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APPENDIX:

Sixteenth Annual A.P.A.P. National Survey For The 1999-2000 Academic Year

SIXTEENTH ANNUAL REPORT ON PHYSICIAN ASSISTANT EDUCATIONAL PROGRAMS
IN THE UNITED STATES, 1999-2000

INTRODUCTION

Founded in 1972, the Association of Physician Assistant Programs (APAP) serves as the national organization representing physician assistant (P.A.) educational programs in the United States. The Association serves as a conduit for communication among P.A. educators by sponsoring meetings, organizing research studies and providing a forum to conduct the business of the membership. Another important role for the Association is to serve as a resource for individuals and organizations interested in the aspects of the physician assistant profession that pertain to the selection and education of the P.A. students and the characteristics of physician assistant programs. In addition, APAP provides representation to various bodies that help to chart the course of the P.A. profession, including the Commission on Accreditation of Allied Health Education Programs (CAAHEP) and the National Commission on Certification of Physician Assistants (NCCPA), among others.

As the primary organ for collection and dissemination of data about its member physician assistant educational programs, the Association publishes the "Physician Assistant Programs Directory."¹ The Directory provides a listing and description of APAP member programs. Each listing provides comprehensive information concerning each program's admission requirements, curriculum, institutional affiliates, credentials awarded and other descriptive data. The Directory also provides a summary of postgraduate educational programs for P.A.'s, information about accreditation and P.A. certification. As of October, 1999, there were 120 physician assistant programs accredited (full or provisional) by the Commission on Accreditation of Allied Health Educational Programs in the United States.²

In 1984, the process of establishing a national database on P.A. programs was initiated by Denis Oliver, Ph.D., Director of The University of Iowa Physician Assistant Program and then Past-President of the Association. The first national survey was developed and administered in the Fall of 1984. The questionnaire requested information on a variety of program "activities" including institutional sponsorship, financial support, program personnel (faculty and support staff), characteristics of applicants and students enrolled, curriculum, student attrition, and graduate employment characteristics. The findings from the 1984 survey were published as the First Annual Report on Physician Assistant Educational Programs in the United States, 1984-85 and, to date, a total of sixteen Annual Reports³⁻¹⁸ have been published, including the present Report.

Dr. Oliver retired as author after publication of the eleventh Report. In 1995, the APAP Board of Directors authorized individuals from the Saint Francis College Department of Physician Assistant Sciences to author future Reports. Data from the annual report has been published in numerous other venues where discussions of the P.A. profession are ongoing. Examples of these publications include the Journal of Medical Education, AAPA News and the Journal of the American Academy of Physician Assistants. Selected data have been published in the Annual Reports to the President and Congress on the States of Health Personnel in the United States and in a publication of the Association of Academic Health Centers.

The data presented in the Report over the years represents responses from greater than 90% of the P.A. programs surveyed. This high rate of response leads the authors to present the findings contained herein to be representative of the physician assistant educational programs in the United States. Given that the basic elements of the annual survey have remained consistent over its thirteen year history, a significant amount of data has been generated that can be used to depict the "typical" or "average" P.A. educational endeavor. The consistency in collection of data has also provided the ability to detect trends or document changes as they occur over time. Identified trends have been analyzed to generate reports on the following items:

- * Characteristics of AMA-accredited P.A. Programs that have Closed.⁵
- * Characteristics of Graduate-Level P.A. Programs.^{6,9}
- * Analysis of Alien and U.S. Unlicensed Medical Graduates Admitted to P.A. Programs.⁸

- * Analysis of P.A. Program Personnel Turnover.¹⁰⁻¹⁸
- * A Review of Program Characteristics by Sponsoring Institution.³

METHODS

The Survey Instruments

Two questionnaires (surveys #1, #2) were administered. The first survey was a total of seven pages in length, mailed in November, 1999, to 120 programs that were identified as accredited from databases maintained by APAP and the American Academy of Physician Assistants (AAPA). Survey #1 consisted of three major sections (see the Appendix for a copy of the questionnaires):

- A. General Program Information: Includes date of admission of first class, length of program, consortia membership, sponsoring institution, sources of financial support, student expenses and financial aid and credentials earned.
- B. Program Personnel: Includes characteristics of program faculty and staff, clinical activity of P.A. personnel, and an assessment of program personnel turnover, attrition and recruitment.
- C. Applicant/Student Information: Includes the number, gender, age, ethnicity, residency, academic and health care experience background of applicants and students enrolled, including the disabled. A section requesting information of unlicensed medical graduate (UMG) applicants and students enrolled is also included.

Survey #2 was five pages in length, was mailed in November and requested information on:

- A. Graduate Information: includes information on student attrition and deceleration, characteristics of recent graduates, starting salary for recent graduates and the board pass rate of those recent graduates.

One of the goals of the current authors with the Annual Report was to make it more user friendly. To move closer to this end, the Annual Report application was moved "on-line" last year, allowing the member programs to enter data directly over the Internet, facilitating the collection and analysis of data. Fifty-three programs (51.5% of the Survey #1 respondents) submitted their program's data via this method for Survey #1. Survey #2 was not available for this administration of the survey. The authors anticipate that an increasing number of programs will supply data using this method during the production of the 17th Report.

Survey Period and Response Rate

Survey #1 and the curriculum section was mailed (11/8/99) to 120 P.A. programs, including ten programs enrolling students for the first time in the 1999-2000 academic year. An initial deadline of December 17, 1999 was established. A total of 105 responses were received for a response rate of 87.5%.

The second survey was mailed upon receipt of survey #1 (all sections). If survey #1 was not received by the deadline, a follow-up letter was mailed, which included a copy of survey #2. Eighty-four survey #2's were received.

A total of 110 programs returned some portion of survey #1 and/or survey #2, for an overall response rate of 91.7%.

Data Entry and Analysis

In the process of editing each questionnaire, obvious misinterpretations or inconsistencies in the responses to specific items were resolved by telephoning or e-mailing the person completing the survey. A series of contingency checks were made to identify invalid characters or extreme values in any field.

In general, analyses of the data consisted of descriptive statistics on the variables of interest, e.g. arithmetic mean, standard deviation, median, and range of values. Medians were listed on tables when they differed significantly from the mean. T-tests were used to determine levels of statistical significance between groups. Regression equations were developed for program budget and student enrollment as well as various parameters associated with personnel

salary and certain variables which were expected to influence salary, i.e., gender, months of experience, academic credentials and academic rank. Data are not reported when only one person is represented in a category.

Tables and figures presented in this report represent aggregate data from the respondents. Due to missing data and/or unusable answers, the number of respondents to a particular questionnaire item varied. In most cases, the maximum number of valid responses was 104, however, in some cases, data on nonrespondents was obtained from the APAP Directory or personal communication with nonrespondent programs, in which case a total of 120 programs were represented.

Quality Improvement

Given that the Report is an ongoing enterprise, the authors are interested in improving its usefulness to our customers. In 1995, the APAP Board of Directors approved the formation of an advisory board to review the planning and direction of the Report and to help to continually improve the product.

Constructive comments on how to improve the Report or any of its survey instruments are welcome at any time. Please address any comments to: Albert Simon, M.Ed., PA-C (e-mail: BSimon@sfcpa.edu) or Marie Link (e-mail: MLink@sfcpa.edu), Department of Physician Assistant Sciences, Saint Francis College, P.O. Box 600, Loretto, PA 15940.

The "Typical" P.A. Program

The data reported herein represents our best estimate of the population value for the variables involved and were used to describe the characteristics of the "typical" P.A. program. Mean and/or median values were reported for each characteristic examined. In calculating mean values, entries with zero values were usually included while 'missing' values were uniformly excluded. When only partial data were available, the number of respondents was identified.

In some cases, totals reported for a given category may not reflect a simple summation of the subcategories. For example, in the table presenting data on applicant age (Table 55), one program may report the total number of applicants, but not report data for any of the age subcategories for applicants. In such a case, means for each of the age groups are reported based on the programs that provided information. The programs that reported only the total number of applicants were included in the "total" figure (N=80), but not in the subcategory data (N=66). Thus, the number of responding programs upon which the category or subcategory means were based may differ. In addition to reporting aggregate data for the "typical program," program respondents were also compared on the basis of geographic region.

Analysis of Trends Over Time: 1984-1999

In comparing current data to similar data collected in previous years, trends occurring in various aspects of P.A. educational programs were identified. Specific variables for which comparisons have been made include program budget, student expenses and financial aid, salaries of program personnel, number of applicants and students enrolled, student characteristics (age, gender, ethnicity, health related experience, G.P.A. and attrition) and employment characteristics of program graduates (i.e., rate of employment, medical specialty, type of practice, starting salary).

Additional Copies of this Report

Copies of this Report may be purchased by contacting: Association of Physician Assistant Programs, 950 N. Washington Street, Alexandria, VA 22314-1552 (703-548-5538).

SECTION I. GENERAL PROGRAM CHARACTERISTICS

Listing of P.A. Programs by Geographical Region

Operational programs are listed by state and APAP consortium in Table 1. The Northeastern (N=26) and Midwestern (N=25) regions had the largest number of programs, while the Heartland (N=12) had the fewest number of programs. In total, 42 states (including the District of Columbia) currently have an operational P.A. program.

Table 1. Consortium Regions of Operational Physician Assistant Programs

NORTHEASTERN CONSORTIUM (N=26): Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York

Albany-Hudson Valley	Mercy College	Springfield College
Bronx Lebanon Hosp. Center	NY Institute of Technology	SUNY/Hlth Sci Brooklyn
Brooklyn Hosp/L.I. University	Northeastern University	SUNY/Stony Brook
Catholic Med. Ctr., Brooklyn	Notre Dame College	Touro College - Bay Shores
CUNY/Harlem Hospital	Quinnipiac College	Touro College - New York
Cornell University	Rochester Institute of Tech.	Univ. Of New England
D'Youville College	Rutgers University	Wagner College/Staten Isl
Daemen College	Seton Hall University	Yale University
LeMoyn College	Sisters of Charity Medical Center	

EASTERN CONSORTIUM (N=18): Maryland, Pennsylvania, Wash. D.C.

Allentown Coll. St. Francis de Sales	Gannon University	MCP - Hahnemann Univ Hlth Sci
Anne Arundel Comm. College	George Washington Univ.	PA College of Technology
Beaver College	Howard University	Philadelphia University
Chatham College	King's College	St. Francis College
Duquesne University	Lock Haven University	Seton Hill College
Community College of Balt. County	Marywood University	Univ. of Sciences in Philadelphia

SOUTHEASTERN CONSORTIUM (N=21): Alabama, Florida, Georgia, Kentucky, N.Carolina, S. Carolina, Tennessee, Virginia, West Virginia

Alderson-Broadus College	Emory University	South College
Barry University	James Madison University	Trevecca Nazarene University
College of Health Science	Medical College of Georgia	Univ. of Alabama - Birmingham
College of West Virginia	Medical Univ South Carolina	University of Florida
Duke University	Methodist College	University of Kentucky
East Carolina University	Miami-Dade Community College	University of South Alabama
Eastern VA Medical School	Nova Southeastern University	Wake Forest University

MIDWESTERN CONSORTIUM (N=25): Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, North Dakota, Ohio, South Dakota, Wisconsin

Augsburg College	Marquette University	Univ. of North Dakota
Butler U/Clarian Health	Medical College of Ohio	Univ of Osteopathic Med
Central Michigan Univ.	Midwestern University	University of St. Francis
Cook County/Malcolm X	St. Louis University	Univ. of South Dakota
Cuyahoga (P.A. and S.P.A.)	Southern Illinois University	University of WI - LaCrosse
Finch Univ of Hlth Sci	Southwest Missouri State Univ.	University of WI-Madison
Grand Valley State University	University of Detroit Mercy	Wayne State University
Kettering College	University of Iowa	Western Michigan University

HEARTLAND CONSORTIUM (N=12): Kansas, Louisiana, Nebraska, Oklahoma, Texas

Baylor College of Medicine	Union College	University of Texas/Galveston
Interservice PA Program	University of Nebraska	University of Texas/Pan Am
Louisiana St. University	Univ. of North Texas Hlth Sci Cent	University of Texas/SW Med Ctr
Texas Tech University	University of Oklahoma	Wichita State University

WESTERN CONSORTIUM (N=18): Arizona, California, Colorado, Idaho, Montana, New Mexico, Oregon, Utah, Washington

AZ School of Hlth Sci
Charles Drew Univ
Idaho State Univ
Midwestern University
Oregon Hlth Sci Univ
Pacific University

Red Rocks Community College
Riverside Community College
Rocky Mountain College
Samuel Merritt College
Stanford University
Univ of California - Davis

University of Colorado
University of New Mexico
Univ of Southern California
University of Utah
University of Washington
Western Univ. of Hlth Science

Nonrespondents to neither Survey #1 nor Survey #2; N=10

The above listing is based upon the APAP Consortium guidelines. Each program responded as to which consortia they belonged.

The geographic distribution of the 120 operational P.A. Programs is shown in Figure 1.

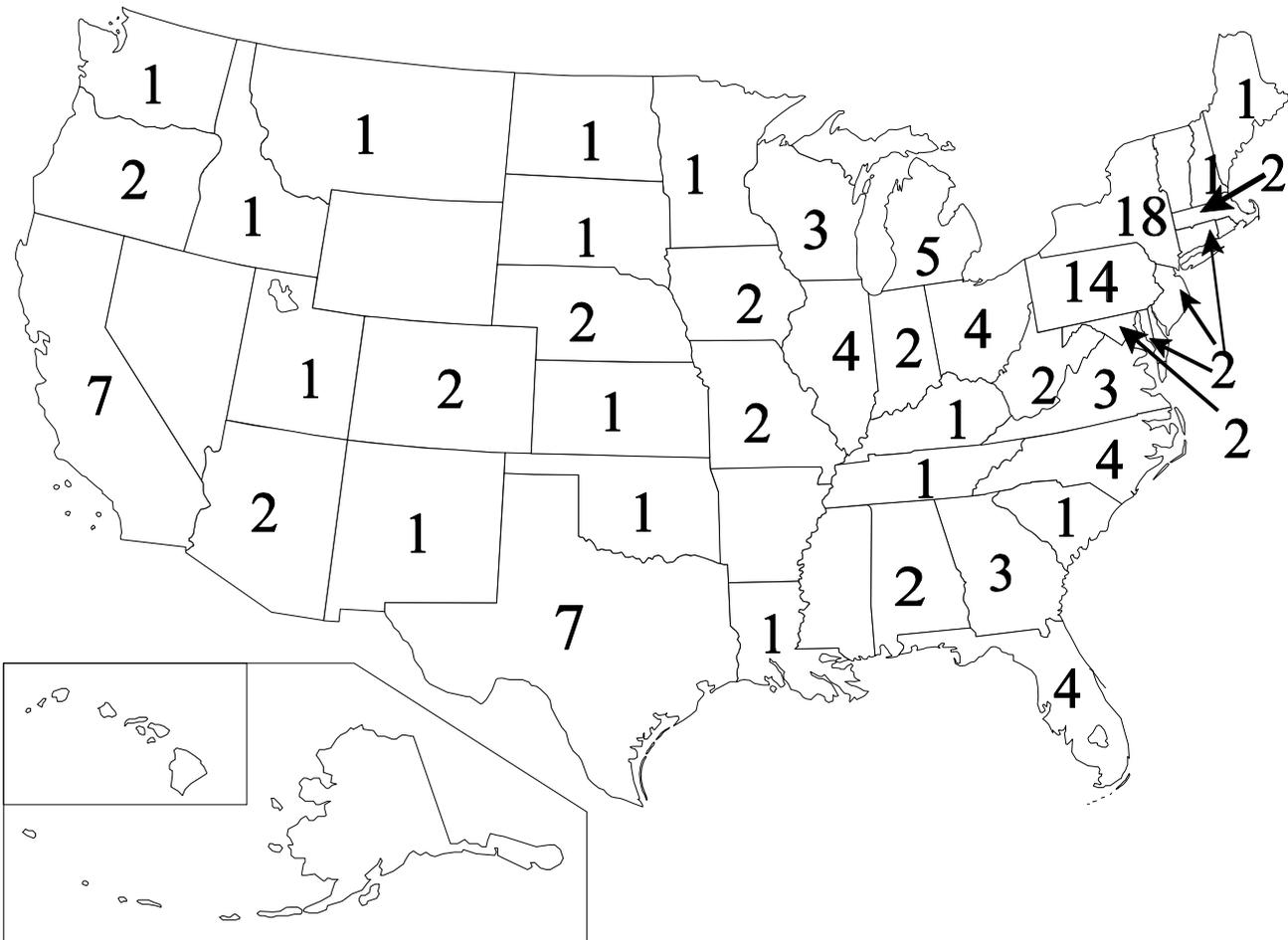


Figure 1. Geographic Distribution of Programs

A summary of P.A. programs by sponsoring institution and by highest credential awarded is shown in Table 2 (next page). The majority of P.A. programs were sponsored by either a university (59%) or 4-year college (26%). Five programs were associated with a two-year college, seven programs were sponsored by a hospital, three with a medical college and one was sponsored by the armed services. The majority of programs (49.5%) awarded a baccalaureate

degree on graduation, 33 programs awarded a master’s degree (31%), and the remaining programs (N=21; 20%) awarded either a certificate or an associate degree as the highest credential granted. Over the past 5 years, thirteen baccalaureate programs converted to masters programs, three programs converted from a certificate to a baccalaureate degree and two programs converted from an associate to baccalaureate program. Some programs offer a graduate degree on completion of additional courses (e.g., public health, preventive medicine, geriatrics, exercise science). These programs were not included as “entry-level” masters programs.

Table 2. P.A. Programs by Type of Sponsoring Institution and Credential Awarded*

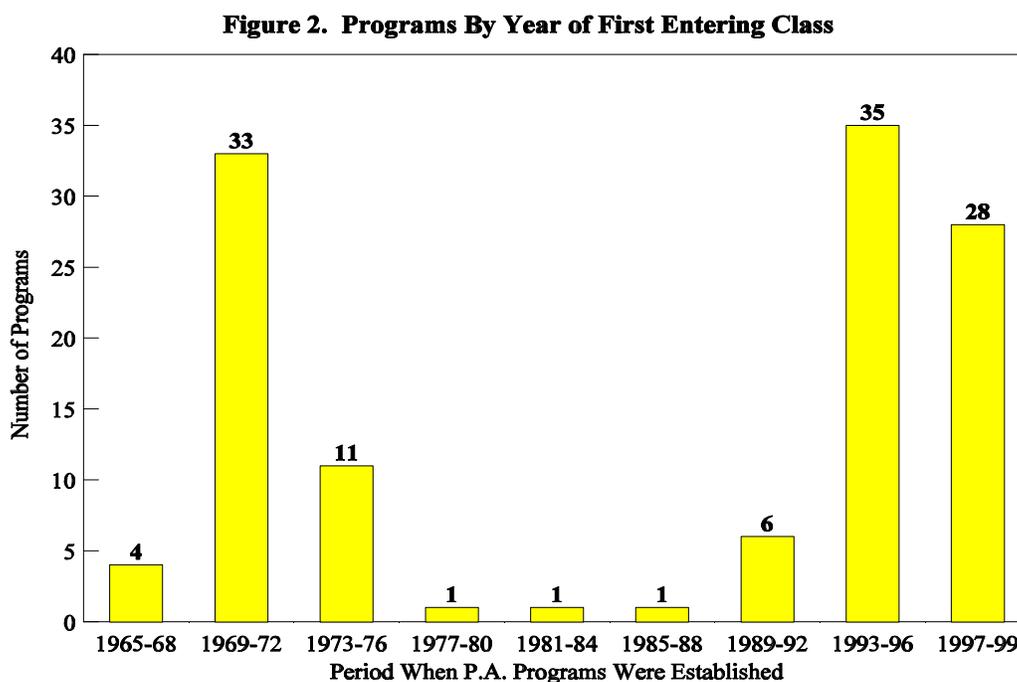
<u>Type of Sponsoring Institution</u>	<u>N</u>	<u>%</u>	<u>Highest Credential Awarded</u>		
			<u>N</u>	<u>%</u>	
University	70	58.33	Master	43	35.83
4-Year College	35	29.17	Baccalaureate	57	47.50
Community College	6	5.00	Associate	7	5.83
Hospital**	5	4.17	Certificate	<u>13</u>	<u>10.83</u>
Medical College	3	2.50		Total	120
Military**	<u>1</u>	<u>0.83</u>			100.00
Total	120	100.00			

* Nonrespondent information was drawn from APAP.

** Degrees granted from University/College Affiliates.

Year Current P.A. Programs Were Established, 1965 Through 1999

The distribution of respondent programs by year of their first entering class is shown in Figure 2. One hundred twenty programs are represented, as the data for the nonrespondent programs were obtained from previous Report surveys or the Accredited Physician Assistant Programs² from AAPA/APAP. The first P.A. program was established

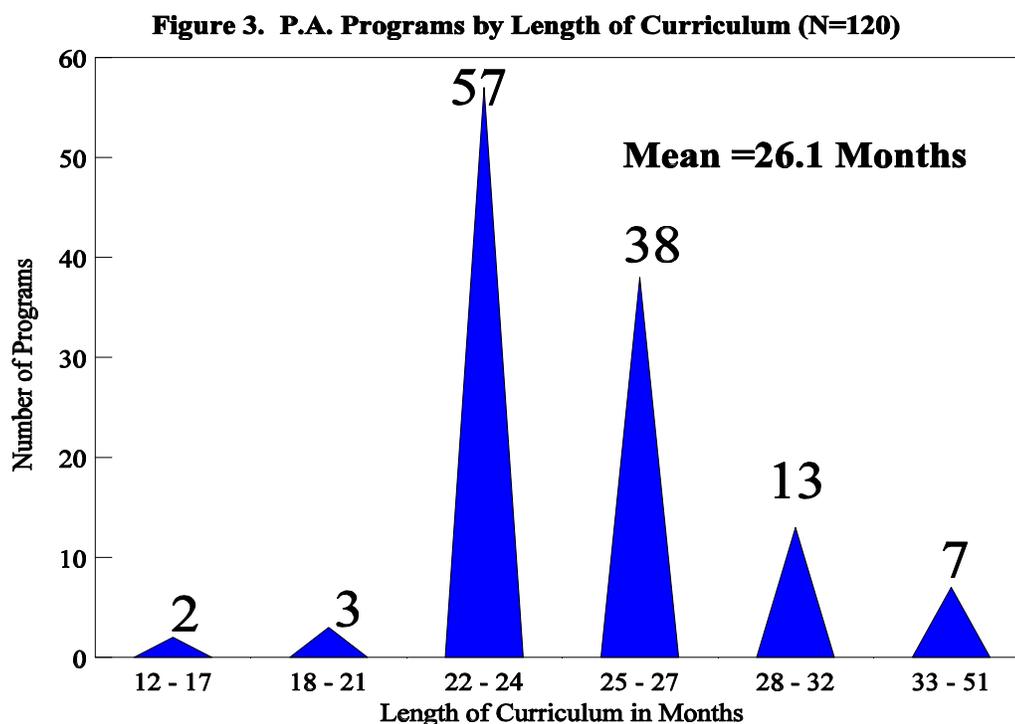


in 1965 at Duke University Medical Center and over the next four years (1965-1968) three additional programs were developed. With the passage by Congress of the Comprehensive Health Manpower Act in 1971, federal training grant support provided the stimulus for the rapid development of the majority of current P.A. programs. Indeed, over the subsequent eight year period (1969 through 1976), forty-four new programs were established. Over the next twelve years, from 1977 through 1988, only three additional programs were established. In the years 1993-1996, 35 new programs were established and from 1997 to 1999, 28 new programs enrolled students for the first time.

Current P.A. Programs by Length of Curriculum

Historically, the length of the professional P.A. curriculum has varied across programs. For example, at some institutions, the P.A. program is a 4-year baccalaureate curriculum that admits students as freshmen. The first two years of this curriculum involves liberal arts and preparatory science courses followed by two years of professional P.A. studies. In some cases, these programs admit students with advanced standing at the beginning of the professional curriculum, typically two years in length. At the other extreme, graduate-level programs admit students who have completed all liberal arts and preparatory science courses and have earned a baccalaureate degree prior to admission. The graduate or master's level curriculum typically includes additional courses and/or experiences in research related activities in addition to the professional curriculum.

Figure 3 illustrates the diversity across programs relative to the length of the curriculum. The mean length of the curriculum was 26.1 months (N=120) with a range of 12 to 51 months. For convenience, the programs were organized into six groups. The majority of programs were between 22-24 months (57) and 25 to 27 months (38) in length. The median was 24 months. The length of the curriculum of P.A. programs has increased in the past several years, for example, in 1986 and 1990, the average length of the curriculum was reported as 23.7 and 24.0 months, respectively. The mean of 26.1 months represents a increase of 2.0% from last year. Non-respondent information was obtained from the APAP Program Directory⁽¹⁾.

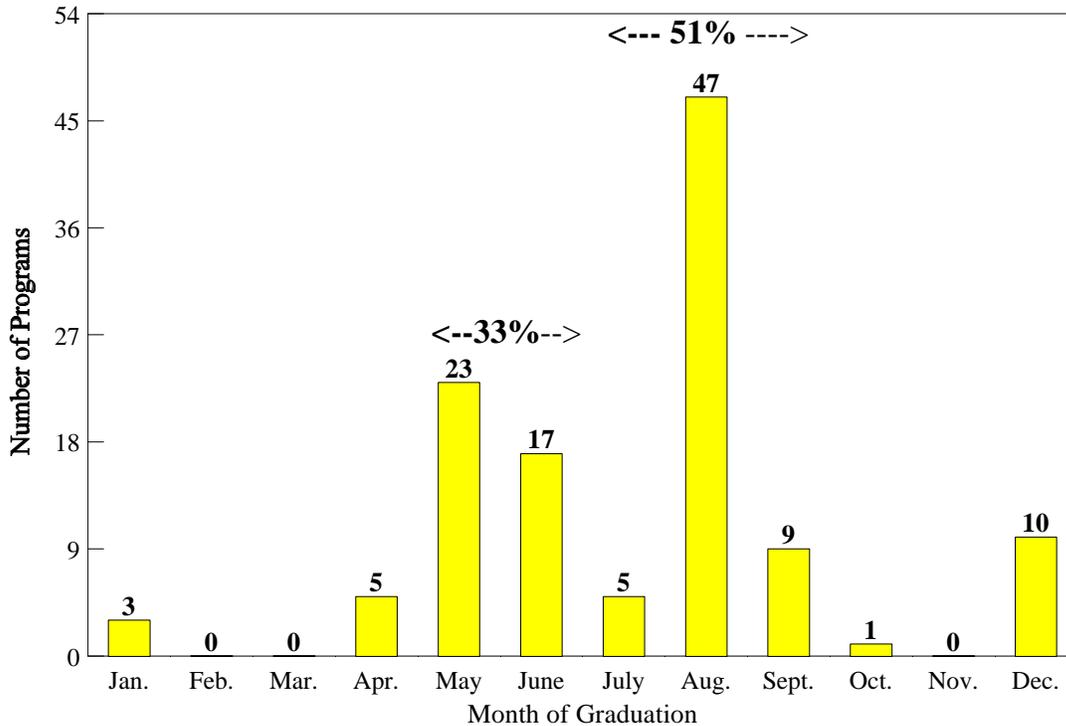


Current P.A. Programs by Month of Graduation

The distribution of P.A. programs by month of graduation is shown in Figure 4. Data for nonrespondent programs and those that have been newly established were supplemented by information from the 1999 P.A. Program Directory⁽¹⁾.

Currently, a majority (N=101; 84.2%) of programs graduate students over two periods, (a) between May and June (N=40; 33.3%) and (b) July, August and September (N=61; 50.8%). It should be noted that two programs graduate two classes per year and one program graduates three classes per year.

Figure 4. P.A. Programs By Months of Graduation (N=120)



Financial Characteristics of P.A. Programs

Information concerning the sources of financial support for P.A. programs is shown in Table 3 (next page). Only data from those programs reporting financial support from the sources indicated were used to calculate the sample mean and range for each category. The number of programs reporting no support from a particular source (last column) is also shown. Note, data presented in the latter column excludes those programs that did not respond to a specific item. Most programs (N=65) reported support from more than one source, for example, 26 programs reported two sources, 23 programs three sources, 9 programs four sources and 7 programs reported five or more sources of support.

The sources of financial support were classified as either internal or external. Internal support referred to funds available from within the sponsoring institution and/or tuition and fees retained by the program. External support included those funds available from outside the institution, such as federal or state grants, support from public or private foundations, and/or from private industry.

The primary source of internal financial support for the majority (N=92) of programs was the sponsoring institution, providing an average of \$466,641/year/program (S.D.= \$347,943). Eleven programs reported that they received no financial support from their sponsoring institution. Thirty-six respondents indicated that they received substantial

support from student tuition and fees paid directly to the program (mean=\$566,618, S.D.=\$545,675). Sixty-seven programs did not receive revenue from student tuition or fees.

