



Primary Care Training and Enhancement - Physician Assistant Program Evaluation

Academic Years 2019-2023

The Health Resources and Services Administration (HRSA) is the primary federal agency for improving health care to people who are geographically isolated or economically or medically vulnerable. HRSA programs help those in need of high-quality primary health care by supporting the training of health professionals – focusing on the geographical distribution of providers to areas where they are needed most.

HRSA established the Primary Care Training and Enhancement - Physician Assistant (PCTE-PA) program in Fiscal Year 2019 to improve primary care training and to strengthen access to primary care services. This program prepares physician assistants (PAs) to practice in primary care settings, particularly in medically underserved communities and rural areas. To achieve these goals, the PCTE-PA program recruits individuals from underserved areas and veterans; offers experiential training opportunities in underserved settings; and trains PAs on key topics such as opioid and other substance use disorder treatment, integrating behavioral health into primary care, and improving provider wellness. These activities improve access to and delivery of primary care services as well as improve the quality-of-care future PAs provide.

This report summarizes the results of a retrospective evaluation of the first four years of the PCTE-PA program, Academic Years (AY) 2019-2023.

Key Findings

- Cumulatively, PCTE-PA students provided over one million hours of patient care in primary care settings, over 631,000 hours of patient care in medically underserved communities, and over 375,000 hours of patient care in rural areas.
- 65% of the PCTE-PA program graduates received training on integrating behavioral health into primary care, 70% received training on substance use or opioid use disorders treatment (excluding medications), and 84% received training in medications for opioid use disorder.
- 37% of program graduates are now employed in a medically underserved community, 24% in a primary care setting, and 10% in a rural area.
- PA students from disadvantaged backgrounds were nine times more likely to work in a medically underserved community and three and a half times more likely to work in a primary care setting compared with those not from disadvantaged backgrounds. Similarly, PA students from rural areas were seven times more likely to work in a rural area compared with those not from rural areas.

Did the PCTE-PA program recruit veterans and students from underserved areas?

During AY 2019-2023, the PCTE-PA program trained 2,965 PA students (Table 1). The number of awardees and PA students increased substantially, from three awardees with 43 PA students in AY 2019-2020 to 18 awardees with 2,267 PA students in AY 2022-2023. A total of 1,544 PA students completed the PCTE-PA program during this four-year period.

Table 1. Number of PCTE-PA Awardees, PA Students, and Graduates, AY 2019-2023

Academic Year (AY)	Awardees	PA Students	PA Graduates
AY 2019-2020	3	43	2
AY 2020-2021	11	953	178
AY 2021-2022	18	1,902	518
AY 2022-2023	18	2,267	846
Unique Totals	18*	2,965*	1,544

* Columns are unique program and student counts. Awardees and students participate in the program for more than one year.

PA Student Characteristics

A recent report published by the American Academy of Physician Associates found PA students from underserved areas were more likely to work in medically underserved communities and rural areas, when compared with students from urban areas.¹ Thus, recruiting students from disadvantaged and rural backgrounds is an important strategy used by the PCTE-PA program to increase the distribution of providers to underserved areas. Similarly, using the unique talents of medically trained veterans was instrumental in the early and continued success of the PA profession.²

- During AY 2019-2023, 42% of PA students reported disadvantaged backgrounds and 22% from rural backgrounds.
- Veterans comprised 3% of PCTE-PA students, similar to the national rate of 4% of PA students with current or previous military experience.³

Did the PCTE-PA program train PA students in underserved and rural areas?

Training PA students in underserved and rural areas is another important aspect of the PCTE-PA program because providers who receive training in community-based, rural, or underserved settings are more likely to practice in similar settings after graduation.⁴

¹ American Academy of Physician Associates. (2022). PA interest in rural locations, medically underserved areas, and health professional shortage areas. Review & recommendations, *PA Practice and 2022 AAPA Student Surveys*, aapa.org/download/103451/

² Cawley, J. F., Cawthon, E., & Hooker, R. S. (2012). Origins of the physician assistant movement in the United States. *Journal of the American Academy of Physician Assistants*, 25(12), 36–42. <https://doi.org/10.1097/01720610-201212000-00008>

³ PAEA. (2023). PA Education Association, By the Numbers: Student Report 5: Data from the 2021 Matriculating Student and End of Program Surveys, Washington, DC. <https://doi.org/10.17538/SR2021.0005>

