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NINETEENTH ANNUAL REPORT ON PHYSICIAN ASSISTANT EDUCATIONAL PROGRAMS IN THE UNITED STATES, 2002-2003

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 October, 2002, there were 132 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 nineteen Annual Reports[3-21] 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 90% of the P.A. programs surveyed. This high rate of response leads the authors to present the findings contained herein to be representative of the physician assistant educational programs in the United States. Given that the basic elements of the annual survey have remained consistent over its seventeen 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.[10-21]
* A Review of Program Characteristics by Sponsoring Institution.[3]

METHODS

The Survey Instruments

Three questionnaires (surveys #1, #2, Curriculum) were administered. The first survey was a total of seven pages in length, mailed in October 2002, to 132 programs that were identified as accredited from databases maintained by APAP and the American Academy of Physician Assistants (AAPA). Survey #1 consisted of three major sections (see the Appendix for a copy of the questionnaires):

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

Survey #2 was 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 of those recent graduates.

The Curriculum Section was six pages in length and requested information on:

A. Didactic Phase: Includes basic science courses and behavior/social science/professional issues/research related courses.
B. Introductory Clinical Sciences: Includes didactic clinical medicine, patient evaluation methods and clinical skills.
C. Clinical Phase of the Curriculum

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" two years ago, allowing the member programs to enter data directly over the Internet, facilitating the collection and analysis of data. Eighty-two programs (62% of the respondents) submitted their program's data via this method.

Survey Period and Response Rate

Survey #1 was mailed (10/28/2002) to 132 P.A. programs, including three programs enrolling students for the first time in the 2002-2003 academic year. An initial deadline of December 15, 2001 was established. A total of 103 responses were received for a response rate of 78.0%.

The second survey and the curriculum survey was included with survey #1. Seventy-three survey #2's were received. Eight-two curriculum surveys were received.

A total of 111 programs returned some portion of survey #1 and/or survey #2, for an overall response rate of 84.1%.

Data Entry and Analysis

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

In general, analyses of the data consisted of descriptive statistics on the variables of interest, e.g. arithmetic mean, standard deviation, median, and range of values. Medians were listed on tables when they differed significantly

from the mean. T-tests were used to determine levels of statistical significance between groups. Regression equations were developed for program budget and student enrollment as well as various parameters associated with personnel salary and certain variables, which were expected to influence salary, i.e., gender, months of experience, academic credentials and academic rank. Data are not reported when only one person is represented in a category.

Tables and figures presented in this report represent aggregate data from the respondents. Due to missing data and/or unusable answers, the number of respondents to a particular questionnaire item varied. In most cases, the maximum number of valid responses was 103, however, in some cases, data on nonrespondents was obtained from the APAP Directory or personal communication with nonrespondent programs, in which case a total of 132 programs were represented.

Quality Improvement

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

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

The "Typical" P.A. Program

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

In some cases, totals reported for a given category may not reflect a simple summation of the subcategories. For example, in the table presenting data on applicant age (Table 55), one program may report the total number of applicants, but not report data for any of the age subcategories for applicants. In such a case, means for each of the age groups are reported based on the programs that provided information. The programs that reported only the total number of applicants were included in the "total" figure (N=76), but not in the subcategory data (N=64). 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: 1984-2002

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	**Massachusetts College of Pharmacy**	SUNY/Hlth Sci Brooklyn
Bronx Lebanon Hosp. Center	Mercy College	SUNY/Stony Brook
Brooklyn Hosp/L.I. University	NY Institute of Technology	Touro College - Bay Shores
Catholic Med. Ctr., Brooklyn	Northeastern University	Touro College - New York
CUNY/Harlem Hospital	Quinnipiac College	Univ. Medicine and Dent. NJ
D'Youville College	Pace University	Univ. Of New England
Daemen College	Rochester Institute of Tech.	Wagner College/Staten Isl
Hofstra University	St. Vincent's Catholic Med Centers	Weill Cornell University
LeMoyne College	Seton Hall University	**Yale University**
Manchester Center for Hlth Sci	**Springfield College**	

EASTERN CONSORTIUM (N=19):

Maryland, Pennsylvania, District of Columbia

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

SOUTHEASTERN CONSORTIUM (N=23):

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

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

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=21):

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
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
University of Utah
University of Washington
Western Univ. of Hlth Science

Nonrespondents to neither Survey #1 nor Survey #2; N=21

The above listing is based upon the APAP Consortium guidelines. Each program responded as to which consortia they belonged. The geographic distribution of the 132 operational P.A. Programs is shown in Figure 1.

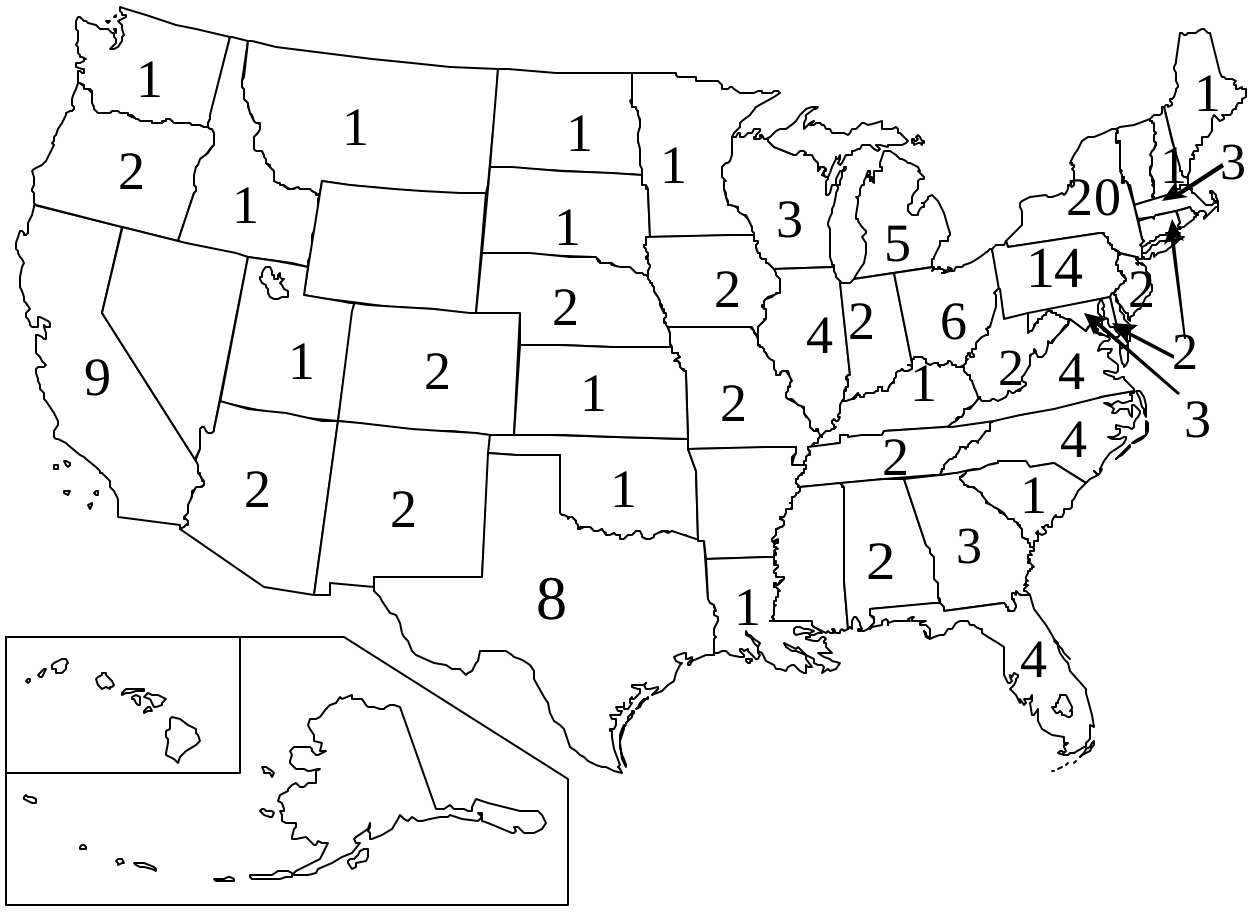


Figure 1. Geographic Distribution of Programs

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%);

eight programs were associated with a two-year college; five programs were sponsored by a hospital and one was sponsored by the armed services. Fifty-four percent of programs award a masters degree (N=71). Forty-four programs award a baccalaureate degree upon graduation (33%). The remaining programs (N=17; 13%) 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). These programs were not included as "entry-level" masters programs.

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

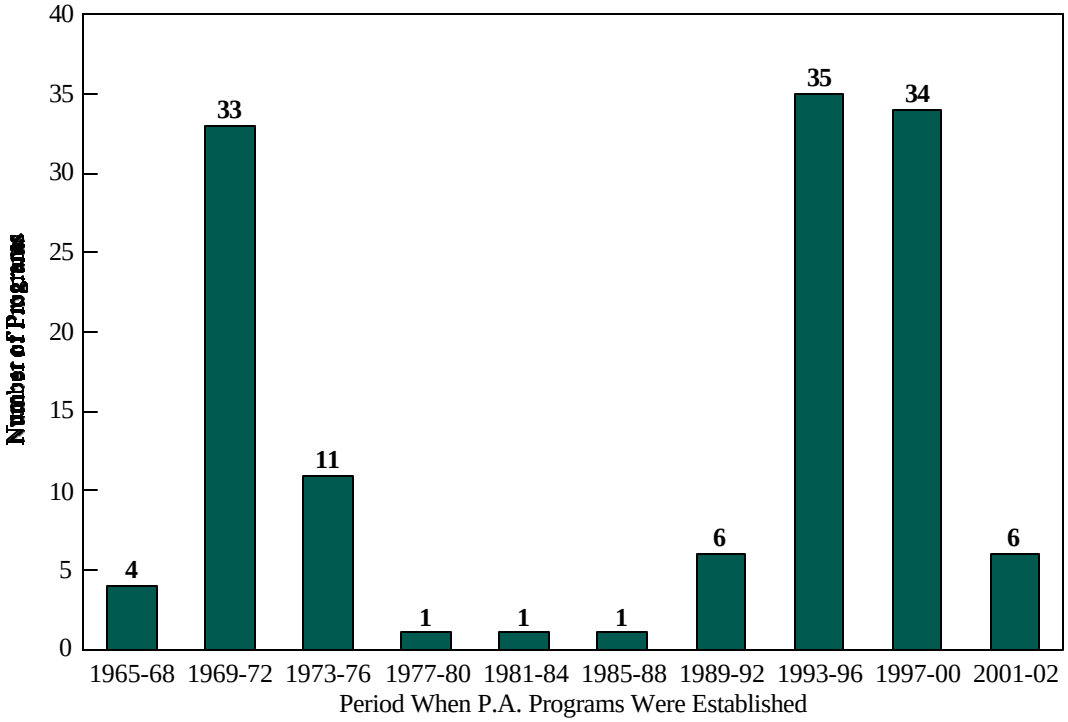
Type of Sponsoring Institution	N	%	Highest Credential Awarded	N	%
University	91	68.94	Master	71	53.79
4-Year College	27	20.45	Baccalaureate	44	33.33
Community College	8	6.06	Associate	5	3.79
Hospital**	5	3.78	Certificate	12	9.09
Military**	1	0.76	Total	**132**	**100.00**
Total	**132**	**100.00**			

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

Year Current P.A. Programs Were Established, 1965 Through 2002

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



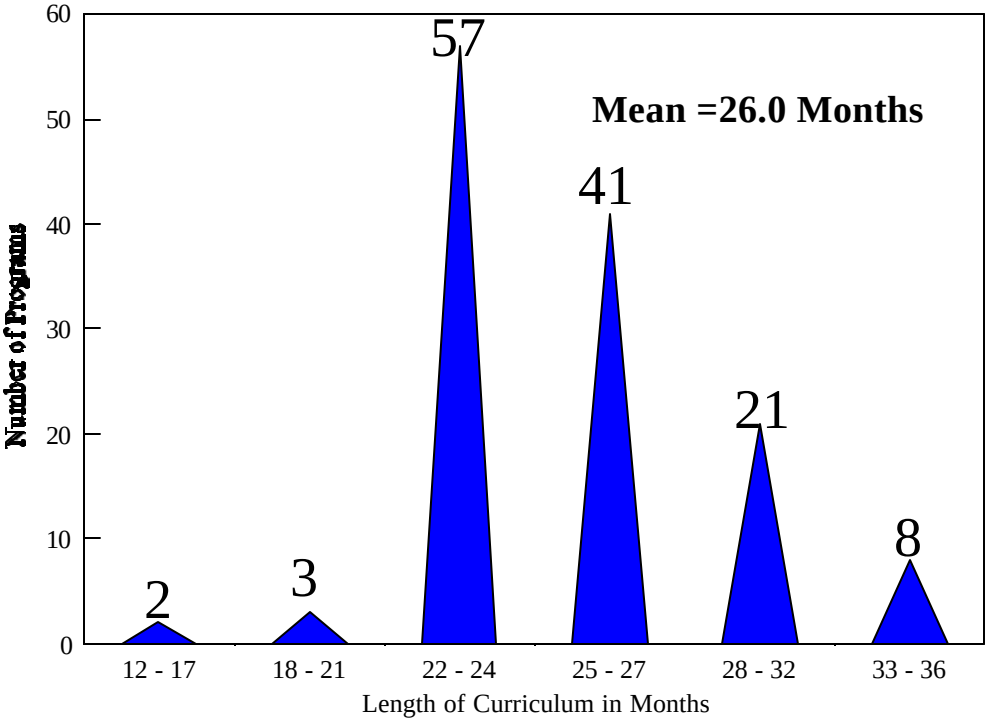
One hundred thirty-two programs are represented, as the data for the nonrespondent programs were obtained from previous Report surveys or the Accredited Physician Assistant Programs[2] from AAPA/APAP. The first P.A. program was established in 1965 at Duke University Medical Center and over the next four years (1965-1968) three additional programs were developed. With the passage by Congress of the Comprehensive Health Manpower Act in 1971, federal training grant support provided the stimulus for the rapid development of the majority of current P.A. programs. Indeed, over the subsequent eight-year period (1969 through 1976), forty-four new programs were established. Over the next twelve years, from 1977 through 1988, only three additional programs were established. In the years 1993-1996, 35 new programs were established and from 1997 to 2000, 34 new programs enrolled students for the first time. From 2001-2002, six 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 26.0 months (N=132) with a range of 12 to 36 months. For convenience, the programs were organized into six groups. The majority of programs were between 22-24 months (57) and 25 to 27 months (41) in length. The median was 24 months. The length of the curriculum of P.A. programs has increased in the past several years, for example, in 1986 and 1990, the average length of the curriculum was reported as 23.7 and 24.0 months, respectively. The mean of 26.0 months represents a decrease of 0.8% from last year. Non-respondent information was obtained from the APAP Program Directory[(1)].

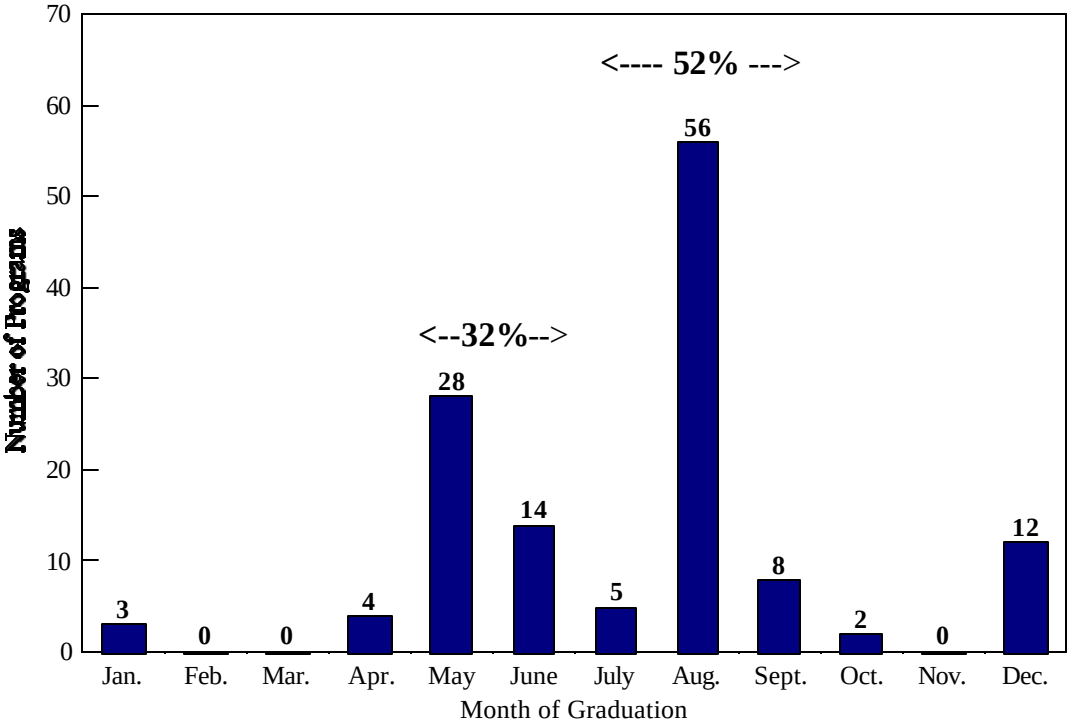
Figure 3. P.A. Programs by Length of Curriculum (N=132)



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 2002 P.A. Program Directory[1].

Figure 4. P.A. Programs By Months of Graduation (N=132)



Currently, a majority (N=111; 84.1%) of programs graduate students over two periods, (a) between May and June (N=42; 31.8%) and (b) July, August and September (N=69; 52.3%.). 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=67) reported support from more than one source, for example, 30 programs reported two sources, 29 programs three sources, 4 programs four sources and 4 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 $574,416/year/program (S.D.=$287,062). Fourteen programs reported that they received no financial support from their sponsoring institution. Thirty-seven respondents indicated that they received substantial support from student tuition and fees paid directly to the program (mean=$771,456, S.D.=$845,603). Sixty-six 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	$574,416	$546,433	$ 46,000 - 1,857,000	89	14
Tuition and Fees (Retained by Program)	$771,456	$448,000	$ 7,000 - 3,570,000	37	66
External					
Federal Grants	$159,334	$132,500	$ 15,000 - 990,500	38	65
State Grants	$115,778	$ 50,000	$ 1,000 - 287,000	9	94
Foundations	$ 13,875	$ 5,500	$ 1,000 - 49,000	8	95
Private Donation	$ 41,828	$ 10,000	$ 1,000 - 244,000	7	96
Industry	$ 38,750	$ 25,000	$ 1,000 - 104,000	4	99
A.H.E.C. Support	$ 20,619	$ 11,048	$ 2,000 - 70,000	13	90
Other	$ 92,193	$ 55,000	$ 1,000 - 548,000	15	88
Total Program Support	**$866,612**	**$713,500**	**$72,000 - 3,640,000**	**103**	**0**

External financial support for programs was primarily from federal training grants from the Department of Health and Human Services, Division of Medicine, Bureau of Health Professions. Thirty-eight programs (37% of the respondents to this item) received federal funds during the 2002-2003 fiscal year. The amount of federal support ranged from $15,000 to $990,500, averaged $159,334 per program (S.D.=$149,264) and accounted for 18.4% of the total budget, higher than the figure (17.7%) reported last year. Sixty-five programs indicated they did not receive federal grant support in 2002-2003. In addition to federal training grants, nine programs indicated they received state grants averaging $115,778 per year and fifteen programs reported financial assistance received from other sources (e.g., rate appeals, teaching contracts, hospitals, training grant, clinical service and scholarships) averaging $92,193 per program.

The total annual financial support from all sources for the 103 programs reporting averaged $866,612 per program (median=$713,500; S.D.=$607,349). An analysis of the association between total budget and total student enrollment was examined. Two correlations were derived, the first using full-time (F.T.) students enrolled ($r = 0.631$; $p<.001$) and the other utilizing the sum of F.T. and ½ of the part-time (P.T.) students ($r = 0.696$ $p<.001$). 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 = (561.437) + (3.72 x # F.T. students enrolled) (in $1,000's)

(b) Total Program Budget = (599.867) + (3.79 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 $747,437 per year while equation “b” predicts, for a program with 50 F.T. and 10 P.T. students, a budget of $808,317/year.

In terms of the reported program budget, the cost of training the average P.A. student for one year of professional training can be roughly estimated by dividing the program budget by the total number of students enrolled (F.T. + P.T./2). Thus, for the 2002 academic year, the cost for the typical program was approximately $11,418 to educate each student (mean budget of $866,612 divided by an average enrollment of 75.9 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. Therefore, the values reported herein may be substantially underestimated.

Program Budget and Federal Support by Region

A comparison of federal support and total program budget by consortia region is shown in Table 4. Programs located in the Western region reported the largest total budget ($1,174,111/program). The most federal grant support was located in the Midwestern region, averaging $219,450/program. Programs in the Heartland region reported the smallest total budget ($642,854/program). Programs in the Heartland region also had the least amount of support from federal training grants ($101,070/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 over one-fourth 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	21	$ 821,211	$461,632	$101,360	$ 1,360	12.3%	2	19
Eastern	17	$ 833,419	$559,371	$143,250	$ 90,461	17.2%	4	13
Southeastern	14	$ 865,545	$816,516	$133,750	$ 27,068	15.5%	4	10
Midwestern	22	$ 793,232	$462,861	$219,450	$ 28,705	27.7%	10	12
Heartland	11	$ 642,854	$231,665	$101,070	$ 56,194	15.7%	7	4
Western	18	$1,174,111	$767,859	$167,455	$ 60,883	14.3%	11	7
Total	**103**	**$ 866,612**	**$607,349**	**$159,334**	**$149,264**	**18.4%**	**38**	**65**

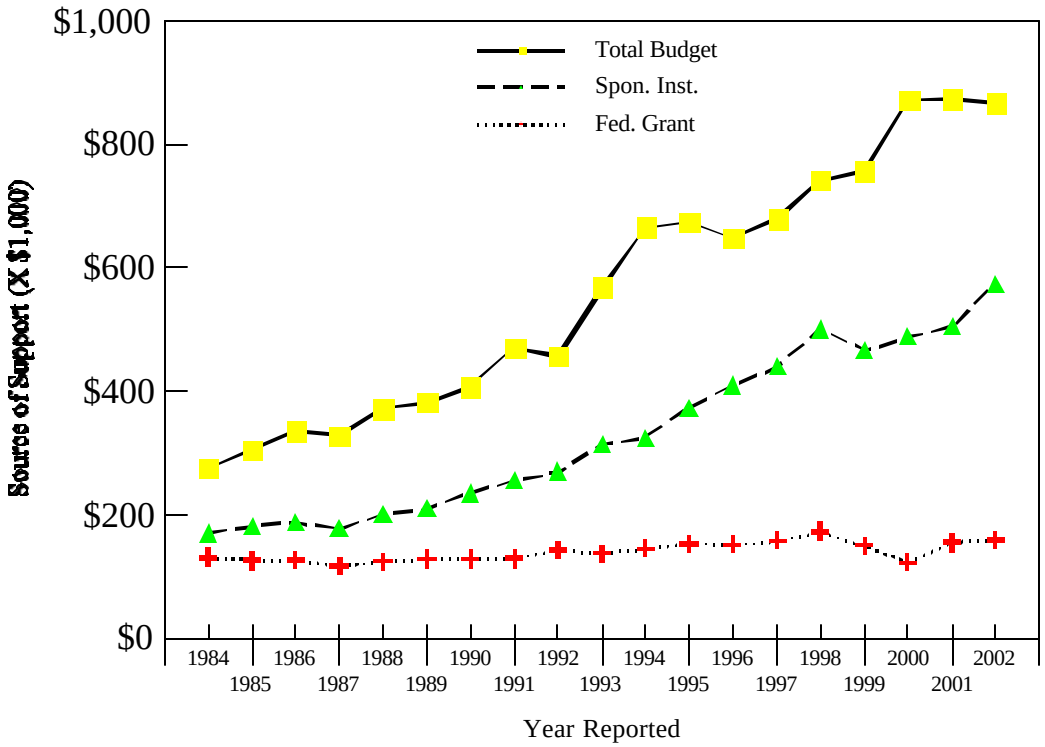
Trends in P.A. program support from 1984 through 2002 are shown in Table 5 and shown graphically in Figure 5 (next page). The total budget column is not a summation of institutional and federal grant support.

Table 5. Trends in Physician Assistant Program Support, 1984 Through 2002

	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%**

The total budget for 2002 decreased by $7,365 from the previous year. The level of training grants accounted for 18% of the total budget. Overall, the total program budget increased by an average of 6.8% annually and the program support from the sponsoring institution increased by an average of 7.2% annually from 1984 to 2002. Federal support increased by 2.9% from 2001. The proportion of the total budget from federal training grants has decreased from 41% in 1985 to 18% in 2002. 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 213% while support from the sponsoring institution increased 239%.

Figure 5. Trends in P.A. Program Support: 1984 Through 2002



Student Educational Expenses

For the class entering in 2002, 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	$30,949	$ 4,100- 80,000	96	$1,113
Nonresident Student	$38,423	$13,300- 80,000	96	$1,382
Books, Fees, and Equipment	$ 5,205	$ 1,400- 39,500	98	$ 204
Total Student Costs: (Tuition, Books, Fees, Equipment)				
Resident Student	$36,154	$5,500-120,000	96	$1,476
Nonresident Student	$43,628	$9,000-142,500	97	$1,781

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 $7,500 difference between resident and nonresident tuition among the 97 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 $1,113 per month while the nonresident paid $1,382 per month, a 22% difference.

Expenses associated with books, equipment and fees averaged $5,205 per student for their entire professional training. These expenditures represented approximately 14.4% and 11.9% 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 $36,154 for residents and $43,628 for nonresidents. The average total cost per month was $1,476 for residents and $1,781 for nonresident students.

