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TWENTIETH ANNUAL REPORT ON PHYSICIAN ASSISTANT EDUCATIONAL PROGRAMS IN THE UNITED STATES, 2003-2004

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 Accreditation Review Commission on Education for the Physician Assistant, Inc. (ARC-PA) 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 a web-based "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 November, 2003, there were 133 physician assistant programs accredited (full or provisional) by the Accreditation Review Commission on Education for the Physician Assistant, Inc.[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 twenty Annual Reports[3-22] 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 University 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 85% 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 twenty 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.[10-22]
* 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 2003, to 133 programs that were identified as accredited from databases maintained by APAP and the ARC-PA. 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 three pages in length and requested information on:

A. Graduate Information: includes information on student attrition and deceleration, characteristics of recent graduates and starting salary for 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" three years ago, allowing the member programs to enter data directly over the Internet, facilitating the collection and analysis of data. Seventy-one programs (61% of the respondents) submitted their program's data via this method.

Survey Period and Response Rate

Survey #1 was sent (11/17/2003) to 133 P.A. programs, including one program enrolling students for the first time in the 2003-2004 academic year. An initial deadline of January 16, 2004 was established. A total of 114 responses were received for a response rate of 85.7%.

The second survey and the curriculum survey were included with survey #1. Eighty-seven were received.

A total of 115 programs returned some portion of survey #1 and/or survey #2, for an overall response rate of 86.5%.

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 some cases, data

on nonrespondents was obtained from the APAP Directory or personal communication with nonrespondent programs, in which case a total of 133 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, D.H.Sc., M.Ed., PA-C (e-mail: BSimon@francis.edu) or Marie Link (e-mail: MLink@francis.edu), Department of Physician Assistant Sciences, Saint Francis University, 117 Evergreen Drive, 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=71). 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 consortia region.

Analysis of Trends Over Time: 1984-2003

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 Consortia Region

Operational programs are listed by state and APAP consortium in Table 1. The Northeastern (N=29) region had the largest number of programs, while the Heartland (N=13) 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=29):

Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York

Albany-Hudson Valley	Mercy College	SUNY Downstate
Bronx Lebanon Hosp. Center	NY Institute of Technology	Stony Brook University
Brooklyn Hosp/L.I. University	Northeastern University	Touro College - Bay Shores
CUNY/Sophie Davis	Pace University	Touro College - Manhatten
D'Youville College	Quinnipiac College	Univ. Medicine and Dent.
Daemen College	**Rochester Institute of Tech.**	Univ. Of New England
Hofstra University	**St. Vincent's CMC - Brooklyn**	**Wagner College/Staten Isl**
LeMoyne College	St. Vincent's CMC - Staten Island	Weill Cornell University
Massachusetts College of Pharmacy	Seton Hall University	Yale University
MA College Pharmacy - Manchester	**Springfield College**	

EASTERN CONSORTIUM (N=19):

Maryland, Pennsylvania, District of Columbia

Anne Arundel Comm. College	George Washington Univ.	Philadelphia University
Arcadia University	Howard University	St. Francis University
Chatham College	King's College	Seton Hill University
DeSales University	Lock Haven University	Towson University
Drexel University	Marywood University	**Univ. MD – Eastern Shore**
Duquesne University	PA College of Technology	
Gannon University	Philadelphia College of Osteo Med	

SOUTHEASTERN CONSORTIUM (N=23):

Alabama, Florida, Georgia, Kentucky, N.Carolina, S. Carolina, Tennessee, Virginia, West Virginia

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

MIDWESTERN CONSORTIUM (N=27):

Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, North Dakota, Ohio, South Dakota, Wisconsin

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

HEARTLAND CONSORTIUM (N=13):

Kansas, Louisiana, Nebraska, Oklahoma, Texas

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

WESTERN CONSORTIUM (N=22):

Arizona, California, Colorado, Idaho, Montana, New Mexico, Oregon, Utah, Washington

AZ School of Hlth Sci
Charles Drew Univ
Loma Linda University
Idaho State Univ
Midwestern University
Oregon Hlth Sci Univ
Pacific University
Red Rocks Community College
Riverside Community College
Rocky Mountain College
Samuel Merritt College
San Joaquin Valley College
Stanford University
Touro Univ. – Mare Island
Univ of California - Davis
University of Colorado
University of New Mexico
University of Saint Francis
Univ of Southern California (Keck)
University of Utah
University of Washington
Western Univ. of Hlth Science

Nonrespondents to both Surveys; N=18

The above listing is based upon the APAP Consortium guidelines. Each program responded as to which consortia they belonged. The geographic distribution of the 133 operational P.A. Programs is shown in Figure 1.

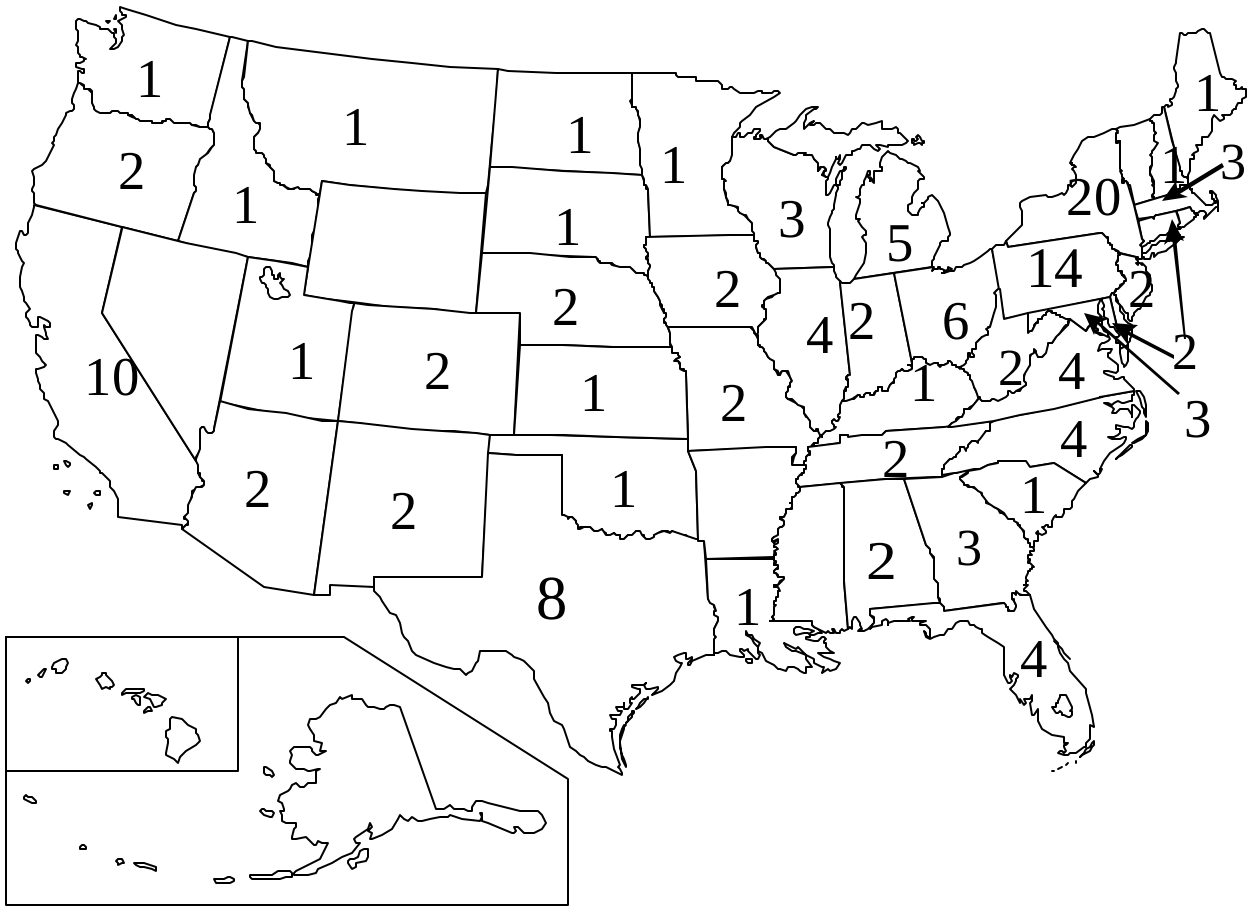


Figure 1. Geographic Distribution of Programs

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 (69%) or 4-year college (20%);

nine programs were associated with a two-year college; four programs were sponsored by a hospital and one was sponsored by the armed services. Sixty-two percent of programs award a masters degree (N=82). Thirty-seven programs award a baccalaureate degree upon graduation (28%). The remaining programs (N=14; 10%) awarded either a certificate or an associate degree as the highest credential granted. Over the past five years, twenty-seven baccalaureate programs converted to masters programs, four programs converted from a certificate to a masters degree and one program converted from a associate to a baccalaureate program. Some programs offer a graduate degree on completion of additional courses (e.g., public health, preventive medicine, geriatrics, exercise science). Such programs were not included as "entry-level" masters programs.

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

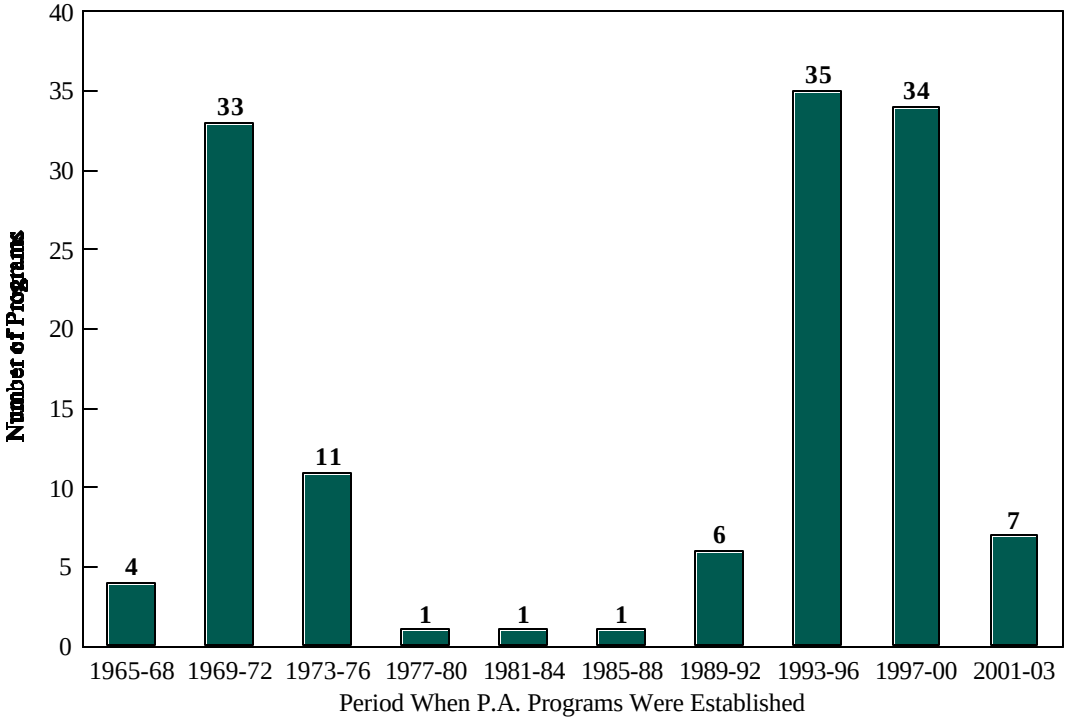
Type of Sponsoring Institution	N	%	Highest Credential Awarded	N	%
University	93	69.92	Master	82	61.65
4-Year College	26	19.55	Baccalaureate	37	27.82
Community College	9	6.77	Associate	5	3.76
Hospital**	4	3.00	Certificate	9	6.77
Military**	1	0.75	Total	**133**	**100.00**
Total	**133**	**100.00**			

* Nonrespondent information was drawn from APAP.
** Degrees granted from University/College Affiliates.

Year Current P.A. Programs Were Established, 1965 Through 2003

The distribution of respondent programs by year of their first entering class is shown in Figure 2.

Figure 2. Programs By Year of First Entering Class



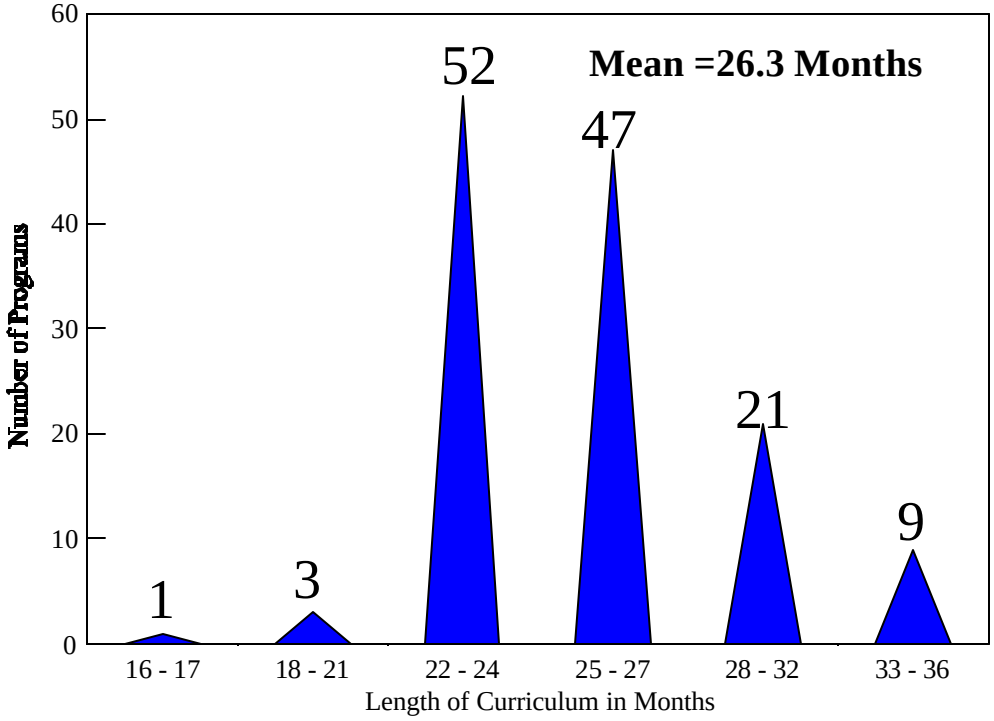
One hundred thirty-three programs are represented, as the data for the nonrespondent programs were obtained from previous Report surveys or from APAP or ARC-PA. The first P.A. program was established in 1965 at Duke University Medical Center and over the next four years (1965-1968) three additional programs 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 2000, 34 new programs enrolled students for the first time. From 2001-2003, seven new programs were accredited.

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/or 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 26.3 months (N=133) with a range of 16 to 36 months. For convenience, the programs were organized into six groups. The majority of programs were between 22-24 months (n=52) and 25 to 27 months (n=47) in length. The median was 26 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 26.3 months represents an increase of 1.2% from last year. Non-respondent information was obtained from the APAP Program Directory[1].

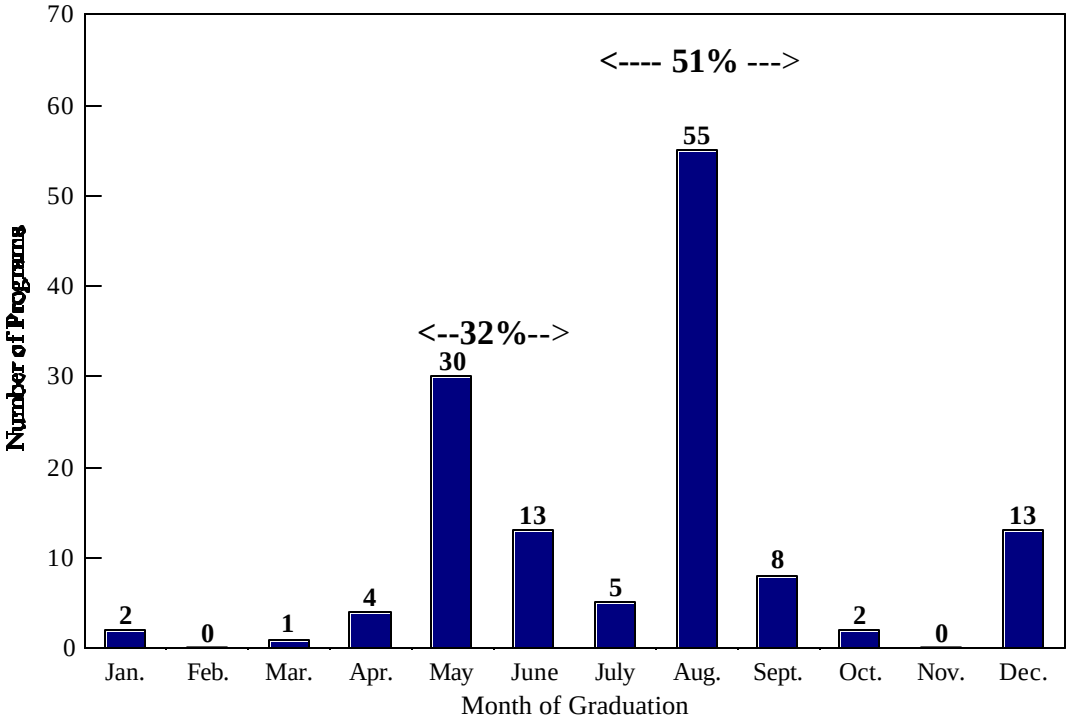
Figure 3. P.A. Programs by Length of Curriculum (N=133)



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 2003 P.A. Program Directory[1].

Figure 4. P.A. Programs By Months of Graduation (N=133)



Currently, a majority (N=111; 83.5%) of programs graduate students over two periods, (a) between May and June (N=43; 32.3%) and (b) July, August and September (N=68; 51.1%.). It should be noted that one program graduates two classes per year and one program graduates three classes per year.

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=63) reported support from more than one source, for example, 29 programs reported two sources, 22 programs three sources, 9 programs four sources and 3 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=89) of programs was the sponsoring institution, providing an average of $654,339/year/program (S.D.=$339,255). Fourteen programs reported that they received no financial support from their sponsoring institution. Thirty-three respondents indicated that they received substantial support from student tuition and fees paid directly to the program (mean=$946,681, S.D.=$938,959). Seventy programs did not receive revenue from student tuition or fees.

Table 3. Sources of Financial Support for Physician Assistant Programs

Source of Financial Support	Mean	Median	Range	N	# With No Support
Internal					
Sponsoring Institution	$654,339	$613,000	$ 49,000 - 2,238,000	89	14
Tuition and Fees (Retained by Program)	$946,681	$782,000	$ 7,000 - 3,635,000	33	70
External					
Federal Grants	$141,762	$147,000	$ 5,000 - 283,000	41	62
State Grants	$152,000	$155,500	$ 22,000 - 287,000	8	95
Foundations	$ 18,917	$ 14,500	$ 2,000 - 50,000	6	97
Private Donation	$ 9,500	$ 10,000	$ 3,000 - 15,000	4	99
Industry	$ 3,500	$ 3,500	----------	2	101
A.H.E.C. Support	$ 52,206	$ 15,000	$ 500 - 600,000	17	86
Other	$ 50,300	$ 29,000	$ 2,000 - 207,000	15	88
Total Program Support	**$954,422**	**$805,000**	**$163,000 - 3,796,000**	**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. Forty-one programs (40% of the respondents to this item) received federal funds during the 2003-2004 fiscal year. The amount of federal support ranged from $5,000 to $283,000, averaged $141,762 per program (S.D.=$54,962) and accounted for 14.9% of the total budget, lower than the figure (18.4%) reported last year. Sixty-two programs indicated they did not receive federal grant support in 2003-2004. In addition to federal training grants, nine programs indicated they received state grants averaging $152,000 per year and fifteen programs reported financial assistance received from other sources (e.g., clinical service, university grant, conference, special allocation and other grants) averaging $50,300 per program.

The total annual financial support from all sources for the 103 programs reporting averaged $954,422 per program (median=$805,000; S.D.=$648,937). An analysis of the association between total budget and total student enrollment was examined. Two correlations were derived, the first using full-time (F.T.) students enrolled ($r = 0.700$; $p<.001$) and the other utilizing the sum of F.T. and ½ of the part-time (P.T.) students ($r = 0.700$ $p<.001$). 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 = (51.244) + (11.78 x # F.T. students enrolled) (in $1,000's)

(b) Total Program Budget = (54.033) + (11.65 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 $640,244 per year while equation “b” predicts, for a program with 50 F.T. and 10 P.T. students, a budget of $694,783/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. Thus, for the 2003 academic year, the cost for the typical program was approximately $11,886 to educate each student (mean budget of $954,422 divided by an average enrollment of 80.3 students/program). 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.

Program Budget and Federal Support by Region

A comparison of federal support and total program budget by consortia region is shown in Table 4. Programs located in the Western region reported the largest total budget ($1,285,892/program). The most federal grant support was located in the Western region, averaging $178,775/program. Programs in the Heartland region reported the smallest total budget ($728,374/program). Programs in the Northeastern region had the least amount of support from federal training grants ($101,264/program). The proportion of total program budget derived from federal funds was lowest (12.3%) in the Northeastern region, while programs in the Midwestern region derived 16.6% of their total budgets from federal sources.

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

Consortia		Total Budget		Federal Grants		% of	Fed. Support	
Region	N	Mean	S.D.	Mean	S.D.	Budget	Yes	No
Northeastern	20	$ 825,459	$255,849	$101,264	$75,930	12.3%	4	16
Eastern	14	$ 892,829	$544,313	$146,668	$86,500	16.4%	3	11
Southeastern	19	$1,134,265	$816,275	$145,321	$30,713	12.8%	8	11
Midwestern	20	$ 792,953	$739,970	$131,263	$54,195	16.6%	8	12
Heartland	12	$ 728,374	$191,064	$112,571	$42,723	15.5%	7	5
Western	18	$1,285,802	$802,484	$178,775	$46,700	13.9%	11	7
Total	**103**	**$ 954,422**	**$648,937**	**$141,762**	**$54,962**	**14.9%**	**41**	**62**

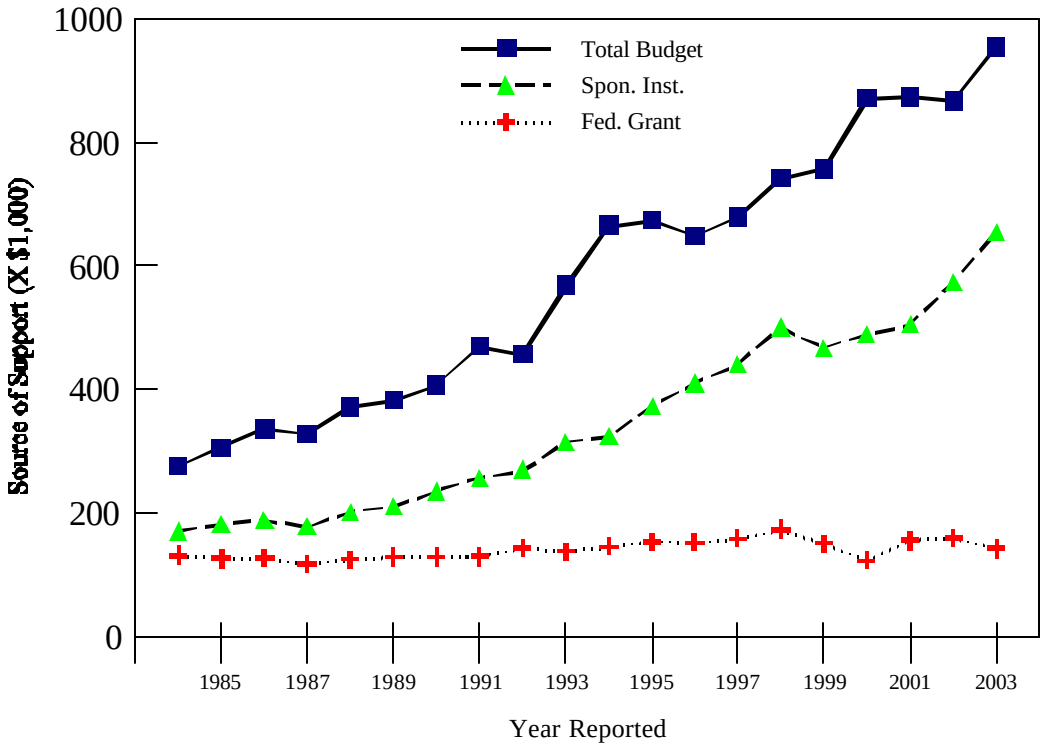
Trends in P.A. program support from 1984 through 2003 are shown in Table 5 and shown graphically in Figure 5 (next page). The total budget column is not a summation of institutional and federal grant support.