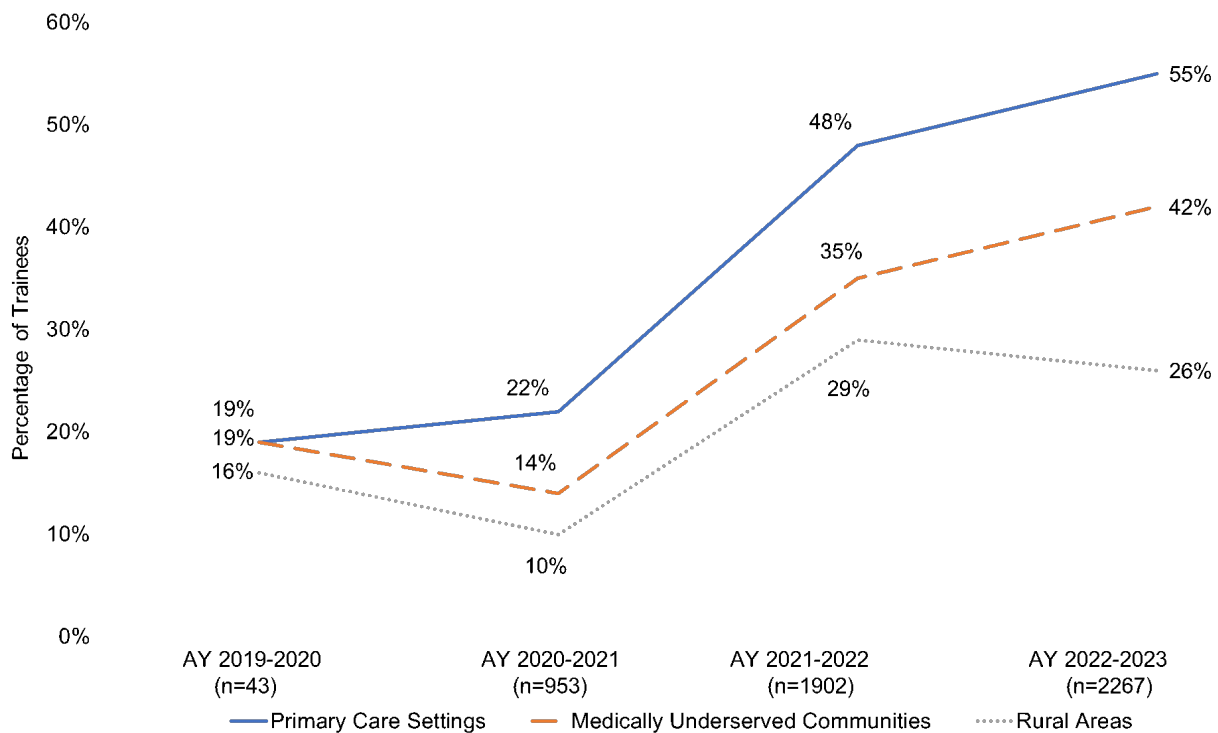
⁴ Goodfellow, A., Ulloa, J. G., Dowling, P. T., Talamantes, E., Chheda, S., Bone, C., & Moreno, G. (2016). Predictors of primary care physician practice location in underserved urban and rural areas in the United States: A systematic literature review. *Academic Medicine: Journal of the Association of American Medical Colleges*, 91(9), 1313. DOI: 10.1097/ACM.0000000000001203

The percentage of PCTE-PA students who received training in primary care settings, medically underserved communities, and rural areas increased over the four-year period (Figure 1):

- The percentage of students trained in primary care settings almost tripled from 19% to 55%.
- The percentage of students trained in medically underserved communities more than doubled from 19% to 42%.
- The percentage of students trained in rural areas increased from 16% to 26%.

While these increases may be a function of the growth of the program over the four-year period and to experiential opportunities resuming after the COVID-19 pandemic, the programmatic emphasis on experiential training in these key settings by PCTE-PA awardees was the primary reason provided by awardees for the noted changes.

Figure 1. Percentage of PA Students Trained in Primary Care Settings, Medically Underserved Communities, and Rural Areas, by Academic Year



As the program focused on these key settings, PCTE-PA students cumulatively provided over one million hours of patient care in primary care settings, over 631,000 hours of patient care in medically underserved communities, and over 375,000 hours of patient care in rural areas over the evaluation period.

Were PCTE-PA graduates trained in behavioral health skills needed for primary care?

The PCTE-PA program also trained students in key behavioral health topics. Behavioral health training is vital to the PCTE-PA program because primary care PAs are often the first health care professionals to identify substance use and other behavioral health conditions.⁵ Moreover, a recent

⁵ Mauldin, S. G., Morton-Rias, D., Barnhill, G. C., Kozikowski, A., & Hooker, R. S. (2020). The role of PAs in providing mental health care. *Journal of the American Academy of Physician Assistants*, 33(12), 34–41. <https://doi.org/10.1097/01.JAA.0000694988.35913.1a>

study by the National Commission on Certification of Physician Assistants found that PAs practicing in primary care see and evaluate behavioral health disorders at least weekly.⁶

During AY 2019-2023, PCTE-PA awardees developed or enhanced 268 courses, 126 of which focused on behavioral health. These behavioral health courses trained 1,570 individuals on integrating behavioral health into primary care settings, 6,495 on substance use disorder and opioid use disorder treatment, and 4,876 on provider wellness.⁷

Examples of Course Titles

- Interprofessional Education Opioid Use Disorder Training
- Opioid Epidemic & Substance/Opioid Use Disorders: Be the Solution
- Burnout in Healthcare: Case Study in Medical Doctor (MD) Suicide
- Training Modules in Patient-Centered Care and Quality Improvement
- Emotional Intelligence, Self-Care and Wellness

Through the above courses, experiential training opportunities, and other activities:

- 65% of the 1,544 PCTE-PA program graduates received training on integrating behavioral health into primary care settings.
- 70% received training on substance use or opioid use disorders treatment (excluding medications).
- 84% of graduates received training in medications for opioid use disorder, far outpacing the national rate of 50% of PA students who report receiving this training.⁸

Where did PCTE-PA students work after graduation?

