

Review Article

# Recruitment Strategies and Holistic Review in Increasing URM Student Populations in PA Programs: A Review of Literature

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## Abstract

A significant lack of diversity in the healthcare workforce exists throughout most health professions and contributes differences in treatments and access to care among groups underrepresented in medicine (URM). Substantial research has been gathered indicating a series of health disparities that disproportionately impact racial and ethnic minorities. The PA profession has been no exception to these challenges in diversity, though recent changes in accreditation standards now require programs to increase recruitment efforts for these populations. This article identifies recruitment strategies and methods of holistic review utilized by PA programs successful in increasing their URM student populations. Recruitment methods highlighted in this paper have been organized into 3 types: pipeline programs, mentorship programs, and general recruitment efforts. Community collaborations and partnerships with pre-pa and diversity organizations have proven successful in promoting URM population success in health professions, while altering admissions methods to favor qualitative measures has also proven beneficial. With these efforts, reflection on successes seen in other PA programs in the development of pipeline programs, utilization of recruitment efforts, and adaptation of admissions strategies should serve as rough guides for next steps in their program's development. Having representative diversity on admissions committees and increasing recruitment efforts specific to DEI communities should be considered minimum steps taken by programs to advance diversity in the PA profession.

## Keywords

Diversity, Health Workforce, Pa Education, Recruitment

## 1. Introduction

A significant lack of diversity in the healthcare workforce exists throughout most health professions, and contributes to various long-standing issues in healthcare regarding differences in treatments and access to care among groups underrepresented in medicine (URM) [1-4]. These groups are defined as racial and ethnic populations underrepresented in the medical profession relative to their population numbers

and include Blacks, Mexican-Americans, Native Americans, and Mainland Puerto Ricans [5]. The physician assistant (PA) profession stands out in its lack of diversity even among other health professions, with 80% of certified PAs identifying as white and only 3.9% identifying as URM [6]

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ethnic minorities [1-4, 7-8]. While not every disparity has clear lines of connection to the lack of diversity in the healthcare workforce, general improvements in workforce and student body diversity have brought benefits and improvements to some of these disparities [9-11]. Generally, worse health outcomes from preventable and treatable diseases have been seen in racial and ethnic minority populations [7], while pervasive levels of implicit bias in the healthcare workforce have been linked to differences in patient-provider interactions, treatment decisions, treatment adherence, and patient health outcomes [8]. Conversely, research on physician-patient racial concordance associates concordance with greater levels of communication and patient satisfaction [9, 10]. In alignment with the PA profession's historical mission to improve care in medically underserved communities [12], URM providers are generally more likely to practice in these communities [10]. A US Department of Health and Human Services review of literature concluded that greater workforce diversity could lead to improved public health outcomes [10].

This lack of diversity has long been recognized by a variety of medical institutions. AAMC has issued a commitment to increasing diversity and fostering culturally prepared workforces [13]. The AMA has similarly committed to workplace diversity and created internal policy efforts to increase diversity in the physician workforce [14, 15]. In the PA arena, the AAPA has stated its commitment to increasing diversity in the PA profession and the PAEA has recognized equity, diversity, and inclusion efforts as "fundamental" to their mission [16, 17].

Despite recognition of this problem by PA institutions, substantial change in student and workforce diversity has yet to be seen [18]. To further push PA programs towards increasing their URM student populations, the ARC-PA has recently made demonstration of diversity, equity, and inclusion efforts a requirement for PA program accreditation, with URM recruitment strategies a point of emphasis [19]. In order to further the goals set by PA institutions and provide insight into possible methods to increase URM student populations in PA programs, this literature review aims to evaluate effective recruitment and admissions strategies utilized by PA programs to advance DEI efforts. Because research on PA program recruitment and admissions is less developed than that of medical schools and other health professions, generalizable research on medical schools or other health professions are utilized when PA-specific research is inadequate.

