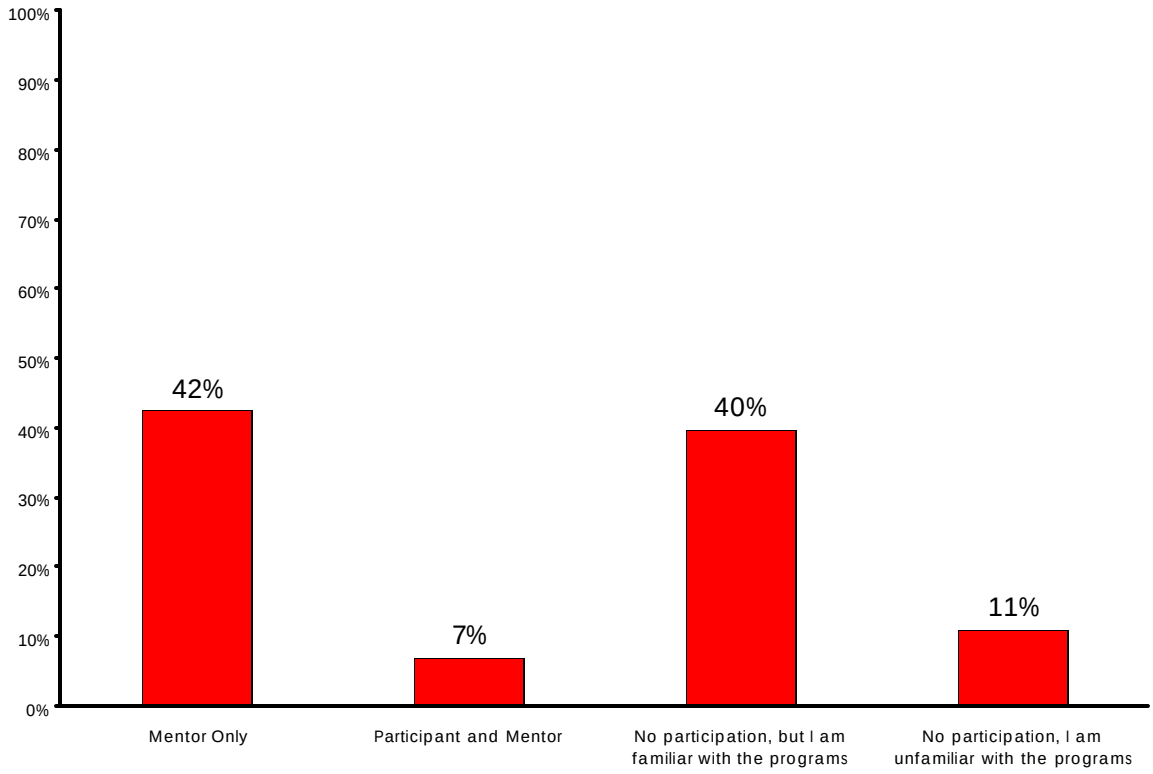


Figure 31. Participation in Chrysalis or NREP of Fellows Completing Training, 2002



3. Future Plans of Fellows Completing Training

In this section, the reported future plans of fellows completing training in 2002 are examined. Initially, all responses are analyzed to determine what general plans these physicians reported, including: going into practice, teaching, and going on to further training. The second portion examines only those who reported that they would be going into patient care after completing their training.

a. General Plans

Of the fellows completing training in 2002, 95% reported plans to enter patient care in some capacity[2] (Table 2). This is slightly higher than the responses from the 2000 and 2001 exiting fellows and over 10% higher than the 1999 exiting fellows. Teaching made up the next most commonly (36%) reported after-training plans among fellows completing training. More than a quarter (28%) reported going on to perform research activities in academic medical centers. These findings are relatively consistent with those from previous surveys. Importantly, only 1% of the fellows completing training in 2002 reported that they were going on to further graduate medical training.

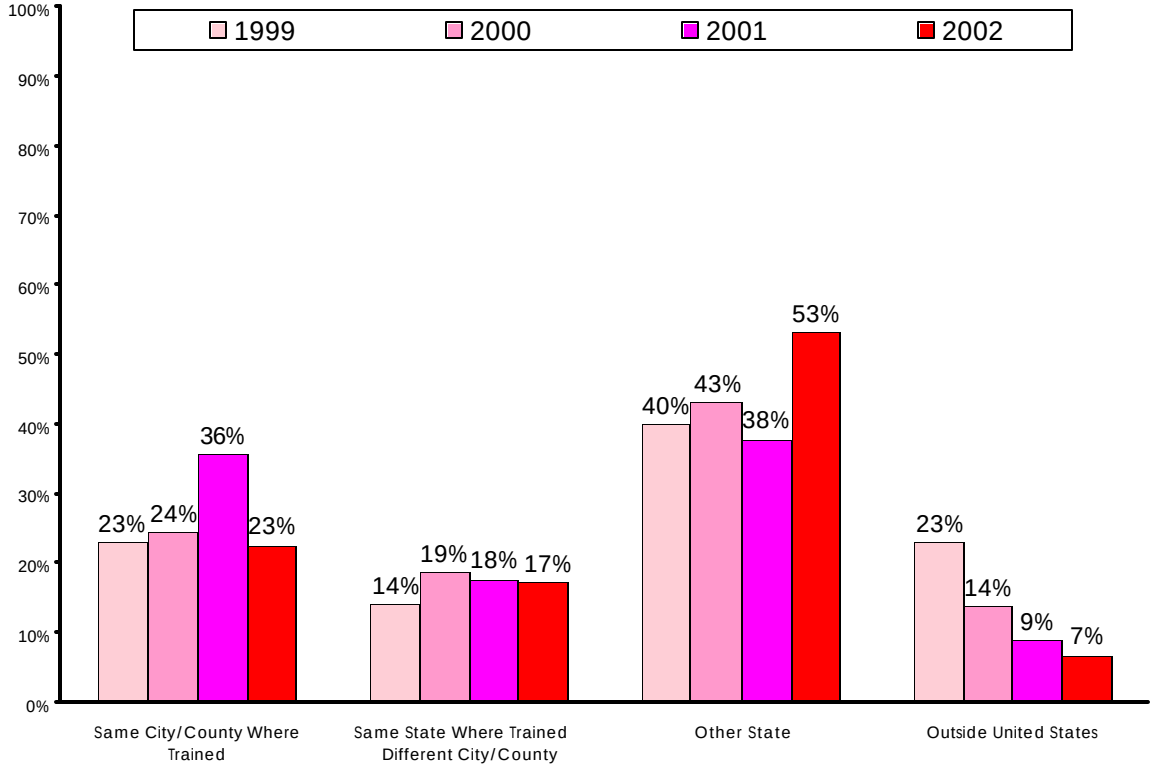
In terms of mobility, in general, fellows completing training in 2001 reported that their after-training activities would be in places other than where they trained (Figure 32). Fifty-three percent (53%) reported that they would be working in different states than where they trained. This figure is significantly higher than reported in 2001. Almost one-fifth (17%) reported that they would be located in a different city or county within the same state as they had trained. Almost a quarter (23%) of the fellows completing training reported that they would be located in the same city or county in which they trained. Thirty-six percent (36%) of the fellows completing training in 2001 reported that they would be located in the same city or county in which they had trained. The percentage from this year's survey is consistent with the results from the 1999 and 2000 surveys. The downward trend in the percentage of fellows completing training and then leaving the country continued with this year's results. Combined with the declining representation of IMGs with temporary visas, this indicates that a larger portion of the allergy and immunology training effort is benefiting patients in the United States.

[2] Respondents were allowed to report more than one planned activity, hence the "in some capacity" phraseology.

Table 2. Planned Activities after Completing A/I Training 1999-2002

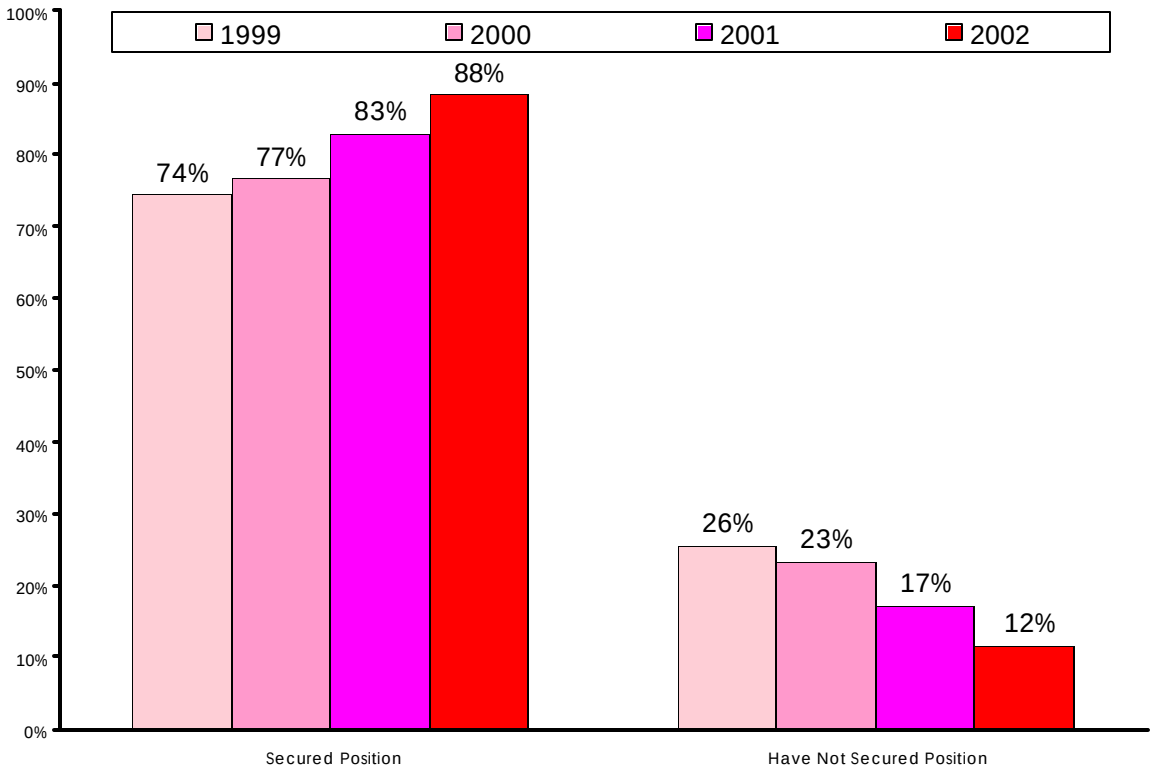
	1999	2000	2001	2002
Patient Care / Clinical Practice	83%	89%	91%	95%
Research (Academic Medicine)	35%	23%	22%	28%
Teaching	31%	40%	31%	36%
Temporarily Inactive in Medicine	4%	0%	0%	4%
Additional Training	2%	10%	7%	1%
Other	2%	2%	9%	1%

Figure 32. Location of Planned Activity after Completing A/I Training, 1999-2002



Finally, of the 95% who reported plans to go on to patient care activities after training, almost 9 out of 10 (88%) reported securing employment (Figure 33). The fact that such a high percentage of fellows completing training had achieved success in the patient care job market is indicative of a healthy job market that is certainly able to support the current level of new allergist production. It should be noted that responses to the survey of fellows completing training were received from May to August, so it is likely that most or all of the remaining 12% may have found positions by the time this report is released. While it is not possible to interpret due to differences in when surveys were administered and returned, it is worth noting

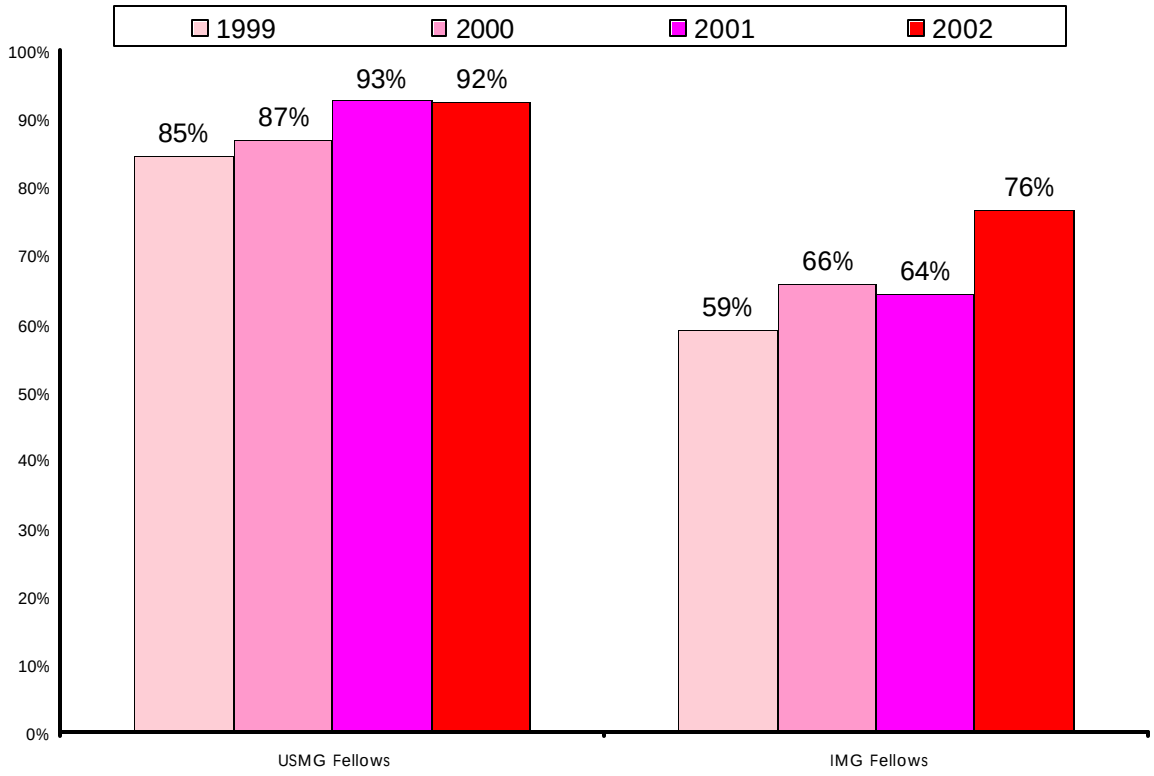
Figure 33. Finding a Practice Position of Fellows Completing Training with Plans to go on to Patient Care, 1999-2002



the positive trend in the responses shown in Figure 33.

