

**A REPORT OF THE
ASSOCIATION OF PHYSICIAN ASSISTANT PA PROGRAMS
NATIONAL RECRUITMENT STRATEGIES TASK FORCE**

Submitted to the APAP Board of Directors
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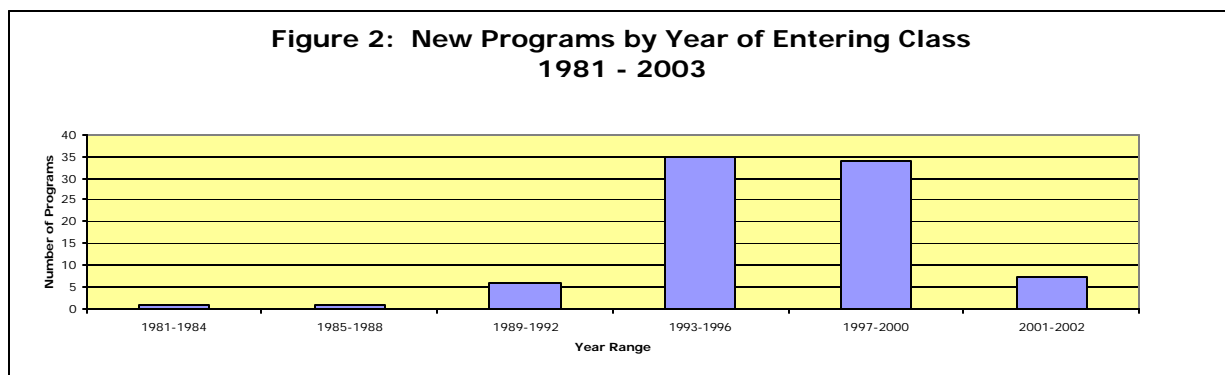
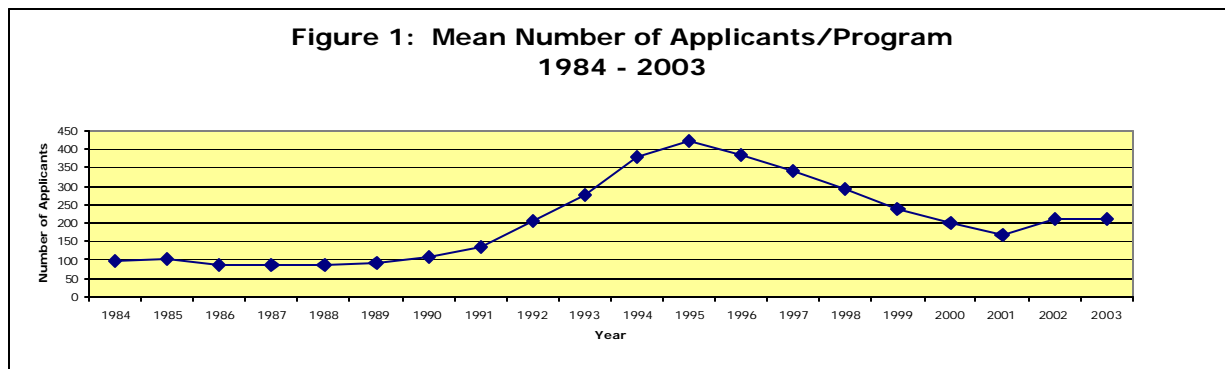
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APAP National Recruitment Strategies Task Force Report

1. INTRODUCTION

The Association of Physician Assistant Programs (APAP) Board of Directors established the APAP National Recruitment Strategies Task Force in 2002. This was in response to new data about the number of prospective applicants for each available seat in physician assistant (PA) educational programs and to ensure that the profession maintains an adequate number of qualified applicants (see Figure 1¹ and Figure 2²).



The charge to the task force was as follows:

Identify and investigate the merits of various recruitment strategies to increase the awareness of careers in the PA profession among individuals investigating the health professions. In addition, the task force will recommend and prioritize those strategies most likely to be attainable and that APAP can most practically implement. These will target individuals of all ages, from junior high schoolers to adults, including individuals from diverse cultural and ethnic backgrounds.

In response to this charge, two major questions were identified:

¹ Simon A, Link M, Miko A. *Twentieth Annual Report on Physician Assistant Educational Programs in the United States, 2003-2004*. Alexandria, VA: Association of Physician Assistant Programs; 2004:42.

² Simon A, Link M, Miko A. *Twentieth Annual Report on Physician Assistant Educational Programs in the United States, 2003-2004*. Alexandria, VA: Association of Physician Assistant Programs; 2004:6.

- Who does the physician assistant profession need to recruit to prepare a population of health care providers to serve the increasingly diverse population of our country?
- What strategies can APAP and individual programs use to overcome perceived barriers to admission to PA programs and maintain a future pool of qualified applicants for the physician assistant profession?

2. BACKGROUND

Importance of Diversity

Several recent reports have stressed the importance of diversity in the nation's health care workforce. In 2003, the Institute of Medicine (IOM) published a significant report from the Committee on Institutional and Policy-Level Strategies for Increasing the Diversity of the U.S. Healthcare Workforce. This timely report stated that

The need and desire of the American people for competent, compassionate health professionals who have the necessary communication skills for an increasingly diverse society already exists and will only rapidly increase. Are we getting all of the qualified students and faculty that we should from the available applicant pool? From its inception, the committee also recognized there is a need to answer the very important, but usually unspoken, question of how does the broader society benefit by having increased diversity among health care professionals, aside from the gratification of doing what is morally right?

Much of that “unspoken question” about value to the broader society was addressed by the June 23, 2003, decision by the Supreme Court on the *Grutter v. Bollinger, et al.* case, when the majority opinion found there is substantial evidence that the quality of the educational experience in a university that has achieved a “critical mass” of diversity is significantly greater than what is experienced without said diversity.

The Supreme Court further found that the need of the American society for such better educated future leaders, who are also better accustomed to interacting with a diverse world community, as well as a more diverse American society, is indeed a “compelling governmental interest.” Logic would suggest the different problem-solving skills found amongst those of diverse ethnic and cultural backgrounds should lead to more creative thinking about clinical, research, patient satisfaction and/or cost problems, which are the bottom lines for health care. Every student and every patient will be advantaged from the achievement of a critical mass of diversity in all health profession education, not just the minority students and minority patients.³

The 2004 Sullivan Commission Report, *Missing Persons: Minorities in Healthcare*, also addressed the need for diversity:

³ Institute of Medicine. Preface: In the Nation's Compelling Interest: Ensuring Diversity in the Health Care Workforce. Report of the Committee on Institutional and Policy-Level Strategies for Increasing the Diversity of the U.S. Healthcare Workforce. Washington, DC: The National Academies Press; 2004: xi.