Table 5. Trends in Physician Assistant Program Support, 1984 Through 2003

	Sponsor. Instit.		Federal Grant		Total Budget		% Budget Fed. Grant	
Year	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%
2000-01	89	$487,739	31	$123,055	99	$871,824	31	14%
2001-02	91	$504,324	33	$154,834	101	$873,977	33	18%
2002-03	89	$574,416	38	$159,334	103	$866,612	38	18%
2003-04	**89**	**$654,339**	**41**	**$141,762**	**103**	**$954,422**	**41**	**15%**

The total budget for 2003 increased by $87,810 from the previous year. The level of training grants accounted for 15% of the total budget. Overall, the total program budget increased by an average of 7.0% annually and the program support from the sponsoring institution increased by an average of 7.6% annually from 1984 to 2003. Federal support decreased by 11% from 2002. The proportion of the total budget from federal training grants has decreased from 41% in 1985 to 15% in 2003. As shown in Figure 5 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 245% while support from the sponsoring institution increased 286%.

Figure 5. Trends in P.A. Program Support: 1984 Through 2003



Student Educational Expenses

For the class entering in 2003, 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.

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

Tuition for Entire Program	Mean	Range	N	Mean/Month/Program
Resident Student	$34,167	$ 2,175- 86,000	108	$1,302
Nonresident Student	$41,723	$ 5,150- 87,800	108	$1,575
Books, Fees, and Equipment	$ 5,018	$ 1,000- 19,755	107	$ 190
Total Student Costs: (Tuition, Books, Fees, Equipment)				
Resident Student	$39,360	$4,800-93,600	107	$1,492
Nonresident Student	$46,884	$8,488-93,600	107	$1,765

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.

On average, there was a $7,600 difference between resident and nonresident tuition among the 108 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 $1,302 per month while the nonresident paid $1,575 per month, a 21% difference.

Expenses associated with books, equipment and fees averaged $5,018 per student for their entire professional training. These expenditures represented approximately 12.8% and 10.7% 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 $39,360 for residents and $46,884 for nonresidents. The average total cost per month was $1,492 for residents and $1,765 for nonresident students.

As shown in Table 7, the majority of students (88.7%) received financial aid, which averaged $21,004 per student per year and accounted for 107% of the costs of tuition, fees, books, and equipment ($19,680) for the typical resident student. Using these values, one can estimate that the typical resident P.A. student would be indebted approximately $42,008 (2 X $21,004) at the conclusion of their professional education.

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

Financial Aid Characteristic	Mean	Range	Number
% Receiving Financial Aid	88.7%	42-100%	97
Amount of Aid Received/Year	$21,004	$3,000-52,000	86

Student Expenses by Consortia Region

Tuition (for the entire curriculum) and total costs for P.A. students during the 2003-2004 academic year are shown by consortia region in Table 8. The average resident tuition and total expenses incurred by P.A. students varied extensively across consortia region. Resident tuition was highest for students enrolled in programs located in the Eastern region ($42,233/curriculum) and lowest for programs located in the Heartland region ($16,720/curriculum). Nonresident tuition varied less across regions with a difference of approximately $8,286 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 and nonresident student expenses were lowest in the Heartland region. The proportion of students receiving financial aid varied from 81.2% in the Midwestern region to 92.1% in the Eastern region.

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

Consortia		Mean Tuition		Total Costs/Month		% Receiving
Region	N	Resident	Nonresident	Resident	Nonresident	Finan.Aid
Northeastern	21	$37,186	$39,704	$1,526	$1,613	87.9%
Eastern	18	$42,233	$44,799	$1,859	$1,961	92.1%
Southeastern	18	$35,989	$44,107	$1,528	$1,839	90.3%
Midwestern	21	$28,644	$36,623	$1,353	$1,676	81.2%
Heartland	12	$16,720	$37,385	$ 827	$1,565	90.3%
Western	17	$38,710	$44,909	$1,654	$1,907	91.9%
Total	**107**	**$33,978**	**$41,625**	**$1,302**	**$1,564**	**88.7%**

Trends in P.A. Student Expenses

Comparisons between tuition and student expenses, and the proportion of students receiving financial aid from 1984 through 2003, are shown in Table 9 and Figure 6 (next page).

Table 9. Trends in P.A. Student Expenses, 1984 Through 2003

	Mean Tuition				Total Expenses				% With		
Academic	Resident		Nonresident		Resident		Nonresident		Fin. Aid		Fin. Aid
Year	N	Mean	N	Mean	N	Mean	N	Mean	N	%	Received
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
2000-2001	101	$28,048	101	$34,662	101	$32,684	101	$39,298	88	86%	$16,930
2001-2002	105	$28,036	105	$35,536	104	$32,810	104	$40,310	94	88%	$17,315
2002-2003	96	$30,949	97	$38,423	96	$36,154	97	$43,628	93	86%	$18,477
2003-2004	108	$34,167	108	$41,723	107	$39,360	107	$46,884	97	89%	$21,004

Tuition has increased 433% and 362% over the past twenty years for resident and nonresident students, respectively, an average of 9.3% and 8.5% per year, respectively. Similarly, total student expenses (which includes tuition, books, equipment, and fees over the entire program) increased by 411% and 370% over the twenty-year period for resident and nonresident students, respectively.

The proportion of students receiving financial aid averaged 76% from 1984 through 2003 and has varied within a narrow range, i.e., 63% to 89%, 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 6 illustrates that financial aid received by the typical student increased by approximately 443% since 1986; total expenses increased by 324% for resident and 285% for nonresident students during that same period.

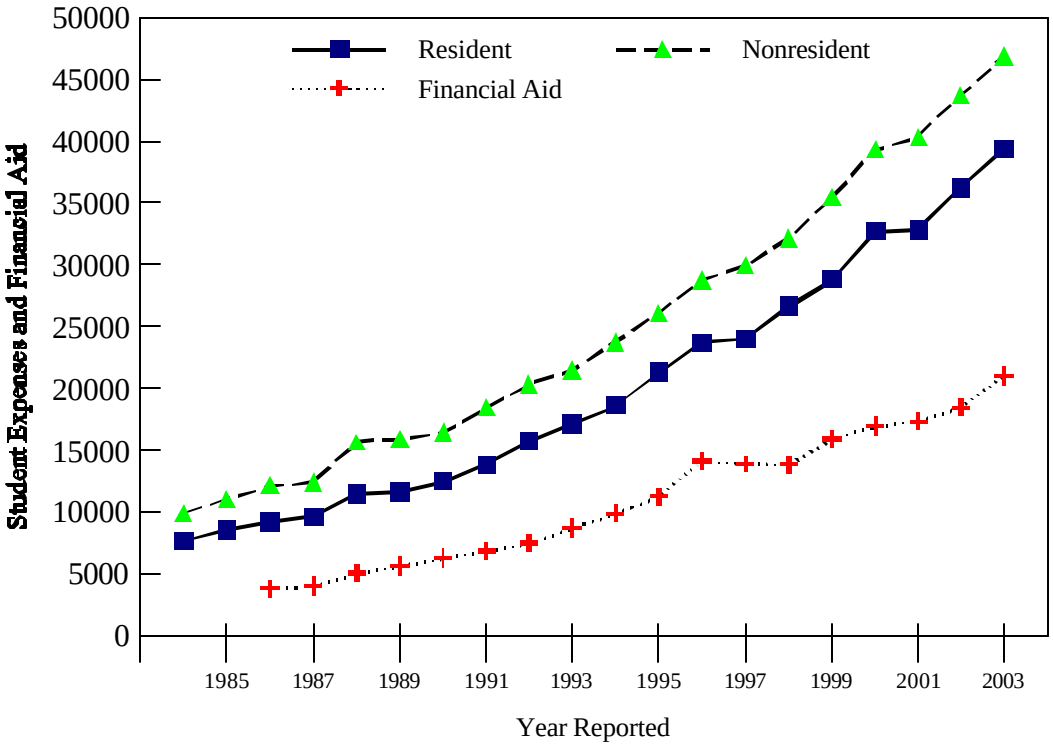
National Health Service Corps (N.H.S.C.) Support

The number and proportion of students receiving support from the National Health Service is shown in Table 10 (next page). Of the four types of support available, N.H.S. Corps Scholarships accounted for all of the support. In total, 16 scholarships were reported among the first year class, 32 among the second year class and 11 among the third year class.

Table 10. Students: Public Health Service Scholarships

	N.H.S. Corps		COSTEP		Loan Repay.		Comm. School		Total
Class	N	%	N	%	N	%	N	%	N
1st Year	16	100.0%	0	0.0%	0	0.0%	0	0.0%	16
2nd Year	32	100.0%	0	0.0%	0	0.0%	0	0.0%	32
3rd Year	11	100.0%	0	0.0%	0	0.0%	0	0.0%	11
Total	**59**		**0**		**0**		**0**		**59**

Figure 6. Trends in P.A. Student Expenses: 1984 Through 2003



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 twenty years, it has been shown that there are an average of 3.5 to 4.7 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, typically including courses in the basic and behavioral sciences and/or the curriculum associated with

Table 11. Classification of Program Personnel by Category

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

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 765 (215 Category IV) personnel reported by survey respondents (N=105; 7.3 per program), 437 P.A.'s and 328 non-P.A.'s. One-hundred programs indicated that they had at least one Category I - III P.A. (mean of 4.4/program) and 46 programs indicated that individuals without a P.A. credential were employed in at least one of the I - III categories (mean of 2.5/program).

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

	Personnel Category				Categories	
Characteristic	I	II	III	IV	I – III	
Physician Assistants						
Total Number	233	177	26	1	436	436
# of Programs*	92	91	23	1	100	105
Mean #/Program	2.5	1.9	1.1	1.0	4.4**	4.2***
Non-Physician Assistants						
Total Number	63	20	31	214	114	114
# of Programs*	38	14	20	90	46	105
Mean #/Program	1.7	1.4	1.5	2.4	2.5**	1.1***

* 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.

The majority of program personnel in Categories I - III were credentialed as P.A.'s (79%) as compared to non-P.A.'s (21%). Across all programs (N=105), the mean per program is 4.2P.A.'s and 1.1 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 consortia region and category is shown in Table 13. Physician assistant programs located in the Eastern and Heartland regions of the United States employed the greatest number of Category I - III P.A.'s per program. Programs in the Western region employed the greatest number of non-P.A.'s per program.

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

Consortia Region	N	Personnel Category I	II	III	IV	Total	Mean per Program (Cat I-III)
Northeastern	20	36 (9)	45 (2)	4 (1)	0 (37)	85 (49)	4.3/(0.6)
Eastern	16	43 (6)	29 (0)	2 (2)	1 (22)	75 (30)	4.6/(0.5)
Southeastern	16	43 (15)	21 (3)	4 (6)	0 (35)	68 (59)	4.3/(1.5)
Heartland	11	19 (7)	27 (6)	5 (3)	0 (32)	51 (48)	4.6/(1.5)
Midwestern	23	44 (10)	24 (3)	8 (4)	0 (39)	76 (56)	3.3/(0.7)
Western	19	48 (16)	31 (6)	3 (15)	0 (49)	82 (86)	4.3/(1.9)
Total	**105**	**233 (63)**	**177 (20)**	**26 (31)**	**1 (214)**	**437 (328)**	**4.2/(1.1)**

* # of non-P.A. personnel are in parentheses.

Programs located in the Midwestern region had the fewest P.A.'s associated with the program (mean of 3.3/program). Programs in the Eastern region employed the least number of Category I-III non-P.A.'s (0.5/program). Programs in the Heartland region employed the greatest number of Category IV personnel per program (2.9/program), while programs in the Eastern region employed the least (1.4/program).

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 91% of their time to the program; the majority was classified as full-time employees.

Table 14. General Characteristics of Physician Assistant Personnel

	Personnel Category			
Characteristic	I N = 233*	II N = 175	III N = 26	Total N = 435
Mean % Time	90.4%	92.0%	91.9%	91.1%
Annual Salary	N = 215	N = 164	N = 25	N = 405
Mean**	$65,107	$66,449	$69,166	$65,804
Range	$35,380-$122,850	$24,000-$108,720	$36,307-$86,466	$24,000-$122,850
Months in Position	N = 231	N = 177	N = 26	N = 435
Mean	52.0	49.1	70.1	52.0
Median	36.0	36.0	40.0	36.0
Range	1-300	1-291	1-193	1-300

* Number of P.A.'s in category.
** Salaries adjusted to 1 FTE

There were some differences between categories in the percent of time the P.A. worked. Nineteen of the 25 P.A.'s in Category III were 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 $65,804 with a range from $24,000 to $122,850. On average, individuals had been in their position for 52.0 months (range 1-300 months). There was some difference in mean salary across categories, ranging from $65,107 for Category I to $69,166 for Category III, a 6.2% increase. P.A.'s in Category III had held their positions for the longest period of time, averaging 70 months, while the majority of P.A.'s in Category II had been associated with the program for the least amount of time (49 months).

Clinical Activity of Physician Assistant Personnel

General characteristics of the clinical activity of P.A. personnel are shown in Table 15 (next page). 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 (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. Over half (62%) 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 (67%). Forty-nine percent of program directors (P.A.'s) also had clinical responsibilities.

Table 15. General Characteristics of Clinically Active Physician Assistant Personnel

	P.A. Personnel Category			Program	
	I	II	III	Directors	Total
Characteristic	N=233	N=177	N=26	N=86	N=522
Clinically Active P.A.'s	157(67%)	114(64%)	13(50%)	42(49%)	326(62%)
Hrs Worked/Week					
Mean	10.9	9.7	6.5	8.2	9.9
(N)	(157)	(114)	(13)	(42)	326
Range	2-42	2-40	4-8	2-20	2-42
Number (%) Paid for Services	136(87%)	83(73%)	8(62%)	35(83%)	262(80%)
Mean Wage/Hour	$35.85	$36.34	$42.30	$43.50	$37.31
(N)	(118)	(68)	(8)	(32)	(226)
Annual Amount*	$17,025	$19,013	$15,288	$17,238	$17,592
Adjust. Salary**	$80,129	$85,243	$84,704	$103,486	$84,954
% Salary From Clinical Earnings	21.2%	22.3%	18.0%	16.7%	20.7%

* Estimated at 48 weeks per year.
** Base Salary + Clinical Earnings for those clinically active.

On average, P.A.'s in Categories I-III spent 10.1 hours per week providing patient care; program directors who were P.A.'s spent an average of 8.2 hours per week. The range in time spent was very broad, from two hours per week to 42 hours per week. Eighty percent of P.A. personnel received additional compensation for their clinical services. The mean hourly wage averaged $37.31/hour and varied from $35.85 for Category I to $43.50 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 $17,592 from their clinical activity. Category III personnel had the lowest additional income ($15,288) and those in Category II had the highest ($19,013).

An "adjusted" annual income (base salary + clinical earnings) was determined for those indicating they received earnings from both sources. On average, there was a 26.1% increase over base salary for those personnel that were clinically active. And, clinical earnings accounted for over one-fifth of the personnel salary. 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 93% 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)
Characteristic	N = 63	N = 20	N = 31	N = 214	N = 114
Mean % Time	89.3%	95.0%	98.9%	95.3%	92.9%
Annual Salary*	N = 48	N = 20	N = 28	N = 199	N = 107
Mean	$62,322	$58,560	$48,946	$30,019	$58,118
Median	$65,000	$56,259	$40,900	$28,479	$60,000
Range	$22,660-$108,347	$22,000-$108,720	$26,600-$156,449	$11,000 - $63,243	$22,000-$156,449
Months in Position	N = 63	N = 20	N = 31	N = 211	N = 113
Mean	70.5	31.9	113.4	58.5	69.3
Median	57.0	21.0	66.0	36.0	48.0
Range	1 - 336	1 – 120	6 - 762	1 – 382	1 - 336

* Salaries adjusted to 1 FTE

The mean salary for non-P.A.'s across Categories I - III was $58,118, ranging from $22,000 to $156,449. On average, these individuals had been employed 69.3 months (median of 48, range of 1-336 months). Non-P.A.'s in Category I earned the highest average salary ($62,322). Non-P.A.'s in Category III had the lowest average salary ($48,946). Category II non-P.A.'s had been associated with the program for the shortest period of time, while Category I non-P.A.'s, on average, had been employed over twice 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 $30,019 with a broad range of $11,000 to $63,243. Category IV personnel had been in their position an average of 58.5 months (median: 36 months).

Characteristics of program personnel in Categories I - III, by ethnicity and gender, are shown in Table 17. 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.

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

	Number of Personnel			Mean Annual Salary		Mean Months in Position	
Ethnicity	Male	Female	Total	Male	Female	Male	Female
White/Non-Hisp.	179	298	477	$69,697	$61,150	57.5	56.0
Black/African-Amer.	14	16	30	$63,608	$62,552	43.6	70.5
Latin/Hisp/Mex. Am.	5	15	20	$68,756	$62,880	32.6	39.3
Asian	5	5	10	$69,909	$63,926	40.4	77.6
Asian Subpopulation	1	1	2	---	---	---	---
Native Haw./Other PI	0	1	1	---	---	---	---
Amer. Ind./Alaskan	0	1	1	---	---	---	---
Other	1	2	3	---	---	---	---
Total	**205**	**339**	**544**	**$69,196**	**$61,217**	**54.9**	**56.0**

Proportionately, there were more women (62%) among the P.A. and non-P.A. personnel; 62% of the white (298/477) and 61.1% of the non-white personnel (41/67) were women. In total, 67 P.A. program staff and/or faculty from 41 programs were identified as members of an ethnic minority (30 Black/African-American, 20 Latino/Hispanic, 10 Asian, two Asian Subpopulation, one Native Hawaiian/Other Pacific Islander, one American Indian/Alaskan Native and three Other). This constitutes 12.3% (67/544) of the total number of faculty and staff and 39% of the programs responding. On average, males earned higher annual salaries than their female counterparts. Females were employed longer in their current position than males.

Characteristics of program personnel in Category IV, by ethnicity and gender, are shown in Table 18. Category IV personnel consisted mainly of females (90.7%). Sixty-two (29%) Category IV P.A. program staff from 28 programs were identified as members of an ethnic minority. Females were employed longer in their current position than males, 59.5 and 50.3 months, respectively.

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

	Number of Personnel			Mean Annual Salary		Mean Months in Position	
Ethnicity	Male	Female	Total	Male	Female	Male	Female
White/Non-Hisp.	13	140	153	$38,972	$28,400	38.9	58.5
Black/African-Amer.	2	23	25	$28,436	$34,310	143.0	61.4
Latin/Hisp/Mex. Am.	4	24	28	$44,237	$27,962	45.3	72.0
Asian	1	5	6	---	$33,975	---	43.2
Asian Subpopulation	0	1	1	---	---	---	---
Native Haw./Other PI	0	0	0	---	---	---	---
Amer. Ind./Alaskan	0	2	2	---	$24,188	---	27.5
Total	**20**	**195**	**215**	**$38,176**	**$29,140**	**50.3**	**59.5**

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.

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

	Mean Annual Salary				Mean % Time				Mean Months in Position			
Categories	Male	N	Female	N	Male	N	Female	N	Male	N	Female	N
Cat. I												
P.A.	$67,482	85	$63,554	130	91.1	92	89.9	141	55.5	91	49.8	140
Non-P.A.	$68,034	31	$55,998	28	94.5	32	83.9	31	67.1	32	74.0	31
Cat. II												
P.A.	$68,667	57	$65,344	106	95.8	63	89.8	111	48.0	63	50.0	113
Non-P.A.	$87,903	5	$48,779	15	100.0	5	93.3	15	25.4	5	34.1	15
Cat. III												
P.A.	$73,980	9	$66,458	16	100.0	9	87.6	17	38.9	9	86.6	17
Non-P.A.	$88,035	4	$42,431	24	100.0	5	98.7	26	127.0	5	86.4	26
Cat. IV												
Non-P.A.	$38,176	19	$29,140	181	92.5	20	95.6	195	50.3	19	59.5	193
Cat. I - III												
P.A.	$68,316	151	$64,388	251	93.4	164	89.7	268	51.7	163	52.2	270
Non-P.A.	$63,843	65	$49,259	42	91.9	70	94.4	44	66.4	69	74.0	44

Male personnel earned higher annual salaries than female personnel. On average for Categories I - III, non-P.A. personnel had been in their positions substantially longer than P.A. personnel.

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 consortia region is presented in Table 20. P.A.'s associated with programs located in the Heartland region reported the highest annual salaries. The lowest mean P.A. salary was in the Eastern region. Non-P.A.'s in the Heartland region had the highest salaries, while those in the Western region had the lowest salaries. P.A.'s salaries were higher than Non-P.A.'s in each region except the Heartland. Non-P.A.'s were employed for more months. There was a statistically significant correlation ($r = 0.128$; $p < .05$) between time in position and salary.

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

Consortia	Mean Salary: Categories I - III				Months in Position	
Region	P.A.	N	Non-P.A.	N	P.A.	Non-P.A.
Northeastern	$66,022	72	$54,517	7	46.9	74.1
Eastern	$62,542	59	$60,010	7	51.6	42.4
Southeastern	$68,423	65	$56,679	23	48.6	73.7
Midwestern	$64,144	76	$54,747	17	55.6	55.5
Heartland	$69,246	51	$82,477	16	62.6	73.9
Western	$65,479	82	$50,352	37	51.1	75.2
Total	$65,804	405	$58,118	107	52.0	69.3

The salaries of Category I - III P.A. program personnel (P.A.'s and non-P.A.'s) by ethnicity and consortia region are shown in Table 21. Mean salaries of Black/African-American personnel were higher than their White counterparts in the Southeastern, Heartland and Western regions. Latino/Hispanic personnel had higher average salaries than Black/African-Americans in the Northeastern region.