As shown in Table 7, the majority of students (86.3%) received financial aid, which averaged $18,477 per student per year and accounted for 102% of the costs of tuition, fees, books, and equipment ($18,477) for the typical resident student. Using these values, one can estimate that the typical resident P.A. student would be indebted approximately $36,954 (2 X $18,477) 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	86.3%	11-100%	93
Amount of Aid Received/Year	$18,477	$1,800-42,000	81

Student Expenses by Consortia Region

Tuition (for the entire curriculum) and total costs for P.A. students during the 2002-2003 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 ($41,165/curriculum) and lowest for programs located in the Heartland region ($11,839/curriculum). Nonresident tuition varied less across regions with a difference of approximately $9,477 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 83.3% in the Midwestern region to 93.4% 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	$34,685	$37,967	$1,248	$1,366	84.1%
Eastern	15	$41,165	$42,999	$1,481	$1,547	93.4%
Southeastern	14	$30,759	$38,933	$1,106	$1,400	87.2%
Midwestern	19	$26,911	$37,095	$ 968	$1,334	83.3%
Heartland	9	$11,839	$33,522	$ 426	$1,206	84.9%
Western	18	$32,044	$38,342	$1,153	$1,379	85.3%
Total	**96**	**$30,949**	**$38,423**	**$1,113**	**$1,382**	**86.3%**

Trends in P.A. Student Expenses

Comparisons between tuition and student expenses, and the proportion of students receiving financial aid from 1984 through 2002, are shown in Table 9 and Figure 6 (next page).

Table 9. Trends in P.A. Student Expenses, 1984 Through 2002

	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

Tuition has increased 385% and 328% over the past nineteen 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 371% and 338% over the nineteen-year period for resident and nonresident students, respectively.

The proportion of students receiving financial aid averaged 74% from 1984 through 2002 and has varied within a narrow range, i.e., 63% to 88%, 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 378% since 1986; total expenses increased by 291% for resident and 259% for nonresident students during that same period.

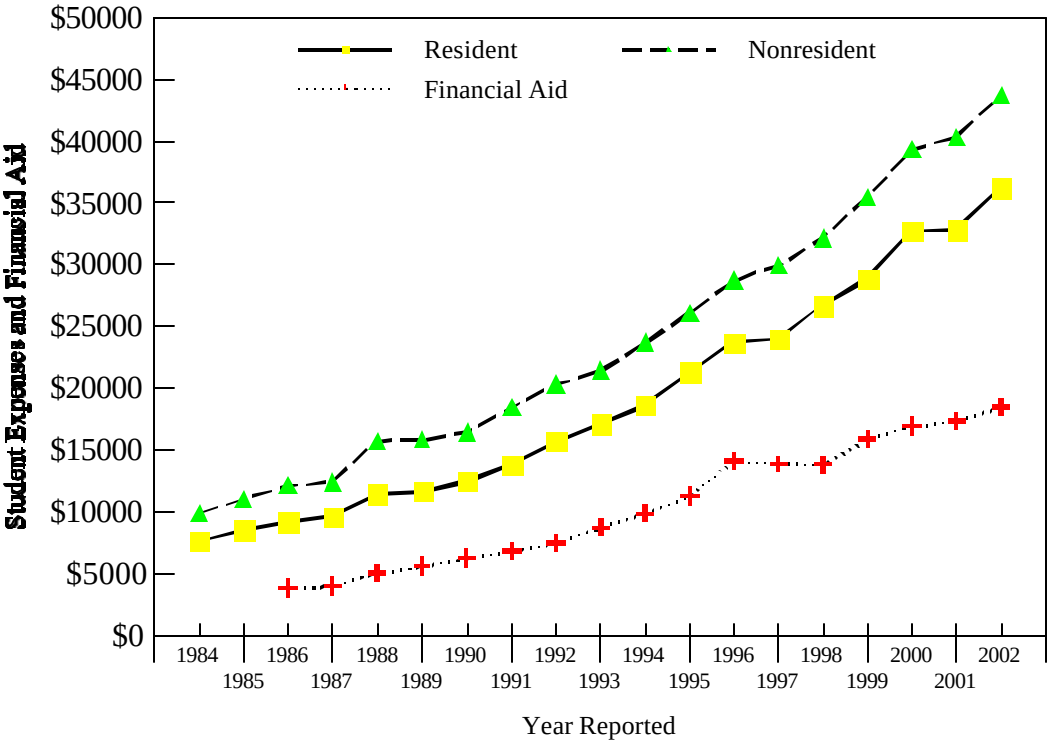
National Health Service Corps (N.H.S.C.) Support

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 75/81 (93%). In total, 34 scholarships were reported among the first year class and 42 among the second 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	32	94.1%	0	0.0%	2	5.9%	0	0.0%	34
2nd Year	38	90.5%	1	2.4%	3	7.1%	0	0.0%	42
3rd Year	5	100.0%	0	0.0%	0	0.0%	0	0.0%	5
Total	**75**		**1**		**5**		**0**		**81**

Figure 6. Trends in P.A. Student Expenses: 1984 Through 2002



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 nineteen 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 720 (194 Category IV) personnel reported by survey respondents (N=103; 7.3 per program), 421 P.A.'s and 299 non-P.A.'s. Ninety-six programs indicated that they had at least one Category I - III P.A. (mean of 4.4/program) and 36 programs indicated that individuals without a P.A. credential were employed in at least one of the I - III categories (mean of 2.9/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	224	163	34	0	421	421
# of Programs*	91	88	26	0	96	103
Mean #/Program	2.5	1.9	1.3	0.0	4.4**	4.1***
Non-Physician Assistants						
Total Number	61	13	31	194	105	105
# of Programs*	36	11	22	79	36	103
Mean #/Program	1.7	1.2	1.4	2.5	2.9**	1.0***

* 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=103) programs.

The majority of program personnel in Categories I - III were credentialed as P.A.'s (80%) as compared to non-P.A.'s (20%). Proportionately, there were relatively few non-P.A.'s in Category II positions (7.4% of Category II personnel). Across all programs (N=103), the mean per program is 4.1P.A.'s and 1.0 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. 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	21	32 (9)	38 (2)	5 (4)	0 (23)	75 (38)	3.6/(0.7)
Eastern	17	41 (8)	29 (1)	6 (5)	0 (24)	76 (38)	4.5/(0.8)
Southeastern	15	35 (12)	18 (1)	5 (3)	0 (28)	58 (44)	4.1/(1.1)
Heartland	11	26 (10)	17 (0)	7 (1)	0 (27)	50 (38)	4.5/(1.0)
Midwestern	21	49 (6)	31 (2)	6 (5)	0 (46)	86 (59)	4.1/(0.6)
Western	18	41 (16)	30 (7)	5 (13)	0 (46)	76 (82)	4.2/(2.0)
Total	**103**	**224 (61)**	**163 (13)**	**34 (31)**	**0 (194)**	**421 (299)**	**4.1/(1.0)**

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

Programs located in the Northeastern region had the fewest P.A.'s associated with the program (mean of 3.6/program). Programs in the Midwestern region employed the least number of Category I-III non-P.A.'s (0.6/program). Programs in the Western region employed the greatest number of Category IV personnel per program (2.6/program), while programs in the Northeastern region employed the least (1.1/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 = 224*	II N = 163	III N = 34	Total N = 421
Mean % Time	90.5%	90.4%	97.2%	91.0%
Annual Salary	N = 204	N = 146	N = 34	N = 384
Mean**	$62,023	$63,031	$71,281	$63,226
Range	$25,750 - $95,474	$35,000 - $91,806	$53,000-$95,200	$25,750-$95,474
Months in Position	N = 224	N = 163	N = 34	N = 421
Mean	48.5	47.3	82.9	50.8
Median	34.5	31.0	49.5	45.5
Range	1-288	1-282	1-341	1-341

* 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. Twenty-five of the 34 P.A.'s in Category III were employed on a full-time basis, whereas P.A.'s in Categories I and II averaged 0.90 FTE. The mean annual salary across all categories was $63,226 with a range from $25,750 to $95,474. On average, individuals had been in their position for 50.8 months (range 1-341 months). There was some difference in mean salary across categories, ranging from $62,023 for Category I to $71,281 for Category III, a 14.9% increase. P.A.'s in Category III had held their positions for the longest period of time, averaging 83 months, while the majority of P.A.'s in Category II had been associated with the program for the least amount of time (47 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 (58%) 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 (75%). Thirty-two 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=224	N=163	N=34	N=94	N=515
Clinical P.A.'s	168(75%)	89(55%)	14(41%)	30(32%)	301(58%)
Hrs Worked/Week					
Mean	9.8	10.5	7.7	7.0	9.6
(N)	(168)	(89)	(14)	(30)	301
Range	1-40	1-40	4-16	4-15	1-40
Number (%) Paid for Services	152(90%)	82(92%)	10(71%)	25(83%)	269(89%)
Mean Wage/Hour	$36.77	$36.38	$37.39	$38.67	$36.85
(N)	(122)	(66)	(9)	(22)	(219)
Annual Amount*	$17,297	$18,336	$13,819	$12,993	$17,035
Adjust. Salary**	$75,320	$69,082	$72,975	$82,741	$73,477
% Salary From Clinical Earnings	23.0%	26.5%	18.9%	15.7%	23.2%

* Estimated at 48 weeks per year.

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

On average, P.A.'s in Categories I-III spent 9.6 hours per week providing patient care; program directors who were P.A.'s spent an average of 7.0 hours per week. The range in time spent was very broad, from one hour per week to 40 hours per week. Eighty-nine percent of P.A. personnel received additional compensation for their clinical services. The mean hourly wage averaged $36.85/hour and varied from $36.38 for Category II to $38.67 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 $17,035 from their clinical activity. Program directors had the lowest additional income ($12,993) and those in Category II had the highest ($18,336).

An "adjusted" annual income (base salary + clinical earnings) was determined for those indicating they received earnings from both sources. On average, there was a 23.2% increase over base salary for those personnel that were clinically active. And, clinical earnings accounted for over one-fifth of the personnel salary. It would appear that the base salary for clinically active personnel is lower than those not in practice. In subsequent tables, salary figures will not include clinical earnings.

General characteristics of non-P.A. credentialed personnel by category is shown in Table 16. Across categories, the typical non-P.A. in Categories I - III devoted 89% 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 = 59	N = 13	N = 31	N = 194	N = 103
Mean % Time	85.7%	90.8%	93.1%	92.7%	88.6%
Annual Salary*	N = 48	N = 12	N = 29	N = 174	N = 89
Mean	$60,143	$51,583	$43,246	$28,951	$53,483
Median	$61,800	$54,000	$38,865	$27,500	$47,000
Range	$31,700-$88,000	$28,200-$74,000	$18,000-$96,594	$10,000 - $60,991	$18,000-$96,594
Months in Position	N = 58	N = 13	N = 31	N = 192	N = 102
Mean	57.8	52.1	89.8	50.4	66.8
Median	36.0	22.0	70.0	28.0	45.0
Range	6 - 324	3 – 270	4 - 360	1 – 370	3 - 360

* Salaries adjusted to 1 FTE

The mean salary for non-P.A.'s across Categories I - III was $53,483, ranging from $18,000 to $96,594. On average, these individuals had been employed 66.8 months (median of 45, range of 3-360 months). Non-P.A.'s in Category I earned the highest average salary ($60,143). Non-P.A.'s in Category III had the lowest average salary ($43,246). Category II non-P.A.'s had been associated with the program for the shortest period of time, while Category III non-P.A.'s, on average, had been employed almost 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 $28,951 with a broad range of $10,000 to $60,991. Category IV personnel had been in their position an average of 50.4 months (median: 28 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.	183	265	448	$65,694	$58,659	58.0	51.4
Black/African-Amer.	13	19	32	$61,139	$64,859	59.2	54.8
Latin/Hisp/Mex. Am.	5	10	15	$77,164	$60,848	107.8	36.2
Asian	2	10	12	$48,000	$52,846	7.5	60.4
Asian Subpopulation	1	0	1	---	---	---	---
Native Haw./Other PI	1	1	2	---	---	---	---
Amer. Ind./Alaskan	0	0	0	---	---	---	---
Other	2	0	2	$62,000	---	15.0	---
Total	**207**	**305**	**512**	**$65,367**	**$58,891**	**57.8**	**51.4**

Proportionately, there were more women (60%) among the P.A. and non-P.A. personnel; 59% of the white (265/448) and 62.5% of the non-white personnel (40/64) were women. In total, 64 P.A. program staff and/or faculty from 42 programs were identified as members of an ethnic minority (32 Black/African-American, 15 Latino/Hispanic, 12 Asian, one Asian Subpopulation, two Native Hawaiian/Other Pacific Islander, and two Other). This constitutes 12.5% (64/512) of the total number of faculty and staff and 57% of the programs responding. In the categories Black/African-American and Asian, males earned higher annual salaries than their female counterparts. Asian 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 (89.7%). Forty-six (24%) Category IV P.A. program staff from 27 programs were identified as members of an ethnic minority. Females were employed longer in their current position than males, 51 and 43 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	135	148	$33,583	$28,051	50.6	49.4
Black/African-Amer.	1	17	18	---	$31,195	---	46.7
Latin/Hisp/Mex. Am.	5	17	22	$35,000	$28,717	25.6	74.3
Asian	1	5	6	---	$31,074	---	38.2
Asian Subpopulation	0	0	0	---	---	---	---
Native Haw./Other PI	0	0	0	---	---	---	---
Amer. Ind./Alaskan	0	0	0	---	---	---	---
Total	**20**	**174**	**194**	**$33,621**	**$28,543**	**42.6**	**51.3**

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.	$65,002	77	$60,598	125	93.1	88	88.6	132	52.2	88	45.7	134
Non-P.A.	$65,034	29	$51,659	18	85.4	36	85.5	22	54.9	35	63.3	22
Cat. II												
P.A.	$64,825	53	$62,008	93	92.3	60	89.4	103	47.1	60	47.4	103
Non-P.A.	----------	1	$50,909	11	------	1	100.0	9	------	1	55.1	12
Cat. III												
P.A.	$72,027	14	$70,758	20	99.3	14	95.8	20	76.4	14	91.9	19
Non-P.A.	$63,107	9	$34,309	20	92.5	10	93.3	21	160.0	10	54.0	22
Cat. IV												
Non-P.A.	$33,621	14	$28,543	160	85.3	20	93.5	174	42.6	20	51.3	172
Cat. I - III												
P.A.	$65,620	144	$62,003	238	93.3	162	89.5	255	52.4	162	49.8	256
Non-P.A.	$64,845	39	$44,376	49	87.2	47	91.2	52	77.3	46	57.9	56

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 Southeastern region had the highest salaries, while those in the Northeastern region had the lowest salaries. P.A.'s salaries were higher than Non-P.A.'s in each region. Non-P.A.'s were employed for more months. There was not a statistically significant correlation ($r = 0.297$; $p > .05$) 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	$62,475	66	$46,794	8	41.2	68.2
Eastern	$60,090	60	$53,363	12	62.6	27.9
Southeastern	$64,794	57	$63,898	16	52.6	78.7
Midwestern	$64,395	86	$50,905	13	48.6	45.5
Heartland	$65,402	40	$49,062	6	52.2	62.8
Western	$62,704	75	$51,964	34	48.5	86.0
Total	$63,226	384	$53,483	89	50.8	66.8

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 each region, except the Eastern and Midwestern. Latino/Hispanic personnel had higher average salaries than Black/African-Americans.

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	$60,157	67	$82,089	4	$77,000	2
Eastern	$60,346	59	$55,653	8	----------	0
Southeastern	$64,464	62	$66,232	8	----------	1
Midwestern	$63,599	87	$56,809	3	$60,520	2
Heartland	$63,798	41	----------	1	$56,877	2
Western	$58,129	92	$64,470	5	$69,957	8
Total	**$61,481**	**408**	**$64,042**	**29**	**$67,363**	**15**

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 three of the four 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	$31,326	17	$31,000	3	----------	1
Eastern	$24,660	15	$30,267	3	----------	1
Southeastern	$26,115	18	$28,225	6	----------	0
Midwestern	$26,708	42	----------	1	----------	0
Heartland	$29,367	14	----------	1	$28,660	4
Western	$32,656	28	$36,793	4	$27,648	11
Total	**$28,506**	**134**	**$31,527**	**18**	**$29,280**	**17**

Trends in P.A. Program Personnel Salaries from 1985 Through 2002

Trends in P.A. personnel salary from 1985 through 2002 are shown in Table 23. Note, salary data was not available for 1987-88. There has been a 121% increase in P.A. salaries (all categories combined) from 1985-86 to 2002-2003, an average of 7.1% 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 2002

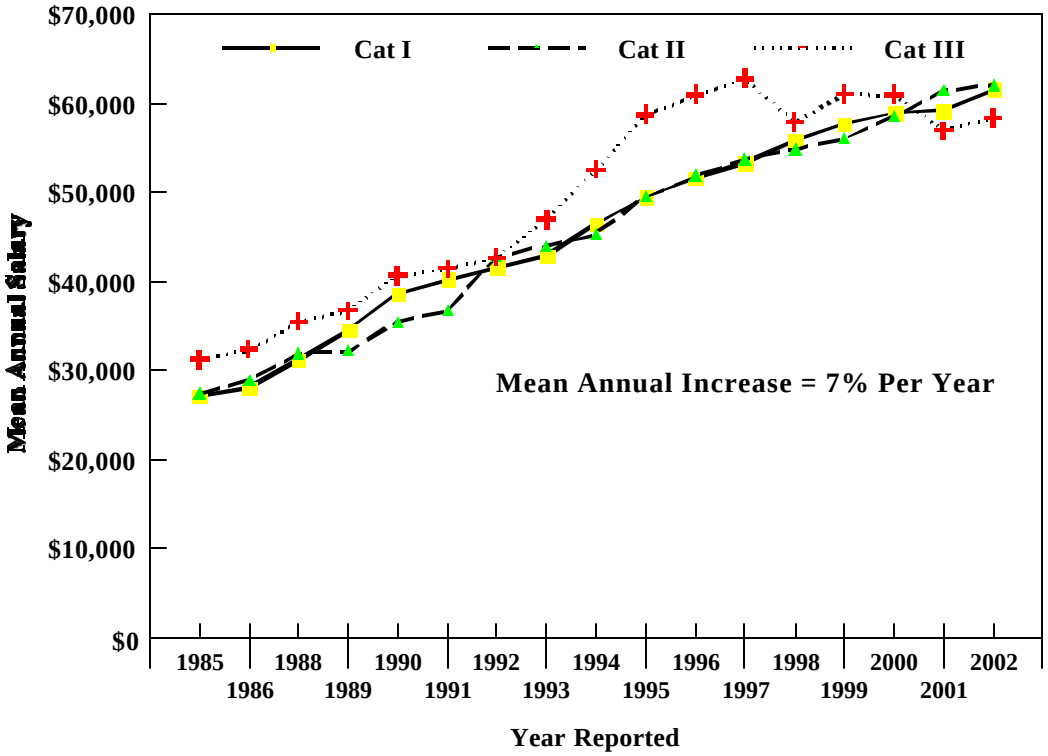
Categories	Cat. I	Cat. II	Cat. III	All Cat.	Months in Position
1985-86	$27,264	$27,553	$31,298	$27,769	36.6
1986-87	$28,129	$29,060	$32,451	$29,010	36.3
1988-89	$31,362	$32,054	$35,547	$32,099	39.9
1989-90	$34,610	$32,300	$36,756	$33,723	43.9
1990-91	$38,547	$35,578	$40,661	$37,404	40.1
1991-92	$40,280	$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

Months in position did not vary substantially, averaging 44.0 months over the 18-year period (range of 36.3 to 55.1).

A three-way analysis of variance (ANOVA) of salary was conducted to investigate the effects of the following parameters: personnel category, gender and consortia region. Main effects were found for sex ($F=21.63$; $p<0.01$; men higher than women) and consortia region ($F=16.32$; $p<0.01$). The category of personnel demonstrated no significant main effects. No significant interactions were found. Taken together, category, gender and region accounted for 24.3% of the variance in salaries ($r=0.493$).

Trends in salary for all categories of program personnel (data for P.A.'s and non-P.A.'s were combined) from 1985 through 2002 are illustrated in Figure 7. Salaries for personnel in Cat I and II consistently increased each year with the largest increase occurring in 1990. Since 1997, Cat III salaries have decreased by 8.7%.

Figure 7. Trends in P.A. Program Salaries: 1985 Through 2002



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	257	92.1%	145	83.8%	38	58.5%	440	85.1%
Staff	22	7.9%	28	16.2%	27	41.5%	77	14.9%
Tenure Status								
In Tenure Track*	73	28.4%	29	20.0%	15	39.5%	117	26.6%
Faculty Tenured**	19	7.4%	6	4.1%	7	18.4%	32	7.3%

* Percent of TOTAL faculty in tenure track not tenured.
** Percent of TOTAL faculty tenured (e.g., 32/440 = 7.3%)

For all categories combined, more than three fourths (N=440; 85%) of personnel were classified as faculty. This distribution of individuals classified as faculty varied greatly between 58.5% for Category III and 92.1% 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-fourth (26.6%) of the faculty were on the tenure track. However, only 7.3% of the faculty were tenured. Viewed in another way, 27.3% of those faculty in a tenure track were tenured, with the highest proportion of these tenured faculty in Category III (46.7%).

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 (90% versus 82%, respectively). A larger proportion of male faculty were on tenure track compared to female faculty, 28.5% versus 24.5%, respectively. Although very few faculty were tenured (7.1%), more male faculty were tenured (8.6%) as compared to female faculty (5.9%).

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

Personnel	Female		Male		Total	
Classification	Number	(%)	Number	(%)	Number	(%)
Faculty Appointment	253	81.9%	186	89.9%	439	85.1%
Staff Appointment	56	18.1%	21	10.1%	77	14.9%
Tenure Status						
Tenure Track Faculty	62	24.5%	53	28.5%	115	26.2%
Tenured Faculty*	15	5.9%	16	8.6%	31	7.1%

* 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 2.3% 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 (24%) as their highest degree. Over one-half of the personnel held a master's degree (N=290; 59.9%). Sixty-five individuals (13.4%) 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								Categories	
Highest	I		II		III		IV		I - III	
Degree	#	(%)	#	(%)	#	(%)	#	(%)	#	(%)
Doctorate	50	19.0%	7	4.2%	8	14.3%	0	0.0%	65	13.4%
Masters	158	60.1%	104	63.0%	28	50.0%	10	10.4%	290	59.9%
Bachelors	53	20.2%	50	30.3%	15	26.8%	48	50.0%	118	24.4%
Associate	2	0.8%	4	2.4%	5	8.9%	38	39.6%	11	2.3%
Total	**263**	**100.0%**	**165**	**100.0%**	**56**	**100.0%**	**96**	**100.0%**	**484**	**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=221; 52.4%).

Table 27. Program Personnel: Academic Rank of Faculty

	Program Personnel Categories							
	I		II		III		Total	
Academic Rank	N	(%)	N	(%)	N	(%)	N	(%)
Full Professor	6	2.4%	0	0.0%	1	2.9%	7	1.7%
Associate Prof.	24	9.8%	6	4.3%	12	34.3%	42	10.0%
Assistant Prof.	131	53.3%	73	51.8%	17	48.6%	221	52.4%
Instructor/Lect.	85	34.6%	62	44.0%	5	14.3%	152	36.0%
Total	**246**	**100.0%**	**141**	**100.0%**	**35**	**100.0%**	**422**	**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 $64,033 (N=391), 34% higher than those appointed to staff positions ($47,867; N=74). In general, the annual salaries of non-P.A. personnel with faculty rank ($64,713, N=53) were higher than the salaries of P.A. personnel with faculty appointments ($63,926; N=338). 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.	$62,793	187	$63,816	121	$71,428	30	$63,926	338
Non-P.A.	$64,177	39	$61,230	7	$71,186	7	$64,713	53
Total	**$63,032**	**226**	**$63,675**	**128**	**$71,382**	**37**	**$64,033**	**391**
Staff								
P.A.	$54,814	14	$58,124	22	$70,175	4	$58,171	40
Non-P.A.	$39,120	8	$38,078	5	$33,903	21	$35,745	34
Total	**$49,107**	**22**	**$54,412**	**27**	**$39,706**	**25**	**$47,867**	**74**

Among the personnel classified as staff, those that were P.A.'s earned a substantially higher (63%) salary ($58,171) than non-P.A.'s ($35,745). In comparison to the previous year (2001-2002), there was over a 2.5% increase in the faculty salaries and a less than 1% 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 6.1% higher than those of female faculty ($66,217 versus $62,383, respectively). Male staff earned substantially higher salaries than did female staff, $58,713 vs. $43,849, 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.	$62,619	211	$66,054	126
Non-P.A.	$59,761	19	$66,806	35
Total	**$62,383**	**230**	**$66,217**	**161**
Staff				
P.A.	$55,305	24	$62,469	16
Non-P.A.	$34,685	30	$43,688	4
Total	**$43,849**	**54**	**$58,713**	**20**

Compared to the previous year (2001-2002), faculty salaries have increased 1.7% for females and 3.2% for males, while staff salaries decreased by 3.4% for males and decreased by 1.0% 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 =$65,686) and associate degree level individuals the lowest ($48,621). Category III individuals earned more at the doctorate; Category I personnel with associate's 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	$65,400	40	$62,388	7	$70,002	8	----------	0	$65,686	55
Masters	$62,256	158	$63,295	92	$67,541	28	$41,336	9	$63,132	278
Bachelors	$56,680	51	$59,884	46	$38,973	14	$33,774	44	$55,774	111
Associate	$75,512	2	$55,673	4	$32,224	5	$27,063	37	$48,621	11
Not Reported	$55,292	2	$64,924	9	$64,951	8	$25,930	84	$63,921	19
Total	**$61,679**	**253**	**$62,161**	**158**	**$58,376**	**63**	**$28,951**	**174**	**$61,400**	**474**

The salary of personnel classified as faculty is shown by academic rank and category in Table 31 (next page). Overall, there was an increase in mean salary with higher academic rank. The range of mean salaries was broad, $59,976 at the rank of instructor in Category II to $73,147 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	$72,278	4	----------	0	----------	1	$72,869	5
Associate Prof.	$71,020	19	$67,455	6	$73,147	12	$71,132	37
Assistant Prof.	$63,202	109	$65,337	62	$68,300	17	$64,367	188
Instructor/Lect.	$60,613	91	$59,976	59	$69,192	5	$60,647	155
Not Reported	$52,043	30	$58,943	31	$43,486	28	$51,751	89
Total	**$61,679**	**253**	**$62,161**	**158**	**$58,376**	**63**	**$61,400**	**474**

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 96.3% of their time to program-related activities. While the percentage of time ranged from 50% to 100%, the majority of the directors (N=83; 88%) were working full-time. Eighty-eight percent of the directors were P.A.'s (N=75).

