Academic Dermatology Manpower

Issues of Recruitment and Retention

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Objective: To assess the total number, recruitment rate, departure rate, and growth rate of full-time academic dermatologists in the United States over the last decade.

Design: Mail survey.

Setting: Academic dermatology departments in the United States.

Participants: Respondents among 113 chairs or chiefs of academic dermatology departments or their designees.


Results: Of the 113 academic dermatology departments, 89 (79%) responded. During the 4 selected academic years, more dermatologists joined academia (n=255) than departed (n=200). Those recruited into academia were predominantly graduating fellows (35%), residents (30%), and in private practice (16%). Of those who left academia, their primary roles were clinician-educator (55%), followed by dermatologic surgeon (16%). Most of those who departed went into private practice (65%). From 1994-1995 to 2001-2002, the recruitment rate increased by 36% (from 10.1% to 13.7%), and the departure rate increased by 88% (from 5.8% to 10.9%), resulting in a 35% decrease in growth rate (from 4.3% to 2.8%).

Conclusions: Retention of academic dermatologists is as important as recruitment. Our results confirm that insufficient retention has contributed to a substantial decrease in the growth rate of academic dermatologists. Future efforts to increase academic manpower must focus on retention as well as recruitment, particularly of clinician-educators. Specific strategies for improving retention include identifying or establishing funding sources for teaching/mentoring and clinical research. Recruitment efforts may be improved by focusing on fellows and private practitioners with academic affiliations.

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In the United States, it appears that there is a shortage of dermatologists to meet the demand for services, based on survey data examining wait times for new appointments, physician perception, and search for new dermatologists. In particular, there is a concern that there is a shortage of academic dermatologists, those who will train future generations of practitioners, based on the perception that fewer residents are choosing careers in academia and that faculty members are leaving academia for other opportunities. At a discussion group on academic workforce issues at the 2003 Association of Professors of Dermatology (APD) Annual Meeting (Chicago, Ill; November 1-2, 2003), many chairs and residency program directors voiced concerns about retention of faculty within their own departments.

However, very little is known about the academic workforce today or in the past decade. The purpose of our survey was to assess the current number of academic dermatologists and how it has changed over the last decade. The survey also examined specific reasons that faculty left or joined academic departments, with the goal of assisting our specialty in attracting and retaining a strong core of qualified, committed individuals in our training programs.

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SURVEY METHODS
AND QUESTIONNAIRE CONTENT

This study received an exemption from the institutional review board of Boston University, Boston, Mass. The initial survey was mailed in March 2004, followed by a postcard reminder 1 week later. Follow-up questionnaires were sent to nonrespondents 2 weeks later by first-class mail and 6 weeks later by certified mail.

The questionnaire was divided into 4 parts: (1) perceptions of the academic workforce nationwide, (2) academic dermatologist needs assessment for 2004, (3) total number of full-time academic dermatologists and departure and recruitment data for 4 selected academic years spanning 1 decade (1994-1995, 1998-1999, 2001-2002, and 2003-2004), and (4) open comments for suggestions to improve recruitment and retention. The decreasing interval between academic years (4 years, 3 years, and 2 years) was chosen to minimize recall bias. For the purposes of this study, we defined “full-time academic dermatologist” as an American-trained dermatologist certified by the American Board of Dermatology or a foreign-trained dermatologist with equivalent certification, considered to be full-time faculty whether supported by the medical school directly or by affiliated organizations. Those based in affiliated hospitals and clinics were included, whereas physicians in fellowship training programs were excluded.

This questionnaire comprised 30 partially close-ended questions (parts 1 and 2) and 3 tables (part 3). The first table requested the number of full-time academic dermatologists and residents on July 1 from 1994 to 2003. The second table requested the number of full-time faculty who departed, their primary role, reason for leaving, and subsequent new position for 4 academic years (1994-1995, 1998-1999, 2001-2002, and 2003-2004). The third table requested the number of full-time faculty who were recruited, their primary role, reason for joining, and status prior to recruitment for the same 4 academic years. The survey may have taken up to several hours to complete. A copy of the questionnaire is available from the corresponding author.

DATA ANALYSIS

Numbers and percentages were used to estimate demographics and survey responses. We dichotomized departments based on the number of full-time faculty reported in 2004 as small (0-5), medium (6-10), and large (>10). We also grouped respondents into 4 geographic regions (Midwest, Northeast, South, and West) as defined by the US Census Bureau.