## 2. Background

### 2.1. Recruitment

Recruitment methods highlighted in this paper have been organized into 3 types: pipeline programs, mentorship programs, and general recruitment efforts. Generally, this order presents methods from the most to least resource intensive,

though specific research discussing resources required for any of these efforts is lacking. While some examples listed may take up a significant amount of time and resources, programs are encouraged to be purposeful in their selection of the recruitment methods presented to best fit their program's needs.

### 2.2. Pipeline Programs

A clear definition of what constitutes a "pipeline program" is lacking in research. These are programs that are run by an overarching educational institution and provide extracurricular educational resources over multiple years to improve learning outcomes and provide educational support to students. For medical professional programs, pipelines have long been established as reliable methods of recruitment for URM students [20]. While generally more resource-intensive than other recruitment strategies, successful pipelines effectively reduce common barriers of entry for URM students by improving GPAs and preparing students for science-intensive coursework, while fostering interest in the medical professions and increasing matriculation of URM students into the parent programs or other programs in the healthcare field [21]. Various research and examples on the topics reflect the potential efficacy that programs can have in increasing URM student populations and the need for these programs in the communities they serve.

Stanford University created a biomedical pipeline program with sustained success over its 26-year existence [21]. The Stanford Medical Youth Science Program (SMYSP) is a 5-week Summer Residential program for Northern California high school students, with a focus on very low income and URM students. Through its existence, 90% of 618 program graduates that are not currently attending high school or college have earned a 4-year degree. 47% of those students have completed or are attending medical or graduate school, and 44% have begun careers in the biomedical field. The program attributes its success to 6 key elements: A financial sustainability plan, addressing local biomedical workforce needs, host undergraduate university with STEM resources, pipeline to science rich universities not limited to the sponsoring undergraduate university, availability of further graduate and professional biomedical training, and commitment of local workforces to supplement hiring of diverse applicants and aid in outreach.

In a comprehensive analysis of their own PA pipeline program, faculty of the University of Southern California laid out a template for future program development to be utilized by other programs [22]. The pipeline involved Kindergarten to 12<sup>th</sup> grade students in 10 pipeline sessions throughout the academic school year, with activities in each session that varied depending on the student's grade. This pipeline emphasized the importance of community collaboration and outreach to school representatives, as well as a commitment to self-improvement and analysis to maintain long term success.

Other PA pipeline programs selectively incorporate pipeline components without being as comprehensive in their

scope. While these programs are generally less effective in barrier reduction efforts, they can still achieve reasonable levels of success while expending less resources. The University of Utah, for example, developed a 4-year pipeline beginning in the first year of undergraduate education, with the intention of increasing racial and ethnic diversity in all health professions by preparing students for competitive admissions processes. The program began in undergraduate education, and recruited URM student populations out of local and regional high schools and offered students accepted into the University of Utah an opportunity to apply to the program [23]. Though the pipeline had a high rate of attrition (62%), any participation was generally associated with better GPA and graduation rates than those that never took part. While the program would not necessarily increase applicant pool diversity by garnering greater interest in the PA profession specifically, or by preparing high school level URM students for undergraduate programs, the associated GPA increase could contribute to improved matriculant diversity. The Medical University of South Carolina has also created a pipeline with a focus on community partnership, collaborating with the state's largest HBCU in order to improve diversity in their program [24]. The program involves meeting one Saturday a month via zoom to discuss the PA career path.

Programs considering developing pipeline programs should see both the advantage of early, comprehensive pipeline programs in preparing URM students for successful careers in health, but also note the flexibility offered by the numerous methods of constructing a pipeline. These are programs that can start small and be built on over time. The flexibility and efficacy can be a significant advantage to PA programs that may lack the necessary resources to develop a comprehensive pipeline. Additionally, utilizing frameworks laid out by other programs could prove advantageous.