Table 32. Characteristics of Program Directors

Characteristics	Mean	S.D.	Range	N
Percent Time	96.3%	11.1	50% - 100%	94
Annual Salary	$85,780	$14,856	$ 50,724 - 120,000	85
P.A.	$85,437	$14,713	$ 50,724 - 120,000	75
Non-P.A.	$88,352	$15,651	$ 65,000 - 120,000	10
Male	$87,903	$14,676	$ 55,702 - 120,000	44
Female	$83,763	$14,797	$ 50,724 - 120,000	40
Doctorate	$88,044	$27,889	$ 62,523 - 120,000	24
Masters	$83,619	$23,548	$ 50,724 - 120,000	52
Bachelors	$94,333	$15,628	$ 70,000 - 110,000	3
Months in Position	70.88	80.74	1-378	94
P.A.	65.73	70.61	1-344	83
Non-P.A.	109.73	128.02	5-378	11
Male	68.29	75.02	1-344	49
Female	73.71	86.46	1-378	45

Highest Degree Held	Female	%	Male	%	Total	%
Doctorate*	9	37.5%	15	62.5%	24	27.6%
Masters	30	50.0%	30	50.0%	60	69.0%
Baccalaureate	2	66.7%	1	33.3%	3	3.4%

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

The mean average salary for program directors was $85,780, ranging from $50,724 to $120,000. Program directors who were P.A.'s earned a lower salary in comparison to those who were non-P.A.'s ($85,437 and $88,352, respectively). The average months in position varied from 66 months for physician assistant to 110 months for non-physician assistant. The median months in position was 49.5 months.

Male program directors had higher average salaries ($87,903) than did female directors ($83,763). The mean time in position of female directors exceeded that of male directors by six months (74 versus 68 months, respectively). The median number of months in position for male and female program directors is 40 and 50.5 respectively. In comparison to the 2001-2002 data, mean salaries increased by 2.4% ($85,780 versus $83,771).

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 ($81,684) compared with the rest of the United States. Directors in the Heartland region had the highest mean salaries ($93,079). The lowest individual salary for a program director was in the Midwestern region ($50,724). Program directors in the Northeastern region had been employed in their positions the longest time, over seven years (87.8 months), and those in the Midwestern region the shortest period of time (43.9 months). Please note that the median months in position are listed on the table.

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

	Program Director Salary			Months in Position			
Consortia Region	N	Mean	Range	N	Mean	Median	Range
Northeastern	17	$ 84,228	$55,000- 101,000	20	87.8	53.0	3-378
Eastern	12	$ 83,937	$63,325- 120,000	16	62.4	49.0	5-244
Southeastern	12	$ 88,351	$55,702- 120,000	12	83.5	60.5	2-232
Midwestern	19	$ 81,684	$50,724- 109,200	20	43.9	50.0	1-101
Heartland	9	$ 93,079	$73,000- 110,000	10	82.2	57.3	6-324
Western	16	$ 87,641	$62,523- 120,000	16	75.4	43.0	1-360
Total	**85**	**$ 85,780**	**$50,724-120,000**	**94**	**70.9**	**49.5**	**1-378**

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 91 medical directors, of which eleven were employed as such on a full-time basis, the remainder, on average, devoted less than one-quarter (24.9%) of their time to program-related activities. The mean annual salary of the medical directors reporting (N=74) was $99,190 but varied extensively, ranging from $25,000 to $200,000. Male medical directors (N=60) earned a lower annual mean salary ($97,168) than did female medical directors ($107,857).

Table 34. Characteristics of Program Medical Directors

	Mean	S.D.	Median	Range	N
Percent Time	33.9	29.6	20.0	5%-100%	91
Annual Salary	$ 99,190	$46,924	$101,500	$25,000-200,000	74
Female	$107,857	$30,870	$114,000	$51,000-161,600	14
Male	$ 97,168	$49,715	$100,000	$25,000-200,000	60
Months in Position	64.6	65.7	44.0	1-373	89
Female	74.0	84.6	50.0	5-373	17
Male	62.4	60.2	43.0	1-288	72

Overall, medical director salaries decreased by 5% 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 (60; 81%). The average months in position is lower for male directors (62 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 ($119,065). Those directors in the Northeastern had the lowest salaries ($86,864). Medical directors in the Eastern region were in their positions for the longest period of time (87.1 months). It should be noted that the range in both salaries (range of $25,000 to $200,000) and months in position (from 1 to 373 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	14	$ 86,864	$ 96,000	$25,000-170,000	18	69.9	48.5	1-288
Eastern	12	$118,416	$117,500	$26,332-184,000	16	87.1	63.0	6-251
Southeastern	11	$ 91,414	$110,500	$30,000-165,000	12	62.6	58.5	4-145
Midwestern	16	$ 92,453	$100,000	$25,000-163,000	19	49.1	60.0	1-120
Heartland	7	$119,065	$120,000	$50,000-200,000	9	57.4	44.0	5-112
Western	14	$ 98,931	$107,900	$28,320-150,000	15	59.9	36.0	3-373
Total	**74**	**$ 91,990**	**$101,500**	**$25,000-200,000**	**89**	**64.6**	**44.0**	**1-373**

* 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=69; 73.4%) were practicing in primary care specialties, predominantly family medicine (N=49; 52%) and internal medicine (N=18; 19%). Only twenty-five 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	49	52.1%
Internal Medicine	18	19.1%
Pediatrics	2	2.1%
Total	**69**	**73.4%**

Non-Primary Care Medical Specialty	N	(%)
Cardiology	5	5.3%
Emergency Med.	5	5.3%
General Surgery	1	1.1%
Psychiatry	1	1.1%
Other	13	13.8%
Total	**25**	**26.6%**

Comparisons between Medical and Program Directors

A comparison between medical and program directors' salaries from 1984-85 through 2002-2003 is shown in Table 37 (next page). Note, information concerning the characteristics of medical directors was not available in 1987-88. Between 1984 and 2002, there has been a 128% increase in the mean salary for program directors and a 74% increase for medical directors. The mean time in position has increased for program directors over this period (64.5 to 70.9 months). This year there was a decrease 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 2002

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
19-yr Mean	**$59,364**	**70.9**	**58**	**$ 89,055**	**66.0**	**48**

On average, in 2002, medical directors earned an annual salary approximately 16% higher than the typical program director ($99,190 versus $85,780). Over the nineteen-year period, the medical directors earned an annual salary of approximately 50% higher than the typical program director ($89,055 versus $59,364). Trends in salary for the program and medical directors from 1984 through 2002 are in Figure 8 (next page) and clearly illustrates the variation in directors' salaries since 1984.

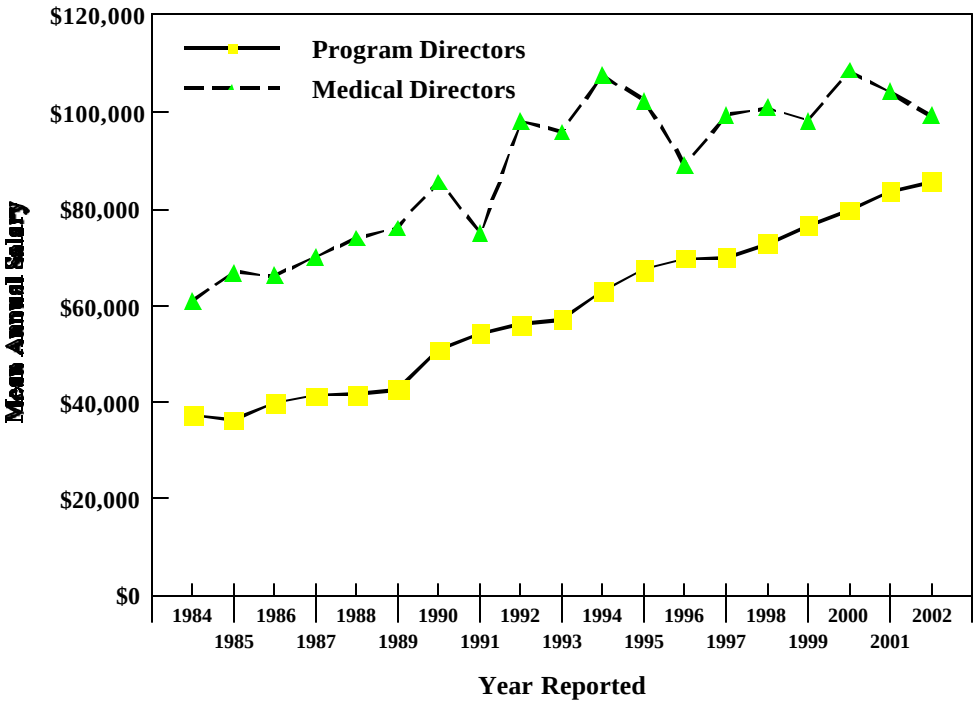
A comparison of academic position and tenure status between the directors is shown in Table 38. The majority of medical and program directors held faculty level positions with 13.4% of these directors classified as staff. More program directors than medical directors in faculty-level positions were on a tenure track and less than one-fourth 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	9	9.6%	16	17.0%
Faculty Appointment	85	90.4%	78	83.0%
Total	**94**	**100.0%**	**94**	**100.0%**
Tenure Status				
Tenure Track Faculty*	34	40.0%	15	19.2%
Faculty Tenured*	22	25.9%	6	7.7%

* Percent of TOTAL faculty tenured

Figure 8. Program and Medical Directors' Salaries: 1984 Through 2002



Since 1985-86, the proportion of program and medical directors classified as faculty has remained relatively constant, averaging 83.7%; in 2002 around 90% of the directors were faculty. The proportion of faculty directors on the tenure track has averaged about 37% over time, and was 40% and 19%, respectively in 2002. The proportion of directors achieving tenured status in 2002 was lower than the mean of 20.3%.

A comparison between the academic rank of medical and program director faculty is shown in Table 39. More program directors (95%) held professorial rank than medical directors (80%) 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%	7	10.6%
Associate Professor	33	41.3%	18	27.3%
Assistant Professor	35	43.8%	28	42.4%
Instructor/Lecturer	4	5.0%	13	19.7%
Total	**80**	**100.0%%**	**66**	**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 48.5 months would be around $61,529 (i.e. $59,592 + $1,937), a value similar to that reported in Table 14 for the average Category I individual (i.e. $62,023) having been employed for a mean of 48.5 months.

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

Characteristic	Base	+ (Constant	x Months)	N
Category I	$ 59,592	+ ($ 39.94	x _____)	251
Category II	$ 60,907	+ ($ 26.20	x _____)	158
Category III	$ 52,145	+ ($ 73.02	x _____)	63
Category IV	$ 27,286	+ ($ 36.10	x _____)	172
Categories I- III	$ 59,114	+ ($ 41.52	x _____)	472
Program Directors	$ 83,259	+ ($ 38.19	x _____)	85
Medical Directors	$ 88,659	+ ($168.14	x _____)	74

P.A. Program Personnel Turnover

The 2002 survey requested updated information on personnel turnover for the period September 2001 through August 2002. 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 2001-2002 as well as the cumulative data for the sixteen-year period (1986-2001) in Table 41. Data are expressed as both total number and mean number of individuals per program for the time period identified. Over the sixteen year-period examined, respondents reported that 971 personnel left their positions, averaging 13.1/program. As shown in Figure 9 (next page), there has been an overall increase in turnover since 1986, with decreases in 1991, 1992, 1995, 1997, 1998 and 2001.

Table 41. Program Personnel Turnover 1986 Through 2001

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
16-year Total	971	13.1
16-year Mean	**60.7**	**0.8**

During the 2001-2002 academic year, 92 P.A. program personnel departed (N=103 programs reported information) for an average of 0.9 per program. The overall 16-year mean is 60.7 personnel departing per year, an average of 0.8 persons departing/program.

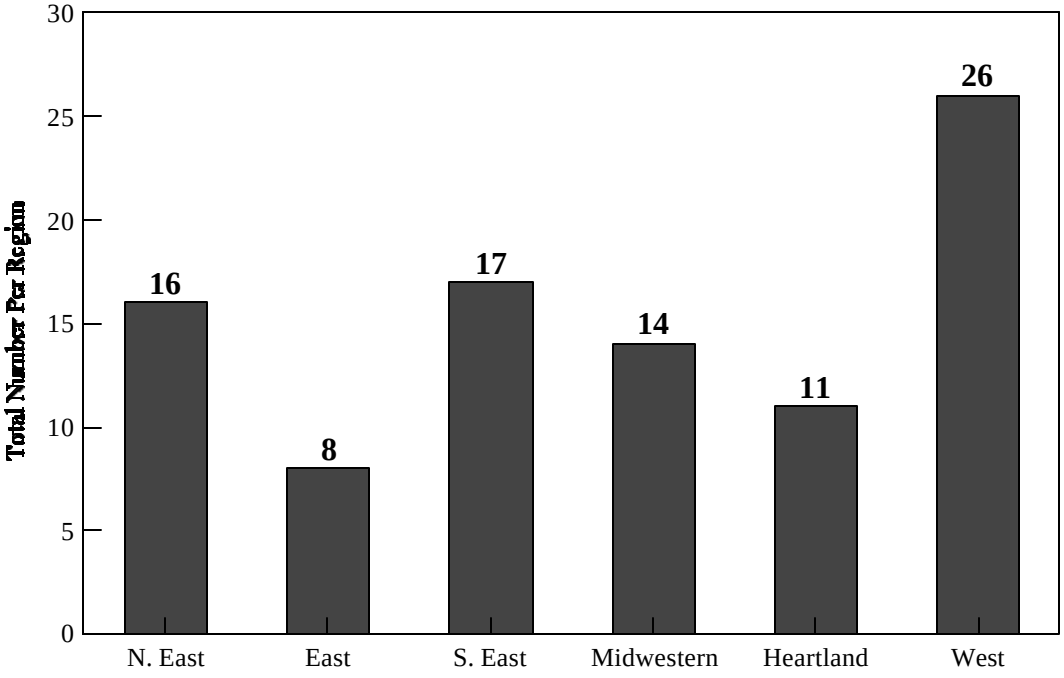
Our best estimate of the mean number of core program personnel is 9.6 per program, and includes one program and medical director, 4.1 P.A.'s and 1.0 non-P.A.'s and 2.5 Category IV personnel. Given the average turnover per year we estimate that 9% of program personnel departed this year (0.9/9.6).

The number of personnel (and mean/program) departing over the past sixteen years and those departing in 2001, by region, is shown in Table 42 and illustrated in Figure 10 (next page). Turnover varied by region. For example, programs in the Western region reported the highest turnover (1.53 per program) while programs in the Eastern region had the lowest rate of turnover (0.47 per program).

Table 42. Program Personnel Turnover by Region, 1986 Through 2001

Consortia Region	Number in 16 Years	Number in 2001	2001 Mean/ Program	N
Northeastern	176	16	0.70	23
Eastern	126	8	0.47	17
Southeastern	155	17	1.06	16
Midwestern	181	14	0.70	20
Heartland	138	11	1.10	10
Western	195	26	1.53	17
Total	**971**	**92**	**0.89**	**103**

Figure 10. Personnel Turnover By Region: 2001-2002
(From 9/1/2001 Through 8/31/2002)



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, 92 program personnel (sixteen Category IV) departed in 2001 with turnover highest among Category I personnel and least for Category III. On average 8.1 weeks were required to fill a position. Filling Category III positions averaged 3.0 weeks while 10 weeks were required to fill Category II positions.

Table 43. Comparison of Personnel Turnover in 2001 by Category

Category	Number Departed	Number Employed	Percent Unfilled	Weeks to Fill Position
I	43	40	7.0%	8.3
II	20	19	5.0%	10.0
III	2	3	0.0%	3.0
IV	16	16	0.0%	6.5
Program Director	8	8	0.0%	7.6
Medical Director	3	2	33.3%	9.0
Total	**92**	**88**	**4.3%**	**8.1**

Table 44 (next page) shows the characteristics of personnel departing and those employed. On average, personnel departed in 2001 were older (2.6 years) than those employed. A higher percentage of females were employed than departed. A higher percentage of white personnel were employed than departed.

Table 44. Characteristics of Personnel Departed and Employed in 2001

Characteristic	Program Personnel: Departed		Program Personnel: Employed	
Mean Age (yrs)	43.5		40.9	
Range	22-65		23-60	
Gender	(%)	N	(%)	N
Male	38.0%	35	30.7%	27
Female	62.0%	57	69.3%	61
Ethnicity				
White	78.3%	72	83.0%	73
Non-White	21.7%	20	17.0%	15

The academic characteristics of personnel departing and those filling the vacated positions are shown in Table 45. Doctorate includes Ph.D., Ed.D., J.D. and M.D. As indicated in Table 45, the majority of personnel employed held a masters degree (54.5%) as their highest credential. Of those departing, 35 held a baccalaureate degree (40.29%) and 39 held a masters degree (44.8%). In addition, the majority of personnel departing were P.A.'s (67.8%) and those employed to fill these positions were also P.A.'s (76.6%).

Table 45. P.A. Program Personnel Turnover in 2001: Academic Characteristics

Highest Degree	Program Personnel: N	Departed	N	Employed
Associate/Certificate	1	1.1%	6	7.8%
Baccalaureate	35	40.2%	21	27.3%
Masters	39	44.8%	42	54.5%
Doctoral	12	13.8%	8	10.4%
P.A. Credentialed	59	67.8%	59	76.6%

The reasons cited for personnel turnover during 2001 and the sixteen-year totals, are shown in Table 46. In 2001, over one-fifth (22.6%) 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, travel, family and illness. Over the sixteen-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 2001 Compared to the Sixteen -Year Totals

Reasons for Terminating	2001: N	2001: (%)	16-Year Totals: N	16-Year Totals: (%)
Career Advancement	10	11.9%	195	22.8%
Return to Clinical Practice	19	22.6%	156	18.2%
Geographic Relocation	4	4.8%	140	16.4%
Retired	6	7.1%	51	6.0%
Job Dissatisfaction	7	8.3%	44	5.1%
Termination	8	9.5%	42	4.9%
Returned to School	5	6.0%	38	4.4%
Salary Dissatisfaction	3	3.6%	31	3.6%
Family Obligations	7	8.3%	23	2.7%
Other	15	17.9%	135	15.8%
Total	**84**	**100%**	**855**	**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 sixteen-year period, there has been a mean salary increase of 1.1% for newly employed individuals as compared to those departing.

Table 47. Salaries of Departing and Newly Employed Personnel, 1986 Through 2001

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
16-Year Mean	**856**	**$44,893**	**41.3**	**$45,399**	**45.5**

The greatest salary differences between departing and newly employed personnel were in 1989-90 (11.8%) and 1995-96 (9.3%). Overall, personnel departing had been in their positions an average of 41 months, while those employed had been in their previous position four 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, 2002-2003 (first-year class), 2001-2002 (second-year class) and 2000-2001 (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	39.5	36.6	8.4%	66.4%
(2002-2003)	Median	36.0	32.0	2.9%	75.0%
	Range	(12-118)	(10-118)	(0-60%)	(0-100%)
	Number	100	103	100	102
Second-Year Class	Mean	37.7	35.1	11.2%	64.6%
(2001-2002)	Median	35.5	31.0	4.0%	71.4%
	Range	(10-129)	(10-129)	(0-65%)	(0-100%)
	Number	100	99	91	99
Third-Year Class	Mean	32.8	30.3	22.1%	72.1%
(2000-2001)	Median	30.0	26.0	5.7%	85.0%
	Range	(10-120)	(10-98)	(0-70%)	(0-100%)
	Number	29	24	24	24
All Classes	Mean	86.7	75.9	10.4%	65.6%
	Median	80.0	68.0	5.0%	60.0%
	Range	(20-247)	(12-247)	(0-70%)	(0-100%)
	Number	100	103	100	102

* Includes both full- and part-time students.

The mean maximum capacity for the first-year class remained about the same as last year (40.1) and is reported as 39.5; the mean maximum capacity for the second-year class decreased from last year (from 38.8 to 37.7); and the mean maximum capacity for the third-year class increased from 30.9 to 32.8 students. The maximum capacity for all classes decreased by 3.9 students per program from last year. It should be noted that some of the programs with students in a "third year" were cases where there was a 1-6 month overlap between the second and third year of the curriculum (i.e., programs that were 25, 28, 30 months in length). It should also be noted that four of the newly established programs had not matriculated students to the second-year at the time data was collected.

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

The percent of capacity unfilled for the first-year class was 8.4% and 11.2% for the senior class (the latter figure likely reflects factors like attrition during the previous year). Maximum capacity of P.A. programs varied extensively for both first- and second-year classes, ranging from 10 to 129. The maximum capacity for all classes

averaged 86.7 students and with a mean enrollment of 75.9 students, approximately 10.4% of the maximum capacity (all classes) remained unfilled.

Current enrollment in the first-year class averaged 36.6 students per program (103 programs; range 10 to 118) and 35.1 students/program in the second-year class. In comparison, the number of first- and second-year students in the previous year was 39.2 and 35.8, respectively. It should be noted that the enrollment figures include both full-time and part-time students, the latter accounting for only 2.8% of the enrollment. On average, approximately 66% of the students in the first-year and 65% 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 69%. Twenty-three programs reported that a "third-year class" was enrolled.

Table 49. Current Enrollment by Gender and Class-Year

	1st Year Class (N=103)			2nd Year Class (N=99)			3rd Year Class (N=23)		
Full-Time	Mean	(%)	Range	Mean	(%)	Range	Mean	(%)	Range
Male	10.8	30.4%	3-82	11.2	32.2%	1-106	8.0	26.2%	1-19
Female	24.7	69.6%	2-74	23.6	67.8%	6- 69	22.5	73.8%	6-79
Total	**35.5**	**100%**		**34.8**	**100%**		**30.5**	**100%**	
	1st Year Class (N=6)			2nd Year Class (N=2)			3rd Year Class (N=1)		
Part-Time	Mean	(%)	Range	Mean	(%)	Range	Mean	(%)	Range
Male	6.5	42.5%	1-19	3.5	32.4%	2- 5	N/A	N/A	N/A
Female	8.8	57.5%	1-23	7.3	67.6%	1-18	N/A	N/A	N/A
Total	**15.3**	**100%**		**10.8**	**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. Six programs reported they enrolled part-time students in the first year; two 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.

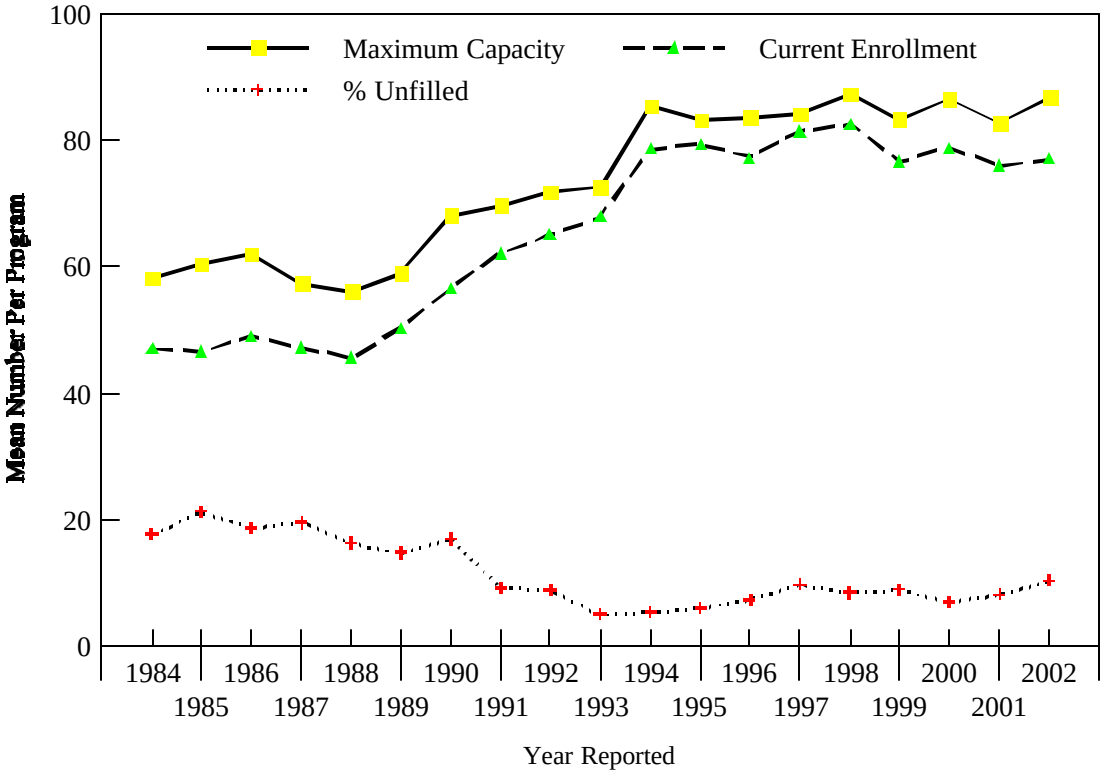
Trends in Maximum Capacity and Student Enrollment

The mean maximum class capacity, total student enrollment and percent of capacity unfilled from 1984 through 2002 are shown in Table 50 (next page). Maximum capacity over the past nineteen years averaged 73.6 students for all classes and ranged from 56.1 to 87.4. The percent of capacity that remained unfilled varied around a mean of 11.6%, however has remained below the mean since 1991. The trends in enrollment, maximum and unfilled capacity are illustrated in Figure 11 (next page). Total enrollment from 1984 through 1993 averaged 53.76 students/program. In the subsequent nine years (1994-2002) enrollment averaged 78.6 and varied between 76.0 students to 82.5 students. This current year has seen an increase in the current enrollment/program by 1.4%.