Table 21. Analysis of Program Personnel by Consortia Region and Ethnicity
Category I – III

Consortia	Mean Annual Salary					
Region	White	N	Black/ African-Amer	N	Lat/Hisp	N
Northeastern	$65,639	65	$61,196	3	$71,200	2
Eastern	$62,292	59	$61,027	4	----------	0
Southeastern	$65,714	78	$67,192	6	$64,080	3
Midwestern	$63,320	83	$49,075	5	----------	1
Heartland	$71,705	61	$86,860	2	$65,044	2
Western	$60,116	100	$65,097	5	$63,601	10
Total	**$64,369**	**446**	**$63,017**	**25**	**$64,186**	**18**

The salaries of Category IV P.A. program personnel (P.A.'s and non-P.A.'s) by ethnicity and consortia region are shown in Table 22 (next page). Mean salaries of Black/African-American personnel were higher than their White counterparts in five of the six regions. Latino/Hispanics personnel had lower salaries than their Black/African-American counterparts in the three regions were comparisons could be made.

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

Consortia Region	Mean Annual Salary White	N	Black/African-American	N	Lat/Hisp	N
Northeastern	$30,520	22	$38,054	6	$25,385	3
Eastern	$23,019	14	$28,737	3	----------	0
Southeastern	$26,197	26	$33,446	6	----------	0
Midwestern	$27,721	35	$32,749	2	----------	0
Heartland	$31,898	16	$36,601	3	$32,492	10
Western	$34,569	31	$28,959	3	$28,900	12
Total	**$29,355**	**144**	**$33,799**	**23**	**$29,915**	**25**

Trends in P.A. Program Personnel Salaries from 1985 Through 2003

Trends in P.A. personnel salary from 1985 through 2003 are shown in Table 23. Note, salary data was not available for 1987-88. There has been a 137% increase in P.A. salaries (all categories combined) from 1985-86 to 2003-2004, an average of 7.6% per year. Proportionately, the largest annual increase in salary (10.9%) for all categories occurred between 1989 and 1990.

Table 23. Salary and Months in Position for P.A. Personnel, 1985 Through 2003

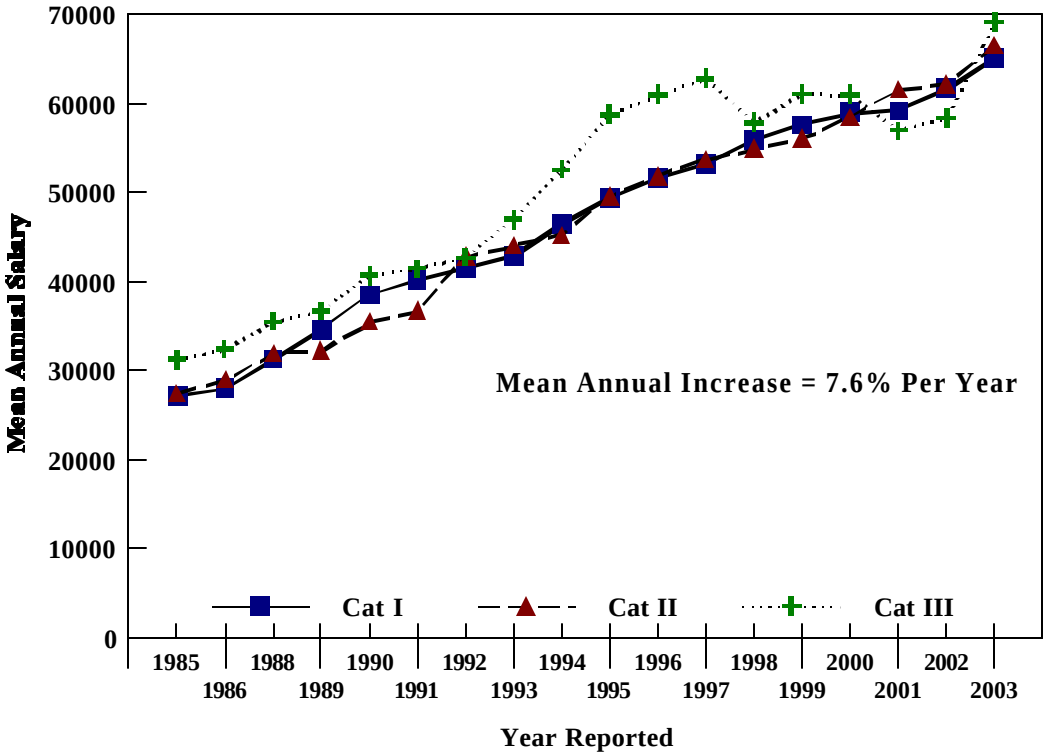
Categories	Cat. I	Cat. II	Cat. III	All Cat.	Months in Position
1985-86	$27,264	$27,553	$31,298	$27,769	36.6
1986-87	$28,129	$29,060	$32,451	$29,010	36.3
1988-89	$31,362	$32,054	$35,547	$32,099	39.9
1989-90	$34,610	$32,300	$36,756	$33,723	43.9
1990-91	$38,547	$35,578	$40,661	$37,404	40.1
1991-92	$40,280	$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
2000-01	$59,013	$58,556	$60,973	$59,108	54.8
2001-02	$59,208	$61,568	$57,003	$59,757	55.1
2002-03	$61,679	$62,161	$58,376	$61,400	53.9
2003-04	$65,107	$66,449	$69,166	$65,804	52.0

Months in position did not vary substantially, averaging 44.5 months over the 18-year period (range of 36.3 to 55.1).

An analysis of variance (ANOVA) of salary was conducted to investigate the effects of the following parameters (data for P.A.'s and non-P.A.'s were combined): personnel category, gender and consortia region. Main effects were found for gender ($F=40.09$; $p<0.01$; men higher than women), consortia region ($F=6.92$; $p<0.01$; the Heartland region had higher salaries) and category of personnel ($F=5.76$; $p<.01$; Category III personnel had lower salaries).

Trends in salary for all categories of program personnel (data for P.A.'s and non-P.A.'s were combined) from 1985 through 2003 are illustrated in Figure 7. Salaries for personnel in Category I and II consistently increased each year with the largest increase occurring in 1988 for Cat I and 1992 for Cat II. Category III salaries steadily increased through 1997. Since then, Cat III salaries have fluctuated, with the largest increase occurring this year.

Figure 7. Trends in P.A. Program Salaries: 1985 Through 2003



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

	Personnel Category							
	I		II		III		Total	
Classification	Number	(%)	Number	(%)	Number	(%)	Number	(%)
Faculty	265	90.1%	169	87.1%	27	49.1%	461	84.9%
Staff	29	9.9%	25	12.9%	28	50.9%	82	15.1%
Tenure Status								
In Tenure Track*	71	26.8%	26	15.4%	7	25.9%	104	22.6%
Faculty Tenured**	17	6.4%	4	2.4%	5	18.5%	26	5.6%

* Percent of TOTAL faculty in tenure track not tenured.
** Percent of TOTAL faculty tenured (e.g., 26/461 = 5.6%)

For all categories combined, more than three fourths (N=461; 85%) of personnel were classified as faculty. This distribution of individuals classified as faculty varied greatly between 49% for Category III and 90% for Category I. Category III includes typically administrative-type personnel who may be less likely to be appointed to an academic level position.

Overall, more than one-fifth (22.6%) of the faculty were on the tenure track. However, only 5.6% of the faculty were tenured. Viewed in another way, 25% of those faculty in a tenure track were tenured, with the highest proportion of these tenured faculty in Category III (71.4%).

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 (93% versus 80%, respectively). A larger proportion of male faculty were on tenure track compared to female faculty, 25.5% versus 20.1%, respectively. Although very few faculty were tenured (5.3%), more male faculty were tenured (6.4%) as compared to female faculty (4.5%).

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

Personnel	Female		Male		Total	
Classification	Number	(%)	Number	(%)	Number	(%)
Faculty Appointment	269	79.6%	188	93.1%	457	84.6%
Staff Appointment	69	20.4%	14	6.9%	83	15.4%
Tenure Status						
Tenure Track Faculty	54	20.1%	48	25.5%	102	22.3%
Tenured Faculty*	12	4.5%	12	6.4%	24	5.3%

* 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 2.8% of Category I - III program personnel were reported to have earned a bachelors or higher degree. Less than one-fourth of the P.A. and non-P.A. personnel held a baccalaureate degree (23%) as their highest degree. Almost two-thirds of the personnel held a master's degree (N=310; 61.8%). Sixty-one individuals (12.2%) 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

	Program Personnel Categories									
Highest	I		II		III		IV		Categories I - III	
Degree	#	(%)	#	(%)	#	(%)	#	(%)	#	(%)
Doctorate	44	16.4%	11	5.9%	6	12.5%	0	0.0%	61	12.2%
Masters	163	60.8%	119	64.0%	28	58.3%	8	9.6%	310	61.8%
Bachelors	58	21.6%	49	26.3%	10	20.8%	51	61.4%	117	23.3%
Associate	3	1.1%	7	3.8%	4	8.3%	24	28.9%	14	2.8%
Total	**268**	**100.0%**	**186**	**100.0%**	**48**	**100.0%**	**83**	**100.0%**	**502**	**100.0%**

The number and academic rank of program faculty, by category, are shown in Table 27. Over half of the P.A. and non-P.A. faculty hold the academic rank of assistant professor (N=225; 56.4%).

Table 27. Program Personnel: Academic Rank of Faculty

	Program Personnel Categories							
	I		II		III		Total	
Academic Rank	N	(%)	N	(%)	N	(%)	N	(%)
Full Professor	9	3.7%	0	0.0%	2	8.0%	11	2.8%
Associate Prof.	24	9.9%	11	8.3%	9	36.0%	44	11.0%
Assistant Prof.	137	56.6%	79	59.8%	9	36.0%	225	56.4%
Instructor/Lect.	72	29.8%	42	31.8%	5	20.0%	119	29.8%
Total	**242**	**100.0%**	**132**	**100.0%**	**25**	**100.0%**	**399**	**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. The mean annual salary of faculty-level personnel was $66,939 (N=427), 33% higher than those appointed to staff positions ($50,496; N=77). In general, the annual salaries of non-P.A. personnel with faculty rank ($70,771, N=63) were higher than the salaries of P.A. personnel with faculty appointments ($66,273; N=364). Faculty salaries differed substantially between categories with Category III faculty earning the highest annual income.

Table 28. Faculty and Staff Salaries by Category

	Program Personnel Categories							
	I		II		III		Categories I - III	
Classification	Mean	N	Mean	N	Mean	N	Mean	N
Faculty								
P.A.	$65,214	199	$67,007	145	$71,372	20	$66,273	364
Non-P.A.	$68,132	46	$74,444	12	$86,241	5	$70,771	63
Total	**$65,761**	**245**	**$67,575**	**157**	**$74,346**	**25**	**$66,939**	**427**
Staff								
P.A.	$65,344	14	$61,794	16	$66,350	4	$63,792	34
Non-P.A.	$41,763	13	$34,734	8	$40,840	22	$39,983	43
Total	**$53,990**	**27**	**$52,774**	**24**	**$44,764**	**26**	**$50,496**	**77**

Among the personnel classified as staff, those that were P.A.'s earned a substantially higher (60%) salary ($63,792) than non-P.A.'s ($39,983). In comparison to the previous year (2002-2003), there was over a 4.5% increase in the faculty salaries and a 5.5% 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 (next page). Salaries for male faculty were 8.3% higher than those of female faculty ($70,154 versus $64,797, respectively). Male staff earned substantially higher salaries than did female staff, $61,612 vs. $48,238, respectively.

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

	Female		Male	
Classification	Mean	N	Mean	N
Faculty				
P.A.	$64,718	223	$68,898	137
Non-P.A.	$65,477	26	$74,492	37
Total	**$64,797**	**249**	**$70,154**	**174**
Staff				
P.A.	$63,020	24	$65,645	10
Non-P.A.	$39,369	40	$48,167	3
Total	**$48,238**	**64**	**$61,612**	**13**

Compared to the previous year (2002-2003), faculty salaries have increased 3.9% for females and 5.9% for males, while staff salaries decreased by 4.9% for males and increased by 10.0% for females.

Annual salary of program personnel by highest degree earned for all categories is shown in Table 30. Doctoral-level personnel (N=55) earn the highest salary (overall for Categories I - III =$71,184) and associate degree level individuals the lowest ($43,368). Category II personnel with a doctorate degree earned the highest salary.

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

	Program Personnel Categories									
	I		II		III		IV		Categories I - III	
Highest Degree	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Doctorate	$70,795	39	$78,203	11	$58,773	5	----------	0	$71,184	55
Masters	$65,614	154	$66,656	112	$67,673	27	$44,744	11	$66,202	293
Bachelors	$61,126	55	$61,531	44	$40,893	10	$32,903	53	$59,433	109
Associate	$37,341	3	$49,199	7	$37,683	4	$28,793	22	$43,368	14
Not Reported	$58,064	23	$69,144	10	$59,848	7	$27,528	110	$61,146	40
Total	**$64,507**	**274**	**$65,592**	**184**	**$58,484**	**53**	**$29,832**	**196**	**$64,273**	**511**

The salary of personnel classified as faculty is shown by academic rank and category in Table 31 (next page). Associate professor had the highest average salary ($72,197). The range of mean salaries was broad, $63,413 at the rank of instructor in Category II to $78,591 for those at the associate professor level in Category III.

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

	I		II		III		Total	
Academic Rank	Mean	N	Mean	N	Mean	N	Mean	N
Full Professor	$70,032	7	----------	0	----------	1	$70,776	8
Associate Prof.	$71,299	23	$68,510	10	$78,591	9	$72,197	42
Assistant Prof.	$65,885	129	$66,600	74	$70,409	9	$66,326	212
Instructor/Lect.	$63,418	70	$63,413	39	$72,041	4	$63,722	113
Not Reported	$65,192	16	$72,463	36	$76,750	2	$70,816	54
Total	**$65,657**	**245**	**$67,575**	**159**	**$74,346**	**25**	**$66,924**	**429**

Program Directors of Physician Assistant Programs

The general characteristics of program directors are shown in Table 32 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 97.1% of their time to program-related activities. While the percentage of time ranged from 50% to 100%, the majority of the directors (N=90; 91%) were working full-time. Eighty-six percent of the directors were P.A.'s (N=85).

Table 32. Characteristics of Program Directors

Characteristics	Mean	S.D.	Range	N
Percent Time	97.1%	9.9	50% - 100%	99
Annual Salary	$87,348	$16,018	$ 57,900 - 137,226	92
P.A.	$87,633	$15,604	$ 57,900 - 136,375	80
Non-P.A.	$85,452	$19,223	$ 64,923 - 137,226	12
Male	$88,384	$16,451	$ 57,900 - 136,375	50
Female	$85,416	$15,521	$ 62,846 - 137,226	40
Doctorate	$88,657	$18,414	$ 63,500 - 136,375	23
Masters	$85,915	$13,671	$ 57,900 - 112,918	55
Bachelors	$76,582	$17,546	$ 62,846 - 110,000	6
Months in Position	71.87	84.30	1-390	99
P.A.	67.98	73.38	1-358	85
Non-P.A.	95.50	130.91	5-390	14
Male	69.49	79.18	1-358	53
Female	75.23	93.09	2-390	43

Highest Degree Held	Female	%	Male	%	Total	%
Doctorate*	7	29.2%	17	70.8%	24	27.0%
Masters	27	45.8%	32	54.2%	59	66.3%
Baccalaureate	4	66.7%	2	33.3%	6	6.7%

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

The mean average salary for program directors was $87,348, ranging from $57,900 to $137,226. Program directors who were P.A.'s earned a higher salary in comparison to those who were non-P.A.'s ($87,633 and $85,452, respectively). The average months in position varied from 68 months for physician assistant to 95.5 months for non-physician assistant. The median months in position was 41 months.

Male program directors had higher average salaries ($88,384) than did female directors ($85,416). The mean time in position of female directors exceeded that of male directors by six months (75 versus 69 months, respectively). The median number of months in position for male and female program directors is 41 and 53 respectively. In comparison to the 2002-2003 data, mean salaries increased by 1.8% ($87,348 versus $85,780).

Program Director Salaries: Regional Differences

A summary of program directors' salary and months in position by consortia region is shown in Table 33. Program directors associated with programs located in the Midwestern region had lower mean salaries ($82,762) compared with the rest of the regions. Directors in the Heartland region had the highest mean salaries ($97,855). The lowest individual salary for a program director was in the Midwestern region ($57,900). Program directors in the Heartland region had been employed in their positions the longest time, over eight years (96.3 months), and those in the Midwestern region the shortest period of time (47.6 months).

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

	Program Director Salary			Months in Position			
Consortia Region	N	Mean	Range	N	Mean	Median	Range
Northeastern	15	$ 86,429	$68,040- 103,400	19	86.7	35.0	2-390
Eastern	13	$ 85,491	$65,000- 110,000	16	64.8	42.5	3-256
Southeastern	14	$ 85,627	$59,640- 110,000	14	73.7	50.0	6-244
Midwestern	22	$ 82,762	$57,900- 109,200	22	47.6	36.0	1-113
Heartland	10	$ 97,855	$80,800- 136,375	10	96.3	67.0	11-336
Western	18	$ 90,563	$65,511- 137,226	18	77.2	40.0	7-372
Total	**92**	**$ 87,348**	**$57,900-137,226**	**99**	**71.9**	**41.0**	**1-390**

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 90 medical directors, of which eleven were employed as such on a full-time basis, the remainder, on average, devoted less than one-quarter (22.5%) of their time to program-related activities. The mean annual salary of the medical directors reporting (N=77) was $105,244 but varied extensively, ranging from $5,000 to $250,000. Male medical directors (N=62) earned a higher annual mean salary ($104,581) than did female medical directors ($103,327).

Table 34. Characteristics of Program Medical Directors

	Mean	S.D.	Median	Range	N
Percent Time	30.2	28.0	20.0	1%-100%	90
Annual Salary	$105,244	$49,025	$100,600	$ 5,000-250,000	77
Female	$103,327	$35,566	$100,000	$33,020-162,200	13
Male	$104,581	$51,306	$102,635	$ 5,000-250,000	62
Months in Position	70.2	67.4	54.0	1-385	90
Female	76.0	95.9	42.0	4-385	15
Male	68.4	61.8	54.0	1-300	71

Overall, medical director salaries increased by 6% 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 (71; 83%). The average months in position is lower for male directors (68 months).

Data concerning medical director salaries, months in position and consortia region are shown in Table 35. Medical directors of those programs in the Heartland region had the highest mean salaries ($129,588). Those directors in the Northeastern had the lowest salaries ($78,538). Medical directors in the Northeastern region were in their positions for the longest period of time (86.6 months). It should be noted that the range in both salaries (range of $25,000 to $250,000) and months in position (from 1 to 385 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

	Medical Director's Salary*				Months in Position			
Consortia Region	N	Mean	Median	Range	N	Mean	Median	Range
Northeastern	11	$ 78,538	$ 70,120	$30,000-162,200	14	86.6	62.0	4-300
Eastern	12	$128,334	$113,989	$68,000-200,000	15	73.5	44.0	14-252
Southeastern	12	$115,098	$118,930	$40,000-200,000	13	59.4	60.0	1-156
Midwestern	17	$ 92,034	$100,000	$ 5,000-186,500	21	55.6	55.0	3-148
Heartland	8	$129,588	$118,368	$50,000-250,000	9	82.2	95.0	21-168
Western	17	$101,023	$100,700	$13,000-160,000	18	73.5	45.0	6-385
Total	**77**	**$105,244**	**$100,600**	**$ 5,000-250,000**	**90**	**70.2**	**54.0**	**1-385**

* 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=41; 71.9%) were practicing in primary care specialties, predominantly family medicine (N=21; 37%) and internal medicine (N=17; 30%). Only sixteen medical directors were in non-primary care specialties.

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

Primary Care Medical Specialty	N	(%)
Family Medicine	21	36.8%
Internal Medicine	17	29.8%
Pediatrics	3	5.3%
Total	**41**	**71.9%**

Non-Primary Care Medical Specialty	N	(%)
Cardiology	2	3.5%
Emergency Med.	5	8.8%
General Surgery	1	1.8%
Psychiatry	1	1.8%
Other	7	12.3%
Total	**16**	**28.2%**

Comparisons between Medical and Program Directors

A comparison between medical and program directors' salaries from 1984-85 through 2003-2004 is shown in Table 37 (next page). Note, information concerning the characteristics of medical directors was not available in 1987-88. Between 1984 and 2003, there has been a 133% increase in the mean salary for program directors and a 72.5% increase for medical directors. The mean time in position has increased for program directors over this period (64.5 to 71.9 months). This year there was a increase in the months in position for program and medical directors from last year.

Table 37. Trends in Directors' Salaries and Months in Position from 1984 Through 2003

Academic	Program Director			Medical Director		
Year	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
2000-2001	$79,878	75.6	88	$108,575	64.0	72
2001-2002	$83,771	75.8	91	$104,355	65.1	81
2002-2003	$85,780	70.9	85	$ 99,190	64.6	74
2003-2004	$87,348	71.9	92	$105,244	70.2	77
20-yr Mean	**$60,762**	**79.3**	**60**	**$ 90,244**	**66.2**	**50**

On average, in 2003, medical directors earned an annual salary approximately 20% higher than the typical program director ($105,244 versus $87,348). Over the twenty-year period, the medical directors earned an annual salary of approximately 49% higher than the typical program director ($90,244 versus $60,762). Trends in salary for the program and medical directors from 1984 through 2003 are in Figure 8 (next page) and clearly illustrates the variation in directors' salaries since 1984.