### 2.3. Mentorship Programs

Mentorship programs pair high school or college students with current medical professional students or medical professionals in a career of interest, in order to guide students through the multiple hurdles that come with becoming a competitive medical professional school applicant, and often further into their medical schooling and practice. While literature on the efficacy of isolated PA mentorship programs is sparse, the potential of this approach is considerable. The valuable information and guidance that such programs can offer to URM student populations, coupled with their relatively low resource expenditure compared to pipeline programs, indicate a significant opportunity to enhance URM student preparedness for PA education.

Within the literature on medical school mentorship programs, UC Irvine found success in utilizing a "mentorship cascade" in a 2-week summer program that was, in large part, run by medical students [25]. These medical students mentored undergraduate premed student participants, who in turn

mentored high school students, also mentored by the medical students. In this program, students were recruited out of local high schools by informing teachers and principals of the program's existence, and URM students were targeted by utilizing outreach programs and communicating with various underserved high schools. Medical students, with the assistance of faculty, created and taught course material that included workshops and anatomy labs, and provided information and resources about the process of applying to medical schools. Premed students provided guidance to high school students as they took part in the workshops. The value of each group's participation was viewed positively, with mentors reporting an increase in self-confidence, leadership abilities, and an awareness of importance of cultural diversity and serving underserved populations. URM mentees reported value in working with role models with shared cultural background, and both groups reported an increased sense of empowerment and positively valued the relationships developed with those they worked alongside. While this program is more of an "enrichment program" with a mentorship framework, the resources required to construct this would be similar to a pipeline program, with the benefits to those who participated can be highly attributable to the mentorship component.

In combination with their pipeline program previously discussed, the University of Southern California emphasized the importance of their mentorship component in the success of their pipeline, which matriculated 46 students between the years of 2015 and 2019, with 62% of these students being URM [26]. While the pipeline focused on introduction of the PA profession to students in local high schools as well as assistance for college applications and preparedness, mentoring efforts paired pre-PA students with practicing PAs and focused on clinical shadowing opportunities and mock interviews.

Other research on mentorship components in pipeline programs suggests a lack of mentorship was a cause for URM student attrition from pipeline programs [27], while URM and low-income focused mentorship programs in dentistry cultivated interest in the profession by the mentees participating [28]. One study also suggests the URM students with race-concordant mentors increases self-confidence in the participating mentees [29].

A significant advantage to these mentorship programs is low resource requirements, while also being efficient in their delivery of information and preparation for PA professions. Preparation for PA education necessitates completion of specific prerequisite requirements including a range of courses, patient care hours, and shadowing hours. Utilizing mentorship programs early in student's academic careers can offer guidance through this complex process, as well as facilitating interest in the PA profession for these students.

## 3. General Recruitment Strategies

General recruitment efforts, while not as effective in di-

rectly addressing barriers to admission as pipeline programs, can be extremely important in improving applicant pool diversity in the PA profession. Some studies suggest active recruitment efforts of any students are not seen as necessary by PA programs due to the steady increase in applicants over time [30, 31]. DiBaise et al speculated this increase in competition has caused URM students to be disproportionately disadvantaged, possibly due to the lower average GPAs in these populations [31]. This would be consistent with research on medical school admissions processes, in which authors speculated concluded that the increase in applications likely increases reliance of admissions committees on quantifiable data (ie. GPA and GRE scores) obtained from applicants [32]. These trends in medical and PA school admissions underscore a need for greater intention from PA programs to recruitment, specifically for recruitment URM populations into their programs.