Table 50. Total Student Enrollment of All Classes, 1984 Through 2002

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	77.1	10.4%
19-Yr. Mean	**68.3**	**73.6**	**65.6**	**11.6%**

Figure 11. Trends in Enrollment: 1984 Through 2002



P.A. Applicants and Students Enrolled

The number of applicants and those enrolled in the most recent P.A. class (2002-2003) 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 210.4 applications for the class entering in 2002-2003, ranging from 21 to 614 applicants. This represented a 26.7% increase (44 applicants/program) from the 166 applicants per program the previous year.

Table 51. Applicant and Student Characteristics, Class of 2002-2003

	Number Applicants	Number Accepted	Number Enrolled F.T.*	P.T.*	Total
Mean	**210.4**	**49.4**	**37.4**	**1.1**	**38.5**
Median	190.5	46.0	33.0	0.0	33.0
Range	21-614	12-131	11-118	0-42	11-118
# Programs	76	87	99	99	99

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

On average, 49.4 students were accepted and 38.5 students per program were enrolled in the first-year class (99 programs; range from 11-118); only 2.9% were part-time students (1.1/program). These findings mark an increase (14.6%) in first-year enrollment over the 20-year average (i.e., 38.5/program versus an average of 33.6/program). Twenty-three percent of the applicant pool was accepted (49.4/210.4) and of these, 77.9% were enrolled (38.5/49.4), thus an average of 22% of those accepted elected not to enroll in a particular program. Overall, 18% of the applicants were enrolled in 2002 (38.5/210). The ratio of applicants to enrollees was over 5.5:1, a higher ratio than the 4.3:1 value in the previous year.

Applicants and Students Enrolled by Consortia Region

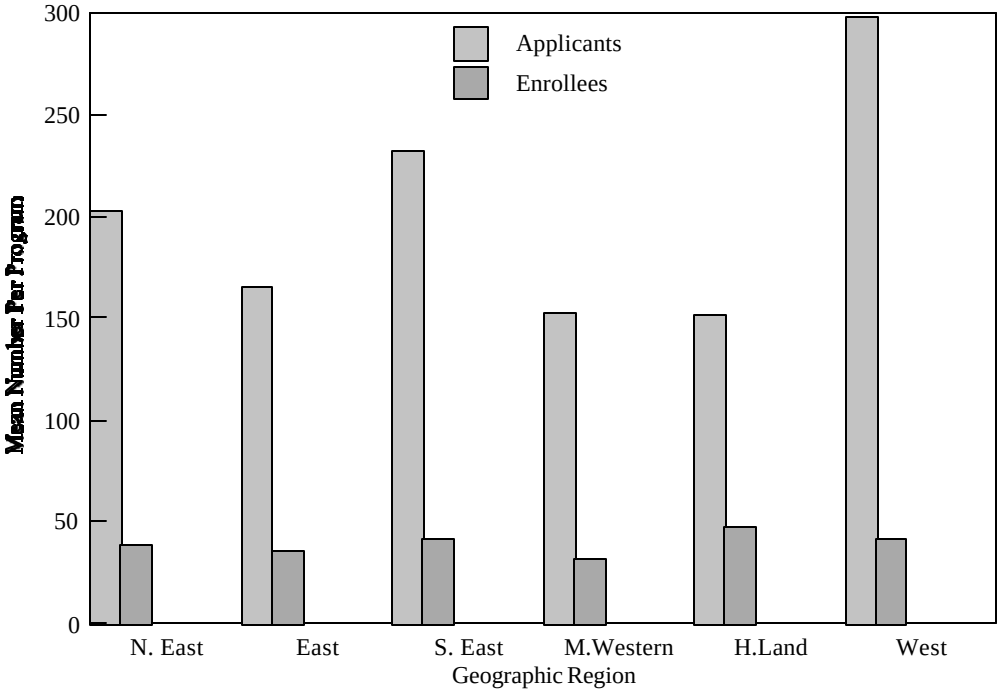
A comparison between the mean number of applicants by consortia region is shown in Table 52 and Figure 12 (next page), 'N' indicates the number of programs responding. Programs in the Western region averaged 298 applicants per program, while programs in the Heartland region, 152 per program. The Western region had the largest increase in the number of applicants from last year (47.3%).

Table 52. Number of Applicants and Enrollees by Region

	Applicants			Enrollees		
Consortia Region	N	Total	% Change Prev. Year	N	Total	Ratio
Northeastern	16	202.4	+ 14.4%	22	38.2	5.3:1
Eastern	14	165.1	+ 32.5%	16	36.4	4.5:1
Southeastern	12	231.8	+ 16.0%	14	41.6	5.6:1
Midwestern	13	152.8	+ 9.6%	19	31.2	4.9:1
Heartland	4	152.0	+ 17.6%	10	47.9	3.2:1
Western	17	297.6	+ 47.3%	18	41.3	7.2:1
Total	**76**	**210.4**	**+ 26.7%**	**99**	**38.5**	**5.5:1**

The largest number of enrollees was in the Heartland region (47.9) and the smallest number was in the Midwestern region (31.2).

Figure 12. Applicants and Students Enrolled by Region, 2002-2003



Trends in P.A. Student Enrollment, 1983 Through 2002

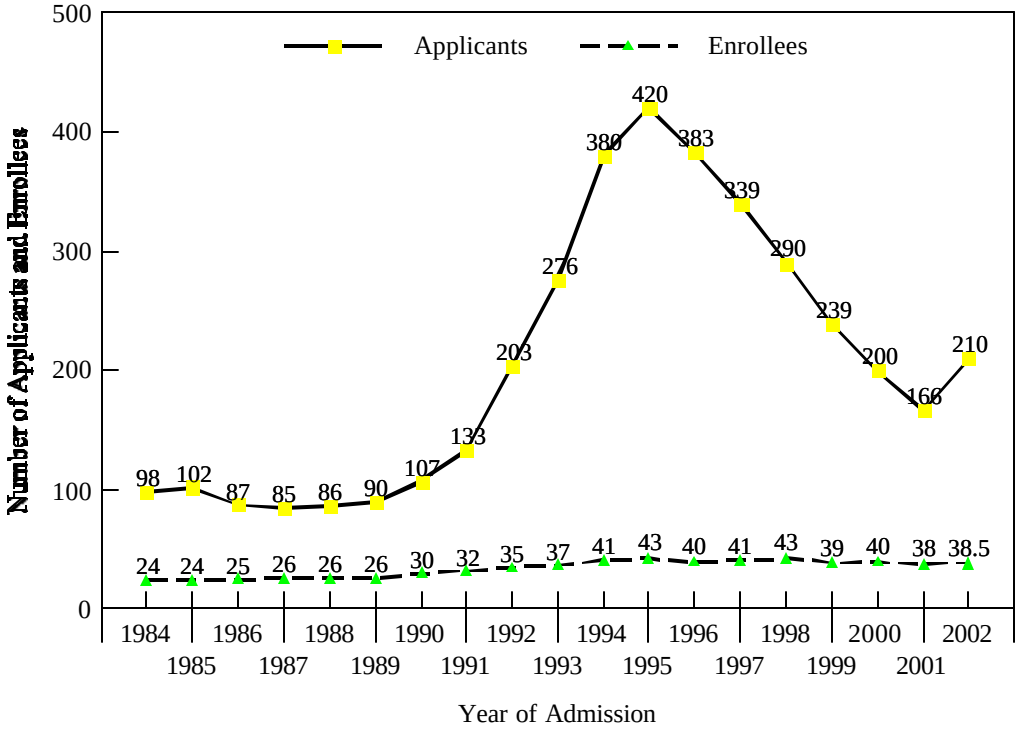
The number of applicants and students enrolled in P.A. programs for the twenty-year period from 1983 through 2002 are shown in Table 53 and Figure 13 (next page).

Table 53. P.A. Applicants and Students Enrolled, 1983 Through 2002

Academic Year	Mean Number Applicants	(N)	Mean Number Accepted	(N)	Mean Number Enrolled	(N)	Mean Ratio Appl./Enroll
1983-1984	N/A	--	N/A	--	24.0	43	N/A
1984-1985	98.4	32	30.4	35	24.1	43	4.0:1
1985-1986	101.8	25	44.5	35	24.3	42	4.0:1
1986-1987	86.5	30	31.2	40	24.9	47	3.5:1
1987-1988	84.7	31	30.2	42	25.6	47	3.3:1
1988-1989	86.1	36	30.2	39	25.9	46	3.3:1
1989-1990	90.2	33	33.0	40	26.1	46	3.5:1
1990-1991	106.5	37	35.6	45	29.6	49	3.6:1
1991-1992	133.2	33	36.8	41	32.2	47	4.1:1
1992-1993	203.2	51	40.6	49	35.0	57	5.8:1
1993-1994	275.7	52	39.6	46	37.0	55	7.4:1
1994-1995	379.6	54	44.9	55	41.4	58	9.2:1
1995-1996	419.5	53	44.7	62	42.9	71	9.8:1
1996-1997	383.3	57	45.6	71	39.6	76	9.7:1
1997-1998	338.6	74	46.0	83	40.5	91	8.4:1
1998-1999	290.4	73	48.0	83	42.6	92	6.8:1
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
20-Yr. Mean	**205.0**	**51**	**40.4**	**59**	**33.6**	**66**	**5.9:1**

From 1984 through 2002 the number of the applicants ranged from 84.7 to 419.5 persons, and averaged 204.9 over the nineteen-year period. Figure 13 illustrates the trends in the number of applicants and students enrolled from 1984 through 2002.

Figure 13. Trends of Applicants and Students Enrolled: 1984 Through 2002



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 decreased to 38. The average number of enrollees over the nineteen-year period is 34.1 students/program.

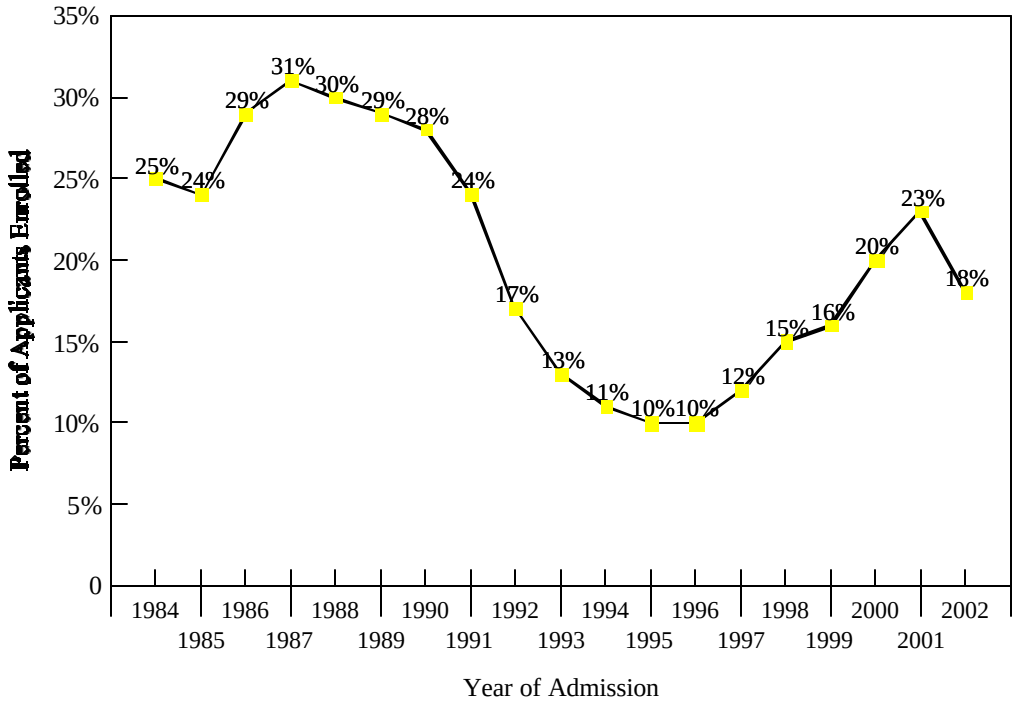
The mean number and relative proportion of male and female students enrolled in P.A. programs over the past twenty years are shown in Table 54 (next page). The proportion of female and male P.A. students enrolled from 1983 through 2002 remained relatively constant, averaging 61.9% and 38.1%, respectively. These figures include part-time students.

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.

Table 54. First-Year Class Enrollment, 1983 Through 2002

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
20-Yr Mean	**66**	**20.3**	**61.9%**	**12.4**	**38.1%**	**33.0**	**66**

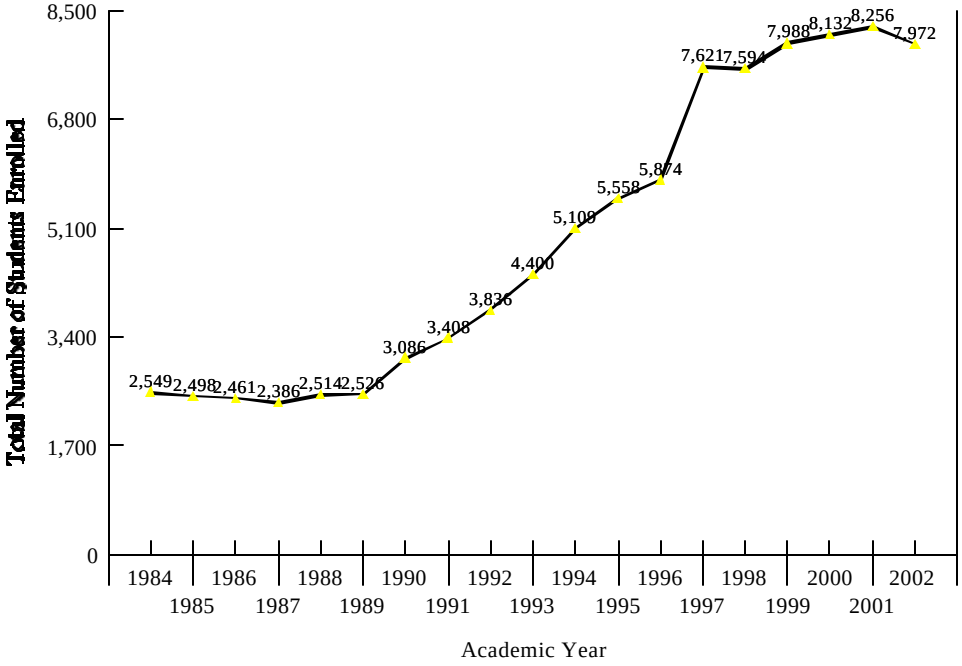
Figure 14. Trends in Percent of Applicants Enrolled: 1984 Through 2002



Total Enrollment in P.A. Programs

Figure 15 illustrates the trends in total student enrollment from 1984 through 2002. Estimates of total enrollment are based on summing mean values for enrollment in the 1st, 2nd and 3rd year classes, then multiplying by the number of programs represented. For the 103 programs we estimate total enrollment to be 7,972 in 2002. (The calculations were as follows, 1st yr. 103x36.6=3,770, 2nd yr. 99x35.1=3,475 and 3rd yr. 24 x 30.3=727). If one would estimate 1st year enrollment based upon 132 programs, first year enrollment would be132x36.6=4,831, an increase of 1,061 students.

Figure 15. Trends in Student Enrollment: 1984 Through 2002



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 an 5% 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) and 132 in 2002.

Applicants and Students Enrolled by Age

The age distribution of applicants, students accepted and those enrolled for the first-year class is shown in Table 55 (next page). The data are expressed as the mean number of individuals per program within each of the age categories examined. Over one-fourth (28.3%) 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 2% were under 20 years of age.

Table 55. Applicants and Enrollees by Age, Class of 2002-2003

	All Applicants		Number Accepted		Number Enrolled	
	Mean	(%)	Mean	(%)	Mean	(%)
Age	(N=64)		(N=84)		(N=99)	
Under 20	3.3	1.6%	1.8	3.6%	0.8	2.1%
20-23	56.0	26.7%	12.8	25.9%	10.9	28.2%
24-26	57.3	27.3%	11.8	23.8%	9.3	24.1%
27-29	31.7	15.1%	7.3	14.7%	5.4	14.0%
30-33	21.9	10.4%	5.6	11.3%	5.1	13.2%
Over 33	39.8	19.0%	10.2	20.6%	7.1	18.4%
Total	**210.4**	**100.0%**	**49.4**	**100.0%**	**38.5**	**100.0%**
	(N=76)*		(N=87)		(N=99)	

* Number of programs reporting.

Students Enrolled by Age and Consortia Region

The distribution of students enrolled in the 2002-2003 class by age and consortia region is shown in Table 56. The table reports the percentage of students per program (N=99 programs) in each age category. Students enrolled in those programs located in the Eastern region tended to be younger than those in other regions, 44.3% were 23 years of age or less. Conversely, students in the Western region were notably older than P.A. students in other regions, 43.2% were over 30 years of age.

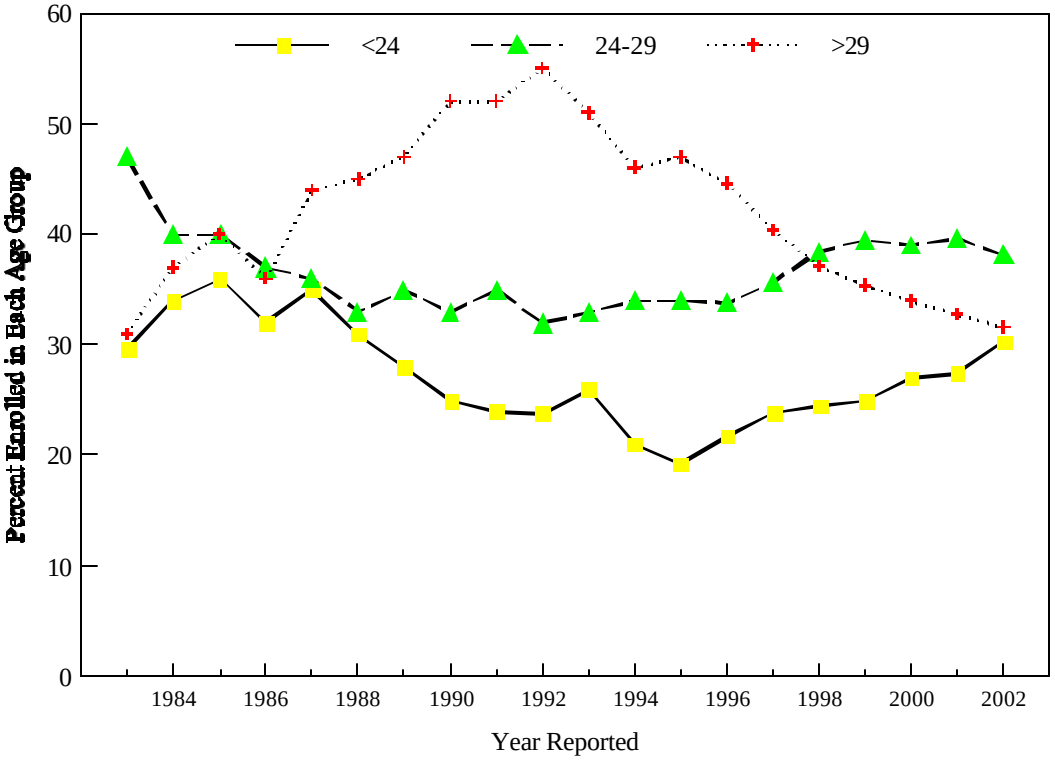
Table 56. P.A. Student Enrollment by Age and Region, Class of 2002-2003

	Age at Application					
Consortia	< 20	20-23	24-26	27-29	30-33	>33
Region	(%)	(%)	(%)	(%)	(%)	(%)
Northeastern	4.4%	31.6%	24.5%	10.3%	15.5%	13.7%
Eastern	6.2%	38.1%	23.7%	10.4%	6.0%	15.6%
Southeastern	0.6%	30.6%	23.0%	15.7%	12.4%	17.7%
Midwestern	0.7%	33.9%	23.9%	15.0%	9.6%	16.9%
Heartland	0.0%	26.7%	26.4%	16.5%	13.7%	16.7%
Western	0.0%	10.6%	25.5%	20.7%	17.2%	26.0%
Total	**2.1%**	**28.2%**	**24.1%**	**14.0%**	**13.2%**	**18.4%**

Trends in Enrollment by Age

Trends in the age of enrolled students from 1983 to 2002 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 30.3% in 2002, 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 38.1%. 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 31.6% of enrollees. This is the fifth year since 1986 that the percentage of students over 29 years of age was less than the 24 to 29 year old group.

Figure 16. Trends in Enrollee Age: 1983 Through 2002



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 28.1, full-time student age was 28.0 and the average age for the part-time student was 35.0.

Table 57 lists average ages of these categories by consortia region. The Western region had the highest average age of applicants (29.0), accepted applicants (29.8) and full-time students (29.7). The Northeastern region had the lowest average age of applicants (26.4). The Eastern region had the lowest average age of accepted applicants (26.3) and full-time students (25.6).

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	15	26.4	21	27.4	21	27.2	4	32.5
Eastern	12	27.0	13	26.3	15	25.6	0	-------
Southeastern	10	27.0	11	27.6	13	27.5	1	-------
Midwestern	13	27.3	18	27.5	18	27.6	1	-------
Heartland	6	28.5	8	27.6	10	28.2	0	-------
Western	12	29.0	15	29.8	17	29.7	1	-------
Total	**68**	**27.4**	**86**	**27.7**	**94**	**27.6**	**7**	**32.7**

Applicants and Students Enrolled by Ethnicity

The ethnicity of applicants and students enrolled in the first-year class is shown in Table 58. The data are expressed as the mean number and percentage of applic ants and enrollees per program from each ethnicity category. Almost three-fourths of the applicants (74.4%) were White/Non-Hispanic; 6.4% were Black/African-American, 4.9% were Latino/Hispanic, 6.9% were Asian.

Table 58. Applicants and Students Enrolled by Ethnicity

	All Applicants		Number Enrolled		# of Programs
	Mean	(%)	Mean	(%)	w/o Minorities
Ethnicity	(N=74)		(N=99)		(N=99)
White/Non-Hispanic	156.3	74.4%	29.8	77.4%	0
Black/African-American	13.4	6.4%	2.3	6.0%	32
Latino/Hispanic/Mex. Am.	10.4	4.9%	2.3	6.0%	39
Asian	14.5	6.9%	2.2	5.7%	37
Asian Subpopulation	2.5	1.2%	0.5	1.3%	73
Native Hawaiian/Other P.I.	1.0	0.4%	0.2	0.5%	89
American Ind./Alaskan	1.3	0.6%	0.4	1.0%	78
Other	10.8	5.1%	0.8	2.1%	74
Total (N=76)	**210.4**	**100%**	**38.5**	**100%**	**8**

Overall, 25.6% of the applicants were members of an ethnic minority, 25% of whom were Black/African-American. Among those enrolled, 77.4% were White/Non-Hispanic and the remainder (22.6%) 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, 26% of the applicants and 23% of those enrolled were described as an ethnic minority. Thirty-two of the 99 program respondents (32.3%) did not enroll any Black/African-American students and thirty-nine programs did not enroll any Hispanic students. Eight programs (8.1%) did not enroll any type of minority student in 2002.

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	117.6	58.1%	84.8	41.9%	25.8	67.5%	12.4	32.5%
Eastern	106.8	64.7%	58.3	35.3%	31.4	86.3%	5.0	13.7%
Southeastern	173.6	74.9%	58.2	25.1%	30.2	72.6%	11.4	27.4%
Midwestern	137.1	89.7%	15.7	10.3%	26.3	84.3%	4.9	15.7%
Heartland	118.2	77.8%	33.8	22.2%	35.2	73.5%	12.7	26.5%
Western	202.9	68.2%	94.7	31.8%	28.4	68.8%	12.9	31.2%
Total	**156.3**	**74.4%**	**53.9**	**25.6%**	**29.8**	**77.4%**	**8.7**	**22.6%**

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 42% and the Midwestern region the least number, with only 10% being non-white. The Northeastern region enrolled the largest percentage (32.5%) of non-white students. Programs in the Eastern region had the fewest number of non-white enrollees (13.7%).

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

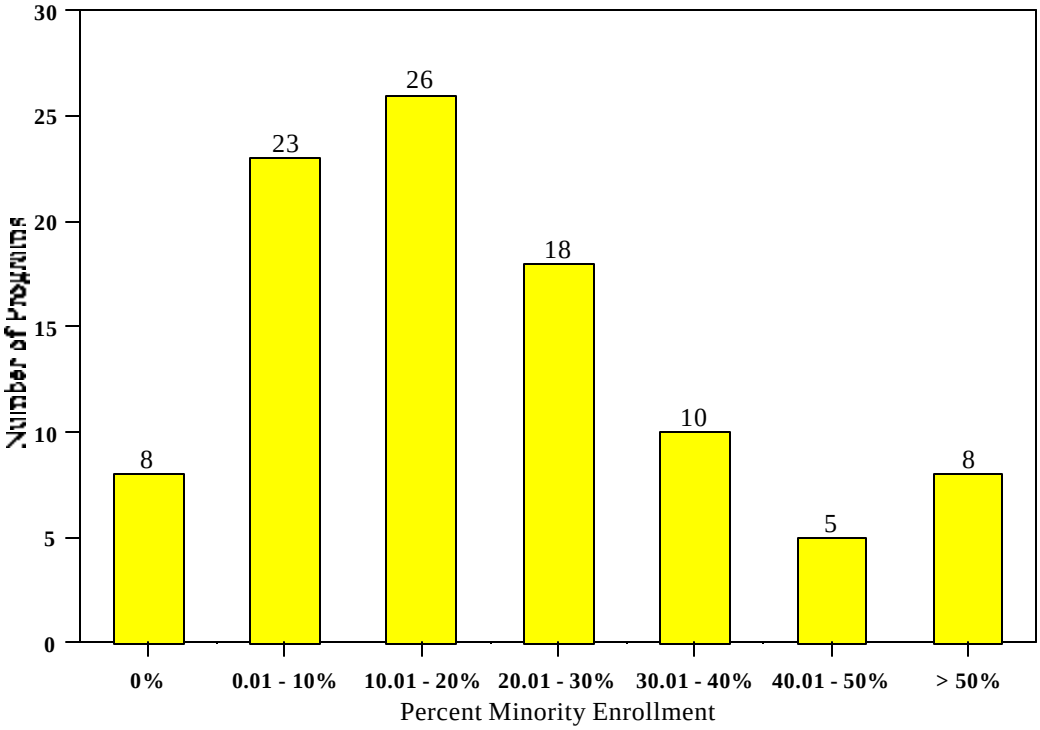
Table 60. Number of Programs with No Minority Enrollment
by Consortia Region

Consortia Region	N	# of Programs	(%)
Northeastern	22	1	4.5%
Eastern	16	2	12.5%
Southeastern	14	1	7.1%
Midwestern	19	3	15.8%
Heartland	10	0	0.0%
Western	18	1	0.0%
Total	**99**	**8**	**8.1%**

Number of Programs versus Percent Minority Student Enrollment

Figure 17 represents the number of programs with certain percentages of minority enrollment. There are 35 programs that have a larger percentage of minority enrollment than the mean of 22.6%; 64 programs have less. The average minority enrollment for programs with greater than 20% is 40%; for programs with less than 20% minority enrollment, 8.9%.