Table 3. Sources of Financial Support for Physician Assistant Programs

<u>Source of Financial Support</u>	<u>Mean</u>	<u>Median</u>	<u>Range</u>	<u>N</u>	<u># With No Support</u>
<u>Internal</u>					
Sponsoring Institution	\$466,641	\$440,000	\$ 25,000 - 1,794,000	92	11
Tuition and Fees (Retained by Program)	\$566,618	\$391,500	\$ 3,000 - 1,845,000	36	67
<u>External</u>					
Federal Grants	\$150,111	\$134,000	\$ 29,000 - 408,000	36	67
State Grants	\$134,429	\$116,000	\$ 1,000 - 313,000	14	89
Foundations	\$ 63,429	\$ 50,000	\$ 11,000 - 200,000	7	96
Private Donation	\$101,167	\$ 21,000	\$ 10,000 - 500,000	6	97
Industry	\$299,500	\$299,500	-----	2	101
A.H.E.C. Support	\$ 31,692	\$ 18,000	\$ 2,000 - 98,000	13	90
Other	\$ 62,545	\$ 40,000	\$ 10,000 - 229,000	11	92
Total Program Support	\$756,946	\$623,000	\$ 25,000 - 3,200,000	103	0

External financial support for programs was primarily from federal training grants from the Department of Health and Human Services, Division of Medicine, Bureau of Health Professions. Thirty-six programs (35% of the respondents to this item) received federal funds during 1999-2000 fiscal year. The amount of federal support ranged from \$29,000 to \$408,000, averaged \$150,111 per program (S.D.=\$78,498) and accounted for 19.8% of the total budget, slightly lower than the figure (23.4%) reported last year. Sixty-seven programs indicated they did not receive federal grant support in 1999-2000. In addition to federal training grants, fourteen programs indicated they received state grants averaging \$134,429 per year and eleven programs reported financial assistance received from other sources (e.g., rate appeals, teaching contracts, hospitals, training grant, clinical service, scholarships and Title III) averaging \$62,545 per program.

The total annual financial support from all sources for the 103 programs reporting averaged \$756,946 per program (median=\$623,000; S.D.=\$530,339). An analysis of the association between total budget and total student enrollment was examined. Two correlations were derived, the first using full-time (F.T.) students enrolled ($r = 0.54$; $p < .001$) and the other utilizing the sum of F.T. and ½ of the part-time (P.T.) students ($r = 0.601$; $p < .01$). The results demonstrated a statistically significant relationship between enrollment and program budget.

The following prediction equations were derived from the data using a least squares analysis, estimating program budget and total student enrollment:

(a) Total Program Budget = (576.649) + (2.57 x # F.T. students enrolled) (in \$1,000's)

(b) Total Program Budget = (572.601) + (2.603 x # (F.T. + P.T./2) students enrolled) (in \$1,000's)

Thus, using equation “a” for a program with an enrollment of 50 F.T. students, one would predict a budget of \$705,149 per year while equation “b” predicts, for a program with 50 F.T. and 10 P.T. students, a budget of \$715,766/year.

In terms of the reported program budget, the cost of training the average P.A. student for one year of professional training can be roughly estimated by dividing the program budget by the total number of students enrolled (F.T. + P.T./2). Thus, for the 1999 academic year, the cost for the typical program was approximately \$9,869 to educate each student (mean budget of \$756,946 divided by an average enrollment of 76.7 students/program). This figure is 4.3% higher than in the previous year.

The estimated cost/student is based on number of students enrolled and reported "program" budget. It should be noted, however, that these figures may exclude (1) overhead costs provided by the institution, (2) faculty, other than "core" program faculty (e.g., basic science faculty) that are supported by their respective departments and (3) preceptors responsible for the clinical training of P.A. students. Therefore, the values reported herein may be substantially underestimated.

Program Budget and Federal Support by Region

A comparison of federal support and total program budget by geographic region is shown in Table 4. Programs located in the Western region reported the largest total budget (\$1,104,850/program). The most federal grant support was located in the Northeastern region, averaging \$181,000/program. Programs in the Eastern region reported the smallest total budget (\$538,951/program). Programs in the Heartland region had the least amount of support from federal training grants (\$100,000/program). The proportion of total program budget derived from federal funds was lowest (13.5%) in the Western region, while programs in the Midwestern region derived over one-fourth of their total budgets from federal sources.

Table 4. Total Program Budget and Federal Training Grant Support by Geographic Region

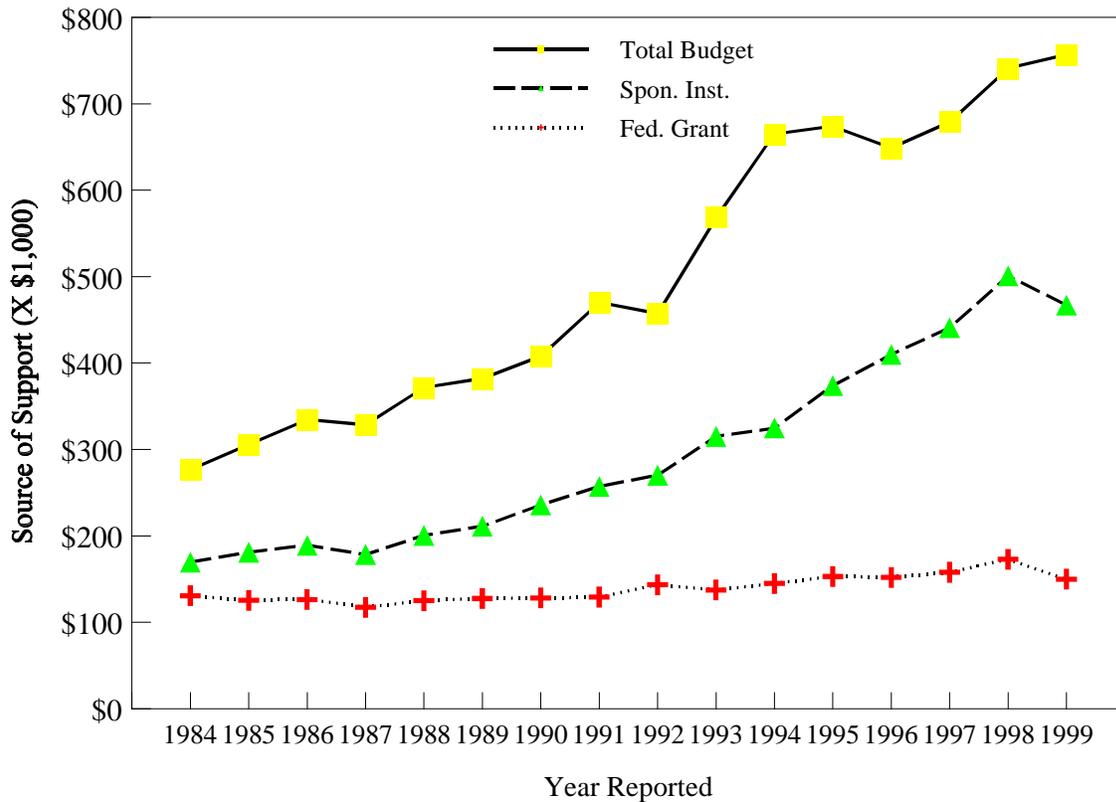
Geographic Region	N	Total Budget		Federal Grants		% of Budget	Fed. Support	
		Mean	S.D.	Mean	S.D.		Yes	No
Northeastern	21	\$ 839,381	\$572,224	\$181,000	\$ 94,086	21.6%	4	17
Eastern	15	\$ 538,951	\$392,896	\$120,000	\$ 48,000	22.3%	2	13
Southeastern	17	\$ 836,882	\$511,672	\$171,000	\$ 97,478	20.4%	6	11
Midwestern	23	\$ 609,096	\$347,322	\$160,857	\$ 56,884	26.4%	7	16
Heartland	11	\$ 576,399	\$170,564	\$100,000	\$ 23,452	17.3%	5	6
Western	<u>16</u>	<u>\$1,104,850</u>	<u>\$727,560</u>	<u>\$149,000</u>	<u>\$ 58,643</u>	<u>13.5%</u>	<u>12</u>	<u>4</u>
Total	103	\$ 756,946	\$530,339	\$150,111	\$ 78,498	19.8%	36	67

Trends in P.A. program support from 1984 through 1999 are shown in Table 5 (next page) and shown graphically in Figure 5 (next page). The total budget column is not a summation of institutional and federal grant support. The total budget for 1999 increased by \$16,000 from the previous year. The level of training grants accounted for 20% of the total budget, a decrease of 3.4% from 1998. Overall, the total program budget and program support from the sponsoring institution increased by an average of 7.2% annually from 1984 to 1999. Although federal support has remained within a narrow range over the years, the proportion of the total budget from federal training grants has decreased from 41% in 1985 to 20% in 1999. As shown in Figure 2 there has been a sustained increase in both the total program budget and institutional support since 1984. Since 1984, total program budget increased by over 173% while support from the sponsoring institution increased 175%. Although Federal training grant support has increased by 14.7% since 1984, the proportion of the total budget from this source has declined substantially.

Table 5. Trends in Physician Assistant Program Support, 1984 Through 1999

Year	Sponsor. Instit.		Federal Grant		Total Budget		% Budget Fed. Grant	
	N	Mean	N	Mean	N	Mean	N	Mean
1984-85	31	\$169,581	27	\$130,889	37	\$276,919	27	35%
1985-86	35	\$181,171	31	\$125,484	38	\$305,868	31	41%
1986-87	37	\$189,135	25	\$126,457	42	\$334,690	33	39%
1987-88	39	\$178,590	35	\$117,429	45	\$328,444	35	38%
1988-89	40	\$200,700	34	\$125,118	44	\$371,386	34	34%
1989-90	35	\$211,400	33	\$127,600	44	\$381,978	34	33%
1990-91	41	\$235,780	36	\$128,222	47	\$409,745	36	31%
1991-92	44	\$257,182	37	\$129,243	48	\$470,063	37	28%
1992-93	49	\$270,346	35	\$143,514	55	\$457,200	35	31%
1993-94	47	\$315,085	35	\$137,514	55	\$568,564	35	24%
1994-95	54	\$324,889	41	\$144,926	58	\$664,797	41	22%
1995-96	65	\$373,957	37	\$152,514	71	\$673,975	37	23%
1996-97	67	\$410,456	35	\$152,300	77	\$648,871	35	22%
1997-98	85	\$441,129	34	\$157,765	90	\$679,096	34	22%
1998-99	79	\$501,150	37	\$173,030	90	\$740,898	37	23%
1999-00	92	\$466,641	36	\$150,111	103	\$756,946	36	20%

Figure 5. Trends in P.A. Program Support: 1984 Through 1999



Student Educational Expenses

For the class entering in 1999, respondents estimated student tuition and educational expenses for the entire length of the program. These results are shown in Table 6. No information was requested concerning living expenses. It should be noted that for the first five Annual Reports, tuition was reported for the student's ENTIRE professional program, for the next eight Annual Reports tuition was reported for the current academic year, however, with the 14th Annual Report, tuition and other educational expenses (e.g., books, fees, equipment) were again reported for the entire professional program.

Table 6. Tuition and Expenses of P.A. Students

<u>Tuition for Entire Program</u>	<u>Mean</u>	<u>Range</u>	<u>N</u>	<u>Mean/Month/Program</u>
Resident Student	\$24,407	\$1,700-79,300	106	\$ 935
Nonresident Student	\$31,001	\$3,500-79,300	105	\$1,188
<u>Books, Fees, and Equipment</u>	\$ 4,433	\$ 450-47,000	106	\$ 170
<u>Total Student Costs: (Tuition, Books, Fees, Equipment)</u>				
Resident Student	\$28,840	\$5,200-87,000	106	\$1,105
Nonresident Student	\$35,434	\$7,000-87,000	105	\$1,358

On average, there was a \$6,594 difference between resident and nonresident tuition among the 105 programs responding. Data are also expressed as the mean cost per student per month. The results of this computation are shown in the right column of Table 6, and indicate that the typical resident student paid an average tuition of \$935 per month while the nonresident paid \$1,188 per month, a 27% difference.

Expenses associated with books, equipment and fees averaged \$4,433 per student for their entire professional training. These expenditures represented approximately 15.3% and 12.5% of the total educational expenses for resident and nonresident students, respectively. The total expenses incurred by the typical P.A. student for their entire P.A. education (includes tuition, books, equipment, and fees) averaged \$28,840 for residents and \$35,434 for nonresidents. The average total cost per month was \$1,105 for residents and \$1,358 for nonresident students.

As shown in Table 7, the majority of students (83.7%) received financial aid which averaged \$15,909 per student per year and accounted for 110% of the costs of tuition, fees, books, and equipment (\$14,420) for the typical resident student. Using these values, one can estimate that the typical resident P.A. student would be indebted approximately \$31,818 (2 X \$15,909) at the conclusion of their professional education.

Table 7. Financial Aid Support Provided P.A. Students

<u>Financial Aid Characteristic</u>	<u>Mean</u>	<u>Range</u>	<u>Number</u>
% Receiving Financial Aid	83.7%	29-100%	94
Amount of Aid Received/Year	\$15,909	\$1,700-33,800	86

Student Expenses by Geographic Region

Tuition (for the entire curriculum) and total costs for P.A. students during the 1999-2000 academic year are shown by geographic region in Table 8 (next page). The average resident tuition and total expenses incurred by P.A. students varied extensively across geographic region. Resident tuition was highest for students enrolled in programs located in the Eastern region (\$34,159/curriculum) and lowest for programs located in the Heartland region (\$13,452/curriculum). Nonresident tuition varied less across regions with a difference of approximately \$7,535

between the highest and lowest values. Total student expenses per month for both residents and nonresidents were highest among programs in the Eastern region. Total resident student expenses were lowest in the Heartland region, while nonresident student expenses were lowest in the Northeastern region. The proportion of students receiving financial aid varied from 80.0% in the Midwestern region to 88.8% in the Southeastern region.

Table 8. Expenses of P.A. Students by Geographic Region

<u>Geographic Region</u>	<u>N</u>	<u>Mean Tuition</u>		<u>Total Costs/Month</u>		<u>% Receiving Finan.Aid</u>
		<u>Resident</u>	<u>Nonresident</u>	<u>Resident</u>	<u>Nonresident</u>	
Northeastern	21	\$25,890	\$28,619	\$ 992	\$1,097	81.7%
Eastern	16	\$34,159	\$36,154	\$1,309	\$1,385	85.8%
Southeastern	18	\$25,693	\$30,633	\$ 984	\$1,174	88.8%
Midwestern	24	\$20,638	\$28,767	\$ 791	\$1,102	80.0%
Heartland	11	\$13,452	\$31,250	\$ 515	\$1,197	83.0%
Western	<u>16</u>	<u>\$24,448</u>	<u>\$30,633</u>	<u>\$ 937</u>	<u>\$1,174</u>	<u>83.3%</u>
Total	106	\$24,407	\$31,001	\$ 935	\$1,188	83.7%

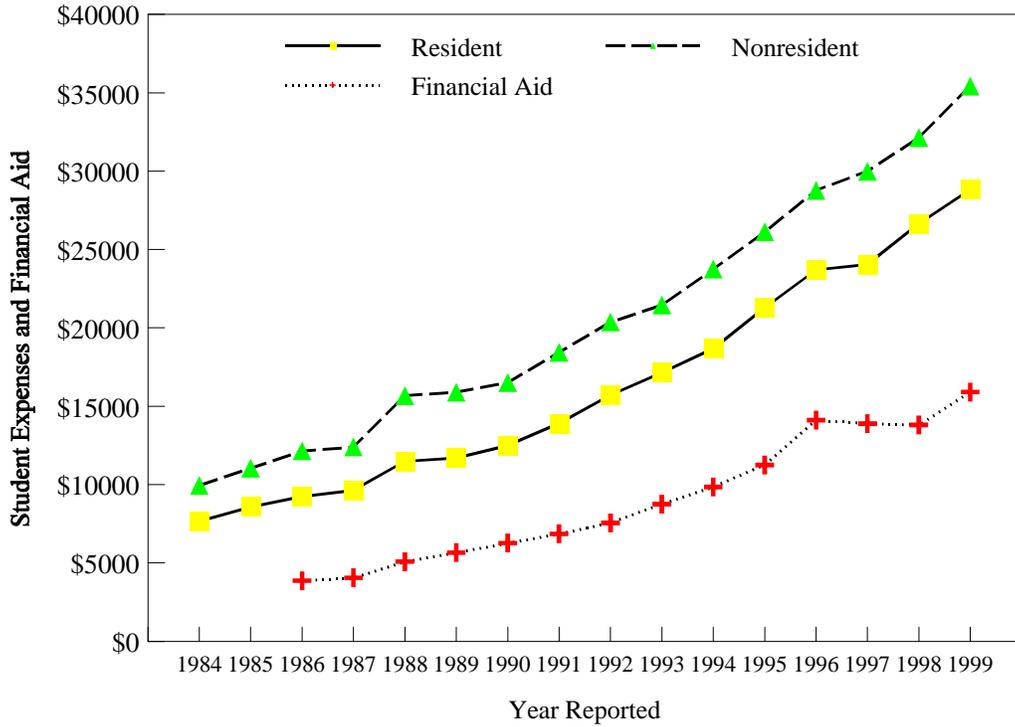
Trends in P.A. Student Expenses

Comparisons between tuition and student expenses, and the proportion of students receiving financial aid from 1984 through 1999, are shown in Table 9 and Figure 6 (next page). Tuition has increased 283% and 245% over the past sixteen years for resident and nonresident students, respectively, an average of 9.4% and 8.7% per year, respectively. Similarly, total student expenses (which includes tuition, books, equipment, and fees over the entire program) increased by 276% and 256% over the sixteen-year period for resident and nonresident students, respectively.

Table 9. Trends in P.A. Student Expenses, 1984 Through 1999

<u>Academic Year</u>	<u>Mean Tuition</u>				<u>Total Expenses</u>				<u>% With Fin. Aid</u>		<u>Fin. Aid Received</u>
	<u>Resident N</u>	<u>Resident Mean</u>	<u>Nonresident N</u>	<u>Nonresident Mean</u>	<u>Resident N</u>	<u>Resident Mean</u>	<u>Nonresident N</u>	<u>Nonresident Mean</u>	<u>N</u>	<u>%</u>	
1984-1985	37	\$ 6,378	36	\$ 8,986	35	\$ 7,669	34	\$ 9,962	33	65%	N/A
1985-1986	40	\$ 7,098	40	\$ 9,565	40	\$ 8,588	40	\$11,055	40	65%	N/A
1986-1987	46	\$ 7,626	43	\$10,451	45	\$ 9,247	42	\$12,155	39	63%	\$3,866
1987-1988	47	\$ 8,012	47	\$10,775	47	\$ 9,643	47	\$12,494	43	63%	\$4,060
1988-1989	47	\$ 9,472	47	\$13,660	47	\$11,485	47	\$15,681	43	67%	\$5,086
1989-1990	47	\$ 9,978	47	\$14,174	47	\$11,706	47	\$15,902	43	69%	\$5,663
1990-1991	47	\$10,620	47	\$14,614	47	\$12,495	46	\$16,511	42	71%	\$6,268
1991-1992	48	\$11,714	47	\$16,240	48	\$13,890	47	\$18,440	45	71%	\$6,860
1992-1993	55	\$13,092	55	\$17,772	55	\$15,694	55	\$20,375	51	71%	\$7,558
1993-1994	55	\$14,470	55	\$18,774	55	\$17,153	55	\$21,457	49	71%	\$8,755
1994-1995	59	\$16,030	59	\$21,106	59	\$18,676	59	\$23,752	53	77%	\$9,846
1995-1996	69	\$17,872	69	\$22,702	69	\$21,308	69	\$26,132	64	79%	\$11,251
1996-1997	76	\$20,132	76	\$25,088	76	\$23,695	76	\$28,775	68	79%	\$14,114
1997-1998	91	\$20,296	91	\$26,228	91	\$24,057	91	\$29,989	84	85%	\$13,890
1998-1999	92	\$22,428	92	\$27,922	92	\$26,653	92	\$32,147	83	83%	\$13,808
1999-2000	106	\$24,407	105	\$31,001	106	\$28,840	105	\$35,434	94	84%	\$15,909

Figure 6. Trends in P.A. Student Expenses: 1984 Through 1999



The proportion of students receiving financial aid averaged 73% from 1984 through 1999 and has varied within a narrow range, i.e., 63% to 85%, over time. It should be noted that the data shown in Table 9 and Figure 6 represents the tuition and costs expended by the typical student for the entire professional program and does not include pre-program academic preparation or living expenses. Beginning with the 1986 annual survey, respondents were asked to estimate the amount of financial aid received per student. Inspection of Figure 3 illustrates that while financial aid received by the typical student increased by approximately 312% since 1986, total expenses increased by 212% for resident and 192% for nonresident students during that same period.

National Health Service Corps (N.H.S.C.) Support

The number and proportion of students receiving support from the National Health Service is shown in Table 10. Of the four types of support available, N.H.S. Corps Scholarships accounted for 87/101 (86%), followed by Loan Repayment (7%). In total, 43 scholarships were reported among the first year class and 54 among the second year class.

Table 10. Students: Public Health Service Scholarships

Class	N.H.S. Corps		COSTEP		Loan Repay.		Comm. School		Total
	N	%	N	%	N	%	N	%	N
1st Year	35	81.4%	1	2.3%	4	9.3%	3	7.0%	43
2nd Year	49	90.7%	2	3.7%	2	3.7%	1	1.9%	54
3rd Year	3	75.0%	0	0.0%	1	25.0%	0	0.0%	4
Total	87		3		7		4		101

SECTION II. PROGRAM PERSONNEL

Classification of Physician Assistant Program Personnel

In 1984, the first APAP survey yielded information on the "core" personnel employed by P.A. programs. Core personnel were defined as those who devoted at least 50% of their time directly to program-related activities. These findings indicated that a total of 258 individuals were employed by the 36 programs responding (7.2 individuals/program and 6.0 FTE's/program). At that time, the personnel were classified into four categories based on their position: administrative (106; 41%), clerical (45; 18%), educational (96; 37%), and research (11; 4%). The total number of employees per program ranged from 3 to 13 with an average of one employee for every 7.7 students enrolled in the typical program.

Program personnel (excluding clerical persons) were further classified into two groups, those that were credentialed as a P.A. and those that were not (herein referred to as non-P.A.'s). The reader is referred to previous Annual Reports for a more detailed description of these personnel for each year. Based on the personnel data over the past sixteen years, it has been shown that there are an average of 3.5 to 3.9 physician assistants (P.A.'s) employed per program. This figure excludes program directors, many of whom were P.A.'s.

For purposes of our present personnel analysis, program staff and faculty were divided into three groups: (a) program directors, (b) medical directors, (c) "program personnel" which included P.A.'s (excluding program directors) and non-P.A.'s (excluding program directors). The P.A. and non-P.A. groups were further subdivided into four categories (I, II, III, and IV) on the basis of their position titles as summarized in Table 11. Category I includes program personnel whose responsibilities were generally associated with the first-year curriculum,

Table 11. Classification of Program Personnel by Category

<u>Category</u>	<u>Typical Position Titles</u>	
I	Lecturer/Instructor Educ./Acad. Coordinator	Educational Specialist Course Coordinator
II	Clinical Coordinator Clinical Instructor	Clinical Skills Coordinator
III	Assoc. or Assist. Director Program Assistant	Executive Assistant Co-Director
IV	Admin. Secretary Admin. Assistant Office Supervisor	Secretary Data Manager

typically including courses in the basic and behavioral sciences and/or the curriculum associated with history/physical examination skills as well as components of introduction to clinical medicine courses. Category II personnel were those involved in the second year or clinical rotation phase of the educational program. These individuals generally assumed clinical teaching or evaluation responsibilities and/or coordinated the students' clinical training assignments. Category III describes those individuals who had primarily administrative-level positions, but excluded those that were program or medical directors. Category IV included personnel who were mainly classified as support staff. Category IV personnel were not considered faculty.

It should be appreciated that program faculty and staff often share responsibilities across teaching, administrative and research activities. Despite this limitation, this classification is a useful way to describe and analyze core program personnel. The majority of the tables that follow in this section list Category IV personnel information,

however it is not included in the total/mean columns. Please refer to each individual table to determine if it is included or not.

Number of P.A. and Non-P.A. Program Personnel by Category

The number of P.A. and non-P.A. program personnel by category is shown in Table 12. It should be noted that program directors are not included in Tables 12 through 31, unless specifically indicated. Across all four categories, there were 800 (243 Category IV) personnel reported by survey respondents (N=105; 7.6 per

Table 12. P.A. and Non-P.A. Program Personnel by Category

<u>Characteristic</u>	<u>Personnel Category</u>				<u>Categories I - III</u>	
	<u>I</u>	<u>II</u>	<u>III</u>	<u>IV</u>		
<u>Physician Assistants</u>						
Total Number	209	218	41	0	468	468
# of Programs*	89	94	29	0	98	105
Mean #/Program	2.3	2.3	1.4	0.0	4.8**	4.5***
<u>Non-Physician Assistants</u>						
Total Number	56	12	21	243	89	89
# of Programs*	31	7	18	91	51	105
Mean #/Program	1.8	1.7	1.2	2.7	1.7**	0.8***

* Number of programs reporting at least one P.A. or non-P.A. in a category.

** Mean is based on number of programs reporting personnel in a category.

*** Mean based on all (N=105) programs.

program), 468 P.A.’s and 332 non-P.A.’s. Ninety-eight programs indicated that they had at least one Category I - III P.A. (mean of 4.8/program) and 51 programs indicated that individuals without a P.A. credential were employed in at least one of the I - III categories (mean of 1.7/program).

The majority of program personnel in Categories I - III were credentialed as P.A.’s (84%) as compared to non-P.A.’s (16%). Proportionately, there were relatively few non-P.A.’s in Category II positions (5.2% of Category II personnel). Across all programs (N=105), the mean per program is 4.5 P.A.’s and 0.8 non-P.A.’s.

Number of P.A. Program Personnel by Region

The total number of personnel (P.A. and non-P.A. personnel) associated with P.A. programs by geographic region and category is shown in Table 13 (next page). Physician assistant programs located in the Eastern region of the United States employed the greatest number of Category I - III P.A.’s per program, while the Heartland region employed the greatest number of non-P.A.’s per program. Programs located in the Northeastern and Midwestern regions had the fewest P.A.’s associated with the program (mean of 3.7/program and 3.8/program, respectively). Programs in the Eastern region employed the least number of Category I-III non-P.A.’s (0.2/program). Programs in the Northeastern region employed the greatest number of Category IV personnel per program (2.7/program), while programs in the Eastern region employed the least (1.8/program).

Table 13. P.A. and Non-P.A. Program Personnel by Category and Region

Geographic Region	Personnel Category						Mean per Program (Cat I-III)
	N	I	II	III	IV	Total	
Northeastern	21	23 (10)	46 (3)	8 (2)	0 (56)	77 (71)	3.7/(0.7)
Eastern	16	52 (2)	38 (0)	3 (1)	0 (29)	93 (32)	5.8/(0.2)
Southeastern	18	33 (11)	33 (1)	6 (6)	0 (47)	72 (65)	4.0/(1.0)
Heartland	11	28 (13)	19 (1)	7 (2)	0 (29)	54 (45)	4.9/(1.5)
Midwestern	23	38 (10)	39 (4)	10 (2)	0 (51)	87 (67)	3.8/(0.7)
Western	<u>16</u>	<u>35 (10)</u>	<u>43 (3)</u>	<u>7 (8)</u>	<u>0 (31)</u>	<u>85 (52)</u>	<u>5.3/(1.3)</u>
Total	105	209 (56)	218 (12)	41 (21)	0 (243)	468 (332)	4.5/(0.8)

* # of non-P.A. personnel are in parentheses, mean/program is based on N=105.

General Characteristics of P.A.'s and Non-P.A.'s Employed by Programs

The general characteristics of physician assistant personnel employed by P.A. programs, by category, excluding non-P.A. program personnel, are shown in Table 14. Across all categories, P.A.'s devoted an average of 92% of their time to the program; the majority were classified as full-time employees. There were some differences between categories in the percent of time the P.A. worked. Twenty-six of the 41 P.A.'s in Category III were

Table 14. General Characteristics of Physician Assistant Personnel

Characteristic	Personnel Category			Total***
	I	II	III	
<u>Characteristic</u>	<u>N = 209*</u>	<u>N = 218</u>	<u>N = 41</u>	<u>N = 468</u>
<u>Mean % Time</u>	91.3%	91.2%	96.0%	91.7%
<u>Annual Salary</u>	<u>N = 172</u>	<u>N = 187</u>	<u>N = 28</u>	<u>N = 387</u>
Mean**	\$57,687	\$56,164	\$67,724	\$57,677
Range	\$29,000 - \$90,258	\$27,500 - \$86,000	\$30,000-\$100,000	\$27,500-\$100,000
<u>Months in Position</u>	<u>N = 184</u>	<u>N = 190</u>	<u>N = 36</u>	<u>N = 410</u>
Mean	44.5	37.5	79.7	44.3
Median	33.5	35.5	66.0	45.0
Range	1-252	1-311	1-396	1-396

* Number of P.A.'s in category.