Existing research lays out trends in recruitment strategies utilized by medical and PA programs for increasing URM student populations. Research on medical school's recruitment strategies identified the most often utilized recruitment strategies as pre-admission site visits to schools (91%) and pre-admission counselling (87%) [33]. The methods that were most often rated as a "Very Effective" recruitment strategies by these schools were URM student recruiters (61%) and enrichment programs (56%). The strategy next most often rated as "Very Effective" was pre-admission site visits (44%). In an analogous study on PA programs, site visits (61.2%) and preadmission counseling (58.2%) were also the most consistently utilized strategies, though utilized much less often than medical school strategies [31]. In terms of perceived efficacy, minority student-targeted presentations (35.3%) was the most often rated strategy as "Very Effective", while the strategy most often rated as either "Effective" or "Very Effective" was enrichment programs (100%), though this strategy had a low frequency of use (9%). It should be noted that the survey of PA programs gave participants the option to rate strategies as either "Effective" or "Very Effective", whereas the medical school survey only offered the option of rating strategies as "Very Effective", so direct comparisons of perceived efficacy are difficult to draw. Curious in these findings is the decreased frequency in use of any recruitment strategies by PA programs surveyed relative to the medical programs surveyed. Possible explanations for this could be inherent differences in PA recruitment and medical school recruitment. Researchers suggested that some of the reasons for this decrease in recruitment efforts in their PA program survey could be attributable to the aforementioned increase in applications [31]. They also suggest other issues that arise from this increase, such as reliance on quantitative data by admissions committees, could be exacerbated by faculty shortages in existing in many PA programs.

One reliable method of recruiting URM populations have come in the form of utilizing organizational partnerships, particularly with undergraduate clubs and communities. One

of many methods utilized by the University of Utah to successfully increase their URM student population was in partnering with their Pre-PA organization to aid in recruitment efforts [34]. The Toledo College of Medicine in Ohio, after experiencing years of low URM student matriculation, utilized the colleges undergraduate branch of the Student National Medical Association (SNMA) in order to develop and implement a new framework to increase interest in their program from URM applicants to which they had offered matriculation [35]. The program was highly successful, and included further partnerships with on-campus diversity committees composed of faculty, staff, deans and community members. Every URM student that eventually matriculated into the program cited the SNMA student organization as an influential factor in their decision.

Some data also suggests racial diversity on campus can serve as a recruitment tool for URM populations in itself [36]. Conversely, anecdotal evidence indicates a lack of diversity can dissuade URM students from attending a medical program [35]. While program location has been shown to be a non-modifiable predictor of PA program diversity [37], utilizing these collaborations with undergraduate programs to display a commitment of the PA program to increasing URM populations and diversity could encourage interest in the profession from URM populations, just as it encourages URM program matriculation for schools that display this commitment [35].

College Pre-PA and diversity organization collaborations with PA programs can effectively be utilized for URM population recruitment efforts. Just as mentorship can serve the dual purpose of providing information and garnering interest in the PA profession, so too can these organizations. Considering the importance of taking specific courses to meet PA program requirements, utilizing these programs to target undergraduate freshmen URM students could prove advantageous. Additionally, the reduction in recruitment efforts in PA institutions is disconcerting given the consistently low levels of URM populations in PA programs. In refocusing recruitment efforts, schools would likely benefit from collaborations with pre-pa and diversity organizations in combination with prioritizing recruitment efforts that have been historically effective, including enrichment programs and minority-student targeted presentations.

## 4. Holistic Admissions

### 4.1. Core Principles

Holistic admissions have gained traction over time as a popular admissions method for shifting the balance of the admissions process not only towards URM candidates, but towards candidates that can offer more qualitative attributes as a whole [38]. The AAMC outlines the core principles of Holistic Review as:

Applicant selection criteria are broad, clearly linked to school mission and goals, and promote numerous aspects of



diversity as essential to excellence.

Selection criteria include experiences and attributes as well as academic performance. These criteria are:

Used to assess applicants in light of their unique backgrounds and with the intent of creating a richly diverse interview and selection pool and student body, Applied equitably across the entire candidate pool, and Supported by student performance data that show that certain experiences or characteristics are linked to that individual's likelihood of success as a student and/or physician.

Schools consider each applicant's potential contribution to both the school and the field of medicine, allowing them the flexibility to weigh and balance the range of criteria needed in a class to achieve their institutional mission and goals [39].