The recruitment rate was defined as the total number of full-time faculty who joined during the selected academic year divided by the total number of full-time faculty on July 1 of that academic year. The departure rate was defined as the total number of full-time faculty who left during the selected academic year divided by the total number of full-time faculty on July 1 of that academic year. The growth rate was defined as the difference between the recruitment rate and the departure rate.

For the purpose of our study, we focused exclusively on those who joined or left academia. Thus, faculty who moved between academic dermatology departments were excluded from the analysis.

We calculated recruitment rates into academia and departure rates from academia by department size and geographic region for academic years 1994-1995, 1998-1999, and 2001-2002. Analyses were limited to those respondents who reported data required for calculation of departure and recruitment rates. We further calculated chi-squared statistics to evaluate any differences in the recruitment, departure, and growth rates between 1994-1995 and 2001-2002, as well as differences in these rates by department size and geographic region. Data from 2003-2004 were not included in these analyses because this was a partial academic year during which questionnaires were collected. All data were analyzed using SAS version 8.1 statistical software (SAS Institute Inc, Cary, NC).

RESULTS

RESPONDENTS

Of the 113 surveys sent, 89 were completed and returned, achieving an overall response rate of 79%. Seventy-nine were completed by the chair or chief, 8 by the vice-chair or residency program director, 1 by the department administrator, and 1 by an unknown member of the department. Surveys were received from 36 (95%) of 38 states that had academic departments, with the following response rates by region: Midwest (63%), Northeast (84%), South (91%), and West (71%). Characteristics of survey respondents are presented in Table 1.

MANPOWER STATISTICS FOR SELECTED ACADEMIC YEARS

More dermatologists joined academia than departed for each of the 4 academic years (1994-1995, 1998-1999, 2001-2002, and 2003-2004), for a combined total of 255 recruited and 200 departed (Figure 1). Although most of the full-time academic dermatologists recruited into academia were fellows (35%) or residents (30%), a substantial number came from private practice (16%). The remaining 19% joined academia from postgraduate research, military medical service, or unknown prior jobs (Figure 2). Of those who left academia, the largest group comprised clinicians-educators (35%), followed by surgeons (16%) and researchers (7%). The majority went into private practice (63%) or retirement (9%). The remaining 26% left academia for opportunities with the pharmaceutical industry or for the Food and Drug Administration, fellowship training, military service, or unknown positions.
From 1994-1995 to 2001-2002, the recruitment rate increased 36%, from 10.1% to 13.7% (P = 0.10), while the departure rate increased 88%, from 5.8% to 10.9% (P < .008). As a result, the growth rate decreased 35%, from 4.3% to 2.8% (P = .24) (Figure 3). The total recruitment rate (1994-1995, 1998-1999, and 2001-2002) exceeded the total departure rate across department sizes (Table 2). Large departments had the lowest recruitment (10.1% vs 14.5%) for small and medium departments; P < .01 and departure rates (6.2% vs 12.4%) for small and medium departments; P < .001) and the highest growth rate (3.9% vs 2.1%) for small and medium departments; P < .05. Small departments had the highest recruitment (16.9%) and departure rates (13.7%), with a moderate growth rate (3.2%). Medium departments had moderate recruitment (12.9%) and departure rates (11.6%), with the lowest growth rate (1.3%). Calculation of recruitment, departure, and growth rates was not performed for academic year 2003-2004 because data collection was incomplete.

Across geographic regions, the total recruitment rate also exceeded the total departure rate (Table 3). Despite its lower recruitment rate (11.3%) compared with other regions (11.5%-15.1%), the Northeast had the highest growth rate (5.1% vs 1.6% for the other 3 regions; P < .001) owing to its low departure rate (6.2% vs 11.4% for the other 3 regions; P < .01). Conversely, the high departure rate in the South (12.9% vs 7.9% for the other 3 regions; P < .03) resulted in the lowest growth rate (0%) of all regions, despite its substantial recruitment rate (12.9%). The West had the highest recruitment rate (15.1% vs 11.9% for the other 3 regions; P = .20), moderate departure rate (10.6%), and substantial growth rate (4.5%). The Northeast recruited the highest proportion (36%) of those new to academia, whereas the highest proportion of those leaving academia (40%) departed from the South.

