



# Primary Care Training and Enhancement - Training Primary Care Champions Evaluation

## Academic Years 2018-2022

The Health Resources and Services Administration (HRSA) is the primary federal agency for improving health care for people who are geographically isolated or economically or medically underserved. HRSA's workforce development programs support the training of individuals in occupations that provide health care services to these underserved individuals. The programs achieve HRSA's mission by encouraging the geographical re-distribution of these health care providers to areas of the country where they are needed most.

HRSA's Primary Care Training and Enhancement – Training Primary Care Champions (PCTE-TPCC) program strengthens the workforce by preparing practicing primary care physicians and physician assistants to become leaders in health care transformation, and for providers to enhance teaching in community-based settings. Awardees support and train PCTE-TPCC fellows through academic-community partnerships; in leadership, health care transformation, and education; and in the implementation of a health care transformation project at their community-based sites.

The PCTE-TPCC program prepares fellows with the experience and competencies to serve in medically underserved areas. Upon program completion, fellows have the skills to assume leadership positions, obtain grants to support projects, and/or to teach and become preceptors in community-based primary care settings. These individuals are then referred to as “Primary Care Champions.”

This report summarizes the results of a retrospective mixed-methods evaluation of the first four years of the PCTE-TPCC program, Academic Years (AY) 2018-2022.

### Key Findings

- During AY 2018-2022, 341 fellows participated in PCTE-TPCC: 286 physicians and 55 physician assistants. A total of 206 physicians and 47 physician assistants completed their fellowship during this timeframe.
- PCTE-TPCC fellows trained as primary care champions by developing and enhancing 113 courses – which were collectively delivered 826 times, reaching 2,948 professionals and students – and conducting nearly 300 health care transformation projects at community-based primary care sites to improve quality of care and to improve health outcomes.
- As of January 2023, one to three years after program completion, 81% of PCTE-TPCC alumni were employed in Health Professional Shortage Areas, 36% at a National Health Service Corps-approved site, and 27% in rural areas.
- Following program completion, alumni from disadvantaged and/or rural backgrounds were far more likely to work in a rural area (40% vs. 15%) and in a Health Professional Shortage Area (95% vs. 68%) compared with those alumni who were not from these backgrounds.

## Who does the PCTE-TPCC program support?

For AY 2018-2022, 341 fellows participated in PCTE-TPCC: 286 physicians and 55 physician assistants. A total of 206 physicians and 47 physician assistants completed their fellowship during this timeframe.

Forty-four percent of physician fellows and 60% of physician assistant fellows were from disadvantaged and/or rural backgrounds, while 27% and 25% self-identified as underrepresented minorities, respectively (Table 1).

**Table 1. Characteristics of PCTE-TPCC Fellows by Provider Type, AY 2018-2022 (N=341)**

Provider Type	Number of PCTE-TPCC Fellows	Disadvantaged and/or Rural Background	Underrepresented Minority Background	Number of PCTE-TPCC Fellowship Completers
Physicians	286	125 (43.7%)	77 (26.9%)	206
Physician Assistants	55	33 (60.0%)	14 (25.4%)	47

## What community-based organizations did PCTE-TPCC awardees partner with?

During AY 2018-2022, 19 awardees implemented the PCTE-TPCC program. Awardees initiated fellowship programs with community-based primary care sites (Figure 1).

**Figure 1. PCTE-TPCC Partnership Types, AY 2018-2022**



Note: Some awardees partnered with more than one partner type.

These partnerships supported and facilitated training for practicing primary care physicians and physician assistants during their fellowships, which lasted one to two years.