** Salaries adjusted to 1 FTE

*** Includes one employee listed as a Category IV

employed on a full-time basis, whereas P.A.'s in Categories I and II averaged 0.91 FTE. The mean annual salary across all categories was \$57,677 with a range from \$27,500 to \$100,000. On average, individuals had been in their position for 44.3 months (range 1-396 months). There was some difference in mean salary across categories, ranging from \$56,164 for Category II to \$67,724 for Category III, a 21% increase. P.A.'s in Category III had held their positions for the longest period of time, averaging 80 months, while the majority of P.A.'s in Category I had been associated with the program for the least amount of time (median: 34 months).

Clinical Activity of Physician Assistant Personnel

General characteristics of the clinical activity of P.A. personnel are shown in Table 15. Note, P.A. credentialed program directors were **also** included in this analysis, however, medical directors **were not**. The following information was requested of respondents: the number of personnel that were clinically active, mean number of hours worked per week, number that were reimbursed for their clinical services, the amount paid for said services

Table 15. General Characteristics of Clinically Active Physician Assistant Personnel

<u>Characteristic</u>	<u>P.A. Personnel Category</u>			<u>Program</u>	<u>Total</u>
	<u>I</u> N=209	<u>II</u> N=218	<u>III</u> N=41	<u>Directors</u> N=104	
Clinical P.A.'s	147(70%)	136(62%)	26(63%)	34(33%)	343(60%)
<u>Hrs Worked/Week</u>					
Mean	12.4	15.6	8.9	8.6	13.2
(N)	(136)	(127)	(20)	(26)	309
Range	1-36	1-44	1-20	1-44	1-44
<u>Number (%) Paid for Services</u>	128(94%)	119(94%)	19(95%)	24(92%)	290(94%)
<u>Mean Wage/Hour</u>	\$35.50	\$34.17	\$36.84	\$39.54	\$35.43
(N)	(100)	(85)	(12)	(20)	(217)
<u>Annual Amount*</u>	\$21,129	\$25,586	\$15,738	\$16,322	\$22,448
<u>Adjust. Salary**</u>	\$69,816	\$63,178	\$61,889	\$73,424	\$65,536
<u>% Salary From Clinical Earnings</u>	30.3%	40.5%	25.4%	22.2%	34.3%

* Estimated at 48 weeks per year.

** Base Salary + Clinical Earnings for those clinically active.

(mean hourly wage) and whether their clinical earnings were included in the salary reported in the personnel table. Based on the data reported, the amount and percent of annual salary derived from clinical service was calculated. Lastly, for those personnel who received earnings through their clinical service in addition to their regular salary, a gross salary (combining program and clinical sources) was calculated. Almost two-thirds (60%) of the program personnel that were credentialed as P.A.'s had clinical responsibilities in addition to their program activities. This proportion varied across the three categories and was greatest for those in category I (70%). Thirty-three percent of program directors (P.A.'s) also had clinical responsibilities.

On average, P.A.'s in Categories I-III spent 13.2 hours per week providing patient care; program directors who were P.A.'s spent an average of 8.6 hours per week. The range in time spent was very broad, from one hour per week to 44 hours per week. Ninety-four percent of P.A. personnel received additional compensation for their clinical services. The mean hourly wage averaged \$35.43/hour and varied from \$34.17 for Category II to \$39.54 per hour for program directors.

Given the mean number of hours worked per week, the average hourly wage and, assuming an average of 48 weeks were worked per year, the annual earnings from patient care services of the P.A.'s with clinical responsibility was estimated. On average, these individuals earned \$22,448 from their clinical activity. Category III personnel had the lowest additional income (\$15,738) and those in Category II had the highest (\$25,586).

An "adjusted" annual income (base salary + clinical earnings) was determined for those indicating they received earnings from both sources. On average, there was a 16.4% increase over base salary for those personnel that were clinically active. And, clinical earnings accounted for over one-fifth of the personnel salary. It would appear that the base salary for clinically active personnel is lower than those not in practice. In subsequent tables, salary figures will not include clinical earnings.

General characteristics of non-P.A. credentialed personnel by category is shown in Table 16. Across categories, the typical non-P.A. in Categories I - III devoted 88% of their time to the program; the majority were classified as full-time employees.

Table 16. General Characteristics of Non-P.A. Personnel
Personnel Category

	I	II	III	IV	Total (Cat. I - III)
<u>Characteristic</u>	<u>N = 56</u>	<u>N = 12</u>	<u>N = 21</u>	<u>N = 243</u>	<u>N = 89</u>
Mean % Time	89.6%	95.7%	79.6%	94.1%	88.1%
<u>Annual Salary*</u>	<u>N = 44</u>	<u>N = 11</u>	<u>N = 19</u>	<u>N = 201</u>	<u>N = 74</u>
Mean	\$52,188	\$43,175	\$51,173	\$26,075	\$50,588
Median	\$54,000	\$36,000	\$52,000	\$24,500	\$50,000
Range	\$25,000- \$120,000	\$25,700- \$75,000	\$25,000- \$95,000	\$12,760 - \$50,760	\$25,000- \$120,000
<u>Months in Position</u>	<u>N = 43</u>	<u>N = 11</u>	<u>N = 19</u>	<u>N = 208</u>	<u>N = 73</u>
Mean	55.2	28.4	97.6	65.7	62.2
Median	24.0	16.0	60.0	40.0	40.0
Range	4 - 340	1 - 85	4 - 324	1 - 408	1 - 340

* Salaries adjusted to 1 FTE

The mean salary for non-P.A.'s across Categories I - III was \$50,588, ranging from \$25,000 to \$120,000. On average, these individuals had been employed 62 months (median of 40, range of 1-340 months). Non-P.A.'s in Category I earned the highest average salary (\$52,188). Non-P.A.'s in Category II had the lowest average salary (\$43,175). Utilizing the median, Category II non-P.A.'s had been associated with the program for the shortest period of time, while Category III non-P.A.'s had been employed almost four times as long. Overall, non-P.A.'s had a lower average annual salary than did personnel who were P.A.'s. Category IV personnel had a mean salary of \$26,075 with a broad range of \$12,760 to \$50,760. Category IV personnel had been in their position an average of 65.7 months (median: 40 months).

Characteristics of program personnel in Categories I - III, by ethnicity and gender, are shown in Table 17 (next page). It should be noted that data on P.A. and non-P.A. program personnel were combined for the analyses in Tables 17 and 21. Proportionately, there were more women (56%) among the P.A. and non-P.A. personnel; 55% of the white (208/375) and 56% of the non-white personnel (52/93) were women. In total, 93 P.A. program staff and/or faculty from 38 programs were identified as members of an ethnic minority (48 Black/African-American, 19 Latino/Hispanic, 16 Asian, one Asian Subpopulation (any Asian other than Chinese, Filipino, Japanese, Korean,

Asian Indian, or Thai), one Native Hawaiian/Other Pacific Islander, five American Indian/Alaskan Native, and three Other). This constitutes 19.9% (93/468) of the total number of faculty and staff and 36% of the programs responding. In all categories except Black/African-American, males earned higher annual salaries than their female counterparts where comparisons were possible. Females were employed longer in their current position than males in every category, except Latino/Hispanic.

Table 17. Salary and Months in Position of Category I - III P.A. and Non-P.A. Personnel by Ethnicity and Sex

<u>Ethnicity</u>	<u>Number of Personnel</u>			<u>Mean Annual Salary</u>		<u>Mean Months in Position</u>	
	<u>Male</u>	<u>Female</u>	<u>Total</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
White/Non-Hisp.	167	208	375	\$61,043	\$54,124	46.0	49.3
Black/African-Amer.	19	29	48	\$53,364	\$54,923	44.2	48.7
Latin/Hisp/Mex. Am.	11	8	19	\$62,245	\$47,289	63.6	36.4
Asian	7	9	16	\$56,079	\$53,510	18.0	59.9
Asian Subpopulation	1	0	1	-----	-----	-----	-----
Native Haw./Other PI	0	1	1	-----	-----	-----	-----
Amer. Ind./Alaskan	2	3	5	\$57,500	\$54,575	-----	43.5
Other	<u>1</u>	<u>2</u>	<u>3</u>	<u>\$65,000</u>	<u>\$59,000</u>	<u>10.5</u>	<u>70.2</u>
Total	208	260	468	\$60,789	\$55,943	50.3	51.7

Characteristics of program personnel in Category IV, by ethnicity and gender, are shown in Table 18. Category IV personnel consisted mainly of females (93.6%). Fifty-nine (25%) Category IV P.A. program staff from 26 programs were identified as members of an ethnic minority. Females were employed longer in their current position than males, 57 and 22 months, respectively.

Table 18. Salary and Months in Position of Category IV Personnel by Ethnicity and Sex

<u>Ethnicity</u>	<u>Number of Personnel</u>			<u>Mean Annual Salary</u>		<u>Mean Months in Position</u>	
	<u>Male</u>	<u>Female</u>	<u>Total</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
White/Non-Hisp.	9	168	177	\$32,246	\$25,906	42.3	52.3
Black/African-Amer.	3	37	40	\$28,017	\$27,214	14.2	50.8
Latin/Hisp/Mex. Am.	2	13	15	\$26,432	\$25,156	18.5	46.7
Asian	0	2	2	-----	\$29,000	-----	28.5
Asian Subpopulation	0	0	0	-----	-----	-----	-----
Native Haw./Other PI	0	0	0	-----	-----	-----	-----
Amer. Ind./Alaskan	<u>1</u>	<u>1</u>	<u>2</u>	-----	-----	-----	-----
Total	15	221	236	\$31,164	\$26,679	21.8	57.4

The relationship between salary, percent time, and months in position for P.A. and non-P.A. personnel by sex is shown in Table 19 (next page). Overall, male personnel earned higher annual salaries than female personnel. In one category, P.A. Category III, the women personnel earned more than the men. On average for Categories I - III, non-P.A. personnel had been in their positions substantially longer than P.A. personnel.

Table 19. Analysis of Salary, Percent Time and Months in Position of P.A. and Non-P.A. Personnel by Sex

Categories	<u>Mean Annual Salary</u>				<u>Mean % Time</u>				<u>Mean Months in Position</u>			
	<u>Male</u>	<u>N</u>	<u>Female</u>	<u>N</u>	<u>Male</u>	<u>N</u>	<u>Female</u>	<u>N</u>	<u>Male</u>	<u>N</u>	<u>Female</u>	<u>N</u>
<u>Cat. I</u>												
P.A.	\$60,147	80	\$55,894	119	98.6	93	89.1	126	44.5	90	45.3	94
Non-P.A.	\$61,546	16	\$50,043	21	84.3	22	86.2	17	48.6	20	62.3	23
<u>Cat. II</u>												
P.A.	\$58,863	65	\$57,742	117	90.4	73	90.3	124	40.2	72	35.9	118
Non-P.A.	\$41,743	5	\$40,127	8	100	5	93.1	10	11.9	4	38.6	7
<u>Cat. III</u>												
P.A.	\$66,055	12	\$69,943	16	98.5	12	90.2	17	84.3	12	75.4	24
Non-P.A.	\$65,132	7	\$38,057	10	72.4	8	90.0	15	102.4	8	96.3	11
<u>Cat. IV</u>												
Non-P.A.	\$31,643	8	\$26,679	196	84.5	10	94.5	221	21.8	15	57.4	221
<u>Cat. I - III</u>												
P.A.	\$60,067	157	\$57,644	252	95.2	178	89.7	267	45.5	174	43.7	236
Non-P.A.	\$58,906	28	\$44,936	39	83.8	35	89.2	42	57.5	32	67.4	41

Personnel by Region: Salary, Months in Position and Ethnicity

Data regarding salary and time in position for P.A. and non-P.A. personnel by geographic region is presented in Table 20. P.A.'s associated with programs located in the Midwestern and Western regions reported the highest annual salaries. The lowest mean P.A. salary was in the Eastern region. Non-P.A.'s in the Southeastern region had the highest salaries, while those in the Heartland region had the lowest salaries. P.A.'s salaries were higher

Table 20. Program Personnel: Salary and Time in Position by Region

Geographic Region	<u>Mean Salary: Categories I - III</u>				<u>Months in Position</u>	
	<u>P.A.</u>	<u>N</u>	<u>Non-P.A.</u>	<u>N</u>	<u>P.A.</u>	<u>Non-P.A.</u>
Northeastern	\$56,142	71	\$50,516	8	38.1	93.4
Eastern	\$52,075	64	\$51,025	4	47.2	16.7
Southeastern	\$57,543	68	\$53,675	20	41.8	58.7
Midwestern	\$59,987	83	\$50,142	18	32.6	38.6
Heartland	\$56,004	38	\$47,174	6	49.3	51.4
Western	<u>\$59,174</u>	<u>63</u>	<u>\$48,116</u>	<u>17</u>	<u>48.6</u>	<u>82.9</u>
Total	\$57,677	387	\$50,588	74	44.5	62.2

than Non-P.A.'s in every region. However, on average non-P.A.'s were employed for more months. There was not a statistically significant correlation ($r = 0.17$; $p > .01$) between time in position and salary.

The salaries of Category I - III P.A. program personnel (P.A.'s and non-P.A.'s) by ethnicity and geographic region are shown in Table 21 (next page). Mean salaries of White personnel were higher than their Black/African-American counterparts in four of the five regions reported where comparison could be made. Latino/Hispanic personnel had salaries higher than Black/African-Americans in the Western region.

Table 21. Analysis of Program Personnel by Geographic Region and Ethnicity
Category I - III

Geographic Region	Mean Annual Salary					
	<u>White</u>	<u>N</u>	<u>Black/ African-Amer</u>	<u>N</u>	<u>Lat/Hisp</u>	<u>N</u>
Northeastern	\$58,086	61	\$55,164	11	-----	1
Eastern	\$52,163	50	\$58,013	8	-----	0
Southeastern	\$56,184	72	\$51,645	12	\$51,145	3
Midwestern	\$58,943	78	\$48,075	7	-----	0
Heartland	\$58,171	35	-----	1	-----	1
Western	<u>\$57,723</u>	<u>60</u>	<u>\$53,162</u>	<u>11</u>	<u>\$59,372</u>	<u>9</u>
Total	\$57,175	356	\$53,848	50	\$54,683	14

The salaries of Category IV P.A. program personnel (P.A.'s and non-P.A.'s) by ethnicity and geographic region are shown in Table 22. Mean salaries of Black/African-American personnel were higher than their White counterparts in three of the four regions where comparisons could be made.

Table 22. Analysis of Program Personnel by Geographic Region and Ethnicity
Category IV

Geographic Region	Mean Annual Salary					
	<u>White</u>	<u>N</u>	<u>Black/African- American</u>	<u>N</u>	<u>Lat/Hisp</u>	<u>N</u>
Northeastern	\$27,013	20	\$32,906	16	-----	1
Eastern	\$24,472	13	\$25,517	5	-----	0
Southeastern	\$23,379	39	\$28,063	8	-----	1
Midwestern	\$26,156	28	-----	1	-----	0
Heartland	\$25,501	19	-----	1	\$20,945	3
Western	<u>\$28,943</u>	<u>33</u>	<u>\$27,192</u>	<u>4</u>	<u>\$27,143</u>	<u>7</u>
Total	\$27,542	152	\$28,142	35	\$26,033	12

Trends in P.A. Program Personnel Salaries from 1986 Through 1999

Trends in P.A. personnel salary from 1986 through 1999 are shown in Table 23 (next page). Note, salary data was not available for 1987-88. There has been a 104% increase in P.A. salaries (all categories combined) from 1985-86 to 1999-2000, an average of 8% per year. Proportionately, the largest annual increase in salary (10.9%) for all categories occurred between 1989 and 1990.

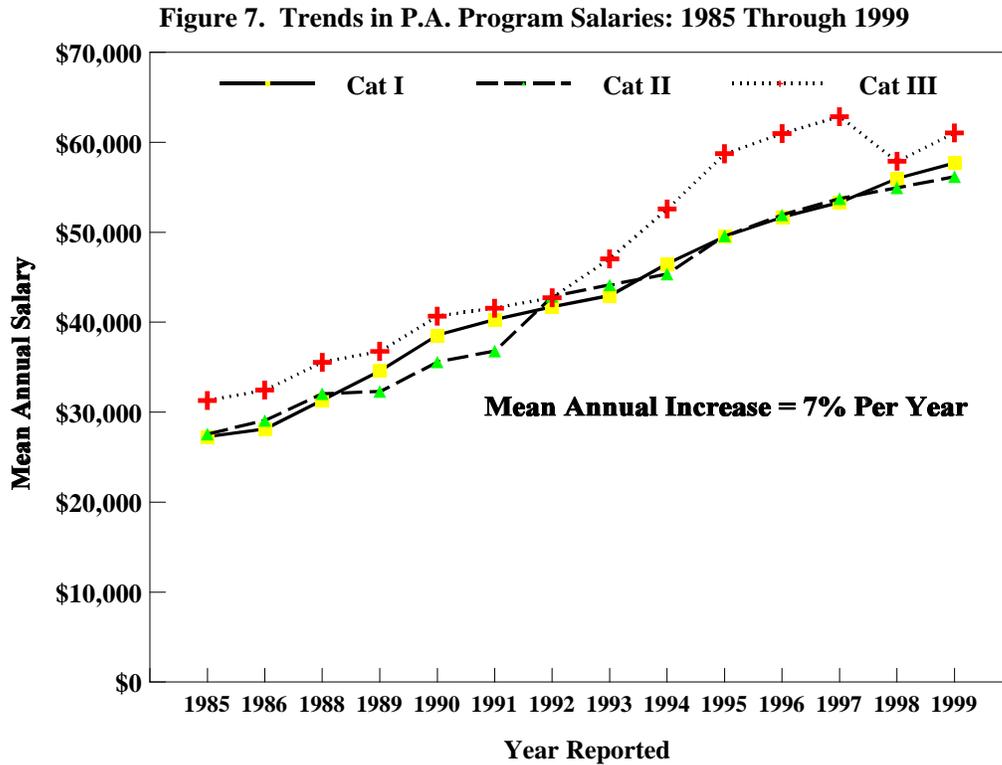
Months in position did not vary substantially, averaging 41.8 months over the 15-year period (range of 36.3 to 51.4). A thorough discussion of personnel turnover is presented at the end of Section II.

A three-way analysis of variance (ANOVA) of salary was conducted to investigate the effects of the following parameters: personnel category, gender and geographic region. Main effects were found for sex (F=18.37; p<.001; men higher than women) and geographic region (F=9.36; p<.001; the Southeast had higher salaries than any other category). The category of personnel demonstrated no significant main effects. No significant interactions were found. Taken together, category, gender and region accounted for 28.6% of the variance in salaries (R=.535).

Table 23. Salary and Months in Position for P.A. Personnel, 1985 Through 1999

<u>Categories</u>	<u>Cat. I</u>	<u>Cat. II</u>	<u>Cat. III</u>	<u>All Cat.</u>	<u>Months in Position</u>
1985-86	\$27,264	\$27,553	\$31,298	\$27,769	36.6
1986-87	\$28,129	\$29,060	\$32,451	\$29,010	36.3
1988-89	\$31,362	\$32,054	\$35,547	\$32,099	39.9
1989-90	\$34,610	\$32,300	\$36,756	\$33,723	43.9
1990-91	\$38,547	\$35,578	\$40,661	\$37,404	40.1
1991-92	\$40,280	\$36,807	\$41,552	\$39,192	51.4
1992-93	\$41,689	\$42,885	\$42,719	\$42,471	42.0
1993-94	\$42,945	\$44,127	\$47,038	\$43,956	41.6
1994-95	\$46,498	\$45,357	\$52,578	\$46,549	42.5
1995-96	\$49,510	\$49,589	\$58,720	\$50,469	39.0
1996-97	\$51,662	\$51,906	\$60,973	\$52,550	41.6
1997-98	\$53,314	\$53,730	\$62,849	\$54,164	38.9
1998-99	\$55,964	\$54,943	\$57,878	\$55,729	46.5
1999-00	\$57,687	\$56,164	\$61,033	\$56,539	44.3

Trends in salary for all categories of program personnel (data for P.A.'s and non-P.A.'s were combined) from 1985 through 1999 are illustrated in Figure 7. Salaries for personnel consistently increased each year with the largest increase occurring in 1990, with the exception of the 1998-99 year for Category III.



Program Personnel: Academic Classification

The number of Category I - III personnel (P.A.'s and non-P.A.'s) classified as faculty and staff, as well as the tenure track status of those in faculty positions, are shown in Table 24.

Table 24. Program Personnel: Classification and Tenure Track Status

<u>Classification</u>	<u>Personnel Category</u>						<u>Total</u>	
	<u>I</u>		<u>II</u>		<u>III</u>		<u>Number</u>	<u>(%)</u>
	<u>Number</u>	<u>(%)</u>	<u>Number</u>	<u>(%)</u>	<u>Number</u>	<u>(%)</u>	<u>Number</u>	<u>(%)</u>
Faculty	253	91.0%	184	78.3%	40	69.0%	477	83.5%
Staff	25	9.0%	51	21.7%	18	31.0%	94	16.5%
<u>Tenure Status</u>								
In Tenure Track*	70	27.7%	37	20.1%	9	22.5%	116	24.3%
Faculty Tenured**	21	8.3%	7	3.8%	3	7.5%	31	6.5%

* Percent of TOTAL faculty in tenure track not tenured.

** Percent of TOTAL faculty tenured (e.g., 21/253 = 8.3%)

For all categories combined, more than three fourths (N=477; 84%) of personnel were classified as faculty. This distribution of individuals classified as faculty varied greatly between 69.0% for Category III and 91.0% for Category I. Category III includes typically administrative-type personnel who may be less likely to be appointed to an academic level position.

Overall, slightly less than one-fourth (24.3%) of the faculty were on the tenure track. However, only 6.5% of the faculty were tenured. Viewed in another way, 27% of those faculty in a tenure track were tenured, with the highest proportion of these tenured faculty in Category III (33.3%).

Table 25 shows the academic classification and tenure status of Category I - III personnel by gender. The proportion of men holding faculty rank was higher than the proportion of women (85.4% versus 82.2%, respectively). A slightly larger proportion of female faculty were on tenure track compared to male faculty, 25.5% versus 22.9%, respectively. Although very few faculty were tenured (6.5%), twice as many male faculty were tenured (9.0%) as compared to female faculty (4.5%).

Table 25. Program Personnel: Classification and Tenure Track Status by Gender

<u>Personnel Classification</u>	<u>Female</u>		<u>Male</u>		<u>Total</u>	
	<u>Number</u>	<u>(%)</u>	<u>Number</u>	<u>(%)</u>	<u>Number</u>	<u>(%)</u>
Faculty Appointment	267	82.2%	210	85.4%	477	83.5%
Staff Appointment	58	17.8%	36	14.6%	94	16.5%
<u>Tenure Status</u>						
Tenure Track Faculty	68	25.5%	48	22.9%	116	24.3%
Tenured Faculty*	12	4.5%	19	9.0%	31	6.5%

* Percent of TOTAL faculty tenured.

A summary of the highest degree held by each category of program personnel is shown in Table 26. All but 2% of Category I - III program personnel were reported to have earned a bachelors or higher degree. Less than one-half of the P.A. and non-P.A. personnel held a baccalaureate degree (42%) as their highest degree. The same is true for those who held a master's degree (N=223; 44.4%). Fifty-five individuals (11%) were identified as having earned a doctorate. Proportionately, Category I and III personnel tended to have more doctorate degrees than those in Category II.

Table 26. Program Personnel: Highest Degree Held

Highest Degree	Program Personnel Categories								Categories I - III	
	I		II		III		IV		#	(<u>%)</u>
	#	(<u>%)</u>	#	(<u>%)</u>	#	(<u>%)</u>	#	(<u>%)</u>		
Doctorate	40	16.3%	2	1.0%	13	25.0%	1	1.4%	55	11.0%
Masters	118	48.2%	76	37.1%	29	55.8%	7	10.1%	223	44.4%
Bachelors	80	32.7%	126	61.5%	7	13.5%	43	62.3%	213	42.4%
Associate	<u>7</u>	<u>2.9%</u>	<u>1</u>	<u>0.5%</u>	<u>3</u>	<u>5.8%</u>	<u>18</u>	<u>26.1%</u>	<u>11</u>	<u>2.2%</u>
Total	245	100.0%	205	100.0%	52	100.0%	69	100.0%	502	100.0%

The number and academic rank of program faculty, by category, are shown in Table 27. The percentage of P.A. and non-P.A. faculty holding the academic rank of instructor/lecturer (N=163; 40.6%) or assistant professor (N=172; 42.9%) was about the same.

Table 27. Program Personnel: Academic Rank of Faculty

Academic Rank	Program Personnel Categories						Total	
	I		II		III		N	(<u>%)</u>
	N	(<u>%)</u>	N	(<u>%)</u>	N	(<u>%)</u>		
Full Professor	4	1.8%	2	1.3%	2	6.9%	8	2.0%
Associate Prof.	28	12.7%	23	15.2%	7	24.1%	58	14.5%
Assistant Prof.	92	41.6%	65	43.0%	15	51.7%	172	42.9%
Instructor/Lect.	<u>97</u>	<u>43.9%</u>	<u>61</u>	<u>40.4%</u>	<u>5</u>	<u>17.2%</u>	<u>163</u>	<u>40.6%</u>
Total	221	100.0%	151	100.0%	29	100.0%	401	100.0%

P.A. and Non-P.A. Personnel Salary Analysis

Salaries for Category I - III P.A. and non-P.A. program personnel by academic classification are shown in Table 28 (next page). The mean annual salary of faculty-level personnel was \$58,308 (N=391), 25% higher than those appointed to staff positions (\$46,737; N=90). In general, the annual salaries of non-P.A. personnel with faculty rank (\$58,276, N=48) were similar to the salaries of P.A. personnel with faculty appointments (\$58,313; N=343). Faculty salaries differed substantially between categories with Category III faculty earning the highest annual income.

Table 28. Faculty and Staff Salaries by Category

<u>Classification</u>	<u>Program Personnel Categories</u>							
	<u>I</u>		<u>II</u>		<u>III</u>		<u>Categories I - III</u>	
	<u>Mean</u>	<u>N</u>	<u>Mean</u>	<u>N</u>	<u>Mean</u>	<u>N</u>	<u>Mean</u>	<u>N</u>
<u>Faculty</u>								
P.A.	\$57,668	180	\$56,943	137	\$70,004	26	\$58,313	343
Non-P.A.	<u>\$58,084</u>	<u>30</u>	<u>\$57,845</u>	<u>13</u>	<u>\$60,553</u>	<u>5</u>	<u>\$58,276</u>	<u>48</u>
Total	\$57,727	210	\$57,021	150	\$68,480	31	\$58,308	391
<u>Staff</u>								
P.A.	\$54,418	18	\$52,212	33	-----	1	\$52,981	52
Non-P.A.	<u>\$39,042</u>	<u>12</u>	<u>\$35,743</u>	<u>9</u>	<u>\$38,888</u>	<u>17</u>	<u>\$38,192</u>	<u>38</u>
Total	\$48,268	30	\$48,683	42	\$39,644	18	\$46,737	90

Among the personnel classified as staff, those that were P.A.'s earned a substantially higher (39%) salary (\$52,981) than non-P.A.'s (\$38,192). In comparison to the previous year (1998-99), there was over a 5% increase in the faculty salaries and a 2.5% increase in staff salaries.

The relationship between salary and gender of P.A. and non-P.A. faculty and staff is summarized in Table 29. Salaries for male faculty were 5% higher than those of female faculty (\$58,604 versus \$55,767, respectively). Male staff earned substantially higher salaries than did female staff, \$52,641 vs. \$44,063, respectively.

Table 29. Program Personnel Salary of Faculty and Staff in Categories I - III by Gender

<u>Classification</u>	<u>Female</u>		<u>Male</u>	
	<u>Mean</u>	<u>N</u>	<u>Mean</u>	<u>N</u>
<u>Faculty</u>				
P.A.	\$55,989	197	\$57,543	134
Non-P.A.	<u>\$53,684</u>	<u>21</u>	<u>\$63,869</u>	<u>27</u>
Total	\$55,767	218	\$58,604	161
<u>Staff</u>				
P.A.	\$51,632	27	\$53,036	21
Non-P.A.	<u>\$32,710</u>	<u>18</u>	<u>\$49,876</u>	<u>3</u>
Total	\$44,063	45	\$52,641	24

Compared to the previous year (1998-99), faculty salaries have increased 3.1% for females and 1.8% for males, while staff salaries increased by less than 1% for males and 2.1% for females.

Annual salary of program personnel by highest degree earned for all categories is shown in Table 30 (next page). Doctoral-level personnel (N=42) earn the highest salary (overall for Categories I - III = \$58,543) and bachelors degree level individuals the lowest (\$51,880). Category III individuals earned more at the doctorate and master's degree level; Category III personnel with doctorates earned the highest salary.