The top 3 reasons for those 132 dermatologists who left academia in 1994-1995, 1998-1999, and 2001-2002, as perceived by the 70 responding chairs and chiefs, were low income (n = 31; 24%), family obligations/personal reasons (n = 21; 16%), and desire for more autonomy (n = 18; 14%). Across department sizes, low income was the most common reason for leaving academia. However, there was some variation by geographic region. Low income was the most common reason selected in the South (n = 13; 25%) and Northeast (n = 10; 29%), whereas desire for more autonomy was the top choice in the Midwest (n = 8; 67%) and family obligations/personal reasons was the top choice in the West (n = 7; 33%).

**STATUS OF FULL-TIME ACADEMIC DERMATOLOGISTS AND NEEDS ASSESSMENT IN 2004**

The number of full-time academic dermatologists in each department ranged from 0 to 43, with a median of 6. From July 2001 to June 2004, 48 (55%) of the 87 responding departments experienced an increase in number of full-time academic dermatologists, 20 (23%) experienced a decrease, and 19 (22%) remained the same. Of the 89 departments, 78 (87%) were interested in recruiting new
full-time academic dermatologists. Of these, 47 (61%) would like to recruit 1 to 2, 27 (35%) would like to recruit 3 to 4, and 3 (4%) would like to recruit more than 4 new full-time academic dermatologists. The most sought-after positions were clinician-educator (n=69; 88%), researcher (n=53; 68%), and surgeon (n=37; 47%). Less sought-after positions included dermatopathologist and pediatric dermatologist.

**PERCEPTIONS OF THE WORKFORCE NATIONWIDE**

Of the 88 respondents, 85 (97%) thought that there were too few academic dermatologists, while 3 (3%) believed that numbers were sufficient. Of those who believed there was a shortage, 60 (71%) chose less resident interest as the major reason, followed by increasing demand for teaching, research, and/or patient care (n=17; 20%) and failure of retention (n=8; 9%). When asked to choose the top 3 reasons for less resident interest in pursuing academic careers, 82 respondents (92%) ranked lower income as the top reason, followed by desire for more autonomy (n=64; 72%), dislike of departmental politics observed during residency training (n=4; 49%), and perceived difficulties in obtaining grant funding (n=34; 38%). Of the 89 respondents, 79 (89%) ranked “the dynamic environment of teaching, learning, investigation, and patient care” among the major 3 reasons for choosing an academic career, followed by teaching opportunities (n=52; 58%) and prestige and recognition (n=41; 46%).

**SUGGESTIONS FOR IMPROVING RECRUITMENT AND RETENTION**

Of the 89 respondents, 71 (80%) ranked higher salary within their top 4 choices to improve retention of academic dermatologists. Other important factors selected among the top 4 choices include a more nurturing and encouraging collegial environment (n=45; 50%), more protected time for research (n=36; 40%), and less time spent in direct patient care (n=27; 30%).

For each of the 3 academic years from 1994 to 2002, the recruitment rate exceeded the departure rate, resulting in a net gain of full-time academic dermatologists. Despite successful recruitment from academic years 1994-1995 to 2001-2002, the 35% decrease in growth rate was attributed to the greater increase in departure rate relative to the increase in recruitment rate. Thus, insufficient retention has slowed the growth of academic dermatology manpower. Based on a board review survey, an increasing proportion of residency graduates said they were entering academics (10% in 1999, 14% in 2000, and 18% in 2002).² Despite this increased recruitment into academia, the proportion of full-time academic dermatologists (our data) to the total number of practicing dermatologists (data from the AMA) has remained constant: 6.0% in 1994, 6.2% in 1998, 6.1% in 2003. This discrepancy between the proportion of graduating resi-
The majority of those who left academia were clinician-educators, who spend substantial amounts of time teaching or mentoring residents and medical students and often spend more than half their time involved in patient care. Educational activities are largely financially uncompensated as public funds for teaching have declined. As a result, most academic faculty have been required to bring in their salaries entirely through patient care revenues, research grants, or both. In addition, there has been growing pressure for academic physicians to see increasing numbers of patients because of the decline of government teaching funds and reductions in reimbursement for patient care. 

In the open comments section of our survey, many chairs and chiefs agreed that too much time spent in patient care leaves little time for academic pursuits. Indeed, Buckley et al reported that academic physicians spending greater than 50% of their time seeing patients have cited insufficient time for the activities of research, teaching, and mentoring needed for a successful academic career and reported greater dissatisfaction with their careers, slower career progress, and that they were less likely to be at the rank of professor. If academic dermatologists’ jobs are becoming more and more like private practice, with little to no time for academic pursuits, the greater income potential and autonomy afforded by a private office setting may become more attractive.