## How did the PCTE-TPCC fellows become primary care champions?

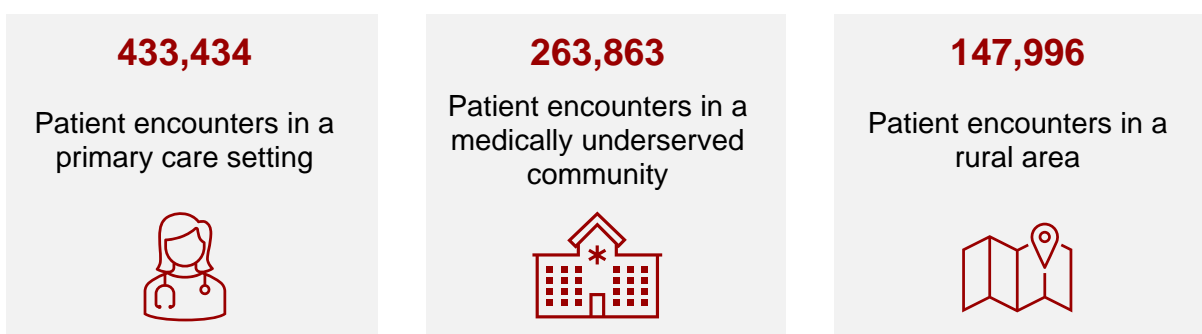
Becoming a primary care champion includes promoting and enhancing primary care as a leader in academic and clinical practice settings, including community-based clinical care, engaging in professional activities such as publications and grants, and teaching.

## Clinical Care

PCTE-TPCC fellows (N=341) enhanced their skills by providing clinical services at their primary care sites. During their fellowship, 100% of fellows trained in a primary care setting, 61% trained in medically underserved areas, and 24% trained in rural areas.

Through the PCTE-TPCC program, over 800,000 patient encounters were provided to patients in medically underserved communities, rural areas, and other primary care settings during the AY 2018-2022 period (Figure 2). These encounters represented nearly 350,000 hours of patient care in these key settings.

**Figure 2. Total Number of Patient Encounters by Setting for PCTE-TPCC Fellows, AY 2018-2022**



Note: Patient encounter settings are not mutually exclusive.

## Professional Activities

In addition to providing clinical care, PCTE-TPCC fellows engaged in professional development activities such as giving presentations, publishing journal articles, and securing grants (Figure 3). These activities encourage trainees to become leaders in their fields, with the goal of transforming health care systems in community-based primary care.

**Figure 3. Type of Professional Activities for PCTE-TPCC Fellows, AY 2018-2022**



## Teaching

AY 2018-2022 PCTE-TPCC fellows developed 113 courses. These courses were delivered 826 times and reached 2,948 professionals and students, 43% of whom were clinical providers (physicians, physician assistants, nurses) and 37% of whom were medical students. The remaining 20% were from other health professions (e.g., public health). Examples of common course content areas included workforce development, leadership and management, communication skills, and quality improvement.

## How did PCTE-TPCC fellows advance health care transformation at community-based primary care sites?

Health care transformation includes better collaboration and coordination among providers to improve quality of care and to improve health outcomes. It also includes engaging patients to tailor the treatment plan and to improve self-management of treatment, as well as incorporating evidence, data, and technology into health care delivery.

The PCTE-TPCC program provided mentorship and protected time to conduct practice improvement projects. As a result, AY 2018-2022 PCTE-TPCC fellows contributed to 296 health care transformation projects at their community-based primary care sites.

For AY 2018-2022, 59% of projects focused on transforming health delivery through changes to workflows, protocols, and screenings in primary care settings (Table 2). For example, projects aimed to increase screening rates, create a registry to assist with monitoring health metrics, and develop electronic health record system tools to facilitate screening and care.

**Table 2. Key Themes of PCTE-TPCC Fellows' Health Care Transformation Projects, AY 2018-2022 (N=296)**

Key Themes of Transformation Projects	Number of Projects
Process changes related to workflows, protocols, and/or screening	176 (59%)
Emphasis on HHS priority areas (opioid abuse, mental health, childhood obesity)	82 (28%)
Process changes related to training of staff	63 (21%)
Research on health transformation interventions	54 (18%)
Use of technology	44 (15%)

Note: Common themes were identified through HRSA-coded review of project descriptions. Categories are not mutually exclusive and do not sum to 100%. Forty-nine projects did not include themes identified in the table.

PCTE-TPCC awardees were encouraged to address the HHS clinical priorities of opioid abuse, mental health, and childhood obesity through their training and fellows' health care transformation projects. As a result, 28% of projects focused on these themes.

Eighteen percent of projects focused on research and contributed to the body of knowledge on ways to improve to health care delivery. For example, through analysis of chart reviews, surveys, and interventions that can improve patient outcomes, projects attempted to advance understanding of health care delivery by examining associations among socioeconomic status, health status, awareness, attitudes, needs, and satisfaction of patient and/or community populations.