Table 30. Salary of Faculty and Staff Personnel by Highest Degree Held
Program Personnel Categories

Highest Degree	I		II		III		IV		Categories I - III	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Doctorate	\$58,164	36	-----	1	\$60,983	5	-----	1	\$58,543	42
Masters	\$57,045	119	\$58,124	68	\$60,475	29	\$30,162	3	\$57,843	216
Bachelors	\$50,136	64	\$53,047	100	\$50,873	5	\$28,500	26	\$51,880	169
Associate	\$58,125	5	-----	1	-----	1	\$24,593	14	\$54,741	7
Not Reported	\$57,843	3	\$47,562	10	\$49,175	5	\$26,645	138	\$49,724	18
Total	\$57,481	227	\$55,016	180	\$58,436	45	\$27,432	182	\$56,583	452

The salary of personnel classified as faculty is shown by academic rank and category in Table 31. Overall, there was an increase in mean salary with higher academic rank. The range of mean salaries was broad, \$52,125 at the rank of instructor in Category I to \$70,127 for those at the full professor level in Category I.

Table 31. Salary of Program Faculty by Academic Rank and Category

Academic Rank	I		II		III		Total	
	Mean	N	Mean	N	Mean	N	Mean	N
Full Professor	\$70,127	4	-----	1	-----	1	\$68,533	6
Associate Prof.	\$61,492	28	\$56,142	24	\$65,632	7	\$59,807	59
Assistant Prof.	\$55,864	86	\$56,432	65	\$68,012	16	\$57,249	167
Instructor/Lect.	\$52,125	90	\$52,225	55	\$57,500	2	\$52,235	147
Not Reported	\$55,041	13	\$54,017	6	\$70,125	3	\$56,819	22
Total	\$55,721	221	\$54,847	151	\$66,654	29	\$55,933	401

Program Directors of Physician Assistant Programs

The general characteristics of program directors are shown in Table 32 (next page) and include percent of time, annual salary and months in position for P.A. and non-P.A. directors by gender and highest degree held. On average, program directors devoted 96% of their time to program-related activities. While the percentage of time ranged from 50% to 100%, the majority of the directors (N=84; 87%) were working full-time. Eighty percent of the directors were P.A.'s (N=70).

The mean average salary for program directors was \$76,709, ranging from \$50,000 to \$107,125. Program directors who were P.A.'s earned a higher salary than those who were non-P.A.'s (\$76,942 and \$75,802, respectively). The average months in position varied from 70 months for physician assistant to 73 months for non-physician assistant. The median months in position was 45 months.

Male program directors had higher average salaries (\$77,989) than did female directors (\$75,306). The mean time in position of female directors exceeded that of male directors by approximately five months (73 versus 68 months, respectively). The median number of months in position for male and female program directors is 38 and 50 respectively. In comparison to the 1998-99 data, mean salaries increased by 5.0% (\$76,709 versus \$73,048).

Table 32. Characteristics of Program Directors

<u>Characteristics</u>	<u>Mean</u>	<u>S.D.</u>	<u>Range</u>	<u>N</u>		
Percent Time	95.9%	12.0	50% - 100%	97		
<u>Annual Salary</u>	<u>\$76,709</u>	<u>\$12,432</u>	<u>\$ 50,000 - 107,125</u>	<u>88</u>		
P.A.	\$76,942	\$11,168	\$ 53,342 - 107,125	70		
Non-P.A.	\$75,802	\$16,417	\$ 50,000 - 105,875	18		
Male	\$77,989	\$13,243	\$ 53,342 - 107,125	46		
Female	\$75,306	\$11,312	\$ 50,000 - 102,500	42		
Doctorate	\$80,092	\$14,095	\$ 50,000 - 107,125	34		
Masters	\$74,898	\$11,184	\$ 53,342 - 102,500	44		
Bachelors	\$73,173	\$ 8,266	\$ 62,000 - 83,900	10		
<u>Months in Position</u>	<u>70.26</u>	<u>79.44</u>	<u>1-342</u>	<u>95</u>		
P.A.	69.64	75.35	4-324	75		
Non-P.A.	72.60	93.19	1-342	20		
Male	67.86	78.13	3-324	49		
Female	72.83	80.75	1-342	46		
<u>Highest Degree Held</u>	<u>Female</u>	<u>%</u>	<u>Male</u>	<u>%</u>	<u>Total</u>	<u>%</u>
Doctorate*	19	51.4%	18	48.6%	37	38.1%
Masters	25	50.0%	25	50.0%	50	51.5%
Baccalaureate	4	40.0%	6	60.0%	10	10.3%

* Includes Ph.D., Ed.D., J.D., Pharm.D. and M.D. Degrees

Program Director Salaries: Regional Differences

A summary of program directors' salary and months in position by geographic region is shown in Table 33. Program directors associated with programs located in the Midwestern region had lower mean salaries (\$72,623) compared with the rest of the United States. Directors in the Heartland and Western regions had the highest mean salaries (\$80,993 and \$82,793, respectively). The lowest individual salary for a program director was in the Northeastern region (\$50,000) and the highest was in the Southeastern region (\$107,125). Program directors in the Western region had been employed in their positions the longest time, over seven years (87.9 months), and those in the Midwestern region the shortest period of time (38.9 months). Please note that the median months in position are listed on the table.

Table 33. Salary and Months in Position of Program Directors by Region

<u>Geographic Region</u>	<u>Program Director Salary</u>			<u>Months in Position</u>			
	<u>N</u>	<u>Mean</u>	<u>Range</u>	<u>N</u>	<u>Mean</u>	<u>Median</u>	<u>Range</u>
Northeastern	16	\$ 75,093	\$50,000- 88,600	18	83.3	39.5	4-342
Eastern	11	\$ 73,216	\$57,630- 90,000	15	70.6	42.0	3-268
Southeastern	16	\$ 77,562	\$53,342-107,125	17	78.4	41.0	1-324
Midwestern	20	\$ 72,623	\$54,247- 97,000	20	38.9	29.0	4-103
Heartland	11	\$ 80,993	\$60,402- 94,800	11	70.5	40.0	6-288
Western	14	\$ 82,793	\$62,216-105,875	14	87.9	61.0	4-324
Total	88	\$ 76,709	\$50,000-107,125	95	70.3	40.0	1-342

Medical Directors of Physician Assistant Programs

The characteristics of P.A. program medical directors are shown in Table 34. Percent time data were available for 86 medical directors, of which ten were employed as such on a full-time basis, the remainder, on average,

Table 34. Characteristics of Program Medical Directors

	Mean	S.D.	Median	Range	N
<u>Percent Time</u>	32.2	28.1	20.0	5%-100%	86
<u>Annual Salary</u>	\$98,214	\$37,352	\$100,000	\$30,000-240,000	71
Female	\$99,254	\$32,997	\$ 95,072	\$33,068-150,000	18
Male	\$97,861	\$38,713	\$101,000	\$30,000-240,000	53
<u>Months in Position</u>	62.2	64.3	44.0	1-337	83
Female	64.0	73.0	40.0	5-337	21
Male	61.6	61.1	45.5	1-252	62

devoted less than one-quarter (24.4%) of their time to program-related activities. The mean annual salary of the medical directors reporting (N=71) was \$98,214 but varied extensively, ranging from \$30,000 to \$240,000. Female medical directors (N=18) earned a higher annual mean salary (\$99,254) than did male medical directors (\$97,861). The male medical director mean salary decreased 6.7% from the previous year (\$104,371 vs. \$97,861).

Overall, medical director salaries decreased by 2.9% from the previous year. Respondents which originally had not made corrections for full-time equivalent were contacted in order to clarify figures. The majority of medical directors were male (53; 75%). The average months in position is slightly lower for male directors (61.6 months). The median months in position for female medical directors is 73 months, while the median number of months for male medical directors is 61 months.

Data concerning medical director salaries, months in position and geographic region are shown in Table 35. Medical directors of those programs in the Midwestern region had the highest mean salaries (\$108,922). Those directors in the Northeastern had the lowest salaries (\$76,222). The Midwestern and Southeastern regions has the highest median salaries (\$104,570 and \$104,000 respectively). Medical directors in the Northeastern region were in their positions for the longest period of time (83.0 months). It should be noted that the range in both salaries (range of \$30,000 to \$240,000) and months in position (from 1 to 337 months) was extensive. Please note that the mean months in position differ significantly from the median months in position.

Table 35. Salary and Months in Position of Medical Directors by Region

<u>Geographic Region</u>	<u>Medical Director's Salary*</u>				<u>Months in Position</u>			
	<u>N</u>	<u>Mean</u>	<u>Median</u>	<u>Range</u>	<u>N</u>	<u>Mean</u>	<u>Median</u>	<u>Range</u>
Northeastern	11	\$ 76,222	\$ 75,000	\$30,000-140,000	17	83.0	60.0	5-252
Eastern	10	\$ 99,076	\$101,100	\$50,000-150,000	13	68.9	44.0	24-215
Southeastern	14	\$102,126	\$104,000	\$51,000-145,000	15	61.3	40.0	5-192
Midwestern	17	\$108,922	\$104,570	\$33,200-240,000	19	47.6	42.0	1-168
Heartland	9	\$ 94,737	\$ 85,300	\$50,000-140,000	9	44.7	47.0	4-120
Western	<u>10</u>	<u>\$100,992</u>	<u>\$ 95,072</u>	<u>\$60,000-150,000</u>	<u>10</u>	<u>63.3</u>	<u>10.5</u>	<u>1-337</u>
Total	71	\$ 98,214	\$100,000	\$30,000-240,000	83	62.2	44.0	1-337

* Corrected for full-time equivalent.

The medical specialties of P.A. program medical directors are shown in Table 36. The majority of medical directors (N=72; 84.7%) were practicing in primary care specialties, predominantly family medicine (N=50; 59%) and internal medicine (N=16; 19%). Only thirteen medical directors were in non-primary care specialties.

Table 36. Medical Specialties of P.A. Program Medical Directors

Primary Care			Non-Primary Care		
Medical Specialty	N	(%)	Medical Specialty	N	(%)
Family Medicine	50	58.8%	Cardiology	5	5.9%
Internal Medicine	16	18.8%	Emergency Med.	3	3.5%
Pediatrics	5	5.9%	Nephrology	1	1.2%
Obstetrics/Gyn.	<u>1</u>	<u>1.2%</u>	Psychiatry	1	1.2%
Total	72	84.7%	Other	<u>3</u>	<u>3.5%</u>
			13	15.3%	

Comparisons between Medical and Program Directors

A comparison between medical and program directors' salaries from 1984-85 through 1999-2000 is shown in Table 37. Note, information concerning the characteristics of medical directors was not available in 1987-88.

Table 37. Trends in Directors' Salaries and Months in Position from 1984 Through 1999

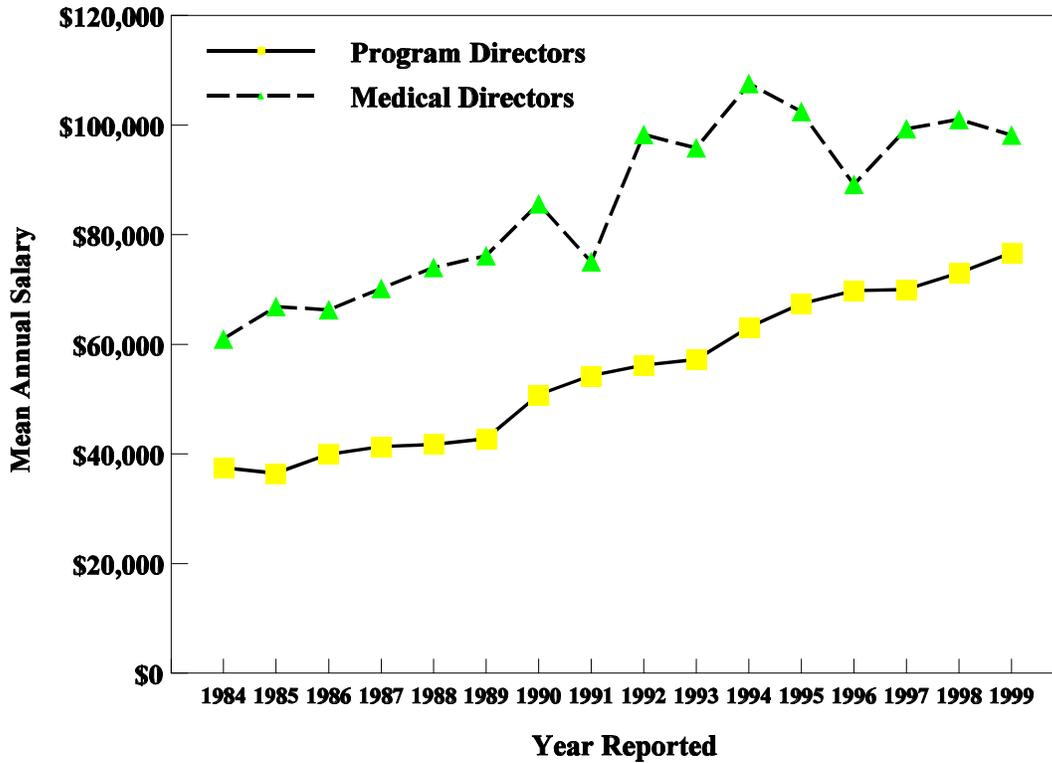
Academic Year	Program Director			Medical Director		
	Mean	Months	N	Mean	Months	N
1984-1985	\$37,499	64.5	31	\$ 61,000	69.1	23
1985-1986	\$36,491	69.3	32	\$ 66,900	70.1	21
1986-1987	\$39,939	68.8	38	\$ 66,300	63.9	29
1987-1988	\$41,324	67.9	38	N/A		
1988-1989	\$41,730	90.3	42	\$ 74,056	75.3	36
1989-1990	\$42,800	88.8	36	\$ 76,168	78.8	32
1990-1991	\$50,824	85.5	41	\$ 85,646	69.1	36
1991-1992	\$54,266	98.9	38	\$ 75,071	72.3	39
1992-1993	\$56,206	91.4	51	\$ 98,288	69.3	39
1993-1994	\$57,241	85.2	50	\$ 95,882	53.8	33
1994-1995	\$63,115	89.9	55	\$107,617	67.3	32
1995-1996	\$67,437	88.0	67	\$102,509	61.7	55
1996-1997	\$69,808	91.7	72	\$ 89,186	64.5	55
1997-1998	\$70,031	68.3	90	\$ 99,372	54.8	75
1998-1999	\$73,048	73.6	80	\$101,066	62.5	62
1999-2000	\$76,709	70.3	88	\$ 98,214	62.2	71
16-yr Mean	\$54,905	80.8	53	\$ 86,247	66.3	43

Between 1984 and 1999, there has been a 105% increase in the mean salary for program directors and a 61% increase for medical directors. The mean time in position has increased for program directors over this period (64.5 to 91.7 months). This year there was a slight decrease in the months in position for programs and medical directors from last year. The 1999-2000 mean annual salary for medical directors decreased by 2.8% from the preceding year.

On average, in 1999, medical directors earned an annual salary approximately 28% higher than the typical program director (\$98,214 versus \$76,709). Over the sixteen-year period, the medical directors earned an annual

salary of approximately 57% higher than the typical program director (\$86,247 versus \$54,905). Trends in salary for the program and medical directors from 1984 through 1999 are in Figure 8 and clearly illustrates the variation in directors' salaries since 1984.

Figure 8. Program and Medical Directors' Salaries: 1984 Through 1999



A comparison of academic position and tenure status between the directors is shown in Table 38. The majority of medical and program directors held faculty level positions with 13% of these directors classified as staff. More program directors than medical directors in faculty-level positions were on a tenure track and less than one-fifth of the faculty directors were tenured.

Table 38. Program and Medical Directors: Position and Tenure Track Status

Level of Position	Program Director		Medical Director	
	Number	(%)	Number	(%)
Staff Appointment	10	10.5%	14	16.9%
Faculty Appointment	85	89.5%	69	83.1%
Total	95	100.0%	83	100.0%
Tenure Status				
Tenure Track Faculty*	39	45.9%	20	29.0%
Faculty Tenured*	16	18.8%	10	14.5%

* Percent of TOTAL faculty tenured

Since 1985-86, the proportion of program and medical directors classified as faculty has remained relatively constant, averaging 82%; in 1999 around 87% of the directors were faculty. The proportion of faculty directors on the tenure track has averaged about 38.4% over time, and was 46% and 29%, respectively in 1999. The proportion of directors achieving tenured status in 1999 was lower than the mean of 21%.

A comparison between the academic rank of medical and program director faculty is shown in Table 39. A higher percentage of program directors (94%) held professorial rank (Assistant to Full Professor) as compared to medical directors (82%). In both cases, there were less than 20% of the directors classified as instructors or lecturers.

Table 39. Program and Medical Directors: Academic Rank

<u>Academic Rank of Faculty</u>	<u>Program Director</u>		<u>Medical Director</u>	
	<u>Number</u>	<u>(%)</u>	<u>Number</u>	<u>(%)</u>
Full Professor	11	12.9%	14	20.9%
Associate Professor	35	41.2%	21	31.3%
Assistant Professor	34	40.0%	20	29.9%
Instructor/Lecturer	<u>5</u>	<u>5.9%</u>	<u>12</u>	<u>17.9%</u>
Total	85	100.0%	67	100.0%

Regression Analysis of Salaries

Linear regression analysis was used to describe the relationship between salary and months in position for all core program faculty and staff. The resulting regression equations provide a means of determining salary while correcting for months in position. Table 40 identifies regression equations for each of the four P.A. and non-P.A. personnel categories, and for program and medical directors. Equations from Table 40 will "predict" salary

Table 40. Regression Equations for Salary and Months in Position for P.A. Program Personnel

<u>Characteristic</u>	<u>Base</u>	<u>±</u>	<u>(Constant</u>	<u>x Months)</u>	<u>N</u>
Category I	\$56,238	+	(\$ 17.64	x _____)	221
Category II	\$51,742	+	(\$ 60.84	x _____)	192
Category III	\$51,144	+	(\$ 56.61	x _____)	39
Category IV	\$21,600	+	(\$ 9.84	x _____)	196
Categories I- III	\$50,017	+	(\$ 66.88	x _____)	452
Program Directors	\$74,557	+	(\$ 30.37	x _____)	87
Medical Directors	\$97,236	+	(\$ 24.27	x _____)	70

within and across each category using the number of months as the independent variable. For example, one would predict that the salary of a Category I individual who has been in his or her position for 44.5 months would be around \$57,023 (i.e. \$56,238 + \$785), a value similar to that reported in Table 14 for the average Category I individual (i.e. \$57,687) having been employed for a mean of 44.5 months.

P.A. Program Personnel Turnover

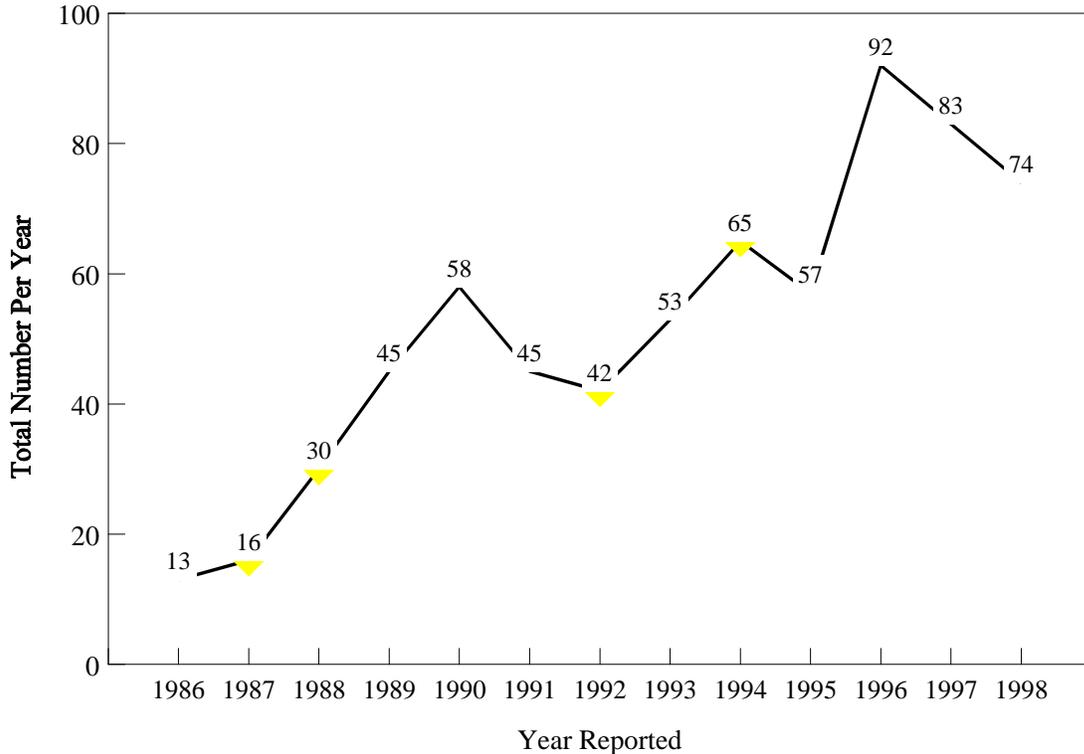
The 1999 survey requested updated information on personnel turnover for the period between September 1998 through August 1999. Program respondents were asked to provide data on the type, frequency and characteristics of personnel terminating and those employed to fill the position. Reported herein is the turnover activity for 1998-1999 as well as the cumulative data for the thirteen-year period (1986-1998) in Table 41 (next page). Data are expressed as both total number and mean number of individuals per program for the time period identified. Over the thirteen year-period examined, respondents reported that 673 personnel left their positions, averaging 10.0/program. As shown in Figure 9 (next page), there has been an overall increase in turnover since 1986, with decreases in 1991, 1992, 1995, 1997 and 1998.

Table 41. Program Personnel Turnover
1986 Through 1998

<u>Academic Year</u>	<u>Total Number Departing</u>	<u>Mean/Program</u>
1986-1987	13	0.3
1987-1988	16	0.3
1988-1989	30	0.6
1989-1990	45	0.9
1990-1991	58	1.2
1991-1992	45	0.8
1992-1993	42	0.8
1993-1994	53	0.9
1994-1995	65	0.9
1995-1996	57	0.7
1996-1997	92	1.0
1997-1998	83	0.9
1998-1999	<u>74</u>	<u>0.7</u>
13-year Total	673	10.0
13-year Mean	51.8	0.8

During the 1998-99 academic year, 74 P.A. program personnel departed (N=102 programs reported information) for an average of 0.7 per program. In 1998, personnel turnover per program decreased from last year, however was similar to the overall 13-year mean of 51.8 personnel departing per year, an average of 0.8 persons departing/program.

Figure 9. Trends in Personnel Turnover: 1986 Through 1998



Our best estimate of the mean number of core program personnel is 10 per program, and includes one program and medical director, 4.5 P.A.'s and 0.8 non-P.A.'s and 2.7 Category IV personnel. Given the average turnover per year we estimate that 7% of program personnel departed this year (0.7/10), lower than the rate of 9.8% the previous year.

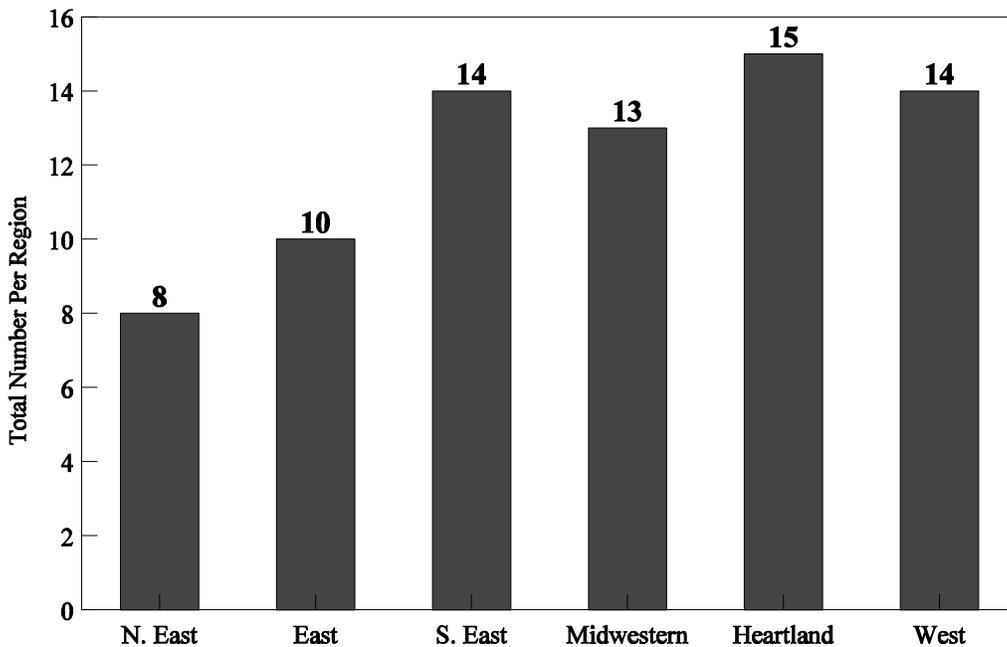
The number of personnel (and mean/program) departing over the past thirteen years and those departing in 1998, by region, is shown in Table 42 and illustrated in Figure 10. Turnover varied by region. For example, programs

Table 42. Program Personnel Turnover by Region, 1986 Through 1998

<u>Geographic Region</u>	<u>Number in 13 Years</u>	<u>Number in 1998</u>	<u>1998 Mean/Program</u>	<u>N</u>
Northeastern	117	8	0.38	21
Eastern	89	10	0.63	16
Southeastern	110	14	0.78	18
Midwestern	132	13	0.57	23
Heartland	97	15	1.36	11
Western	<u>128</u>	<u>14</u>	<u>0.88</u>	<u>16</u>
Total	673	74	0.70	105

in the Heartland region reported the highest turnover (1.36 per program) while programs in the Northeastern region had the lowest rate of turnover (0.38 per program).

Figure 10. Personnel Turnover By Region: 1998-1999
(From 9/1/98 Through 8/31/99)



A comparison of the number and category of personnel departing, those employed, percent of positions unfilled and mean number of weeks to fill the position are shown in Table 43 (next page). Overall, 74 program personnel (eleven Category IV) departed in 1998 with turnover highest among Category I personnel and least for Category III. On average 11.0 weeks were required to fill a position. Filling program director positions averaged 12.5 weeks while 5.6 weeks were required to fill Category II positions.

Table 43. Comparison of Personnel Turnover in 1998 by Category

<u>Category</u>	<u>Number Departed</u>	<u>Number Employed</u>	<u>Percent Unfilled</u>	<u>Weeks to Fill Position</u>
I	36	28	22.2%	8.4
II	16	13	18.8%	5.6
III	2	2	0.0%	7.3
IV	11	11	0.0%	10.0
Program Director	6	6	0.0%	12.5
Medical Director	<u>3</u>	<u>2</u>	<u>33.3%</u>	<u>12.7</u>
Total	74	62	16.2%	11.0

Table 44 shows the characteristics of personnel departing and those employed. On average, personnel departed in 1997 were older (3.4 years) than those employed. A higher percentage of females were employed than departed. Approximately the same distribution of ethnic personnel departing were employed.

Table 44. Characteristics of Personnel Departed and Employed in 1998

<u>Characteristic</u>	<u>Program Personnel</u>			
	<u>Departed</u>		<u>Employed</u>	
Mean Age (yrs)	45.4		36.4	
Range	22-63		22-55	
<u>Gender</u>	<u>(%)</u>	<u>N</u>	<u>(%)</u>	<u>N</u>
Male	33.8%	25	30.6%	19
Female	66.2%	49	69.4%	43
<u>Ethnicity</u>				
White	81.1%	60	85.5%	53
Non-White	18.9%	14	14.5%	9

The academic characteristics of personnel departing and those filling the vacated positions are shown in Table 45. Doctorate includes Ph.D., Ed.D., M.D and J.D. As indicated in Table 45, the majority of personnel employed held a masters degree (42%) as their highest credential, of those departing, 30 held a baccalaureate degree (40.5%) and 30 held a masters degree (40.5%). In addition, the majority of personnel departing were P.A.'s (81%) and those employed to fill these positions were also P.A.'s (82%).

Table 45. P.A. Program Personnel Turnover in 1998:
Academic Characteristics

<u>Highest Degree</u>	<u>Program Personnel</u>			
	<u>N</u>	<u>Departed</u>	<u>N</u>	<u>Employed</u>
Associate/Certificate	3	4.1%	2	3.2%
Baccalaureate	30	40.5%	26	41.9%
Masters	30	40.5%	23	37.1%
Doctoral	11	14.9%	11	17.7%
P.A. Credentialed	60	81.1%	51	82.3%

The reasons cited for personnel turnover during 1998 and the thirteen-year totals, are shown in Table 46 (next page). In 1998, more than one-fourth (27.7%) of the individuals departing did so for career advancement. Eleven cited geographic relocation as a reason for leaving their position. Previously the "Other" category

included positions that were either eliminated by the program or the personnel were asked to resign, however for the last three years, the number of personnel terminated by the program was higher than in previous years, so it was added as an official category. The "Other" category includes reasons such as unknown, travel, family and illness. Over the thirteen-year period, career advancement was the primary reason for departing followed by geographic relocation and a return to clinical practice.