Figure 34 shows the percentage of USMG and IMG fellows completing training in 2002 who secured a practice position and planned to go on to patient care activities. As is evident, USMG fellows, once again, had more success finding practice positions than their IMG counterparts in 2002 (92% having secured positions compared with 76%, a difference of 16%). While the results are similar in previous surveys, the difference between USMG and IMG fellows in securing practice positions was smaller in 2002 than in previous years.

Figure 34. Success in Job Market Among Fellows Completing Training with Plans to go on to Patient Care by Location of Medical School Attended, 1999-2002



b. Specific Plans

For those fellows completing training in 2001 who reported plans to go on to patient care and reported having secured a practice position, a series of questions was included on the survey to obtain additional details about these new positions. This section explores those responses including: practice setting, location of practice, compensation, and satisfaction.

i. Practice Characteristics

Figure 35 presents data on the reported practice settings of this group of fellows completing training in 2002. Fellows completing training in 2002 reported a wide variety of practice settings. About two-thirds (66%) of the fellows reported going into private practice settings, while a substantial proportion reported going into hospital (inpatient, ambulatory care/ emergency room) settings (20%) and medical school faculty positions (11%).

Figure 35. Practice Settings of Fellows Completing Training with Confirmed Plans to go on to Patient Care, 1999-2002

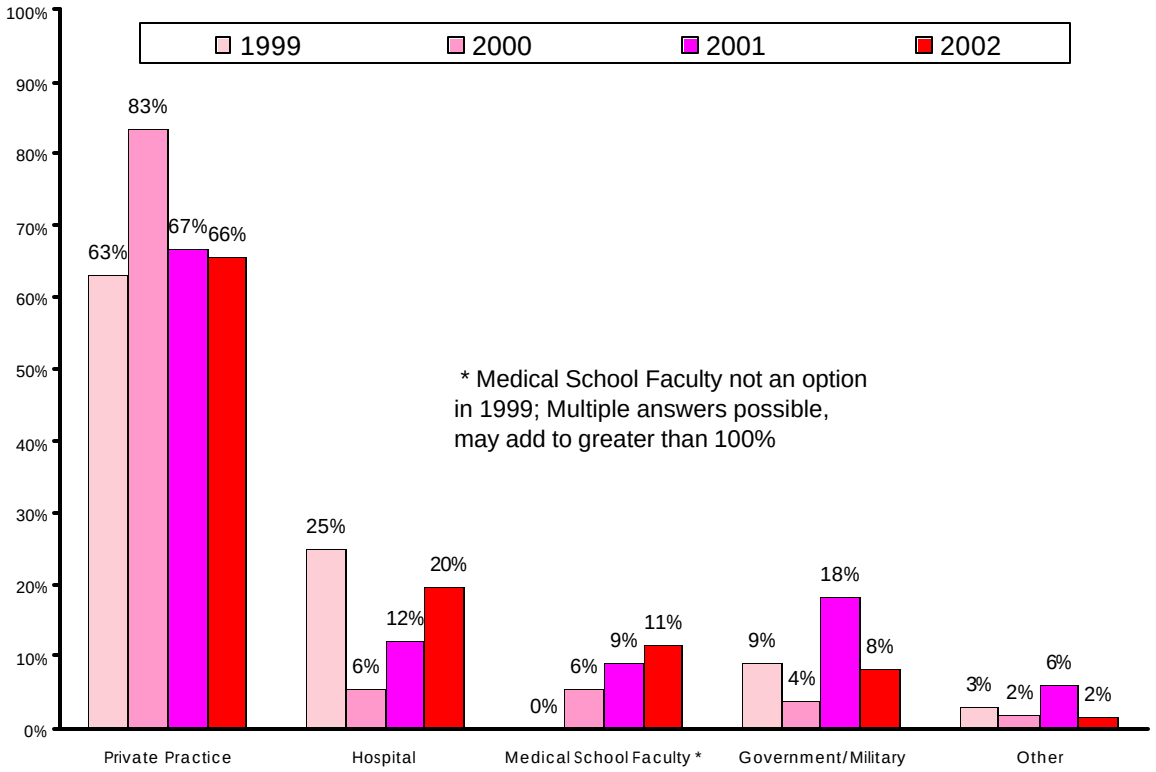


Table 3 shows the practice settings of fellows completing training who reported plans to go on to patient care and had secured positions by the location of the medical school they attended. While private practice was the most common practice setting for both USMGs (69%) and IMGs (54%), a much larger percentage (46%) of IMGs reported entering positions in hospital settings than did their USMG counterparts (13%).

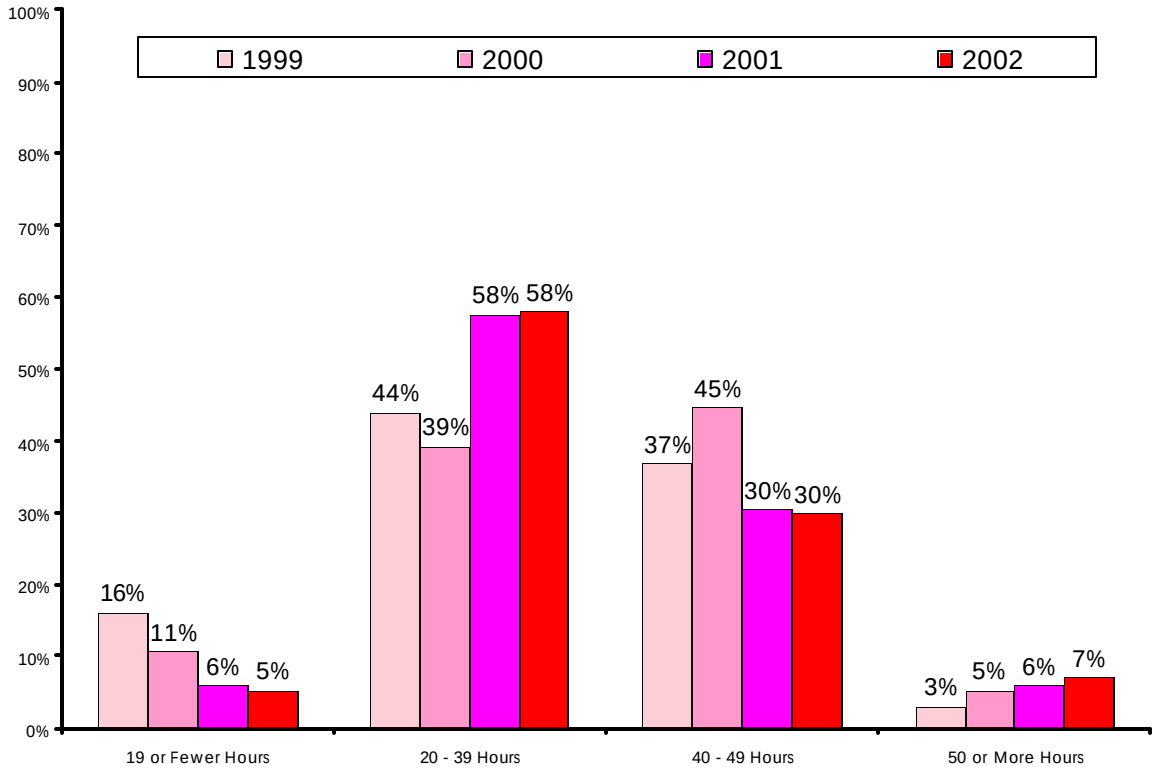
Fellows completing allergy and immunology training in 2002 reported expecting to spend an average of slightly fewer than 35 hours in direct patient care per week. The largest group (58%) reported expecting to spend 20-39 hours per week in direct patient care (Figure 36). Somewhat fewer (30%) reported expectations of 40-49 hours per week in direct patient care. The remaining 12% were split almost evenly between those who reported 19 or fewer hours per week and those who reported 50 or more hours per week. The average weekly direct patient care hours in 2002 were similar to the reported weekly direct patient care hours in 2001. Moreover, compared to the average within the practicing allergist population (Forte et al. 2000), the fellows completing training in 2002 expect to work about 4 fewer hours per week in

direct patient care. As has been the case in the past, fellows completing training are expecting to work fewer hours than the typical allergist in practice.

Table 3. Practice Settings of Fellows Completing Training with Confirmed Plans to go on to Patient Care by Location of Medical School Attended, 1999-2002

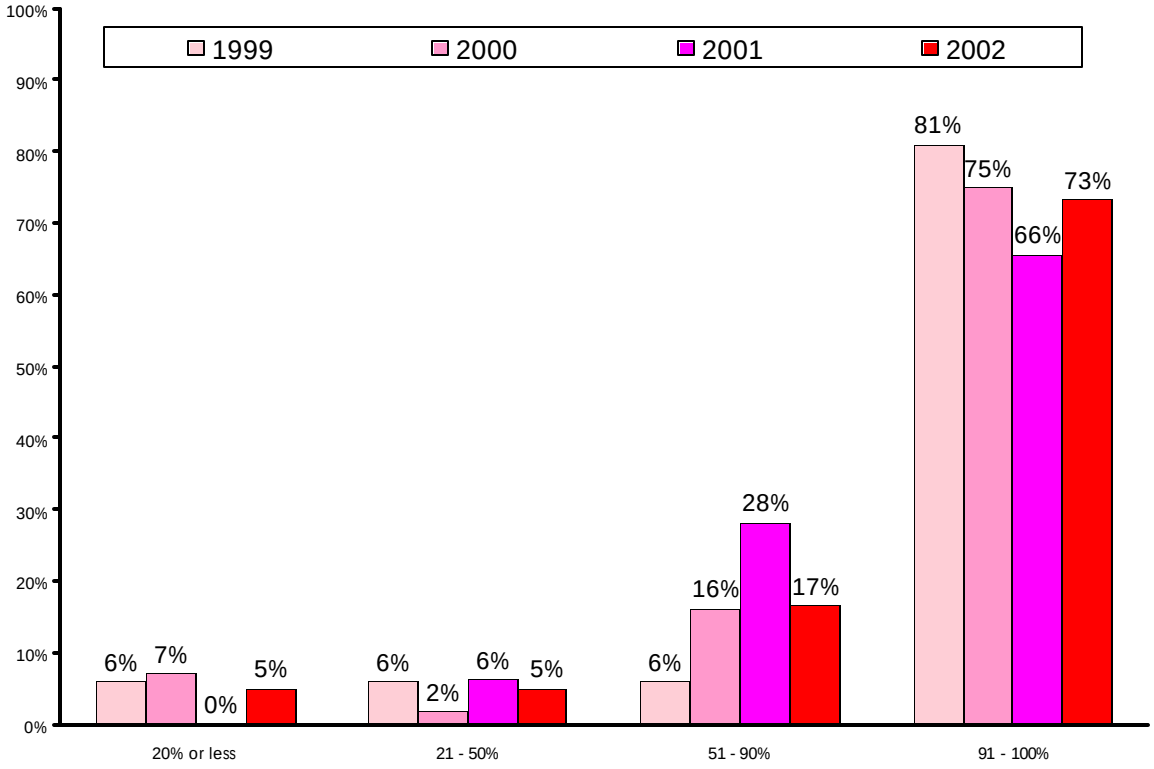
	USMG				IMG			
Practice Setting	1999	2000	2001	2002	1999	2000	2001	2002
Private Practice	68%	81%	58%	69%	50%	86%	89%	54%
Hospital	18%	3%	13%	13%	40%	10%	11%	46%
Medical School Faculty	0%	6%	8%	13%	0%	5%	11%	8%
Government/Military	14%	6%	25%	10%	0%	0%	0%	0%
Other	0%	3%	8%	2%	10%	0%	0%	0%

Figure 36. Expected Direct Patient Care Hours per Week of Fellows Completing Training with Confirmed Plans to go on to Patient Care, 1999-2002



Finally, almost three-fourths (73%) of the fellows completing training in 2002 who reported having found a patient care position also reported that they would be spending 91-100% of their practice time devoted to allergy and immunology services (Figure 37). Only a small group (10%) reported that they would be spending less than half of their patient care time devoted to allergy and immunology care. Unlike the last two years, the percentage of fellows completing training that would be spending 91-100% of their practice time devoted to allergy and immunology services increased from the previous year (66% in 2001).