### Example Project Titles

- *Using Community Health Workers to Reduce the No-Show Rate in Primary Care*
- *Implementing an Electronic Referral System in a Rural County Health Department*
- *Improving Colorectal Cancer Screening among Veterans in the Post-Pandemic Period*
- *Evolving a Clinic-Based Population Health Complex Care Model in a Primary Care Safety Net Teaching Practice*

A subset of health care transformation projects from various awardees were presented at the AY 2021-2022 fourth annual PCTE-TPCC meeting for awardee project directors, program staff, and fellows. Transformation and quality improvement projects from the AY 2018-2022 period led to a variety of changes in care delivery, including the examples highlighted in Table 3.

**Table 3. Changes in Care Delivery: Select Results from Awardees' Quality Improvement Projects Presented at the Fourth Annual PCTE-TPCC Meeting**

+ 32%	<b>Annual well visit rates</b> among older adults using a change in workflow
+ 22%	Pneumonia <b>vaccination rates</b> using team-based care
+ 16%	<b>Colorectal cancer screening rates</b> using team-based care and patient engagement
+ 7%	<b>Hepatitis C screening rates</b> using data and team-based care
+ 6%	<b>Controlled hypertension</b> using a collaborative nurse visit model
+ 3%	<b>Hemoglobin A1c control</b> using a team-based care approach
+ 3%	<b>Breast cancer screening rates</b> using EMR messaging and other outreach methods

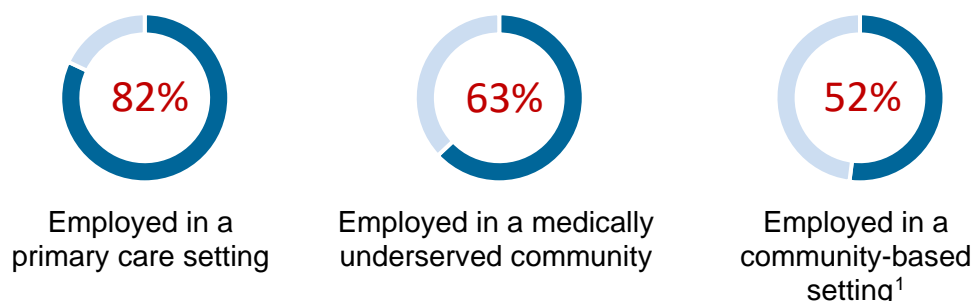
## To what extent did fellows remain employed in community-based and underserved settings after program completion?

The PCTE-TPCC program was designed to prepare fellows to serve as primary care champions in medically underserved areas. PCTE-TPCC awardees were selected, in part, based on their track record for placing graduates in these settings.

### One Year After Program Completion

A total of 158 PCTE-TPCC alumni who completed their fellowship between AY 2018-2021 reported their employment setting one year later. At this time, the majority of completers worked in primary care and/or underserved settings (Figure 4).

**Figure 4. PCTE-TPCC Fellow Employment Settings One Year after Program Completion, AY 2018-2021 (N=158)**



Note: Employment categories are not mutually exclusive.

Among those employed in community-based settings (n=82), 63 worked at Federally Qualified Health Centers or Look-Alikes, 10 worked at rural health clinics, seven at community health centers, and two at critical access hospitals.

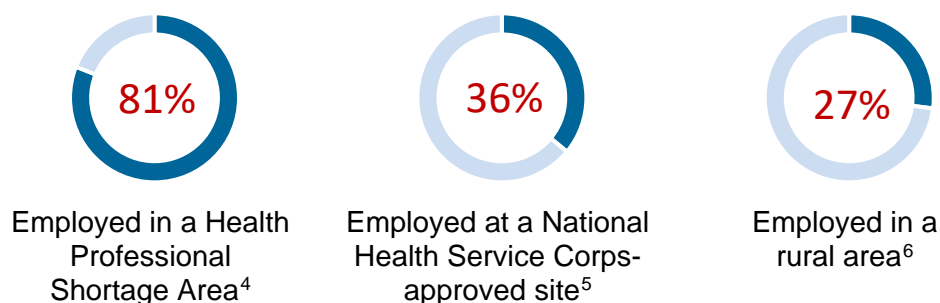
<sup>1</sup> Community settings include Federally Qualified Health Center or Look-Alike, Community Health Center, Rural Health Clinic, or Critical Access Hospital

In addition, 35% of fellows reported teaching and 13% reported conducting research one year later, allowing PCTE-TPCC alumni to continue to serve in primary care leadership and health care transformation roles beyond their fellowship.