Table 46. P.A. Program Personnel Turnover:
Reasons for Termination in 1998 Compared to the Thirteen -Year Totals

Reasons for Terminating	<u>1998</u>		<u>13-Year Totals</u>	
	<u>N</u>	<u>(%)</u>	<u>N</u>	<u>(%)</u>
Career Advancement	18	27.7%	163	26.4%
Geographic Relocation	11	16.9%	115	18.6%
Return to Clinical Practice	10	15.4%	107	17.3%
Retired	5	7.7%	37	6.0%
Termination	3	4.6%	14	2.3%
Job Dissatisfaction	3	4.6%	30	4.9%
Returned to School	2	3.1%	26	4.2%
Salary Dissatisfaction	1	1.5%	22	3.6%
Family Obligations	2	3.1%	7	1.1%
Other	<u>10</u>	<u>15.4%</u>	<u>96</u>	<u>15.6%</u>
Total	65	100%	617	100.0%

A comparison of salaries and months in position between personnel departing and those employed is shown for each year in Table 47. On average, over the thirteen-year period, there has been a mean salary increase of 4.9% for newly employed individuals as compared to those departing.

Table 47. Salaries of Departing and Newly Employed Personnel,
1986 Through 1998

<u>Academic Year</u>	<u>N</u>	<u>Salary Departing</u>	<u>Months in Position</u>	<u>Salary New Employee</u>	<u>Months Prior Position</u>
1986-1987	13	\$30,868	41.3	\$30,000	35.0
1987-1988	16	\$30,900	73.1	\$33,500	57.4
1988-1989	30	\$33,000	43.5	\$34,000	38.1
1989-1990	45	\$34,000	41.8	\$38,000	55.5
1990-1991	58	\$38,200	22.7	\$40,000	52.3
1991-1992	45	\$38,960	39.4	\$38,450	47.2
1992-1993	40	\$44,748	48.1	\$43,151	54.7
1993-1994	46	\$43,857	31.5	\$44,667	52.3
1994-1995	58	\$44,118	48.4	\$45,536	45.3
1995-1996	43	\$46,771	35.0	\$51,127	39.6
1996-1997	78	\$47,523	48.9	\$51,533	46.6
1997-1998	75	\$48,926	42.0	\$53,366	45.7
1998-1999	64	\$51,402	46.4	\$55,479	40.1
13-Year Mean	510	\$42,129	41.1	\$44,213	47.5

The greatest salary differences between departing and newly employed personnel were in 1989-90 (11.8%) and 1995-96 (9.3%). Overall, personnel departing had been in their positions an average of 41 months, while those employed had been in their previous position six months longer (47.5 months).

SECTION III. P.A. APPLICANT AND STUDENT CHARACTERISTICS

Physician Assistant Student Enrollment

The maximum capacity and current enrollment of P.A. students in the most recently enrolled classes, 1999-2000 (first-year class), 1998-99 (second-year class) and 1997-98 (third-year class) are shown in Table 48. The proportion of maximum capacity that remained unfilled and the resident status of the students is also presented. The dates in parentheses indicate the academic year of admission and the number indicates the programs responding.

Table 48. Maximum Class Capacity and Current Enrollment in Physician Assistant Programs

		<u>Maximum Capacity</u>	<u>Current Enrollment</u>	<u>% Capacity Unfilled</u>	<u>% Residents</u>
<u>First-Year Class</u> (1999-2000)	Mean	39.9	38.2	6.2%	63.3%
	Median	35.0	32.0	5.0%	60.0%
	Range	(10-204)	(10-204)	(0-18%)	(0-100%)
	Number	105	103	103	92
<u>Second-Year Class</u> (1998-1999)	Mean	38.9	36.6	10.4%	71.2%
	Median	35.0	32.0	8.0%	65.0%
	Range	(10-192)	(9-192)	(0-45%)	(0-100%)
	Number	99	97	52	80
<u>Third-Year Class</u> (1997-1998)	Mean	36.8	33.5	20.0%	71.4%
	Median	33.0	32.0	15.0%	68.0%
	Range	(6-120)	(5-81)	(0-75%)	(0-100%)
	Number	19	15	15	14
<u>All Classes</u>	Mean	83.3	76.7	9.0%	70.7%
	Median	75.0	67.5	8.0%	60.0%
	Range	(20-396)	(15-396)	(0-45%)	(0-100%)
	Number	105	104	104	90

* Includes both full- and part-time students.

The mean maximum capacity for the first-year class decreased slightly from last year (42.1) and is reported as 39.9; the mean maximum capacity for the second-year class also decreased from last year (from 40.2 to 38.9); and the mean maximum capacity for the third-year class increased from 32.7 to 36.8 students. The maximum capacity for all classes decreased by 4.1 students per program from last year. It should be noted that some of the programs with students in a “third year” were cases where there was a 1-6 month overlap between the second and third year of the curriculum (i.e., programs that were 25, 28, 30 months in length). It should also be noted that ten of the newly established programs had not matriculated students to the second-year at the time data was collected.

The medians for the maximum capacity and current enrollment of the classes are listed on the table. Note that the medians are lower than the mean in each category.

The percent of capacity unfilled for the first-year class was 6.2% and 10.4% for the senior class (the latter figure likely reflects factors like attrition during the previous year). Maximum capacity of P.A. programs varied extensively for both first- and second-year classes, ranging from 10 to 204. The maximum capacity for all classes averaged 83.3 students and with a mean enrollment of 76.7 students, approximately 9.0% of the maximum capacity (all classes) remained unfilled.

Current enrollment in the first-year class averaged 38.2 students per program (103 programs; range 10 to 204) and 36.6 students/program in the second-year class. In comparison, the number of first- and second-year students in the previous year was 40.0 and 37.1, respectively. It should be noted that the enrollment figures include both full-time and part-time students, the latter accounting for only 2.7% of the enrollment. On average, approximately 63% of the students in the first-year and 71% of the second-year class were residents of the state in which the program was located.

The current enrollment for all classes by gender and full- and part-time student status is shown in Table 49. The majority of both full-time and part-time students were female, averaging around 64%. Fifteen programs reported that a "third-year class" was enrolled.

Table 49. Current Enrollment by Gender and Class-Year

	<u>1st Year Class (N=103)</u>			<u>2nd Year Class (N=97)</u>			<u>3rd Year Class (N=15)</u>		
<u>Full-Time</u>	<u>Mean</u>	<u>(%)</u>	<u>Range</u>	<u>Mean</u>	<u>(%)</u>	<u>Range</u>	<u>Mean</u>	<u>(%)</u>	<u>Range</u>
Male	14.2	37.2%	1-170	13.3	36.3%	1-155	11.2	33.4%	1-28
Female	<u>24.0</u>	<u>62.8%</u>	6- 66	<u>23.3</u>	<u>63.7%</u>	2- 66	<u>22.3</u>	<u>66.6%</u>	5-69
Total	38.2	100%		36.6	100%		33.5	100%	
	<u>1st Year Class (N=13)</u>			<u>2nd Year Class (N=13)</u>			<u>3rd Year Class (N=0)</u>		
<u>Part-Time</u>	<u>Mean</u>	<u>(%)</u>	<u>Range</u>	<u>Mean</u>	<u>(%)</u>	<u>Range</u>	<u>Mean</u>	<u>(%)</u>	<u>Range</u>
Male	2.4	46.2%	1- 6	3.3	34.0%	1-27	N/A	N/A	N/A
Female	<u>2.8</u>	<u>53.8%</u>	1-14	<u>6.4</u>	<u>66.0%</u>	1-36	N/A	N/A	N/A
Total	5.2	100%		9.7	100%				

It should be noted that respondents were asked to identify only those classes enrolled in the "professional" component of the curriculum, thus, a 4-year program may only have two years of "P.A.-specific" curriculum. Thirteen programs reported they enrolled part-time students in the first year; thirteen programs also indicated they had part-time students in the second year of the program and no programs reported part-time students in the third-year.

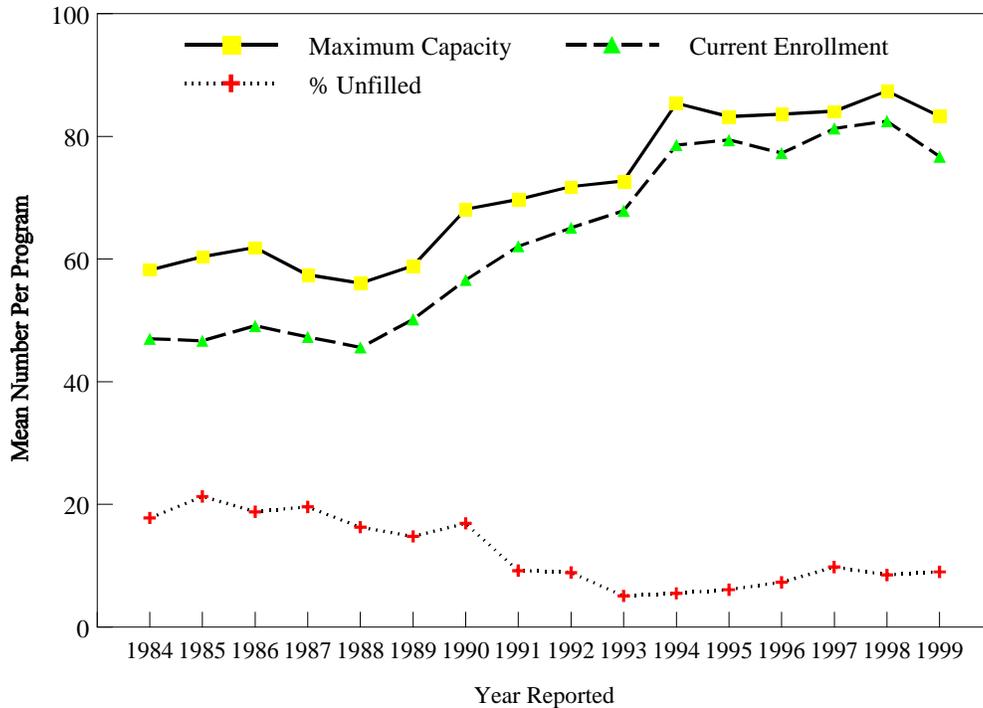
Trends in Maximum Capacity and Student Enrollment

The mean maximum class capacity, total student enrollment and percent of capacity unfilled from 1984 through 1999 are shown in Table 50 (next page). Maximum capacity over the past sixteen years averaged 71 students for all classes and ranged from 56.1 to 87.4. The percent of capacity that remained unfilled varied around a mean of 12.2%, however has remained below the mean since 1991. The trends in enrollment, maximum and unfilled capacity are illustrated in Figure 11 (next page). Total enrollment from 1984 through 1988 averaged 47.1 students/program and varied little during that period. In the subsequent eleven years (1989-99) enrollment averaged 70.7 and showed an overall increase of 64%, from 50.2 students to 82.5 students. This current year has seen a decrease in the current enrollment/program by 7%.

Table 50. Total Student Enrollment of All Classes, 1984 Through 1999

<u>Academic Year</u>	<u>Programs Responding</u>	<u>Maximum Capacity All Classes</u>	<u>Current Enrollment All Classes</u>	<u>Percent Capacity Unfilled</u>
1984-1985	39	58.2	47.0	17.8%
1985-1986	44	60.4	46.7	21.3%
1986-1987	47	61.9	49.1	18.8%
1987-1988	48	57.4	47.3	19.6%
1988-1989	48	56.1	45.6	16.3%
1989-1990	45	58.9	50.2	14.8%
1990-1991	50	68.1	56.6	16.9%
1991-1992	50	69.7	62.1	9.2%
1992-1993	57	71.8	65.1	8.9%
1993-1994	56	72.7	67.9	5.1%
1994-1995	61	85.4	78.6	5.5%
1995-1996	68	83.2	79.4	6.1%
1996-1997	77	83.6	77.3	7.3%
1997-1998	95	84.1	81.3	9.8%
1998-1999	96	87.4	82.5	8.5%
<u>1999-2000</u>	<u>105</u>	<u>83.3</u>	<u>76.7</u>	<u>9.0%</u>
16-Yr. Mean	61.7	71.4	63.4	12.2%

Figure 11. Trends in Enrollment: 1984 Through 1999



P.A. Applicants and Students Enrolled

The number of applicants and those enrolled in the most recent P.A. class (1999-2000) is shown in Table 51. In addition, information on those accepted and the mean number of full- and part-time students is also provided. The typical program received 239 applications for the class entering in 1999-2000, ranging from 23 to 712 applicants. This represented a 17.6% decrease (51 applicants/program) from the 290 applicants per program the previous year.

Table 51. Applicant and Student Characteristics, Class of 1999-2000

	Number	Number	Number Enrolled		
	<u>Applicants</u>	<u>Accepted</u>	<u>F.T.*</u>	<u>P.T.*</u>	<u>Total</u>
Mean	238.8	42.6	38.8	0.5	39.3
Median	212.0	39.0	33.0	0.0	34.0
Range	23-712	10-131	9-204	0-22	9-204
# Programs	80	96	105	105	105

* F.T. = Full-Time; P.T. = Part-Time

On average, 43 students were accepted and 39.3 students per program were enrolled in the first-year class (105 programs; range from 9-204); only 1.3% were part-time students (0.5/program). These findings mark an increase (21%) in first-year enrollment over the 17-year average (i.e., 39.3/program versus an average of 32.6/program). Eighteen percent of the applicant pool was accepted (43/239) and of these, 92% were enrolled (39.3/42.6), thus an average of 8% of those accepted elected not to enroll in a particular program. Overall, 16% of the applicants were enrolled in 1999 (39/239). The ratio of applicants to enrollees was over 6.1:1, a lower ratio than the 6.8:1 value in the previous year.

Applicants and Students Enrolled by Geographic Region

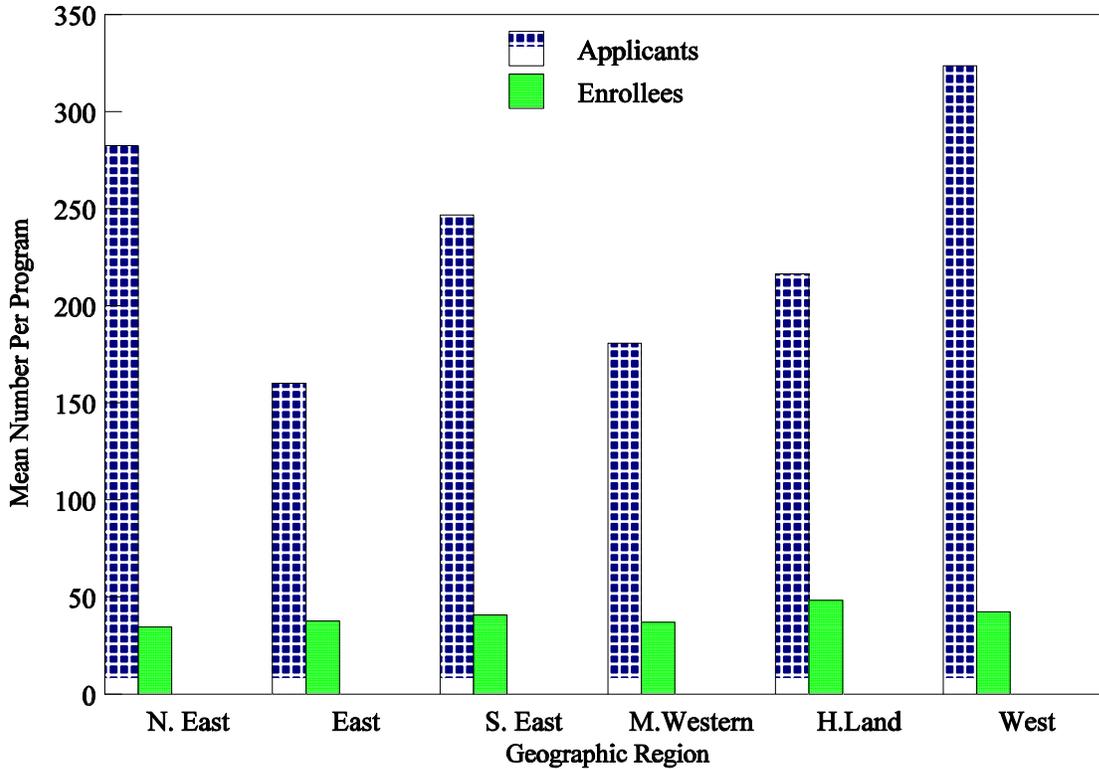
A comparison between the mean number of applicants by geographic region is shown in Table 52 and Figure 12 (next page), ‘N’ indicates the number of programs responding. Programs in the Western region averaged 324 applicants per program, while programs in the Eastern region, 160 per program. The Eastern region had the largest decrease in the number of applicants from last year (24.7%). No geographic region showed an increase in the average number of applicants.

Table 52. Number of Applicants and Enrollees by Region

Geographic Region	Applicants		% Change Prev. Year	Enrollees		Ratio
	<u>N</u>	<u>Total</u>		<u>N</u>	<u>Total</u>	
Northeastern	15	282.4	- 13.5%	20	34.5	8.2:1
Eastern	11	160.0	- 24.7%	14	37.6	4.3:1
Southeastern	14	246.7	- 21.0%	18	40.7	6.1:1
Midwestern	20	180.6	- 9.8%	23	37.0	4.9:1
Heartland	7	216.4	- 3.9%	10	48.3	4.5:1
Western	<u>13</u>	<u>323.6</u>	<u>- 15.8%</u>	<u>19</u>	<u>42.3</u>	<u>7.7:1</u>
Total	80	238.8	- 17.8%	104	39.3	6.1:1

The largest number of enrollees was in the Heartland region (48.3) and the smallest number was in the Northeastern region (34.5).

Figure 12. Applicants and Students Enrolled by Region, 1999-2000



Trends in P.A. Student Enrollment, 1983 Through 1999

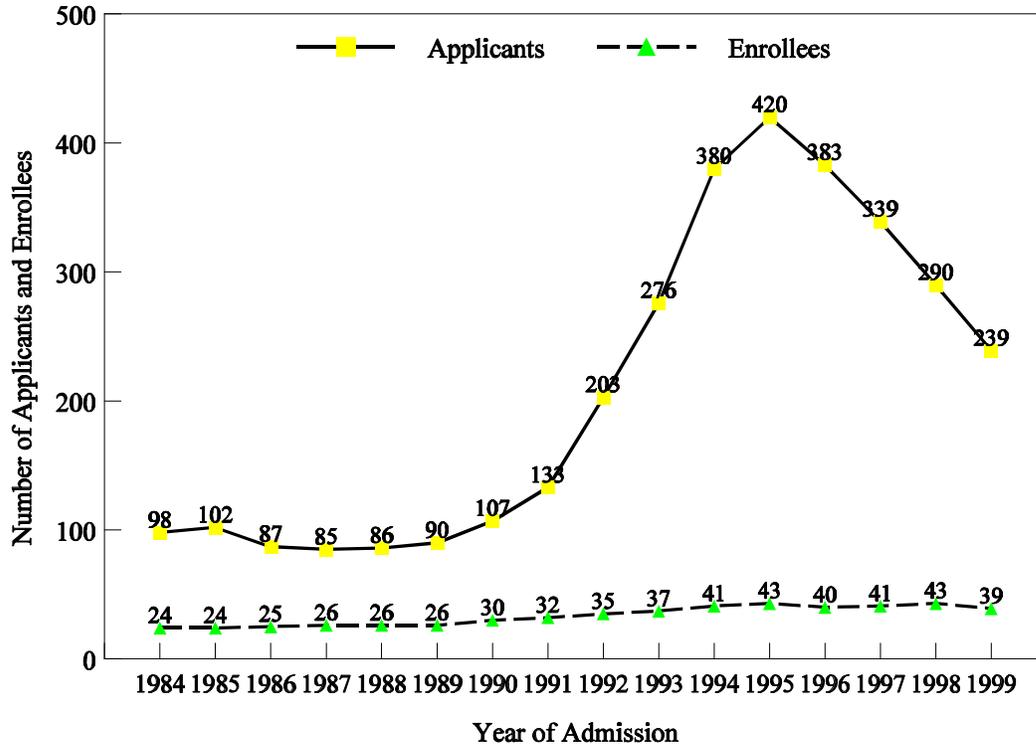
The number of applicants and students enrolled in P.A. programs for the seventeen-year period from 1983 through 1999 are shown in Table 53 and Figure 13 (next page).

Table 53. P.A. Applicants and Students Enrolled, 1983 Through 1999

Academic Year	Mean Number Applicants		Mean Number Accepted		Mean Number Enrolled		Mean Ratio Appl./Enroll
	Applicants	(N)	Accepted	(N)	Enrolled	(N)	
1983-1984	N/A	--	N/A	--	24.0	43	N/A
1984-1985	98.4	32	30.4	35	24.1	43	4.0:1
1985-1986	101.8	25	44.5	35	24.3	42	4.0:1
1986-1987	86.5	30	31.2	40	24.9	47	3.5:1
1987-1988	84.7	31	30.2	42	25.6	47	3.3:1
1988-1989	86.1	36	30.2	39	25.9	46	3.3:1
1989-1990	90.2	33	33.0	40	26.1	46	3.5:1
1990-1991	106.5	37	35.6	45	29.6	49	3.6:1
1991-1992	133.2	33	36.8	41	32.2	47	4.1:1
1992-1993	203.2	51	40.6	49	35.0	57	5.8:1
1993-1994	275.7	52	39.6	46	37.0	55	7.4:1
1994-1995	379.6	54	44.9	55	41.4	58	9.2:1
1995-1996	419.5	53	44.7	62	42.9	71	9.8:1
1996-1997	383.3	57	45.6	71	39.6	76	9.7:1
1997-1998	338.6	74	46.0	83	40.5	91	8.4:1
1998-1999	290.4	73	48.0	83	42.6	92	6.8:1
<u>1999-2000</u>	<u>238.8</u>	<u>80</u>	<u>42.6</u>	<u>96</u>	<u>39.3</u>	<u>105</u>	<u>6.1:1</u>
17-Yr. Mean	207.3	47	39.0	54	32.6	60	6.1:1

From 1984 through 1999 the number of the applicants ranged from 84.7 to 419.5 persons, and averaged 207.3 over the seventeen-year period. Figure 13 illustrates the trends in the number of applicants and students enrolled from 1984 through 1999. The mean number of applicants/program remained relatively constant from 1984

Figure 13. Trends of Applicants and Students Enrolled: 1983 Through 1999



through 1989, then increased systematically by over 350% until 1995. Since 1995, the number of applicants/program has decreased by 43%. There had also been a systematic increase in enrollees from 1984 through 1995. Since then, the mean number enrolled has fluctuated between 39 and 43. The average number of enrollees over the seventeen-year period is 32.6 students/program.

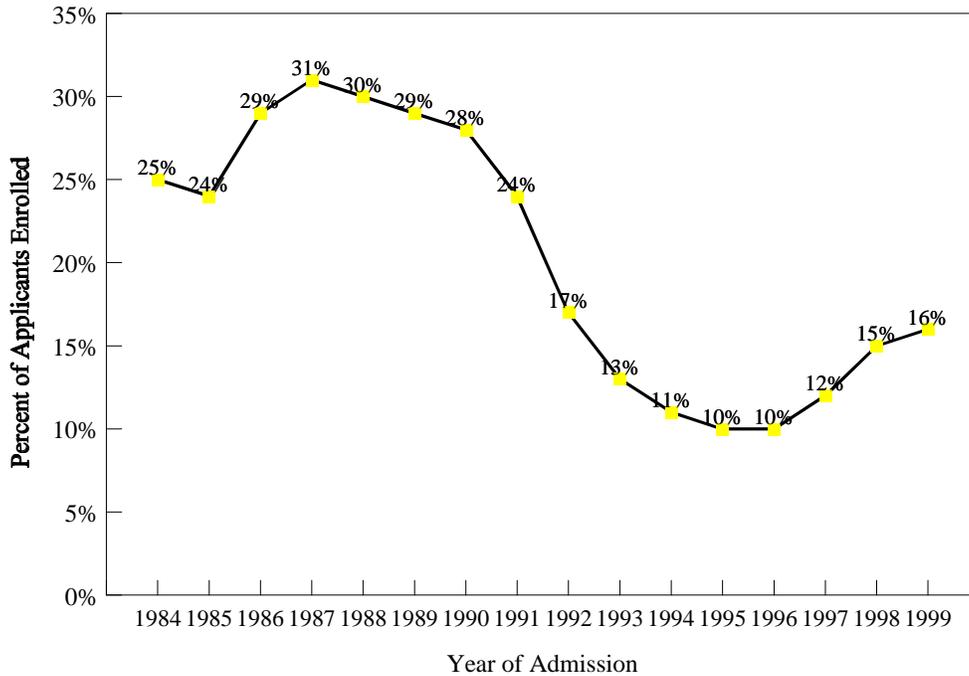
The mean number and relative proportion of male and female students enrolled in P.A. programs over the past seventeen years are shown in Table 54 (next page). The proportion of female and male P.A. students enrolled from 1983 through 1999 remained relatively constant, averaging 60.9% and 39.1%, respectively. These figures include part-time students.

Trends in the percent of applicants enrolled is illustrated in Figure 14 (next page). Although the number of applicants and students enrolled has increased since 1987-88, they have not done so at an equivalent rate. Thus, the proportion of applicants enrolled has systematically decreased from a high of 31% in 1987 to a low of 10% in 1996, with an increase to 16% in 1999.

Table 54. First-Year Class Enrollment, 1983 Through 1999

Academic Year	Female			Male		Total	
	N	Mean	(%)	Mean	(%)	Mean	N
1983-1984	39	13.6	58.4%	9.7	41.6%	24.0	43
1984-1985	39	14.6	61.6%	9.1	38.4%	24.1	43
1985-1986	42	15.3	63.0%	9.0	37.0%	24.3	41
1986-1987	44	15.5	62.2%	9.4	37.8%	24.9	47
1987-1988	47	15.7	61.6%	9.9	38.4%	25.6	47
1988-1989	46	16.2	62.3%	9.8	37.7%	25.9	46
1989-1990	46	16.4	62.8%	9.7	37.2%	26.1	46
1990-1991	47	16.3	55.1%	13.3	44.9%	29.6	49
1991-1992	47	19.4	60.2%	12.8	39.8%	32.2	47
1992-1993	55	20.7	59.8%	13.9	40.2%	35.0	56
1993-1994	55	22.2	61.5%	13.9	38.5%	37.0	55
1994-1995	60	24.4	60.2%	16.1	39.8%	41.1	55
1995-1996	71	22.8	58.2%	16.4	41.8%	39.2	71
1996-1997	77	23.5	61.4%	14.8	38.6%	38.3	77
1997-1998	95	24.4	61.9%	15.0	38.1%	39.4	95
1998-1999	91	25.0	62.5%	15.0	37.5%	40.0	91
<u>1999-2000</u>	<u>103</u>	<u>24.0</u>	<u>62.8%</u>	<u>14.2</u>	<u>37.2%</u>	<u>40.2</u>	<u>103</u>
17-Yr Mean	59	19.4	60.9%	12.5	39.1%	32.2	60

Figure 14. Trends in Percent of Applicants Enrolled: 1984 Through 1999

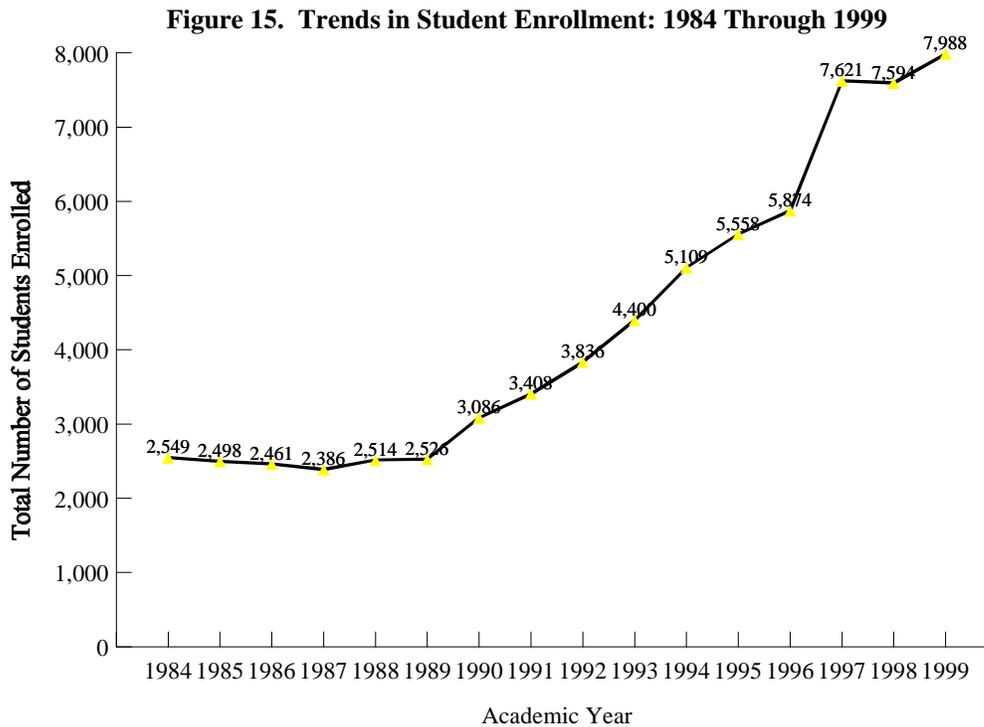


Total Enrollment in P.A. Programs

Figure 15 illustrates the trends in total student enrollment from 1984 through 1999. Estimates of total enrollment are based on summing mean values for enrollment in the 1st, 2nd and 3rd year classes, then multiplying by the number of programs represented. For the 103 programs we estimate total enrollment to be 7,988 in 1999. (The calculations were as follows, 1st yr. $103 \times 38.2 = 3,935$, 2nd yr. $97 \times 36.6 = 3,550$ and 3rd yr. $15 \times 33.5 = 503$). If one would estimate 1st year enrollment based upon 120 programs, first year enrollment would be $120 \times 38.2 = 4,584$, an increase of 649 students.