Figure 37. Expected Percentage of Patient Care Time Devoted to A/I of Fellows Completing Training with Confirmed Plans to go on to Patient Care, 1999-2002



ii. Location of Practice

The fellows completing training in 2002 found practice opportunities in all parts of the United States (Table 4). The most common area of the country where fellows found patient care positions (36%) was the South Atlantic Census Division (Delaware, Washington, D.C., Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, and West Virginia). The second most common area was the East North Central (Illinois, Indiana, Michigan, Ohio, and Wisconsin), where 18% of the fellows found patient care positions. Similar to last year's results, although to a lesser extent, the areas with relatively few allergists to population, such as the South Atlantic and the East South Central states (11%) were two of the three most likely places for new allergists to find positions. At the same time, in areas with higher concentrations of allergists (e.g., New England), a smaller percentage of new allergists found positions (7%). In areas of the country with relatively few allergists per capita the job market for allergists appears to be robust. Finally, it is also a positive sign that only 4% of the fellows completing training were leaving the country to practice. This percentage has declined each year since 1999, reflecting the decline in fellows with temporary visas.

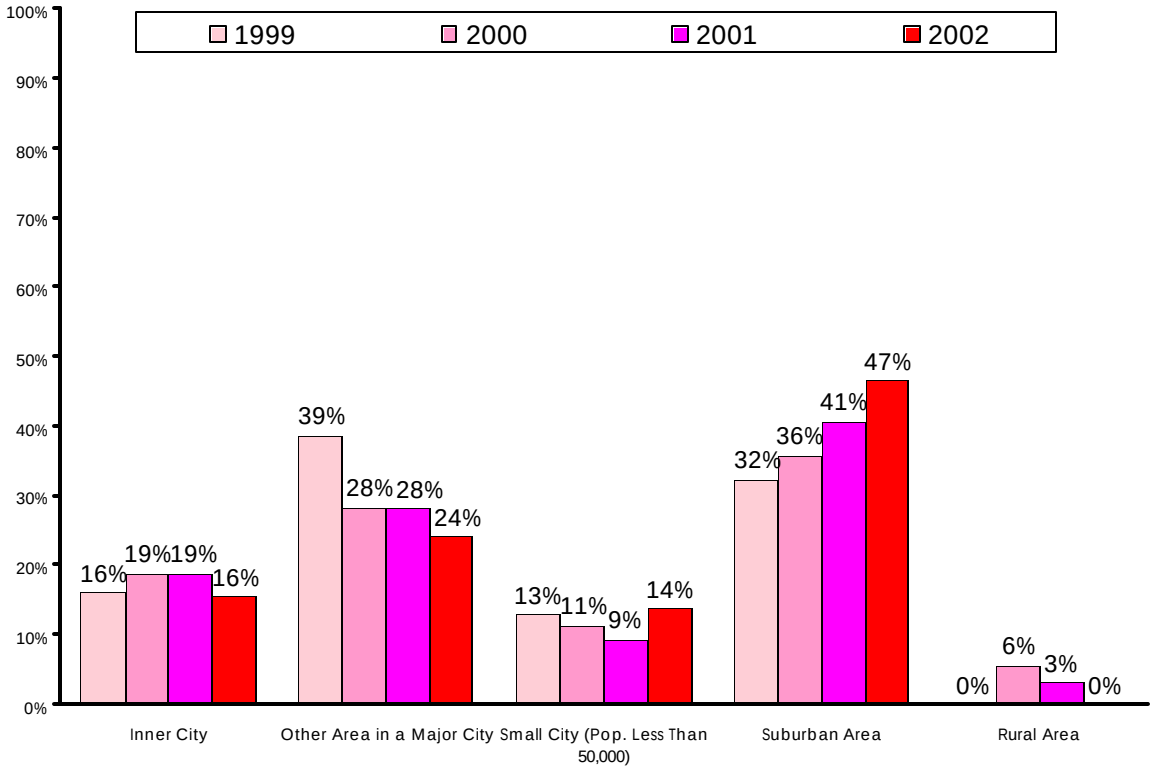
The types of areas that fellows completing training reported having secured patient care positions include suburban areas (47%), inner cities (16%), other areas within major cities (24%), and small cities (14%) (Figure 38). There were no fellows completing training that reported a practice location in a rural area. The percentage reporting having secured a patient care position in the suburbs has increased in each year of the survey. The trend in the percentage of fellows securing practice positions in the suburbs may indicate that cities are becoming saturated with allergists or that the relative wealth in the suburbs is attracting new allergists.

[3] "Allergist-rich" areas refer to those Census Divisions that had above average allergist-to-population ratios in 1999 (see Forte et al. 2000 for a discussion of ratios). "Allergist-poor" areas refer to those Census Divisions that had below average allergist-to-population ratios in 1999.

Table 4. Geographical Distribution of Practice Location of Fellows Completing Training with Confirmed Plans to go on to Patient Care, 1999-2002

Location of practice	1999	2000	2001	2002
New England	9%	7%	0%	7%
Middle Atlantic	9%	7%	9%	11%
East North Central	22%	27%	16%	18%
West North Central	3%	2%	6%	0%
South Atlantic	19%	14%	25%	36%
East South Central	6%	11%	9%	11%
West South Central	6%	9%	9%	4%
Mountain	0%	7%	3%	4%
Pacific	9%	5%	16%	7%
Outside U.S.	16%	11%	6%	4%

Figure 38. Types of Practice Locations of Fellows Completing Training with Confirmed Plans to go on to Patient Care, 1999-2002



iii. Compensation

Compensation is an important, and often sensitive, issue among physicians. For fellows completing allergy and immunology training in 2001, the vast majority (84%) reported they would receive a salary as compensation for their patient care activities (Figure 39). Further, of those who reported they would receive salaries, about half (53%) reported that they would be compensated with some sort of incentive as well, while 47% would receive a salary only. Self-employment practice income remains as an infrequent (10%), yet consistent (6%-13% from 1999 to 2002) form of compensation.

The average (mean) base salary (without incentives) reported by fellows completing training in 2002 was just over $117,000. This is about $4,000 greater than the mean reported in 2001. Figure 40 presents the base salary distribution. Over a quarter (27%) reported salaries below $100,000. The largest percentage (39%) of fellows reported salaries between $100,000 and $124,999. The 2002 graduates were over twice as likely to find positions with salaries of $125,000 or more than in previous years of the survey.

Table 5 shows the distribution of reported expected levels of salary by location of medical school attended for fellows completing allergy and immunology training in 2002. IMGs (31%) were slightly more likely than USMGs (26%) to report expected salaries below $100,000. The average salary among USMGs ($120,000) was about $11,000 higher than IMGs (109,000). The stability and accuracy of these estimates are questionable because there were so few IMGs among those who reported having found a salaried position (13). The salary for USMGs is much higher than in previous years of the study ($106,000 in 1999, $109,000 in 2000, and $109,000 in 2001). It is too soon to know whether the increase in salaries in 2002 is the beginning of a long term increase or a temporary anomaly.

For the 53% of fellows completing allergy and immunology training who reported anticipating additional incentive income, the average incentive was almost $17,000. This is higher than observations from previous years. Figure 41 presents the distribution of anticipated incentive income for fellows completing training in 2002. Less than one-fifth (19%) reported expecting less than $10,000 in incentives, while 29% reported expecting $20,000 or more. A little more

Figure 39. Type of Compensation of Fellows Completing Training with Confirmed Plans to go on to Patient Care, 1999-2002

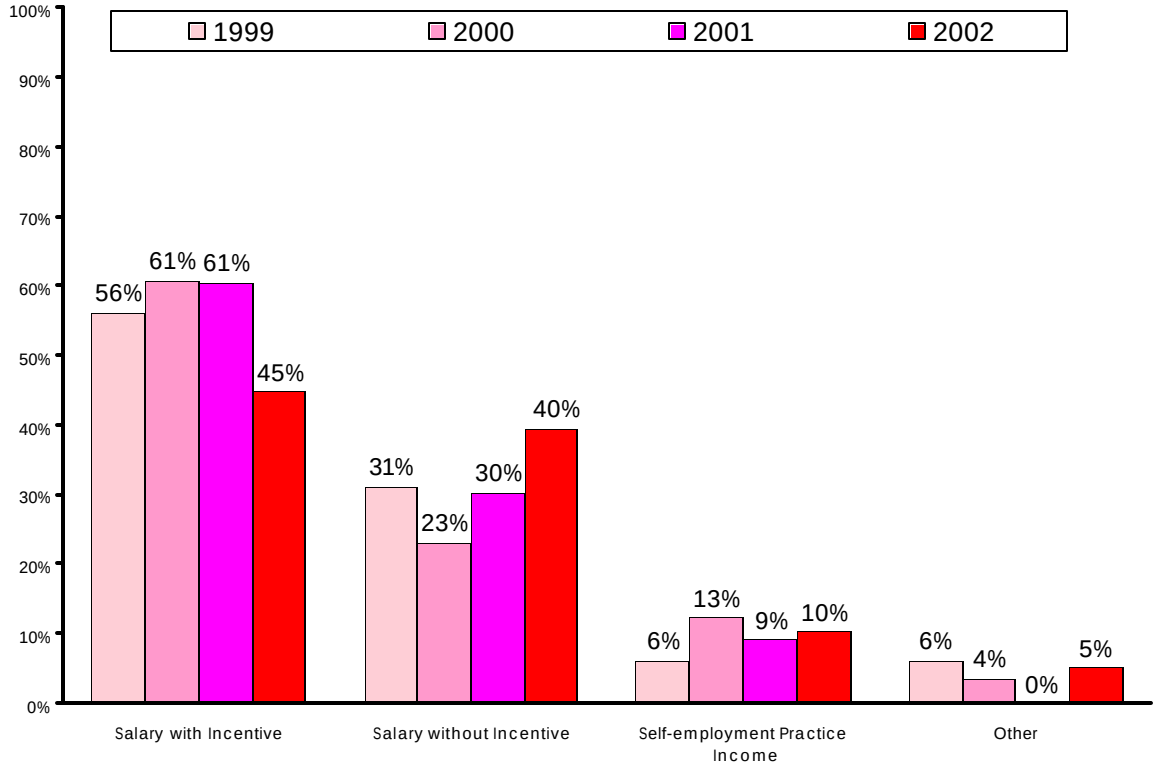
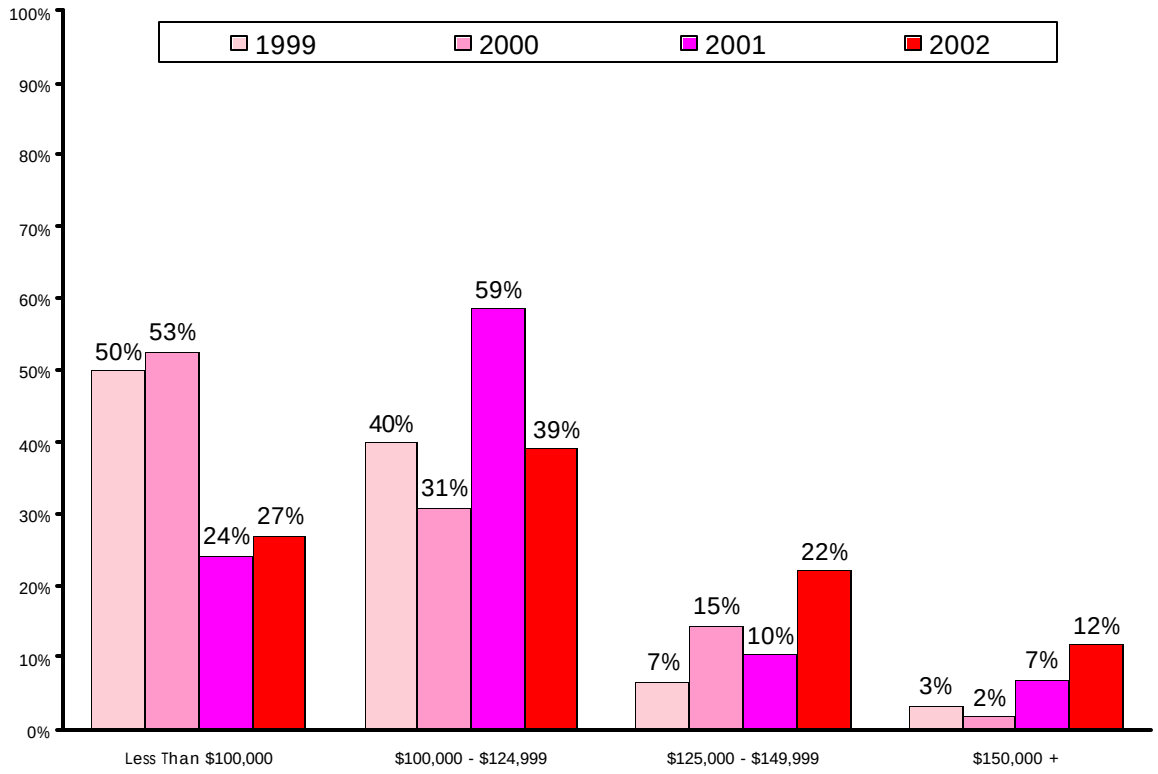


Figure 40. Expected Base Salary During First Year of Practice of Fellows Completing Training with Confirmed Plans to go on to Patient Care, 1999-2002



than half (52%) expected incentive income between $10,000 and $19,999. The distribution in 2002 was quite different than in previous years in that it was more heavily weighted toward the upper end of the incentive scale. In fact, this was the first time that more fellows reported incentives over $20,000 than under $10,000.