Diversity is a critical part of the mission of health care and the national challenge of preparing our nation's future workforce. America's success in improving health status and advancing the health sciences is wholly dependent on the contributions of people from a myriad of diverse backgrounds and cultures, including Latinos, Native Americans, African Americans, European Americans, and Asian Americans. The lack of diversity is a key barrier to ensuring a culturally competent health care system at the provider, organizational, and system levels. It diminishes our nation's capacity to eliminate racial and ethnic health disparities and compromises our national capacity to advance the health sciences.⁴

APAP and the American Academy of Physician Assistants (AAPA) have both acknowledged the importance of diversity within the PA profession. In the July 2003 issue of the *APAP Update*, APAP President Jim Cawley explained to members the association's decision to endorse the Association of American Medical Colleges' (AAMC) amicus curiae brief in the U.S. Supreme Court case involving affirmative action admissions policies at the University of Michigan:

In backing the AAMC's [University of Michigan court case] brief, the association emphasized the particular relevance of this issue for PA educators who hope to better balance the composition of the country's health care workforce. Affirmative action is one way in which medical education programs can help achieve the diversity in the health care workforce that will more closely resemble the profile of American society. APAP remains proud to be among the groups in the health professions taking a stand on this issue of vital social and educational public policy.⁵

APAP also adopted a new mission statement at its November 2004 Education Forum:

APAP's mission is to pursue excellence, foster faculty development, advance the body of knowledge that defines quality education and patient-centered care, and promote diversity in all aspects of physician assistant education.⁶

At the 2004 House of Delegates, the AAPA adopted the policy brief, "Affirmative Action in Physician Assistant Education," which concluded:

The AAPA believes that physician assistants should reflect the culture and ethnicity of the patient populations they serve in order to improve the quality and accessibility of health care. Therefore, the AAPA supports affirmative action programs in physician assistant education with the goal of increasing the diversity and cultural competence of physician assistants entering the profession.⁷

⁴ Sullivan Commission. Missing Persons: Minorities in Healthcare. 2004: 28. Available at: <http://www.sullivancommission.org>.

⁵ Cawley JF. "APAP on the Side of Landmark Supreme Court Decision." *APAP Update*, July 2003. Available at: <http://www.apap.org/0703docs/0703UMichigan.htm>.

⁶ APAP Web site. Available at: <http://www.apap.org/mission.htm>. Accessed January 22, 2005.

⁷ American Academy of Physician Assistants. "Affirmative Action in Physician Assistant Education." AAPA brief, 2004. Available at: <http://www.aapa.org/members/policyres/pdf/04arefcom-b04/2004-b-03.pdf>.

In addition, many studies have shown that minority physicians take care of a higher proportion of patients from their own ethnic or racial groups.^{8, 9} Diversity within the medical profession therefore increases the availability of health care among represented populations. Unfortunately, this issue has not been researched in the PA profession. It seems clear, however, that the PA profession has a golden opportunity to be a driving force in the education of diverse medical providers — if it chooses to actively recruit candidates that reflect the nation’s current population.

It should be noted that although the term diversity is typically associated with minority populations, it is actually more complex and encompasses gender, religion, culture, sexual orientation, socioeconomic status, educational background, and other factors that make up the unique culture of this country. While the strategies and recommendations developed in this paper can be applied to other populations, the task force chose to emphasize diversity —primarily ethnic diversity.

Focusing on diversity achieves two complementary goals for the PA profession: (1) it ensures an adequate applicant pipeline of minority and other populations that are not currently represented in PA programs in numbers reflective of their percentage in the overall population; and (2) it increases the diversity of the health professions workforce. As the recent Institute of Medicine report points out, not only are minority populations more likely to receive health care from minority providers, but also, diversity — desirable in itself — benefits patients through the introduction of health care providers from differing cultural backgrounds whose perspectives contribute to a multifaceted health care system.

In recent years, with health insurance out of reach for many Americans, there has been increasing recognition that the basic health care needs of the population are not being met. The physician assistant profession was created to help populations most in need of care by creating health care providers to partner with physicians in providing quality health care for the people of this country. Few would debate that the profession needs well-qualified providers to improve access and quality health care for all people of this nation. This starts with recruiting a well-qualified applicant pool that will demographically mirror the communities in which physician assistants serve.

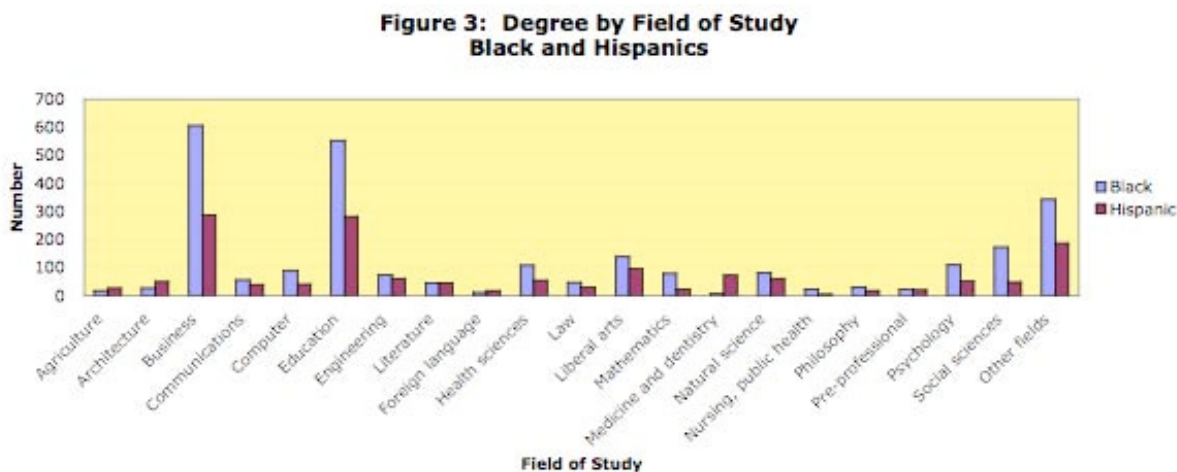
⁸ Komaromy M, Grumbach K, Drake M, Vranizan K, Lurie N, Keane D, Bindman, AB. The role of Black and Hispanic physicians in providing health care for underserved populations. *N Engl J. Med.* 1996; 334(20):1305-1310.

⁹ Stoddard JJ, Back MR, Brotherton SE. The respective racial and ethnic diversity of U.S. pediatricians and American children. *Pediatrics.* 2001;105(1):27-31.

Education

The enrollment of ethnic minorities in college has increased markedly in the last quarter-century. The percentage of enrolled college students who are ethnic minorities increased from 15% in 1976 to 28% in 2000. This is predominantly due to the increased percentages of Hispanic and Asian/Pacific Islander students (up from 4% to 10% and 2% to 6%, respectively, over that time period). The proportion of African American students rose from 9 to 11%.¹⁰ But in the health professions, the picture is not as optimistic. As the Sullivan Commission report points out, only 9% of nurses, 6% of physicians, and 5% of dentists are from ethnic minorities.¹¹ The PA profession has done better, with minority enrollment averaging 20% since 1983 and 22.2% in the last 10 years.¹² However, this figure has not improved much over the past 20 years, and it is still less than the percentage in the national population. In 2000, minorities made up 30.6% of the resident U.S. population, and this percentage is expected to increase to 49.9% by 2050.¹³ With this in mind, the profession must look toward the future.

Because ethnic diversity in the PA profession is a priority, targeted recruitment is important. There are certain fields of study with higher proportions of minority students, for example, education (see Figure 3),¹⁴ that could be targeted for recruitment. Recruitment could also occur at tribally controlled institutions, historically Black colleges and universities, and institutions serving Hispanics. Development of PA programs at these institutions should also be considered.