## 4.2. Current Manifestation in PA Admissions

Holistic review has been identified as a reliable approach for improving URM populations in the healthcare workforce [35]. In the context of medical schools, ample research shows the benefits of holistic review for increasing admissions of URM populations to be significant [40-42]. While progress is being made, holistic review processes in PA programs have yet to be fully realized. Using data taken from the PAEA's annual survey of PA programs, research found that the vast majority of programs reported utilizing holistic review and, accordingly, these programs were found to utilize the core principles of holistic review more than programs that reported not using holistic review [43]. However, while program's use of holistic review was positively correlated with URM student percentage, the correlation was inconsistent and the percentages of URM students was only slightly higher than programs that reported not using holistic review. Differences in matriculant quantitative measurements between programs were largely insignificant. Overall, nonscience GPAs as well as GRE scores did not differ significantly between the programs. Differences were noted in the average science GPAs, with programs that reported using holistic review accepting students with average undergraduate science GPAs of 3.49 compared to 3.57 in programs not utilizing holistic review, and in patient care hours, with schools utilizing holistic review admitting students with around 850 more patient care hours than other programs. Relative to the small difference in matriculant science GPAs, programs reporting use of holistic review arguably have greater quantitative expectations than those that do not.

One potential explanation for the inconsistency in incorporating holistic review strategies into admissions practices in PA programs could be the difficulty that comes with measuring non-cognitive attributes compared to the ease offered by quantitative cognitive measurements (i.e. GPA and standardized test scores). It has been speculated that with the increasing number of applicants in medical programs, admissions committees are more likely to rely on quantitative measures [32]. Additionally, quantitative measures including

GPA and GRE scores have established predictive value for PANCE pass rate [44]. The same study found no noncognitive factors linked with PANCE success. If quantitative measures of success are reliable in predicting PA program success, it is reasonable for PA programs faced with revamping their admissions procedures to question why change is necessary. Jones et al. [45] and Brenneman et al. [46] stressed a shift in focus when evaluating noncognitive attributes. Rather than attempting to use these attributes as predictors of academic success, admissions committees should be more mindful of attributes that contribute positively to later clinical practice. This idea would be consistent with the AAMC definition for a holistic review process, which necessitates consideration of how an applicant might contribute value not only as a student, but also as a future medical practitioner [39].

Despite the lack of overall change in URM student matriculation with holistic review implementation, multiple examples serve as testaments to the positive effect updated holistic admissions processes can have on increasing URM populations. Chatham University developed a new admissions process and viewed results over two years, with a key change being the introduction of the holistic credit system [47]. The changes lead to an increase of URM acceptances by 361.5% and URM matriculants by 1277% in the years it was incorporated. In the University of Utah's admissions process overhaul, the development of holistic review processes was incorporated that partially contributed to the program's significant increase in URM applicants and matriculants [34]. The Medical University of South Carolina similarly revamped their admissions review process to significantly increase both the URM population interviews offered and URM matriculants [48]. In their previous process, academic attributes such as GPA and GRE scores were combined with interview scores to give final student ratings. Under their new holistic review process, non-academic attributes and indicators of motivation, persistence, and determination were evaluated first, and these factors were increased in weight relative to GPA. This change led to an increase in URM interviews by 2.9 times previous rates. In the interview process, all applicants offered an interview were seen as academically qualified, and the final cohort selected was based off this interview alone - a change which led to a final URM student matriculation increase of 3.6 times that of the previous cohort. Of the programs discussed, only the University of Utah provided data on subsequent measures of success in the cohorts influenced by holistic review, reporting consistent first-attempt PANCE pass rates compared to previous cohorts.