Table 5. Expected Base Salary During First Year of Practice of Fellows Completing Training with Confirmed Plans to go on to Patient Care by Location of Medical School Attended, 1999-2002

	USMG				IMG			
Base Salary/Income	1999	2000	2001	2002	1999	2000	2001	2002
Less than $100,000	45%	41%	30%	26%	63%	70%	0%	31%
$100,000 - $124,999	41%	34%	57%	35%	38%	26%	67%	54%
$125,000 - $149,999	9%	22%	9%	24%	0%	4%	17%	15%
$150,000 +	5%	3%	4%	15%	0%	0%	17%	0%

Figure 41. Anticipated Additional Incentive Income of Fellows Completing Training with Confirmed Plans to go on to Patient Care, 1999-2002

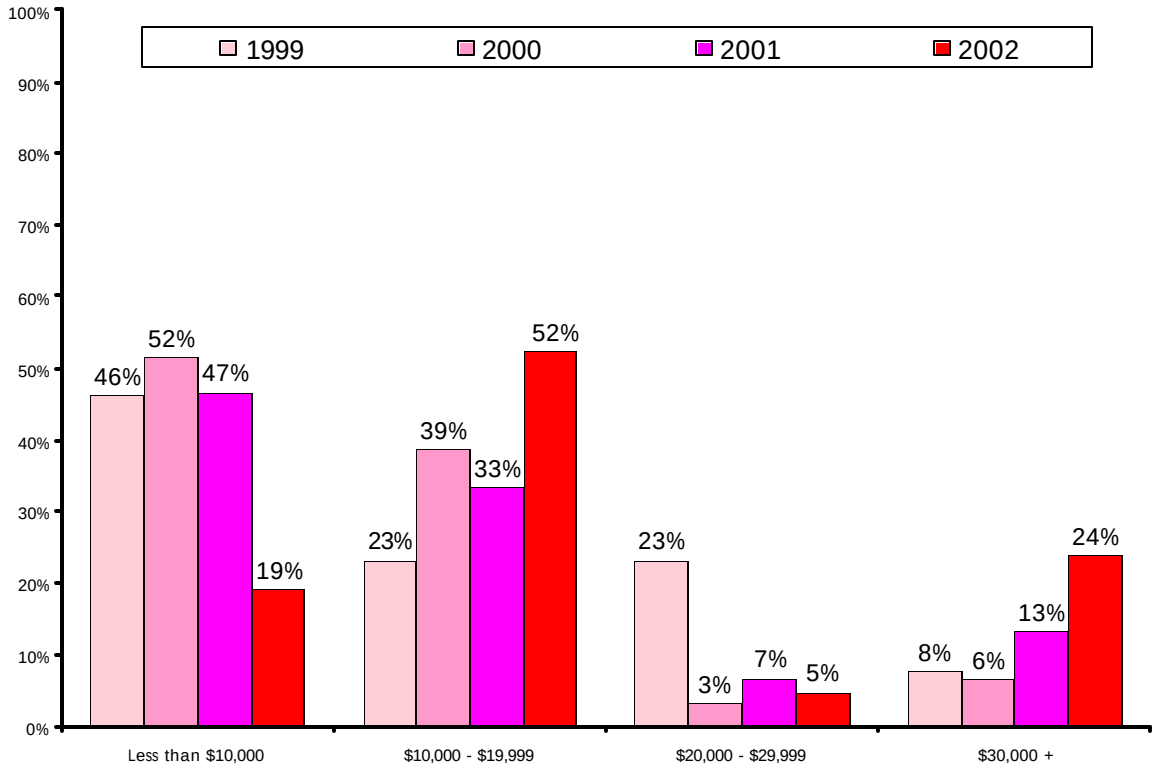


Table 6. Anticipated Additional Incentive Income of Fellows Completing Training with Confirmed Plans to go on to Patient Care by Location of Medical School Attended, 1999-2002

	USMG				IMG			
Incentive Income	1999	2000	2001	2002	1999	2000	2001	2002
Less than $10,000	44%	39%	50%	27%	50%	69%	33%	0%
$10,000 - $19,999	11%	44%	42%	47%	50%	31%	0%	67%
$20,000 - $29,999	33%	6%	0%	0%	0%	0%	33%	17%
$30,000 +	11%	11%	8%	27%	0%	0%	33%	17%

Unlike annual base salary, USMG fellows completing training in 2002 reported a lower expected incentive income than IMGs (Table 6). However, due to the small number of IMGs in the group (6), it is not possible to make a valid comparison between USMGs and IMGs for 2002. However, the 2002 distribution of expected incentive income among USMGs does appear to be more concentrated toward the higher incentive levels than in 2001.

iv. Level of Satisfaction

Selecting a subspecialty for a physician is akin to selecting a career field for many other professionals. Understanding how satisfied physicians who have chosen allergy and immunology as a subspecialty is an important part of developing strategies to attract more and better qualified medical residents to the discipline. In this section, two indicators of satisfaction are examined: satisfaction with salary/compensation; and whether the fellows completing training would recommend allergy and immunology to other physicians in training.

Overall, the fellows completing allergy and immunology training in 2002 appeared to be satisfied with their anticipated level of compensation (Figure 42). The vast majority (91%) reported that they were satisfied with their anticipated level of compensation, with 43% reportedly very satisfied with their compensation. Fewer than 10% reported any sort of dissatisfaction with their anticipated level of compensation, with 3% very dissatisfied. Fellows completing training in 2002 were more likely to report being very satisfied than in any of the previous years of the survey.

The other indicator of satisfaction with one's selection of allergy and immunology as a subspecialty, whether a physician would recommend allergy and immunology to other physicians in training, also provided encouraging observations (Figure 43). Once again, an overwhelming majority (98%) of the fellows completing training in 2002 reported that they would recommend allergy and immunology to other physicians in training. In general, the satisfaction indicators in 2002 continued to provide positive indications for allergy and immunology.

Figure 42. Level of Satisfaction with Anticipated Compensation of Fellows Completing Training with Confirmed Plans to go on to Patient Care, 1999-2002

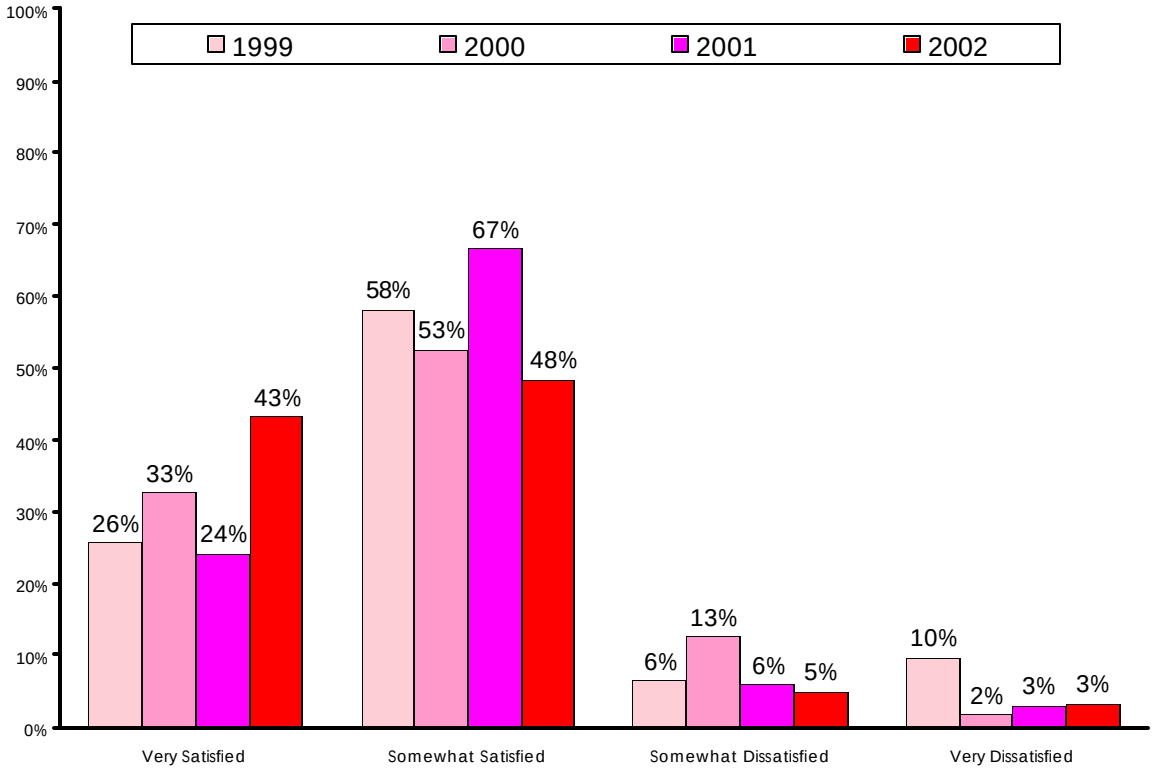
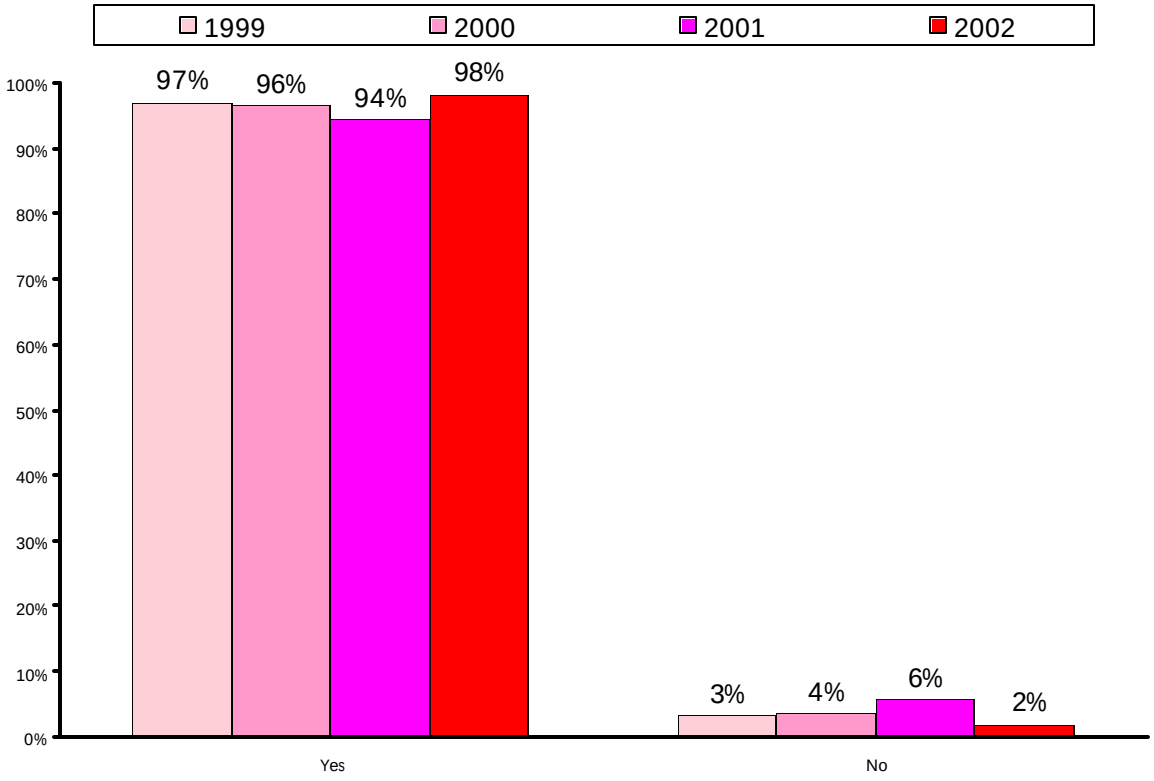


Figure 43. Whether Fellows Completing Training with Confirmed Plans to go on to Patient Care Would Recommend A/I to Other Physicians in Training, 1999-2002



4. Experience in the Job Market of Fellows Completing Training

In this section, data are presented that examine, firsthand, the job market for allergists. Survey data from all fellows completing training in 2002 (not just those entering patient care positions) are included in this section.[4]

a. Finding a Position

A good indicator of the demand for allergists is whether fellows completing training in a particular year report experiencing difficulties securing satisfying practice positions. If demand for allergists is high, it would be expected that allergists would have relatively few difficulties securing satisfying practice positions after completing their training. Three-fourths (75%) of the fellows completing training in 2002 reported experiencing no difficulties securing satisfying practice positions (Figure 44). Less than one in five (19%) reported experiencing difficulties. The remainder (7%) reported that they had not started their job search at the time of the survey. In comparison to prior years, the fellows in 2002 were less likely to report having experienced difficulties in their job search. These results are more positive than the 2001 results where more fellows reported having difficulties.