¹⁰ *Digest of Education Statistics*. Chapter 3: Postsecondary Education. 2002. Available at: http://nces.ed.gov/programs/digest/d02/ch_3.asp#3.

¹¹ Sullivan Commission. *Missing Persons: Minorities in Healthcare*. 2004. Available at: <http://www.sullivancommission.org>.

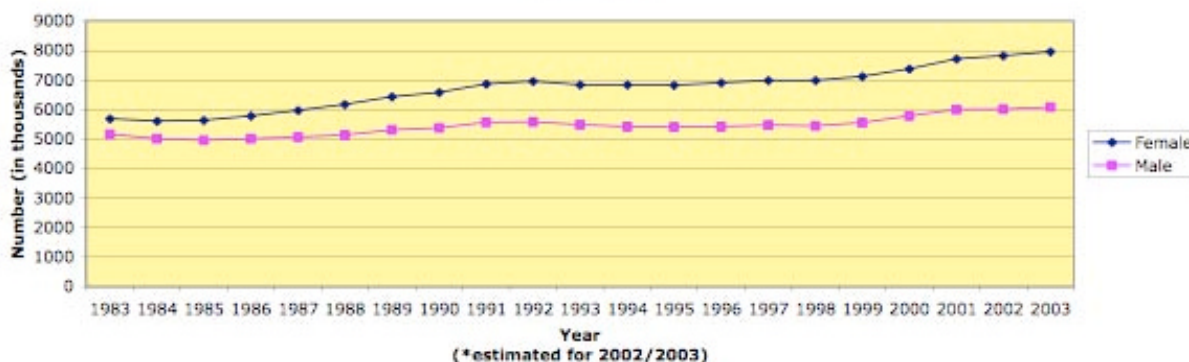
¹² Simon A, Link M, Miko A. *Twentieth Annual Report on Physician Assistant Educational Programs in the United States, 2003-2004*. Alexandria, VA: Association of Physician Assistant Programs; 2004:50.

¹³ U.S. Census Bureau. Available at: http://factfinder.census.gov/jsp/saff/SAFFInfo.jsp?_pageId=tp9_race_ethnicity. Accessed January 20, 2005.

¹⁴ *Digest of Education Statistics*. Chapter 1, Table 10. 2002. Available at: <http://nces.ed.gov/programs/digest/d02/tables/dt010.asp>.

Men could also be targeted for recruitment. When looking at the educational pipeline between 1983 and 2003, more women than men enrolled in two- and four-year, degree-granting institutions. Although the numbers of both men and women are expected to increase (see Figure 4), the number of women is projected to increase at a faster rate.¹⁵ This may have an impact on the potential PA applicant pool when looking for diversity in gender. The increase in the percentage of women in PA programs seems likely to be a result of this overall, national trend.

**Figure 4: Enrollment in 2- and 4-year Degree Granting Institutions
1983 - 2003***



What Other Professions Are Doing

In recent years, the need for proactive recruitment strategies to attract qualified, effective applicants has been recognized in many professions, including engineering, computer science, teaching, agriculture, and general graduate studies. Some professions have begun to realize that they had become complacent, assuming that the supply of resources and applicants was inexhaustible. Increasingly, over the past 20 years, professions have been finding it necessary to actively seek qualified and diverse applicants to provide for the future needs of their professions and the country.

The dental profession, for example, has recognized that minorities and disadvantaged students are not well represented: only about 5% of dentists are from underrepresented minority backgrounds.¹⁶ The dental profession has responded more proactively than many and has developed some of the best available programs for minority recruitment. The American Dental Education Association (ADEA) has worked to implement new programs across the country to increase enrollment of these populations. Among the specific strategies employed are the following:

1. Collaboration with the American Dental Association to develop the pipeline concept through community partnerships with dental schools

¹⁵ Wirt J, Choy S, Rooney P, Provasnik S, Sen A, Tobin, R. The Condition of Education 2004 (NCES 2004-077). U.S. Department of Education, National Center for Education Statistics. Washington, DC: U.S. Government Printing Office. Table 6-1, pg 115.

¹⁶ Gravely T, McCann A, Brooks E, Harman W, Schneiderman E. Enrichment and recruitment programs at dental schools: Impact on enrollment of underrepresented minority students. *J Dent Educ.* 2004; 542-552.

2. Establishment of Annual National Recruitment and Retention Strategies conferences to strengthen the national network and exchanges of best practices
3. Expansion of collaborative efforts with other organizations, such as the National Dental Association (NDA), National Association of the Advisors to the Health Professions (NAAHP), National Association of Medical Minority Educators (NAMME), Hispanic Dental Association (HDA), Friends of the Indian Health Service (FIHS), and the AAMC
4. Continuation of legislative efforts to promote funding for dental school, minority student assistance, and minority faculty loan repayment programs
5. Implementation of a minority faculty recruitment plan through foundation funding, similar to that of the AAMC
6. Provision of funding for recruitment pipeline programs that support low-income and minority student recruitment efforts through the W.K. Kellogg Foundation
7. Expansion of regional, pre-dental advisor workshops
8. Implementation of cultural and linguistic competency in dental school curriculum

The Association of American Medical Colleges encourages prospective minority students through its policy, “AAMC Statement on Medical Education of Minority Group Students,” which appears on its Web site:

The Association of American Medical Colleges (AAMC) has a commitment to increasing the number of underrepresented minorities in medical education ([see] AAMC policy statement). Our training and exposure opportunities can help put you on the path to a career in medicine. For even more resources about deciding and preparing to apply, visit Considering a Career in Medicine and Applying to Medical School. This Minorities in Medicine site provides information related to minority medical student preparation, the medical education pipeline, and financial aid opportunities available to minorities.¹⁷

The business world can also provide instructive examples. Current business literature has many marketing models that are applicable to the recruitment and retention of qualified and appropriate medical providers in today’s marketplace. One such model is the Baron’s graduate recruitment model,¹⁸ which suggests that in order to successfully implement a recruitment and retention plan for a profession, an organization must plan and follow several steps: (1) assess the status of current tools and strategies used for recruitment; (2) develop recruitment objectives and strategies to meet those objectives; (3) implement strategic plans to meet recruitment objectives; and (4) monitor and evaluate such plans. Using these basic marketing principles, APAP and individual PA programs can identify, recruit, and matriculate the student populations they desire. Developing an individualized strategy for each institution will undoubtedly enhance any program’s recruiting efforts. For a generalized, step-wise model for recruitment, see Appendix A.

¹⁷ Association of American Medical Colleges, Minorities in Medicine. Available at <http://www.aamc.org/students/minorities/start.htm>. Accessed January 6, 2005.

¹⁸ Rhoades P, Franz M. Market research to recruit graduate students in dietetics. *J Am Diet Assoc.* 1993; 93:920-922.

APAP and individual PA programs should consider utilizing the Baron's model. Implementing such a marketing plan would seem straightforward, as the formula is a simple one. However, few medical professions track and evaluate their admissions or recruitment processes.