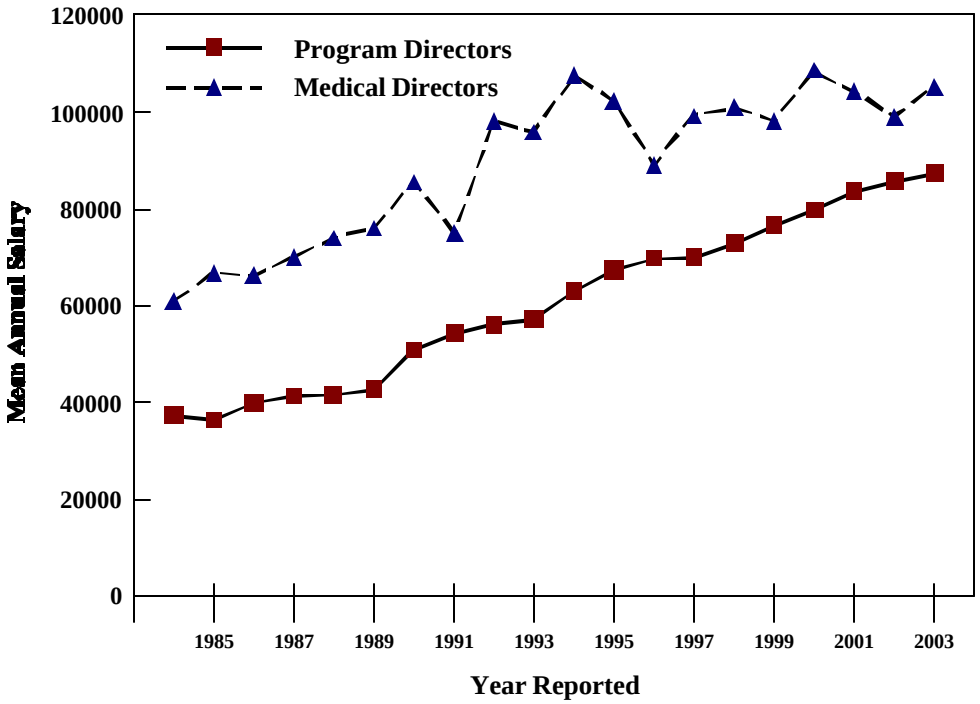
A comparison of academic position and tenure status between the directors is shown in Table 38. The majority of medical and program directors held faculty level positions with 12% of these directors classified as staff. More program directors than medical directors in faculty-level positions were on 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

	Program Director		Medical Director	
Level of Position	Number	(%)	Number	(%)
Staff Appointment	8	8.2%	14	16.1%
Faculty Appointment	89	91.8%	73	83.9%
Total	**97**	**100.0%**	**87**	**100.0%**
Tenure Status				
Tenure Track Faculty*	36	40.4%	18	24.7%
Faculty Tenured*	15	16.9%	6	8.2%

* Percent of TOTAL faculty tenured

Figure 8. Program and Medical Directors' Salaries: 1984 Through 2003



In 2003 approximately 88% of the directors were faculty. The proportion of faculty directors on the tenure track was 40% and 25%.

A comparison between the academic rank of medical and program director faculty is shown in Table 39. More medical directors (96%) held professorial rank than program directors (91%) held professorial rank (Assistant to Full Professor).

Table 39. Program and Medical Directors: Academic Rank

	Program Director		Medical Director	
Academic Rank of Faculty	Number	(%)	Number	(%)
Full Professor	8	10.0%	11	20.4%
Associate Professor	32	40.0%	19	35.2%
Assistant Professor	33	41.3%	22	40.7%
Instructor/Lecturer	7	8.8%	2	3.7%
Total	**80**	**100.0%%**	**54**	**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 (next page) 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 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 52.0 months would be around $64,368 (i.e. $63,084 + $1,284), a value similar to that reported in Table 14 for the average Category I individual (i.e. $65,107) having been employed for a mean of 52.0 months.

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

Characteristic	Base	+ (Constant	x Months)	N
Category I	$ 63,084	+ ($ 24.70	x _____)	275
Category II	$ 63,318	+ ($ 46.90	x _____)	187
Category III	$ 50,843	+ ($ 74.70	x _____)	52
Category IV	$ 27,650	+ ($ 38.30	x _____)	197
Categories I- III	$ 62,301	+ ($ 32.00	x _____)	509
Program Directors	$ 84,752	+ ($ 39.00	x _____)	92
Medical Directors	$ 94,896	+ ($150.00	x _____)	77

P.A. Program Personnel Turnover

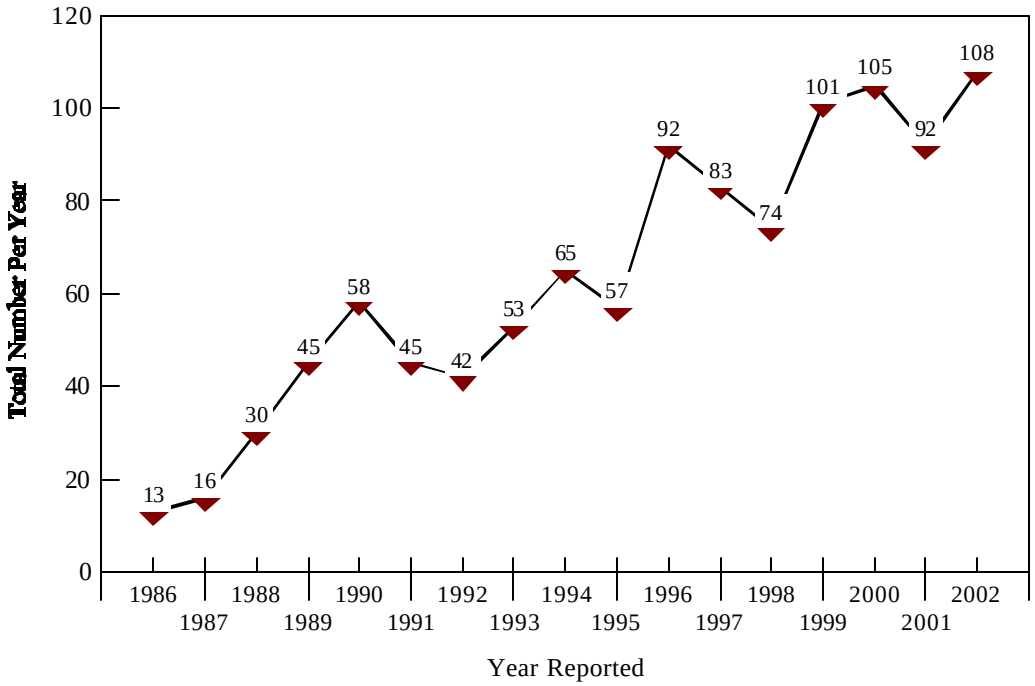
The 2003 survey requested updated information on personnel turnover for the period September 2002 through August 2003. Program respondents were asked to provide data on the type, frequency and characteristics of personnel terminating and those employed to fill the position. Reported herein is the turnover activity for 2002-2003 as well as the cumulative data for the seventeen-year period (1986-2002) in Table 41. Data are expressed as both total number and mean number of individuals per program for the time period identified. Over the seventeen year-period examined, respondents reported that 1079 personnel left their positions. As shown in Figure 9 (next page), there has been an overall increase in turnover since 1986, with decreases in 1991, 1992, 1995, 1997, 1998 and 2001.

Table 41. Program Personnel Turnover 1986 Through 2002

Academic Year	Total Number Departing	Mean/Program
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	74	0.7
1999-2000	101	1.1
2000-2001	105	1.1
2001-2002	92	0.9
2002-2003	108	1.0
17-year Mean	**63.5**	**0.8**

During the 2002-2003 academic year, 108 P.A. program personnel departed (N=105 programs reported information) for an average of 1.0 per program. The overall 17-year mean is 63.5 personnel departing per year, an average of 0.8 persons departing/program.

Figure 9. Trends in Personnel Turnover: 1986 Through 2002



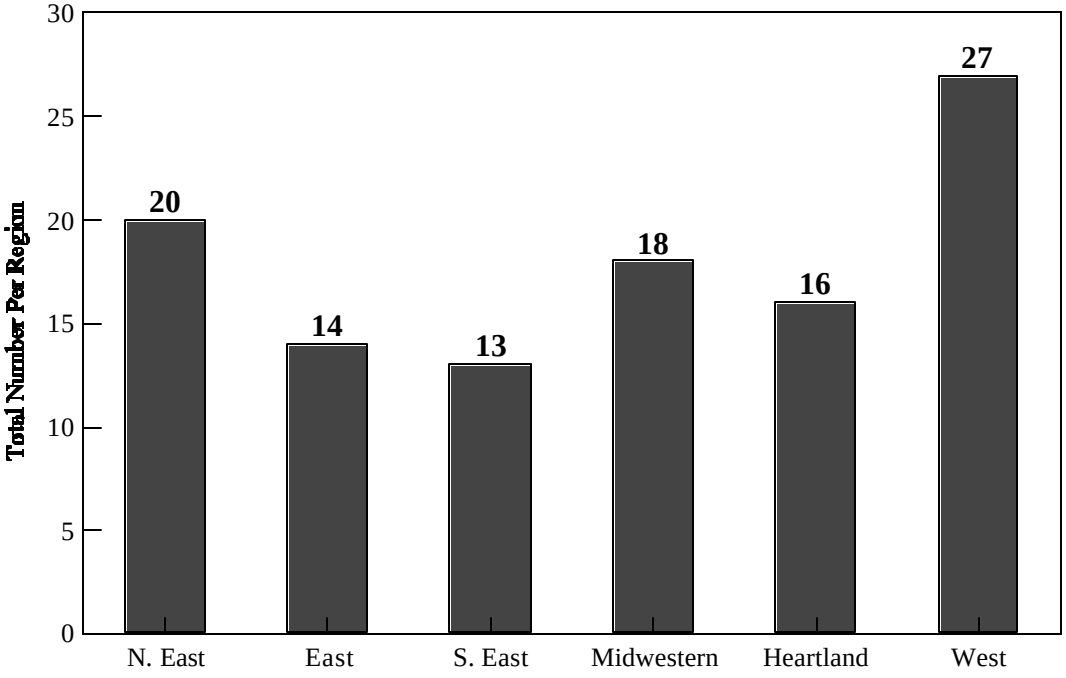
Our best estimate of the mean number of core program personnel is 9.7 per program, and includes one program and medical director, 4.2 P.A.'s and 1.1 non-P.A.'s and 2.4 Category IV personnel. Given the average turnover per year we estimate that 10.3% of program personnel departed this year (1.0/9.7).

The number of personnel (and mean/program) departing over the past seventeen years and those departing in 2002, by region, is shown in Table 42 and illustrated in Figure 10 (next page). Turnover varied by region. For example, programs in the Heartland region reported the highest turnover (1.45 per program) while programs in the Midwestern region had the lowest rate of turnover (0.78 per program).

Table 42. Program Personnel Turnover by Region, 1986 Through 2002

Consortia Region	Number in 17 Years	Number in 2002	2002 Mean/ Program	N
Northeastern	196	20	1.00	20
Eastern	140	14	0.88	16
Southeastern	168	13	0.81	16
Midwestern	199	18	0.78	23
Heartland	154	16	1.45	11
Western	222	27	1.42	19
Total	**1,079**	**108**	**1.03**	**105**

Figure 10. Personnel Turnover By Region: 2002-2003
(From 9/1/2002 Through 8/31/2003)



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. Overall, 108 program personnel (nineteen Category IV) departed in 2002 with turnover highest among Category I personnel and least for Category III. On average 7.9 weeks were required to fill a position. Filling program director positions averaged 0.7 weeks while 10.7 weeks were required to fill Category III positions.

Table 43. Comparison of Personnel Turnover in 2002 by Category

Category	Number Departed	Number Employed	Percent Unfilled	Weeks to Fill Position
I	36	28	22.2%	10.3
II	29	27	6.9%	8.2
III	3	4	0.0%	10.7
IV	19	16	15.8%	8.6
Program Director	12	12	0.0%	0.7
Medical Director	9	9	0.0%	2.8
Total	**108**	**96**	**11.1%**	**7.9**

Table 44 (next page) shows the characteristics of personnel departing and those employed. On average, personnel departed in 2002 were older (4.1 years) than those employed. Approximately the same number of females were employed as departed. A higher percentage of non-white personnel were employed than departed.

Table 44. Characteristics of Personnel Departed and Employed in 2002

Characteristic	Program Personnel: Departed		Program Personnel: Employed	
Mean Age (yrs)	44.9		40.8	
Range	24-71		20-58	
Gender	(%)	N	(%)	N
Male	31.8%	34	31.3%	30
Female	68.2%	73	68.7%	66
Ethnicity				
White	89.6%	95	80.2%	77
Non-White	10.4%	11	19.8%	19

The academic characteristics of personnel departing and those filling the vacated positions are shown in Table 45. Doctorate includes Ph.D., Ed.D., Psy.D., D.Ph. and M.D. As indicated in Table 45, the majority of personnel employed held a masters degree (54.3%) as their highest credential. Of those departing, 45 held a masters degree (49.5%) and 23 held a doctorate degree (25.3%). In addition, the majority of personnel departing were P.A.'s (66.7%) and those employed to fill these positions were also P.A.'s (67.7%).

Table 45. P.A. Program Personnel Turnover in 2002: Academic Characteristics

Highest Degree	Program Personnel: N	Departed	N	Employed
Associate/Certificate	4	4.4%	0	0.0%
Baccalaureate	19	20.9%	21	25.9%
Masters	45	49.5%	44	54.3%
Doctoral	23	25.3%	16	19.8%
P.A. Credentialed	70	66.7%	65	67.7%

The reasons cited for personnel turnover during 2002 and the seventeen-year totals, are shown in Table 46. In 2002, almost one-fifth (18.5%) of the individuals departing did so to return to clinical practice. Ten cited career advancement as the reason for leaving their position. The "Other" category includes reasons such as unknown, military service and medical. Over the seventeen-year period, career advancement was the primary reason for departing followed by return to clinical practice and geographic relocation.

Table 46. P.A. Program Personnel Turnover:
Reasons for Termination in 2002 Compared to the Seventeen -Year Totals

Reasons for Terminating	2002: N	2002: (%)	17-Year Totals: N	17-Year Totals: (%)
Career Advancement	10	12.3%	205	21.9%
Return to Clinical Practice	15	18.5%	171	18.3%
Geographic Relocation	14	17.3%	154	16.5%
Retired	8	9.9%	59	6.3%
Termination	7	8.6%	49	5.2%
Job Dissatisfaction	1	1.2%	45	4.8%
Returned to School	1	1.2%	39	4.2%
Salary Dissatisfaction	1	1.2%	32	3.4%
Family Obligations	7	8.6%	30	3.2%
Other	17	21.0%	152	16.2%
Total	**81**	**100%**	**936**	**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 seventeen-year period, there has been a mean salary increase of 3% for newly employed individuals as compared to those departing.

Table 47. Salaries of Departing and Newly Employed Personnel, 1986 Through 2002

Academic Year	N	Salary Departing	Months in Position	Salary New Employee	Months Prior Position
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
1999-2000	94	$48,523	42.1	$47,899	26.5
2000-2001	79	$53,881	46.0	$49,997	36.0
2001-2002	72	$52,775	39.2	$53,718	48.4
2002-2003	85	$59,280	48.3	$57,456	45.3
17-Year Mean	**941**	**$43,984**	**43.4**	**$45,169**	**45.1**

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 43 months, while those employed had been in their previous position two months longer (45 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, 2003-2004 (first-year class), 2002-2003 (second-year class) and 2001-2002 (third-year class) are shown in Table 48. The proportion of maximum capacity that remained unfilled and the resident status of the students are 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

		Maximum Capacity	Current Enrollment	% Capacity Unfilled	% Residents
First-Year Class	Mean	41.2	38.2	6.3%	70.2%
(2003-2004)	Median	36.0	34.5	0.0%	73.3%
	Range	(13-180)	(10-98)	(0-68%)	(0-100%)
	Number	108	108	108	91
Second-Year Class	Mean	38.9	35.0	9.8%	73.9%
(2002-2003)	Median	34.5	31.5	4.1%	75.8%
	Range	(12-180)	(8-112)	(0-67%)	(0-100%)
	Number	108	108	108	90
Third-Year Class	Mean	35.3	29.2	14.6%	73.2%
(2001-2002)	Median	32.0	28.0	6.3%	74.9%
	Range	(10-90)	(6-54)	(0-85%)	(0-100%)
	Number	31	29	29	24
All Classes	Mean	89.8	80.3	9.3%	71.3%
	Median	80.0	70.0	3.8%	73.3%
	Range	(24-360)	(18-222)	(0-53%)	(0-100%)
	Number	109	109	109	91

* Includes both full- and part-time students.

The mean maximum capacity for the first-year class increased from last year (39.5) and is reported as 41.2; the mean maximum capacity for the second-year class also increased from last year (from 37.7 to 38.9); and the mean maximum capacity for the third-year class increased from 32.8 to 35.3 students. The maximum capacity for all classes increased by 3.1 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).

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 except resident status.

The percent of capacity unfilled for the first-year class was 6.3% and 9.8% 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 12 to 180. The maximum capacity for all classes

averaged 89.8 students and with a mean enrollment of 80.3 students, approximately 9.3% of the maximum capacity (all classes) remained unfilled.

Current enrollment in the first-year class averaged 38.2 students per program (108 programs; range 10 to 98) and 35 students/program in the second-year class. In comparison, the number of first- and second-year students in the previous year was 36.6 and 35.1, respectively. It should be noted that the enrollment figures include both full-time and part-time students, the latter accounting for only 1.9% of the enrollment. On average, approximately 70% of the students in the first-year and 74% 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 70%. Twenty-eight programs reported that a "third-year class" was enrolled.

Table 49. Current Enrollment by Gender and Class-Year

	1st Year Class (N=108)			2nd Year Class (N=108)			3rd Year Class (N=28)		
Full-Time	Mean	(%)	Range	Mean	(%)	Range	Mean	(%)	Range
Male	11.0	29.6%	2-66	10.5	30.3%	2- 78	7.4	25.6%	1-16
Female	26.1	70.4%	6-77	24.1	69.7%	2- 74	21.5	74.4%	6-38
Total	**37.1**	**100%**		**34.6**	**100%**		**28.9**	**100%**	
	1st Year Class (N=14)			2nd Year Class (N=4)			3rd Year Class (N=1)		
Part-Time	Mean	(%)	Range	Mean	(%)	Range	Mean	(%)	Range
Male	2.1	27.3%	0-10	3.8	30.2%	1- 5	N/A	N/A	N/A
Female	5.6	72.7%	0-23	8.8	69.8%	0-19	N/A	N/A	N/A
Total	**7.7**	**100%**		**12.6**	**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. Fourteen programs reported they enrolled part-time students in the first year; four programs also indicated they had part-time students in the second year of the program and one program reported part-time students in the third-year.

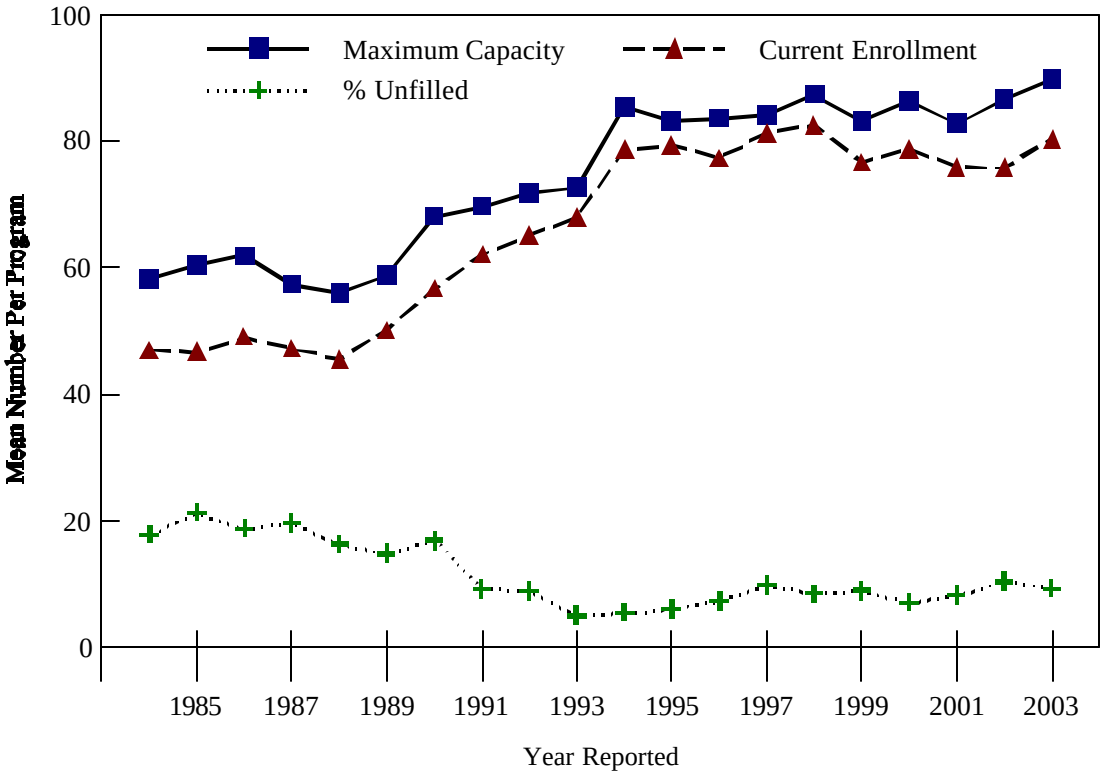
Trends in Maximum Capacity and Student Enrollment

The mean maximum class capacity, total student enrollment and percent of capacity unfilled from 1984 through 2003 are shown in Table 50 (next page). Maximum capacity over the past twenty years averaged 74.4 students for all classes and ranged from 56.1 to 89.8. The percent of capacity that remained unfilled varied around a mean of 11.5%, however has remained below the mean since 1990. The trends in enrollment, maximum and unfilled capacity are illustrated in Figure 11 (next page). Total enrollment from 1984 through 1993 averaged 53.76 students/program. In the subsequent ten years (1994-2003) enrollment averaged 78.7 and varied between 76.0 students to 82.5 students. This current year has seen an increase in the current enrollment/program by 5.6%.

Table 50. Total Student Enrollment of All Classes, 1984 Through 2003

Academic Year	Programs Responding	Maximum Capacity All Classes	Current Enrollment All Classes	Percent Capacity Unfilled
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%
1999-2000	105	83.3	76.7	9.0%
2000-2001	102	86.5	78.8	7.1%
2001-2002	105	82.8	76.0	8.2%
2002-2003	103	86.7	75.9	10.4%
2003-2004	109	89.8	80.3	9.3%
20-Yr. Mean	**70.3**	**74.4**	**66.2**	**11.5%**

Figure 11. Trends in Enrollment: 1984 Through 2003



P.A. Applicants and Students Enrolled

The number of applicants and those enrolled in the most recent P.A. class (2003-2004) 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 212.1 applications for the class entering in 2003-2004, ranging from 22 to 593 applicants. This represented less than a 1% increase (1.7 applicants/program) from the 210.4 applicants per program the previous year.

Table 51. Applicant and Student Characteristics, Class of 2003-2004

	Number Applicants	Number Accepted	Number Enrolled F.T.*	P.T.*	Total
Mean	**212.1**	**47.7**	**39.0**	**0.9**	**39.9**
Median	169.0	45.0	35.5	0.0	36.0
Range	22-593	13-154	12-160	0-33	12-160
# Programs	80	89	98	98	98

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

On average, 47.7 students were accepted and 39 students per program were enrolled in the first-year class (98 programs; range from 12-160); only 2.3% were part-time students (0.9/program). These findings mark an increase (17.7%) in first-year enrollment over the 21-year average (i.e., 39.9/program versus an average of 33.9/program). Twenty-two percent of the applicant pool was accepted (47.7/212.1) and of these, 83.6% were enrolled (39.9/47.7), thus an average of 16% of those accepted elected not to enroll in a particular program. Overall, 19% of the applicants were enrolled in 2003 (39.9/212). The ratio of applicants to enrollees was over 5.3:1, a lower ratio than the 5.5:1 value in the previous year.