## 5. Implicit Bias

While increased URM student percentage in PA programs on the whole was found to be positively, though inconsistently, correlated with programs using holistic review, African American student populations evaluated in the study did not change significantly [31]. This pattern of improved

URM student populations, while leaving African American student populations unchanged, has similarly been seen in medical school and nursing school implementation of holistic review [49, 50]. Further research into possible causes is necessary, however it could be speculated that implicit bias, specific to the African American population, comes into play.

Previous research has verified the existence of implicit bias in the medical field [51], though administration of the Harvard Implicit Association Test (IAT) to admissions committees has been met with varying degrees of success in increasing URM student populations [52]. In studying the implementation of the IAT to the admissions committee of Ohio State University College of Medicine, the effect was significant. 48% of respondents stated they were aware of their results during their next admissions cycle and 21% reported that their results impacted admissions decisions. Following the IAT administration, the subsequent class was reportedly the most diverse in the program's history. These results were not replicated in PA admissions, in which administration of the IAT to four different PA admissions committees was followed by insignificant changes in the likelihood of URM interview invites, admissions offers, and program matriculations. Authors speculated this could possibly be due to existing holistic admissions procedures that have been implemented previously at these schools [53].

## 6. Faculty

In Dibaise et al.'s study on factors influencing URM student populations in PA programs, researchers observed a positive correlation between heightened URM student enrollment and the inclusion of one or more African American or Hispanic faculty on admissions committees [31]. While this finding suggests a valuable method for increasing URM student populations, it is important to understand the unique challenges faced by URM faculty to support this staff appropriately.

According to the latest PAEA faculty data, only 9.2% of PA faculty identify as URM [54]. Research indicates that URM medical students are less inclined to contemplate careers in academia due to perceptions that succeeding in this realm may be challenging based on their racial background. This thinking is not necessarily unsubstantiated, as research has also found URM medical faculty achieve tenure and promotion at lower rates than white faculty [55].

In regards to pipeline and recruitment efforts, Vellejo et al. contribute to this discussion by noting that the extracurricular nature of pipeline programs can adversely affect URM faculty's career outcomes due to the challenges of balancing these demands with their standard workloads [22]. Their research recommends recognizing and rewarding these additional components of work with expected promotion and tenure.

Addressing this issue goes beyond simply hiring URM faculty. It is important for programs, if utilizing URM faculty

in areas such as pipeline programs and URM recruitment, to have a nuanced understanding of the roles and unique challenges faced by these individuals, and incentivizing their efforts appropriately.

## 7. Limitations and Further Research

In shifting admissions criteria away from quantitative measures, special attention should be paid to retaining URM students. Data shows in PA programs, retention rates for some URM populations are reduced [56]; however, there is a significant deficiency in research on various methods utilized for retention in PA programs. Further, holistic admissions strategies and recruitment strategies seem to be very inconsistent among PA programs. Further research on successful strategies utilized by PA programs for recruitment and holistic review to guide other programs could help to advance an increase in URM matriculation across programs.

## 8. Discussion and Recommendations

There continues to exist a strong desire for participation and untapped potential of URM populations to pursue careers in medicine. Stanford's Medical Youth Science program, focused on low SES and URM students accepts 24 students into their 5-week program, though receives around 300 applications [21]. UC Irvine's study on their "mentorship cascade" enrichment program suggested, based on the fast rate of which the program was filled, that there was "intense demand" for these programs [25].

There are many factors that come with the growing PA profession that actively work against URM students, and suggest that a lack of action will only worsen diversity in medicine. Researchers have suggested that increases in PA applicant pools lead to overreliance on quantitative measurements which disproportionately disadvantages URM students [31, 32]. It has also been speculated that increasing number of PA schools lead to faculty shortages which exacerbate this reliance on quantifiable measurements [31].

The desire for these populations to participate and succeed in these health professions has and continues to exist. It is up to PA programs across the country to shift their focus to these populations and provide them deserved opportunities that have been lacking in the past, so that the PA profession may realize its full potential in promoting health equity and providing the highest levels of care to underserved populations. The necessary next step in alleviating these disparities, as it has been for so long, is action. This in mind, a list of recommendations for recruitment and holistic review are provided below.