A thorough, on-line search reviewed current literature in Medline (via Ovid and PubMed), Academic Medicine, Psycinfo, ALADIN, and ERIC databases and found several useful recruitment and retention strategies that could be applied to the physician assistant profession; however, tracking the success of such strategies is another issue altogether. Little information was found on tracking outcomes of recruitment and retention strategies of future health care providers or other professionals. When tracking is performed, it is primarily on an institutional level and usually limited to short-term, perceived success based on applicant trends, which is at best a minimal measurement of success.

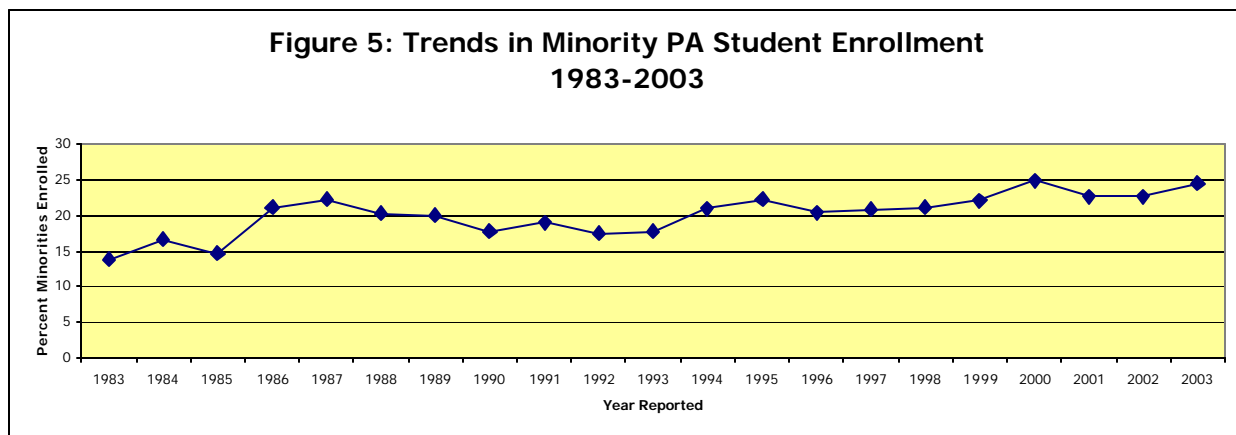
3. PA TRENDS

Knowing where to target recruitment efforts means defining the proposed applicant pool. Trends in the PA profession will give an idea of who is in the pipeline. Data from the *Twentieth Annual Report on Physician Assistant Educational Programs in the United States, 2003-2004*, showed that the typical entering student was a white/Non-Hispanic female, about 28 years of age, with 32.4 months of health care experience prior to admission.¹⁹

More detailed outcomes from the *Twentieth Annual Report* painted a picture of minority recruitment in PA education in 2003:

- Each PA program received an average of 212.1 applications and accepted an average of 47.7 students.
- The average age of students accepted into PA school was 27.8 years.
- Seventy-one percent of the applicants classified themselves as white/Non-Hispanic; 6.4% chose African-American, 6.0% Latino/Hispanic, and 7.7% Asian.
- Overall, 28.8% of applicants and 24.4% of enrolled students belong to an ethnic minority.
- Thirty-one of the 98 programs responding to the survey did not enroll any African-American students, 35 programs did not enroll any Latin/Hispanic students, and three programs did not enroll any minority students at all in 2003.
- More minority students are applying to PA programs in the Northeast consortium (48.9%), although enrollment is 31.5%. The Western region, which has 30.2% minority applicants, enrolls the largest percentage of minority students at 33.3%.
- Minority student enrollment increased fairly quickly in the early 1980s, from 13.8 in 1983–84 to 22.3% in 1987–88. Over the last 10 years, minority enrollment has averaged 22.2%, with no significant change (see Figure 5).

¹⁹ Simon A, Link M, Miko A. *Twentieth Annual Report on Physician Assistant Educational Programs in the United States, 2003-2004*. Alexandria, VA: Association of Physician Assistant Programs; 2004:87.



These statistics highlight the diversity gap within our profession. To ensure equality and high-quality care for the entire population, the demographics of physician assistants should mirror the population served. As the population of this country changes, it is imperative that the profession change with it. From the numbers presented above, it appears that minority representation in our profession has plateaued.

Recruitment and Retention in PA Programs

There are several examples of successful efforts to increase the diversity within our own profession and other medical professions. A similar theme is found throughout the literature: expanding the pool of available applicants from diverse backgrounds and ensuring their matriculation and retention within educational programs are the cornerstones of successfully increasing diversity.

In the first published article on PA program diversity, Weiner and Schneller in 1981 called for raising the number of minority students in PA programs.²⁰ They suggested that tracking the changing patterns of recruitment, admissions, and retention of minorities was important, and that applicant success in the program may not be related to educational background.

The next important study came from Garcia and Fowkes at Stanford University in California.²¹ In this program, a specified recruitment person from a minority background, well-versed in the needs of the medical profession and health care disparities, was hired. This person identified potential applicants, tracked them using background cards, and also located financial aid resources for minority students. A recruitment network was developed with agencies serving the targeted population of minorities in California. Marketing techniques were used to increase awareness of the profession, including public media promotion through radio and newspaper and in brochures featuring minority PAs. Garcia and Fowkes also emphasized the importance of admissions procedures and retention strategies. Admissions workshops and counseling were available to minority students to increase their admission rates to the Stanford PA program. The

²⁰ Weiner T, Schneller ES. Black attrition in physician assistant training programs. *American Journal of Public Health*. 1981;71(4):425-427.

²¹ Garcia RD, Fowkes VK. Recruitment and retention of minority students in a physician assistant program. *Journal of Medical Education*. 1987;62:477-484.

program offered learning support activities, personal counseling, and a faculty mentor to assist in successful completion of the program. Curriculum changes were introduced to teach about health care for minorities in California, and medical Spanish was adopted, with an emphasis on techniques for interviewing, history-taking, and patient education. Using these strategies, minority student representation increased from a baseline of 17% to 54% in the first year and 44% in the second year. This program continues to be successful at attracting and graduating applicants from diverse backgrounds. The Stanford PA program's strategies are echoed throughout recruitment and retention reports today and continue to demonstrate their effectiveness in the current marketplace.

Another success story in the recruitment of students from diverse backgrounds comes from Pacific University in Oregon.²² In this institution's recruitment program, presentations about the PA profession were conducted in minority and underrepresented communities to increase the awareness of the profession. Counseling meetings were held with potential applicants. In order to improve applicants' preparation for the next application cycle, meetings were also held for those who applied but who were not accepted into the program. Community scholarships were established for students demonstrating experience serving diverse populations. Minority PAs were recruited to help increase the awareness of the PA profession by assisting with presentations and participating in community health events. The Pacific program also introduced curriculum changes and enhancements addressing the cultural and health care needs of disadvantaged populations. This program was successful in increasing the number of minority applicants and matriculants to the program. Along with these recruitment successes, the program increased involvement and awareness of PAs in Oregon. The goal of these strategies was to increase student representation from minority and rural communities by 10% from a baseline of 5.5%. The goal was exceeded: during the first application cycle, minority matriculant representation increased to 15.6%; in the second it was 9.4%; and in the third, 20%.

