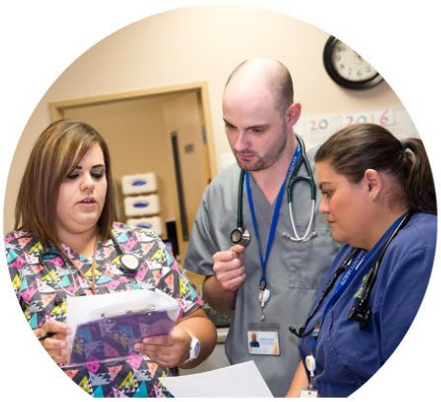
Recommendations

of the

National Advisory Council on the National Health Service Corps (NACNHSC)



December 2024

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Authority

The National Advisory Council on the National Health Service Corps (NACNHSC or Council) was established under Section 337 of the Public Health Service Act, as amended by Section 10501 of the Affordable Care Act. NACNHSC serves as a forum to identify priorities for the National Health Service Corps (NHSC) and bring forward and anticipate future program issues and concerns. The Council functions as a sounding board for proposed policy changes by using the diverse expertise represented on the Council to provide advice on specific program areas and ongoing initiatives. In addition, NACNHSC develops and distributes white papers and briefs discussing issues and concerns relating to the NHSC with specific recommendations for necessary policy revisions.

Acknowledgements

The Council extends gratitude and appreciation to those who contributed to the writing of this report, which includes all of the current Council members as well as members who participated in the working groups to develop recommendations and who have since rotated off of the Council (see the roster in Appendix A). In addition, the Council thanks staff from the Health Resources and Services Administration (HRSA), Bureau of Health Workforce (BHW).

Executive Summary

The 18,000 NHSC scholars and loan repayors provide care for more than 19 million people in underserved communities across the United States and its territories. The NHSC boasts an outstanding retention rate: More than 80 percent of NHSC participants continue to practice in the community where they completed their NHSC service after they have met their obligations.

The NACNHSC, which is made up of NHSC alumni and other clinical public health experts, offers advice and recommendations to the Secretary of the U.S. Department of Health and Human Services and, by designation, the HRSA Administrator about NHSC programs and policies. The Council has identified recruitment and retention of trainees and sites to the NHSC program as an opportunity to leverage the unique capacity of the NHSC to facilitate clinical training that boosts the workforce while also increasing the number of health care providers in underserved areas. The Council also believes that the NHSC is an ideal mechanism for nurturing a workforce capable of providing integrated and comprehensive care in all settings. The recommendations in this report are organized into three categories and briefly outlined here:

Participant Recruitment and Retention: Bolster recruitment by highlighting the diverse career paths that NHSC alumni can pursue, leveraging social media, and facilitating mentorship and community building. Enhance long-term retention in public health settings through financial incentives. Address the housing shortage that limits NHSC participation, and develop clinical rotations to increase clinicians' exposure to underserved communities.

Site Recruitment and Retention: Expand communication and outreach to current and potential NHSC sites to increase site participation, especially in rural areas. Better assist sites with navigating NHSC participation, particularly the requirement that sites offer a sliding fee scale, which HRSA staff recognize as the top reason that sites opt out of the

NHSC program. Create targeted focus groups to evaluate the impact of the change in Health Professional Shortage Area scoring on site participation and recertification.

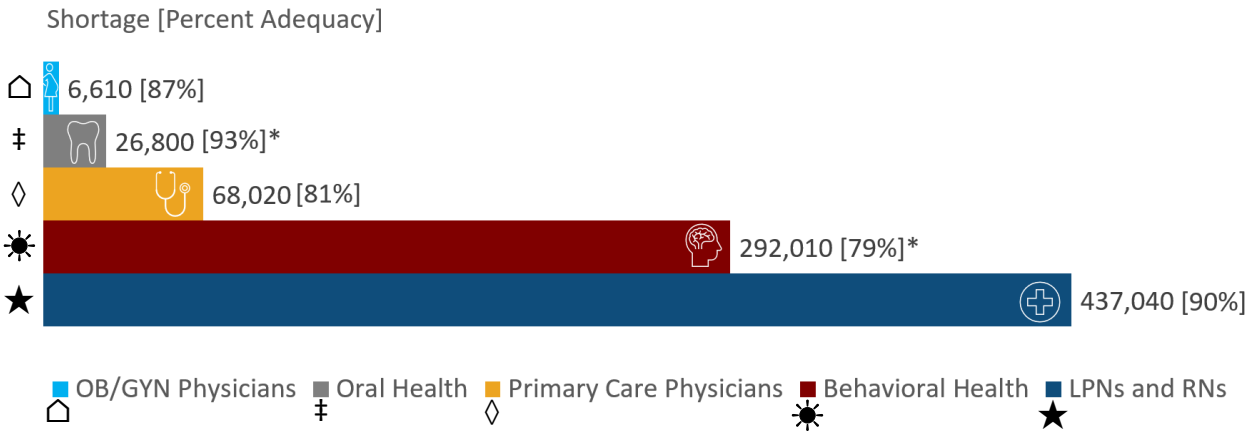
Expansion of Funding to Enhance Integrative Care: Advance interdisciplinary and collaborative practice by supporting training and certification in preventive and holistic care, including nutrition counseling, and improve use of quality metrics to facilitate integrated care.