Total enrollment remained relatively constant from 1984 through 1989. Subsequently, there had been a linear and relatively steep sustained increase until 1996. In 1997, there was a dramatic increase of 30%. The two factors influencing the number of P.A. students enrolled have been, (a) a larger number of first-year students enrolled and (b) an increase in the total number of programs.

In addition, since 1984 the number of P.A. programs has changed as follows: 53 (1984); 51 (1985); 49 (1986); 50 (1987); 51 (1988 and 1989); 55 (1990 and 1991) 59 (1992); 63 (1993); 67 (1994); 81 (1995); 89 (1996); 104 (1997); 107 (1998) and 120 in 1999.



Applicants and Students Enrolled by Age

The age distribution of applicants, students accepted and those enrolled for the first-year class is shown in Table 55 (next page). The data are expressed as the mean number of individuals per program within each of the age categories examined. A little over one-fourth of the applicants were less than 24 years of age and approximately 44% were between 24-29 years. Almost one-third (35%) of the students enrolled in the first-year class were over 30 years of age; over one-half were between the ages of 20 and 29 and only 3% were under 20 years of age.

Table 55. Applicants and Enrollees by Age, Class of 1999-2000

<u>Age</u>	<u>All Applicants</u>		<u>Number Accepted</u>		<u>Number Enrolled</u>	
	<u>Mean</u>	<u>(%)</u>	<u>Mean</u>	<u>(%)</u>	<u>Mean</u>	<u>(%)</u>
	(N=66)		(N=86)		(N=100)	
Under 20	2.8	1.2%	1.6	3.9%	1.0	2.6%
20-23	57.0	24.9%	8.8	21.2%	8.5	22.4%
24-26	63.5	27.8%	9.6	23.1%	8.4	22.2%
27-29	38.0	16.6%	7.0	16.9%	6.6	17.4%
30-33	25.5	11.1%	4.9	11.8%	4.5	11.9%
Over 33	42.0	18.4%	9.6	23.1%	8.9	23.5%
Total	238.8	100.0%	42.6	100.0%	39.3	100.0%
	(N=80)*		(N=96)		(N=105)	

* Number of programs reporting.

Students Enrolled by Age and Geographic Region

The distribution of students enrolled in the 1999-2000 class by age and geographic region is shown in Table 56. The table reports the percentage of students per program (N=100 programs) in each age category. Students enrolled in those programs located in the Eastern region tended to be younger than those in other regions, 40% were 23 years of age or less. Conversely, students in the Western region were notably older than P.A. students in other regions, 33.1% were over 33 years of age.

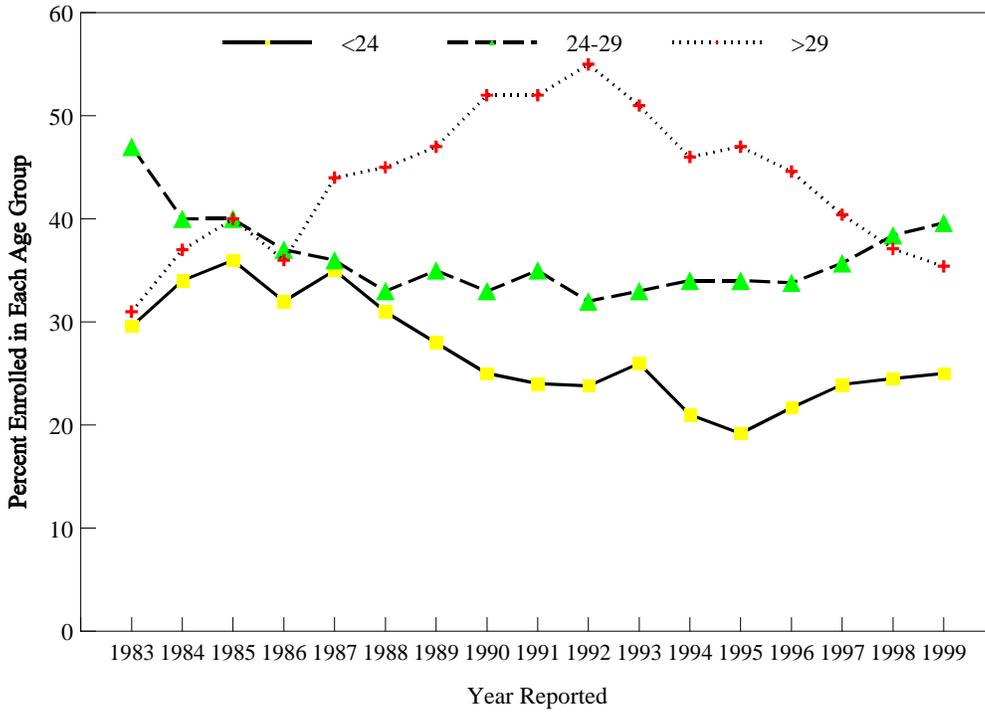
Table 56. P.A. Student Enrollment by Age and Region, Class of 1999-2000

<u>Geographic Region</u>	<u>Age at Application</u>					
	<u>< 20</u>	<u>20-23</u>	<u>24-26</u>	<u>27-29</u>	<u>30-33</u>	<u>>33</u>
	<u>(%)</u>	<u>(%)</u>	<u>(%)</u>	<u>(%)</u>	<u>(%)</u>	<u>(%)</u>
Northeastern	3.5%	25.4%	23.4%	16.0%	8.4%	23.3%
Eastern	11.2%	29.1%	16.7%	13.0%	10.3%	19.7%
Southeastern	2.0%	21.0%	23.0%	18.5%	12.8%	22.7%
Midwestern	0.0%	23.7%	24.2%	14.7%	10.5%	26.9%
Heartland	0.2%	23.9%	24.9%	16.7%	14.3%	20.0%
Western	0.0%	9.7%	19.4%	22.6%	15.2%	33.1%
Total	2.6%	22.4%	22.2%	17.4%	11.9%	23.5%

Trends in Enrollment by Age

Trends in the age of enrolled students from 1983 to 1999 are shown in Figure 16 (next page). The data were grouped into the following three age categories: under 24 years of age, those between 24 and 29 years and those over 29 years of age. The proportion of enrollees less than 24 years of age increased to 25% in 1999, from a pattern of decrease through 1995. Those between the ages of 24 and 29 initially decreased from 1983 to 1992; since then, there has been a gradual increase to the current value of 39.6%. The enrollment of students that were over 29 years of age had systematically increased over time beginning at 32% of the enrollees in 1983, peaking in 1992 (56%) and then decreasing to the current level of 35% of enrollees. This is the second year since 1986 that the percentage of students over 29 years of age was less than the 24 to 29 year old group.

Figure 16. Trends in Enrollee Age: 1983 Through 1999



Average Age of Applicants

The survey included questions asking the average age of all of the programs' applicants, accepted applicants and currently enrolled full- and part-time students. As a result of these questions, the average applicant age was 28.3, accepted applicant age was 28.6, full-time student age was 28.2 and the average age for the part-time student was 33.7. Table 57 lists average ages of these categories by geographic region. The Heartland and Western regions had the highest average age of applicants (30.1 and 30.5 respectively). The Western region had the highest average age of accepted applicants (31.9) and full-time students (31.9). The Eastern region had the lowest average age of applicants, accepted applicants and full-time students (27).

Table 57. Average Age of Applicants, Accepted Applicants and Enrollees by Region

Geographic Region	Applicants		Accepted Applicants		Enrollees Full-Time		Enrollees Part-Time	
	N	Average Age	N	Average Age	N	Average Age	N	Average Age
Northeastern	14	27.8	19	28.3	21	27.7	2	28.5
Eastern	11	27.0	13	27.1	14	26.8	1	-----
Southeastern	12	27.1	13	27.9	15	28.2	2	34.0
Midwestern	15	28.6	21	29.6	20	28.8	1	-----
Heartland	5	30.1	8	27.9	10	28.6	1	-----
Western	<u>11</u>	<u>30.5</u>	<u>13</u>	<u>31.9</u>	<u>16</u>	<u>31.9</u>	<u>0</u>	<u>-----</u>
Total	68	28.3	87	28.6	96	28.2	7	33.7

Applicants and Students Enrolled by Ethnicity

The ethnicity of applicants and students enrolled in the first-year class is shown in Table 58. The data are expressed as the mean number and percentage of applicants and enrollees per program from each ethnicity category. Almost three-fourths of the applicants (74.3%) were White/Non-Hispanic; 6.5% were Black/African-American, 5.8% were Latino/Hispanic, 8.4% were Asian.

Table 58. Applicants and Students Enrolled by Ethnicity

<u>Ethnicity</u>	<u>All Applicants</u>		<u>Number Enrolled</u>		<u># of Programs</u>
	<u>Mean</u>	<u>(%)</u>	<u>Mean</u>	<u>(%)</u>	<u>w/o Minorities</u>
	(N=78)		(N=103)		(N=103)
White/Non-Hispanic	173.6	74.3%	30.7	77.9%	0
Black/African-American	15.2	6.5%	2.4	6.1%	40
Latino/Hispanic/Mex. Am.	13.5	5.8%	2.5	6.3%	38
Asian	19.7	8.4%	2.5	6.3%	30
Asian Subpopulation	0.8	0.3%	0.3	0.8%	88
Native Hawaiian/Other P.I.	2.8	1.2%	0.3	0.8%	84
American Ind./Alaskan	0.6	0.3%	0.2	0.5%	93
Other	<u>7.5</u>	<u>3.2%</u>	<u>0.5</u>	<u>1.3%</u>	<u>85</u>
Total (N=80)	238.8	100%	38.8	100%	9

Overall, 26% of the applicants were members of an ethnic minority, 25% of whom were Black/African-American. Among those enrolled, 77.9% were White/Non-Hispanic and the remainder (22.1%) were from an ethnic minority. A comparison between the proportion of minority applicants and those enrolled suggests that preference is not given to applicants on the basis of ethnicity, for example, 26% of the applicants and 22% of those enrolled were described as an ethnic minority. Forty of the 103 program respondents (38.8%) did not enroll any Black/African-American students and thirty-eight programs did not enroll any Hispanic students. Nine programs (8.7%) did not enroll any type of minority student in 1999.

Ethnic Representation of Applicants and Enrollees by Geographic Region

The mean number and proportion of P.A. applicants and students enrolled in the first-year class on the basis of both ethnicity and geographic region is in Table 59.

Table 59. Applicants and Enrollees by Ethnicity and Geographic Region

<u>Geographic</u> <u>Region</u>	<u>Applicants</u>				<u>Enrollees</u>			
	<u>White</u>		<u>Non-White</u>		<u>White</u>		<u>Non-White</u>	
	<u>Mean</u>	<u>%</u>	<u>Mean</u>	<u>%</u>	<u>Mean</u>	<u>%</u>	<u>Mean</u>	<u>%</u>
Northeastern	188.3	66.7%	94.2	33.3%	26.6	77.1%	7.9	22.9%
Eastern	148.9	81.1%	34.7	18.9%	31.1	82.3%	6.7	17.7%
Southeastern	184.9	77.6%	53.3	22.4%	32.0	77.7%	9.2	22.3%
Midwestern	138.7	85.1%	24.3	14.9%	31.4	87.2%	4.6	12.8%
Heartland	171.6	79.3%	44.9	20.7%	37.5	78.1%	10.5	21.9%
Western	<u>208.9</u>	<u>64.4%</u>	<u>115.6</u>	<u>35.6%</u>	<u>28.4</u>	<u>66.2%</u>	<u>14.5</u>	<u>33.8%</u>
Total	173.6	74.3%	60.1	25.7%	30.7	77.9%	8.7	22.1%

For purposes of comparing across regions, minorities were grouped into a single category and designated non-white. There was considerable variation in the proportion of minorities applying to, and enrolled in, programs across regions. Programs in the Western region had the largest proportion of non-white applicants at 36% and the Midwestern region the least number, with only 15% being non-white. The Western region enrolled the largest percentage (34%) of non-white students. Programs in the Midwestern region had a the fewest number of non-white enrollees (13%).

The number and percent of programs reporting no minority students enrolled in the first-year class is shown in Table 60. Nine programs, in separate regions, had no minority students enrolled.

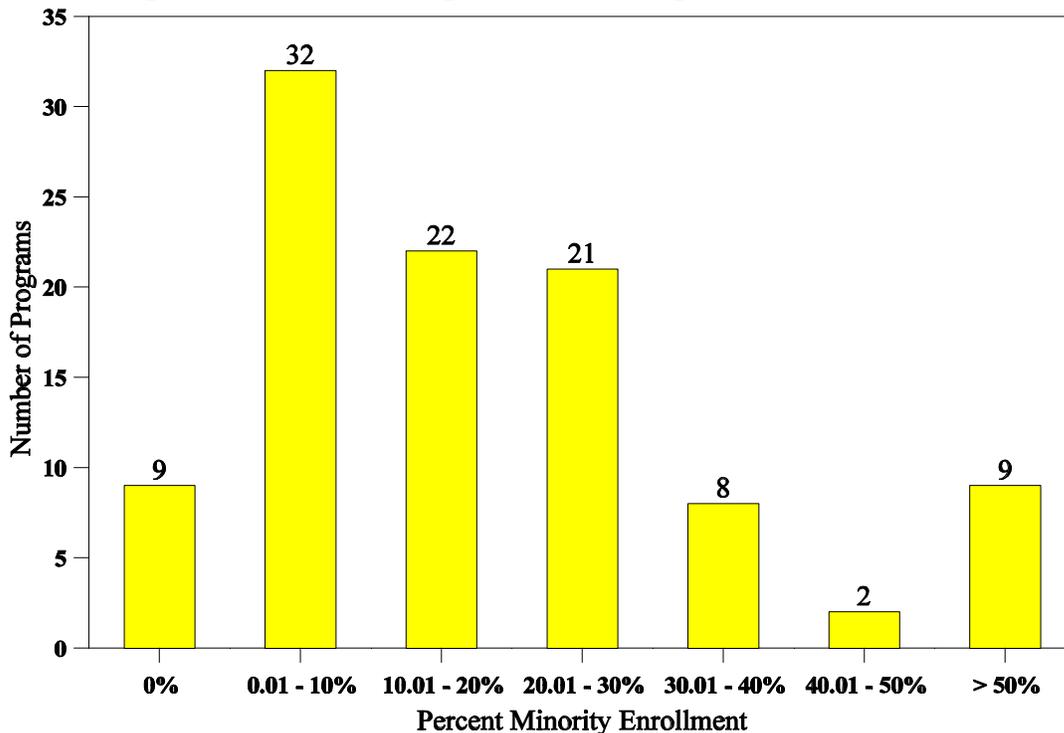
Table 60. Number of Programs with No Minority Enrollment by Geographic Region

<u>Geographic Region</u>	<u>N</u>	<u># of Programs</u>	<u>(%)</u>
Northeastern	20	2	10.0%
Eastern	15	3	20.0%
Southeastern	18	0	0.0%
Midwestern	23	3	13.0%
Heartland	11	0	0.0%
Western	<u>16</u>	<u>1</u>	<u>6.3%</u>
Total	103	9	8.7%

Number of Programs versus Percent Minority Student Enrollment

Figure 17 represents the number of programs with certain percentages of minority enrollment. There are 33 programs who have a larger percentage of minority enrollment than the mean of 22.1%; 70 programs have less. The average minority enrollment for programs with greater than 20% is 38.6%; for programs will less than 20% minority enrollment, 8.5%.

Figure 17. Number of Programs vs. Percentage of Minority Enrollment



Trends in Minority Student Enrollment, 1983 Through 1999

The proportion of minority and non-minority students enrolled in P.A. programs over a seventeen-year period (1983-84 through 1999-2000) is shown in Table 61 and Figure 18 (next page). The proportion of non-white students in the first-year class fluctuated between 14% in 1983 and 22% in 1999-2000. Expressed differently, the number of minority students has doubled from a mean of 4.0/program in 1983 to 8.7/program in 1999.

Table 61. Ethnicity of P.A. Students Enrolled from 1983 Through 1999

<u>Academic Year</u>	<u>N</u>	<u>White</u>		<u>Non-White</u>		<u>First Yr. Enrollment</u>
		<u>Mean</u>	<u>%</u>	<u>Mean</u>	<u>%</u>	
1983-1984	39	20.7	86.2%	4.0	13.8%	24.0
1984-1985	39	20.3	83.4%	4.1	16.6%	24.5
1985-1986	41	20.9	85.3%	3.6	14.7%	24.6
1986-1987	47	19.6	78.8%	5.3	21.1%	24.9
1987-1988	47	19.7	77.7%	5.9	22.3%	25.6
1988-1989	46	20.8	79.7%	5.3	20.3%	25.9
1989-1990	46	20.9	80.1%	5.2	19.9%	26.1
1990-1991	48	24.6	82.3%	5.3	17.7%	29.9
1991-1992	47	26.0	81.0%	6.1	19.0%	32.1
1992-1993	56	26.9	82.5%	5.7	17.5%	32.6
1993-1994	55	29.3	82.3%	6.3	17.7%	35.6
1994-1995	58	33.2	77.5%	8.8	20.9%	42.0
1995-1996	69	32.4	77.7%	9.3	22.3%	41.5
1996-1997	76	31.3	79.6%	8.0	20.4%	39.6
1997-1998	91	32.4	79.2%	8.5	20.8%	40.6
1998-1999	89	32.9	78.9%	8.8	21.1%	42.6
<u>1999-2000</u>	<u>103</u>	<u>30.7</u>	<u>77.9%</u>	<u>8.7</u>	<u>22.1%</u>	<u>39.3</u>
17-yr. Mean	59	26.1	80.0%	6.5	20.0%	32.4

Minority student enrollment over seventeen years has averaged 20% per year (mean of 6.5 students/program). It should be noted that values for the 1992-93 and 1993-94 period may be under represented because some programs with large minority enrollments were non-respondents in both years.

Academic Characteristics of P.A. Students

The academic profile of students at the time of enrollment are shown in Table 62 (next page). Over one-half (68.5%) of the students enrolled in 1999 had earned at least a baccalaureate degree (61% as their highest degree) while less than one-fifth (19.4%) entered with no academic degree. Only 12% of the enrollees had earned an associate level degree prior to entry. Of the full-time students, 7.4% were admitted with a graduate-level degree, predominantly a masters degree (5.5%).

Figure 18. Trends in Minority Student Enrollment: 1983 Through 1999

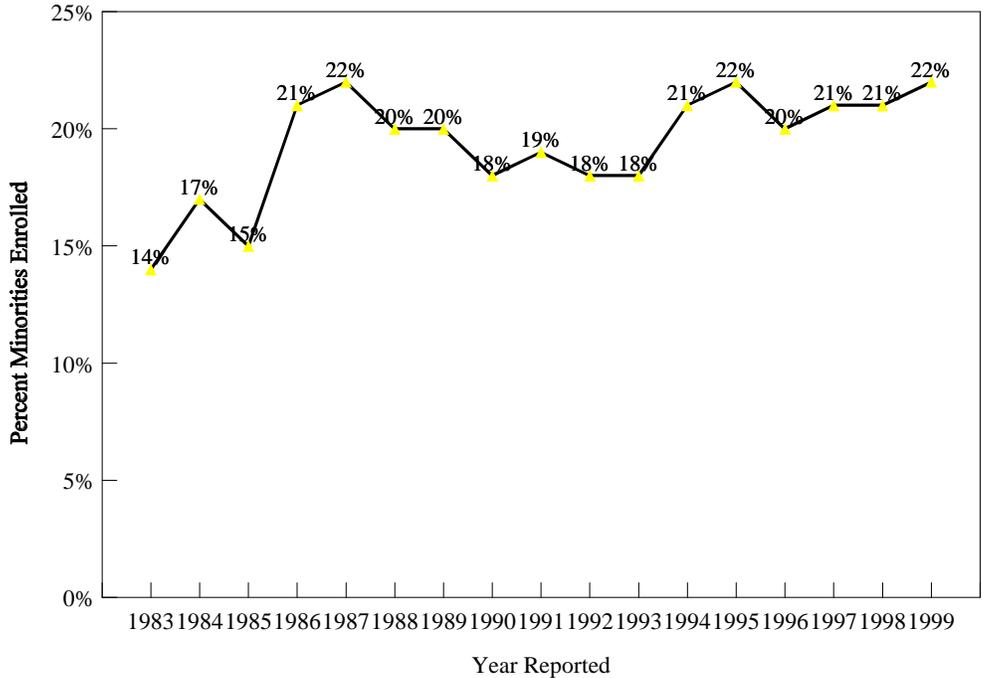
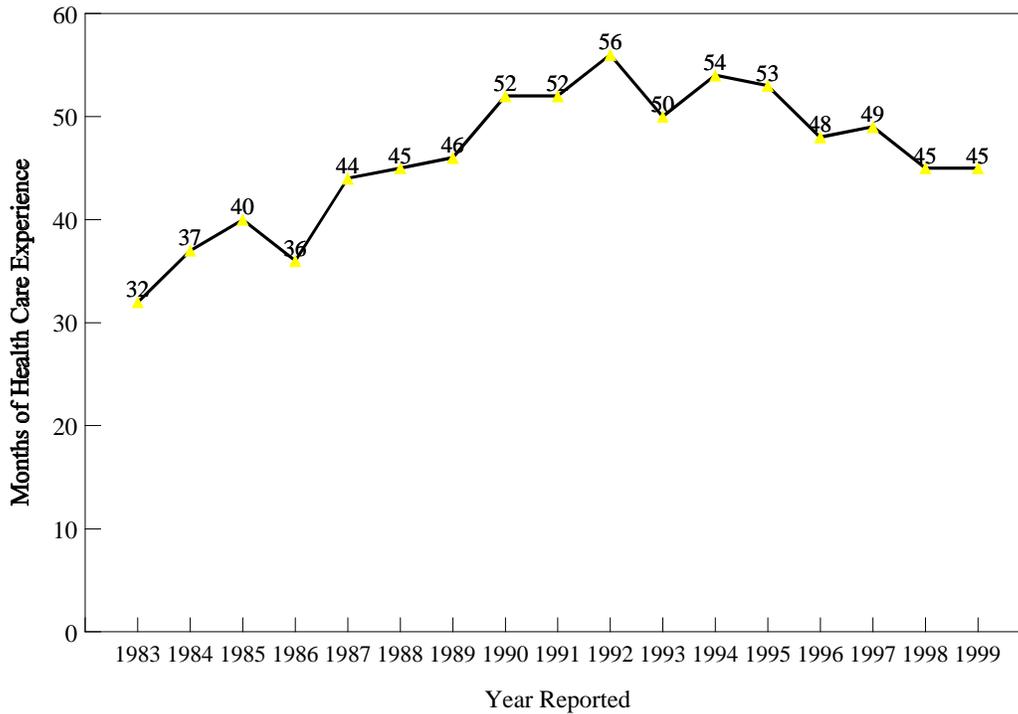


Table 62. Academic Characteristics of P.A. Students Enrolled in 1999

Highest Academic Credential Earned	Full-Time		Part-Time		Total	
	Mean	%	Mean	%	Mean	%
No Academic Degree	7.1	19.5%	0.1	14.3%	7.2	19.4%
Associate Degree	4.5	12.4%	0.0	0.0%	4.5	12.1%
Baccalaureate Degree	22.1	60.7%	0.6	85.7%	22.7	61.2%
Masters Degree	2.0	5.5%	0.0	0.0%	2.0	5.4%
Doctoral Degree	<u>0.7</u>	<u>1.9%</u>	<u>0.0</u>	<u>0.0%</u>	<u>0.7</u>	<u>1.9%</u>
Total	36.4	100.0%	0.7	100.0%	37.1	100.0%

The mean number of months of health care experience (H.C.E.) of students at the time of enrollment for 1999-2000 is 45.4 months. As shown in Figure 19 (next page), the months of health care experience systematically increased from 1983 through 1992 to a high of 56 months. Since that time, H.C.E. has had an overall decrease to 45 months in 1999.

Figure 19. Trends in Health Care Experience of Enrollees: 1983 Through 1999



Academic Characteristics of Enrolled P.A. Students by Geographic Region

A comparison of the academic degrees earned by entering students across regions is shown in Table 63. The data are expressed as the percentage of students per program in each degree category. Each of the regions had more than 50% of students entering with a baccalaureate degree. The Eastern region had the largest number of enrollees with no degree (34%). The Western region had 2.1% of its enrollees with a doctoral degree.

Table 63. Academic Characteristics of Enrollees by Region, Class of 1999-2000

Geographic Region	N	Degree Characteristics					Total Mean
		No Degree	Associate Degree	Bacc. Degree	Masters Degree	Doctoral Degree	
Northeastern	20	26.1%	10.1%	58.7%	4.5%	0.6%	34.5
Eastern	16	34.3%	5.9%	53.0%	5.0%	1.8%	37.6
Southeastern	18	12.7%	8.4%	70.9%	6.2%	1.8%	40.7
Midwestern	23	11.4%	14.3%	61.7%	11.7%	0.9%	37.0
Heartland	11	24.3%	13.6%	57.5%	4.3%	0.3%	48.3
Western	16	18.0%	12.0%	58.0%	9.9%	2.1%	42.3
Total	104	19.4%	12.1%	61.2%	5.4%	1.9%	36.4

An analysis of grade point average (GPA) and mean number of months of health care experience by geographic region is shown in Table 64.

Table 64. Grade Point Average and Mean Number of Months of Health Care Experience by Region, Class of 1999-2000

Geographic Region	Grade Point Average			Months of H.C.E.		
	<u>N</u>	<u>Mean</u>	<u>S.D.</u>	<u>N</u>	<u>Mean</u>	<u>S.D.</u>
Northeastern	20	3.36	0.14	16	47.0	59.0
Eastern	16	3.39	0.20	15	47.6	20.5
Southeastern	17	3.40	0.10	16	48.0	23.0
Midwestern	21	3.41	0.18	21	48.0	29.0
Heartland	11	3.43	0.14	10	29.0	14.7
Western	<u>12</u>	<u>3.30</u>	<u>0.20</u>	<u>12</u>	<u>47.0</u>	<u>28.0</u>
Total	97	3.39	0.17	90	45.4	33.2

The cumulative GPA of entering students ranged from 3.30 to 3.43 with a mean of 3.39. Programs in the Heartland regions reported the highest GPA for entering students. The average number of months of health related experience prior to admission varied extensively across regions. For example, students in programs located in the Heartland region had completed an average of 29 months of health-related experience while those entering programs in the Southeastern and Midwestern regions had 48 months of health care experience. The average for all programs was under four years (45.4 months).

Unlicensed Medical Graduates: Applicants and Students Enrolled

The total number, mean number/program and proportion of unlicensed medical graduates (designated as UMG's) who applied to, and enrolled in, P.A. programs for the 1999-2000 class is shown in Table 65. The total number of UMG applications to P.A. programs decreased from 243 in 1998 to 170 in 1999. The number per program also decreased from 3.2/program in 1998 to 2.2/program in 1999. There were 26 programs that received applications from UMG's in 1999. Fifty-five percent of the applicants were U.S. Citizen UMG's.

Table 65. Admission of Unlicensed Medical Graduates
Class Entering in 1999-2000

Citizenship Status	Applied			Enrolled		
	<u>N(N)*</u>	<u>Mean**</u>	<u>%</u>	<u>N(N)*</u>	<u>Mean</u>	<u>%</u>
U.S. Citizen	93(20)	1.2	54.5%	43(15)	0.44	65.7%
Alien	<u>77(13)</u>	<u>1.0</u>	<u>45.5%</u>	<u>22(12)</u>	<u>0.23</u>	<u>34.3%</u>
Total**	170(26)	2.2	100.0%	65(12)	0.67	100.0%

* N = Number of UMG applicants or enrollees; (N) = Number of programs with at least one UMG applicant or enrollee.

** Mean based on the total number of programs responding, including those with no UMG applicants or enrollees

Sixty-five UMG's were enrolled in 1999, an increase from 27 enrollees in 1998. Thirty-eight percent of the UMG applicants were enrolled in a P.A. program in 1999, where only 11% were enrolled in 1998. This year, a higher percentage of U.S.-citizen UMG were admitted (46.2%) as compared to the alien UMG's (28.6%).

Unlicensed Medical Graduates: Regional Analysis

The mean number of UMG applicants and enrollees by geographic region is shown in Table 66. Programs located in the Western region received the largest number of UMG applications (mean of 4.90/program) while programs in the Heartland region averaged 0.04/program UMG applicants.