A final example of the successful integration of minority populations can be seen in the partnership between the Duke University PA Program in North Carolina and its Area Health Education Center (AHEC) in a project designed to recruit and retain students from underrepresented minority and disadvantaged backgrounds. A key feature of the partnership was the use of a regional clinical coordinator with contacts and ties in the targeted communities. The program also promoted the PA profession through the local media, visits to local high schools and community groups and, in combination with AHEC, the development of new clinical training sites in targeted areas. The Duke program has successfully increased its percentage of minority students to 34% in the last three consecutive entering classes, with a large proportion of graduates returning to disadvantaged and rural populations. Through successful tracking of its graduate placements, the program was able to secure a HRSA grant to continue the recruitment and retention program.²³

Enrichment programs, which target students still in high school, are cited throughout the medical and non-medical literature. These programs allow students to attend science courses and health

²² Legler C, Stohs S. Integrating diversity into a physician assistant program. *Perspective on Physician Assistant Education*. 2003;14(1):31-36.

²³ Strand J, Carter R. Primary care training grants through Title VII, Section 747: The Duke experience. *Perspective on Physician Assistant Education*. 2003;14(1):25-30.

care lectures; students receive test preparation, mentorship experiences, and information about medical school applications and admissions. Through such activities, students' preparation for college is maximized, and they are introduced to mentors within the medical field.²⁴ Several medical schools, health professional programs, and non-medical professions use such programs. The University of Washington School of Medicine, for example, implements a six-week high school enrichment program for students from minority, disadvantaged, or rural backgrounds.

Approximately half of U.S. medical schools sponsor educational partnerships with secondary schools in an effort to stimulate interest in the sciences.²⁵ Mentoring becomes an integral part of the motivation for young people to succeed in these programs and a necessary component in all outreach programs.²⁶ Drawing upon these models, the task force concluded that it was essential that physician assistants and PA students, especially those from minority backgrounds, develop relationships with younger students from minority backgrounds, who may become the PA students of the future.

The ultimate goal of enrolling qualified physician assistant students requires focusing efforts along a continuum from recruitment through admissions and matriculation. The same themes are seen in the literature again and again: to recruit diverse student populations for the health care professions, it is imperative to cultivate applicants at an early age and begin a pipeline for potential applicants. And for students to succeed in medicine, they must develop a strong background in sciences, starting at young ages in elementary and secondary education.

Recent literature supports admissions policies that more truly reflect the requirements for succeeding in medical careers. Underrepresented minority students often score lower than their white or Asian American counterparts on such standardized tests as the GRE and MCAT, principally because of poorer educational opportunities. Both the IOM and the Sullivan Commission have recommended placing greater weight on qualitative attributes such as leadership, commitment to service, community orientation, experience with diverse groups, and other noncognitive factors in their admissions and selections policies and practices.^{27, 28, 29}

²⁴ Ramsey PG, Coombs JB, Hunt DD, Marshall SG, Wenrich MD. From concept to culture. *Acad Med.* 2001;76(8):765.

²⁵ Sullivan LW. Minority student recruitment: The challenge and the obligation. *J Dent Educ.* 1995;59(6):641-648.

²⁶ Nickens HW, Ready TP, Petersdorf RG. Project 3000 by 2000: Racial and ethnic diversity in U.S. medical schools. *N Engl J Med.* 1994;331(7):472-476.

²⁷ Hojat, M, Robeson M, Damjanov I, Veloski JJ, Glaser K, Gonnella JS. Student's psychosocial characteristics as predictors of academic performance in medical school. *Acad Med.* 1993;66(8): 635-637.

²⁸ Mitchell K. Traditional predictors of performance in medical school. *Acad Med.* 1990;66:149-158.

²⁹ Institute of Medicine. In the Nation's Compelling Interest: Ensuring Diversity in the Health Care Workforce. Committee on Institutional and Policy-Level Strategies for Increasing the Diversity of the U.S. Healthcare Workforce. Washington, DC: The National Academies Press; 2004.

4. NEW DATA

Survey Results

In 2004 the APAP National Recruitment Strategies Task Force developed a survey tool and disseminated it to the PA programs to elicit information about their current student recruitment and retention practices. Of the 133 then-accredited programs, eighty-nine schools (66%) responded. Sixty-one percent of program respondents indicated that they offered a master's degree, 19% offered a bachelor's degree, and 16% percent did not reply to the question. Three schools offered an associate's degree, and one a certificate. Most of the responding programs were located at university health science centers or four-year institutions and were fairly evenly divided among regions of the country.

The survey questions spanned the application process. The profession's Central Application Service for Physician Assistants (CASPA), initiated by APAP in 2001, is a major entry point into the profession; consequently, the survey questioned the programs' perceptions of the application service. Programs are encouraged to join CASPA, in part, because their participation contributes to the data about the number of discrete applicants to the PA profession, and questions about program participation in CASPA were also included in the survey. The majority of responding schools (60%) participated in CASPA. Another 12% were considering it. The most common reasons the programs gave for participating (>50%) were:

- To provide applicants with an efficient process to apply to multiple PA programs with a single application
- To reduce the clerical and administrative task of admission personnel within the PA programs, allowing them to focus on student recruitment and selection

Of the 24 (26.6%) responding programs that did not participate in CASPA, 16 (75%) listed reasons:

- Twenty-nine percent reported various problems relating to the CASPA process.
- Twenty-one percent had program-specific issues (for example, they accepted only in-state students; they already had a free, on-line application).
- Seventeen percent were not involved because of an institutional decision.

The physician assistant profession has been challenged to determine the true size of its applicant pool. Data from the *Annual Report on Physician Assistant Educational Programs in the United States* reports the number of applicants or applications per program. Thus, an applicant could be counted multiple times, once for each of the programs to which he applied. The CASPA data reflects individual or unique applicants. Each applicant is counted once, including applicants who apply to multiple programs. Unfortunately, at this point, not all programs participate in the CASPA system, and its data do not reflect applicants to non-participating programs. No data on the PA applicant pool is complete and accurate; however, CASPA data reported for the 2005 admissions cycle will present data from 90 (67.6 %) of the currently accredited 133 programs. The task force believes that accurate data are needed to track applicants and supports the participation of programs in CASPA. APAP should continue to collect data on the applicant

pools of non-CASPA programs and share all aggregate information freely with CASPA and the PA programs. For these reasons, the barriers to participation need to be addressed.

The survey also included questions about students who were admitted but chose not to matriculate. Nearly all of the programs responded that they had had students who did not show up the first day or who turned down acceptance, even though they may have paid a deposit. The most common reason was acceptance at another program (89%). This suggests that students were hedging their bets and did not mind losing the deposit money if they could get into a school that was higher on their wish list. Personal reason (unspecified) was cited next (67%), followed by financial (57%). (Programs could select more than one response.) Interestingly, several programs commented that they only admitted qualified applicants and did not fill seats just to have a full class roster.

Specifics about program recruitment were also included in the survey. Fifty-five percent of the respondents designated this responsibility to a specific individual within the program. The majority of the programs (61%) conducted 75 to 100% of their own recruiting, with the school or department and sponsoring institution performing much smaller percentages of the work. Two programs (2.2%) did five percent or less of their own recruiting. Only 27% of the programs indicated that a health career advisor from outside the department was specifically involved with their recruitment efforts. Thirty-six percent said that the medical director was involved with recruitment. The vast majority of the personnel responsible for recruitment were program directors and other faculty.