Of the fellows completing training in 2002 who reported experiencing difficulties finding a satisfying practice positions, 71% reported that the difficulty was due to a lack of positions in desired locations (Table 7). This was somewhat higher than in 2001 (67%), but slightly lower than in 2000 (77%), but was still the most common response provided in each year. The difficulty in finding a position in their desired practice locations lends more support to the suggestion above the that there has been and continues to be an evolution in the geographical locations where fellows are obtaining positions. Lack of positions in desired practice settings was also provided as an explanation of the difficulties experienced in the job market by a number (21%) of fellows. However, unlike the past 2 years of the survey, family considerations (43%) was the second most common reason provided for experiencing difficulty in finding a satisfying position. This observation is an indicator of the changing professional expectations among the general population of physicians. Only 14% cited visa status

[4] The reader is encouraged to review the section on the perceptions of training program directors on the job market for new allergists in the previous chapter.

Figure 44. Practice Position Search Experiences of Fellows Completing Training, 1999-2002

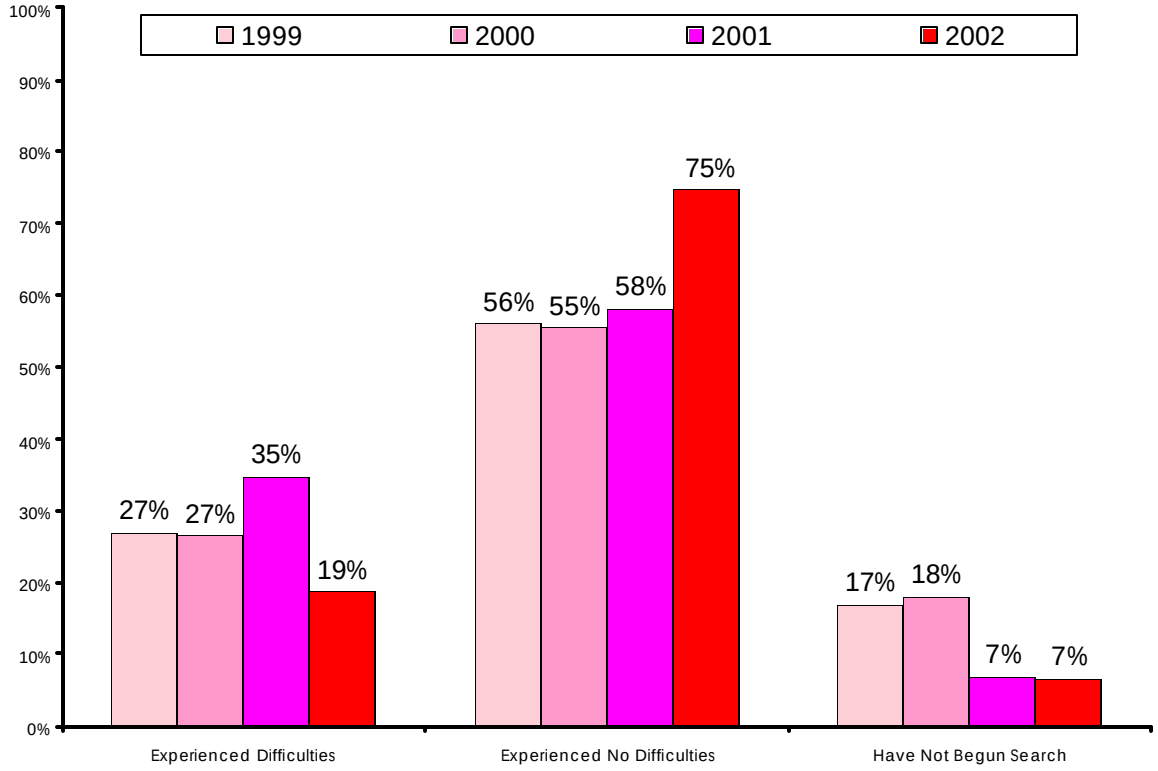


Table 7. Reasons for Difficulty Finding a Practice Position of Fellows Completing Training, 1999-2002

	1999	2000	2001	2002
Lack of Positions in Desired Locations	62%	77%	67%	71%
Lack of Positions in Desired Settings	38%	23%	40%	21%
Limited Opportunities due to Visa Status	38%	32%	33%	14%
Family Considerations	38%	14%	27%	43%
Inadequate Salary/Compensation Offered	23%	9%	33%	29%
Overall Lack of Positions / Practice Opportunities	15%	5%	20%	7%

restrictions as the source of the difficulties in finding a satisfying position. This is the lowest level for all four years of the survey. Finally, only 7% reported that their difficulties were due to an overall lack of practice opportunities.

Another indication of the status of the market for new allergists is whether fellows completing training have to alter their plans because of limited practice opportunities. Figure 45 shows that almost 9 out 10 (88%) of the fellows completing training reported that they did not have to change their plans due to limited practice opportunities.[5] This percentage is higher than what has been observed in previous surveys.

Figure 45. Effect of Limited Opportunities on Fellows Completing Training, 1999-2002

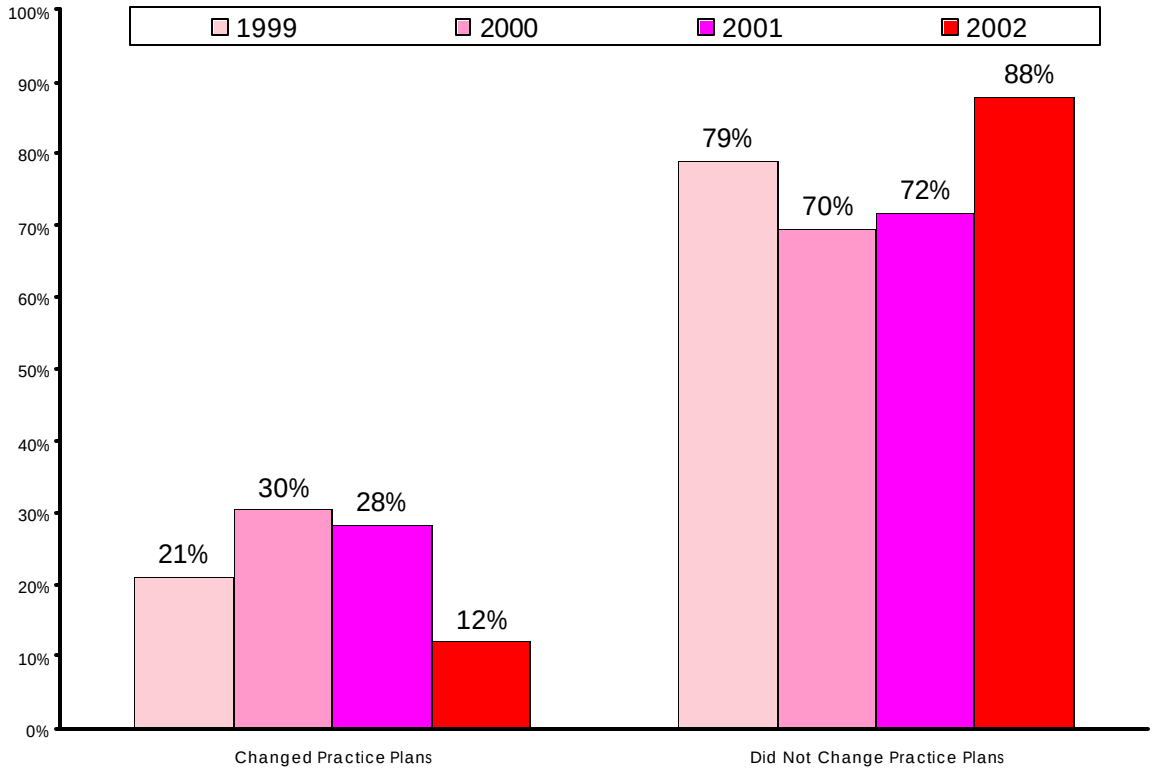


Table 8. Outcome of Limited Opportunities on Fellows Completing Training, 1999-2002

	1999	2000	2001	2002
Seeking Employment in Different Region of the Country	25%	43%	40%	13%
Leaving United States	25%	0%	--*	--*
Accepting Less Desirable Position	25%	14%	50%	13%
Accepting Less Desirable Compensation	13%	19%	40%	38%
Accepting Less Desirable Setting	13%	33%	50%	13%
Continued Training in Subspecialty	13%	10%	10%	0%
Temporarily Leaving Medicine	13%	0%	--*	--*

Multiple answers possible, columns may add to greater than 100%
** Not an option in 2001 and 2002.*

Of those fellows completing training who reported having to change their practice plans, 13% reported accepting a less desirable position; 13% reported accepting a position in a less desirable setting; 38% accepted a position with less desirable compensation; and 13% sought employment in a different part of the country (Table 8). Due to the small number of physicians who reported having to change their practice plans (8), it is difficult to make statements about

[5] For the purpose of comparison, slightly fewer than 17% of all physicians completing training in New York State in 2002 reported having to change their plans due to limited opportunities (Nolan et al. 2003).

the differences in changes to practice plans between 2001 and 2002.

Finally, a quantitative indicator of the health of the job market for new allergists can be constructed by examining the ratio of the number of positions applied for to the number of offers received by fellows completing training. The mean number of positions applied for by fellows completing training in 2002 was 5, and the mean number of position offers was 3. The ratio of applications to offers was 1.67. That is, on average, fellows completing training reported receiving offers for 60% of the applications they filed. In 2001, the ratio 1.5 and in 2000 it was close to 1.

Examining the distributions of the number of positions applied for (Figure 46) and the number of offers received (Figure 47) by fellows completing training reveals that 71% of the fellows completing training reported having made 1 to 5 applications, with 21% reporting 6 to 10 applications. Seven percent (7%) reported having made over 10 applications. The percentage of fellows reporting 10 or more applications is down 15% from the 22% reported in 2001. Over 8 out of 10 (84%) of the fellows completing training in 2002 also reported receiving 1 to 5 job offers. Very few (4%) of the fellows completing training reported not receiving any offers.