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



Trends in Minority Student Enrollment, 1983 Through 2002

The proportion of minority and non-minority students enrolled in P.A. programs over a twenty-year period (1983-1984 through 2002-2003) 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 10.0/program in 2000.

Table 61. Ethnicity of P.A. Students Enrolled from 1983 Through 2002

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
20-yr. Mean	**65**	**26.6**	**79.7%**	**6.8**	**20.3%**	**33.3**

Minority student enrollment over twenty years has averaged 20.3% per year (mean of 6.8 students/program). It should be noted that values for the 1992-93 and 1993-94 period may be under represented because some programs with large minority enrollments were non-respondents in both years.

Academic Characteristics of P.A. Students

The academic profile of students at the time of enrollment are shown in Table 62 (next page). Almost three-fourth (73.9%) of the students enrolled in 2002 had earned at least a baccalaureate degree (67.4% as their highest degree) while less than one-fifth (17.3%) entered with no academic degree. Only 9% of the enrollees had earned an associate level degree prior to entry. Of the full-time students, 6.5% were admitted with a graduate-level degree, predominantly a masters degree (4.6%).

Figure 18. Trends in Minority Student Enrollment: 1983 Through 2002

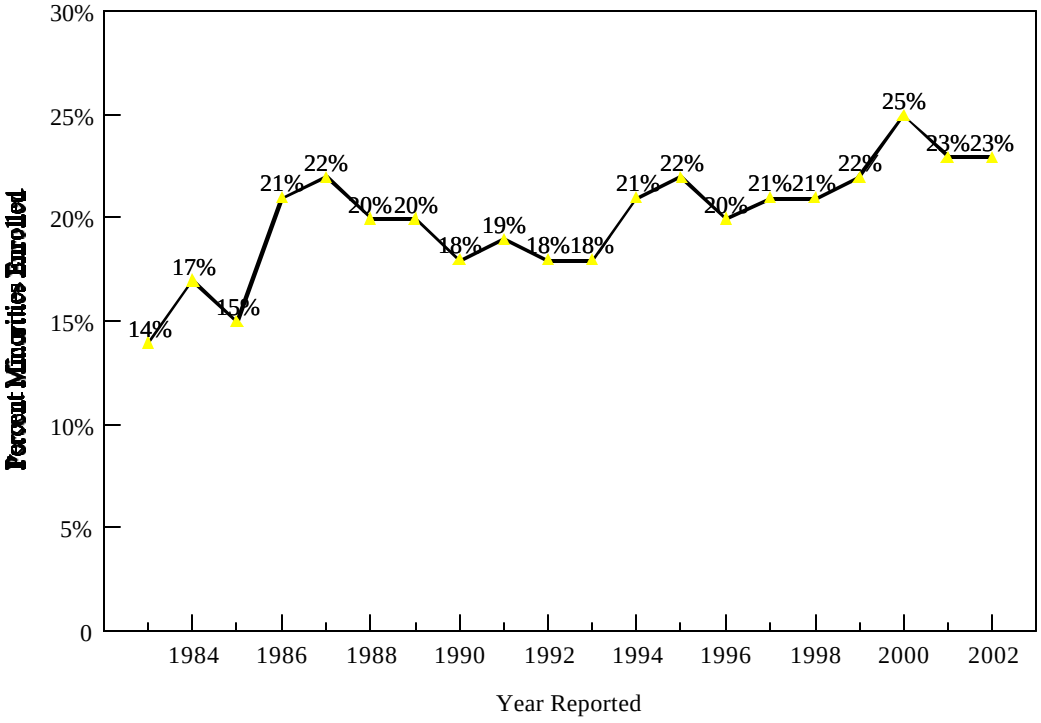
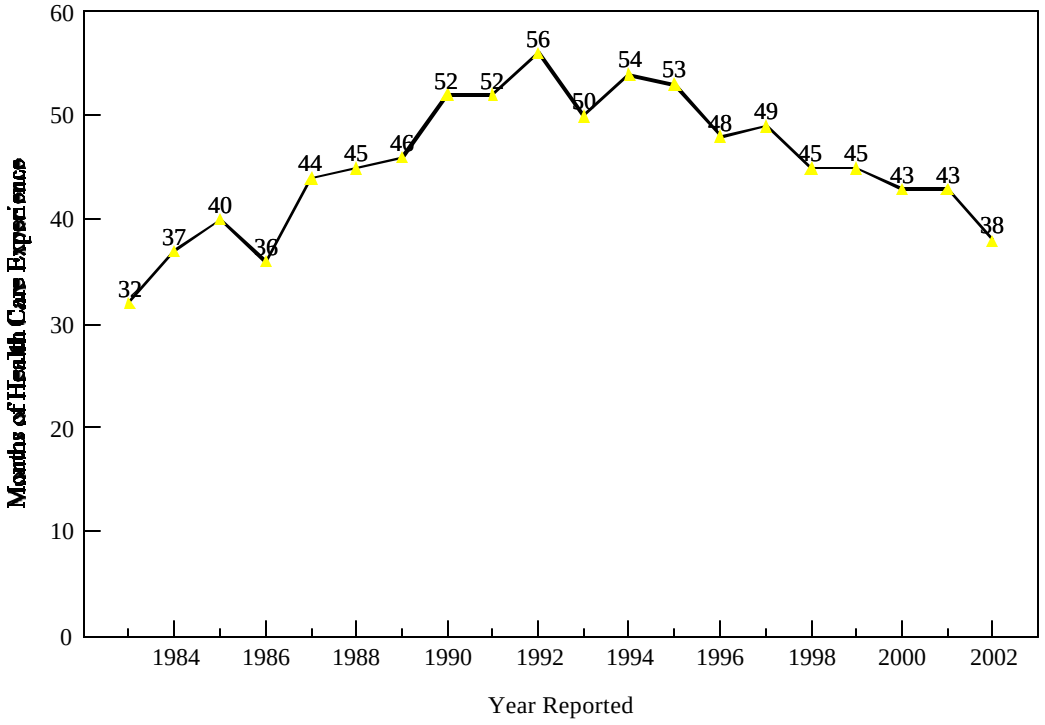


Table 62. Academic Characteristics of P.A. Students Enrolled in 2002

Highest Academic Credential Earned	Full-Time		Part-Time		Total	
	Mean	%	Mean	%	Mean	%
No Academic Degree	6.5	17.4%	0.2	14.3%	6.7	17.3%
Associate Degree	3.3	8.8%	0.1	7.1%	3.4	8.8%
Baccalaureate Degree	25.1	67.3%	1.0	71.4%	26.1	67.4%
Masters Degree	1.7	4.6%	0.1	7.1%	1.8	4.7%
Doctoral Degree	0.7	1.9%	0.0	0.0%	0.7	1.8%
Total	**37.3**	**100.0%**	**1.4**	**100.0%**	**38.7**	**100.0%**

The mean number of months of health care experience (H.C.E.) of students at the time of enrollment for 2002-2003 is 37.7 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 38 months in 2002.

Figure 19. Trends in Health Care Experience of Enrollees: 1983 Through 2002



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 50% of students entering with a baccalaureate degree. The Eastern region had the largest number of enrollees with no degree (26.5%). The Midwestern region had 3.9% of its enrollees with a doctoral degree.

Table 63. Academic Characteristics of Enrollees by Region, Class of 2002-2003

		Degree Characteristics					
Consortia Region	N	No Degree	Associate Degree	Bacc. Degree	Masters Degree	Doctoral Degree	Total Mean
Northeastern	21	25.0%	8.7%	61.0%	3.8%	1.5%	35.9
Eastern	17	26.5%	8.3%	59.1%	4.0%	2.1%	36.1
Southeastern	14	6.5%	9.4%	75.7%	6.6%	1.8%	41.0
Midwestern	18	13.3%	8.9%	67.6%	6.3%	3.9%	30.3
Heartland	10	15.2%	8.2%	69.7%	5.6%	1.3%	47.3
Western	18	3.0%	7.1%	81.1%	6.4%	2.4%	41.1
Total	**98**	**17.3%**	**8.8%**	**67.4%**	**4.7%**	**1.8%**	**38.7**

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 2002-2003

Consortia	Grade Point Average			Months of H.C.E.		
Region	N	Mean	S.D.	N	Mean	S.D.
Northeastern	21	3.27	0.20	15	24.4	15.9
Eastern	14	3.38	0.16	12	19.2	15.7
Southeastern	14	3.32	0.14	13	36.5	18.2
Midwestern	16	3.40	0.20	16	42.3	24.8
Heartland	8	3.45	0.12	6	44.3	24.3
Western	17	3.27	0.19	15	59.3	52.3
Total	**90**	**3.36**	**0.17**	**77**	**37.7**	**32.2**

The cumulative GPA of entering students ranged from 3.27 to 3.45 with a mean of 3.36. 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 Eastern region had completed an average of 19 months of health-related experience while those entering programs in the Western regions had 59 months of health care experience. The average for all programs was over three years (37.7 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 2002-2003 class is shown in Table 65. The total number of UMG applications to P.A. programs increased from 360 in 2001 to 471 in 2002. The number per program decreased from 4.3/program in 2001 to 3.5/program in 2002. There were 40 programs that received applications from UMG's in 2002. Seventy-four percent of the applicants were U.S. Citizen UMG's.

Table 65. Admission of Unlicensed Medical Graduates

	Class Entering in 2002 – 2003					
Citizenship	Applied			Enrolled		
Status	N(N)*	Mean**	%	N(N)*	Mean	%
U.S. Citizen	383(30)	2.6	74.3%	130(26)	1.31	79.9%
Alien	88(20)	0.9	25.7%	33(16)	0.33	20.1%
Total**	**471(40)**	**3.5**	**100.0%**	**163(22)**	**1.64**	**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 2002, 163 UMG's were enrolled, 90% more than the number of enrollees in 2001 (86). Thirty-five percent of the UMG applicants were enrolled in a P.A. program in 2002, where 24% were enrolled in 2001. A higher percentage of alien UMG's were admitted (37.5%) as compared to the U.S.-citizen UMG's (33.9%).

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 15.45/program) while programs in the Eastern region averaged 0.44/program UMG applicants.

Table 66. Unlicensed Medical Graduate Applicants and Enrollees by Region, 2002-2003

	Applied		Enrolled	
Consortia Region	Mean	N	Mean	N
Northeastern	2.13	23	1.09	23
Eastern	0.44	16	0.06	17
Southeastern	1.71	14	0.57	14
Midwestern	15.45	20	4.80	20
Heartland	1.30	10	0.20	10
Western	4.39	18	2.00	18
Total	**4.66**	**101**	**1.65**	**102**

Programs in the Midwestern region enrolled the largest proportion of UMG's enrolled (4.80/program) and those in the Eastern region had 0.06/program UMG's enrolled. With respect to the total applicant pool/program, UMG's accounted for only 2.2% (4.66/210) of all applicants and less than 4.2% (1.65/39) of all first-year enrollees in 2002.

The number and location of programs, by region, reporting no UMG applicants and/or enrollees for the most recently enrolled class are shown in Table 67. In total, there was a majority of programs that did not receive an application from an UMG (60/101; 59%) and a majority did not enroll an UMG (66/102; 64.7%) in the 2002-2003 class.

Table 67. Number of Programs Reporting No Applications and/or Enrollment of Unlicensed Medical Graduates by Region, 2002-2003

Consortia	Applied		Enrolled	
Region	N/N*	%	N/N*	%
Northeastern	13/23	56.5%	13/23	56.5%
Eastern	13/16	81.3%	16/17	94.1%
Southeastern	6/14	42.9%	9/14	64.3%
Midwestern	13/20	65.0%	9/20	45.0%
Heartland	8/10	80.0%	8/10	80.0%
Western	7/18	38.9%	11/18	61.1%
Total	**60/101**	**59.4%**	**66/102**	**64.7%**

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

Trends in UMG Applications and Enrollment, 1987 Through 2002

Data concerning UMG applicants and UMG students enrolled from 1987 through 2002 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 3,045 UMG applicants (averaging 191/year) over the sixteen-year period examined. UMG applicants accounted for an average of 1.9% of the total applicant pool. Over the same period of time, there were 711 UMG's enrolled (45/year) which accounted for 1.6% of the total number of students enrolled. On average, only 21% of the UMG applicants were enrolled.

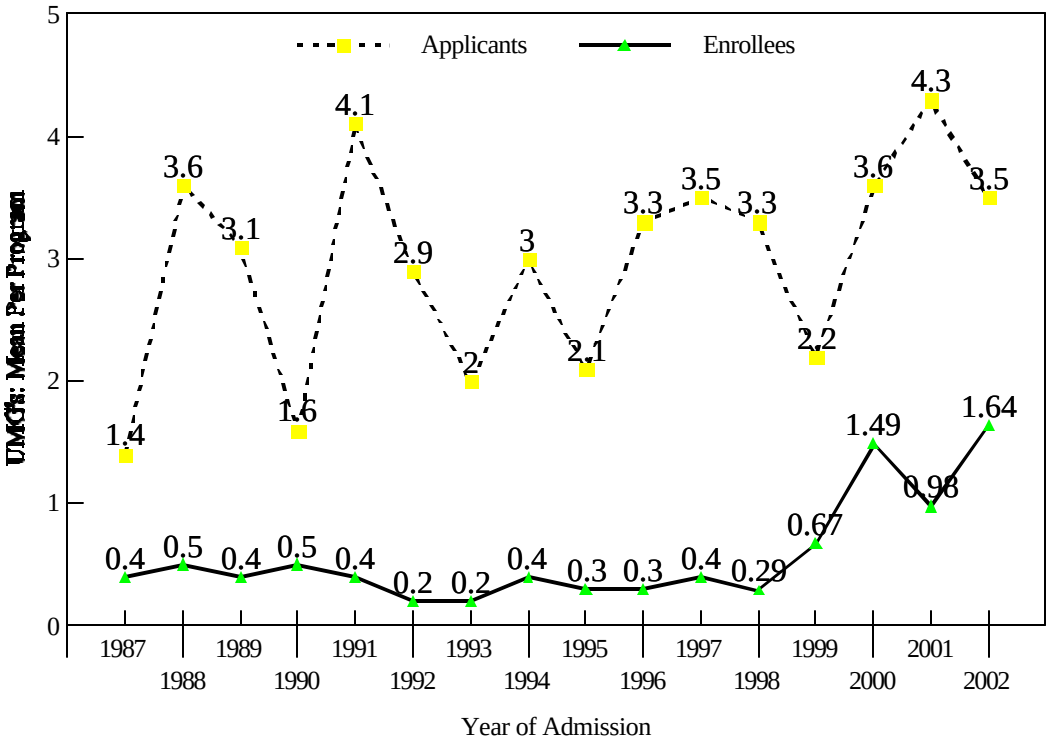
Table 68. Unlicensed Medical Graduates: Applicants and Enrollees, 1987 Through 2002

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%
16-Yr. Mean	**191**	**2.9**	**1.9%**	**45**	**0.57**	**1.6%**	**21.2%**

* 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.

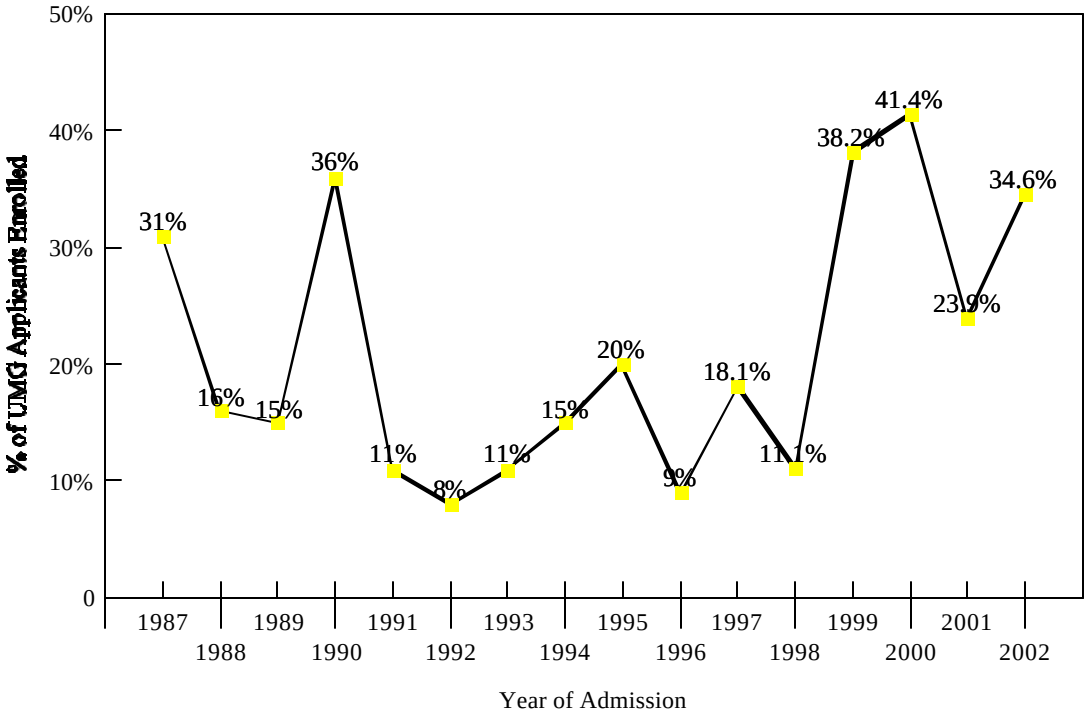
Figure 20. Trends in U.M.G. Applicants and Enrollees: 1987 Through 2002



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 sixteen years from a low of 8% to a high of 41.4%.

Figure 21. Percent of U.M.G. Applicants Enrolled: 1987 Through 2002



Disabled Students Enrolled in P.A. Programs

The number and proportion of students with a disability that were enrolled in the 2002-2003 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 1.4% of the total number of students enrolled).

Table 69. Enrollment of Disabled Students by Gender, 2002-2003

	1st Year Enrolled		Disabled		Number of
Gender	N	%	N	%	Programs
Male	1108	30.3%	19	35.8%	103
Female	2549	69.7%	34	64.2%	103
Total	**3657**	**100.0%**	**53**	**100.0%**	**103**

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 2002-2003 academic year, and those withdrawing and decelerating prior to graduation, are shown in Table 70. The mean number of 2002 graduates was 34.6/program and represented 93% of the students originally enrolled in this class. We estimate that there was a total of 4,290 P.A.'s graduated from all programs graduating class in 2002 (124 programs x 34.6/program). It should be noted that eight of the new programs did not graduate students in 2002. As in previous years, the majority (65%) of 2002 graduates were women.

Table 70. Number of Graduates and Students Withdrawn or Decelerated in 2002-2003 by Gender

	Number Graduated		Attrition of Students		Students Decelerated	
Gender	Mean	%	Mean	%	Mean	%
Female	22.4	93.3%	1.1	4.6%	0.5	2.1%
Male	12.2	92.4%	0.8	6.1%	0.2	1.5%
Total/Program	**34.6**	**93.0%**	**1.9**	**5.1%**	**0.7**	**1.9%**

* 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 1.9 students/program for an overall attrition rate of 5.1%. The attrition rate for males was higher than the attrition rate for females, 6.1% and 4.6% respectively. The attrition rate was lower than in 2001 (4.8%) and considerably lower than the average of 7.5% over the previous nineteen years.

On average, the rate of deceleration was 1.9%. 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 141 students withdrawing from the 2002 graduating class (as reported by 74 programs). The most common reason for withdrawal was academic (49.6%). 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	70	49.6%	Career Change	4	2.8%
Personal	29	20.6%	Medical	3	2.1%
Financial	21	14.9%	Other	14	9.9%
			Total	**141**	**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 region had the largest graduating classes with a mean of 50.9 students per program, while programs in the Midwestern and Northeastern regions had the smallest graduating class (29.5/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	13	29.5	3.1	9.3%	0.8	2.4%
Eastern	11	33.9	2.7	7.3%	0.4	1.1%
Southeastern	11	36.0	0.7	1.9%	0.5	1.3%
Midwestern	21	29.5	1.8	5.6%	0.7	2.2%
Heartland	8	50.9	1.4	2.6%	1.1	2.1%
Western	9	38.6	1.0	2.5%	0.6	1.5%
Total	**73**	**34.6**	**1.9**	**5.1%**	**0.7**	**1.9%**

The highest attrition rates occurred in those programs located in the Northeastern region (9.3%) while programs in the Southeastern region had the lowest attrition rates (1.9%). In comparison to the previous year, the number graduated/program in 2002 has decreased (6.4%). The rate of attrition increased in three of the six regions (Northeastern, Eastern and Midwestern); deceleration increased in three regions (Southeastern, Heartland and Western). Programs in the Northeastern region reported the largest rate of deceleration (2.4%), while programs in the Eastern region had the lowest rate of deceleration (1.1%).

The reasons for withdrawal by region are shown in Table 73. Programs in the Southeastern region had the highest percentage of students withdraw for academic reasons (62.5%) while programs in the Heartland region cited academic reasons for withdrawal 33.3% of the time. In the Western region, 50% of the programs cited personal reasons for student withdrawal as compared with 12.5% in the Southeastern region.

Table 73. Reasons for Withdrawal by Consortia Region

	Reasons for Withdrawal from Program						
Consortia	Academic		Personal		Other		
Region	N	%	N	%	N	%	Total
Northeastern	19	47.5%	7	17.5%	14	35.0%	40
Eastern	18	52.9%	7	20.6%	9	26.5%	34
Southeastern	5	62.5%	1	12.5%	2	25.0%	8
Midwestern	20	51.3%	8	20.5%	11	28.2%	39
Heartland	4	33.3%	2	16.7%	6	50.0%	12
Western	4	50.0%	4	50.0%	0	0.0%	8
Total	**70**	**49.6%**	**29**	**20.6%**	**42**	**29.8%**	**141**

Graduation, Attrition, and Deceleration of Students by Age

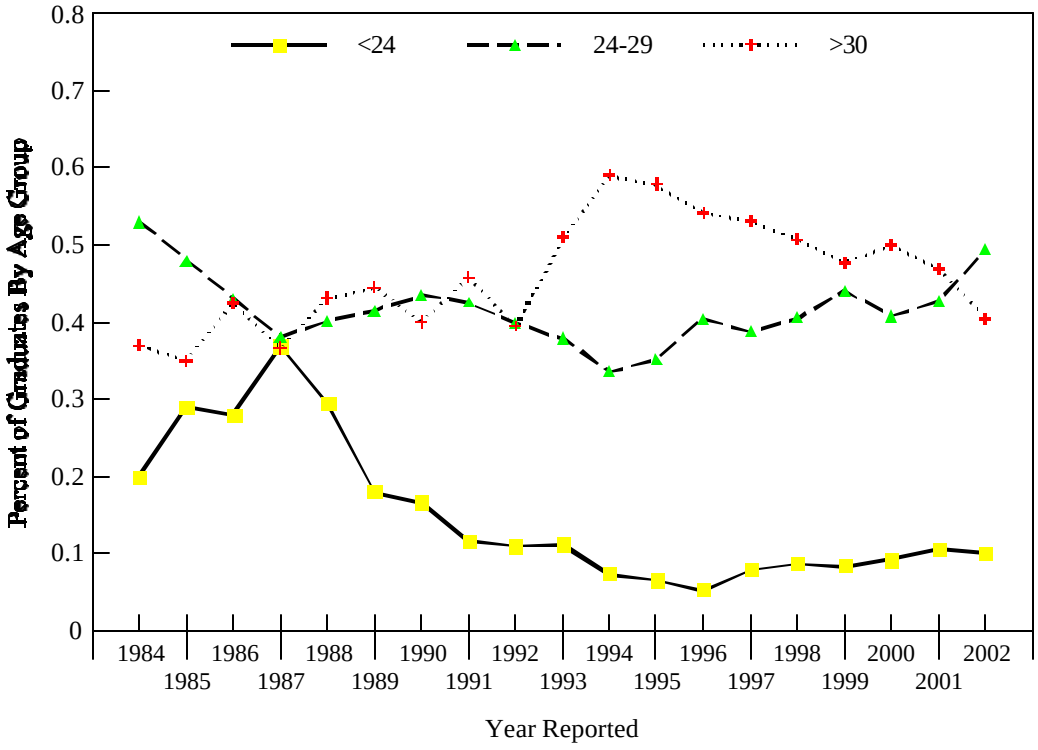
The mean number of graduates, attrition rates, and students decelerated for each age category is shown in Table 74. Over one-third (37%) of the graduates were between the ages of 20 and 26 upon graduation; 40.5% were 30 years of age or older and none were under the age of 20. Attrition was highest for 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 24 and 26.