Table 66. Unlicensed Medical Graduate Applicants and Enrollees by Region, 1999-2000

Geographic Region	Applied		Enrolled	
	Mean	N	Mean	N
Northeastern	0.34	16	0.13	20
Eastern	1.32	12	0.51	14
Southeastern	0.53	15	0.60	17
Midwestern	0.64	17	0.44	19
Heartland	0.04	7	0.06	11
Western	<u>4.90</u>	<u>11</u>	<u>0.91</u>	<u>16</u>
Total	2.20	78	0.66	97

Programs in the Western region enrolled the largest proportion of UMG's enrolled (0.91/program/region) and those in the Heartland region had 0.06/program UMG's enrolled. With respect to the total applicant pool/program, UMG's accounted for only 0.9% (2.2/239) of all applicants and less than 1.8% (0.7/38) of all first-year enrollees in 1999.

The number and location of programs, by region, reporting no UMG applicants and/or enrollees for the most recently enrolled class are shown in Table 67. In total, there was a majority of programs that did not receive an application from an UMG (58/78; 74%) and a majority did not enroll an UMG (73/97; 75.2%) in the 1999-2000 class.

Table 67. Number of Programs Reporting No Applications and/or Enrollment of Unlicensed Medical Graduates by Region, 1999-2000

Geographic Region	Applied		Enrolled	
	N/N*	%	N/N*	%
Northeastern	13/16	81.3%	18/20	90.0%
Eastern	8/12	66.7%	9/14	63.6%
Southeastern	12/15	80.0%	11/17	64.7%
Midwestern	13/17	76.5%	15/19	78.9%
Heartland	7/ 7	100.0%	10/11	90.9%
Western	<u>5/11</u>	<u>45.5%</u>	<u>10/16</u>	<u>62.5%</u>
Total	58/78	74.4%	73/97	75.3%

* N/N = number of programs with no UMG's/total number of programs reporting.

Trends in UMG Applications and Enrollment, 1987 Through 1999

Data concerning UMG applicants and UMG students enrolled from 1987 through 1999 is shown in Table 68 (next page). The total number and mean number per program of UMG applicants and UMG students enrolled, as well as the proportion of UMG's relative to the total pool of UMG applicants and enrollees is presented for each year examined. In addition, the proportion of UMG applicants that were enrolled is also included. These data are also illustrated in Figures 20 and 21 (next page).

Table 68. Unlicensed Medical Graduates: Applicants and Enrollees, 1987 Through 1999

Academic Year	UMG Applications			UMG's Enrolled			% of UMG Applicants Enrolled
	Total N	Mean/Program	%*	Total N	Mean/Program	%*	
1987-1988	55	1.4	1.3%	17	0.40	1.4%	30.9%
1988-1989	142	3.6	3.4%	23	0.51	1.9%	16.2%
1989-1990	121	3.1	3.4%	18	0.39	1.5%	14.9%
1990-1991	73	1.6	1.5%	26	0.51	1.7%	35.6%
1991-1992	167	4.1	3.1%	18	0.40	1.2%	10.7%
1992-1993	161	2.9	1.4%	13	0.20	0.6%	8.1%
1993-1994	109	2.0	0.7%	12	0.20	0.5%	11.0%
1994-1995	143	3.0	0.8%	22	0.39	1.0%	15.4%
1995-1996	123	2.1	0.5%	24	0.33	1.0%	19.5%
1996-1997	217	3.3	0.8%	20	0.29	0.8%	9.2%
1997-1998	204	3.5	1.0%	37	0.40	1.0%	18.1%
1998-1999	243	3.2	1.1%	27	0.29	0.8%	11.1%
1999-2000	<u>170</u>	<u>2.2</u>	<u>0.9%</u>	<u>65</u>	<u>0.67</u>	<u>1.8%</u>	<u>38.2%</u>
13-Yr. Mean	148	2.8	1.5%	25	0.38	1.2%	18.4%

* Proportion of UMG's to total applicants and enrollees, respectively.

Overall there has been a total of 1,928 UMG applicants (averaging 148/year) over the thirteen-year period examined. UMG applicants accounted for an average of 1.5% of the total applicant pool. Over the same period of time, there were 322 UMG's enrolled (25/year) which accounted for 1.2% of the total number of students enrolled. On average, only 18.4% of the UMG applicants were enrolled. This is the first year since 1990 that there has been over 35% of the UMG applicants enrolled.

Figure 20. Trends in U.M.G. Applicants and Enrollees: 1987 Through 1999

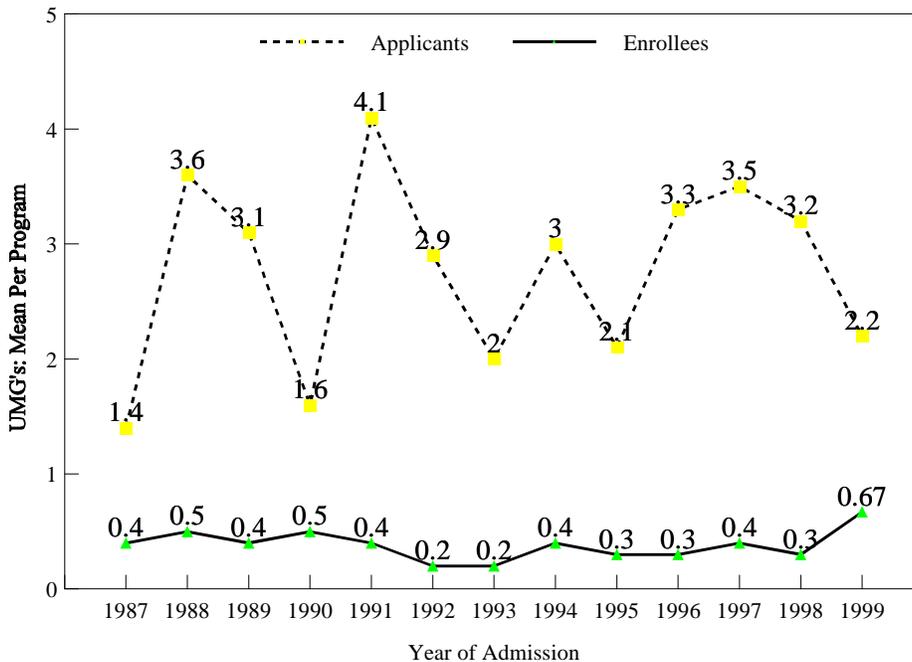
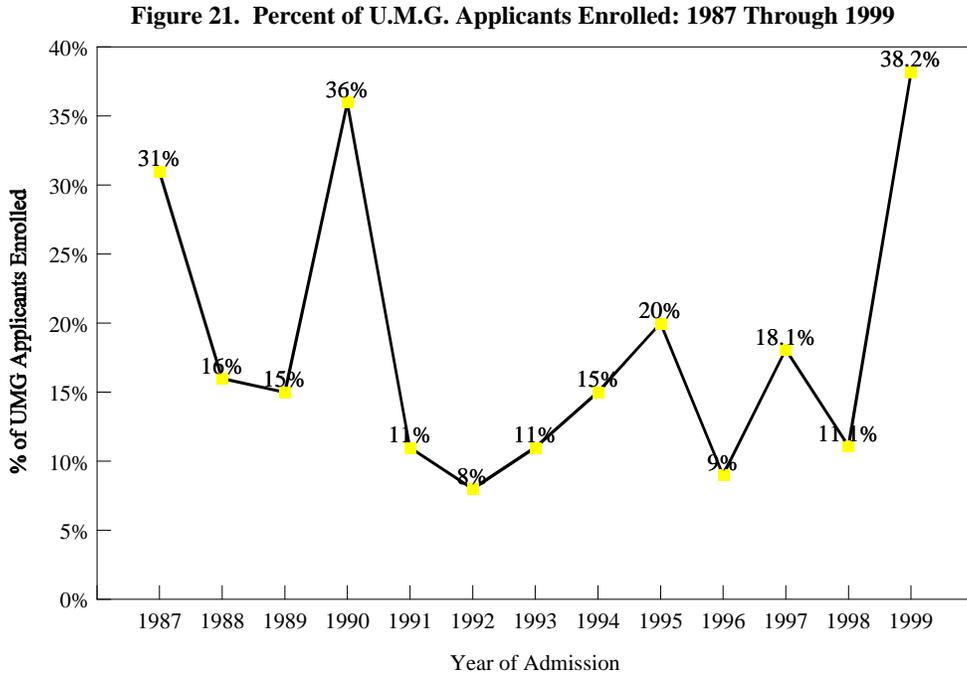


Figure 20 shows the mean number of UMG applicants and enrollees per program since 1987. Although the mean number of applicants has varied substantially over time, the mean number of UMG's enrolled per program has not fluctuated to the same extent. As shown in Figure 21, after a sharp decrease in the percent of UMG applicants enrolled in 1996, the percent of UMG applicants enrolled increased to 38.2% in 1999.



Disabled Students Enrolled in P.A. Programs

The number and proportion of students with a disability that were enrolled in the 1999-2000 class is presented in Table 69. The number and proportion of enrollees who were classified as disabled was very small for the entering class (approximately 1% of the total number of students enrolled).

Table 69. Enrollment of Disabled Students by Gender, 1999-2000

<u>Gender</u>	<u>1st Year Enrolled</u>		<u>Disabled</u>		<u>Number of Programs</u>
	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	
Male	1458	37.0%	12	33.3%	104
Female	<u>2481</u>	<u>63.0%</u>	<u>24</u>	<u>66.7%</u>	<u>104</u>
Total	3939	100.0%	36	100.0%	104

There were approximately 100% more disabled female students than disabled male students. It should be noted that some students may have had an undetectable disability, thus, the figures reported herein may under-represent the actual number of disabled individuals.

SECTION IV. GRADUATE INFORMATION

Number and Attrition of Students by Gender

The number and gender of students graduating during the 1999-2000 academic year, and those withdrawing and decelerating prior to graduation, are shown in Table 70. The mean number of 1999 graduates was 35.7/program and represented 94% of the students originally enrolled in this class. We estimate that there were a total of 3,712

Table 70. Number of Graduates and Students Withdrawn or Decelerated in 1999-2000 by Gender

<u>Gender</u>	<u>Number Graduated</u>		<u>Attrition of Students</u>		<u>Students Decelerated</u>	
	<u>Mean</u>	<u>%</u>	<u>Mean</u>	<u>%</u>	<u>Mean</u>	<u>%</u>
Female	22.7	94.2%	0.9	3.7%	0.5	2.1%
Male	13.0	92.9%	0.6	4.3%	0.4	2.9%
Total/Program	35.7	93.7%	1.5	3.9%	0.9	2.4%

* Proportion withdrawing or decelerating was calculated as:

$$\frac{\sum_{p=1}^N (G_p W_p \text{ or } D_p)}{\sum_{p=1}^N (G_p + W_p + D_p)}$$

where: G_p = number graduated from program "p".
 W_p = number withdrew from program "p".
 D_p = number decelerated from program "p".

P.A.'s graduated from all programs graduating class in 1999 (104 programs x 35.7/program). It should be noted that sixteen of the new programs did not graduate students in 1999. Our estimated value for 1999 graduates was similar to the number reported as takers of the 1999 National Certifying Examination (i.e., N=3,675). As in previous years, the majority (64%) of 1999 graduates were women.

The mean number of students withdrawing prior to graduation was 1.5 students/program for an overall attrition rate of 3.9%. The attrition rate for females was lower than the attrition rate for males, 3.7% and 4.3% respectively. The attrition rate was lower than in 1998 (4.3%) and considerably lower than the average of 8.2% over the previous sixteen years.

On average, the rate of deceleration was 2.4%. A decelerated student was defined as one who was enrolled, experienced academic, personal, and/or financial difficulty, but remained a student in the program on a part-time basis and/or was on a temporary leave of absence. The reasons cited for withdrawal are presented in Table 71. There were a total of 129 students withdrawing from the 1999 graduating class (as reported by 51 programs). The most common reasons for withdrawal were academic (51%) and personal (36%). It should be noted that the reasons cited for withdrawal were provided by program staff, rather than the students involved.

Table 71. Reasons for Student Withdrawal from the Program

<u>Reason Given</u>	<u>N</u>	<u>(%)</u>	<u>Reason Given</u>	<u>N</u>	<u>(%)</u>
Academic	66	51.2%	Career Change	4	3.1%
Personal	47	36.4%	Medical	4	3.1%
Financial	1	0.8%	Other	7	5.4%
			Total	129	100.0%

Attrition Rates of Students by Geographic Region

The mean number of graduates, attrition rates, and students decelerated by geographic region are shown in Table 72. Programs in the Heartland region had the largest graduating classes with a mean of 41.9 students per program, while programs in the Southeastern and Midwestern regions had smaller graduating classes

Table 72. Number Graduated, Withdrawn and Decelerated by Geographic Region

<u>Geographic Region</u>	<u>N</u>	<u>Mean # Graduated</u>	<u>Mean and Rate of Attrition</u>		<u>Mean and Rate of Deceleration</u>	
Northeastern	16	34.3	2.2	5.9%	0.5	1.4%
Eastern	13	37.9	2.0	4.8%	1.7	4.1%
Southeastern	14	32.6	1.2	3.5%	0.6	1.7%
Midwestern	21	32.7	1.2	3.4%	1.0	2.9%
Heartland	8	41.9	1.8	4.0%	1.4	3.1%
Western	<u>12</u>	<u>40.3</u>	<u>1.0</u>	<u>2.4%</u>	<u>0.5</u>	<u>1.2%</u>
Total	84	35.7	1.5	3.9%	0.9	2.4%

(32.6/program and 32.7/program, respectively). The highest attrition rates occurred in those programs located in the Northeastern region (5.9%) while programs in the Western region had the lowest attrition rates (2.4%). In comparison to the previous year, the number graduated/program in 1999 has decreased (2.7%). The rate of attrition increased in two of the six regions (Northeastern and Southeastern); whereas deceleration increased in three regions (Eastern, Southeastern and Midwestern). Programs in the Eastern region reported the largest rate of deceleration (4.1%), while programs in the Western region had the lowest rate of deceleration (1.2%).

The reasons for withdrawal by region are shown in Table 73. Programs in the Eastern region had the highest percentage of students withdraw for academic reasons (70.4%) while programs in the Southeastern region cited academic reasons for withdrawal 27.8% of the time. In the Western region, 60% of the programs cited personal reasons for student withdrawal as compared with 18.5% in the Eastern region.

Table 73. Reasons for Withdrawal by Geographic Region

<u>Geographic Region</u>	<u>Reasons for Withdrawal from Program</u>						<u>Total</u>
	<u>Academic</u>		<u>Personal</u>		<u>Other</u>		
	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	
Northeastern	19	54.3%	13	37.1%	3	8.6%	35
Eastern	19	70.4%	5	18.5%	3	11.1%	27
Southeastern	5	27.8%	9	50.0%	4	22.2%	18
Midwestern	15	60.0%	8	32.0%	2	8.0%	25
Heartland	5	35.7%	6	42.9%	3	21.4%	14
Western	<u>3</u>	<u>30.0%</u>	<u>6</u>	<u>60.0%</u>	<u>1</u>	<u>10.0%</u>	<u>10</u>
Total	66	51.2%	47	36.4%	16	12.4%	129

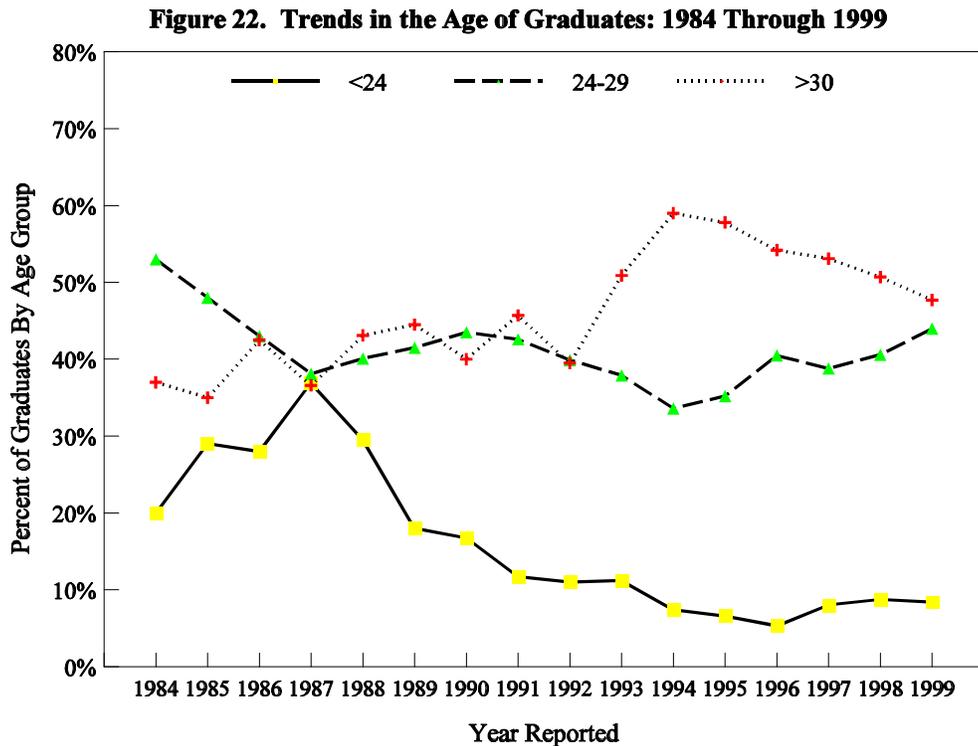
Graduation, Attrition, and Deceleration of Students by Age

The mean number of graduates, attrition rates, and students decelerated for each age category is shown in Table 74. More than one-fourth (31.1%) of the graduates were between the ages of 20 and 26 upon graduation; 47.7% were 30 years of age or older and none were under the age of 20. Attrition was highest for those between 20 and 23 years of age; lowest for those between 24 and 29. Deceleration rates were highest for students over 33 years of age and least for those between 24 and 29 years.

Table 74. Number Graduated, Decelerated and Attrition Rates of 1999 Graduates by Age

<u>Age at Graduation</u>	<u>N</u>	<u>Number Graduated</u>		<u>Withdrew Prior to Graduation</u>		<u>Attrition Rate</u>	<u>Students Decelerated</u>	
		<u>Mean</u>	<u>%</u>	<u>Mean</u>	<u>%</u>	<u>%</u>	<u>Mean</u>	<u>Rate</u>
Under 20	80	0.0	0.0%	0.0	0.0%	0.0%	0.0	0.0%
20-23	80	3.0	8.4%	0.3	20.0%	8.8%	0.1	2.9%
24-26	80	8.1	22.7%	0.2	13.3%	2.4%	0.1	1.2%
27-29	80	7.6	21.3%	0.2	13.3%	2.5%	0.1	1.3%
30-33	80	6.2	17.4%	0.2	13.3%	3.1%	0.1	1.5%
Over 33	80	10.8	30.3%	0.6	40.0%	5.1%	0.4	3.4%
Total/Program	80	35.7	100%	1.5	100.0%	3.9%	0.9	2.4%

Figure 22 shows the trends in age from 1984 through 1999. The proportion of recent graduates in the youngest age group (<24) has generally decreased over time, with a slight increase over the previous three years. Conversely, the middle age group (24 - 29) has increased 31% since 1994. The graduates in the older age group (>30) has decreased 19% since 1994.



The mean number of graduates, withdrawals, decelerated students and attrition rates for the 1999 graduating class by ethnicity is shown in Table 75. The majority of the recent graduates were White/Non-Hispanic (81.4%) and less than one-fifth (18.6%) were minorities.

Table 75. Number and Attrition Rates of 1999 Graduates by Ethnicity

Ethnicity	N	Mean Number Graduated		Withdrew Prior to Graduation		Attrition Rate	Students Decelerated	
		Mean	%	Mean	%	%	Mean	Rate
White/Non-Hispanic	84	29.0	81.4%	1.2	75.0%	3.9%	0.7	2.3%
Black/African-Amer.	84	1.9	5.3%	0.2	12.5%	9.1%	0.1	4.5%
Latino/Hispanic/Mex. Am.	84	1.7	4.8%	0.1	6.3%	5.6%	0.0	0.0%
Asian	84	2.0	5.6%	0.1	6.3%	4.5%	0.1	4.5%
Asian Subpopulations	84	0.1	0.3%	0.0	0.0%	0.0%	0.0	0.0%
Native Haw./Other P.I.	84	0.4	1.1%	0.0	0.0%	0.0%	0.0	0.0%
American Ind./Alaskan	84	0.1	0.3%	0.0	0.0%	0.0%	0.0	0.0%
Other	84	0.4	1.1%	0.0	0.0%	0.0%	0.0	0.0%
Total/Program	84	35.7	100.0%	1.5	100.0%	3.9%	0.9	2.4%

Within the minority groups graduating, 28.8% were Black/African-American, 25.8% were Latino/Hispanics, 30.3% were Asian, 6.1% were Native Hawaiian/Other Pacific Islander, and the remainder were classified as Asian Subpopulation, Alaskan/Native American or Other. Fifty-five percent (N=46) of the 84 programs reported at least one Black/African-American among their 1999 graduates. Forty-two (50%) programs also graduated at least one Latino/Hispanic.

The Black/African-American students had the highest rate of attrition (9.1%), followed by Latino/Hispanic students (5.6%). The White/Non-Hispanics had an attrition rate of 3.9%. Proportionately, minority students were more likely to be decelerated, particularly the Black/African-American and Asian students (4.5%) as compared to White students (2.3%).

Trends in Student Attrition: 1984 Through 1999

Figure 23 (next page) shows the relative attrition rates from 1984 through 1999 for all students and for white and non-white students. Attrition rates have averaged 8.2% over the past sixteen years, ranging from a high of 14% in 1988 to a low of 3.9% in 1999. The 1999 attrition rate for white students was 3.9% and 5.6% for non-white students, the latter represents a decrease from 1998. Before 1990, decelerated students were included in the attrition rates. If decelerated students were included this year, the adjusted attrition rate would be 6.3%. The rate of attrition has been over twice as high for non-white students, averaging 15.2% as compared to 6.9% for white students.

Sex and Ethnicity of 1999 P.A. Graduates by Geographic Region

The mean number and proportion of 1999 graduates by gender, ethnicity, and geographic region are shown in Table 76 (next page). Proportionately, more minority students graduated from programs in the Western region (33%) than from programs located in the Midwestern region (9.0%). The Western and Northeastern regions had the highest proportion of male graduates (42%) and the Midwestern region the highest proportion of female graduates (71%).

Figure 23: Trends in Student Attrition: 1984 Through 1999

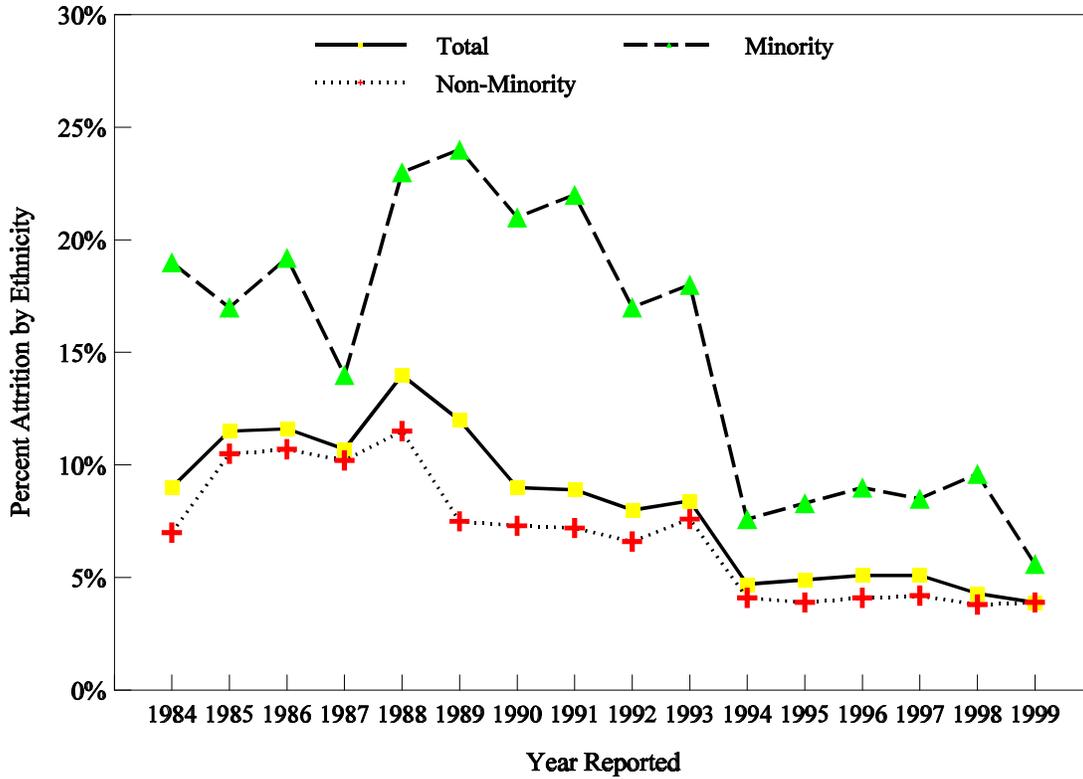


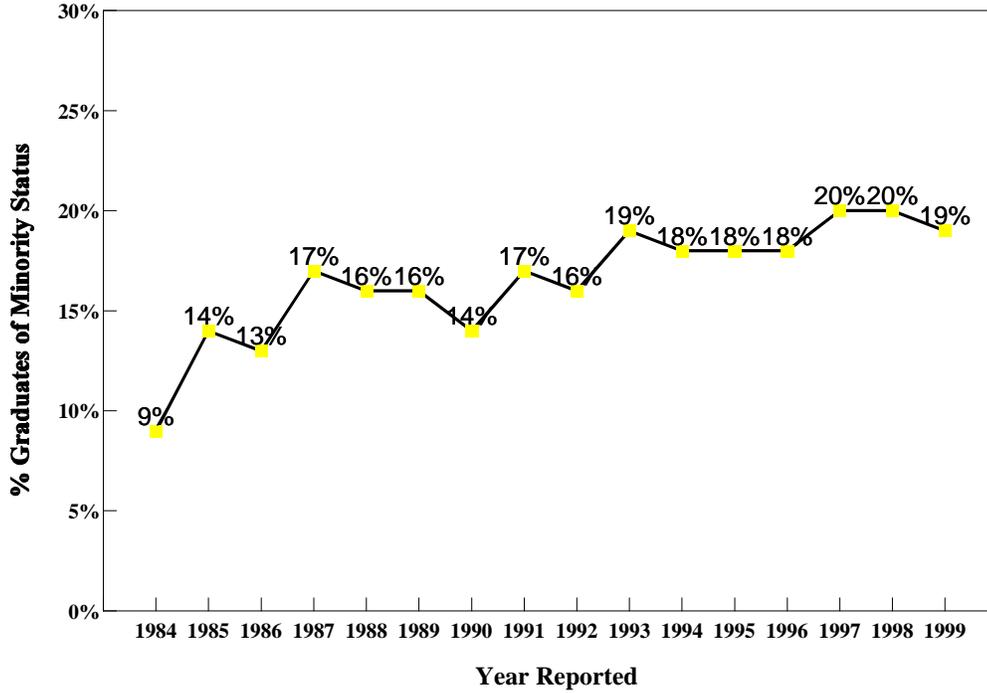
Table 76. 1999 Graduates by Sex, Ethnicity, and Geographic Region

Geographic Region	N	Mean # of Graduates	Gender		Ethnicity				
			Male	Female	White	Black	Hispanic	Asian	Other
Northeastern	16	34.3	42.0%	58.0%	77.2%	6.8%	5.5%	8.8%	1.7%
Eastern	13	37.9	33.9%	66.1%	83.8%	6.9%	1.6%	3.7%	4.0%
Southeastern	14	32.6	36.6%	63.4%	84.2%	5.0%	3.9%	3.7%	3.2%
Midwestern	21	32.7	29.2%	70.8%	91.0%	1.5%	2.0%	2.2%	3.3%
Heartland	8	41.9	37.9%	62.1%	80.9%	3.9%	6.9%	6.0%	2.3%
Western	12	40.3	42.2%	57.8%	66.7%	8.3%	11.0%	7.0%	7.0%
Total	84	35.7	36.5%	63.5%	81.2%	5.2%	4.9%	5.7%	3.0%

Trends in the Graduation of Minorities

The graduation of minority P.A.'s has been monitored since 1984. Figure 24 (next page) shows the proportion of non-white P.A. graduates over the past sixteen years. During the sixteen-year period for which data was available, the graduation of non-white students averaged 16.5%, ranging from a high of 19.7% in 1998 to a low of 9.0% in 1984. The reader is referred to Figure 18 concerning enrollment of minority students which, over the past seventeen years, has averaged 20% (Table 61).

Figure 24. Trends in Minority P.A. Graduates: 1984 Through 1999



Employment Status of 1999 P.A. Graduates

A summary of the employment status of the recent graduates, as reported by 77 programs, is shown in Table 77. It should be noted that the time elapsed between a program's graduation date and the date the survey was completed varied.