## Employment Details for All Completers

Program data was used to assess where program completers are currently providing healthcare services. Present-day employment information was available for 242 of the 253 PCTE-TPCC alumni who completed their fellowship by the end of AY 2021-2022.<sup>2,3</sup> Time elapsed since program completion ranged from less than one year to more than three years.

**Figure 5. PCTE-TPCC Fellow Employment Locations One to Three Years after Program Completion, AY 2018-2022 (N=242)**



Note: Employment categories are not mutually exclusive.

## Are fellow and training characteristics associated with practicing in underserved settings?

According to recent health care workforce outcomes research, health professionals from rural areas and those from underrepresented race/ethnicity groups are more likely than their peers to practice in underserved areas.<sup>7,8</sup> Given these findings, the relationships between PCTE-TPCC alumni's background characteristics and current employment setting were examined among all 242 completers with present-day employment information.<sup>2</sup>

<sup>2</sup> U.S. Centers for Medicare & Medicaid Services. (January, 2023). *National Plan & Provider Enumeration System (NPPES) NPI Registry*. <https://npiregistry.cms.hhs.gov/search>

<sup>3</sup> Health Resources & Services Administration. *Bureau of Health Workforce Clinician Dashboards*. <https://data.hrsa.gov/topics/health-workforce/clinician-dashboards?tab=AlumniDashboards>

<sup>4</sup> Health Resources & Services Administration. (January, 2023). *Find Shortage Areas by Address*. <https://data.hrsa.gov/tools/shortage-area/by-address>. *HPSA designation may include primary care, dental, and/or mental health shortage areas*.

<sup>5</sup> Health Resources & Services Administration. *Data Explorer*. <https://data.hrsa.gov/tools/data-explorer>

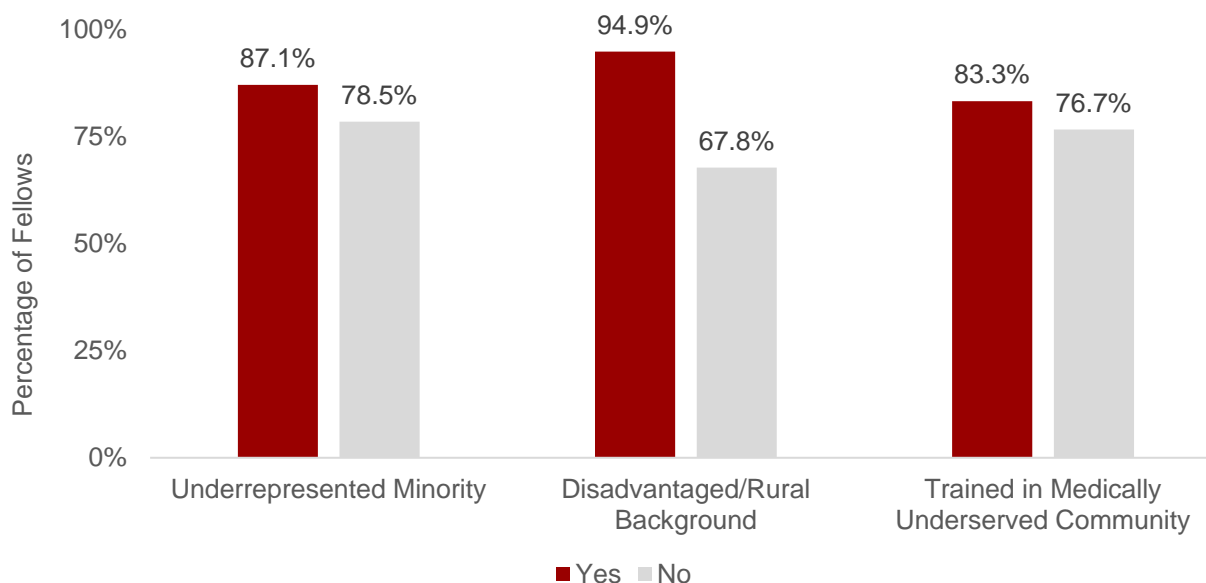
<sup>6</sup> Rural Health Information Hub. *Am I Rural? - Tool*. <https://www.ruralhealthinfo.org/am-i-rural>