Applicants and Students Enrolled by Consortia Region

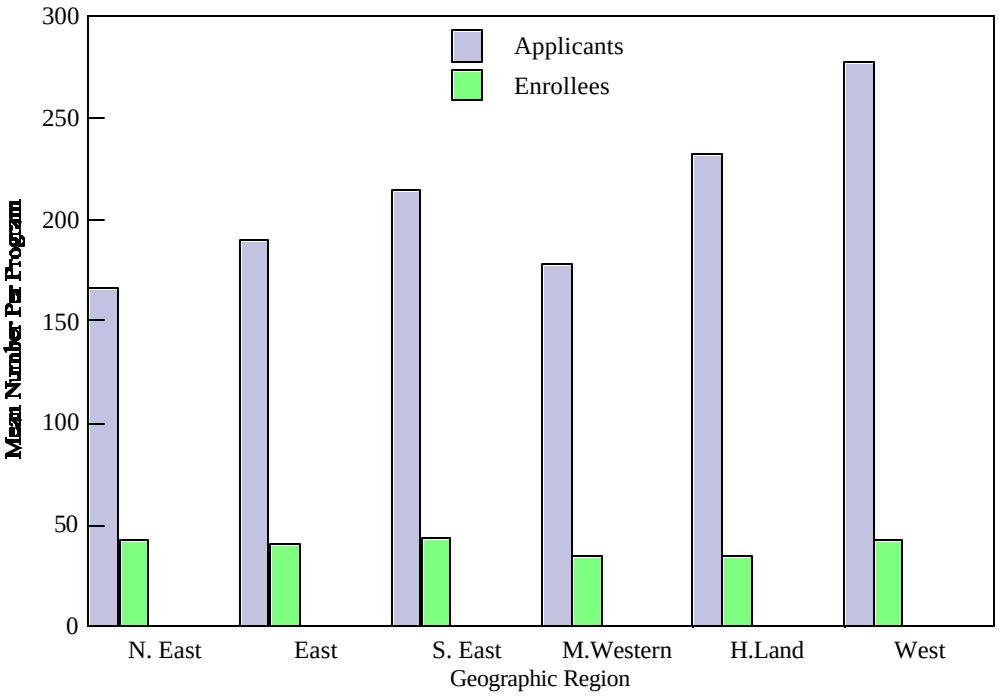
A comparison between the mean number of applicants by consortia region is shown in Table 52 and Figure 12 (next page), 'N' indicates the number of programs responding. Programs in the Western region averaged 278 applicants per program, while programs in the Northeastern region, 166 per program. The Heartland region had the largest increase in the number of applicants from last year (52.6%).

Table 52. Number of Applicants and Enrollees by Region

Consortia Region	Applicants N	Applicants Total	% Change Prev. Year	Enrollees N	Enrollees Total	Ratio
Northeastern	10	166.0	- 18.0%	17	42.4	3.9:1
Eastern	12	189.3	+ 14.7%	15	40.9	4.6:1
Southeastern	16	214.3	- 7.5%	18	43.7	4.9:1
Midwestern	17	178.0	+ 16.5%	20	34.5	5.2:1
Heartland	8	232.0	+ 52.6%	11	34.3	6.8:1
Western	17	277.9	- 6.6%	17	42.4	6.6:1
Total	**80**	**212.1**	**+ 0.8%**	**98**	**39.9**	**5.3:1**

The largest number of enrollees was in the Southeastern region (43.7) and the smallest number was in the Heartland region (34.3).

Figure 12. Applicants and Students Enrolled by Region, 2003-2004



Trends in P.A. Student Enrollment, 1983 Through 2003

The number of applicants and students enrolled in P.A. programs for the twenty-year period from 1983 through 2003 are shown in Table 53 (next page) and Figure 13 (next page).

From 1984 through 2003 the number of the applicants ranged from 84.7 to 419.5 persons, and averaged 205.2 over the twenty-year period. Figure 13 illustrates the trends in the number of applicants and students enrolled from 1984 through 2003.

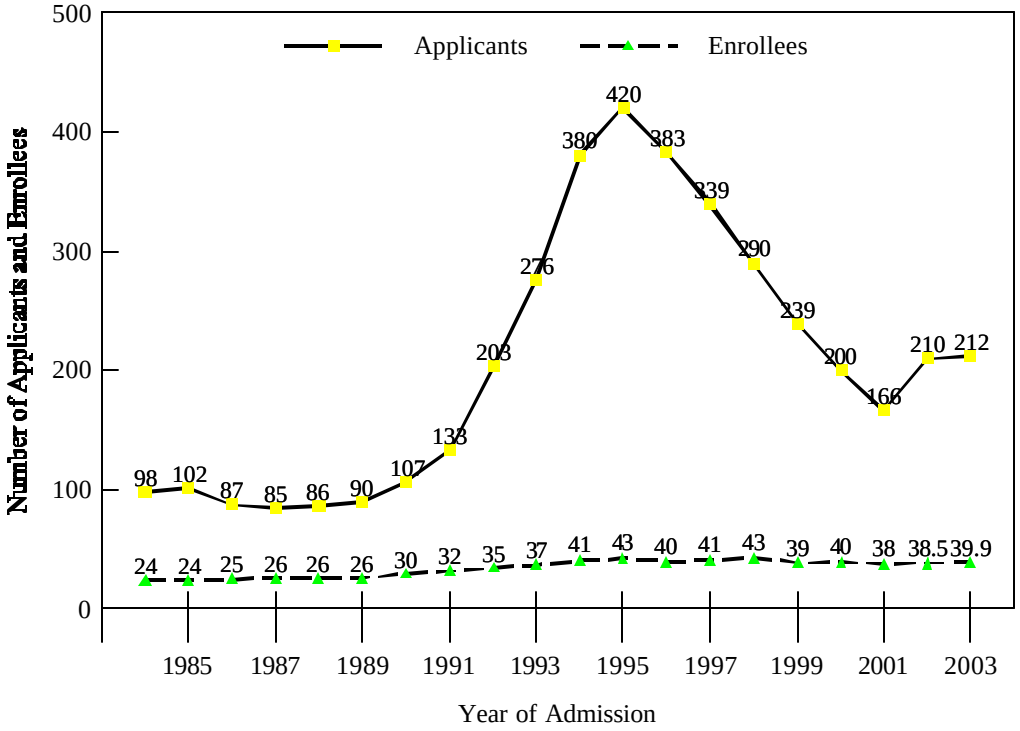
The mean number of applicants/program remained relatively constant from 1984 through 1989, then increased systematically by over 350% until 1995. From 1995 through 2001, the number of applicants/program decreased by 60.5%. In 2002, the number of applicants increased by 26.5%.

There was a systematic increase in enrollees from 1984 through 1995. Since then, the mean number enrolled has varied around a mean of 40 students/program. The average number of enrollees over the twenty-year period is 34.4 students/program.

Table 53. P.A. Applicants and Students Enrolled, 1984 Through 2003

Academic Year	Mean Number Applicants	(N)	Mean Number Accepted	(N)	Mean Number Enrolled	(N)	Mean Ratio Appl./Enroll
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
1999-2000	238.8	80	42.6	96	39.3	105	6.1:1
2000-2001	199.7	80	48.5	91	40.1	101	5.0:1
2001-2002	166.0	79	47.5	98	38.4	105	4.4:1
2002-2003	210.4	76	49.4	87	38.5	99	5.5:1
2003-2004	212.1	80	47.7	89	39.9	98	5.3:1
20-Yr. Mean	**205.2**	**53**	**40.9**	**61**	**34.4**	**68**	**5.6:1**

Figure 13. Trends of Applicants and Students Enrolled: 1984 Through 2003



The mean number and relative proportion of male and female students enrolled in P.A. programs over the past twenty-one years are shown in Table 54. The proportion of female and male students remained relatively constant from 1983-1995, average of 61% and 39% respectively. Since then, the percentage of female students has increased to 70% and male students have decreased to 30%. These figures include part-time students.

Table 54. First-Year Class Enrollment, 1983 Through 2003

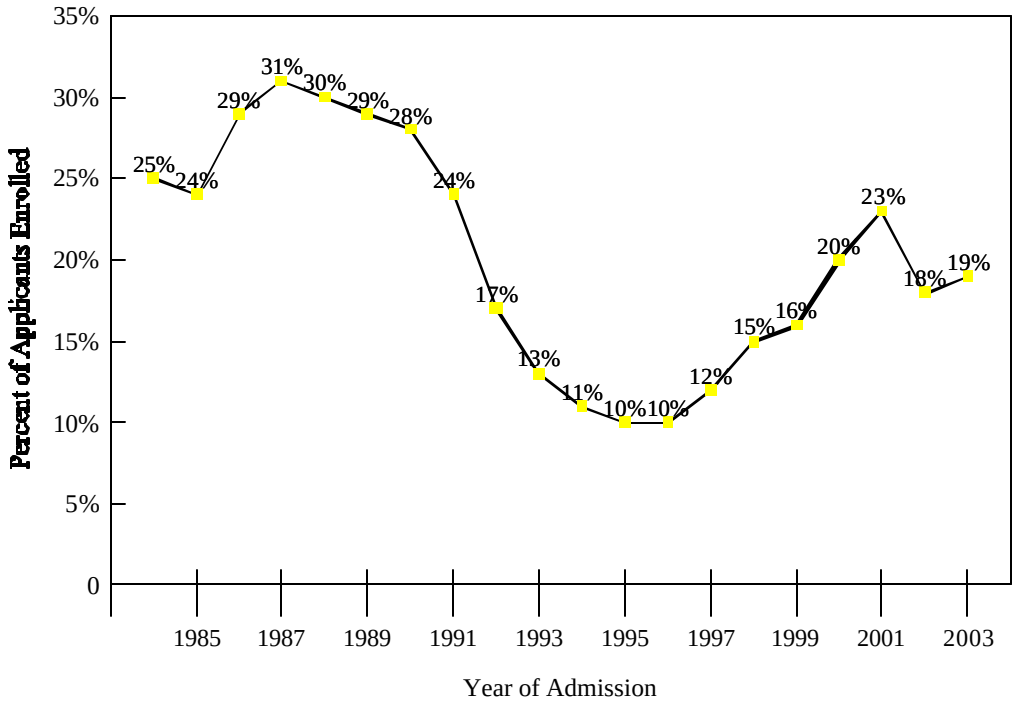
Academic		Female		Male		Total	
Year	N	Mean	(%)	Mean	(%)	Mean	N
1983-1984	39	13.6	58.4%	9.7	41.6%	24.0	43
1984-1985	39	14.6	61.6%	9.1	38.4%	24.1	43
1985-1986	42	15.3	63.0%	9.0	37.0%	24.3	41
1986-1987	44	15.5	62.2%	9.4	37.8%	24.9	47
1987-1988	47	15.7	61.6%	9.9	38.4%	25.6	47
1988-1989	46	16.2	62.3%	9.8	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
1999-2000	103	24.0	62.8%	14.2	37.2%	40.2	103
2000-2001	102	24.8	64.9%	13.4	35.1%	38.2	102
2001-2002	105	26.7	68.1%	12.5	31.9%	39.2	105
2002-2003	103	24.7	69.6%	10.8	30.4%	35.5	103
2003-2004	108	26.9	70.4%	11.3	29.6%	38.2	108
21-Yr Mean	**68**	**20.6**	**62.3%**	**12.4**	**37.7%**	**33.3**	**68**

Trends in the percent of applicants enrolled are illustrated in Figure 14 (next page). The proportion of applicants enrolled systematically decreased from a high of 31% in 1987 to a low of 10% in 1995, with an increase to 23% in 2001.

Total Enrollment in P.A. Programs

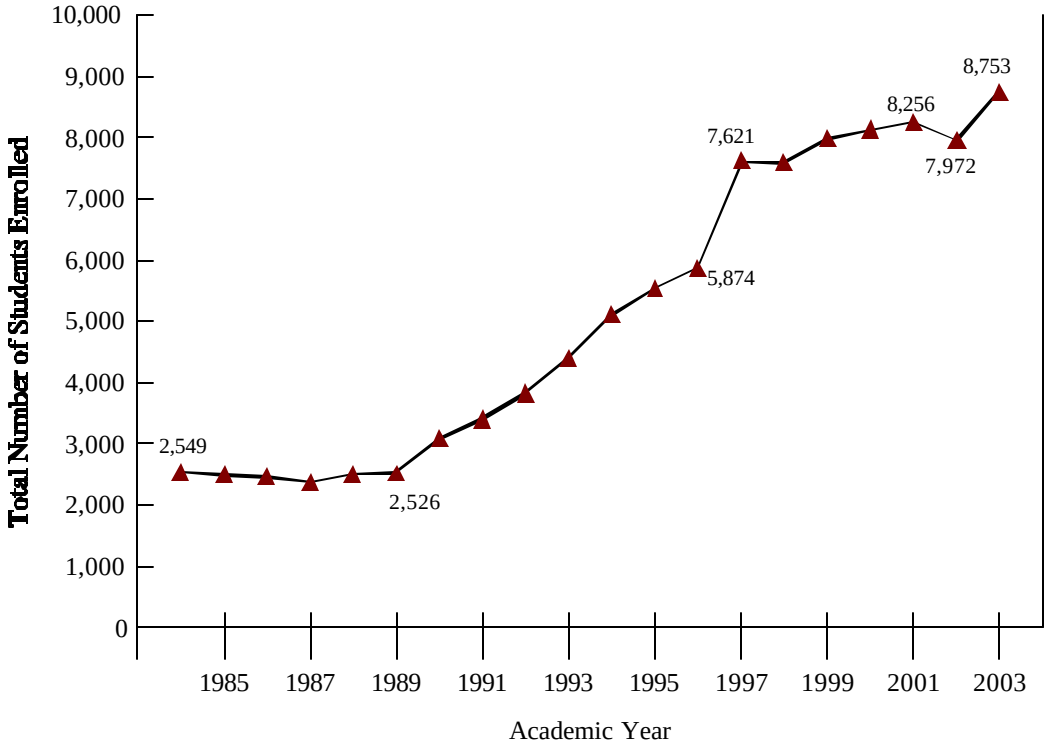
Figure 15 (next page) illustrates the trends in total student enrollment from 1984 through 2003. Estimates of total enrollment are based on summing mean values for enrollment in the 1st, 2nd and 3rd year classes, then multiplying by the number of programs represented. For the 108 programs we estimate total enrollment to be 8,753 in 2003. (The calculations were as follows, 1st yr. 108x38.2=4,126, 2nd yr. 108x35.0=3,780 and 3rd yr. 29 x 29.2=847). If one would estimate 1st year enrollment based upon 133 programs, first year enrollment would be133x38.2=5,081, an increase of 955 students.

Figure 14. Trends in Percent of Applicants Enrolled: 1984 Through 2003



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%. Since then, there has been a 15% increase. 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); 120 (1999); 126 (2000), 130 (2001), 132 (2002) and 133 in 2003.

Figure 15. Trends in Student Enrollment: 1984 Through 2003



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. The data are expressed as the mean number of individuals per program within each of the age categories examined. Almost one-third (29.6%) of the number of applicants was less than 24 years of age. Over 40% of the applicants were between 24-29 years. Almost one-third 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 26 and 0.5% were under 20 years of age.

Table 55. Applicants and Enrollees by Age, Class of 2003-2004

	All Applicants		Number Accepted		Number Enrolled	
	Mean	(%)	Mean	(%)	Mean	(%)
Age	(N=71)		(N=83)		(N=89)	
Under 20	2.3	1.2%	0.5	1.0%	0.2	0.5%
20-23	56.7	28.4%	15.7	32.8%	12.6	32.1%
24-26	55.6	27.8%	11.7	24.4%	9.4	24.0%
27-29	31.9	16.0%	6.7	14.0%	5.4	13.8%
30-33	24.0	12.0%	5.4	11.3%	4.4	11.2%
Over 33	29.2	14.6%	7.9	16.5%	7.2	18.4%
Total	**212.1**	**100.0%**	**47.7**	**100.0%**	**39.9**	**100.0%**
	(N=80)*		(N=89)		(N=98)	

* Number of programs reporting.

Students Enrolled by Age and Consortia Region

The distribution of students enrolled in the 2003-2004 class by age and consortia region is shown in Table 56. The table reports the percentage of students per program (N=73 programs) in each age category. Students enrolled in those programs located in the Eastern region tended to be younger than those in other regions, 42.2% were 23 years of age or less. Conversely, students in the Western region were notably older than P.A. students in other regions, 36.7% were over 30 years of age.

Table 56. P.A. Student Enrollment by Age and Region, Class of 2003-2004

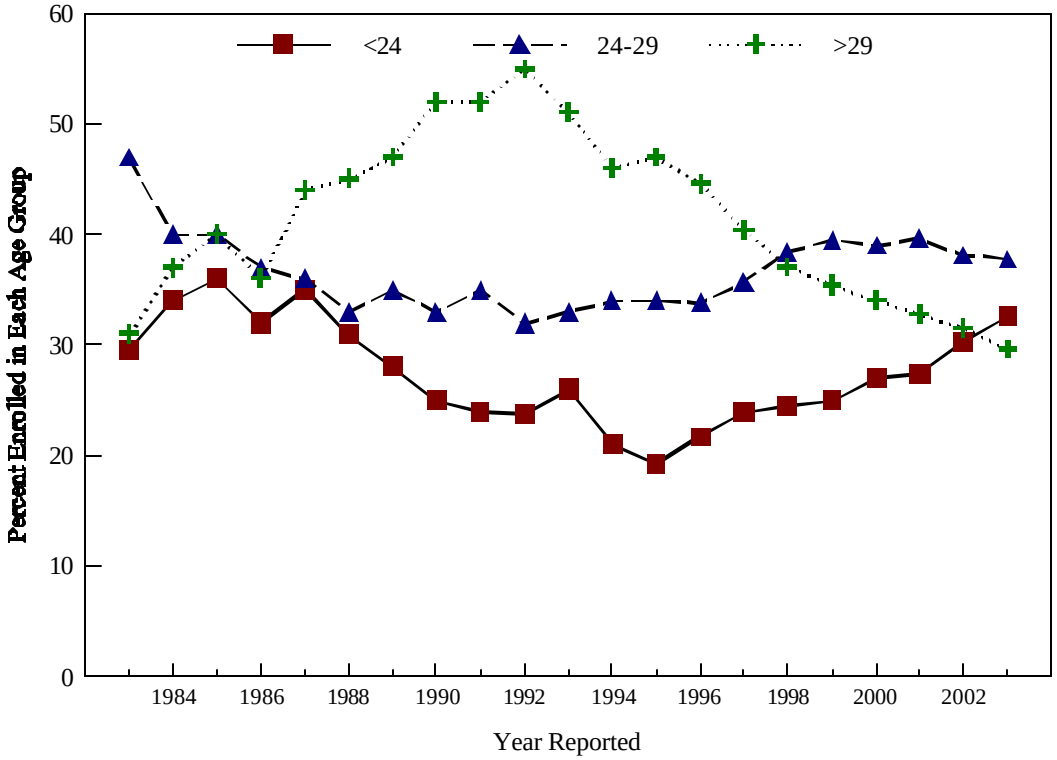
	Age at Application					
Consortia	< 20	20-23	24-26	27-29	30-33	>33
Region	(%)	(%)	(%)	(%)	(%)	(%)
Northeastern	6.0%	30.8%	24.6%	14.6%	9.0%	15.0%
Eastern	1.1%	41.1%	28.0%	11.3%	7.2%	11.2%
Southeastern	0.2%	31.5%	30.0%	13.8%	13.1%	11.3%
Midwestern	0.3%	36.2%	27.4%	11.5%	8.5%	16.1%
Heartland	0.0%	33.6%	26.2%	16.3%	12.9%	11.0%
Western	0.1%	10.7%	28.5%	24.2%	17.6%	19.1%
Total	**0.5%**	**32.1%**	**24.0%**	**13.8%**	**11.2%**	**18.4%**

Trends in Enrollment by Age

Trends in the age of enrolled students from 1983 to 2003 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 32.6% in 2003, 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 37.8%. 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 29.6% of enrollees. This is the first year that the percentage of students over 29 years of age was less than both under 24 years of age and the 24 to 29 year old group.

Figure 16. Trends in Enrollee Age: 1983 Through 2003



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 27.5, accepted applicant age was 27.6, full-time student age was 27.8 and the average age for the part-time student was 33.1.

Table 57 lists average ages of these categories by consortia region. The Western region had the highest average age of applicants (29.6), accepted applicants (30.5) and full-time students (30.1). The Eastern region had the lowest average age of applicants (26.4), accepted applicants (26.1) and full-time students (25.3).

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

	Applicants		Accepted Applicants		Enrollees Full-Time		Enrollees Part-Time	
Consortia Region	N	Average Age	N	Average Age	N	Average Age	N	Average Age
Northeastern	12	26.6	14	26.6	17	27.4	3	39.7
Eastern	13	26.4	13	26.1	15	25.3	2	25.8
Southeastern	14	27.1	15	27.5	18	27.8	1	-------
Midwestern	16	27.9	18	27.7	20	28.1	2	34.0
Heartland	5	26.6	9	26.9	13	29.5	0	-------
Western	15	29.6	15	30.5	18	30.1	0	-------
Total	**75**	**27.5**	**84**	**27.6**	**101**	**27.8**	**8**	**33.1**

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 (71.7%) were White/Non-Hispanic; 6.4% were Black/African-American, 6.0% were Latino/Hispanic, 7.7% were Asian.

Table 58. Applicants and Students Enrolled by Ethnicity

	All Applicants		Number Enrolled		# of Programs
	Mean	(%)	Mean	(%)	w/o Minorities
Ethnicity	(N=76)		(N=98)		(N=98)
White/Non-Hispanic	148.0	71.7%	30.1	75.6%	0
Black/African-American	13.3	6.4%	2.7	6.8%	31
Latino/Hispanic/Mex. Am.	12.4	6.0%	2.6	6.5%	35
Asian	15.9	7.7%	2.4	6.0%	28
Asian Subpopulation	4.8	2.3%	0.6	1.5%	76
Native Hawaiian/Other P.I.	0.6	0.3%	0.1	0.3%	89
American Ind./Alaskan	1.5	0.7%	0.3	0.8%	86
Other	9.9	4.8%	1.0	2.5%	64
Total (N=80)	**212.1**	**100%**	**39.9**	**100%**	**3**

Overall, 28.3% of the applicants were members of an ethnic minority, 27% of whom were Asian. Among those enrolled, 75.6% were White/Non-Hispanic and the remainder (24.4%) was 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, 28% of the applicants and 24% of those enrolled were described as an ethnic minority. Thirty-one of the 98 program respondents (31.6%) did not enroll any Black/African-American students and thirty-five programs did not enroll any Hispanic students. Three programs (3.1%) did not enroll any type of minority student in 2003.

Ethnic Representation of Applicants and Enrollees by Consortia 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 consortia region is in Table 59.