These recommendations build on the vision described in the NACNHSC's 2022 report, *The National Health Service Corps at 50: Accomplishments, Adaptations, & Aspirations*. The Council believes the NHSC can make a substantial contribution to alleviating the current and projected health care workforce shortages.

Introduction

The NHSC seeks to address the maldistribution and supply of health care providers by investing in recruitment and retention, supporting community-based training, and incentivizing providers to work in high-need areas. As of early 2024, more than 18,000 NHSC scholars and loan repayors were providing care to more than 19 million people in underserved communities. The NHSC boasts an excellent retention rate: More than 80 percent of NHSC participants continue to practice in the community where they completed their NHSC service after they have met their obligations. However, projections from HRSA's BHW of shortages through 2036 suggest that the number of medical, nursing, dental, and behavioral health providers will be insufficient to meet demand in coming years (see Figure 1).[1] The projections highlight the need to strengthen the health workforce through education, training, and service.

Figure 1: Projected Health Workforce Shortages (2036)



Source: Health Resources and Services Administration. *Workforce projections*. https://data.hrsa.gov/topics/health-workforce/workforce-projections; https://bhw.hrsa.gov/data-research/projecting-health-workforce-supply-demand
Note: These adequacy estimates do not include all professions within the field due to incomplete data.

[1] Health Resources and Services Administration, Bureau of Health Workforce. (2024, March). *Health workforce projections.* https://bhw.hrsa.gov/data-research/projecting-health-workforce-supply-demand; https://data.hrsa.gov/topics/health-workforce/workforce-projections

The NACNHSC provides advice and recommendations to the Secretary of U.S. Department of Health and Human Services (HHS) and, by designation, the HRSA Administrator about NHSC programs and policies. (See Appendix A for the NACNHSC roster.) Among the many topics of discussion over the past several years, the following topics rose to prominence at the Council's June 27–28, 2023, public meeting:

- Mentorship
- Recruitment and retention
- Expanding the loan repayment program to include registered dietitians, health educators, and other allied health care providers
- Integrative medicine and whole-person care
- Best practices for recruitment and retention in rural areas

Ultimately, the Council formed three workgroups around the following themes:

- Enhancing NHSC participant recruitment and retention
- Improving NHSC site recruitment and retention
- Expanding NHSC funding to support integrative care

Workgroups met from September 2023 through March 2024 to gather information from subject matter experts within HRSA and discuss potential approaches. Each workgroup drafted recommendations for consideration by the full Council at its March 19–20, 2024, public meeting and subsequently refined the recommendations in response to Council input.

HHS recognizes that physician shortages, poverty, and geographic isolation contribute to lack of access to care and poorer health outcomes for rural Americans.[2] Notably, more than half of rural U.S. counties lack hospital obstetric services. HRSA has identified a need to increase the number of NHSC participants in rural areas. Nearly 70 percent of areas designated as primary medical

[2] U.S. Department of Health and Human Services. (2023, July 26). *HHS invests $11 million to expand medical residencies in rural communities* [Press release]. https://www.hhs.gov/about/news/2023/07/26/hhs-invests-11-million-expand-medical-residencies-rural-communities.html

Health Professional Shortage Areas (HPSAs) are in rural areas. HHS is investing substantially in rural health care, and many of the Council's recommendations for the NHSC directly support those efforts.