### 1. Recruitment

- 1) A variety of methods of recruitment are available. Programs should feel encouraged to "mix and match" methods depending on their needs and available re-

sources.

- 2) Pipeline program construction
  - a) Most effective method of combined recruitment and barrier reduction.
  - b) Financial planning for sustainability of these programs is important for long-term success.
  - c) Establish community partnerships (ex. HBCUs, diversity organizations, underserved public schools) to improve outreach efforts.
  - d) Earlier exposure of students to pipeline programs tends to be more effective, though programs beginning in undergraduate schooling can also be effective.
- 3) Mentorship
  - a) Offers a lower-resource option that can provide valuable information necessary to apply to PA programs.
  - b) Shadowing opportunities and program prerequisite information (i.e. course requirements) can be provided by these programs and directly improve matriculation rates by increasing the number of schools to which students apply.
  - c) Utilizing PA students as mentors and recruiters can offer value for all students involved, while conserving faculty resources.
- 4) General Recruitment
  - a) General recruitment methods should be utilized altogether more often and target URM populations.
  - b) Minority student-targeted presentations, preadmission counselling, and URM student recruiters are among many recruitment strategies seen as effective by the PA programs utilizing them.
  - c) Utilizing undergraduate diversity organizations and pre-PA organizations for outreach can facilitate interest in the PA profession for URM populations.
2. Holistic Admissions
  - 1) A standard for implementation of holistic review in PA programs has yet to be established.
  - 2) Evaluation of noncognitive factors should focus on how applicants contribute value as future PAs, rather than only as PA students.
  - 3) Including at least one African American or Hispanic faculty on admissions committees can improve URM student populations, but programs should be cognizant of unique challenges faced by these faculty.
  - 4) Holistic review methods varied, but successful features included:
    - a) Evaluating non-academic attributes and indicators of motivation, persistence, and determination prior to evaluation of academic attributes.
    - b) Increasing weight of nonacademic attributes relative to academic attributes
    - c) Regarding all applicants granted an interview as qualified for PA schooling and basing final cohort selection on interview alone.
  3. Programs implementing methods of recruitment and holistic review should be encouraged to report URM

student population changes and subsequent measures of program success to aid in evaluation of effective methods.

## 9. Conclusion

Despite a lack of change in PA diversity, new ARC-PA accreditation guidelines should jumpstart efforts made by PA programs to tackle deficiencies in URM student populations. With these efforts, reflection on successes seen in other PA programs in the development of pipeline programs, utilization of recruitment efforts, and adaptation of admissions strategies should serve as rough guides for next steps in their program's development. In both increasing applicant pool diversity and URM matriculation, a variety of successful methods have been seen in research and the options available to programs looking to increase URM student populations should offer many different paths to success. However, regardless of applicable ARC-PA guidelines, PA program faculty should feel a responsibility to act as DEI leaders. Having representative diversity on admissions committees and increasing recruitment efforts specific to DEI communities should be considered minimum steps taken by programs to advance diversity in the PA profession. PA programs should be encouraged to go above and beyond what is laid out by ARC-PA guidelines. DEI efforts should not be viewed as a requirement to maintain accreditation, but a responsibility by all faculty to the patients that their cohorts will eventually serve.

## Abbreviations

PA	Physician Assistant
URM	Under represented in medicine
GPA	Grade Point Average
UC	University of California
GRE	Graduate Record Exam
PANCE	Physician Assistant National Certifying Examination
IAT	Implicit Association Test
DEI	Diversity, Equity and Inclusion
ARC-PA	Accreditation Review Commission on Education for the Physician Assistant

## Author Contributions

**Michelle Gamber:** Supervision, Validation, Writing – review & editing

**Kelton Black:** Conceptualization, Writing – original draft

## Conflicts of Interest

The authors declare no conflicts of interest.

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