Table 59. Applicants and Enrollees by Ethnicity and Consortia Region

	Applicants				Enrollees			
Consortia	White		Non-White		White		Non-White	
Region	Mean	%	Mean	%	Mean	%	Mean	%
Northeastern	85.6	51.1%	81.8	48.9%	28.9	68.5%	13.3	31.5%
Eastern	136.3	72.0%	53.1	28.0%	33.4	82.1%	7.3	17.9%
Southeastern	158.3	73.8%	56.3	26.2%	34.7	79.4%	9.0	20.6%
Midwestern	127.3	83.6%	25.0	16.4%	28.1	83.4%	5.6	16.6%
Heartland	165.0	76.9%	49.5	23.1%	26.1	75.0%	8.7	25.0%
Western	193.1	69.8%	83.6	30.2%	28.4	66.7%	14.2	33.3%
Total	**148.0**	**71.7%**	**58.4**	**28.3%**	**30.1**	**75.6%**	**9.7**	**24.4%**

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 Northeastern region had the largest proportion of non-white applicants at 49% and the Midwestern region the least number, with only 16% being non-white. The Western region enrolled the largest percentage (33.3%) of non-white students. Programs in the Midwestern region had the fewest number of non-white enrollees (16.6%).

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

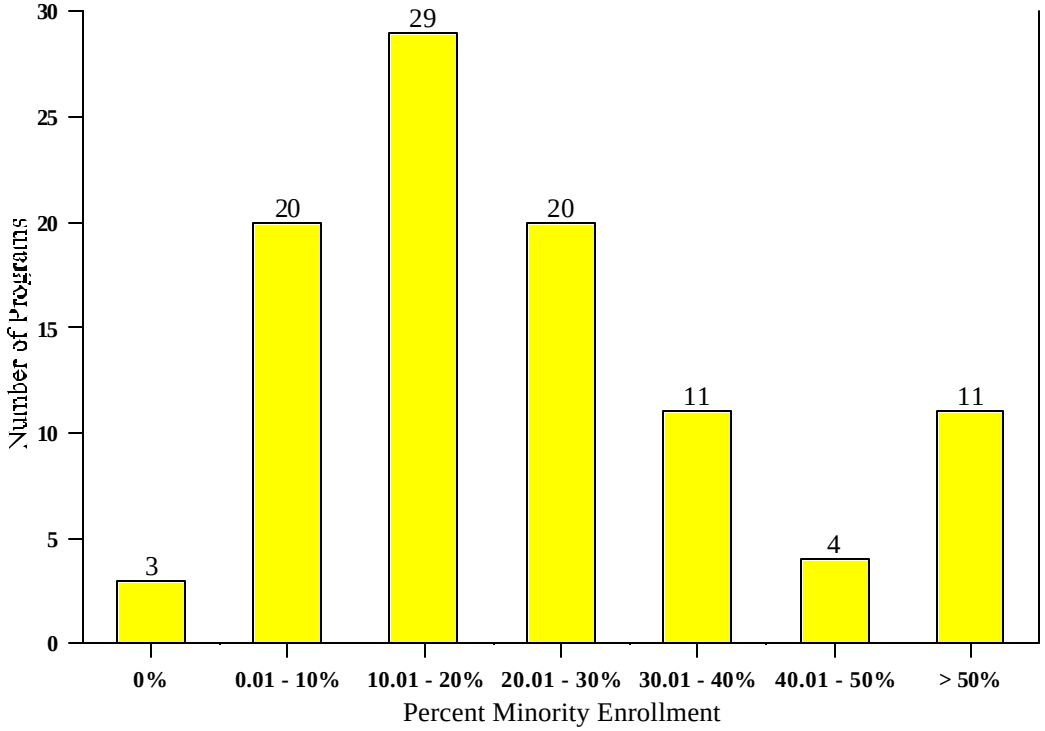
Table 60. Number of Programs with No Minority Enrollment
by Consortia Region

Consortia Region	N	# of Programs	(%)
Northeastern	17	0	0.0%
Eastern	15	1	6.7%
Southeastern	18	0	0.0%
Midwestern	20	0	0.0%
Heartland	11	1	9.1%
Western	17	1	5.9%
Total	**98**	**3**	**3.1%**

Number of Programs versus Percent Minority Student Enrollment

Figure 17 represents the number of programs with certain percentages of minority enrollment. There are 39 programs that have a larger percentage of minority enrollment than the mean of 24.4%; 59 programs have less. The average minority enrollment for programs with greater than 20% is 39%; for programs with less than 20% minority enrollment, 10.5%.

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



Trends in Minority Student Enrollment, 1983 Through 2003

The proportion of minority and non-minority students enrolled in P.A. programs over a twenty-one-year period (1983-1984 through 2003-2004) 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 25% in 2000-2001. Expressed differently, the number of minority students has more than doubled from a mean of 4.0/program in 1983 to 9.7/program in 2003.

Table 61. Ethnicity of P.A. Students Enrolled from 1983 Through 2003

Academic		White		Non-White		First Yr.
Year	N	Mean	%	Mean	%	Enrollment
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
1999-2000	103	30.7	77.9%	8.7	22.1%	39.3
2000-2001	102	30.2	75.1%	10.0	24.9%	40.1
2001-2002	105	29.0	77.3%	8.5	22.7%	38.0
2002-2003	99	29.8	77.4%	8.7	22.6%	38.5
2003-2004	98	30.1	75.6%	9.7	24.4%	39.9
21-yr. Mean	**67**	**26.7**	**79.8%**	**6.9**	**20.1%**	**33.7**

Minority student enrollment over twenty-one years has averaged 20.1% per year (mean of 6.9 students/program).

Academic Characteristics of P.A. Students

The academic profile of students at the time of enrollment are shown in Table 62 (next page). Over three-fourth (81%) of the students enrolled in 2003 had earned at least a baccalaureate degree (74.2% as their highest degree) while less than one-fifth (13.1%) entered with no academic degree. Only 6% of the enrollees had earned an associate level degree prior to entry. Of the full-time students, 6.7% were admitted with a graduate-level degree, predominantly a masters degree (4.8%).

Figure 18. Trends in Minority Student Enrollment: 1983 Through 2003

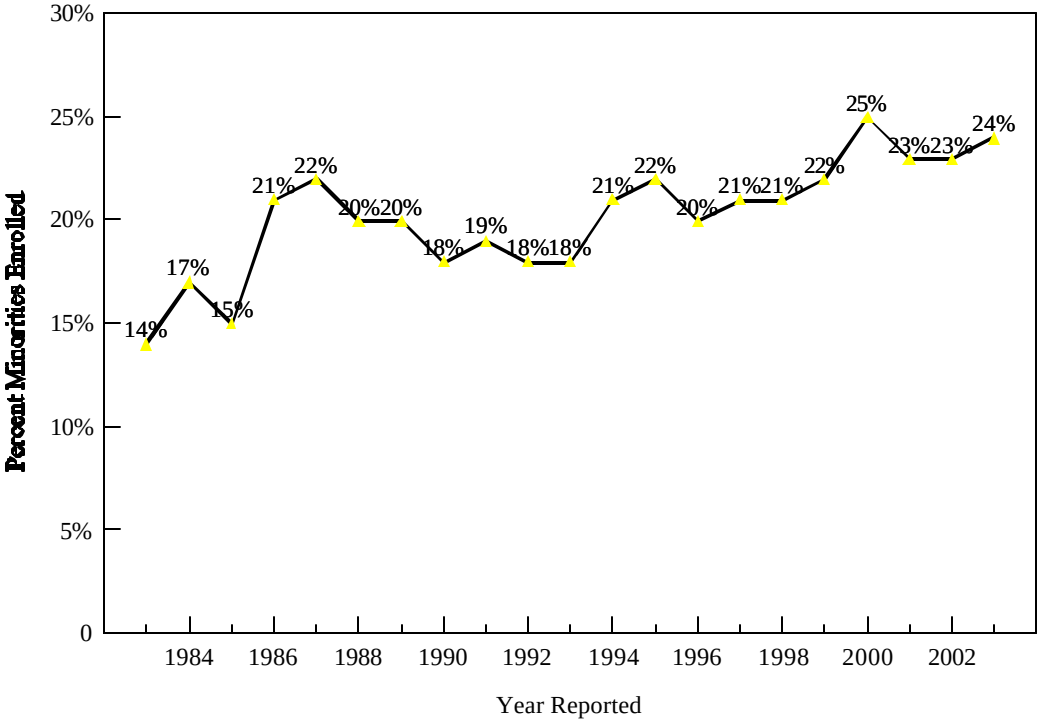
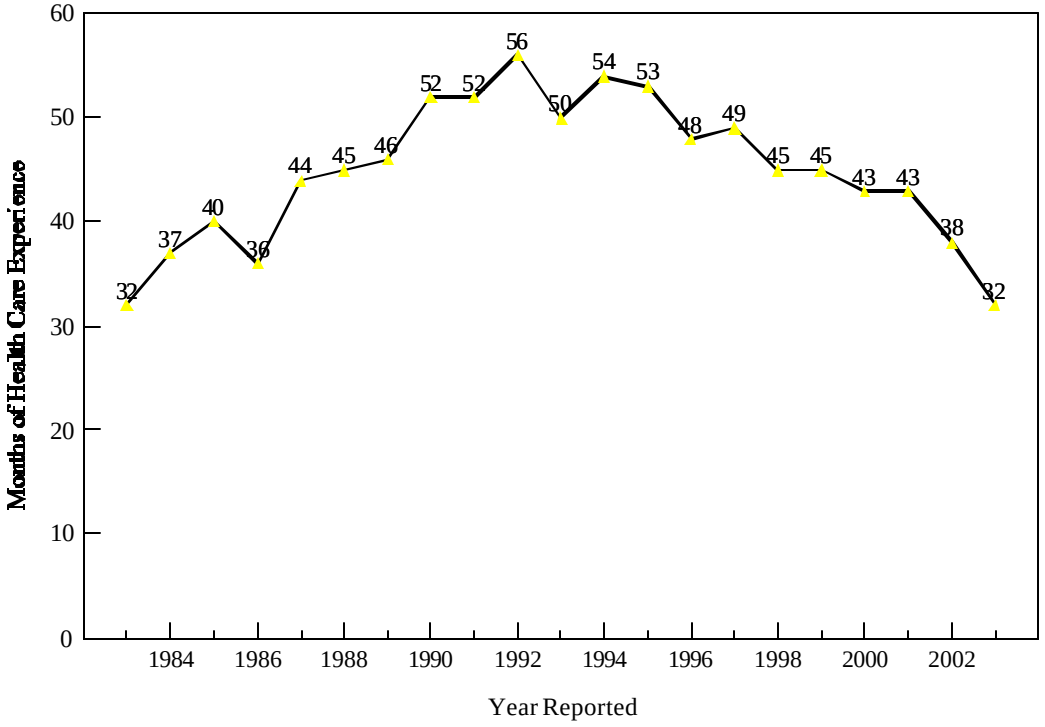


Table 62. Academic Characteristics of P.A. Students Enrolled in 2003

Highest Academic Credential Earned	Full-Time Mean	Full-Time %	Part-Time Mean	Part-Time %	Total Mean	Total %
No Academic Degree	4.9	13.1%	0.1	12.5%	5.0	13.1%
Associate Degree	2.3	6.1%	0.0	0.0%	2.3	6.0%
Baccalaureate Degree	27.8	74.1%	0.6	75.0%	28.4	74.2%
Masters Degree	1.8	4.8%	0.1	12.5%	1.9	5.0%
Doctoral Degree	0.7	1.9%	0.0	0.0%	0.7	1.8%
Total	**37.5**	**100.0%**	**0.8**	**100.0%**	**38.3**	**100.0%**

The mean number of months of health care experience (H.C.E.) of students at the time of enrollment for 2003-2004 is 32.4 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 32 months in 2003.

Figure 19. Trends in Health Care Experience of Enrollees: 1983 Through 2003



Academic Characteristics of Enrolled P.A. Students by Consortia 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 60% of students entering with a baccalaureate degree. The Eastern region had the largest number of enrollees with no degree (29.1%). The Western region had 3.6% of its enrollees with a doctoral degree.

Table 63. Academic Characteristics of Enrollees by Region, Class of 2003-2004

		Degree Characteristics					
Consortia Region	N	No Degree	Associate Degree	Bacc. Degree	Masters Degree	Doctoral Degree	Total Mean
Northeastern	18	21.4%	8.5%	62.4%	5.6%	2.0%	35.7
Eastern	18	29.1%	1.1%	62.9%	4.5%	2.3%	39.1
Southeastern	18	4.1%	3.4%	85.3%	6.2%	1.0%	43.6
Midwestern	20	12.2%	8.6%	72.5%	5.2%	1.5%	34.4
Heartland	12	8.1%	6.4%	80.6%	4.3%	0.7%	35.2
Western	18	4.6%	9.1%	78.3%	4.4%	3.6%	41.9
Total	**104**	**13.1%**	**6.0%**	**74.2%**	**5.0%**	**1.8%**	**38.3**

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

Table 64. Grade Point Average and Mean Number of Months of Health Care Experience by Region, Class of 2003-2004

Consortia	Grade Point Average			Months of H.C.E.		
Region	N	Mean	S.D.	N	Mean	S.D.
Northeastern	19	3.28	0.12	14	17.9	12.9
Eastern	17	3.36	0.17	14	24.0	24.9
Southeastern	18	3.30	0.13	17	31.4	12.0
Midwestern	20	3.41	0.15	19	40.4	32.0
Heartland	13	3.46	0.21	9	29.7	14.7
Western	18	3.33	0.16	15	46.4	28.7
Total	**105**	**3.35**	**0.16**	**88**	**32.4**	**24.5**

The cumulative GPA of entering students ranged from 2.97 to 3.68 with a mean of 3.35. 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 Northeastern region had completed an average of 18 months of health-related experience while those entering programs in the Western regions had 46 months of health care experience. The average for all programs was less than three years (32.4 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 2003-2004 class is shown in Table 65. The total number of UMG applications to P.A. programs increased from 471 in 2002 to 543 in 2003. The number per program increased from 3.5/program in 2002 to 7.6/program in 2003. There were 43 programs that received applications from UMG's in 2003. Eighty-five percent of the applicants were U.S. Citizen UMG's.

Table 65. Admission of Unlicensed Medical Graduates

	Class Entering in 2003 – 2004					
Citizenship	Applied			Enrolled		
Status	N(N)*	Mean**	%	N(N)*	Mean	%
U.S. Citizen	460(36)	6.5	84.7%	83(27)	0.91	76.9%
Alien	83(20)	1.2	15.3%	25(11)	0.27	23.1%
Total**	**543(43)**	**7.6**	**100.0%**	**108(36)**	**1.15**	**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

In 2003, 108 UMG's were enrolled, 34% less than the number of enrollees in 2002 (163). Twenty percent of the UMG applicants were enrolled in a P.A. program in 2003, where 35% were enrolled in 2002. A higher percentage of alien UMG's were admitted (30.1%) as compared to the U.S.-citizen UMG's (18.0%).

Unlicensed Medical Graduates: Regional Analysis

The mean number of UMG applicants and enrollees by consortia region is shown in Table 66. Programs located in the Midwestern region received the largest number of UMG applications (mean of 26.79/program) while programs in the Heartland region averaged 0.88/program UMG applicants.

Table 66. Unlicensed Medical Graduate Applicants and Enrollees by Region, 2003-2004

	Applied		Enrolled	
Consortia Region	Mean	N	Mean	N
Northeastern	5.73	11	0.88	16
Eastern	2.00	9	0.93	15
Southeastern	1.57	14	0.56	16
Midwestern	26.79	14	2.39	18
Heartland	0.88	8	0.17	12
Western	3.87	15	1.44	18
Total	**7.60**	**71**	**1.15**	**95**

Programs in the Midwestern region enrolled the largest proportion of UMG's enrolled (2.39/program) and those in the Heartland region had 0.17/program UMG's enrolled. With respect to the total applicant pool/program, UMG's accounted for only 3.6% (7.6/212) of all applicants and less than 2.9% (1.15/40) of all first-year enrollees in 2003.

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. Less than half of the programs that did not receive an application from an UMG (28/71; 39%). However, over three-fourths did not enroll an UMG (59/77; 76.6%) in the 2003-2004 class.

Table 67. Number of Programs Reporting No Applications and/or Enrollment of Unlicensed Medical Graduates by Region, 2003-2004

Consortia	Applied		Enrolled	
Region	N/N*	%	N/N*	%
Northeastern	2/11	18.2%	7/16	43.8%
Eastern	3/9	33.3%	7/15	46.7%
Southeastern	4/14	28.6%	10/16	62.5%
Midwestern	5/14	35.7%	12/18	66.7%
Heartland	5/8	62.5%	10/12	83.3%
Western	9/15	60.0%	13/18	72.2%
Total	**28/71**	**39.4%**	**59/77**	**76.6%**

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

Trends in UMG Applications and Enrollment, 1987 Through 2003

Data concerning UMG applicants and UMG students enrolled from 1987 through 2003 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 pages).

Overall there has been a total of 3,588 UMG applicants (averaging 211/year) over the seventeen-year period examined. UMG applicants accounted for an average of 1.8% of the total applicant pool. Over the same period of time, there were 819 UMG's enrolled (48/year) which accounted for 1.7% of the total number of students enrolled. On average, only 21% of the UMG applicants were enrolled.

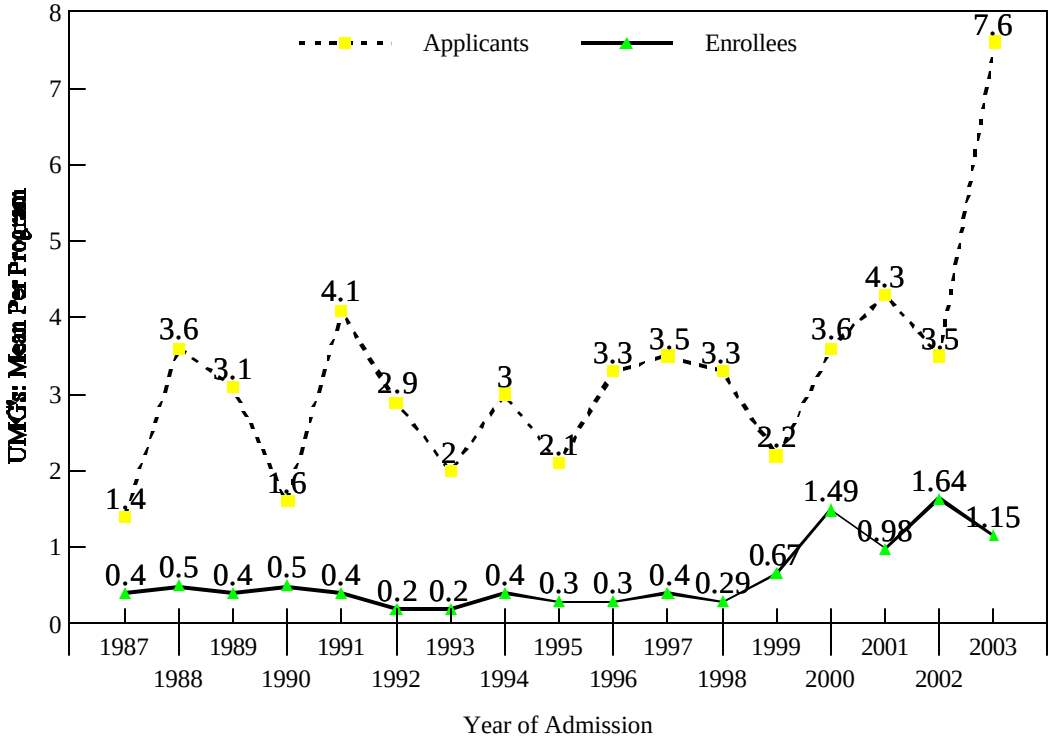
Table 68. Unlicensed Medical Graduates: Applicants and Enrollees, 1987 Through 2003

Academic Year	UMG Applications Total N	Mean/ Program	%*	UMG's Enrolled Total N	Mean/ Program	%*	% of UMG Applicants Enrolled
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	170	2.2	0.9%	65	0.67	1.8%	38.2%
2000-2001	286	3.6	1.8%	140	1.49	3.9%	41.4%
2001-2002	360	4.3	2.7%	86	0.98	2.2%	23.9%
2002-2003	471	3.5	2.0%	163	1.64	4.2%	34.6%
2003-2004	543	7.6	3.6%	108	1.15	2.9%	19.9%
17-Yr. Mean	**211**	**3.2**	**1.8%**	**48**	**0.60**	**1.7%**	**21.1%**

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

Figure 20 shows the mean number of UMG applicants and enrollees per program since 1987.

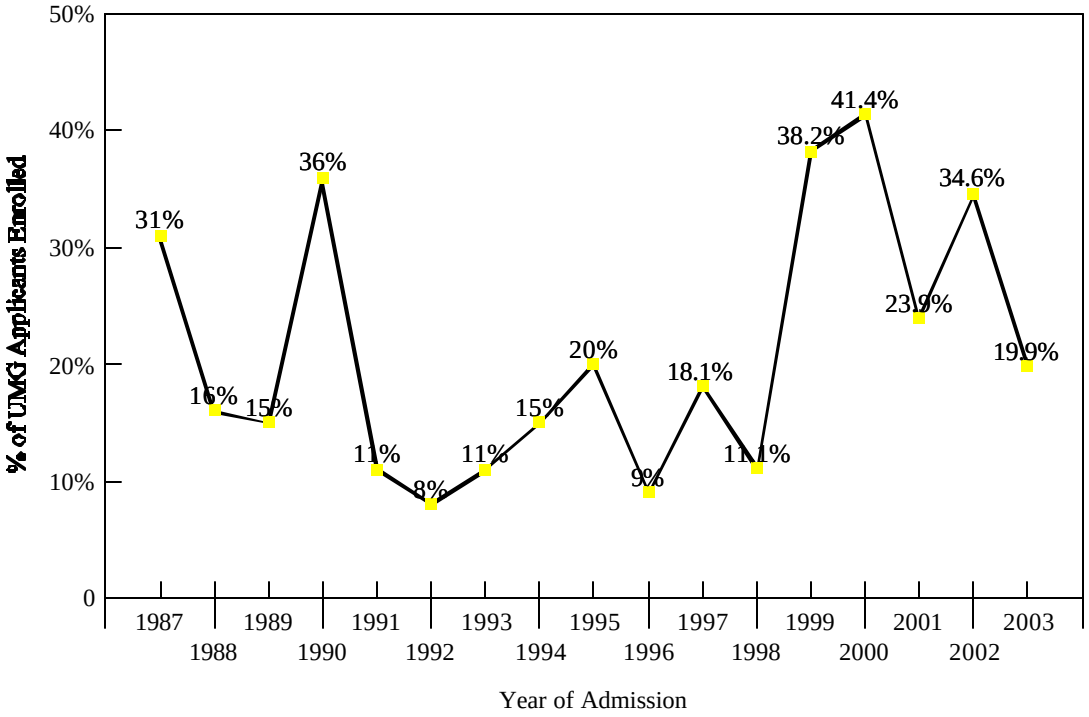
Figure 20. Trends in U.M.G. Applicants and Enrollees: 1987 Through 2003



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 the percent of UMG applicants enrolled has fluctuated extensively over the past seventeen years from a low of 8% to a high of 41.4%.

Figure 21. Percent of U.M.G. Applicants Enrolled: 1987 Through 2003



Disabled Students Enrolled in P.A. Programs

The number and proportion of students with a disability that were enrolled in the 2003-2004 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 1.0% of the total number of students enrolled).