Figure 46. Number of Positions Applied for by Fellows Completing Training, 1999-2002

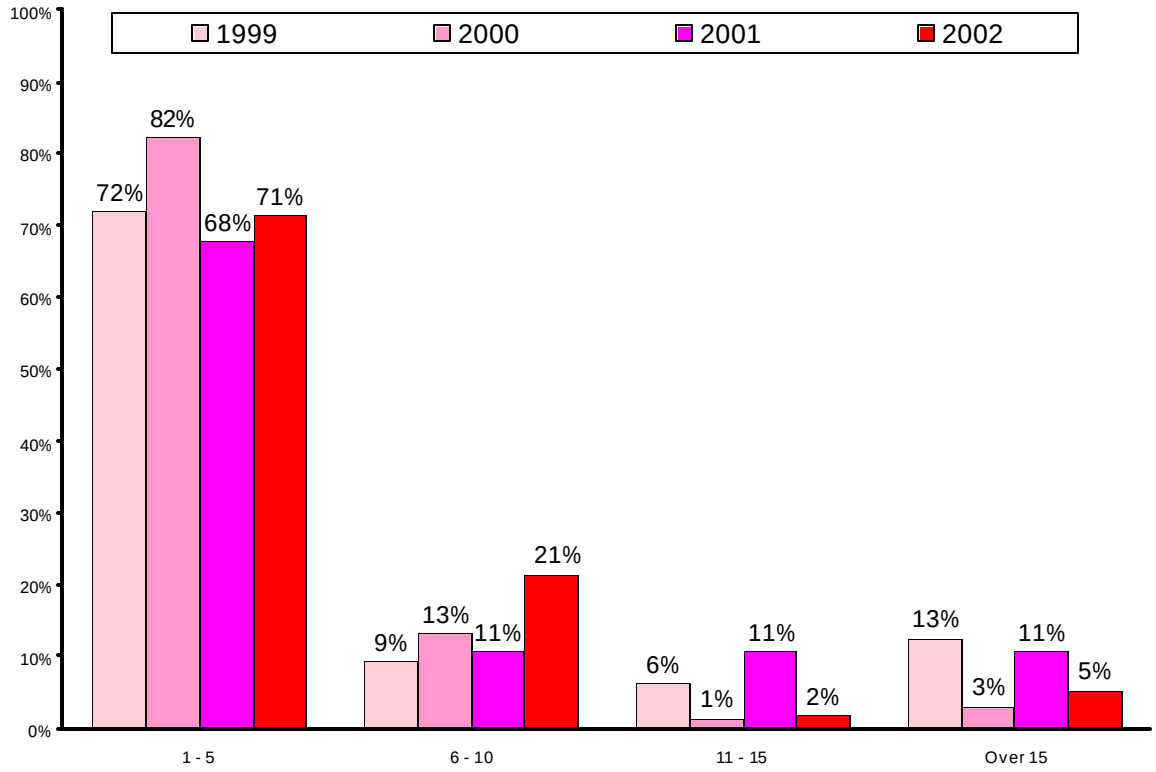
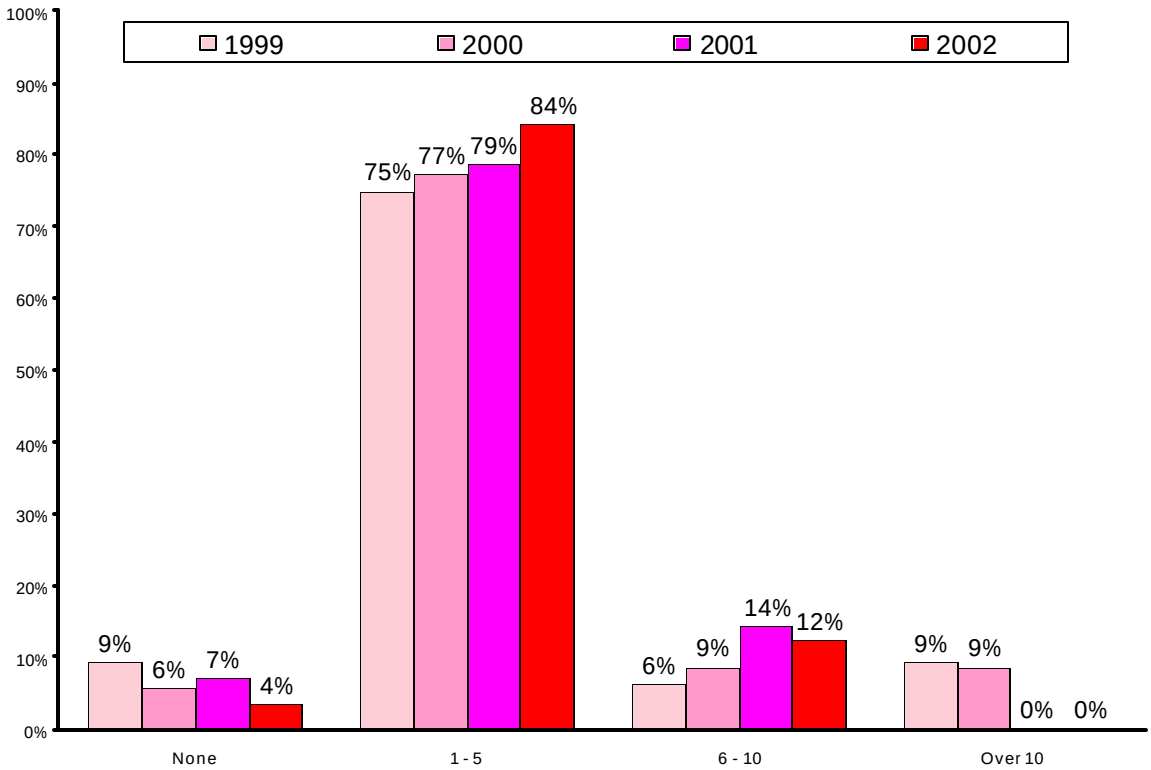


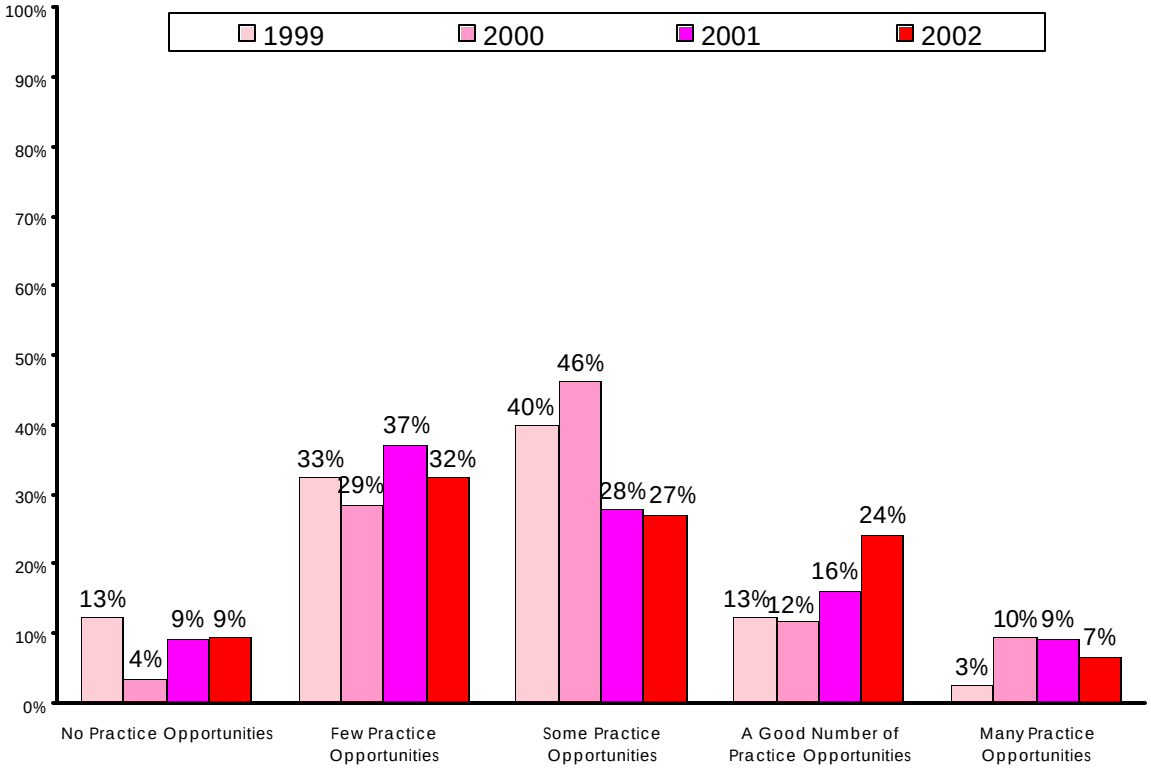
Figure 47. Number of Job Offers Received by Fellows Completing Training, 1999-2002



b. Assessment of the Job Market for Allergists

Figure 48[6] presents data on the local job market [within 50 miles of their training site(s)] assessments by fellows completing training in 2002. As is evident, most of the fellows reported that the local job market was soft. While 9% of the fellows reported no practice opportunities, about a third (32%) reported only a few available practice opportunities. However, 31% of the respondents reported a good number or many practice opportunities. This level was higher than the 25% in 2001. Thus, while the local job market may be better in 2002 than in 2001, it still lags behind the national market.

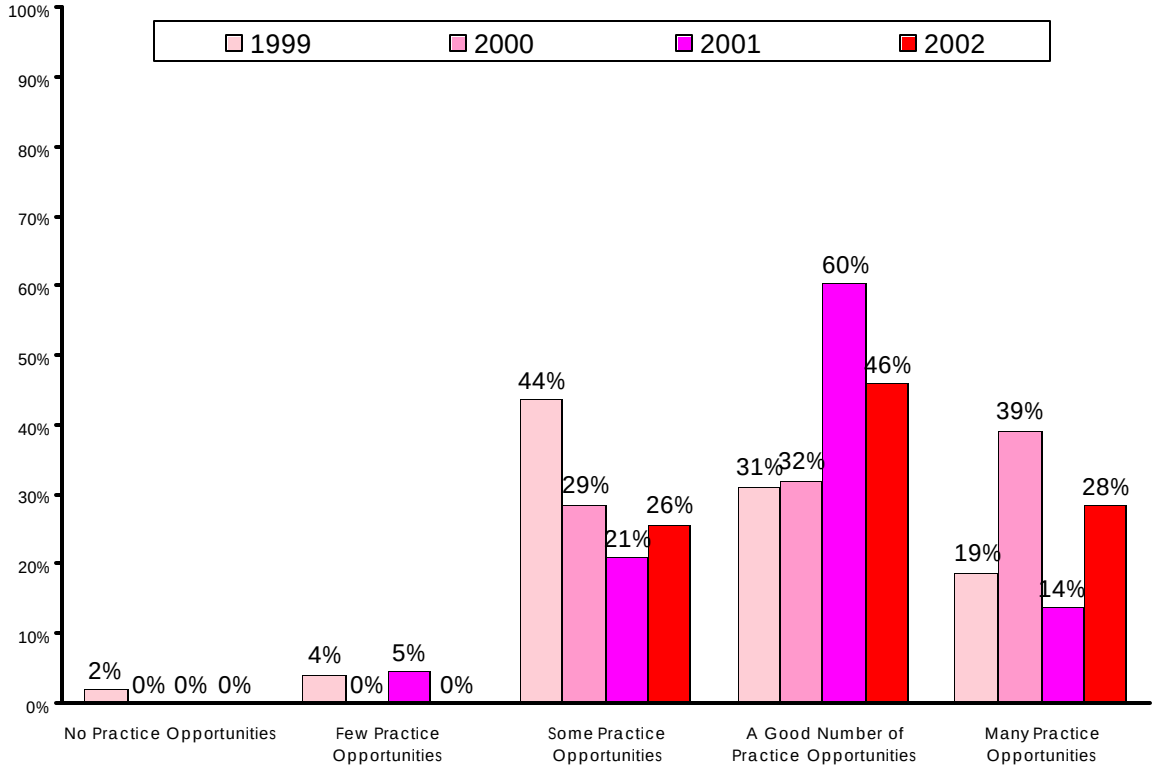
Figure 48. Assessment of Local A/I Practice Opportunities of Fellows Completing Training, 1999-2002



[6] It should be noted that prior to the 2001 survey, "Few Practice Opportunities" and "A Good Number of Practice Opportunities" were not used in the survey to describe the job market data for allergists. Instead on the 1999 and 2000 surveys numeric values 0 through 4 were used with 0 as "No Practice Opportunities," 2 as "Some Practice Opportunities," and 4 as "Many Practice Opportunities." Values 1 and 3 were not assigned qualitative labels on the survey instruments, themselves, rather the labels were added for ease of interpretation. In 2001 and 2002, all labels were assigned on the survey instrument itself.

Figure 49 reveals a very different assessment of the national job market for allergists. Clearly, fellows completing training in 2002 perceived the national job market to be much better than the local market. Nearly three-quarters (74%) of the fellows completing training reported that a good number or many practice opportunities were available nationally. No fellows reported that there were few or no opportunities available.