Students were utilized in recruitment activities in seventy-four percent of the programs, with 65% responding that they found students to be very or extremely helpful. Most programs used their students informally, for information sessions, as greeters, tour guides, or social contacts for potential students. Only a few used students as part of the formal admissions process.

From the survey responses, it became apparent that most programs did not have a specific budget line item for recruitment but had specific line items for travel and publications. A large amount of the funding for recruitment appeared to come from the program's sponsoring institution and was outside the program's budget (49%).

Every option listed on the survey for recruitment activities was utilized both on and off campus. The top three (each used by more than 75% of respondents) on-campus activities were:

1. Information sessions
2. One-on-one individual advising meetings
3. Open house/career days

The top five (all more than 75%) off-campus activities were:

1. Web sites
2. E-mail responses
3. Phone inquiries
4. Career days/career fairs
5. Mailed information (brochures)

Web sites and e-mail responses were the two most commonly used techniques, each by 91% of responding programs. It is very important for recruitment that programs keep Web site information current and respond quickly to e-mail inquiries.

Sixty-five percent of programs conducted information sessions for health majors at four-year institutions; only 40% of respondents recruited on two-year college campuses. Almost 50% of the respondents conducted some kind of session at the high school level, 24% did so at the junior high level, and 10% at the grade school level.

The task force was interested in learning how programs tracked prospective students and the outcomes of programs' recruitment strategies. Tracking was defined as any mechanism the program used to follow a prospective student from first contact to admission and graduation. Of the 62 programs that made comments, 21% stated that they had no formal means of tracking recruitment activities. Other programs used various systems (Excel/Access) or relied on student input at matriculation. Programs may have tracked phone calls, Web site usage, or e-mails, but there were no consistent trends, either in the pieces of information being tracked or in how the data were tracked.

The strategies programs perceived as most effective for recruitment were open-house meetings and one-on-one advisement. The number of recruitment activities in a year ranged from a low of three to a high of 66, with most programs in the 10–20 range. It was not clear from the responses how programs determined which strategy worked best for them.

Forty-seven percent of respondents stated that they targeted underrepresented minorities for recruitment, and 31% targeted educationally disadvantaged students. Thirty-nine percent targeted students from rural areas. Only nine percent of the programs mentioned targeting potential students with health experience, and the same percentage was limited to accepting students from their state or an assigned area. Interestingly, given the history of the PA profession which began with medical corpsmen returning from military duty overseas, only seven percent of programs targeted military personnel.

The vast majority of respondents had some contact — usually a personal contact of some kind — with applicants who did not meet their qualifications for admission or who were not accepted. Twenty-seven percent of programs referred their unqualified applicants to other professions, and 21% referred them to other PA programs. For qualified applicants who were not accepted, 21% of the programs referred them to other programs, but only seven percent referred them to other professions. Of the 92% of respondents who identified a finite time for accessing their applicant pool pipeline, 61% considered the timeframe to be one to two years, and 29% felt it was three to four years.

Overall, results of the survey demonstrate that the PA profession could do better at tracking student contacts and identifying its potential applicant pool. The creation of a tracking tool and a standardized data set would constitute first steps toward gaining a firm knowledge base about prospective PA students. The tracking tool should allow programs to maintain a connection with a potential student from first contact — even those made some time prior to college — through admission to a PA program and to graduation. It is important to understand how long students

are working to get into a program, as well as where they come from. Ideally, the tracking tool would be standardized so that the data from all programs could be compiled in a national database. This would allow programs to identify the student, regardless of which program ultimately admitted him or her. If we as recruiters were aware of who is showing interest in our programs or profession, we could better direct our efforts toward attracting the students we would like in our programs and profession. This would enable us to develop programs to foster students, especially those from specific groups, into the profession.

Roundtable Results

To help programs recognize barriers to recruitment and the most effective strategies for overcoming them, a roundtable was held at the October 2003 APAP Education Forum. Seven major topics were identified from the roundtable, Barriers to Qualified Applicant Recruitment. For each of these, the roundtable participants identified specific barriers:

1. Marketing plan
 - No specific marketing plan
 - Lack of time on PA program's part to devise a long-term recruitment strategy
 - Cost: no money for travel, recruitment, marketing, et cetera.
 - Lack of information about where and when recruiting fairs were held
2. Advisors
 - Inadequate knowledge among some advisors about PA education/profession
3. Program reputation
 - Regional locations of programs — program saturation, in Pennsylvania and New York, for example
 - Applicant's perception of the program/institution
 - Mission statement
 - Reputation
 - Private vs. public
 - Faith-based
 - Cultural/racial
 - Program duration: four-year (pre-PA/bachelor's) program vs. two-year program
 - Distance: large catchment area
4. Cost
 - Tuition/cost of program
 - Lack of financial aid/scholarships
5. Personnel
 - No specific recruiter
6. Prerequisites
 - Variable prerequisites
 - Lack of applicant access to needed prerequisites
 - Mismatch between program mission and prerequisites
7. Degree
 - Differences in the bachelor's, master's, and certificate credentials

- Many applicants looking only at master's programs

Strategies to overcome barriers within each topic have been elucidated based on results from the survey and roundtable, as well as information from the literature. (For details, see Appendix B.) Programs will improve outcomes in their recruitment and retention activities by implementing the following steps:

- Develop an inclusive marketing plan that clarifies the applicant populations from which programs wish to recruit.
- Develop a well-defined mission statement.
- Inform personnel about program prerequisites, so that potential applicants receive accurate information.
- Design Web sites to be comprehensive and to display adequate information (mission statement, program costs, admissions criteria, application/supplemental process, curriculum, et cetera.) to enable applicants to get a feel for the program.
- Develop evaluation strategies to track the success of current recruitment strategies.

5. STRATEGIES AND RECOMMENDATIONS

Based on literature searches and discussions among its members, the task force developed several sets of strategies to guide both APAP and PA programs in increasing the diversity of the PA profession. These are part of a long-term process. No one solution will fit all needs. Individual programs and APAP must decide which strategies will work best for them, based on time, money, and interest.

General Strategies

These strategies were found to be common to almost all professions considered:

- Identify capable, highly skilled individuals at a young age in target populations.^{30, 31, 32}
- Assign promotion, travel, and recruitment duties to specific individuals.^{30, 33, 34}
- Use students as a source of fresh ideas on recruitment and to generate enthusiasm about careers in the health professions.^{30, 31}
- Provide potential students with early professional and campus experiences through summer outreach programs or campus visits.^{30, 33, 34}

³⁰ Dumas-Hines F, Cochran LL, Williams EU. Promoting diversity: recommendations for recruitment and retention of minorities in higher education. *College Student Journal*. 2001;35(3).

³¹ Guzman C. Recruitment, retention, and workforce diversity. *Journal of the American Water Works Association*. 2000;92(1):76-77.

³² Kennedy G. Graduate student recruitment in public administration: A survey of NASPAA member institutions. *Public Administration Review*. 1981;March/April:249-252.

³³ Kassoff H. Civil engineering evolution. *Journal of Professional Issues in Engineering Education and Practice*. 1993;(1):8-13.