Departmental leaders need to refocus their efforts on retention. Much more could be done at both the national and individual department levels to address specific factors affecting retention. For example, the American Academy of Dermatology, Society for Investigative Dermatology, and APD could schedule forums at their annual meetings for chairs and chiefs to brainstorm and discuss innovative ways to fund nonclinical activities, to provide a more nurturing and collegial environment, and to improve faculty job satisfaction. Outreach to professional organizations in other medical and surgical subspecialties could be informative.

Department chairs must help junior faculty members find protected time and nonclinical salary support for their academic pursuits. For those interested in clinical research, the Dermatology Foundation has recently funded career development awards in dermatologic surgery, health care policy, medical dermatology, and women’s health. For individuals preparing for laboratory-based research careers, there are training grants from the National Institutes of Health and 1- to 3-year career de-
development awards available through the Dermatology Foundation, American Skin Association, and other organizations. Another possibility is the establishment of endowed junior faculty scholarships, similar to endowed chairs. These scholarships are awarded to an instructor or assistant professor for several years to cover a fixed proportion of salary, with the intent of creating opportunities to get studies started, to acquire pilot data, and to lay the foundation for external grant funding.

To maintain the quantity and quality of educational activities, department leaders may need to find creative ways to make these endeavors more rewarding. Annual awards in recognition of excellence in teaching/mentoring with a modest fund ($1000-$2000) to support the development of innovative educational methods (eg, teaching seminars and faculty development courses), or tapping into departmental discretionary funds to compensate for educational activities may be considered. To develop strategies to improve retention, we recently surveyed clinician-educators to evaluate job satisfaction and specific factors affecting their future career choices. Analyses are under way.

Regarding recruitment, of the 89 respondents, most (n=70; 79%) believed that the greatest source of new recruits into academia were residents. However, we found that a slightly higher proportion of those recruited into academia comprised fellows (35%) compared with residents (30%). As a result, fluctuations in fellows’ career choices may have an even greater impact on the number of full-time academic dermatologists. Leaders of departments should consider spending equal, if not greater, effort in recruiting fellows compared with residents. In-depth surveys of fellows, including type of fellowship training, will be required to gain insight into critical factors affecting their career choices.

An unexpected finding is that 16% of those recruited into academia came from private practice. After years of being involved solely in direct patient care, these individuals were likely drawn to the intellectual challenge and the opportunity to engage in teaching, 2 aspects of the academic environment perceived as most valuable by dermatologists in both community-based and academic settings.17 Disenchanted private practitioners may be a potential untapped source for recruitment. Invitations to participate in grand rounds, to lecture to residents, and to attend teaching clinics are a few ways to engage community dermatologists and keep them involved with the academic environment.

Rates of departure, recruitment, and growth varied by department size and geographic location. Of the 18 large departments that responded to our survey, 6 (33%) are located in the Northeast, which correlates with this region’s successful retention and growth. On the other hand, of the 26 small departments, 13 (50%) are located in the South, which correlates with this region’s failure of retention and lack of growth. This “revolving door” phenomenon in the smaller departments would result in a relative greater loss of patient care, teaching, research, and administrative activities than in larger departments. Larger departments may have qualities such as greater financial stability (more sources of revenue generation), more autonomy (department vs division), academic diversity, career opportunities, and available resources to attract and retain those pursuing academic careers. Future studies to understand the roles of department size, geographic location, and/or other unassessed factors on the variation in recruitment and departure rates may shed light on the efforts to increase the academic dermatology workforce.

Our survey study has several limitations. Data collection was restricted to full-time academic dermatologists; thus, the impact of changes in part-time faculty on academic manpower are unknown. Recall bias or insufficient knowledge on the part of the respondents should be taken into consideration as some of the information requested dated back 1 decade. There is likely some discrepancy in point of view of the individual faculty members and their department leaders regarding the specific reason(s) for departure. To more accurately assess reasons for leaving academia, future survey studies should target those who left academia, as well as current faculty members to assess risk factors for departure.

In conclusion, over the last decade, failure of retention has substantially slowed the growth of academic dermatology manpower. National dermatology organizations and individual departments should refocus their efforts on improving retention, as well as continuing to attract new faculty. Suggestions to improve retention include identification of funding sources aside from patient care revenues to support the critical academic missions of teaching/mentoring and clinical research. Given that departing faculty are understood to desire both higher salaries and more discretionary time, this promises to be a major challenge for our specialty. Fellows and private practitioners as well as graduating dermatology residents are potential sources for recruitment.

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