Table 74. Number Graduated, Decelerated and Attrition Rates of 2002 Graduates by Age

		Number Graduated		Withdrew Prior To Graduation		Attrition Rate	Students Decelerated	
Age at Graduation	N	Mean	%	Mean	%	%	Mean	Rate
Under 20	71	0.0	0.0%	0.0	0.0%	0.0%	0.0	0.0%
20-23	71	3.5	10.1%	0.3	16.7%	7.7%	0.1	2.6%
24-26	71	9.3	26.9%	0.2	11.1%	2.1%	0.1	1.0%
27-29	71	7.8	22.5%	0.3	15.8%	3.7%	0.1	1.2%
30-33	71	6.3	18.2%	0.2	11.1%	3.0%	0.1	1.5%
Over 33	71	7.7	22.3%	0.9	47.4%	10.1%	0.3	3.4%
Total/Program	**71**	**34.6**	**100%**	**1.9**	**100.0%**	**5.1%**	**0.7**	**1.9%**

Figure 22 shows the trends in age from 1984 through 2002. The proportion of recent graduates in the youngest age group (<24) has generally decreased over time, with a slight increase over the previous five years. Conversely, the middle age group (24 - 29) has increased 47% since 1994. The graduates in the older age group (>30) have decreased 31% since 1994.

Figure 22. Trends in the Age of Graduates: 1984 Through 2002



The mean number of graduates, withdrawals, decelerated students and attrition rates for the 2002 graduating class by ethnicity is shown in Table 75. The majority of the recent graduates were White/Non-Hispanic (77.6%), less than one-fourth (22.4%) were minorities.

Table 75. Number and Attrition Rates of 2002 Graduates by Ethnicity

		Mean Number Graduated		Withdrew Prior to Graduation		Attrition Rate	Students Decelerated	
Ethnicity	N	Mean	%	Mean	%	%	Mean	Rate
White/Non-Hispanic	73	27.3	77.6%	1.4	73.7%	4.8%	0.4	1.4%
Black/African-Amer.	73	1.9	5.4%	0.2	10.5%	9.0%	0.1	4.5%
Latino/Hispanic/Mex. Am.	73	1.6	4.5%	0.1	5.3%	5.6%	0.1	5.6%
Asian	73	2.0	5.7%	0.1	5.3%	4.5%	0.1	4.5%
Asian Subpopulations	73	0.3	0.9%	0.0	0.0%	0.0%	0.0	0.0%
Native Haw./Other P.I.	73	0.2	0.6%	0.0	0.0%	0.0%	0.0	0.0%
American Ind./Alaskan	73	0.3	0.9%	0.0	5.3%	0.0%	0.0	0.0%
Other/Unknown	73	1.6	4.5%	0.1	5.3%	5.9%	0.0	0.0%
Total/Program	**73**	**35.2**	**100.0%**	**1.9**	**100.0%**	**5.1%**	**0.7**	**1.9%**

Within the minority groups graduating, 24.1% were Black/African-American, 20.3% were Latino/Hispanics, 25.3% were Asian and the remainder were classified as Asian Subpopulation, Alaskan/Native American or Other/Unknown. Sixty-seven percent (N=49) of the 73 programs reported at least one Black/African-American among their 2002 graduates. Forty-six (63%) programs also graduated at least one Latino/Hispanic.

The Black/African-American students had the highest rate of attrition (9.0%), followed by Latino/Hispanic students (5.6%). The White/Non-Hispanics had an attrition rate of 4.8%. Proportionately, minority students were more likely to be decelerated, particularly the Latino/Hispanic students (5.6%) as compared to White students (1.4%).

Trends in Student Attrition: 1984 Through 2002

Figure 23 (next page) shows the relative attrition rates from 1984 through 2002 for all students and for white and non-white students. Attrition rates have averaged 7.3% over the past nineteen years, ranging from a high of 14% in 1988 to a low of 3.9% in 1999. The 2002 attrition rate for white students was 4.8% and 5.7% for non-white students; the latter represents a decrease from 2001. Before 1990, decelerated students were included in the attrition rates. If decelerated students were included this year, the adjusted attrition rate would be 6.9%.

Sex and Ethnicity of 2002 P.A. Graduates by Consortia Region

The mean number and proportion of 2002 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 (29%) than from programs located in the Midwestern region (12.6%). The Heartland region had the highest proportion of male graduates (44.2%) and the Eastern region the highest proportion of female graduates (75.5%).

Figure 23: Trends in Student Attrition: 1984 Through 2002

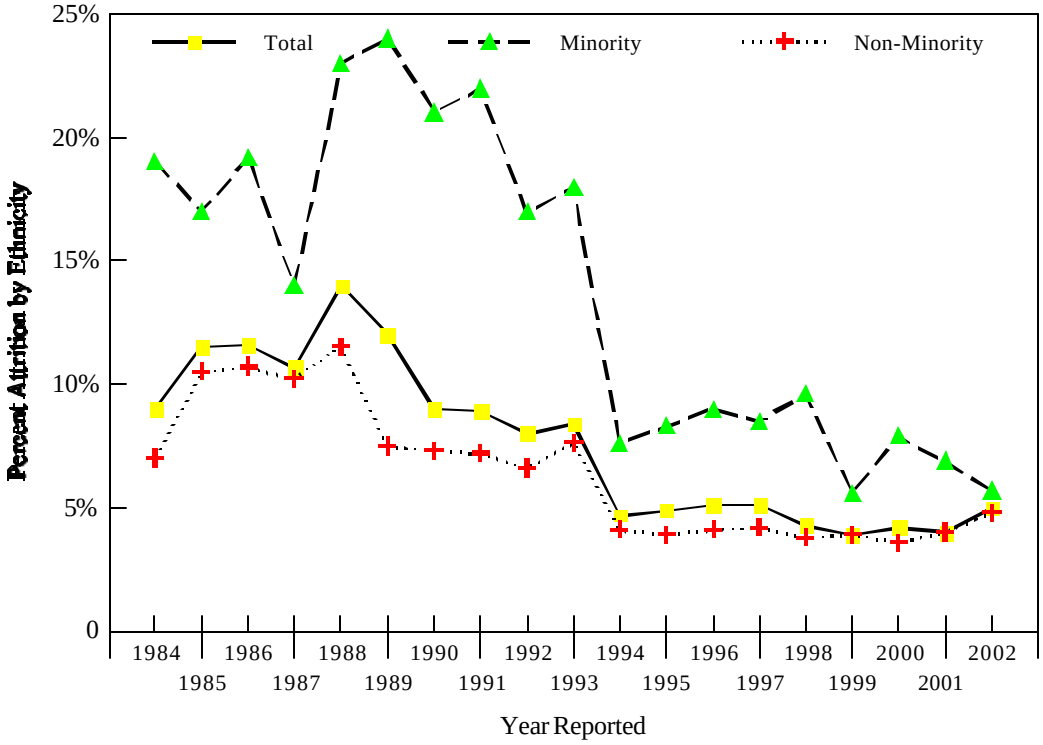


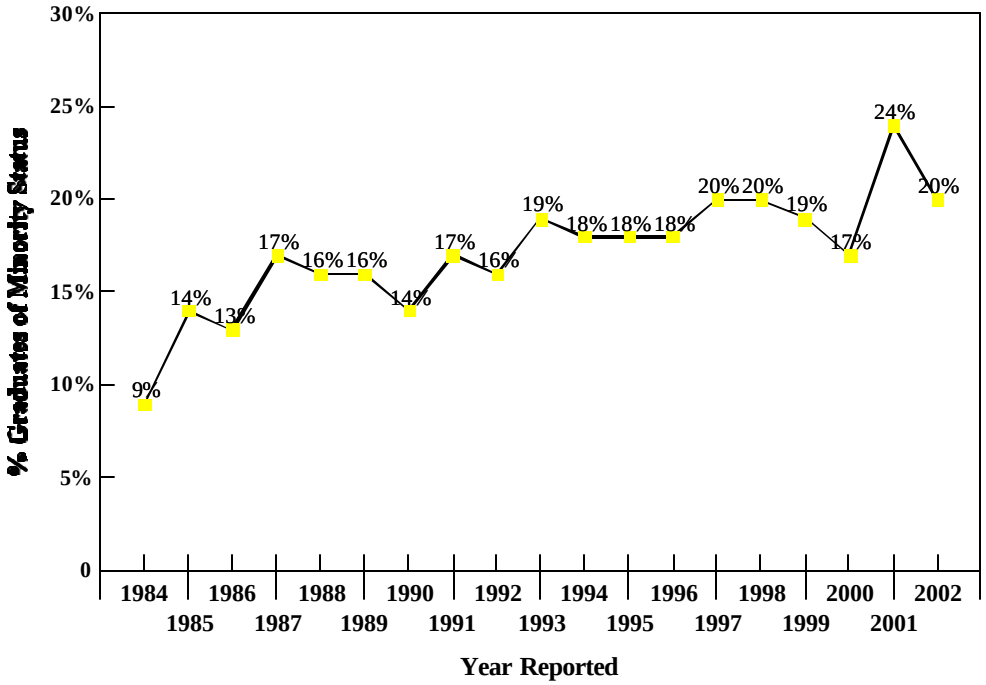
Table 76. 2002 Graduates by Sex, Ethnicity, and Consortia Region

Consortia Region	N	Mean # of Graduates	Gender		Ethnicity				
			Male	Female	White	Black	Hispanic	Asian	Other
Northeastern	13	29.5	34.2%	65.8%	75.2%	12.6%	3.2%	7.4%	1.6%
Eastern	11	33.9	24.5%	75.5%	81.4%	8.0%	0.9%	5.3%	4.4%
Southeastern	11	36.0	31.9%	68.1%	81.9%	4.0%	5.2%	4.1%	4.8%
Midwestern	21	29.5	33.2%	66.8%	87.4%	2.9%	1.7%	4.3%	3.7%
Heartland	8	50.9	44.2%	55.8%	74.7%	4.7%	12.9%	5.1%	2.6%
Western	9	38.6	43.3%	56.7%	71.4%	5.1%	10.7%	5.5%	7.3%
Total	73	34.0	35.0%	65.0%	80.1%	6.0%	4.7%	5.2%	4.0%

Trends in the Graduation of Minorities

The graduation of minority P.A.'s has been monitored since 1984. Figure 24 (next page) shows the proportion of non-white P.A. graduates over the past nineteen years. During the nineteen-year period for which data was available , the graduation of non-white students averaged 17.1%, 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 years, has averaged 20.3% (Table 61).

Figure 24. Trends in Minority P.A. Graduates: 1984 Through 2002



Employment Status of 2002 P.A. Graduates

A summary of the employment status of the recent graduates, as reported by 73 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 2002 P.A. Graduates

Employment Status	Mean Number Per Program	S.D.	Relative Frequency
Employed:			
As a P.A.	23.9	10.7	61.6%
Not as a P.A.	0.8	0.4	2.3%
Unemployed	5.2	7.8	15.0%
Continued with Education	1.7	1.2	4.9%
Unknown	5.6	7.4	16.2%
Total (N=73)	**37.2**	**16.3**	**100.0%**

The majority (61.6%) of recent graduates were employed as a physician assistant, a 2% increase from 2001 graduates (59.6%). Almost one-third of the graduates were either unemployed or their employment status was unknown.

Number of Recent Graduates by State

The number of 2002 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 2,501 students from 73 programs completed their training in 2002. However, if we consider all programs that graduated P.A.'s in 2002 (i.e., 124 programs) we estimate that the total number of graduates would be approximately 4,290 (124 x 34.6).

Table 78. Number of 2002 Graduates by State

State	Number Prog.	Number Grads	State	Number Prog.	Number Grads	State	Number Prog.	Number Grads
AL	1	35	LA	1	28	OK	1	51
CA	4	180	MA	1	31	PA	9	273
CO	1	31	MD	1	28	SC	1	36
CT	1	34	ME	1	39	SD	1	21
DC	1	51	MI	4	152	TN	1	28
FL	1	60	MN	1	26	TX	5	292
GA	2	90	MO	2	46	UT	1	32
IA	2	54	NC	2	70	VA	2	41
ID	1	22	NE	1	36	WA	1	73
IL	1	81	NM	1	9	WI	3	66
IN	2	48	NY	10	299	WV	1	36
KS	1	43	OH	3	59			
						Total	**73**	**2501**

2002 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 Northeastern region reported that over 84% of their 2002 graduates had secured employment at the time the program reported. Programs in the Heartland region had the lowest proportion of graduates employed (51.7%). The overall proportion of recent graduates who were unemployed, including the "Other" category, averaged 28.7% across the regions.

Table 79. Employment Characteristics of 2002 Graduates by Consortia Region

Consortia Region	N	Employed Mean	Employed %	Unemployed Mean	Unemployed %	Other Mean	Other %	Total Mean
Northeastern	13	28.1	84.1%	1.8	5.4%	3.5	10.5%	33.4
Eastern	11	24.4	65.9%	4.3	11.6%	8.3	22.4%	37.0
Southeastern	11	31.0	83.3%	1.9	5.1%	4.3	11.6%	37.2
Midwestern	21	23.0	71.9%	3.6	11.3%	5.4	16.9%	32.0
Heartland	8	27.6	51.7%	1.8	3.4%	24.0	44.9%	53.4
Western	9	28.0	69.7%	2.8	7.0%	9.4	23.4%	40.2
Total	**73**	**26.4**	**71.1%**	**2.8**	**7.6%**	**7.9**	**21.1%**	**37.2**

Trends in Medical Specialty Selection of Recent Graduates, 1985 Through 2002

A comparison of the employment of recent graduates in primary and non-primary care medicine from 1985 through 2002 is shown in Table 80 and illustrated in Figure 25 (primary care includes F.M., G.I.M., Ob/Gyn, Peds)(next page). From 1985 through 2002 there was an overall decrease in the proportion of graduates entering primary care practice, from 60% in 1985 to a low of 47% in 2001. In the past eighteen years an average of 55% of the graduates have selected primary care medical specialties.

Table 80. Employment of Recent Graduates in Primary and Non-Primary Care Medicine, 1985 Through 2002

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
18-Yr. Mean	**747**	**55.0%**	**627**	**45.1%**	**1374**

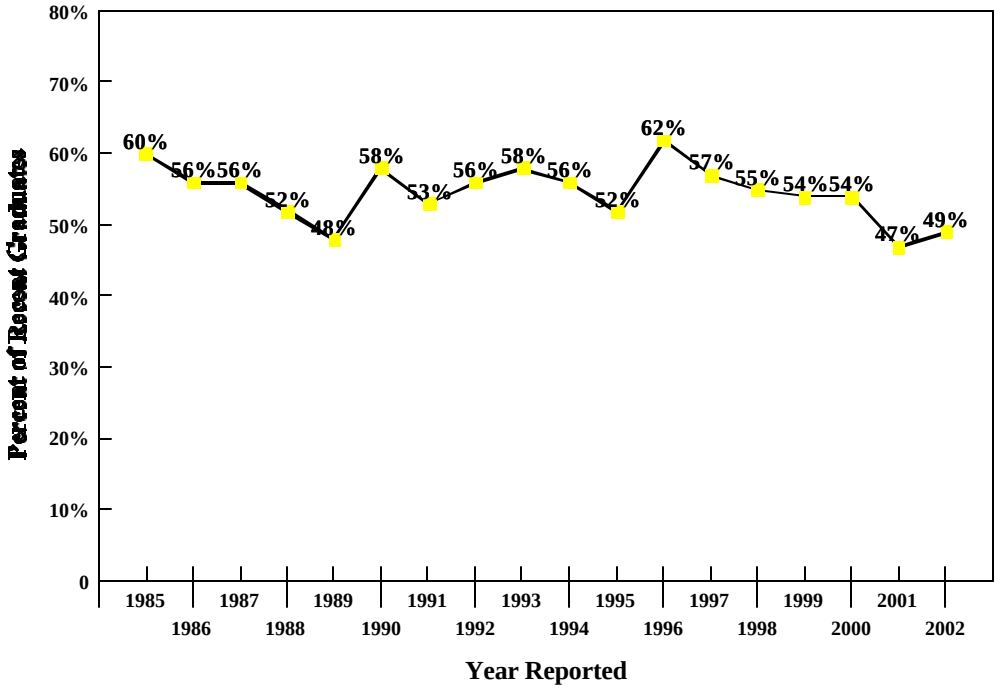
Employment of Recent Graduates in Primary and Non-Primary Care by Consortia Region

The relative proportion of 2002 graduates entering primary and non-primary care medical specialties by region is shown in Table 81. Graduates from programs in the Eastern region had the highest level of employment in primary care medical specialties (58.1%). Graduates from the Northeastern region had the highest level of employment in non-primary care specialties (59.0%).

Table 81. Employment of 2002 Graduates in Primary and Non-Primary Care Medicine, by Consortia Region

		Primary Care		Non-Primary Care	
Consortia Region	N	Mean	%	Mean	%
Northeastern	13	8.9	41.0%	12.8	59.0%
Eastern	11	11.1	58.1%	8.0	41.9%
Southeastern	11	12.9	53.1%	11.4	46.9%
Midwestern	21	12.0	46.0%	14.1	54.0%
Heartland	8	11.7	54.9%	9.6	45.1%
Western	9	14.0	49.0%	14.6	51.0%
Total	**73**	**11.7**	**49.0%**	**12.2**	**51.0%**

Figure 25. Recent Graduate Employment in Primary Care: 1985 Through 2002



The distribution of recent graduates selecting primary care medical specialties from 1993 through 2002 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 decreased. The ten-year average was 72% for family medicine and 16.7% for general internal medicine. The selection of both obstetrics and gynecology and pediatrics also varied over time, ranging from 3.1% to 6.4% and 4.6% to 9.2%, respectively.

Table 82. Trends in the Primary Care Medical Specialty Selection of Recent Graduates, 1993 Through 2002

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Clinical	(53)	(48)	(56)	(57)	(68)	(74)	(77)	(76)	(82)	(73)
Specialty	%	%	%	%	%	%	%	%	%	%
Fam Md	71.0	76.0	75.4	73.1	73.2	75.1	74.9	67.3	67.4	70.1
Int Med	15.1	16.0	15.4	16.9	17.7	16.3	14.8	21.5	17.0	16.4
Gen Ped	8.4	4.6	5.2	6.4	5.3	5.6	6.8	5.5	9.2	7.3
Ob/Gyn	5.5	3.4	3.1	3.6	3.8	3.0	3.4	5.7	6.4	6.2

* 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 emergency medicine accounted for over two-thirds of the positions (70.6%) selected by recent graduates in non-primary care.

Table 83. Trends in the Non-Primary Care Medical Specialty Selection of Recent Graduates, 1993 Through 2002

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Clinical	(53)	(48)	(56)	(57)	(68)	(74)	(77)	(76)	(82)	(73)
Specialty	%	%	%	%	%	%	%	%	%	%
Surgery	36.2	35.5	33.0	34.1	35.1	36.2	31.4	40.4	38.6	41.2
Med	35.4	25.1	29.4	30.6	29.1	28.4	23.3	18.6	22.4	20.7
Em Med	23.1	37.0	33.2	28.7	32.3	33.3	37.7	36.5	32.6	29.4
Psych.	0.9	1.1	0.8	1.0	1.5	0.7	3.3	2.1	2.7	2.9
Ind Med	4.4	1.3	3.6	5.6	2.0	1.4	4.3	2.4	3.7	5.8

* Number of Programs responding

A list of the specific internal medicine subspecialties selected by 2002 graduates is shown in Table 84, along with the number of graduates and programs represented. A total of 390 recent graduates from seventy-three 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=89; 35 programs) and gastroenterology (n=54; 29 programs).

Table 84. Internal Medicine Subspecialties Selected by 2002 Graduates

Medical Area	# of Graduates	# of Programs	Medical Area	# of Graduates	# of Programs
Military Medicine	167	1	Dermatology	10	10
Cardiology	89	35	AIDS/Inf. Diseases	5	5
Gastroenterology	54	29	Other	29	18
Oncology	36	26	**Total**	**390**	**73**

A list of surgical subspecialties selected by the recent graduates is in Table 85. A total of 246 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 cardiovascular/cardiothoracic surgery (n=57; 23%).

Table 85. Surgical Subspecialties Selected by 2002 Graduates

Surgical Area	Number of Graduates	Number of Programs	Surgical Area	Number of Graduates	Number of Programs
CV/CT	57	28	Orthopedics	31	18
Plastic	35	9	Organ Transplant	3	1
Neurosurgery	32	21	Other Surg. Spec.	88	25
			Total	**246**	**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 2002 Graduates by Consortia Region

		Family Medicine		Internal Medicine*		Surgery*	
Consortia Region	N	Mean	%	Mean	%	Mean	%
Northeastern	13	6.3	43.2%	3.2	21.9%	5.1	34.9%
Eastern	11	9.0	51.7%	5.5	31.6%	2.9	16.7%
Southeastern	11	7.9	53.7%	3.1	21.1%	3.7	25.2%
Midwestern	21	7.4	44.3%	4.4	26.3%	4.9	29.3%
Heartland	8	12.5	59.2%	3.6	17.1%	5.0	23.7%
Western	9	10.1	51.0%	3.5	17.7%	6.2	31.3%
Total	**73**	**8.2**	**48.8%**	**3.9**	**23.2%**	**4.7**	**28.0%**

* Includes the sub-specialties

Note, the "other" category is not included in the table. Graduates from the Heartland region selected family medicine preferentially (59.2%) and those from the Northeastern region had the least percentage entering family medicine (43.2%). Conversely, graduates from programs in the Northeast selected surgery (34.9%) more frequently than did graduates from other regions.

Regional Variation and Trends in New Graduate Starting Salaries

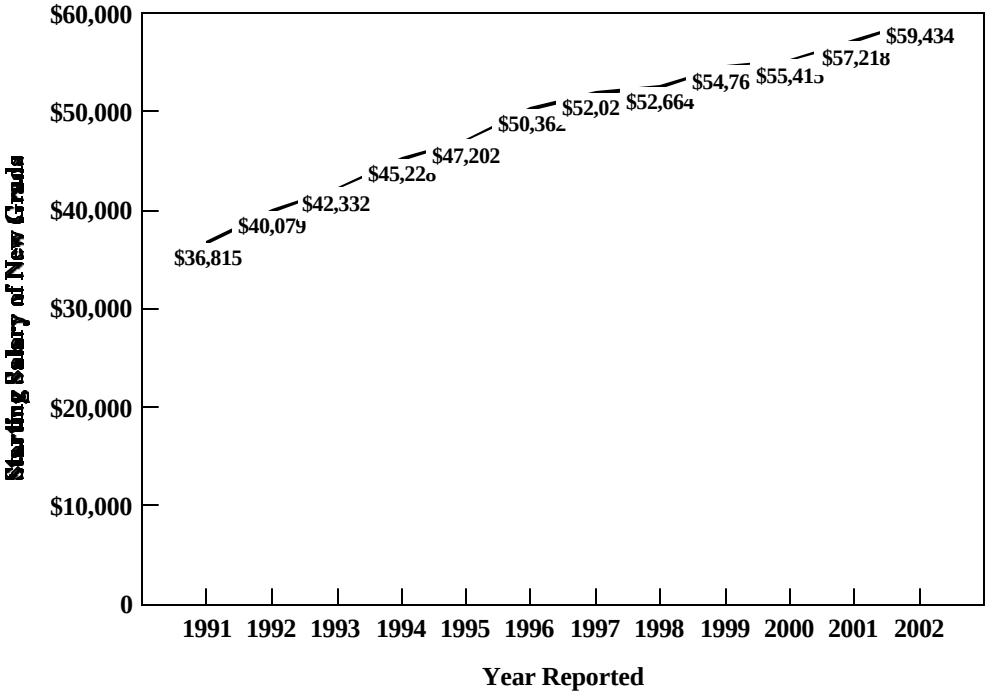
Table 87 shows the estimated starting salary of recent graduates in 2002 by region. The overall average was $59,434, an increase of 3.9% from the 2001 average of $57,218. Mean salaries were above $59,000 for graduates from programs located in all but the Eastern region.

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

Consortia Region	N	Mean	Median	Change from 2001
Northeastern	10	$60,380	$61,500	+ 7.5%
Eastern	7	$56,400	$56,800	+ 1.2%
Southeastern	9	$59,448	$60,000	- 0.2%
Midwestern	17	$59,656	$60,300	+ 2.3%
Heartland	7	$59,657	$60,000	+ 2.2%
Western	9	$60,133	$58,500	+ 11.4%
Total	59	$59,434	$60,000	+ 3.9%

Salaries of graduates from programs located in the Western region marked the greatest increase from 2001 (11.4%), while programs in the Southeastern region reported a decrease of 0.2% from 2001. These data are also shown in Figure 26 (next page). Thus, starting salaries have increased each year by an average of 3.4% and there has been an overall increase in salaries of 61.4% since 1991.

Figure 26. Trends in Starting Salary for New Graduates: 1991 Through 2002



SECTION V. PHYSICIAN ASSISTANT CURRICULUM

General Comments on the P.A. Curriculum

As indicated in Section I, the length of the P.A. curriculum varies from 12 to 36 months, similarly, the credential awarded varies from certificate only to a masters degree. As such, a variety of curriculum models designed to prepare physician assistants for clinical practice are represented across the programs.

The professional curriculum of the Atypical@ PA program is 26 months in length. There are many different approaches in providing the education contained in the didactic and clinical curricula of various PA programs. Thus, as one looks at the different curricula represented, there is quite a bit of variation in course names, length, etc. Most of the components can be categorized as basic medical, behavioral and social sciences (Phase I curriculum), introduction to clinical medicine and patient assessment (Phase II curriculum), and supervised clinical practice (Phase III curriculum). The first two components can be either integrated together or with the basic sciences offered prior to the clinical medicine and patient assessment. Generally, the clinical rotations occupy the last year of the curriculum, providing students with direct patient care experiences in a variety of settings and medical disciplines.

Methods of Analysis

The data describing the Atypical@ P.A. program curriculum includes the following parameters, (a) total mean hours or weeks of instruction for each of the three phases in the P.A. curriculum, (b) type of instructional methods used (lecture/discussion and laboratory), (c) hours (weeks) of instruction in specific Acourses@ or clinical rotation for each component of the Acore curriculum@ and (d) degree of interdisciplinary education and type of other health professions students also participating in P.A. courses and/or rotations. The data will also be compared across regions.

As indicated, programs vary in curriculum design, length, sequencing and the types of courses/rotations offered. For example, while a specific body of knowledge may be presented by a program in a specific course (e.g., pathology or physiology) another program may do so within a combined course (e.g. pathophysiology), while other programs may integrate the subject matter within other disciplines (e.g., during the introduction to clinical medicine course). Thus, in the following section where the Atypical@ curriculum is described as consisting of specific courses and hours of instruction, the number of programs with and without (i.e. reporting zero) a specific course or clinical activity is also specified.