<sup>7</sup> 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

<sup>8</sup> Pittman, P., Chen, C., Erikson, C., Salsberg, E., Luo, Q., Vichare, A., ... & Burke, G. (2021). Health workforce for health equity. *Medical Care*, 59(10 Suppl 5), S405-S408. DOI: 10.1097/MLR.0000000000001609

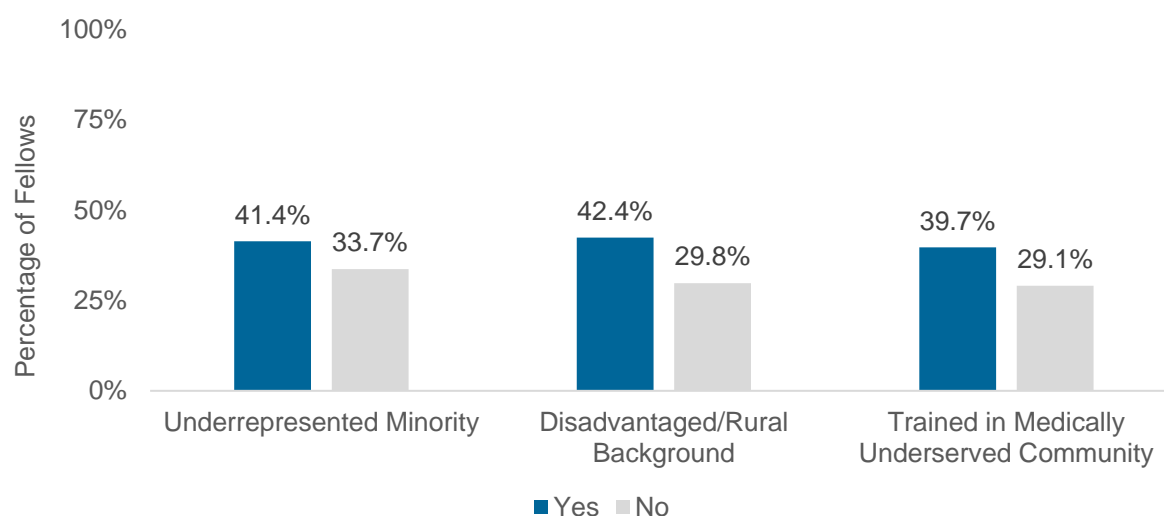
PCTE-TPCC alumni were more likely to work in a Health Professional Shortage Area if they were an underrepresented minority (87% vs. 79%), from a disadvantaged and/or rural background (95% vs 68%),<sup>9</sup> or if they trained in a medically underserved community (83% vs. 77%) compared with those without these backgrounds or training experiences (Figure 6).

**Figure 6. Percentage of Fellows Employed in a Health Professional Shortage Area as of January 2023, by Background and Training Setting (N=242)**



Similarly, alumni were more likely to work at a National Health Service Corps-approved site if they were an underrepresented minority (41% vs. 34%), from a disadvantaged and/or rural background (42% vs. 30%),<sup>10</sup> or if they trained in a medically underserved community (40% vs. 29%) compared with those without these backgrounds or training experiences (Figure 7).

**Figure 7. Percentage of Fellows Employed at a National Health Service Corps-Approved Site as of January 2023, by Background and Training Setting (N=242)**