³⁴ Anderson-Rowland MR. Understanding engineering students for better recruitment strategies: A four-year study. Abstract. Proceedings of the Frontiers in Education Conference. 2000;1:19-25.

- Initiate pipeline strategies by encouraging youth at the elementary and secondary education levels to continue their education at postsecondary institutions.^{30, 34}
- Sponsor merit scholarship programs for needy students within target populations.^{35, 36, 37, 38}
- Review admissions policies to accurately reflect requirements needed to succeed in the profession and enable students from a wide variety of backgrounds to qualify for admission.^{30, 31, 34, 35, 37}
- Create retention strategies for higher-risk students.^{31, 37, 39}

Specific PA Program Strategies

The following strategies are more specific to PA programs:

- Ensure that the design of program recruitment materials (for example, brochures, Web sites) reflects a commitment to diversity through photos or a statement of the program's commitment.
- Advertise the program to targeted populations in high schools, colleges, universities, and publications that serve a large population of minority and underrepresented students.
- Target minority and diversity offices at feeder institutions for your program.
- Develop joint recruitment efforts with undergraduate or feeder institutions — especially those with strong minority and diversity programs.
- Enhance recruitment efforts by developing relationships with AAPA constituent organizations and caucuses, state PA chapters, and diversity officers within those organizations.
- Develop relationships with local organizations (for example, churches, scout troops, clubs) to enhance promotion and mentorship of potential PA applicants.
- Implement preparatory programs for undergraduate pre-health majors.
- Enlist minority alumni and community mentors as role models, and tap minority students to help recruit and mentor diverse populations through the completion of PA programs.
- Initiate program visitations, open houses, and rap sessions with targeted populations. Seek funding to help the targeted students visit the program.
- Revisit the importance of noncognitive variables in the admissions process. Review correlations between the success of minority students and various admissions criteria as part of a reexamination of admissions procedures.
- Review the program's admission criteria and rules about timing for successful completion of the program to ensure they are not biased against students from disadvantaged educational backgrounds.

³⁵ Ginsberg R, Whaley D. Admission and retention policies in teacher preparation programs: legal and practical issues. *Teacher Educator*. 38(3):169-189.

³⁶ Hadfield J. Recruiting and retaining adult students. *New Directions for Student Services*. 2003;102:17-25.

³⁷ Guzman C. Recruitment, retention, and workforce diversity. *Journal of the American Water Works Association*. 2000;92(1):76-77.

³⁸ Dyer JE, Breja LM. Problems in recruiting students into agricultural education programs: A delphi study of agriculture teacher perceptions. *Journal of Agricultural Education*. 2003;44(2):75-85.

³⁹ Cabrera R. Retention issues in legal education: The roles of undergraduate educators and of academic support in the law school. *Journal of College Student Retention*. 2002;3(2):167-182.

- Seek grant monies and financial aid resources for students from disadvantaged or diverse backgrounds.

Recommendations for APAP

The APAP National Recruitment Strategies Task Force recognizes the importance of diversity in the PA profession. Therefore, the following recommendations are made with this in mind. Programs should also bear in mind the importance of strategies for improving the retention of applicants, although this is not within the scope of this report.

1. Develop a tracking mechanism for ongoing evaluation of the potential applicant pool.

- Encourage the participation of PA programs in CASPA. A mechanism for free exchange of data between CASPA and non-CASPA programs needs to be developed. APAP should continue to collect data on the applicant pools of non-CASPA programs, and aggregate, unprotected information should be shared freely among APAP, CASPA, and PA programs.
- Retain a statistician to conduct appropriate statistical evaluation of CASPA raw data and make this available to all programs.
- Add questions to the CASPA application form, the AAPA new enrollee survey, and programs' supplemental applications that pose such questions to applicants as, "When did you first hear about the program?" and "When did you first contact the program?"
- Encourage programs to track their applicants to learn where they are accepted.
- Survey programs on a regular basis to determine how classes are changing: gather applicant data, including numbers of qualified applicants and spots filled, and assess feeder institutions.

2. Develop resources and training opportunities on recruitment strategies for PA programs.

- Develop a resource list of possible recruitment strategies and educational resources for PA programs, including:
 - A list of the tribally controlled institutions, historically Black colleges and universities, and Hispanic serving institutions
 - A list of schools that CASPA applicants have attended in each state, updated annually, to allow programs to identify and target specific schools for recruitment
 - A financial aid booklet for students and faculty
 - A list of program funding sources, including:
 - Health Career Opportunity Programs (HCOP)
 - HRSA, Title VII
 - Private foundations, for example, Robert Wood Johnson, Ford, Gates, Kellogg
 - USDA

- APAP
 - Other organizations
 - A list of Area Health Education Centers (AHEC) that may help with student travel, housing, tutoring, clinical rotations, and recruitment activities
 - Advertisements in *Keepsake* (Spectrum Publications), a journal that targets minority populations, and other publications
 - b. Commission workshops at APAP meetings for PA program faculty and staff with a focus on:
 - Web page design. Standard content of PA programs' Web sites should include:
 - Mission statement
 - Admissions criteria
 - Application process
 - Curriculum
 - Supplemental application (if any)
 - FAQs, content information
 - Practical development and implementation of recruitment strategies
 - Tracking mechanisms to promote successful recruitment
 - c. Reestablish Project Access in conjunction with AAPA. (As part of Project Access, PAs presented at local high schools, especially those with high minority populations, to teach students about the PA role and profession.)
- 3. Create ongoing mechanisms to promote and evaluate recruitment and enrollment strategies for PA students in the programs.**
- a. Consider the Baron's graduate recruitment model as a recruitment tracking tool for use by APAP and the PA programs.
 - Assess the status of current tools and strategies used for recruitment.
 - Develop recruitment objectives, as well as strategies to meet them.
 - Use outcomes to formulate a well-defined mission statement.
 - Clarify the applicant population of interest.
 - Implement strategic plans for recruitment objectives.
 - Monitor and evaluate such plans.
 - b. Establish a standing Public Relations Committee (PRC) that would perform some of the following activities:
 - Coordinate and oversee recruitment efforts for APAP.
 - Work with CASPA.
 - Work with the AAPA PRC.

- Develop liaisons to organizations like the NAAHP, AAMC, AMA, AOA, AACOMAS, and NAMME (already in effect).
 - Develop educational materials.
 - Maintain a resource list for programs (see Recommendation 2a).
 - Track data from the *Annual Report on Physician Assistant Educational Programs in the United States*.
 - Develop a short- and long-term applicant tracking mechanism for APAP and the PA programs; monitor the results.
 - Data would include name, address, and date of expected application to the programs, current educational institution, and most recent health care experience.
- c. Create an APAP Marketing Department to
- Educate graduate PAs about APAP and the current PA educational process.
 - Market APAP to its member faculty.
 - Inform faculty of searchable, on-line *PA Programs Directory*.
 - Review APAP Web site for the following:
 - Graphics and language inclusive of ethnic and cultural diversity
 - Explicit language stating APAP's commitment to diversity, similar to the AAMC's policy statement
 - Clear links to the *PA Programs Directory* from the APAP home page
 - Links to NCCPA, AAPA, and other appropriate organizations
 - FAQs

4. Continue to identify and evaluate barriers to recruitment and admission of qualified applicants and propose solutions.