The reader should be aware that **two** mean values for a course or rotation will be presented, one using the number of programs with the course and the second including those programs reporting zero values; as such, the data will be qualified explicitly in the tables. In addition, it should be understood that the absence of a specific course does not imply that the body of knowledge is not presented in the curriculum. In fact, inspection of the Aother@ category for each major phase of the curriculum indicates that a wide range of courses are offered by many programs and these are specified accordingly. For comparative purposes, the reader is referred to the Third, Seventh, Eleventh and Fifteenth Reports[5,9,13,17] which present data from previous analyses of P.A. curricula information gathered in 1986, 1990, 1994 and 1998.

Phase I Curriculum: Basic Medical Sciences

The average total number of hours per program in the basic medical sciences, by instructional method, is shown in Table 88 (next page). The typical P.A. program offered an average of 400.5 hours/program of instruction in the basic sciences, as reported by 82 programs. There was a broad range of hours in this component of the curriculum (i.e. 109-846 hours). The low end of the range probably reflects a program with a curriculum model whereby the basic sciences are integrated extensively with the introductory clinical medicine section of the curriculum and thus relatively few hours in specific basic science courses were reported.

Table 88. Basic Medical Science Curriculum:
Total Hours and Methods of Instruction

Basic Sciences	Hours of Instruction: Lec./Disc.	Laboratory	**Total**
Mean Hrs*	317.6	82.9	**400.5**
Median	299.0	70.5	**370.5**
S.D.	119.6	66.1	**143.5**
Range	109 - 775	0 – 406	**109 – 846**

*Mean based on all respondents (N=82).

The principal method of instruction in the basic sciences was lecture and discussion (averaging 317.6 hours/program) with a total of 82.9 hours in the laboratory. Most of the laboratory hours were associated with anatomy, microbiology and clinical laboratory sciences.

A listing of the basic science Acore@ courses and the number of hours of instruction provided in each is in Table 89. Core courses were defined as those offered by one-third of the programs. Please note that anatomy/ physiology had been listed as a core course in previous years. However, for this year, only 15% of the programs reported that they had an anatomy/physiology basic medical science course (mean hours of instruction: 91.6 hours). Two mean values are reported for each course, the value in column one corresponds to the mean hours of instruction for those programs that offered the course (N shown in column 5). Column six identifies the number of programs that did not offer a specific course and the value in column seven shows the mean for all programs, including those reporting zero hours (N=82). It should be noted that some programs require specific basic science courses prior to admission (e.g. anatomy, physiology, microbiology).

Table 89. Basic Medical Science Curriculum:
Hours of Instruction in ACore@ Courses

Basic Medical Science Courses	Hours of Instruction: Mean*	S.D.	Range	Number of Programs: Mean Based Upon	Reporting 0 Hours	Total Mean**
Anatomy	121.3	61.5	20 - 381	81	1	121.2
Biochemistry	52.5	43.6	10 - 210	23	59	14.7
Clin. Lab Sciences	45.7	29.2	8 - 180	67	15	37.3
Microbiology	42.1	32.5	3 - 140	49	33	25.1
Nutrition	11.9	9.8	2 - 44	50	32	7.3
Pathology	51.6	33.7	2 - 150	29	53	18.2
Pathophysiology	67.4	38.6	14 - 210	43	39	35.3
Pharmacology	75.4	26.2	32 - 160	81	1	74.5
Physiology	65.8	26.5	12 - 120	45	37	36.1
Medical Terminology	16.4	13.2	1 - 48	30	52	6.0
AOther@	58.5	45.6	10 - 210	23	59	16.4
Total Hours	**400.5****	**143.5**	**109 - 846**	**82**	**0**	**400.5**

* Mean for only programs with the course (shown in column 5)
** Mean for all programs (N=82), including those with zero values.

It is noteworthy that all but one respondent P.A. program had a formal pharmacology course with instruction averaging 75.4 hours/program (range 32-160 hours). It also appears that all programs had anatomy, physiology

and pathology, either as separate courses of combined with each other (e.g. anatomy/physiology or pathophysiology). Over half of the programs had microbiology (42.1 hours) and nutrition (11.9 hours). The courses identified in Table 89 (excluding AOther@) constitute approximately 85% of the total number of hours in the basic science phase of the curriculum for the typical P.A. program (342/400.5). The remaining 15% of the hours are accounted for in the AOther@ category and include a variety of science courses as listed in Table 90. A total of ten courses were reported, for example, immunology, neuroanatomy, genetics, etc. The mean number of hours for each was not available.

Table 90. AOther@ Courses in the Basic Medical Science Curriculum

Other Basic Sciences	N*	Other Basic Sciences	N*
Immunology	5	Histology	1
Neuroanatomy	5	Applied Pathology	1
Genetics	3	Hematology	1
Human Neurology	1	Epidemiology	1
Women's Health	1	Preventive Medicine	1

*Number of programs reporting course was presented

Interdisciplinary Education in the Basic Sciences

In an effort to determine the type and extent of interdisciplinary education in P.A. programs, respondents were asked to report whether a course was offered to other than P.A. students, and if so, the type of other students involved. The results from this query is shown in Table 91 for the core basic science curriculum listed in Table 89.

Table 91. Interdisciplinary Education Among the Basic Sciences

Basic Medical Science Courses	% of Programs Interdiscipl.	Number of Programs and Type of Students* 1	2	3	4	5	6	7	# Not Inter.
Anatomy	20/81 = 24.7%	6	0	2	12	0	0	4	61
Biochemistry	5/23 = 21.7%	3	0	0	3	2	1	2	77
Clin. Lab Sci.	4/67 = 6.0%	2	0	0	1	2	0	0	78
Microbiology	6/49 = 12.2%	2	0	1	1	0	2	0	76
Nutrition	3/50 = 6.0%	2	1	0	0	0	0	0	79
Pathology	6/29 = 20.7%	1	0	1	4	1	1	0	76
Pathophysiology	6/43 = 14.0%	1	0	3	2	0	1	0	76
Pharmacology	10/81 = 12.3%	4	0	6	0	0	0	0	72
Physiology	8/45 = 17.8%	4	0	1	4	1	0	0	74
Medical Term.	2/30 = 6.7%	1	0	0	0	1	0	1	80
AOther@	12/23 = 52.2%	3	1	3	3	1	0	2	70
Total	**50/82 = 61.0%**								**32**

*Student Codes: 1=Medical, 2=Nurse, 3=N.P., 4=Physical Therapy, 5=Med. Technology, 6=Pharmacy, 7=Other

For example, 20 of the 81 programs that offered a specific course in anatomy, did so as an interdisciplinary course. Furthermore, six programs did so with medical students, 12 programs with physical therapy, etc. It should be noted that a single program could report more than one type of student in the same course. The data, as reported, will not identify the total number of types of interdisciplinary students from a particular program. The last column in the table identifies the number of programs that offered a course specifically for P.A. students only.

In total, 50 programs had at least one course which was interdisciplinary, conversely, there were 32 programs that did not participate in interdisciplinary education for any of the basic science courses identified.

In addition to the specified student code categories (#1 through #6), respondents also reported other types of students involved in interdisciplinary members of the courses enumerated in Table 92 which lists nine additional types of students involved in P.A. courses. These other student included majors in occupational therapy, biology and unspecified allied health professions.

Table 92. Other Students Involved in Interdisciplinary Education: Basic Medical Sciences

Other Students	N	Other Students	N
Occupational Tech.	10	Sports Med./Athl. Trainer	2
Biology Students	6	Respiratory Therapist	2
Allied Health (Gen)	4	Perfusion Tech.	1
Nurse Anesthetist	2	Ultrasound Tech.	1
Nurse Midwife	2		

Phase I Curriculum: Behavioral Sciences

The term Abehavioral science@ is used to describe a variety of Adisciplines or courses@ that do not fit well within either the basic sciences or the introduction to clinical medicine areas. These courses typically include subject matter from the behavior, legal, ethical and social sciences. In addition, however, we have also included under this category courses dealing with the profession and those that are Aresearch-related,@ e.g. medical literature review, research methods and statistics. These courses may well have been included under the basic sciences.

The average number of hours devoted to the behavioral sciences (including P.A. professional issues) and the instructional methodology used are shown in Table 93. An average of 174.9 hours of instruction per program was devoted to the behavioral and social sciences category. The number of hours varied extensively from 53 hours to 640 hours. The principal instructional method was lecture and discussion (161.1 hours) with a minor involvement in laboratory instruction (13.8 hours).

Table 93. Behavioral/Social Sciences Curriculum: Methods of Instruction

Behavioral Sciences	Lecture/ Discussion	Laboratory	**Total/ Program**
Mean Hours*	161.1	13.8	**174.9**
Median	152.0	0.0	**156.5**
S.D.	83.9	38.0	**100.9**
Range	27 - 495	0 - 294	**53 - 640**

* Mean based on 82 programs, including those with A0".

A list of the most common course, i.e., offered by over 50% of the programs, in these Abehavioral@ sciences is shown in Table 94 (next page). It should be clear that many of these topics may also be integrated with clinical sciences and therefore not identified in this section. The courses shown in Table 94 constitute what one might consider to be the Acore@ curriculum in the area of behavioral and social sciences for the typical P.A. program (average of 174.9 hours/program). In addition, the category also included course in the Aresearch-related@ curriculum and as such are grouped together in the Table. Two means are shown, one for those programs with the course and mean values across all programs, including those with zero hours.

Table 94. Behavioral/Social Sciences Curriculum Core Courses

Behavioral/ Social Sciences	Hours of Instruction Mean*	S.D.	Range	# Prog With	# Prog 0 Hrs	Total Mean**
Psychosocial/Dynamics	33.9	34.9	2 - 225	71	11	29.4
Health Promo./Dis. Prev.	27.8	21.5	2 - 200	73	9	20.1
Medical Bioethics	18.7	14.6	1 - 75	79	3	18.0
P.A. Professional Issues	22.0	16.7	2 - 120	80	2	21.5
Health Care Organization	13.5	13.4	1 - 58	71	11	11.7
Human Sexuality	10.2	16.1	1 - 124	72	10	9.0
Cross-Cultural Issues	11.8	10.3	1 - 48	70	12	10.0
Medical Literature Rev.	17.1	16.1	1 - 120	76	6	15.8
Research Methods	21.3	17.9	1 - 105	63	19	16.4
Statistics	13.2	13.9	1 - 45	46	36	7.4
AOther@	42.7	32.7	7 - 144	20	66	10.5
Total Hours**	**174.9**	**156.5**	**53 - 640**	**82**	**0**	**174.9**

* Mean for only programs with course

** Mean based on all 82 programs, including those with zero values

Proportionately, over one-half of the time was devoted to the areas of psychosocial dynamics (33.9 hours), health promotion/disease prevention (27.8 hours), medical bioethics (18.7 hours) and P.A. professional issues (22.0 hours). In addition, courses in health care systems, human sexuality and cross cultural issues were provided by the typical educational program. For the Aresearch-related@ curriculum, a total of 51.6 hours per program was offered as research methods (21.3 hours), statistics (13.2 hours) and medical literature review (17.1 hours).

A list of sixteen courses were reported by programs in the Aother@ category in the behavioral and social science section of the questionnaire as shown in Table 95. The number of programs offering each course is shown. There were a wide variety of such courses offered among P.A. program ranging from epidemiology (N = 4 programs) to twelve disciplines that were unique to certain programs. No effort was made to group these course into Asimilar@ areas.

Table 95. AOther@ Courses in the Behavioral Sciences

Behavioral Science Courses	N*	Behavioral Science Courses	N*
Epidemiology	4	Death and Dying	1
Behavioral Medicine	2	Issues in Health Care	1
Health Law	2	Psychiatry	1
Evidenced-Based Medicine	2	Oral Health	1
Abnormal Psychology	1	Medical Informatics	1
Adult Medicine	1	Obesity	1
Community Health	1	Medical Spanish	1
Counseling	1	Alternative Medicine	1

* Number of programs reporting course was presented.

Interdisciplinary Education in the Behavioral/Social Sciences

The type and extent of interdisciplinary education across the behavioral and social sciences is shown in Table 96 (next page). In total, 21 of the 82 programs (25.6%) had a least one course which was taught to P.A. students and other students in the health professions, while 61 programs did not have an interdisciplinary course in this component of the curriculum. The last column in the Table identifies the number of programs, for each course,

that were not interdisciplinary in nature. The most common interdisciplinary course (13% of programs) was in the area of medical bioethics. In these particular course areas, programs reported a variety of students involved, categories #1 through #5 were represented.

Table 96. Interdisciplinary Education in the Behavioral Sciences

Behavioral/ Social Sciences	% of Programs Interdiscipl.	Number of Programs and Type of Students*							# Not Inter.
		1	2	3	4	5	6	7	
Psychosoc./Dynamics	5/71 = 7.0%	4	0	1	0	0	0	0	77
Medical Bioethics	10/79 = 12.7%	6	1	2	2	2	0	0	72
P.A. Prof. Issues	3/80 = 3.8%	1	1	1	0	0	0	0	79
Health Care System	5/71 = 7.0%	2	0	2	1	0	0	0	77
Human Sexuality	6/72 = 8.3%	5	0	1	0	0	0	0	76
Hlth Prom./Prev.Med.	6/73 = 8.2%	3	0	2	0	0	0	1	76
Cross-Cultural Issues	5/70 = 7.1%	3	0	2	0	0	0	0	77
Medical Lit. Rev.	3/76 = 3.9%	1	0	2	0	0	0	0	79
Research Methods	3/63 = 4.8%	1	0	2	0	0	0	0	79
Statistics	3/46 = 6.5%	0	0	1	0	1	0	1	79
AOther@	2/20 = 10.0%	1	0	0	0	1	0	0	80
Total	**21/82 = 25.6%**								**61**

*Student Codes: 1=Medical, 2=Nurse, 3=N.P., 4=Physical Therapy, 5=Med. Technology, 6=Pharmacy, 7=Other

As previously noted, a program may report more than one type of student in the same course (e.g., nursing and nurse practitioner students) and therefore that program would be represented more than once in the student categories (#2 and #3). Therefore, the data, as presented, does not permit us to assign specific types of students to a given program.

In addition to specific student codes (#1 through #6), respondents also reported other types of students involved as interdisciplinary members of the designated courses and are shown in Table 97. Five additional types of students, from occupational therapy to other allied health majors, were reported.

Table 97. Other Students Involved in Interdisciplinary Education: Behavioral Sciences Courses

Other Students	N	Other Students	N
Occupational Therapy	5	Nurse Specialist	1
Respiratory Therapist	3	Allied Health (Gen)	1
Athletic Trainer	2		

Phase I Curriculum: Regional Variation

The total hours of instruction per program in both the basic and behavioral sciences (Phase I of the curriculum), is shown by geographic region in Table 98 (next page). In total, the typical program devoted approximately 575 hours of instruction in Phase I of the curriculum, with the basic and behavioral sciences accounting for 70% and 30% of the hours of instruction, respectively.

Table 98. Basic and Behavioral Science Curriculum by Region

Geographic Region	Basic Sciences Total Hours N	Basic Sciences Total Hours Mean	Basic Sciences Total Hours S.D.	Behavioral Sciences Total Hours N	Behavioral Sciences Total Hours Mean	Behavioral Sciences Total Hours S.D.	Phase I Total Hours N	Phase I Total Hours Mean
Northeastern	16	420.5	158.2	16	184.8	96.6	16	605.3
Eastern	11	350.5	130.5	11	160.4	119.9	11	510.9
Southeastern	12	386.6	122.9	12	189.9	141.5	12	576.5
Midwestern	18	391.1	144.4	18	131.6	70.6	18	522.7
Heartland	9	377.3	96.4	9	196.2	66.7	9	573.5
Western	16	407.1	162.7	16	203.1	72.9	16	610.2
All Regions	**82**	**400.5**	**143.5**	**82**	**174.9**	**156.5**	**82**	**575.4**

The total hours in Phase I reported herein (575 hours per program; 82 programs), is similar to the 578 hours/program reported by 76 programs in the 1998 Fifteenth Annual Report [17] . The distribution of time has not significantly changed from an average of 72% in 1998 to 70% currently in the basic sciences relative to the behavioral/social sciences.

There was considerable variation in the number of hours devoted to the basic medical sciences across regions, with programs in the Northeastern (420.5 hours/program) and Western (407.1 hours/program) regions reporting more hours than those in the remaining regions. Programs in the Eastern (350.5 hours/program) region reported the least number of hours in this component of the curriculum.

There was also regional variation in the behavioral/social science curricula, ranging from 131.6 hours (Midwestern) to 203.1 hours of instruction in the Western region. The mean total hours/program devoted to instruction in Phase I (basic + behavioral sciences) ranged from 510.9 hours per program in the Eastern region to 610.2 hours per program in the Western region.

Phase II Curriculum: Introductory Clinical Sciences and Patient Assessment

For the typical P.A. program, the Aintroduction to clinical medicine@ curriculum (referred herein as ICM or Phase II) follows the basic and behavioral medical sciences and is preparatory to the clinical year of supervised clinical instruction.

The information presented in ICM provides the student with a foundation in both didactic knowledge in clinical medicine, clinical skills associated with comprehensive patient assessment (physical diagnosis, interviewing and the medical history) and special skills and procedures (IV=s, casting, etc.) which will permit the student to become effectively involved in a range of patient care activities during their supervised clinical rotations or preceptorships.

The number of hours devoted to the introduction to clinical medicine curriculum is shown in Table 99 (next page). There were a total of 577.6 hours of instruction in this phase of the curriculum. Proportionately these hours were distributed as follows: 358.9 hours/program (62%) in didactic clinical medicine, 147.3 hours/program (25.5%) in patient assessment skills and 71.4 hours/program (12.4%) in special clinical skills/procedures instruction. Within the patient assessment component, 49.7 hours and 97.6 hours of instruction were included in the interviewing/medical history and physical diagnosis component, respectively.

Table 99. Hours of Instruction in the Phase II Curriculum

Intro. Clinical Sciences	Hours of Instruction			# Prog	# Prog
	Mean	S.D.	Range	With*	0 Hrs
Didactic Clin. Medicine	358.9	236.5	90 - 1,375	82	0
Patient Assessment					
History/Interviewing	49.7	41.3	6 – 300	82	0
Physical Assessment	97.6	60.6	24 - 360	82	0
Sub-Total	147.3	82.1	12 - 454	82	0
Clinical Skills	71.4	40.0	16 - 200	82	0
Grand Total	**577.6**	**181.1**	**245 - 1,970**	**82**	**0**

* Number of programs reporting course was presented.

These findings (578 hours/program) were the same as the hours of instruction in the 1998 Report[17] (577 hours/program).

A total of six areas of special skills, certifications or clinical procedures were reported offered by a majority of P.A. programs during Phase II of the curriculum. The number of programs offering a specific skill area and mean hours/program devoted to instruction is identified in Table 100. For example, 65 programs offered instruction (certification) in either ACLs, PALS, or ATLS, averaging 18.1 hours per program. Eighty-two programs had specific instruction in EKG (17.0 hours/program) and 81 programs had instruction in suturing (7.7 hours/program). It is important to note that for some of the areas where programs reported zero hours, for example casting, it does not mean that these programs did not provide instruction in the area. These programs probably offer such instruction during the Phase III clinical year, for example, a rotation in surgery would obviously include instruction in suturing and instruction on casting would occur during orthopedics.

Table 100. Types of Clinical Skills Courses in Phase II of the Curriculum

Clinical Skills	Hours of Instruction			# Prog	# Prog
	Mean	S.D.	Range	With*	0 Hrs
ACLS, PALS, ATLS	18.1	10.6	4 - 80	65	17
EKG	17.0	8.3	3 - 40	82	0
Suturing	7.7	6.1	2 - 48	81	1
CPR	6.4	3.1	1- 16	57	26
Casting	5.0	2.7	2 - 16	79	3
Injections/IV=s	5.7	3.5	2 - 20	79	3
Other	20.4	16.2	2 - 54	35	47
Total Hours	**80.3**	**45.1**	**6 - 100**	**82**	**0**

* Number of programs reporting the activity was presented.

There was a wide range of Aother@ types of clinical skills reported by programs and these are summarized in Table 101 (next page). For convenience, the type of skills were grouped into certain areas, e.g., emergency procedures. A relatively substantial number of hours of instruction (total= 20.4 hours/program) was involved, primarily in the clinical and surgical areas.

Table 101. Other Types of Clinical Skills

Other Clinical Skills (examples)	N*	Mean Hours per Program
Emergency Procedures (N.G., Cath., Airway)	26	6.1
Radiological Sciences (X-ray, interpret.)	14	18.4
Clinical Skills (general, non-specific)	7	21.5
Surgical Skills (general, non-specific)	8	24.4
Sterile/Aseptic Techniques	4	16.2
Total	35	20.4

* Number programs reporting activity was presented.

Phase II Curriculum: Interdisciplinary Education

Table 102 provides information on the type and extent of interdisciplinary education in the introductory medical sciences. In total, 19 of the 82 programs (23%) had at least one course (or skill area) taught jointly to P.A. students and other students in the health related professions. Sixty-three programs did not have interdisciplinary instruction in this phase of the curriculum. Only six programs had interdisciplinary instruction in the area of patient assessment, while, eleven programs offered instruction in the clinical skills areas to other types of students.

Table 102. Interdisciplinary Education in the Didactic Clinical Medicine and the Physical Assessment Curriculum

Introductory/ Clinical Sciences	% of Programs Interdiscipl.	Number of Programs and Type of Students*							# Not Inter.
		1	2	3	4	5	6	7	
Didactic Clin. Med.	9/82 = 11.0%	6	0	2	0	0	1	0	73
Patient Assessment									
History/Interview	6/82 = 7.3%	4	0	2	0	0	0	0	76
Physical Assessment	6/82 = 7.3%	4	0	2	0	0	0	0	76
Clinical Skills	11/82 = 13.4%	7	4	2	0	0	2	1	71
Total	**19/82 = 23.2%**								**63**

*Student Codes: 1=Medical, 2=Nurse, 3=N.P., 4=Physical Therapy, 5=Med. Technology, 6=Pharmacy, 7=Other

A summary of Aother@ types of students included in the student codes is shown in Table 103 for which, six other health professions disciplines were identified, from occupational therapy to Pharm.D. students.

Table 103. Other Types of Students in Interdisciplinary Education: Phase II Curriculum

Other Students	N	Other Students	N
Occupational Ther.	4	Nutrition	1
Surg Asst.	2	Radiology Tech.	1
Respiratory Therapist	2	Pharm.D.	1

Phase II Curriculum: Regional Variation in Clinical Skills Courses

The number of instructional hours in the area of clinical skills courses across programs by region is shown in Table 104. Program in the Southeastern region had the highest number of instruction hours in the area of clinical skills, 70.7 hours/program. The fewest number of hours was reported from programs in the Western region at 57 hours/program.

Table 104. Clinical Skills Curriculum by Region

Geographic Region	Total Hours Clinical Skills		
	N	Mean	S.D.
Northeastern	15	60.6	34.6
Eastern	12	65.6	25.6
Southeastern	13	70.7	37.6
Midwestern	19	59.4	28.1
Heartland	9	61.2	24.7
Western	14	57.1	23.3
All Regions	**82**	**80.3**	**45.1**

The total hours of instruction per program provided in Phase I and Phase II of the curriculum combined, Phase II alone and the proportion of Phase I relative to total hours (Phase I + Phase II) is shown across programs, by region, in Table 105. The typical program offered an average of 1,153 hours per program to instruction in Phase I and II of the P.A. curriculum. Programs in the Northeastern region reported the most hours of instruction in Phase I + Phase II (1,187 hours/program) while the programs in the Midwestern region reported the least number (1,067 hours/program).

Table 105. Comparisons of Phase I and II Curriculum by Region

Geographic Region		Phase I + Phase II Total Hours		Phase II ICM Total Hours		Phase I/ I + II
	N	Mean	S.D.	Mean	S.D.	%
Northeastern	16	1,186.7	301.7	581.4	210.7	51.0%
Eastern	11	1,101.2	261.5	590.3	235.6	46.4%
Southeastern	12	1,182.6	283.6	606.1	273.3	48.7%
Midwestern	18	1,067.0	197.7	544.3	294.4	49.0%
Heartland	9	1,176.6	300.1	603.1	376.5	48.7%
Western	16	1,169.0	246.1	558.8	264.6	52.2%
All Regions	**82**	**1,153.0**	**284.5**	**577.6**	**181.1**	**49.9%**

Programs in the Southeastern region reported the largest number of hours of instruction in Phase II (ICM: 606 hours/program) with the least number reported by programs in the Midwestern region (544 hours/program).

On average, the typical program had a nearly equal distribution of time between Phase I (49.9%=basic and behavioral science) and Phase II (50.1%=ICM) of the curriculum. There was some regional variation in the proportion of time devoted to Phase I and II. Programs in the Eastern region spent the least amount of time in the basic sciences (46.4%), while the Northeastern (51%) and Western (52%) regions spent the majority of time in Phase I of the curriculum. Assuming an academic year of 42-46 weeks in length, it is estimated that the typical P.A. student will spend an average of 25 to 27 hours per week of contact hours of instruction during the first year of the curriculum.

Phase III Curriculum: Supervised Clinical Instruction

The typical programs offers approximately 45 weeks of Acontinuous@ supervised clinical instruction, often referred to as clinical rotations, clerkships and/or preceptorships, under the supervision of physician educators. Herein, the terms rotation and clerkship will denote a situation whereby the student Arotates@ from one clinical experience to another, either within the same facility or at a much greater distance, including in other states. Rotating clinical experiences are in a variety of specialities, e.g., family medicine, pediatrics, surgery, and so forth. They are typically less than eight weeks in length, varying from two to twelve weeks depending on the medical specialty. The clinical preceptorship has generally been regarded as a clinical experience which (a) occurs toward the end of the students clinical training, (b) is typically longer than the other rotations offered by the program and (c) may be associated with a physician preceptor who then might become the students employer upon graduation.