Table 69. Enrollment of Disabled Students by Gender, 2003-2004

	1st Year Enrolled		Disabled		Number of
Gender	N	%	N	%	Programs
Male	1193	29.7%	18	43.9%	101
Female	2823	70.3%	23	56.1%	101
Total	**4016**	**100.0%**	**41**	**100.0%**	**101**

There were 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 2003-2004 academic year, and those withdrawing and decelerating prior to graduation, are shown in Table 70. The mean number of 2003 graduates was 35.3/program and represented 91.5% of the students originally enrolled in this class. We estimate that there was a total of 4,554 P.A.'s graduated from all programs graduating class in 2003 (129 programs x 35.3/program). It should be noted that four of the programs did not graduate students in 2003. As in previous years, the majority (66%) of 2003 graduates were women.

Table 70. Number of Graduates and Students Withdrawn or Decelerated in 2003-2004 by Gender

	Number Graduated		Attrition of Students		Students Decelerated	
Gender	Mean	%	Mean	%	Mean	%
Female	23.4	91.4%	1.2	4.7%	1.0	3.9%
Male	11.9	88.8%	0.9	6.7%	0.6	4.5%
Total/Program	**35.3**	**90.5%**	**2.1**	**5.4%**	**1.6**	**4.1%**

* Proportion withdrawing or decelerating was calculated as:

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

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

The mean number of students withdrawing prior to graduation was 2.1 students/program for an overall attrition rate of 5.4%. The attrition rate for males was higher than the attrition rate for females, 6.7% and 4.7% respectively. The attrition rate is higher than in 2002 (5.1%) but lower than the average of 7.6% over the previous twenty years.

On average, the rate of deceleration was 4.1%. 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 171 students withdrawing from the 2003 graduating class (as reported by 71 programs). The most common reason for withdrawal was academic (48.5%). It should be noted that program staff provided the reasons cited for withdrawal, rather than the students involved.

Table 71. Reasons for Student Withdrawal from the Program

Reason Given	N	(%)	Reason Given	N	(%)
Academic	83	48.5%	Career Change	6	3.5%
Personal	66	38.6%	Medical	7	4.1%
Financial	2	1.2%	Other	7	4.1%
			Total	**171**	**100.0%**

Attrition Rates of Students by Consortia Region

The mean number of graduates, attrition rates, and students decelerated by consortia region are shown in Table 72. Programs in the Heartland and Western regions had the largest graduating classes with a mean of 37.9 students per program, while programs in the Midwestern region had the smallest graduating class (32.2/program).

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

Consortia Region	N	Mean # Graduated	Mean and Rate of Attrition		Mean and Rate of Deceleration	
Northeastern	15	35.1	2.9	7.3%	1.5	3.8%
Eastern	14	35.1	4.0	9.8%	1.8	4.4%
Southeastern	14	35.4	1.7	4.4%	1.7	4.4%
Midwestern	19	32.2	1.3	3.8%	0.9	2.6%
Heartland	12	37.9	1.2	2.9%	2.4	5.8%
Western	13	37.9	1.2	3.0%	1.5	3.7%
Total	**87**	**35.3**	**2.1**	**5.4%**	**1.6**	**4.1%**

The highest attrition rates occurred in those programs located in the Eastern region (9.8%) while programs in the Heartland region had the lowest attrition rates (2.9%). In comparison to the previous year, the number graduated/ program in 2003 has increased (2.0%). The rate of attrition increased in four of the six regions (Eastern, Southeastern, Heartland and Western); deceleration increased in three regions (Southeastern, Heartland and Western). Programs in the Heartland region reported the largest rate of deceleration (5.8%), while programs in the Midwestern region had the lowest rate of deceleration (2.6%).

The reasons for withdrawal by region are shown in Table 73. Programs in the Western region had the highest percentage of students withdraw for academic reasons (57.1%) while programs in the Eastern region cited academic reasons for withdrawal 42.9% of the time. In the Eastern region, 41% of the programs cited personal reasons for student withdrawal as compared with 21.4% in the Western region.

Table 73. Reasons for Withdrawal by Consortia Region

	Reasons for Withdrawal from Program						
Consortia	Academic		Personal		Other		
Region	N	%	N	%	N	%	Total
Northeastern	20	54.0%	15	40.5%	2	5.4%	37
Eastern	24	42.9%	23	41.1%	9	16.1%	56
Southeastern	11	44.0%	10	40.0%	4	16.0%	25
Midwestern	12	50.0%	9	37.5%	3	12.5%	24
Heartland	8	53.3%	6	40.0%	1	6.7%	15
Western	8	57.1%	3	21.4%	3	21.4%	14
Total	**83**	**48.5%**	**66**	**38.6%**	**22**	**12.9%**	**171**

Graduation, Attrition, and Deceleration of Students by Age

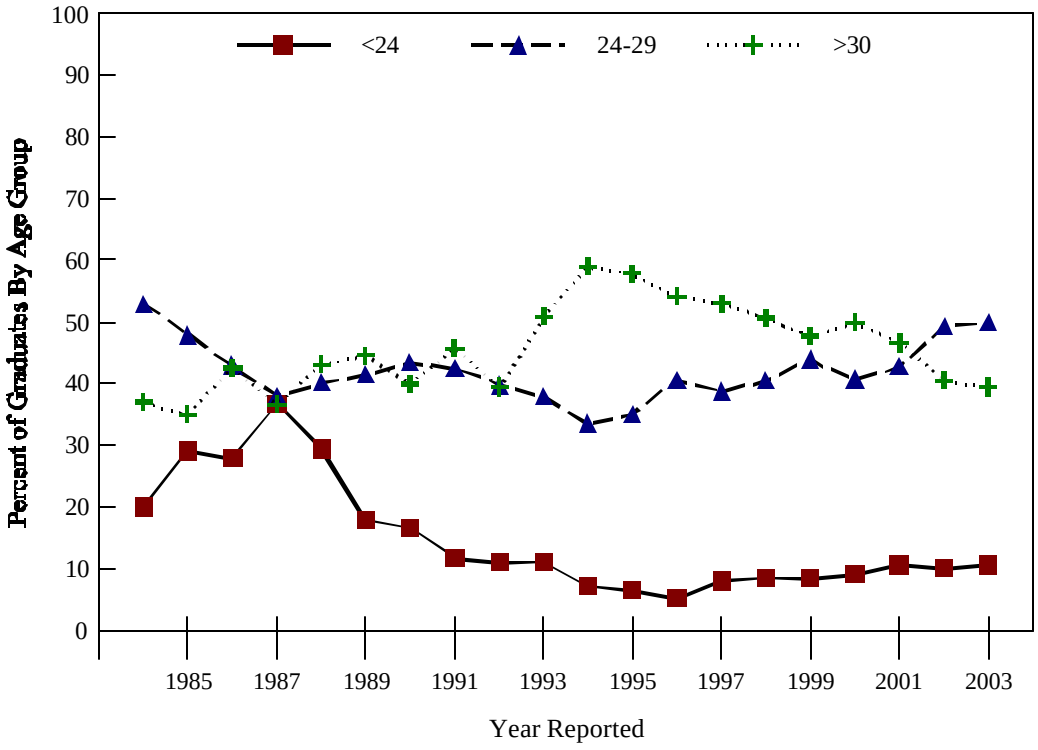
The mean number of graduates, attrition rates, and students decelerated for each age category is shown in Table 74. Over one-third (39.2%) of the graduates were between the ages of 20 and 26 upon graduation; 39.5% were 30 years of age or older and none were under the age of 20. Attrition was highest for those over 33 years of age; lowest for those between 24 and 26. Deceleration rates were highest for students over 33 years of age and least for those between 20 and 23.

Table 74. Number Graduated, Decelerated and Attrition Rates of 2003 Graduates by Age

		Number Graduated		Withdrew Prior To Graduation		Attrition Rate	Students Decelerated	
Age at Graduation	N	Mean	%	Mean	%	%	Mean	Rate
Under 20	85	0.0	0.0%	0.0	0.0%	0.0%	0.0	0.0%
20-23	85	3.8	10.6%	0.2	11.1%	4.9%	0.1	2.4%
24-26	85	10.2	28.6%	0.4	22.2%	3.7%	0.3	2.8%
27-29	85	7.6	21.3%	0.3	16.7%	3.7%	0.3	3.7%
30-33	85	6.1	17.1%	0.3	16.7%	4.5%	0.3	4.5%
Over 33	85	8.0	22.4%	0.6	33.3%	6.6%	0.5	5.5%
Total/Program	**85**	**35.3**	**100%**	**2.1**	**100.0%**	**5.4%**	**1.6**	**4.1%**

Figure 22 shows the trends in age from 1984 through 2003. The proportion of recent graduates in the youngest age group (<24) has generally decreased over time, with a slight increase over the previous eight years. Conversely, the middle age group (24 - 29) has increased 48.5% since 1994. The graduates in the older age group (>30) have decreased 33% since 1994.

Figure 22. Trends in the Age of Graduates: 1984 Through 2003



The mean number of graduates, withdrawals, decelerated students and attrition rates for the 2003 graduating class by ethnicity is shown in Table 75. The majority of the recent graduates were White/Non-Hispanic (79.6%), less than one-fourth (20.4%) were minorities.

Table 75. Number and Attrition Rates of 2003 Graduates by Ethnicity

		Mean Number Graduated		Withdrew Prior to Graduation		Attrition Rate	Students Decelerated	
Ethnicity	N	Mean	%	Mean	%	%	Mean	Rate
White/Non-Hispanic	87	28.1	79.6%	1.4	70.0%	4.6%	0.8	2.6%
Black/African-Amer.	87	1.7	4.8%	0.3	15.0%	13.0%	0.3	13.0%
Latino/Hispanic/Mex. Am.	87	2.3	6.5%	0.1	5.0%	4.0%	0.1	4.0%
Asian	87	1.9	5.4%	0.1	5.0%	4.5%	0.2	9.0%
Asian Subpopulations	87	0.5	1.4%	0.1	5.0%	16.7%	0.0	0.0%
Native Haw./Other P.I.	87	0.1	0.3%	0.0	0.0%	0.0%	0.0	0.0%
American Ind./Alaskan	87	0.3	0.8%	0.0	0.0%	0.0%	0.0	0.0%
Other/Unknown	87	0.4	1.1%	0.0	0.0%	0.0%	0.0	0.0%
Total/Program	**87**	**35.3**	**100.0%**	**2.1**	**100.0%**	**5.4%**	**1.6**	**4.1%**

Within the minority groups graduating, 23.6% were Black/African-American, 31.9% were Latino/Hispanics, 26.4% were Asian and the remainder were classified as Asian Subpopulation, Alaskan/Native American or Other/Unknown. Fifty-four percent (N=47) of the 87 programs reported at least one Black/African-American among their 2003 graduates. Fifty-six (64%) programs also graduated at least one Latino/Hispanic.

The Asian Subpopulations students had the highest rate of attrition (16.7%), followed by Black/African-American students (13.0%). The White/Non-Hispanics had an attrition rate of 4.6%. Proportionately, minority students were more likely to be decelerated, particularly the Black/African-American students (13.0%) as compared to White students (2.6%).

Trends in Student Attrition: 1984 Through 2003

Figure 23 (next page) shows the relative attrition rates from 1984 through 2003 for all students and for white and non-white students. Attrition rates have averaged 7.3% over the past twenty years, ranging from a high of 14% in 1988 to a low of 3.9% in 1999. The 2003 attrition rate for white students was 4.6% and 7.1% for non-white students; the latter represents a increase from 2002. Before 1990, decelerated students were included in the attrition rates. If decelerated students were included this year, the adjusted attrition rate would be 8.8%.

Gender and Ethnicity of 2003 P.A. Graduates by Consortia Region

The mean number and proportion of 2003 graduates by gender, ethnicity, and consortia 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 (11.3%). The Heartland region had the highest proportion of male graduates (41.6%) and the Eastern region the highest proportion of female graduates (74.3%).

Figure 23: Trends in Student Attrition: 1984 Through 2003

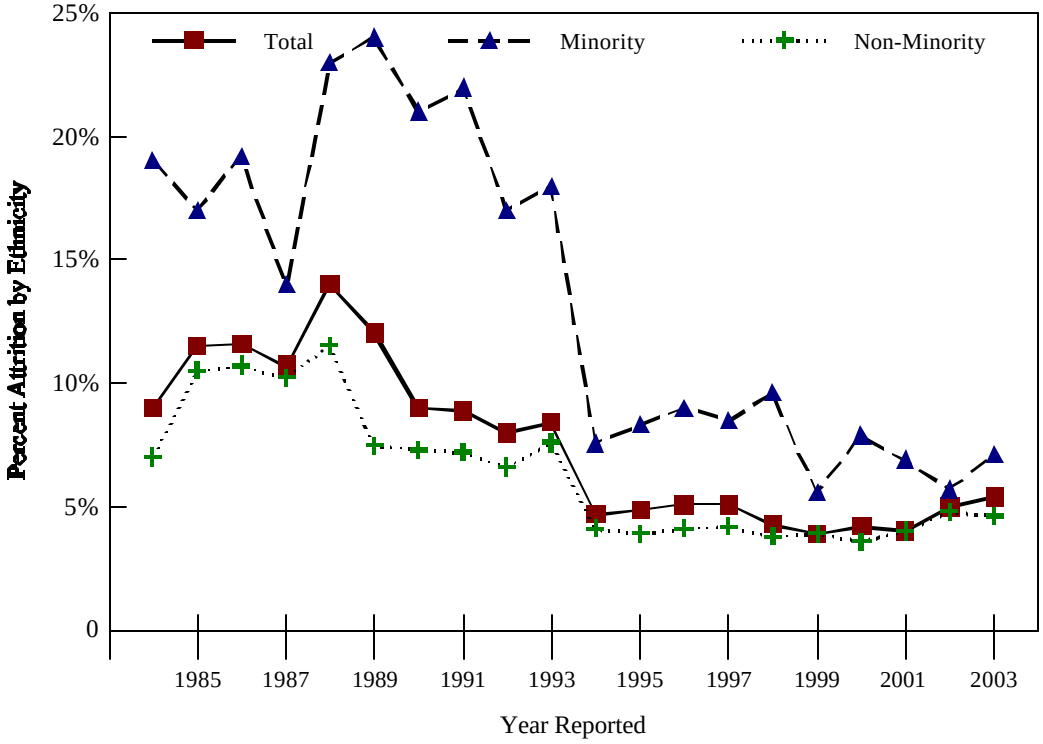


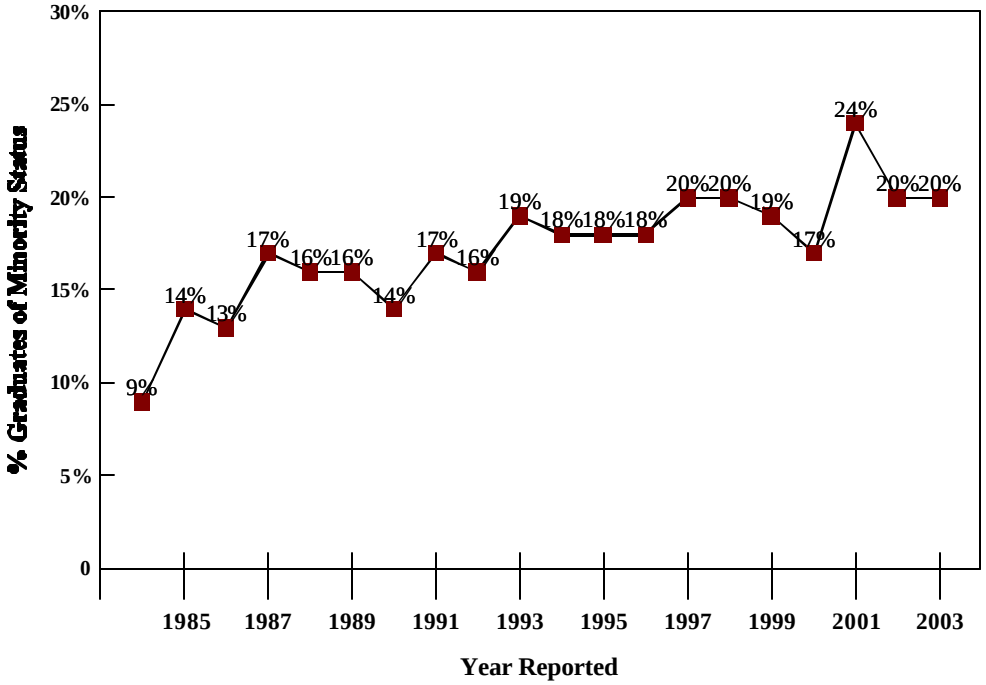
Table 76. 2003 Graduates by Gender, Ethnicity, and Consortia Region

Consortia Region	N	Mean # of Graduates	Gender		Ethnicity				
			Male	Female	White	Black	Hispanic	Asian	Other
Northeastern	15	35.1	34.8%	65.2%	80.0%	7.6%	4.0%	6.5%	1.9%
Eastern	14	35.1	25.7%	74.3%	82.2%	8.3%	2.0%	5.3%	2.2%
Southeastern	14	35.4	27.9%	72.1%	81.9%	3.8%	8.7%	3.4%	2.2%
Midwestern	19	32.2	35.2%	64.7%	88.7%	2.5%	1.6%	2.6%	4.7%
Heartland	12	37.9	41.6%	58.5%	75.7%	4.9%	12.8%	3.4%	3.1%
Western	13	37.9	36.7%	63.3%	66.8%	2.2%	12.4%	11.2%	7.3%
Total	87	35.3	33.7%	66.3%	79.6%	4.8%	6.5%	5.4%	3.7%

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 twenty years. During the twenty-year period for which data was available, the graduation of non-white students averaged 17.3%, ranging from a high of 24% in 2001 to a low of 9.0% in 1984. The reader is referred to Figure 18 concerning enrollment of minority students, which over the past twenty-one years, has averaged 20.1% (Table 61).

Figure 24. Trends in Minority P.A. Graduates: 1984 Through 2003



Employment Status of 2003 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 2003 P.A. Graduates

Employment Status	Mean Number Per Program	S.D.	Relative Frequency
Employed:			
As a P.A.	24.0	16.3	70.0%
Not as a P.A.	0.6	1.9	1.7%
Unemployed	1.9	3.2	5.5%
Continued with Education	0.5	0.4	1.5%
Unknown	7.3	12.1	21.3%
Total (N=77)	**34.3**	**18.8**	**100.0%**

The majority (70.0%) of recent graduates were employed as a physician assistant, a 13.6% increase from 2002 graduates (61.6%). Over one-fourth of the graduates were either unemployed or their employment status was unknown.

Number of Recent Graduates by State

The number of 2003 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 2,640 students from 77 programs completed their training in 2003. However, if we consider all programs that graduated P.A.'s in 2003 (i.e., 129 programs) we estimate that the total number of graduates would be approximately 4,554 (129 x 35.3).

Table 78. Number of 2003 Graduates by State

State	Number Prog.	Number Grads	State	Number Prog.	Number Grads	State	Number Prog.	Number Grads
AL	2	61	KS	1	41	OK	1	47
AZ	1	83	LA	1	25	OR	1	23
CA	4	234	MA	2	74	PA	10	359
CO	1	30	MO	1	25	SD	1	19
CT	1	49	MT	1	21	TN	2	40
DC	2	85	NC	2	51	TX	8	309
FL	2	90	NE	1	31	UT	1	32
GA	1	50	NJ	1	29	VA	2	39
IA	2	59	NM	2	35	WA	1	68
ID	1	21	NY	9	283	WI	3	76
IL	2	46	OH	4	116	WV	1	44
IN	2	45						
						Total	**77**	**2640**

2003 Program Graduates: Employment Status by Consortia 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 Heartland region reported that over 81% of their 2003 graduates had secured employment at the time the program reported. Programs in the Western region had the lowest proportion of graduates employed (57.6%). The overall proportion of recent graduates who were unemployed, including the "Other" category, averaged 30% across the regions.

Table 79. Employment Characteristics of 2003 Graduates by Consortia Region

Consortia Region	N	Employed Mean	Employed %	Unemployed Mean	Unemployed %	Other Mean	Other %	Total Mean
Northeastern	13	24.2	72.5%	1.5	4.5%	7.7	23.1%	33.4
Eastern	12	23.2	62.7%	2.3	6.2%	11.5	31.1%	37.0
Southeastern	12	22.7	72.5%	2.7	8.6%	5.9	18.8%	31.3
Midwestern	16	21.9	74.7%	0.7	2.4%	6.7	22.9%	29.3
Heartland	12	30.6	81.0%	2.3	6.1%	4.9	13.0%	37.8
Western	12	22.3	57.6%	2.3	5.9%	14.1	36.4%	38.7
Total	**77**	**24.0**	**70.0%**	**1.9**	**5.5%**	**8.4**	**24.5%**	**34.3**

Trends in Medical Specialty Selection of Recent Graduates, 1985 Through 2003

A comparison of the employment of recent graduates in primary and non-primary care medicine from 1985 through 2003 is shown in Table 80 (next page) and illustrated in Figure 25 (primary care includes F.M., G.I.M., Ob/Gyn, Peds)(page 64). From 1985 through 2003 there was an overall decrease in the proportion of graduates entering primary care practice, from 60% in 1985 to a low of 34% in 2003. In the past nineteen years, an average of 54% of the graduates have selected primary care medical specialties.