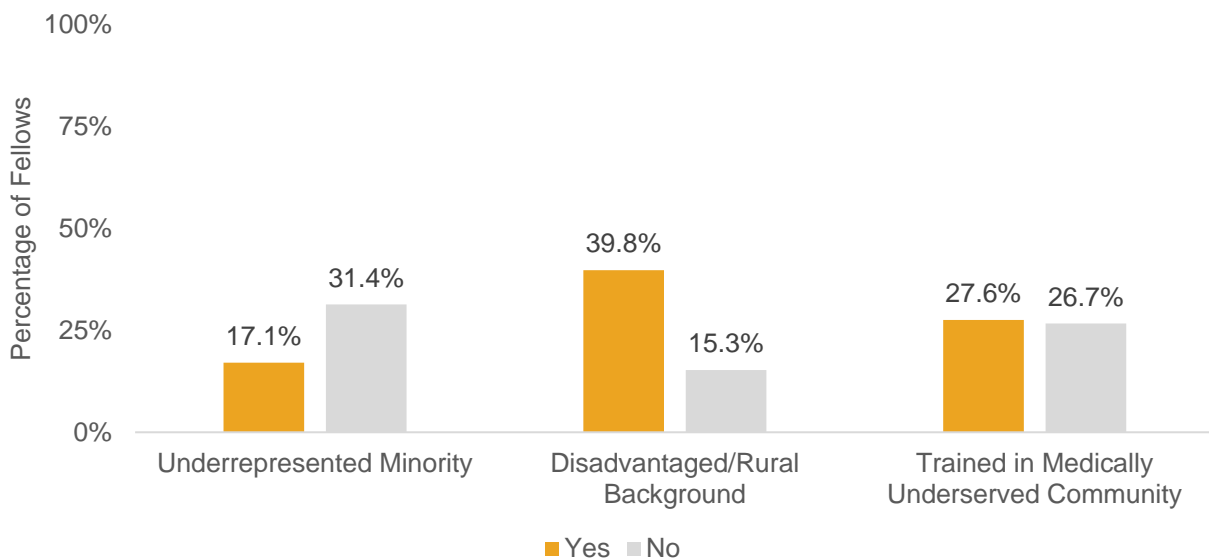


<sup>9</sup>  $\chi^2 (1) = 57.2, p < .001$

<sup>10</sup>  $\chi^2 (1) = 8.6, p = .003$

Finally, alumni were far more likely to be employed in a rural area if they came from a rural and/or disadvantaged background compared with those without these backgrounds (40% vs. 15%; Figure 8).<sup>11</sup> Conversely, underrepresented minorities were less likely to work in rural areas than those who were not underrepresented minorities (17% vs. 31%).

**Figure 8. Percentage of Fellows Employed in a Rural Area as of January 2023, by Background and Training Setting (N=242)**



## Piloting a new approach: What was learned from the National Health Service Corps partnership?

The National Health Service Corps supports primary care providers through scholarships and loan repayment programs and is successful retaining providers in underserved areas.

HRSA's Alumni Clinician Dashboards show the 2-year retention rate in a Health Professional Shortage Area for National Health Service Corps alumni who completed in 2020 was 86%.<sup>12</sup> Across all years, to date, the Health Professional Shortage Area retention rate for National Health Service Corps alumni was 83%.<sup>12</sup>

Acknowledging the success of National Health Service Corps, the PCTE-TPCC program aimed to partner with National Health Service Corps and provide experiences that would make PCTE-TPCC fellows more likely to practice in underserved areas.

National Health Service Corps collaborated with the PCTE-TPCC program by allowing current National Health Service Corps recipients to participate part-time in PCTE-TPCC and by giving PCTE-TPCC graduates priority status when applying for the National Health Service Corps loan repayment program.

<sup>11</sup>  $\chi^2(1) = 36.1, p < .001$

<sup>12</sup> Health Resources & Services Administration. *Bureau of Health Workforce Clinician Dashboards*. <https://data.hrsa.gov/topics/health-workforce/clinician-dashboards?tab=AlumniDashboards>



While National Health Service Corps data indicated that 37 individuals were participants of both programs during AY 2018-2022, data could only be matched between the National Health Service Corps and TPCC data for 18 fellows. Of these 18 fellows:

- Twelve were National Health Service Corps alumni, four applied and received National Health Service Corps loan repayment after completing the PCTE-TPCC fellowship, and two were active National Health Service Corps participants during their fellowship.
- Fifty-six percent self-identified as underrepresented minorities and 56% were from disadvantaged and/or rural backgrounds, compared to 27% and 46% of AY 2018-2022 PCTE-TPCC fellows, respectively.

While PCTE-TPCC is a new program that is still ongoing, strategic partnerships like the one with National Health Service Corps may further increase the number of underrepresented minorities and clinicians from disadvantaged and/or rural backgrounds working in medically underserved settings over the long-term.

For more information, visit the website: [bhw.hrsa.gov](http://bhw.hrsa.gov)