One of the goals of the PCTE-PA program is for graduates to find employment in primary care settings and in underserved areas. In AY 2021-2022, HRSA began collecting employment data at the point of graduation for this program. 421 PA students provided employment data when they graduated from the PCTE-PA program:

- 24% were employed in a medically underserved community.
- 37% were employed in a primary care setting.
- 10% were employed in a rural area.

A closer examination of PCTE-PA graduates revealed PA students from a disadvantaged background were nine times more likely to work in a medically underserved community⁹ and three and a half times more likely to work in a primary care setting¹⁰ compared with students who were not from a disadvantaged background. Additionally, PA students from a rural background were seven times more likely to work in a rural area than students who were not from a rural background¹¹ (Figure 2). These findings support recent PA workforce research.¹²

⁶ Mauldin, S. G., Morton-Rias, D., Barnhill, G. C., Kozikowski, A., & Hooker, R. S. (2020). The role of PAs in providing mental health care. *Journal of the American Academy of Physician Assistants*, 33(12), 34–41. <https://doi.org/10.1097/01.JAA.0000694988.35913.1a>

⁷ Multiple courses developed on these topics; students typically take more than one course.

⁸ PAEA. (2023). PA Education Association, By the Numbers: Student Report 5: Data from the 2021 Matriculating Student and End of Program Surveys, Washington, DC. <https://doi.org/10.17538/SR2021.0005>

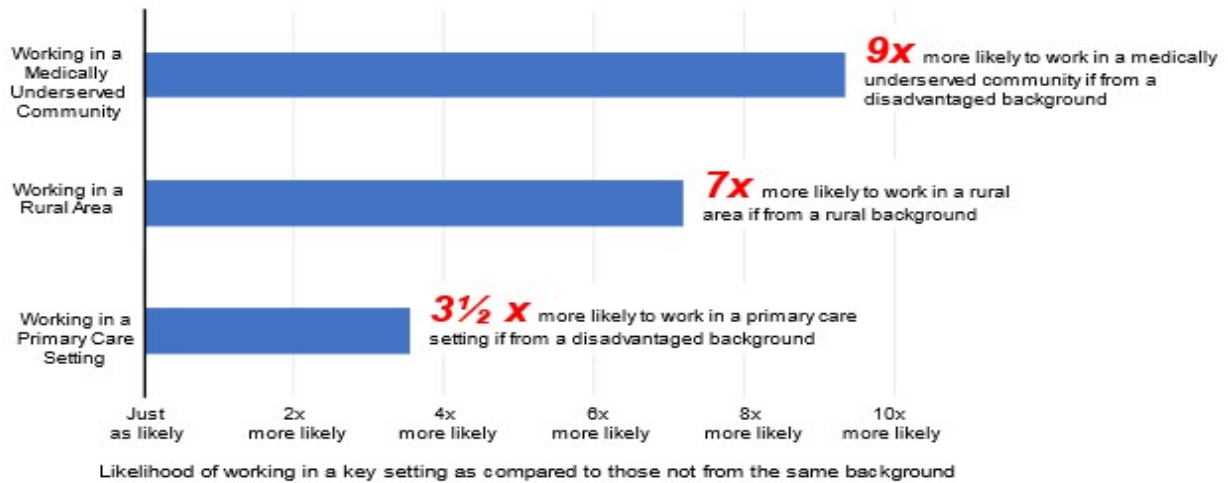
⁹ Odds ratio = 9.3, 95% CI 4.53-19.2, p ≤ .001

¹⁰ Odds ratio = 3.5, 95% CI 1.63-7.69, p = .001

¹¹ Odds ratio = 7.2, 95% CI 2.9-17.70, p ≤ .001

¹² American Academy of Physician Associates. (2022). PA interest in rural locations, medically underserved areas, and health professional shortage areas. Review & recommendations, *PA Practice and 2022 AAPA Student Surveys*, aapa.org/download/103451/

Figure 2. PCTE-PA Student Background and Employment Setting (N=421)



Conclusion

During its first four years, the PCTE-PA program successfully strengthened the primary care workforce by recruiting veterans and PA students from disadvantaged and rural backgrounds, providing training opportunities in medically underserved communities and rural areas, and graduating PAs equipped with essential behavioral health skills. Through the program, the PA students provided over one million hours of patient care in primary care settings. Graduates of the program were more likely to become employed in underserved and rural settings if they came from a disadvantaged or rural background. These outcomes demonstrate the program's ability to fulfill HRSA's mission to improve health care access by supporting PA training and encouraging the geographical distribution of PAs to areas where primary care is needed most.

For more information, visit the website: bhw.hrsa.gov