Table 80. Employment of Recent Graduates in Primary and Non-Primary Care Medicine, 1985 Through 2003

Academic	Primary Care		Non-Primary Care		Total
Year	N	%	N	%	N
1985-1986	399	59.9%	278	41.1%	677
1986-1987	404	55.6%	322	44.4%	726
1987-1988	418	56.4%	323	43.6%	741
1988-1989	422	52.2%	387	47.8%	809
1989-1990	398	48.2%	427	51.8%	825
1990-1991	508	58.1%	367	41.9%	875
1991-1992	511	53.5%	444	46.5%	955
1992-1993	674	55.7%	537	44.3%	1211
1993-1994	826	58.0%	597	42.0%	1423
1994-1995	852	55.5%	684	44.5%	1536
1995-1996	817	52.2%	702	44.8%	1566
1996-1997	970	62.3%	588	37.7%	1558
1997-1998	1046	56.9%	792	43.1%	1838
1998-1999	1113	54.5%	928	45.5%	2041
1999-2000	1176	53.7%	1015	46.3%	2191
2000-2001	1143	53.9%	977	46.1%	2120
2001-2002	1014	46.5%	1166	53.5%	2180
2002-2003	964	49.0%	1003	51.0%	1967
2003-2004	623	33.7%	1228	66.3%	1851
19-Yr. Mean	**751**	**53.5%**	**655**	**46.3%**	**1419**

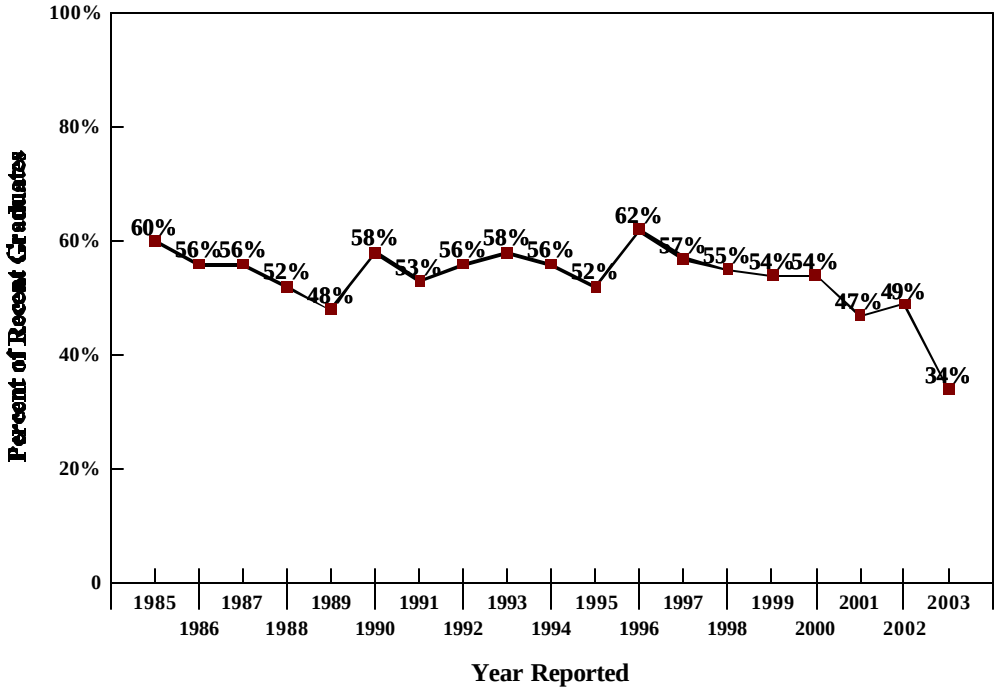
Employment of Recent Graduates in Primary and Non-Primary Care by Consortia Region

The relative proportion of 2003 graduates entering primary and non-primary care medical specialties by region is shown in Table 81. Graduates from programs in the Western region had the highest level of employment in primary care medical specialties (51.8%). Graduates from the Northeastern region had the highest level of employment in non-primary care specialties (77.4%).

Table 81. Employment of 2003 Graduates in Primary and Non-Primary Care Medicine, by Consortia Region

		Primary Care		Non-Primary Care	
Consortia Region	N	Mean	%	Mean	%
Northeastern	13	5.5	22.6%	18.8	77.4%
Eastern	11	8.2	32.4%	17.1	67.6%
Southeastern	11	9.3	37.5%	15.5	62.5%
Midwestern	16	6.3	28.6%	15.7	71.4%
Heartland	12	10.1	33.0%	20.5	67.0%
Western	12	11.6	51.8%	10.8	48.2%
Total	**75**	**8.3**	**33.6%**	**16.4**	**66.4%**

Figure 25. Recent Graduate Employment in Primary Care: 1985 Through 2003



The distribution of recent graduates selecting primary care medical specialties from 1993 through 2003 is shown in Table 82. Over the period analyzed, family medicine and general internal medicine remained the primary care specialties of choice. This year, general internal medicine, general pediatrics and obstetrics and gynecology increased. The ten-year average was 72% for family medicine and 17% for general internal medicine. The selection of both obstetrics and gynecology and pediatrics also varied over time, ranging from 3.1% to 8.0% and 4.6% to 9.2%, respectively.

Table 82. Trends in the Primary Care Medical Specialty Selection of Recent Graduates, 1993 Through 2003

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Clinical	(48)	(56)	(57)	(68)	(74)	(77)	(76)	(82)	(73)	(75)
Specialty	%	%	%	%	%	%	%	%	%	%
Fam Md	76.0	75.4	73.1	73.2	75.1	74.9	67.3	67.4	70.1	63.7
Int Med	16.0	15.4	16.9	17.7	16.3	14.8	21.5	17.0	16.4	20.5
Gen Ped	4.6	5.2	6.4	5.3	5.6	6.8	5.5	9.2	7.3	7.7
Ob/Gyn	3.4	3.1	3.6	3.8	3.0	3.4	5.7	6.4	6.2	8.0

* 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 sub-specialties accounted for over three-fourths (80%) of the positions selected by recent graduates in non-primary care.

Table 83. Trends in the Non-Primary Care Medical Specialty Selection of Recent Graduates, 1993 Through 2003

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Clinical	(48)	(56)	(57)	(68)	(74)	(77)	(76)	(82)	(73)	(75)
Specialty	%	%	%	%	%	%	%	%	%	%
Surgery	35.5	33.0	34.1	35.1	36.2	31.4	40.4	38.6	41.2	46.6
Med	25.1	29.4	30.6	29.1	28.4	23.3	18.6	22.4	20.7	33.2
Em Med	37.0	33.2	28.7	32.3	33.3	37.7	36.5	32.6	29.4	17.5
Psych.	1.1	0.8	1.0	1.5	0.7	3.3	2.1	2.7	2.9	1.7
Ind Med	1.3	3.6	5.6	2.0	1.4	4.3	2.4	3.7	5.8	1.0

* Number of Programs responding

A list of the specific internal medicine subspecialties selected by 2003 graduates is shown in Table 84, along with the number of graduates and programs represented. A total of 382 recent graduates from sixty-seven 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=75; 40 programs).

Table 84. Internal Medicine Subspecialties Selected by 2003 Graduates

Medical Area	# of Graduates	# of Programs	Medical Area	# of Graduates	# of Programs
Military Medicine	120	1	Gastroenterology	26	18
Cardiology	75	40	Neurology	14	12
Dermatology	36	21	AIDS/Inf. Diseases	8	7
Oncology	32	18	Other	71	42
			Total	**382**	**67**

A list of surgical subspecialties selected by the recent graduates is in Table 85. A total of 409 recent graduates from seventy-three P.A. programs selected surgical sub-specialty areas as their first position. Proportionately, these graduates were employed most commonly in orthopedics (n=221; 54%).

Table 85. Surgical Subspecialties Selected by 2003 Graduates

Surgical Area	Number of Graduates	Number of Programs	Surgical Area	Number of Graduates	Number of Programs
Orthopedics	221	64	Plastic	17	7
CV/CT	79	39	Organ Transplant	3	3
Neurosurgery	45	28	Other Surg. Spec.	44	22
			Total	**409**	**73**

Medical Specialty Selection of Recent Graduates by Consortia Region

A comparison of medical specialty selection of recent graduates by consortia 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 was employed is shown and include, family medicine, internal medicine (including subspecialties), and surgery (including subspecialties).

Table 86. Medical Specialties Selected by 2003 Graduates by Consortia Region

		Family Medicine		Internal Medicine*		Surgery*	
Consortia Region	N	Mean	%	Mean	%	Mean	%
Northeastern	13	2.2	13.4%	4.9	29.9%	9.3	56.7%
Eastern	11	4.5	22.0%	6.7	32.7%	9.3	45.4%
Southeastern	11	6.4	30.9%	6.2	29.8%	8.2	39.4%
Midwestern	16	3.8	23.0%	4.7	28.5%	8.0	48.5%
Heartland	12	6.8	30.9%	5.3	24.1%	9.9	45.0%
Western	12	9.0	53.6%	3.8	22.6%	4.0	23.8%
Total	**75**	**5.3**	**30.1%**	**5.2**	**29.5%**	**7.1**	**40.3%**

* Includes the sub-specialties

Note, the "other" category is not included in the table. Graduates from the Western region selected family medicine preferentially (53.6%) and those from the Northeastern region had the least percentage entering family medicine (13.4%). Conversely, graduates from programs in the Northeast selected surgery (56.7%) more frequently than did graduates from other regions.

Regional Variation and Trends in New Graduate Starting Salaries

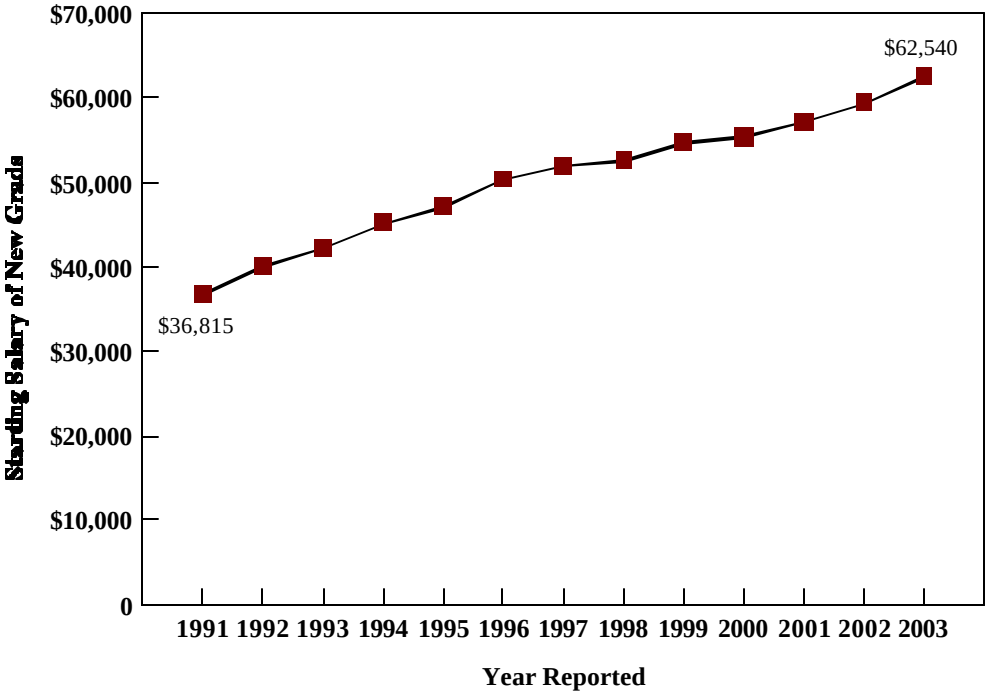
Table 87 shows the estimated starting salary of recent graduates in 2003 by region. The overall average was $62,540, an increase of 5.2% from the 2002 average of $59,434. Mean salaries were above $61,000 for graduates from programs located in all but the Eastern region.

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

Consortia Region	N	Mean	Median	Change from 2002
Northeastern	11	$64,609	$65,000	+ 7.0%
Eastern	8	$59,250	$60,000	+ 5.1%
Southeastern	11	$63,477	$62,000	+ 6.8%
Midwestern	16	$62,307	$61,650	+ 4.4%
Heartland	11	$63,490	$62,892	+ 6.4%
Western	11	$61,319	$61,000	+ 2.0%
Total	68	$62,540	$62,000	+ 5.2%

Salaries of graduates from programs located in the Northeastern region marked the greatest increase from 2002 (7.0%). These data are also shown in Figure 26 (next page). Thus, starting salaries have increased each year by an average of 4.5% and there has been an overall increase in salaries of 69.9% since 1991.

Figure 26. Trends in Starting Salary for New Graduates: 1991 Through 2003



SUMMARY AND CONCLUSIONS

This report presents an update of physician assistant educational programs in the United States for the 2003-2004 academic year. This is the twentieth annual report to be published since 1984 and is based upon data drawn from the 2003 national survey of P.A. programs and includes APAP member programs and those enrolling students for the first time in 2003. Two surveys were administered. The surveys was mailed in November to 133 programs. The response rate for survey #1 was 86% (114 programs) and for survey #2 was 65%. 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 consortia region.

As we have data extending from 1984, we were able to also examine trends which have occurred over the past twenty 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=119; 89.5%) were associated with either a University or 4-year College. Eighty-two programs (62%) awarded graduates a master's degree and thirty-seven (28%) awarded graduates a baccalaureate degree; the remainder awarded either an associate degree or only a certificate of completion. The majority (N=82; 61.7%) of the current P.A. Programs were established since 1989; thirty-five 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 months in length and ranged from 12 to 36 months. The majority of programs graduated their seniors over two periods, between May-June (N=43) and August-September (N=63).

P.A. programs received the majority of their financial support from the sponsoring institution, averaging $654,339 (69% of the budget) and federal training grants, averaging $141,762 (15% of the budget). Forty-one programs (40%) reported they received federal training grant support in 2003- 2004. The average cost per program to educate a P.A. student was estimated to be $11,886/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 ($1,285,802 per program). Programs located in the Western region had the highest level of federal training grant support ($178,775 per program). Programs in the Heartland region had the lowest total budget, averaging $728,374 per program. Programs in the Northeastern region had the lowest level of federal training grant support ($101,264).

The typical resident student paid an average of $39,360 for tuition, books, fees, and equipment for their entire professional education in a P.A. program, the non-resident student paid $46,884. Eighty-nine percent of the students received financial aid averaging $21,004 per student per year. Students enrolled in programs located in the Eastern region had the highest resident tuition ($42,233/student/curriculum), while programs in the Heartland region had the lowest resident tuition ($16,720/student/curriculum).

Ninety-two percent of the students in programs located in the Eastern region received financial aid, while 81% of the students in the Midwestern region received financial aid. For all students enrolled in 2003, only 16 (1st year students) and 32 (2nd year students) were awarded support from any of the several types of Public Health Service Corps Scholarships.

Trends from 1984 Through 2003

Total program budget increased an average of 7.0% annually from 1984 through 2003, a total increase of 245% over the past twenty years. During this period, institutional support for the typical program increased an average of 7.6% per year, while federal training grant support remained relatively unchanged (20-year mean=$141,762) and accounted for an average of 15% of the total program budget. Since 1984, both tuition and total student expenses have increased by over 360% while the proportion of students receiving financial assistance has increased to 89%. Since 1986, the amount of financial aid provided to students has increased by 443%, from $3,866/student/year to $21,004/student/year in 2003.

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 (0.30) and one program director (0.971) and, on average, 4.2 P.A. credentialed and 1.1 non-P.A. faculty, and 2.4 Category IV personnel. Thus, the "core" personnel for the typical program amounted to approximately 9.0 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, consortia region, gender, ethnicity, academic classification, and highest degree held.

In comparison to the Category I - III personnel data gathered in 2002-2003, salaries for P.A. program personnel increased by 4.1% and by 8.7% for non-P.A.'s. Eighty-five percent of the Cat I – III personnel were classified as faculty. Twenty-two percent were on a tenure track and 25% of the tenure track faculty were tenured. Sixty-two percent of the Category I - III program personnel had earned a masters degree and 12% held a doctorate as their highest degree.

On average, 62% of the P.A. credentialed staff and faculty (including program directors) provided 9.9 hours per week of clinical practice in addition to their educational activities. Eighty percent were paid for their clinical service which averaged $37.31 per hour. Clinical earnings accounted for 20.7% of their salary.

In comparison to the 2002 data, the proportion of program directors who were credentialed as P.A.'s decreased from 88% to 87%, salaries increased by 1.8% and months in position increased from 71 to 72 months. The majority of program (92%) and medical (84%) directors were classified as faculty and were on a tenure track. Less than one-fifth were tenured. Twenty-seven percent of the program directors had doctoral-level degrees (typically the Ph.D. or Ed.D.). Since 1984, there has been a 133% increase in mean salary for program directors and 73% increase for medical directors. The time in position for both medical and program directors has fluctuated extensively over the twenty year period.

Respondents also provided data on personnel turnover over the past year. For the period September 2002 through August 2003, turnover averaged 1.0 individual per program. Turnover across all programs was highest among Category I personnel (36/year) and lowest among Category III personnel. Twelve program director positions were filled during this period. Departing personnel had been in their positions an average of 48 months, those filling the position were in their previous position 45 months and were typically 4.1 years older than their predecessors.

Vacated positions were filled within 7.9 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, return to clinical practice, geographic relocation and career advancement. In this past year, the salary of those filling the vacated position was 3.1% less than the salary of the person leaving the position.

SECTION III. P.A. Applicant and Student Characteristics

In 2003, the average size of the entering P.A. class was 38.2 students, 70% of whom were women. The senior class averaged 35.0 students per program with 9.8% of the maximum capacity of the class unfilled (due largely to attrition from the program). The typical program received 212 applications and reported a ratio of 5.3 applicants to students enrolled. Using the mean values of the responding programs, the total enrollment (all classes) across all 108 programs was estimated to be 8,753 (781 more students than the previous year). Similarly, the estimated first-year enrollment was 4,126 students with only 1.9% enrolled as part-time students. Programs located in the Western region had the largest number of applicants (278/program). The Southeastern region had the largest number of students enrolled (43.7/program). Programs in the Northeastern region had the smallest number of applicants (166.0/program). Programs in the Heartland region had the fewest number of students enrolled (34.3/program).

The typical entering student was described as a white/non-Hispanic female, 28 years of age, with a grade point average of 3.35 and 32.4 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 24.4% in the current year, with the majority of these students in the Black/African-American ethnic group. All but eight programs reported that at least one minority student was enrolled in the 2003 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 decreased by 60.5% from 1995 (420/program to 166/program). The number of applicants increased by 27.7% fro 2001 to 2003.

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 2003. The total number of UMG applicants increased from 471 (3.5/program) in 2002 to 543 (7.6/program) in 2003. UMG enrollment has decreased from 163 (1.64/program) in 2002 to 108 (1.15/program) in 2003. On average, 20% of the UMG applicants were admitted in 2003.

Over one-half (60.6%; 43/71) of the programs received an UMG application while 46.8% (36/77) of the programs enrolled an UMG in 2003. In a broader perspective and with respect to the total applicant pool, UMG's accounted for only 3.6% of the total number of applicants and 2.9% of all students enrolled in the 2003 class.

Programs located in the Midwestern region accounted for the majority of UMG applicants, averaging 26.79/program, while programs in the Heartland region only received an average of 0.88/program. Programs in the Midwestern region enrolled the highest proportion (2.39/program) of UMG's, while programs in the Heartland region enrolled 0.17/program UMG's in 2003.

SECTION IV. Graduate Information

The average size of the 2003 graduating class was 35.3/program and was highest for programs located in the Heartland and Western regions (37.9/program) and lowest in the Midwestern region (32.2/program). The majority of recent graduates were female (66%) and non-minority (80%). The attrition rates across programs averaged 5.4% (2.1 students per program) and the reasons for withdrawal were most frequently due to academic (48.5%). The attrition rate reported in 2003 was higher than the previous year (5.1%). Attrition was highest among minorities and older students. Students from programs in the Eastern region had the highest attrition rate (9.8%) and those from programs in the Heartland region the lowest attrition (2.9%).

On average, 1.6 students per program were decelerated for a deceleration rate of 4.1%. 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 Heartland region (5.8%) and lowest for programs in the Midwestern region (2.6%).

The proportion of 2003 graduates employed in primary care specialties decreased from the previous year (33.7% versus 49.0% in 2002) and those so employed remained principally in family medic ine or general internal medicine. The most common non-primary care specialties selected by recent graduates were surgery (including subspecialties) and medicine. The most common medicine subspecialties was cardiology, while orthopedic surgery was the most common surgical specialties selected.

Based on responses from program directors, starting salaries continued to increase, averaging $62,540, 5.2% above that reported for the 2002 academic year ($59,434). Programs in the Heartland region had the highest percent of employment (81.0%) while programs in the Eastern region had the lowest percent of employment of recent graduates.

REFERENCES

1. Association of Physician Assistant Programs, Physician Assistant Programs Directory. [Online]. Available http://www.apap.org, October, 2003.

2. Accreditation Review Commission on Education for the Physician Assistant, Inc., Accredited Programs [Online], Available http://www.arc-pa.org/General/AccreditedPrograms.html, November 2003.

3. Oliver, D., J. Baker, and W. Donahue. First Annual Report on Physician Assistant Educational Programs in the United States, 1984-85. Association of Physician Assistant Programs, May, 1985.

4. Oliver, D., J. Baker, and W. Donahue. Second Annual Report on Physician Assistant Educational Programs in the United States, 1985-86. Association of Physician Assistant Programs, May, 1986.

5. Oliver, D., J. Baker, and W. Donahue. Third Annual Report on Physician Assistant Educational Programs in the United States, 1986-87. Association of Physician Assistant Programs, May, 1987.

6. Oliver, D., J. Baker, and W. Donahue. Fourth Annual Report on Physician Assistant Educational Programs in the United States, 1987-88. Association of Physician Assistant Programs, May, 1988.

7. Oliver, D., J. Baker, and W. Donahue. Fifth Annual Report on Physician Assistant Educational Programs in the United States, 1988-89. Association of Physician Assistant Programs, May, 1989.

8. Oliver, D., J. Baker, and W. Donahue. Sixth Annual Report on Physician Assistant Educational Programs in the United States, 1989-90. Association of Physician Assistant Programs, May, 1990.

9. Oliver, D., J. Baker, and W. Donahue. Seventh Annual Report on Physician Assistant Educational Programs in the United States, 1990-91. Association of Physician Assistant Programs, May, 1991.

10. Oliver, D., J. Baker, and W. Donahue. Eighth Annual Report on Physician Assistant Educational Programs in the United States, 1991-92. Association of Physician Assistant Programs, May, 1992.

11. Oliver, D., J. Baker, and W. Donahue. Ninth Annual Report on Physician Assistant Educational Programs in the United States, 1992-93. Association of Physician Assistant Programs, May, 1993.

12. Oliver, D., J. Baker, and W. Donahue. Tenth Annual Report on Physician Assistant Educational Programs in the United States, 1993-94. Association of Physician Assistant Programs, May, 1994.

13. Oliver, D., J. Baker, and W. Donahue. Eleventh Annual Report on Physician Assistant Educational Programs in the United States, 1994-95. Association of Physician Assistant Programs, May, 1995.

14. Simon, A., M. Link, and A. Miko. Twelfth Annual Report on Physician Assistant Educational Programs in the United States, 1995-96. Association of Physician Assistant Programs, May, 1996.

15. Simon, A., M. Link, and A. Miko. Thirteenth Annual Report on Physician Assistant Educational Programs in the United States, 1996-97. Association of Physician Assistant Programs, May, 1997.

16. Simon, A., M. Link, and A. Miko. Fourteenth Annual Report on Physician Assistant Educational Programs in the United States, 1997-98. Association of Physician Assistant Programs, May, 1998.

17. Simon, A., M. Link, and A. Miko. Fifteenth Annual Report on Physician Assistant Educational Programs in the United States, 1998-99. Association of Physician Assistant Programs, May, 1999.

18. Simon, A., M. Link, and A. Miko. Sixteenth Annual Report on Physician Assistant Educational Programs in the United States, 1999-2000. Association of Physician Assistant Programs, July, 2000.

19. Simon, A., M. Link, and A. Miko. Seventeenth Annual Report on Physician Assistant Educational Programs in the United States, 2000-2001. Association of Physician Assistant Programs, August, 2001.

20. Simon, A., M. Link, and A. Miko. Eighteenth Annual Report on Physician Assistant Educational Programs in the United States, 2001-2002. Association of Physician Assistant Programs, September, 2002.

21. Simon, A., M. Link, and A. Miko. Nineteenth Annual Report on Physician Assistant Educational Programs in the United States, 2002-2003. Association of Physician Assistant Programs, August, 2003.

22. Simon, A. and M. Link. Twentieth Annual Report on Physician Assistant Educational Programs in the United States, 2003-2004. Association of Physician Assistant Programs, August, 2004.