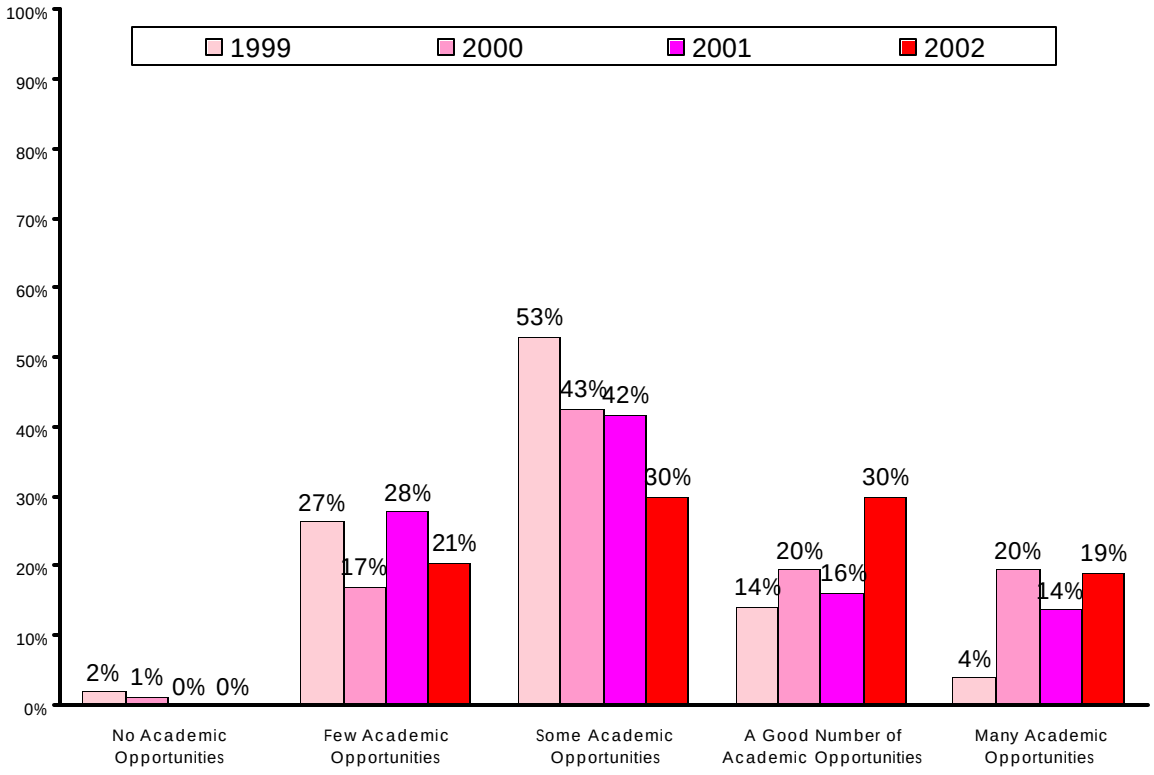
Figure 49. Assessment of National A/I Practice Opportunities of Fellows Completing Training, 1999-2002



5. Academic Careers in Allergy and Immunology

Concerns about academic careers and the academic aspects of the practice of allergy and immunology have become more important to allergy and immunology stakeholders of late due to previous reports of faculty shortages (Forte and Salsberg 2001). As was discussed in the previous chapter, the availability of sufficient faculty is one of the factors impacting program size. In 2002, 71% of the fellows completing training reported considering academia as a career path. In terms of national academic opportunities, fellows completing training in 2002 perceived the market as less healthy than the practice market (Figure 50). Forty-nine percent (49%) of the fellows completing training in 2002 reported a good number or many academic opportunities nationally compared to 74% who reported a good number or many available practice opportunities nationally. However, the academic market was perceived as somewhat robust, in and of itself since only about one-fifth (21%) of the fellows completing training reported only few or no opportunities nationally. The assessment of the academic job market by fellows in 2002 is slightly more positive than in past years of the survey.

Figure 50. Assessment of National A/I Academic Job Market of Fellows Completing Training, 1999-2002



Conclusions

It is estimated that 125 fellows completed allergy and immunology training in 2002. While the production of new allergists was declining in the mid- to late 1990s, the class of 2002 appears to be larger than those of 1999 (84), 2000 (108), and 2001 (109). The increase is likely in response to the reports of a potential future crisis due to an inadequate supply of allergists in the United States (Forte et al. 2000). Based on the results of the survey of fellows completing allergy and immunology training in 2002, several conclusions are apparent.

First, the number of USMG fellows completing training in allergy and immunology is increasing. In 2002, almost three quarters (76%) of the fellows completing allergy and immunology training were graduates of US medical schools. At the same time, the number of IMGs completing training in allergy and immunology continues to decline. In 2002, about a quarter (26%) of the allergy and immunology fellows that completed training were IMGs. Of those, three-fifths were J-1, J-2 exchange visitors who must either leave the United States after they complete their training or apply for a waiver of that requirement. While the proportion of IMGs that are J-1, J-2 exchange visitors increased between 2001 and 2002, the percentage of all fellows that are IMGs decreased. Thus, the decrease in the number of IMGs completing training in allergy and immunology and predicted continuation of this decline (Forte and Salsberg 2001) is a positive indicator for growth in the specialty.

As was the case in the surveys of fellows completing training in the past, allergy and immunology fellowship programs continue to train *patient care physicians*. The overwhelming majority of fellows completing their allergy and immunology training in 2002 reported plans to go into patient care. Further, almost 9 out 10 of these fellows had already secured practice positions at the time of the survey (Spring/Summer 2002). New allergists most commonly reported finding private practice positions, that they expected to provide 30-49 hours per week in direct patient care, and that they would be compensated on a salary basis with incentives. For the most part, the new allergists of 2002 were satisfied with their choice of allergy and immunology as a career and would recommend it to other physicians in training. These findings were consistent with those from the 1999, 2000, and 2001 surveys of fellows completing allergy and immunology training.

According to fellows completing training in 2002, there appear to be a good number of practice opportunities nationally, as opposed to areas close to allergy and immunology training sites. Very few new allergists experienced difficulties finding a practice position. Among the new allergists who experienced difficulties, the practice positions they eventually obtained had less desirable compensation.

Further, it is becoming more apparent that the ability to support new allergists is not distributed evenly across all geographical regions of the country. As was the case in 2000 and 2001, more new allergists reported finding practice positions in traditionally allergist-poor areas, suggesting that the high concentration of allergists in certain regions of the country may be forcing allergists to look elsewhere for practice opportunities. In other words, particular regions of the country (e.g., New England) that had previously attracted allergists may no longer be able to support many more new allergists. At the same time, areas that traditionally have not had large concetrations of allergists may now be viable locations for new or growing practices (in 2002 the South Atlantic is an excellent example). The changing geographical distribution of new allergists bears watching in the coming years.

Finally, many of the observations from the 2002 survey of fellows completing allergy and immunology training are consistent with those from the surveys in 1999, 2000, and 2001. Most importantly, the job market for new allergists continues to thrive (e.g., practice incomes continue to rise and satisfaction amongst new allergists remains consistently high) and appears to be stronger than in other years of the survey, which suggests that efforts to expand the training of allergists in the United States are warranted.

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Appendix A: Allergy and Immunology Training Program Director Survey, 2002

2002 Survey of Directors of Allergy and Immunology Fellowship Programs

The American Academy of Allergy, Asthma, and Immunology
and
Center for Health Workforce Studies
School of Public Health, University at Albany

This questionnaire is designed to obtain information on Allergy and Immunology fellowship programs and practice opportunities for Allergy and Immunology fellows completing training in the U.S. Your response will be ***confidential*** and will be reported only in national and regional tabulations and summaries. A summary of the results of this survey will be available on the CHWS website later this year.

A. ALLERGY AND IMMUNOLOGY FELLOWSHIP PROGRAM CHARACTERISTICS

1. Please enter the **program identification number**: _____
Don't know your program identification number? Click here.

NOTE: If you are the director of a specific track of the program at your institution (e.g., the pediatric or medicine track), please limit your responses to that track.

2. Please indicate the number available fellowship positions, applications received, and the percentage of strong applications during the following academic years:

Positions Available	Applications Received	% Strong Candidates	Academic Year for Start of Fellowship
		%	**2001-2002**
		%	**2002-2003**
		%	**2003-2004**

3. Each year a new group of allergy and immunology fellows begins training. How many fellows began/will begin training in your program during the following academic years? Also, please indicate their previous training backgrounds.

Prior Training of Fellows Entering Training			Academic Year
Pediatrics	Internal Medicine	Combined Peds/IM	
			2000-2001
			2001-2002
			2002-2003*

4. Each year a group of allergy and immunology fellows complete their training. How many fellows completed/will complete training in your program during the following academic years? Also, please indicate their previous training backgrounds.

Prior Training of Fellows Completing Training	Academic Year

Pediatrics	Internal Medicine	Combined Peds/IM	
			2000-2001
			2001-2002
			2002-2003*

** Please estimate the figures for future years to the best of your ability.*

5. Please indicate the number of current fellows training in your program that receive funding from the following sources:

Source:	**Number of Fellows Funded**:
a) Your institution	
b) Training grant	
c) Clinical fellowship	
d) Pharmaceutical company	
e) Other source (specify -->)	

6. How would you rate the **qualifications of applicants** to your program this year? Please Select One

7. How would you rate the **adequacy of funding** for your program this year? Please Select One

8. How would you describe the **change in funding** for your program this year? Please Select One

9. Please indicate the number and type of faculty currently in your program:

Type of Faculty:	**Number of Faculty**:
a) Full-time paid	
b) Part-time paid	
c) Full-time volunteer	
d) Part-time volunteer	
e) Other (specify -->)	

10. How would you describe your recent experience(s) recruiting qualified faculty for your program?
Please Select One

11. How do you think Allergy and Immunology is viewed by the following:

A) Pediatric Residents
Please Select One

B) Internal Medicine Residents
Please Select One

12. How do you think the views of pediatric and internal medicine residents about Allergy and Immunology have changed over the previous 3 years?

A) Pediatric Residents
Please Select One

B) Internal Medicine Residents
Please Select One

13. For how many years have you been the director of your program?

14. When do you plan to step down as director of your program? Please Select One

B. ALLERGY AND IMMUNOLOGY JOB MARKET

1. Please indicate the percentage of fellows graduating from your program in the **past 5 years** who found employment in the following types of positions:

% Private practice

% Academic medical center

% Industry

% Government/Military

% Other (specify -->)

2. Do you think that fellows who completed your training program during the previous (2000-2001) academic year experienced difficulties finding full-time employment opportunities in Allergy and Immunology?
Please Select One

3. How do you anticipate the job market experiences of fellows who complete your training program during the current (2001-2002) academic year will compare to those who completed training during the previous (2000-2001) academic year?
Please Select One

4. What is your overall assessment of the practice opportunities in **Allergy and Immunology within 50 miles of your training site(s)**?
Please Select One

5. What is your overall assessment of the practice opportunities in **Allergy and Immunology nationally**?
Please Select One

C. COMMENTS

Please provide any additional comments or observations you may have about your training program and/or the employment opportunities for Allergists and Immunologists that cannot be captured from the questions above:

Submit Responses

Appendix B: TPD Survey Technical Details

1. Definition of the Population

The Center defined the study population as program directors of active, accredited allergy and immunology fellowship programs in the United States. There are three groups that this definition excludes which could potentially generate new allergists: 1) active programs outside the United States; 2) clinical laboratory immunology programs; and 3) non-accredited fellowship programs that continue to train physicians. These exclusions, however, should not dramatically affect the results of the survey, as these sources have not accounted for very many patient care allergists historically. Focusing on the active, accredited allergy and immunology fellowship programs, the main producers of new formally trained care allergists, is appropriate and allows for comparisons with the 1999, 2000, and 2001 survey data.

2. Mailing List Sources

The elements of the population of directors of allergy and immunology fellowship programs were obtained from AAAAI's master list of allergy and immunology training programs. The list included 70 accredited allergy and immunology fellowship programs that were currently active at the time of the survey (late Spring 2002).

3. Survey Distribution Details

On June 5, 2002, each director was sent an e-mail announcing the program director and fellow exit surveys. In the e-mail, instructions were given indicating the procedures necessary to complete the surveys online. As an incentive to complete the program director survey each director was provided a hyperlink to a summary of the 2001 survey results and was offered a summary of the 2002 survey results.

A follow up e-mail was sent to the non-respondents each week until August 26, 2002 that consisted of a reminder announcement of the program director survey with instructions indicating the procedures necessary to complete the survey online.

4. Response Rate Analysis

In all, 56 directors of the 70 active, accredited allergy and immunology fellowship programs responded to the survey for a response rate of 80%. Fifty-four (54) directors responded via the electronic version of the survey, while 2 responded via the paper version of the study. This response rate was much greater than that of the 2001 survey, and confirms the explanations of the lower response rate in 2001 and the predictions of a recovery in coming years. 2001 was the initial year of transitioning the GME surveys to an online collection mechanism (IBIS). As such, the response rates were very poor: 61% for training program directors and 41% for the fellows completing training. The response rates bounced back in 2002 most likely due to a higher level of comfort amongst participants with the IBIS.