Table 77. Employment Characteristics of 1999 P.A. Graduates

<u>Employment Status</u>	<u>Mean Number Per Program</u>	<u>S.D.</u>	<u>Relative Frequency</u>
Employed:			
As a P.A.	27.0	13.1	73.2%
Not as a P.A.	0.4	0.8	1.1%
Unemployed	3.6	4.2	9.8%
Continued with Education	0.2	0.8	0.5%
Unknown	<u>5.7</u>	<u>8.8</u>	<u>15.4%</u>
Total (N=77)	36.9	23.1	100.0%

The majority (73.2%) of recent graduates were employed as a physician assistant, a 3.5% increase from 1998 graduates (70.7%). Over one-fourth of the graduates were either unemployed or their employment status was unknown, 17% less than last year (30.4%).

Number of Recent Graduates by State

The number of 1999 graduates, by state, is shown in Table 78 and includes the number of programs reporting from each state. Those states with the largest number of programs are those with the largest number of graduates, e.g., CA, NY, PA, TX. A total of 2,972 students from 82 programs completed their training in 1999. However, if we consider all programs that graduated P.A.'s in 1999 (i.e., 104 programs) we estimate that the total number of graduates would be approximately 3,713 (104 x 35.7).

Table 78. Number of 1999 Graduates by State

<u>State</u>	<u>Number Prog.</u>	<u>Number Grads</u>	<u>State</u>	<u>Number Prog.</u>	<u>Number Grads</u>	<u>State</u>	<u>Number Prog.</u>	<u>Number Grads</u>
AL	2	53	KS	1	43	OH	3	73
AZ	1	39	MA	1	30	OK	1	50
CA	5	269	MD	1	26	PA	10	381
CO	1	24	MI	5	169	SC	1	30
CT	2	66	MO	1	30	SD	1	13
DC	2	86	MN	1	26	TN	1	26
FL	2	86	MT	1	19	TX	5	204
GA	2	83	NC	4	120	UT	1	32
IA	2	55	ND	1	80	WA	1	72
ID	1	20	NE	1	38	WV	1	37
IL	2	128	NJ	2	71	WI	<u>3</u>	<u>69</u>
IN	2	43	NY	11	381			
Total							82	2972

1999 Program Graduates: Employment Status by Geographic Region

The employment of recent graduates varied depending on the region where their program was located. Employment data are shown in Table 79. Programs located in the Northeastern region reported that over 80% of their 1999 graduates had secured employment at the time the program reported. Programs in the Eastern region had the lowest proportion of graduates employed (59.2%). The overall proportion of recent graduates who were unemployed, including the "Other" category, averaged 26% across the regions.

Table 79. Employment Characteristics of 1999 Graduates by Geographic Region

<u>Geographic Region</u>	<u>N</u>	<u>Employed</u>		<u>Unemployed</u>		<u>Other</u>		<u>Total Mean</u>
		<u>Mean</u>	<u>%</u>	<u>Mean</u>	<u>%</u>	<u>Mean</u>	<u>%</u>	
Northeastern	16	28.4	82.8%	3.4	9.9%	5.9	17.2%	34.3
Eastern	9	22.9	59.2%	3.9	10.1%	11.9	30.7%	38.7
Southeastern	12	27.1	79.7%	3.1	9.1%	3.8	11.2%	34.0
Midwestern	20	23.9	78.9%	2.5	8.3%	3.9	12.9%	30.3
Heartland	8	44.5	79.6%	3.9	7.0%	7.5	13.4%	55.9
Western	<u>12</u>	<u>25.7</u>	<u>63.8%</u>	<u>6.3</u>	<u>15.6%</u>	<u>8.3</u>	<u>20.6%</u>	<u>40.3</u>
Total	77	27.4	74.3%	3.6	9.8%	5.9	16.0%	36.9

Trends in Medical Specialty Selection of Recent Graduates, 1985 Through 1999

A comparison of the employment of recent graduates in primary and non-primary care medicine from 1985 through 1999 is shown in Table 80 and illustrated in Figure 25 (primary care includes F.M., G.I.M., Ob/Gyn, Peds)(next page). From 1985 through 1989 there was an overall decrease in the proportion of graduates entering primary care practice, from 60% in 1985 to a low of 48% in 1989, a decline averaging 3.8% per year. In the past ten years an average of 56% of the graduates have selected primary care medical specialties and the overall fifteen-year mean is 55.9%.

Table 80. Employment of Recent Graduates in Primary and Non-Primary Care Medicine, 1985 Through 1999

Academic Year	Primary Care		Non-Primary Care		Total	
	N	%	N	%	N	%
1985-1986	399	59.9%	278	41.1%	677	100%
1986-1987	404	55.6%	322	44.4%	726	100%
1987-1988	418	56.4%	323	43.6%	741	100%
1988-1989	422	52.2%	387	47.8%	809	100%
1989-1990	398	48.2%	427	51.8%	825	100%
1990-1991	508	58.1%	367	41.9%	875	100%
1991-1992	511	53.5%	444	46.5%	955	100%
1992-1993	674	55.7%	537	44.3%	1211	100%
1993-1994	826	58.0%	597	42.0%	1423	100%
1994-1995	852	55.5%	684	44.5%	1536	100%
1995-1996	817	52.2%	702	44.8%	1566	100%
1996-1997	970	62.3%	588	37.7%	1558	100%
1997-1998	1046	56.9%	792	43.1%	1838	100%
1998-1999	1113	54.5%	928	45.5%	2041	100%
<u>1999-2000</u>	<u>1176</u>	<u>53.7%</u>	<u>1015</u>	<u>46.3%</u>	<u>2191</u>	<u>100%</u>
15-Yr. Mean	687	55.9%	543	44.1%	1230	100%

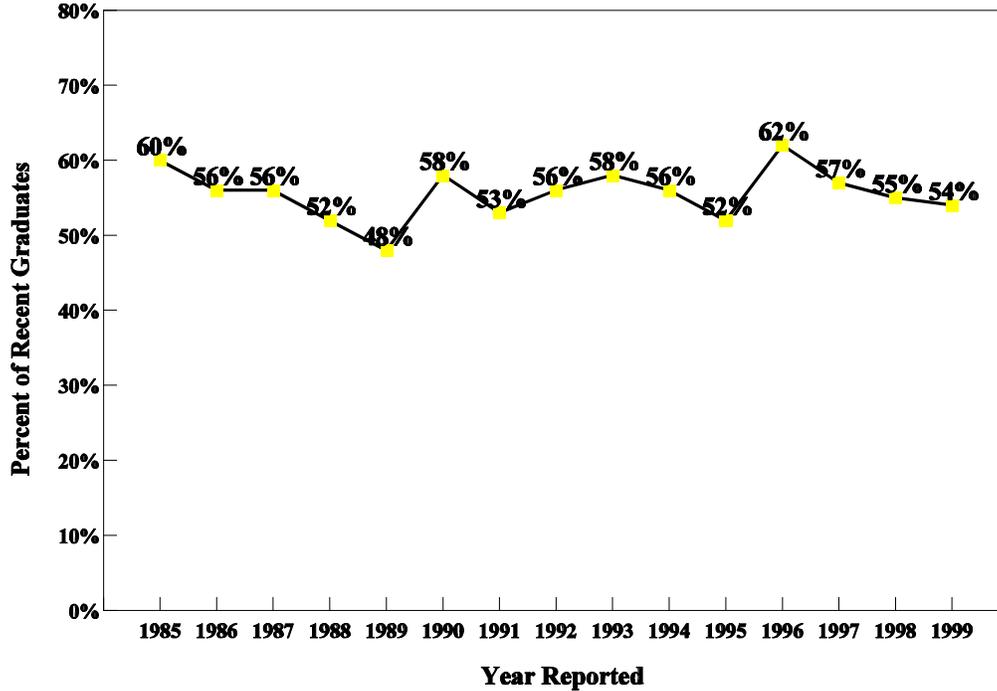
Employment of Recent Graduates in Primary and Non-Primary Care by Geographic Region

The relative proportion of 1999 graduates entering primary and non-primary care medical specialties by region is shown in Table 81. Graduates from programs in the Heartland region had the highest level of employment in primary care medical specialties (87.3%). Graduates from the Northeastern region had the highest level of employment in non-primary care specialties (46.7%).

Table 81. Employment of 1999 Graduates in Primary and Non-Primary Care Medicine by Geographic Region

Geographic Region	N	Primary Care		Non-Primary Care	
		Mean	%	Mean	%
Northeastern	16	10.6	53.3%	9.3	46.7%
Eastern	9	10.2	56.0%	8.0	44.0%
Southeastern	12	12.1	59.3%	8.3	40.7%
Midwestern	19	15.7	73.4%	5.7	26.6%
Heartland	8	34.5	87.3%	5.0	12.7%
Western	<u>12</u>	<u>17.7</u>	<u>75.3%</u>	<u>5.8</u>	<u>24.7%</u>
Total	76	15.7	68.9%	7.1	31.1%

Figure 25. Recent Graduate Employment in Primary Care: 1985 Through 1999



The distribution of recent graduates selecting primary care medical specialties from 1990 through 1999 is shown in Table 82. Over the period analyzed, family medicine and general internal medicine remained the primary care specialties of choice, with family medicine increasing and general internal medicine decreasing, over time. The ten-year average was 73% for family medicine and 15.9% for general internal medicine. The selection of both obstetrics and gynecology and pediatrics also varied over time, ranging from 3.1% to 8.9% and 4.6% to 8.4%, respectively.

Table 82. Trends in the Primary Care Medical Specialty Selection of Recent Graduates, 1990 Through 1998

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Clinical	(48)	(47)	(51)	(53)	(48)	(56)	(57)	(68)	(74)	(77)*
<u>Specialty</u>	<u>%</u>									
Fam Md	68.5	72.2	71.1	71.0	76.0	75.4	73.1	73.2	75.1	74.9
Int Med	16.6	14.3	16.3	15.1	16.0	15.4	16.9	17.7	16.3	14.8
Gen Ped	6.1	5.9	5.9	8.4	4.6	5.2	6.4	5.3	5.6	6.8
Ob/Gyn	8.9	7.6	6.7	5.5	3.4	3.1	3.6	3.8	3.0	3.4

* Number of Programs responding

Trends in the graduates' selection of non-primary care medicine over the past ten years shown in Table 83 (next page). Surgery (plus sub-specialties) and medicine specialties accounted for the majority of positions (54.7%) selected by recent graduates in non-primary care. Employment in psychiatry by recent graduates increased to 3.3% in 1999; the highest percentage since 1987.

Table 83. Trends in the Non-Primary Care Medical Specialty Selection of Recent Graduates, 1990 Through 1999

	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>
Clinical	(48)	(47)	(51)	(53)	(48)	(56)	(57)	(68)	(74)	(77)
<u>Specialty</u>	<u>%</u>									
Surgery	50.1	57.7	47.4	36.2	35.5	33.0	34.1	35.1	36.2	31.4
Med	25.3	20.4	22.6	35.4	25.1	29.4	30.6	29.1	28.4	23.3
Em Med	19.3	19.4	25.6	23.1	37.0	33.2	28.7	32.3	33.3	37.7
Psych.	1.9	1.2	1.6	0.9	1.1	0.8	1.0	1.5	0.7	3.3
Ind Med	3.3	1.5	2.8	4.4	1.3	3.6	5.6	2.0	1.4	4.3

A list of the specific internal medicine subspecialties selected by 1999 graduates is shown in Table 84, along with the number of graduates and programs represented. A total of 306 recent graduates from seventy-two programs were employed among the subspecialties. It should be noted that one of the armed services programs defined their graduate employment as "military medicine". Otherwise, the largest number of recent graduates selected cardiology (n=46; 28 programs) and oncology (n=26; 21 programs).

Table 84. Internal Medicine Subspecialties Selected by 1999 Graduates

<u>Medical Area</u>	<u># of Graduates</u>	<u># of Programs</u>	<u>Medical Area</u>	<u># of Graduates</u>	<u># of Programs</u>
Military Medicine	171	1	Dermatology	3	2
Cardiology	46	28	AIDS/Inf. Diseases	3	3
Oncology	26	21	Other	<u>50</u>	<u>36</u>
Gastroenterology	7	6	Total	306	72

A list of surgical subspecialties selected by the recent graduates is in Table 85. A total of 170 recent graduates from seventy P.A. programs selected surgical sub-specialty areas as their first position. Proportionately, these graduates were employed most commonly in cardiovascular/cardiothoracic surgery (n=62; 36%) and neurosurgery (n=37; 22%).

Table 85. Surgical Subspecialties Selected by 1999 Graduates

<u>Surgical Area</u>	<u>Number of Graduates</u>	<u>Number of Programs</u>	<u>Surgical Area</u>	<u>Number of Graduates</u>	<u>Number of Programs</u>
CV/CT	62	31	Plastic	4	3
Neurosurgery	37	24	Organ Transplant	2	2
Orthopedics	5	2	Other Surg. Spec.	<u>60</u>	<u>14</u>
			Total	170	70

Medical Specialty Selection of Recent Graduates by Geographic Region

A comparison of medical specialty selection of recent graduates by geographic region is shown in Table 86 (next page). The data are presented as the mean number of recent graduates per program employed in each area. Medical specialties in which the largest proportion of recent graduates were employed is shown and include, family medicine, internal medicine (including subspecialties), and surgery (including subspecialties).

Table 86. Medical Specialties Selected by 1999 Graduates by Geographic Region

<u>Geographic Region</u>	<u>N</u>	<u>Family Medicine</u>		<u>Internal Medicine*</u>		<u>Surgery*</u>	
		<u>Mean</u>	<u>%</u>	<u>Mean</u>	<u>%</u>	<u>Mean</u>	<u>%</u>
Northeastern	16	5.3	37.6%	5.3	37.6%	3.5	24.8%
Eastern	9	7.6	58.0%	3.4	26.0%	2.1	16.0%
Southeastern	12	7.4	44.8%	5.8	35.2%	3.3	20.0%
Midwestern	20	11.3	61.7%	3.6	19.7%	3.4	18.6%
Heartland	8	32.0	83.1%	3.6	9.4%	2.9	7.5%
Western	<u>12</u>	<u>14.3</u>	<u>82.2%</u>	<u>2.5</u>	<u>14.4%</u>	<u>0.6</u>	<u>3.4%</u>
Total	77	11.6	63.4%	4.1	22.4%	2.6	14.2%

* Includes the sub-specialties

Note, the "other" category is not included in the table. Graduates from the Heartland region selected family medicine preferentially (83.1%) and those from the Northeastern region had the least percentage entering family medicine (37.6%). Conversely, graduates from programs in the Northeast selected surgery (24.8%) and internal medicine (37.6%) more frequently than did graduates from other regions.

Regional Variation and Trends in New Graduate Starting Salaries

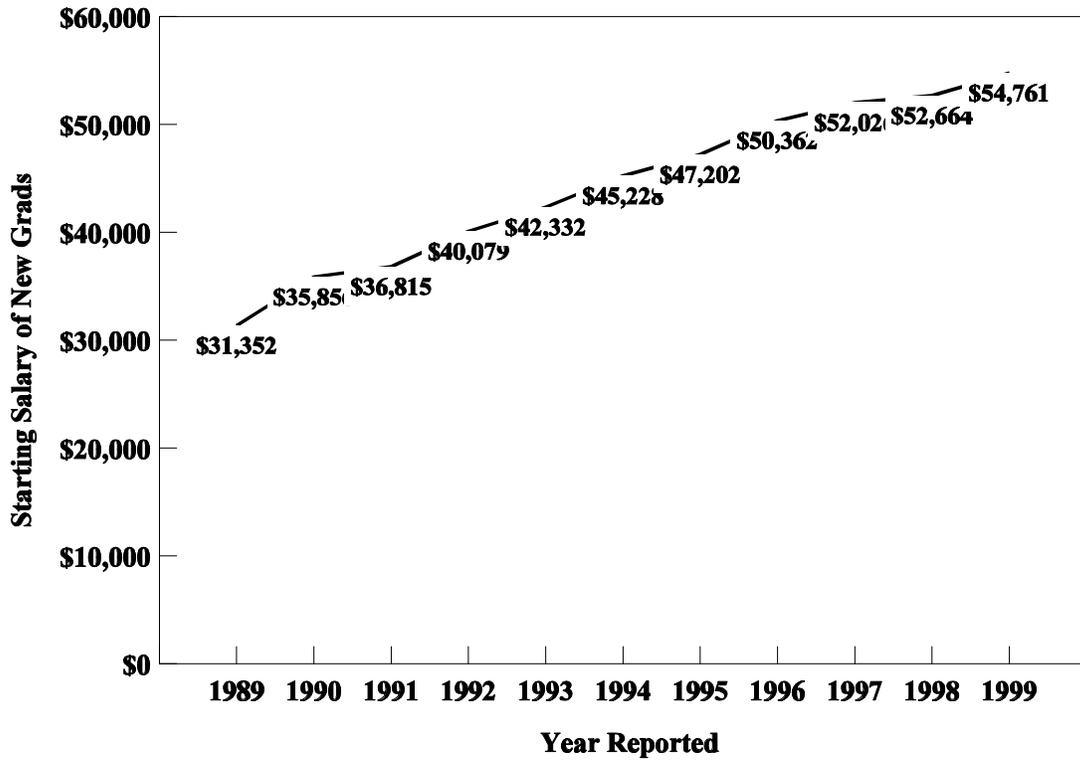
Table 87 shows the estimated starting salary of recent graduates in 1999 by region. The overall average was \$54,761, an increase of 4% from the 1998 average of \$52,664. Salaries were above \$52,000 for those graduates from programs located in all but the Eastern region. The median starting salary was highest for those graduates from programs located in the Southeast.

Table 87. Program Directors' Perceptions of Starting Salaries for P.A. Graduates by Geographic Region

<u>Geographic Region</u>	<u>N</u>	<u>Mean</u>	<u>Median</u>	<u>Change from 1998</u>
Northeastern	14	\$55,821	\$55,000	+ 0.6%
Eastern	6	\$50,917	\$48,500	+ 0.3%
Southeastern	10	\$57,314	\$55,369	+ 4.6%
Midwestern	18	\$56,026	\$55,000	+ 4.9%
Heartland	7	\$52,407	\$54,000	+ 1.7%
Western	<u>10</u>	<u>\$52,400</u>	<u>\$50,000</u>	<u>+ 1.7%</u>
Total	65	\$54,761	\$55,000	+ 4.0%

Salaries of graduates from programs located in the Midwestern region marked the greatest increase from 1998 (4.9%), while programs in the Eastern region reported an increase of 0.3% from 1998. These data are also shown in Figure 26 (next page). Thus, starting salaries have increased each year by an average of 5.8% and there has been an overall increase in salaries of 75% since 1989.

Figure 26. Trends in Starting Salary for New Graduates: 1989 Through 1999



SUMMARY AND CONCLUSIONS

This report presents an update of physician assistant educational programs in the United States for the 1999-2000 academic year. This is the sixteenth annual report to be published since 1984 and is based upon data drawn from the 1999 national survey of P.A. programs and includes APAP member programs and those enrolling students for the first time in 1999. Two surveys were administered. Survey #1 was mailed in October to 120 programs. The response rate for survey #1 was 87.5% (105 programs). The second survey was mailed in November, with a return of eighty-four surveys. Highlights of the findings are provided in this summary and includes a description of the "typical" P.A. program. Comparisons were also made across programs by geographic region.

As we have data extending from 1984, we were able to also examine trends which have occurred over the past fifteen years for certain variables. Trends were analyzed relative to program budget and student expenses, personnel salaries and turnover, curriculum and interdisciplinary education, applicant, student and graduate characteristics, and salaries for recent graduates.

SECTION I. General Characteristics of P.A. Programs

The majority of programs (N=105; 87.5%) were associated with either a University or 4-year College and most (N=57; 47.5%) awarded graduates a baccalaureate degree; forty-three programs awarded a master's degree; the remainder awarded either an associate degree or only a certificate of completion. The majority (N=69; 57.5%) of the current P.A. Programs were established since 1989; thirty-six percent of the programs were established in the period 1969 through 1976, an average of 5.5 programs/year. From 1977 through 1988 (12 years) only three new programs were developed. The "typical" P.A. curriculum was 26.1 months in length and ranged from 12 to 51 months. The majority of programs graduated their seniors over two periods, between May-June (N=40) and August-September (N=56).

P.A. programs received the majority of their financial support from the sponsoring institution, averaging \$466,641 (62% of the budget) and federal training grants, averaging \$150,111 (20% of the budget). Thirty-six programs (35%) reported they received federal training grant support in 1999-2000. The average cost per program to educate a P.A. student was estimated to be \$9,869/student/year, a figure derived by dividing the total budget by the total number of students enrolled. This value does not include other costs, for example, clinical preceptors and other educators whose wages are not included in the program's budget. Programs located in the Western region had the highest total budget (\$1,104,850 per program). Programs located in the Northeastern region had the highest level of federal training grant support (\$181,000 per program). Programs in the Eastern region had the lowest total budget, averaging \$538,951 per program. Programs in the Heartland region had the lowest level of federal training grant support (\$100,000).

The typical resident student paid an average of \$28,840 for tuition, books, fees, and equipment for their entire professional education in a P.A. program, the non-resident student paid \$35,434. Eighty-four percent of the students received financial aid averaging \$15,909 per student per year. Students enrolled in programs located in the Eastern region had the highest resident tuition (\$34,159/student/curriculum), while programs in the Heartland region had the lowest resident tuition (\$13,452/student/curriculum).

Eighty-nine percent of the students in programs located in the Southeastern region received financial aid, while 80% of the students in the Midwestern region received financial aid. For all students enrolled in 1999, only 1.1% (1st year students) and 1.5% (2nd year students) were awarded support from any of the several types of Public Health Service Corps Scholarships.

Trends from 1984 Through 1999

Total program budget increased an average of 7.2% annually from 1984 through 1999, a total increase of 173% over the past sixteen years. During this period, institutional support for the typical program increased an average of 7.2% per year, while federal training grant support remained relatively unchanged (16 year mean=\$150,111) and accounted for an average of 29% of the total program budget (41% in 1985 down to 20% in 1999). Since 1984, both tuition and total student expenses have increased by over 250% while the proportion of students

receiving financial assistance has increased to 84%. Since 1986, the amount of financial aid provided to students has increased by almost 312%, from \$3,866/student/year to \$15,909/student/year in 1999.

SECTION II. Program Personnel

In order to conduct an analysis of P.A. program personnel, the faculty and staff were divided into three major groups as follows: (1) program directors, (2) medical directors and (3) those faculty and staff associated with the educational and/or administrative aspects of the program (referred herein as program personnel). The latter group was subdivided on the basis of whether they were P.A.'s or non-P.A.'s and organized across four categories (I, II, III, IV) based on job titles and program responsibilities.

The typical P.A. program employed one medical (0.32) and one program director (0.96) and, on average, 4.5 P.A. credentialed and 0.8 non-P.A. faculty, and 2.7 Category IV personnel. Thus, the "core" personnel for the typical program amounted to approximately 9.28 FTE's including clerical and/or other types of support personnel. General characteristics were reported for directors and program faculty and staff, including, percent time working with the program, months in position, annual salary, highest degree held, academic classification and tenure track status, gender, and ethnicity. Annual salary was shown to vary by job category, geographic region, gender, ethnicity, academic classification, and highest degree held.

In comparison to the Category I - III personnel data gathered in 1998-1999, salaries for P.A. program personnel increased by 4.2% and 4.5% for non-P.A.'s. Eighty-seven percent of the P.A. and 56% of the non-P.A. personnel were classified as faculty. Twenty-four percent were on a tenure track and 27% of the tenure track faculty were tenured. Forty-four percent of the Category I - III program personnel had earned a masters degree and 11% held a doctorate as their highest degree.

On average, 60% of the P.A. credentialed staff and faculty (including program directors) provided 13 hours per week of clinical practice in addition to their educational activities. Ninety-four percent were paid for their clinical service which averaged \$35.43 per hour. Clinical earnings accounted for 34% of their salary.

In comparison to the 1998 data, the proportion of program directors who were credentialed as P.A.'s decreased from 81% to 79.5%, salaries increased by 4.5% and months in position decreased from 74 to 70 months. The majority of program (90%) and medical (83%) directors were classified as faculty and were on a tenure track. Less than one-fifth were tenured. While all but one of the medical directors held M.D., D.O., or Ph.D. degrees, thirty-eight percent of the program directors had doctoral-level degrees (typically the Ph.D. or Ed.D.). Since 1984, there has been a 105% increase in mean salary for program directors and 61% increase for medical directors. The time in position for both medical and program directors has fluctuated extensively over the sixteen year period.

Respondents also provided data on personnel turnover over the past year. For the period September 1998 through August 1999, turnover averaged 0.8 individual per program. Turnover across all programs was highest among Category I personnel (36/year) and lowest among Category III personnel. Six program director positions were filled during this period. Departing personnel had been in their positions an average of 46 months, those filling the position were in their previous position 40 months and were typically nine years younger than their predecessors.

Vacated positions were filled within 11.0 weeks and were filled by individuals with similar academic and personal characteristics as those departing. The three primary reasons cited for the departure of personnel included, in descending order, career advancement, geographic relocation and return to clinical practice. In this past year, the salary of those filling the vacated position was 7.9% greater than the salary of the person leaving the position.

SECTION III. P.A. Applicant and Student Characteristics

In 1999, the average size of the entering P.A. class was 38.2 students, 62% of whom were women. The senior class averaged 36.6 students per program with 10.4% of the maximum capacity of the class unfilled (due largely to attrition from the program). The typical program received 239 applications and reported a ratio of 6.1 applicants to students enrolled. Using the mean values of the responding programs, the total enrollment (all classes) across all 103 programs was estimated to be 7,988 (394 more students than the previous year). Similarly, the estimated first-year enrollment was 3,935 students with only 1.3% enrolled as part-time students. Programs located in the Western region had the largest number of applicants (324/program). The Heartland region had the largest number of students enrolled (48/program). Programs in the Eastern region had the smallest number of applicants (160/program). Programs in the Northeastern region had the fewest number of students enrolled (34.5/program).

The typical entering student was described as a white/non-Hispanic female over 28 years of age, with a grade point average of 3.39 and 45 months of health care experience prior to admission.

The proportion of minority students enrolled in the first-year class has increased from 13.8% in 1983-84 to 22.1% in the current year, with the majority of these students in the African-American ethnic group. All but nine programs reported that at least one minority student was enrolled in the 1999 class.

Although there was relatively little change in the number of applicants and students enrolled between 1984 and 1989, the number of applicants and students enrolled from 1989 to the 1995 increased substantially, 325% and 52%, respectively, during that period. The number of applicants has decreased by 43% since 1995 (420/program to 239/program)

Information was also obtained on the number of unlicensed medical graduates (U.S.-born and alien) applying to and enrolling in P.A. programs during 1999. The total number of UMG applicants decreased from 243 (3.2/program) in 1998 to 170 (2.2/program) in 1999. UMG enrollment has increased from 27 (0.3/program) in 1998 to 65 (0.7/program) in 1999. On average, 38.2% of the UMG applicants were admitted in 1999.

Over one-fourth (25.6%; 20/78) of the programs received an UMG application while 24.7% (24/97) of the programs enrolled an UMG in 1999. In a broader perspective and with respect to the total applicant pool, UMG's accounted for only 0.9% of the total number of applicants and 1.8% of all students enrolled in the 1999 class.

Programs located in the Western region accounted for the majority of UMG applicants, averaging 4.9/program, while programs in the Heartland region only received an average of 0.0/program. Programs in the Western region enrolled the highest proportion (0.9/program) of UMG's, while programs in the Heartland region enrolled 0.1/program UMG's in 1999.

SECTION IV. Graduate Information

The average size of the 1999 graduating class was 35.7/program and was highest for programs located in the Heartland region (42/program) and lowest in the Southeastern and Midwestern regions (32.6/program and 32.7/program, respectively). The majority of recent graduates were female (64%) and non-minority (81%). The attrition rates across programs averaged 3.9% (1.5 students per program) and the reasons for withdrawal were most frequently due to academic (51%) and/or personal (36%) problems. The attrition rate reported in 1999 was lower than the previous year (4.3%) and the sixteen average of 8.2%. Attrition was highest among minorities and younger students. Students from programs in the Northeastern region had the highest attrition rate (5.9%) and those from programs in the Western region the lowest attrition (2.4%).

On average, 0.9 students per program were decelerated for a deceleration rate of 2.4%. These students were not considered "withdrawn" and therefore not included in the attrition figures. Deceleration occurred more frequently among minorities and older students. The highest deceleration rates were reported by programs located in the Eastern region (4.1%) and lowest for programs in the Western region (1.2%).

The proportion of 1999 graduates employed in primary care specialties decreased from the previous year (53.7% versus 54.5% in 1998) and those so employed remained principally in family medicine or general internal medicine. The most common non-primary care specialties selected by recent graduates were surgery (including subspecialties) and emergency medicine. The most common medicine subspecialties were cardiology and oncology, while cardiothoracic and cardiovascular surgery were the most common surgical specialties selected.

Based on responses from program directors, starting salaries continued to increase, averaging \$54,761, 4% above that reported for the 1998 academic year (\$52,664). Programs in the Northeastern region had the highest percent of employment (82.8%) while programs in the Eastern region had the lowest percent of employment of recent graduates.