The majority of P.A. programs require students to complete a specific number of Acore@ clinical training experiences and the remaining time is allotted to clinical rotations with the student allowed the opportunity to select Aelectives@, ostensibly in areas of interest. Table 106 shows the total length of the clinical year and mean weeks of required and elective rotations for the typical P.A. program. On average, 85% of the rotations are required (38.1 weeks) with the remaining 15% elective (6.9 weeks). Three programs reported that all their clinical rotations were in required specialties. For the 80 program respondents, the average clinical year was 45 weeks per program and ranged from 24 to 96 weeks.

Table 106. Weeks of Supervised Clinical Instruction in Required and Elective Rotations

	Required	Elective	Total
Mean Weeks*	38.1	6.9	45.0
Median	40.0	5.0	48.0
S.D.	15.0	5.5	8.0
Range	2 – 90	0 - 40	24 - 96

*Mean based on 80 programs

The length of supervised clinical education in primary and non-primary areas is shown in Table 107. On average, the typical student will spend about 30.2 weeks of supervised clinical experience in primary care medicine and 18.3 weeks in non-primary care medicine for a total of 48.5 weeks during Phase III.

Table 107. Weeks of Supervised Clinical Instruction in Primary and Non-Primary Care Medicine

	Prim. Care	Non-Prim. Care	Total
Mean Weeks*	30.2	18.3	48.5
Median	28.0	18.0	45.0
S.D.	12.7	6.4	8.6
Range	15 - 132	2 - 55	16 - 140

*Mean based on 85 programs

The average length of clinical experience in each of the primary care medical specialties for the typical P.A. student is shown in Table 108 (next page). The majority of programs indicated that the Atypical@ P.A. student completed 8.9 weeks per program in family medicine, 6.5 weeks on general internal medicine, 5.3 weeks in pediatrics and 4.7 weeks in obstetrics and gynecology. Fifty programs have established primary care preceptorships which average 9.4 weeks/program. Clinical disciplines within the Aother@ category include geriatrics (11 programs) and one program each for the following: AIDS, community medicine, maternal/child health, medically underserved areas and SICU. It should be noted that all of the P.A. programs represented had a primary care clinical training experiences available for their students.

Table 108. Weeks of Clinical Instruction in Primary Care Medicine by Specialty

Primary Care Speciality	Mean*	S.D.	Range	# Prog With	# Prog. 0 Wks
Family/General Medicine	8.9	6.1	4 – 39	71	9
General Int. Medicine	6.5	3.6	2 – 30	75	5
General Pediatrics	5.3	2.1	2 – 13	73	7
Obstetrics/Gynecology	4.7	1.7	2 - 8	71	9
Primary Care Precept.	9.4	8.4	4 – 60	50	30
Other	5.8	2.7	4 – 15	16	64
Total	**30.2**	**12.7**	**15 -132**	**80**	**0**

* Mean based on programs with the rotation in the discipline.

The length of time required in the non-primary care medical specialties for the typical P.A. student is shown in Table 109. As reported by the majority of programs (60 or more), the typical P.A. student completed 4.9 weeks of general surgery, 4.7 weeks if emergency medicine and 4.2 weeks of psychiatry. Thirty programs indicated that their students complete rotations in the surgical subspecialties (5.0 weeks/program). Twenty-two of the programs indicated that their students completed rotations in the internal medicine subspecialties (4.2 weeks/program).

Table 109. Weeks of Clinical Instruction in Non-Primary Care Medicine by Specialty

Primary Care Speciality	Mean*	S.D.	Range	# Prog With	# Prog. 0 Wks
Surgical Subspecialties	5.0	3.0	2 – 16	30	50
General Surgery	4.9	1.5	2 - 8	77	3
Emergency Medicine	4.7	1.1	2 - 8	78	2
Psychiatry	4.2	2.0	1 - 6	60	20
Internal Medicine Subspec.	4.2	1.9	2 - 6	22	58
Other	7.3	2.9	2 – 16	11	69
Total	**18.3**	**6.4**	**2 - 55**	**80**	**0**

* Mean based on programs with the rotation in the discipline.

A total of 10 specific clinical specialties were reported in the Aother@ category under non-primary care experiences and are itemized in Table 110. The clinical elective was a relatively common (13 programs) sub-specialty while the remaining disciplines were only represented five or fewer times across the programs.

Table 110. Frequency of AOther@ Clinical Specialties Selected by P.A. Students

Clinical Discipline	N*	Clinical Discipline	N*
Clinical Elective	13	Research	2
Orthopaedics	5	Behavioral Medicine	1
Geriatrics	3	ICU	1
AIDS/STD Clinic	2	Education Practicum	1
Dermatology	2	Preceptorship	1

*N=Number of programs offering the non-primary care specialty

Several programs offer clinical instruction in specific areas of interest. Table 111 lists several examples of this instruction. The displayed data indicate that there is wide variation in the length of these experiences as offered. Note also that the majority of programs do not offer rotations in these interest areas as separate clinical rotations.

Table 111. Weeks of Clinical Instruction in Specific Areas of Interest

Primary Care Speciality	Mean*	S.D.	Range	# Prog With	# Prog. 0 Wks
Preventive Medicine	6.8	6.8	1 - 30	25	55
Geriatrics	4.6	3.3	1 - 21	43	37
Infant Mortality	3.1	2.5	1 - 8	18	62
Substance Abuse	3.7	3.7	1 – 20	26	54
STD/AIDS	4.1	3.2	1 – 15	30	50

* Mean based on programs with the rotation in the discipline.

Interdisciplinary Education During the Clinical Curriculum

The extent and type of interdisciplinary education occurring during the primary care component of the clinical curriculum is shown in Table 112. In total, a majority of the 80 programs (N=47, 58.8%) had at least one clinical rotation which involved other health profession students (33 programs reported they had no interdisciplinary education during Phase III). The clinical disciplines= degree of interdisciplinary education varied between 30% and 54% of the programs. Medical students and residents predominated, although, nursing students were also commonly identified as being involved. As these are clinical experiences, it is not clear how involved these students are with each other. They may be simply on the health care team. There were fewer P.A. programs that had interdisciplinary activities with nurse practitioners. In addition to the student codes used, other types of students were also involved and included, certified nurse midwife and pharmacy.

Table 112. Interdisciplinary Education in the Primary Care Clinical Curriculum

Primary Care Specialty	% of Programs Interdiscipl.	Number of Programs and Type of Studs* 1	2	3	4	5	# Not Inter.
Family Medicine	30/71 = 42.3%	19	16	11	2	12	41
General Int. Medicine	35/75 = 46.7%	32	18	7	1	23	40
General Pediatrics	27/73 = 37.0%	23	14	11	2	13	46
Obstetrics/Gynecology	38/71 = 53.5%	28	16	8	3	21	37
Primary Care Precept.	15/50 = 30.0%	12	6	6	0	11	35
Others	6/16 = 37.5%	6	2	2	0	4	10
Total	**47/80 = 58.8%**						**33**

*Student Codes: 1=Medical, 2=Resident, 3=Nurse., 4=Nurse Prac, 5=Other.

Interdisciplinary education occurring in the non-primary care specialties is shown in Table 113. The proportion of P.A. programs with interdisciplinary experiences was similar to that for the primary care curriculum, i.e., 52.5% of the programs. In addition, the types of students involved was also similar, i.e., primarily medical students, residents and nursing students. Relatively few nurse practitioner students were involved in the non-primary care disciplines, as one might predict. The other types of students reported by programs included, pharmacy and nurse midwife.

Table 113. Interdisciplinary Education in the Non-Primary Care Clinical Curriculum

Primary Care Specialty	% of Programs Interdiscipl.	Number of Programs and Type of Studs* 1	2	3	4	5	# Not Inter.
Emergency Medicine	36/70 = 51.4%	30	20	10	1	18	34
General Surgery	38/77 = 49.4%	33	19	7	0	21	35
Surgical Subspecialty	14/30 = 46.7%	11	6	5	0	9	16
Int. Med. Subspecialty	12/22 = 54.5%	10	6	3	0	8	10
Psychiatry	29/60 = 48.3%	24	15	4	2	19	31
Others	6/11 = 54.5%	5	2	2	1	4	5
Total	**42/80 = 52.5%**						**38**

*Student Codes: 1=Medical, 2=Resident, 3=Nurse., 4=Nurse Prac, 5=Other.

Phase III Curriculum: Regional Differences

The variation across programs relative to the weeks spent in primary and non-primary clinical training by geographic region is shown in Table 114. The percent of time in primary care relative to the total clinical year is also identified. The total length of clinical training across all regions averaged 48.5 weeks per program with programs in the Eastern and Heartland regions above the mean.

Table 114. Total Length of Supervised Clinical Instruction in Primary and Non-Primary Care Medicine by Region

Geographic Region	Primary Care Mean*	Primary Care S.D.	Non-Primary Care Mean*	Non-Primary Care S.D.	Total Hours Mean*	Total Hours S.D.	% Prim. Care
Northeastern	27.7	7.3	19.1	4.1	46.8	6.6	59%
Eastern	37.7	17.7	19.3	4.2	57.0	9.3	66%
Southeastern	27.9	3.7	17.7	4.1	45.6	5.0	61%
Midwestern	28.6	5.4	19.4	10.3	48.0	11.7	60%
Heartland	32.4	4.3	17.3	5.2	49.7	6.1	65%
Western	28.7	4.0	16.5	5.5	45.2	7.9	63%
All Regions	**30.2**	**12.7**	**18.3**	**6.4**	**48.5**	**8.6**	**62%**

* Mean based on those programs reporting involvement in the area.

On average, the typical program spent a mean of 62% of time in primary care clinical education during phase III. Programs in the Eastern, Heartland and Western regions were above the average at 66%, 65% and 63%, respectively, in primary care. The remaining regions reported a range of 59% to 61% for the time spent in primary care medicine.

The distribution of time the typical P.A. student spent in each of the primary and non-primary care medical specialties by region is shown in Tables 115 and 116 (next page). For the most part, there was little variation from the total mean across regions for each of the primary care specialties. Students in programs located in the Western region spent more time in family medicine (11.2 weeks versus the mean of 8.9 weeks). The Eastern region was above the mean for the number of weeks in the primary care preceptorship model.

Table 115. Weeks of Primary Care Clinical Training for the Typical P.A. Student by Specialty and Region

Geographic Region	Family Med.		G. Int. Med.		Pediatrics		Obs/Gyn		Preceptor	
	Mean*	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Northeastern	4.8	3.1	6.1	2.2	5.8	1.8	5.1	1.1	4.0	4.0
Eastern	9.3	7.0	7.4	6.8	5.4	0.5	5.3	0.6	10.7	9.2
Southeastern	7.3	2.0	7.3	2.2	4.9	2.1	3.4	1.8	5.2	3.0
Midwestern	9.9	5.4	5.3	2.2	3.5	2.0	3.6	1.9	8.2	7.0
Heartland	7.8	2.4	8.1	2.3	5.0	1.3	4.6	0.8	4.4	4.0
Western	11.2	9.5	4.6	2.7	5.0	3.0	3.8	2.1	5.8	6.3
All Regions	**8.9**	**6.1**	**6.5**	**3.6**	**5.3**	**2.1**	**4.7**	**1.7**	**9.4**	**8.4**

* Means based on programs with rotation; excludes those reporting zero values.

Similarly, there was only modest regional variation in the amount of time devoted to the non-primary care specialties.

Table 116. Weeks of Non-Primary Care Clinical Training for the Typical P.A. Student by Specialty and Region

Geographic Region	General Surg.		Surg. Subspec.		Int. Med. Subspec.		Emergency Medicine		Psychiatry	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Northeastern	5.2	1.5	4.7	1.9	4.5	2.0	4.8	1.0	4.2	1.5
Eastern	5.3	0.6	5.7	2.5	5.0	1.9	5.3	0.6	4.5	2.0
Southeastern	5.3	1.5	4.0	2.0	4.0	1.9	4.6	0.9	4.2	2.1
Midwestern	5.0	1.6	4.0	3.6	3.9	2.0	4.2	1.4	4.1	1.8
Heartland	4.2	0.4	6.4	4.8	4.0	1.7	4.6	1.3	3.1	1.6
Western	4.1	1.7	5.0	2.5	4.3	1.8	4.5	1.0	4.1	2.3
All Regions	**4.9**	**1.5**	**5.0**	**3.0**	**4.2**	**1.9**	**4.7**	**1.1**	**4.2**	**2.0**

* Means based on programs with rotation; excludes those reporting zero values.

Supervised Clinical Experiences in Medically Underserved Areas

The number of students per program involved in clinical training in medically underserved areas (M.U.A.) by specialty is shown in Table 117. The mean number of weeks per students and number of programs with or without such experiences is reported. It is noted that programs that did not have rotations in a specific medical specialty were not included in the last column of Table 117.

Table 117. Clinical Instruction in M.U.A.=s by Medical Specialty

Medical Specialty	Mean # Studs/Prog.	Mean # Wks/Stud	>N= Programs With	>N= Programs None
Family/General Medicine	20.8	7.1	61	19
General Int. Medicine	16.4	6.5	44	36
General Pediatrics	18.1	5.3	43	37
Obstetrics/Gynecology	18.0	4.9	39	41
Primary Care Precept.	19.2	7.6	35	45
Other	19.2	5.2	21	59

Thus, of the 80 programs that have a rotation in family medicine, 61 programs reported that a mean of 20.8 students per program spent an average of 7.1 weeks of their rotation in a M.U.A. and 19 programs did not have family medicine experiences in a M.U.A. Over-all, of the 80 programs with students in the clinical year, only four programs did not have students complete rotations in a M.U.A. (three specialty programs and the Interservice PA Program). The AOther@ category included non-primary care specialties.

The proportion of time the typical P.A. student spent in a M.U.A., by region, is shown in Table 118. For each region, the total number of student-weeks of clinical training in a M.U.A. (column one) and the total weeks of clinical instruction for all programs in each region (column two) was determined. Student-weeks were a product of the total number of students time the number of weeks of clinical experience, by program. From these values, an estimate of the proportion of student-weeks in an M.U.A. can be calculated (column three). Thus, students in the Eastern region spent 18% of their clinical time in a M.U.A. as compared to those students in programs from the Heartland region who spent 51% of their time in a M.U.A.

Table 118. Clinical Instruction of P.A. Students in M.U.A.=s by Region

Geographic Region	N	Total Stud-Wks in M.U.A.	Total Stud-Wks Clin. Instruc.	% of Stud-Wks in M.U.A.
Northeastern	15	727.8	2,164.5	33.6%
Eastern	12	388.0	2,139.2	18.1%
Southeastern	14	599.8	1,874.3	32.0%
Midwestern	14	497.5	1,748.2	28.5%
Heartland	12	485.9	946.8	51.3%
Western	13	751.3	1,642.3	45.7%
All Regions	**80**	**684.1**	**1,769.6**	**38.7%**

Changes in P.A. Curriculum Since 1986

A summary of the P.A. curricula reported in 1986[5], 1990[9] , 1994[13] , 1998[17] and 2002 is in Table 119.

Table 119. Changes in the P.A. Curriculum, 1986 Through 2002

Phase in Curriculum	1986-1987		1990-1991		1994-1995		1998-1999		2002-2003	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Phase I (hours)	(N=45)		(N=48)		(N=58)		(N=76)		(N=82)	
Basic Medical Sciences	463.6	185.2	408.1	166.5	400.7	183.6	418.9	187.4	400.5	143.5
Behavioral/Social Sci.	124.4	61.3	124.3	69.0	149.6	117.6	159.2	81.2	174.9	100.0
Total	588.0	N/A	532.4	N/A	550.3	N/A	578.1	N/A	575.4	N/A
Phase II (hours)	(N=47)		(N=48)		(N=55)		(N=71)		(N=82)	
Didactic Clin. Medicine	267.5	162.6	308.6	165.5	343.0	245.0	346.1	281.7	358.9	236.5
Patient Assessment	143.3	54.0	136.4	N/A	143.5	79.8	163.4	96.4	147.3	82.1
Other/Clinical Skills	129.3	107.9	37.1	N/A	62.3	31.3	67.3	31.7	71.4	40.0
Total	485.1	201.7	483.3	187.1	553.7	286.9	576.8	196.4	577.6	181.1
Phase I + Phase II: Total	1072.9	149.4	1004.5	313.1	1094.0	363.7	1154.9	317.9	1153.0	284.5
Phase II (weeks)	(N=46)		(N=48)		(N=58)		(N=85)		(N=80)	
Primary Care Medicine	34.0	18.4	34.9	10.8	30.9	8.3	28.8	13.6	30.2	12.7
Non-Prim. Care Medicine	18.8	7.5	16.6	9.6	19.8	6.6	21.7	6.3	18.3	6.4
Total	51.6	16.5	51.5	8.2	50.7	6.9	50.5	7.1	48.5	8.6

For each phase of the curriculum, sub-categories are also shown (e.g., Phase I basic and behavioral sciences), along with the number of programs data was available.

Relative to Phase I, the mean number of hours of instruction varied modestly across years, from a high of 588 hours/program in 1986 to a low of 532 hours/program in 1990, a variation of 10%. The basic science curriculum

within this phase of the curriculum showed the greatest difference across years, 464 hours/program in 1986 to 400.5 hours/program in 2002.

Between 1986 and 2002, the total number of instructional hours in Phase II (ICM) has increased by 19%, 485 hours/program in 1986 to 578 hours/program in 2002. The hours of instruction reported within the three categories (didactic medicine, patient assessment, clinical skills/procedures) has changed rather dramatically. For example, the number of hours in didactic clinical medicine increased 34% between 1986 and 2002; the number of hours in other/clinical skills has decreased by 45% from 1986 to 2002. However, on review, the 1986 clinical skills data included two categories, clinical skills instruction and Aother@, thus, it is likely that these values are overstated by including the AOther@ category.

There has been a very modest decrease in the total length of supervised clinical experience (Phase III) from 51.6 weeks in 1986 to 48.5 weeks in 2002. During this period, the number of weeks devoted to primary care has also decreased from 34 weeks to 30 weeks.

SUMMARY AND CONCLUSIONS

This report presents an update of physician assistant educational programs in the United States for the 2002-2003 academic year. This is the nineteenth annual report to be published since 1984 and is based upon data drawn from the 2002 national survey of P.A. programs and includes APAP member programs and those enrolling students for the first time in 2002. Three surveys were administered. The surveys was mailed in October to 132 programs. The response rate for survey #1 was 78% (103 programs), for survey #2 was 57% and for the curriculum survey 62%. 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 sixteen 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=118; 89.4%) were associated with either a University or 4-year College. Seventy-one programs (54%) awarded graduates a master's degree and forty-four (33%) awarded graduates a baccalaureate degree; the remainder awarded either an associate degree or only a certificate of completion. The majority (N=81; 61.4%) of the current P.A. Programs were established since 1989; thirty-six percent of the programs were established in the period 1969 through 1976, an average of 5.5 programs/year. From 1977 through 1988 (12 years) only three new programs were developed. The "typical" P.A. curriculum was 26 months in length and ranged from 12 to 36 months. The majority of programs graduated their seniors over two periods, between May-June (N=42) and August-September (N=69).

P.A. programs received the majority of their financial support from the sponsoring institution, averaging $574,416 (66% of the budget) and federal training grants, averaging $159,334 (18% of the budget). Thirty-eight programs (37%) reported they received federal training grant support in 2002- 2003. The average cost per program to educate a P.A. student was estimated to be $11,418/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 ($1,17,111 per program). Programs located in the Midwestern region had the highest level of federal training grant support ($219,450 per program). Programs in the Heartland region had the lowest total budget, averaging $642,854 per program. Programs in the Heartland region had the lowest level of federal training grant support ($101,070).

The typical resident student paid an average of $36,154 for tuition, books, fees, and equipment for their entire professional education in a P.A. program, the non-resident student paid $43,628. Eighty-six percent of the students received financial aid averaging $18,477 per student per year. Students enrolled in programs located in the Eastern region had the highest resident tuition ($41,165/student/curriculum), while programs in the Heartland region had the lowest resident tuition ($11,839/student/curriculum).

Ninety-three percent of the students in programs located in the Eastern region received financial aid, while 83% of the students in the Midwestern region received financial aid. For all students enrolled in 2002, only 34 (1st year students) and 42 (2nd year students) were awarded support from any of the several types of Public Health Service Corps Scholarships.

Trends from 1984 Through 2002

Total program budget increased an average of 6.8% annually from 1984 through 2002, a total increase of 213% over the past nineteen years. During this period, institutional support for the typical program increased an average of 7.2% per year, while federal training grant support remained relatively unchanged (19-year mean=$139,991) and accounted for an average of 18% of the total program budget (41% in 1985 down to 14% in 2000). Since 1984, both tuition and total student expenses have increased by over 325% while the proportion of students receiving financial assistance has increased to 86%. Since 1986, the amount of financial aid provided to students has increased by 378%, from $3,866/student/year to $18,477/student/year in 2002.

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 (0.34) and one program director (0.963) and, on average, 4.1 P.A. credentialed and 1.0 non-P.A. faculty, and 2.5 Category IV personnel. Thus, the "core" personnel for the typical program amounted to approximately 8.9 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 2001-2002, salaries for P.A. program personnel increased by 1.8% and by 5.5% for non-P.A.'s. Eighty-five percent of the Cat I – III personnel were classified as faculty. Twenty-seven percent were on a tenure track and 27% of the tenure track faculty were tenured. Sixty percent of the Category I - III program personnel had earned a masters degree and 13% held a doctorate as their highest degree.

On average, 58% of the P.A. credentialed staff and faculty (including program directors) provided 9.6 hours per week of clinical practice in addition to their educational activities. Eighty-nine percent were paid for their clinical service which averaged $36.85 per hour. Clinical earnings accounted for 23.2% of their salary.

In comparison to the 2001 data, the proportion of program directors who were credentialed as P.A.'s increased from 82% to 88%, salaries increased by 2.4% and months in position decreased from 76 to 71 months. The majority of program (90%) and medical (83%) directors were classified as faculty and were on a tenure track. Less than one-fifth were tenured. Thirty-eight percent of the program directors had doctoral-level degrees (typically the Ph.D. or Ed.D.). Since 1984, there has been a 129% increase in mean salary for program directors and 63% increase for medical directors. The time in position for both medical and program directors has fluctuated extensively over the nineteen year period.

Respondents also provided data on personnel turnover over the past year. For the period September 2001 through August 2002, turnover averaged 0.9 individual per program. Turnover across all programs was highest among Category I personnel (43/year) and lowest among Category III personnel. Eight program director positions were filled during this period. Departing personnel had been in their positions an average of 39 months, those filling the position were in their previous position 48 months and were typically 2.6 years younger than their predecessors.

Vacated positions were filled within 8.1 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, career advancement and termination. In this past year, the salary of those filling the vacated position was 1.8% less than the salary of the person leaving the position.

SECTION III. P.A. Applicant and Student Characteristics

In 2002, the average size of the entering P.A. class was 39.5 students, 69% of whom were women. The senior class averaged 37.7 students per program with 11.2% of the maximum capacity of the class unfilled (due largely to attrition from the program). The typical program received 210 applications and reported a ratio of 5.5 applicants to students enrolled. Using the mean values of the responding programs, the total enrollment (all classes) across all 103 programs was estimated to be 7,972 (284 less students than the previous year). Similarly, the estimated first-year enrollment was 3,770 students with only 2.8% enrolled as part-time students. Programs located in the Western region had the largest number of applicants (298/program). The Heartland region had the largest number of students enrolled (47.9/program). Programs in the Heartland region had the smallest number of applicants (152.0/program). Programs in the Midwestern region had the fewest number of students enrolled (31.2/program).

The typical entering student was described as a white/non-Hispanic female, 28 years of age, with a grade point average of 3.36 and 37.7 months of health care experience prior to admission.

The proportion of minority students enrolled in the first-year class has increased from 13.8% in 1983-84 to 22.6% 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 2002 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 26.5% in 2002.

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 2002. The total number of UMG applicants increased from 360 (4.3/program) in 2001 to 471 (3.5/program) in 2002. UMG enrollment has increased from 86 (0.98/program) in 2001 to 163 (1.64/program) in 2002. On average, 35% of the UMG applicants were admitted in 2002.

Almost one-half (39.6%; 40/101) of the programs received an UMG application while 35.3% (36/102) of the programs enrolled an UMG in 2002. In a broader perspective and with respect to the total applicant pool, UMG's accounted for only 2.2% of the total number of applicants and 4.2% of all students enrolled in the 2002 class.

Programs located in the Midwestern region accounted for the majority of UMG applicants, averaging 15.45/program, while programs in the Eastern region only received an average of 0.44/program. Programs in the Midwestern region enrolled the highest proportion (4.80/program) of UMG's, while programs in the Eastern region enrolled 0.06/program UMG's in 2002.

SECTION IV. Graduate Information

The average size of the 2002 graduating class was 34.6/program and was highest for programs located in the Heartland region (50.9/program) and lowest in the Northeastern and Midwestern regions (29.5/program). The majority of recent graduates were female (65%) and non-minority (78%). The attrition rates across programs averaged 5.1% (1.9 students per program) and the reasons for withdrawal were most frequently due to academic (50%). The attrition rate reported in 2002 was higher than the previous year (4.8%). Attrition was highest among minorities and older students. Students from programs in the Northeastern region had the highest attrition rate (9.3%) and those from programs in the Southeastern region the lowest attrition (1.9%).

On average, 0.7 student per program was decelerated for a deceleration rate of 1.9%. 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 Northeastern region (2.4%) and lowest for programs in the Eastern region (1.1%).

The proportion of 2002 graduates employed in primary care specialties increased slightly from the previous year (49.0% versus 46.5% in 2001) and those so employed remained principally in family medicine or general internal medicine. The most common non-primary care specialties selected by recent graduates were surgery (including subspecialties) and emergency medicine. The most common medicine subspecialties were cardiology and gastroenterology, while cardiothoracic and cardiovascular surgery were the most common surgical specialties selected.

Based on responses from program directors, starting salaries continued to increase, averaging $59,434, 3.9% above that reported for the 2001 academic year ($57,218). Programs in the Northeastern region had the highest percent of employment (84.1%) while programs in the Eastern region had the lowest percent of employment of recent graduates.

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