- a. Help individual programs to identify and evaluate their own recruitment barriers so that they can develop individual solutions.
- b. Offer future roundtables on perceived barriers, as well as mechanisms to evaluate solutions.
- c. Establish a task force to determine the feasibility of minimum, standardized prerequisites to facilitate application to the programs and increase the number of applicants.

Appendix A

A Generalized, Step-wise Approach to Developing a Recruitment Strategy

- 1) Develop a mission statement that reflects the program's goals and desired student population. Identify the unique characteristics of the parent institution that set it apart from other programs. Identify the future directions of the program, and list them in the mission statement. Include strategic marketing methods to analyze, plan, implement, and evaluate your desired outcomes, which should reflect the needs of the institution's target audiences, as well as its overall organizational objectives.
- 2) Assess the current and desired target populations. This should include an internal audit and review of all recruitment activities. This assessment will fine-tune the program's institutional objectives and strategies, while identifying potential barriers to success.
- 3) Identify the target population(s) from which you hope to recruit. Be certain to identify these populations on all official program literature and information. It is essential that programs understand the special needs of their target populations and consider institutional barriers that could hinder the matriculation and success of any special populations. Assessing the social support structures needed for these student groups and putting them in place can also impact the future recruitment successes of sought-after populations.
- 4) Identify clinical rotation sites and geographical locations that have concentrations of your program's desired population.
- 5) Develop recruitment strategies and outcome goals for target populations. Ensure a data-rich environment by collecting and analyzing currently available data on your recruitment activities and admissions processes. Decide which additional data is needed to assist in the development and evaluation of your program's future goals.
- 6) Implement recruitment and marketing strategies.
- 7) Analyze your enrollment cycle. The effectiveness of all recruitment techniques depends upon a complete review of the program's entire admissions cycle, beginning with initial inquiries to actual enrollees. Recognizing the admissions productivity of each aspect of the enrollment cycle is crucial to the overall success of any recruitment marketing plan; for example, what are the program's inquiries-to-applicant, applicant-to-acceptance, and acceptance-to-enrollee yield rates? Analyzing these factors in conjunction with secondary factors such as gender, feeder institutions, previous academic experience/degrees, and past health care experience can help programs with the proper utilization of financial resources and faculty effort in recruiting events.

Appendix B

BARRIERS	STRATEGIES TO OVERCOME BARRIERS
Marketing Plan APAP	Work with AAPA/State organizations <ul style="list-style-type: none"> • Public Relations Committee • Constituent Relations Committee
	<ul style="list-style-type: none"> • Create APAP Public Relations Committee (PRC)/APAP Marketing Department • Develop own PA liaisons to NAAHP, AAMC, AMA, NAMME (already in effect), AOA, AACOMAS • Work with AAPA Public Relations Committee <ul style="list-style-type: none"> ▪ Develop educational materials
	Mission statement <ul style="list-style-type: none"> • Clear statement of the type of applicants the profession wishes to recruit • Explicit statement of commitment to increasing the number of underrepresented minorities in PA education
	Web site <ul style="list-style-type: none"> • Inclusive Web site, graphics, and language • Maintain and update features; what's new • Clear link to and information on the <i>PA Programs Directory</i> from the APAP home page • Link to issues of <i>Keepsake</i>, NCCPA, AAPA, et cetera • Curriculum • Recommendation that programs standardize content <ul style="list-style-type: none"> ▪ Mission statement ▪ Admissions criteria ▪ Application process ▪ Curriculum ▪ Supplemental application (if any) ▪ FAQs, content information
	Marketing APAP to PA faculty <ul style="list-style-type: none"> • Inform faculty of searchable, on-line <i>PA Programs Directory</i> • Recruitment workshop <ul style="list-style-type: none"> ▪ Include diversity
Marketing Plan Programs	Mission Statement <ul style="list-style-type: none"> • Clear statement of the type of applicants the program wishes to recruit • Reflect program's goals/philosophies
	Web site <ul style="list-style-type: none"> • Inclusive Web site, graphics and language • Maintained/updated features; what's new • Clear link /information to the <i>PA Programs Directory</i> from the home page • Link to Keepsakes, NCCPA, AAPA, etc. • Curriculum • Standardized content <ul style="list-style-type: none"> ▪ Mission statement ▪ Admissions criteria

	<ul style="list-style-type: none"> ▪ Application process ▪ Curriculum ▪ Supplemental application (if any) ▪ FAQs
	<p>Targeting populations</p> <ul style="list-style-type: none"> • Feeder schools • Second career applicants <ul style="list-style-type: none"> ▪ Hospitals, clinics ▪ Military facilities ▪ Conferences for allied health professions: RT, X-ray and lab technicians, pharmacists, nurses, EMTs, athletic trainers, PTs, OTs, MSWs/mental health providers, et cetera • Use CASPA data to identify schools from which applicants applied; also pinpoint those schools from which applicants do not apply <ul style="list-style-type: none"> ▪ State board of regents • Others • Historically Black, Latino, Native American, Asian,/Pacific institutions • High schools, magnet schools, junior highs, boys' and girls' clubs, health classes • National organization of high school counselors • Churches, community centers
Advisors	<p>APAP component (See liaisons)</p> <ul style="list-style-type: none"> ▪ Work with NAAHP about success measures ▪ Consider how to accomplish the cultural shift away from measuring only those who get into medical school <p>Program component</p> <ul style="list-style-type: none"> ▪ Feeder schools ▪ Own institution
Program Reputation	<p>Activities</p> <ul style="list-style-type: none"> • Info session • Saturday academies/summer programs (preparatory programs) • Program visitation/campus tours • Community projects <ul style="list-style-type: none"> ▪ Health fairs ▪ PA week
Cost	<ul style="list-style-type: none"> • Line item for recruitment • Scholarships — work on developing full ride • Evaluate cost savings — redirect • See resource list for funding sources • Increase marketing of <i>PA Program Directory</i>
Personnel	<ul style="list-style-type: none"> • Utilize students, alumni, local PAs • Protected faculty time • Develop FAQs for Web site, staff, faculty • Staff utilization • Orientation to faculty/staff/students <ul style="list-style-type: none"> ▪ Public relations: be polite on the phone • Offer incentives for assisting program

	<ul style="list-style-type: none"> ▪ Faculty appointments give access to library, et cetera ▪ Faculty appointments give access to library, et cetera
Degree	<ul style="list-style-type: none"> • Publicize program degree offerings clearly
Miscellaneous	<p>Tracking (Marketing and Recruitment Committee)</p> <ul style="list-style-type: none"> • APAP PRC: suggest programs develop long-term tracking mechanisms to ensure a pipeline based on standardized data from information sessions <ul style="list-style-type: none"> ▪ Data to include name, address, date of expected application, current educational institution, most recent medical experience • Short-term tracking <ul style="list-style-type: none"> ▪ Programs to consider specific questions to include on supplemental applications, for example, “When did you first hear about the program?” and “When did you first contact the program?” ▪ Outcome — how is the class changing? Applicant data; number qualified; spots filled; feeder institutions • Consider tracking interview population via surveys (paper, phone, or Web)