Even though the Center received an 80% response rate on the program director survey, an examination of the representativeness of the sample was conducted. The only variable available for respresentativeness assessment was geographic location of the program. To determine whether survey response rates varied significantly across geographic locations, response rates were calculated for two sets of geographic areas: Census regions and divisions. Table 1 presents the survey response rates by geographic area within the United States as well as the results of the statistical tests to determine whether response rate differences were statistically significant. As is evident, there was no statistically significant variation in response rate by geographic region.

While there was no significant variation in response rate by geographical location of the program, that is only one potential source of bias in the survey results. Unfortunately, there are little other data on non-responding programs available for analysis. Therefore, the responses were considered representative of the population, based on region, of allergy and immunology program directors and can be used for future analysis.

Table B-1. Response Rate by Geographical Location, 2002 Training Program Director Survey

Geographic Location

Overall Response Analysis

	Rate	Population	Responses
Overall	80.0%	70	56

Census Divisions	Responses Frequency	Survey Population Frequency	Response Rate	t^{sig}
New England	4	5	80.0%	0.00
Middle Atlantic	12	15	80.0%	0.00
East North Central	7	9	77.8%	-0.16
West North Central	6	8	75.0%	-0.33
East South Central	2	3	66.7%	-0.56
South Atlantic	8	10	80.0%	0.00
West South Central	5	7	71.4%	-0.53
Mountain	2	2	100.0%	0.70
Pacific	10	11	90.9%	0.87

Census Regions	Responses Frequency	Survey Population Frequency	Response Rate	t^{sig}
Northeast	16	20	80.0%	0.00
North Central	13	17	76.5%	-0.32
South	15	20	75.0%	-0.48
West	12	13	92.3%	1.06

Appendix C: Exit Survey of Fellows Completing Allergy and Immunology Training, 2002

2002 Survey of Allergy and Immunology Residents Completing Training

The American Academy of Allergy, Asthma, and Immunology
and
Center for Health Workforce Studies
University at Albany, School of Public Health

This questionnaire is designed to obtain information on the job market, demographic characteristics, and practice plans of allergy and immunology residents completing training in 2002. Your response will be **confidential** and will be reported only in national and regional tabulations and summaries. A summary of the results of this survey will be available on the CHWS website later this year.

A. DEMOGRAPHIC CHARACTERISTICS

1. Please enter your **program identification number**:
Don't know your program identification number? Click here.

2. Gender: Please Select One

3. Age:

4. Citizenship Status: Please Select One

5. Race/Ethnicity: Please Select One

6. Professional Memberships:
(Please mark all that apply)

- [ ] American Academy of Allergy, Asthma and Immunology (AAAAI)
- [ ] American College of Allergy, Asthma and Immunology (ACAAI)
- [ ] Clinical Immunology Society (CIS)
- [ ] American Association of Immunologists (AAI)
- [ ] Regional/State/Local Allergy and Immunology Society
- [ ] American Thoracic Society (ATS)
- [ ] American Academy of Pediatrics (AAP)
- [ ] American College of Physicians-American Society of Internal Medicine (ACP-ASIM)
- [ ] Other (specify -->)

B. MEDICAL EDUCATION AND TRAINING

1. Type of medical school education: Please Select One

2. Location of medical school: Please Select One

3. Graduate medical education:

Specialties in which you have **completed** training at the **graduate** level:	If subspecializing / doing additional fellowship, specialty you are **entering this year**:
(Please mark all that apply)	
	Allergy and Immunology
	-- Clinical and Laboratory Immunology
	Internal Medicine (General)
	-- Pulmonary Disease
	-- Rheumatology
	-- Other Internal Medicine Subspecialty
	Internal Medicine and Pediatrics (Combined)
	Pediatrics (General)
	-- Other Pediatrics Subspecialty
	Other (specify --
	>)

4. Year completed **initial residency** training (i.e., pediatrics, internal medicine, combined program):

5. Years of allergy and immunology fellowship training upon completion of current program: Please Select One

6. Please indicate your participation in the Chrysalis or NREP programs: Please Select One

C. FUTURE PLANS

1. What do you expect your principal work activities to include after completion of your current fellowship program? *(Please mark all that apply)*

- Patient Care/Clinical Practice
- Additional Subspecialty Training or Fellowship
- Research (Academic Medicine)
- Research (Industry)
- Teaching
- Temporarily Inactice in Medicine
- Undecided
- Other (specify -->)

2. Which best describes the location of your primary activity after training? Please Select One

3. If you are going on for **additional residency training/fellowship** in 2002, what are the main reasons? *(Please mark all that apply)*

- To further your medical education

- [ ] Unable to find a satisfying position
- [ ] Unable to find any position
- [ ] Other (specify -->) _____

4. Do you have an obligation or visa requirement to work in a federally-designated Health Professional Shortage Area (HPSA)? Please Select One

5. If you are planning to enter patient/clinical care to any degree, have you found a practice position yet? Please Select One

If you are not planning to provide Patient/Clinical Care services after completing your current training: Skip to Part E

D. SPECIFIC PLANS

1. Which best describes the type of **practice setting** you will be entering?
(Please mark all that apply)

Principal Practice Setting:	Secondary Practice Setting:
	Solo Practice
	Partnership (2 physicians)
	Group Practice -- Owner/Partner
	Group Practice -- Employee
	Medical School Faculty
	Hospital -- Inpatient
	Hospital -- Ambulatory Care
	Hospital -- Emergency Room
	Freestanding Health Center or Clinic
	Managed Care Organization/HMO
	Urgent Care Clinic
	Military/U.S. Government
	State or Local Health Department
	Private Industry
	Nursing Home
	Temp Agency
	Other (specify -- >) _____
	Undecided

2. How many hours per week do you expect to work in the following professional activities?

	Hours per Week						
Activities	0	1-9	10-19	20-29	30-39	40-49	50 +
Direct Patient Care	☐	☐	☐	☐	☐	☐	☐

Research/Clinical Trials	☐	☐	☐	☐	☐	☐	☐
Teaching	☐	☐	☐	☐	☐	☐	☐
Administration	☐	☐	☐	☐	☐	☐	☐

3. What percentage of your practice time do you expect to be devoted to **allergy and immunology services**? Please Select One

4. What is the zip code of the **principal practice address** at which you will be working?

If the zip code is unknown, please indicate city/town and state below.

City/Town

State
Please Select One

5. Which best describes the area in which your principal practice is located? Please Select One

6. How will you be compensated at your principal practice?
Please Select One

7. Expected personal income during first year of practice (all sources):

Base Salary/Income
Please Select One

Anticipated Additional Incentive Income
Please Select One

8. What is your level of satisfaction with your anticipated salary/compensation? Please Select One

9. Will you be practicing in a federally designated Health Professional Shortage Area? Please Select One

10. Do you expect to be at your principal practice **more than 3 years**? Please Select One

11. Would you recommend the specialty of Allergy and Immunology to medical students or other physicians in training? Please Select One

E. EXPERIENCE IN JOB MARKET

1. Did you have a difficult time finding a position you were satisfied with?
Please Select One

IF YES, what would you say were the **main reasons**? *(Please mark all that apply)*

- ☐ Overall lack of positions/practice opportunities
- ☐ Lack of positions in desired locations
- ☐ Lack of positions in desired settings (e.g., Hospital, Group Practice, Academic Medical Center, etc.)
- ☐ Inadequate salary/compensation offered
- ☐ Limited opportunities due to visa status
- ☐ Family considerations
- ☐ Other (specify -->) _____

2. Did you have to change your plans because of limited opportunities? Please Select One

IF YES, how did you change your plans? *(Please mark all that apply)*

- ☐ Sought employment in different region of the country
- ☐ Continued training in a subspecialty
- ☐ Accepted a less desirable position
- ☐ Accepted less desirable compensation
- ☐ Accepted less desirable setting or location
- ☐ Other (specify -->) _____

3. Please quantitatively describe your experiences in the job market by indicating the number of **total and preferred** positions applied for, interviews and offers you have received to date.

Type of Position	**Positions Applied for**	**Interviews**	**Offers**
All Positions			
Preferred Positions			

4. What is your overall assessment of the practice opportunities in **Allergy and Immunology within 50 miles of the site where you trained**? Please Select One

5. What is your overall assessment of the practice opportunities in **Allergy and Immunology nationally**? Please Select One

6. What is your overall assessment of the **academic** opportunities in **Allergy and Immunology nationally**? Please Select One

7. Did you ever consider/are you considering a career in **Academics**? Please Select One

IF NO, what would you say were/are the main reasons? *(Please mark all that apply)*

- ☐ No positions available
- ☐ Unable to obtain academic appointment
- ☐ Decided academics is not a desirable career

☐ Other (specify -->)

F. COMMENTS

Please provide any additional comments or observations you may have about your training experiences in Allergy and Immunology and/or the employment opportunities for Allergists and Immunologists.

Submit Responses

Appendix D: Fellow Exit Survey Technical Details

1. Definition of the Population

The Center defined the study population as physicians who completed allergy and immunology fellowship programs in the United States in 2002. Physicians who have recently completed their allergy and immunology fellowship training and are or have been on the job market can offer valuable information about the demand for physicians who provide allergy and immunology services. Moreover, determining how large a proportion of the recent graduates enter patient care, continue training in another subspecialty, or leave the country can help advise allergy and immunology stakeholders how many physicians they need to train to maintain an adequate supply of physicians providing allergy and immunology services.

2. Mailing List Sources and Mailing Details

The elements of the population of physicians completing training in allergy and immunology in 2002 were obtained from AAAAI. The Center received a database containing all current (April 2002) allergy and immunology fellows in training. The Center originally identified 148 fellows that were due to complete training between June 2002 and January 1, 2003. During the distribution and collection of the surveys, it became evident, through both fellows' responses to the survey and fellows' responses to emailed exhortations, that a number of the residents listed in the database were not completing their training in 2002. The effect of this issue was that, once again, the Center was forced to estimate the number of graduates of allergy and immunology fellowship programs and to use an indirect method of assessing whether the responses were representative of the population of allergists completing training in 2002.

3. Survey Distribution Details

On May 31, 2002, each fellow was sent an e-mail announcing the fellow exit survey. In the e-mail, instructions were given indicating the procedures necessary to complete the survey online. Fellows were also informed that the results of the survey would be available for their viewing later this year.

A follow up e-mail was sent to the non-respondents each week until August 12, 2002 that consisted of a reminder announcement of the fellow exit survey with instructions indicating the

procedures necessary to complete the survey online.

4. Response Rate Analysis

The Center received 77 unique responses to the 2002 fellow exit survey. Sixty-eight (68) responses were obtained through the online version of the survey, and 9 were obtained through the paper version of the survey. Initial "eyeballing" of the data revealed that some of the responses were submitted by physicians who had not yet completed their fellowship training, choosing either to prolong their fellowships to 3 years or simply only having completed their initial year of allergy and immunology training. The Center estimates that 125 physicians completed allergy and immunology training in the United States in 2002. Thus, the estimated response rate for the survey was 62%. Because there were no definite data points observed prior to administration of the survey, due to problems identified above, there was no definite way to determine how representative the respondents were of the total population of physicians completing allergy and immunology in 2002.

Following from the fellow exit survey analyses performed in 1999, 2000, and 2001, to assess representativeness indirectly, response rates by geographical area of the fellowship program from which the fellows graduated were examined. The comparison of interest was the response rate of programs with graduates. Of the program directors that responded to the survey, 53 reported that they had graduates in 2002. The Center received fellow exit surveys from fellows who graduated from 39 of those programs generating a 73.6% response rate. Table 2 presents this response rate by geographical area. While there was wide variation amongst divisions, the only rate that varied significantly from the overall rate was for the Pacific region. However, when Census regions, rather than Census divisions, were used, there were no significant differences between the regional response rates and the overall rate. Based on these results, the responses to the fellow exit survey were considered representative of the population of fellows who completed training in allergy and immunology in the United States in 2002. It should be noted that while this method of determining representativeness was not ideal, it was the only option.

Table D-1. Response Rate by Geographical Location, 2002 Fellow Exit Survey

Geographic Location

Overall Response Analysis

	Rate	Programs with Graduates	Responses
Overall	73.6%	53	39

Census Divisions	Responses	Programs	Response Rate	t^{sig}
New England	3	4	75.0%	-0.06
Middle Atlantic	9	12	75.0%	-0.10
East North Central	5	6	83.3%	-0.52
West North Central	6	6	100.0%	-1.44
East South Central	1	1	100.0%	-0.60
South Atlantic	6	8	75.0%	-0.08
West South Central	3	4	75.0%	-0.06
Mountain	2	2	100.0%	-0.84
Pacific	4	10	40.0%	2.09

Census Regions	Responses	Programs	Percent	t^{sig}
Northeast	12	16	75.0%	-0.11
North Central	11	12	91.7%	-1.34
South	10	13	76.9%	-0.25
West	6	12	50.0%	1.60