Participant Recruitment and Retention

Background

Recruitment and retention are strongly linked. Effective recruitment attracts applicants well suited to the NHSC program, and those applicants are more likely to successfully complete the program, which contributes to retention. Successful program alumni serve as role models, advocates, and mentors, which further supports recruitment.

Current NHSC recruitment efforts are effective, and there are more applicants than HRSA is able to fund. Yet there is a persistent and growing need for additional primary care providers (PCPs) and more favorable PCP distribution across the United States and its territories. For more than 50 years, the NHSC has played a vital role in boosting the number of PCPs practicing in HPSAs, and it is expected to continue doing so. Maintaining and strengthening NHSC recruitment and retention will help to ensure that the best and most service-oriented applicants continue to participate in the program.[3] The following short- and long-term recommendations support this objective. The short-term recommendations represent efforts the Council believes HRSA can undertake immediately. The long-term recommendations address some of the most complex health care workforce issues—including competition for well-trained providers and housing shortages—and thus may require a great deal of deliberation, collaboration, and resources to implement.

[3] In their study comparing rural HPSAs with rural non-HPSAs, Pathman et al. concluded that "the principal dynamic by which rural shortage areas emerge is simply that too few physicians are recruited." Pathman, D. E., Konrad, T. R., Dann, R., & and Koch, G. (2004). Retention of primary care physicians in rural health professional shortage areas. *American Journal of Public Health, 94*, 1723–1729. https://doi.org/10.2105/AJPH.94.10.1723

Participant Short-Term (PST) Recommendations

Short-Term Recommendation PST-1: HRSA should revise its definition of NHSC retention to include alumni who no longer provide direct clinical care but otherwise advance the NHSC mission through academic, administrative, health policy, public health, advocacy, or other leadership roles.

Rationale

Former NHSC Director Luis Padilla, M.D.; former U.S. Surgeon General Regina Benjamin, M.D.; Hawaii Governor Josh Green, M.D., and many other impactful leaders are among the NHSC alumni who might not be captured by the current definition of retention. Expanding the definition will better reflect the broad scope of career opportunities that NHSC alumni may pursue, which benefits the program in multiple ways. First, it demonstrates to NHSC candidates and participants that there are diverse career pathways beyond clinical practice, including those that hold opportunities to improve health policy, health systems, and public health more broadly. Program alumni also benefit from a heightened awareness of the varied career paths open to them. A more comprehensive picture of NHSC alumni also highlights for Congress and other stakeholders the value of the NHSC and the return on the investment of taxpayer resources.

Short-Term Recommendation PST-2: NHSC should analyze demographic data of participants to strengthen recruitment and retention efforts by determining predictors of program retention. This analysis could be stratified by year, professional role (physician, physician assistant, nurse practitioner, etc.), specialty, race, ethnicity, languages spoken, or other criteria. The analysis could also assess whether the diversity of participants is sufficient to meet the cultural and linguistic needs of HPSAs.

Rationale

HPSA needs evolve over time, as do the characteristics of NHSC participants and other health care providers. It is important to periodically evaluate whether NHSC participants are meeting the cultural and linguistic needs of their service areas. Historical predictors of retention also may not be the same as the most significant predictors today. For example, a strong predictor of retention is being from or having shared experience with the community that one serves.[4,5] A study published in 2024 demonstrated the importance of looking closely at community-level factors that affect retention in rural areas.[6] Analysis of recent NHSC participant data can support more informed conclusions that can then be incorporated into recruitment and retention strategies to help ensure that the NHSC workforce is prepared to fulfill its mission. (See Figure 2 for an example.) Recently, the NHSC recognized the need to address language as a barrier to health care access and announced a new award enhancement for NHSC participants who are proficient in Spanish.[7]

[4] Russell, D., Matthew, S., Fitts, M., Liddle, Z., Murakami-Gold, L., Campbell, N., et al. (2021). Interventions for health workforce retention in rural and remote areas: a systematic review. *Human Resources for Health, 19*, Article 103. https://doi.org/10.1186/s12960-021-00643-7

[5] McQueen, I. T., Maggard-Gibbons, M., Capra, G., Raaen, L., Ulloa, J. G., Shekelle, P. G., et al. (2017). Recruiting rural healthcare providers today: a systematic review of training program success and determinants of geographic choices. *Journal of General Internal Medicine, 33*(2), 191–199. https://doi.org/10.1007%2Fs11606-017-4210-z

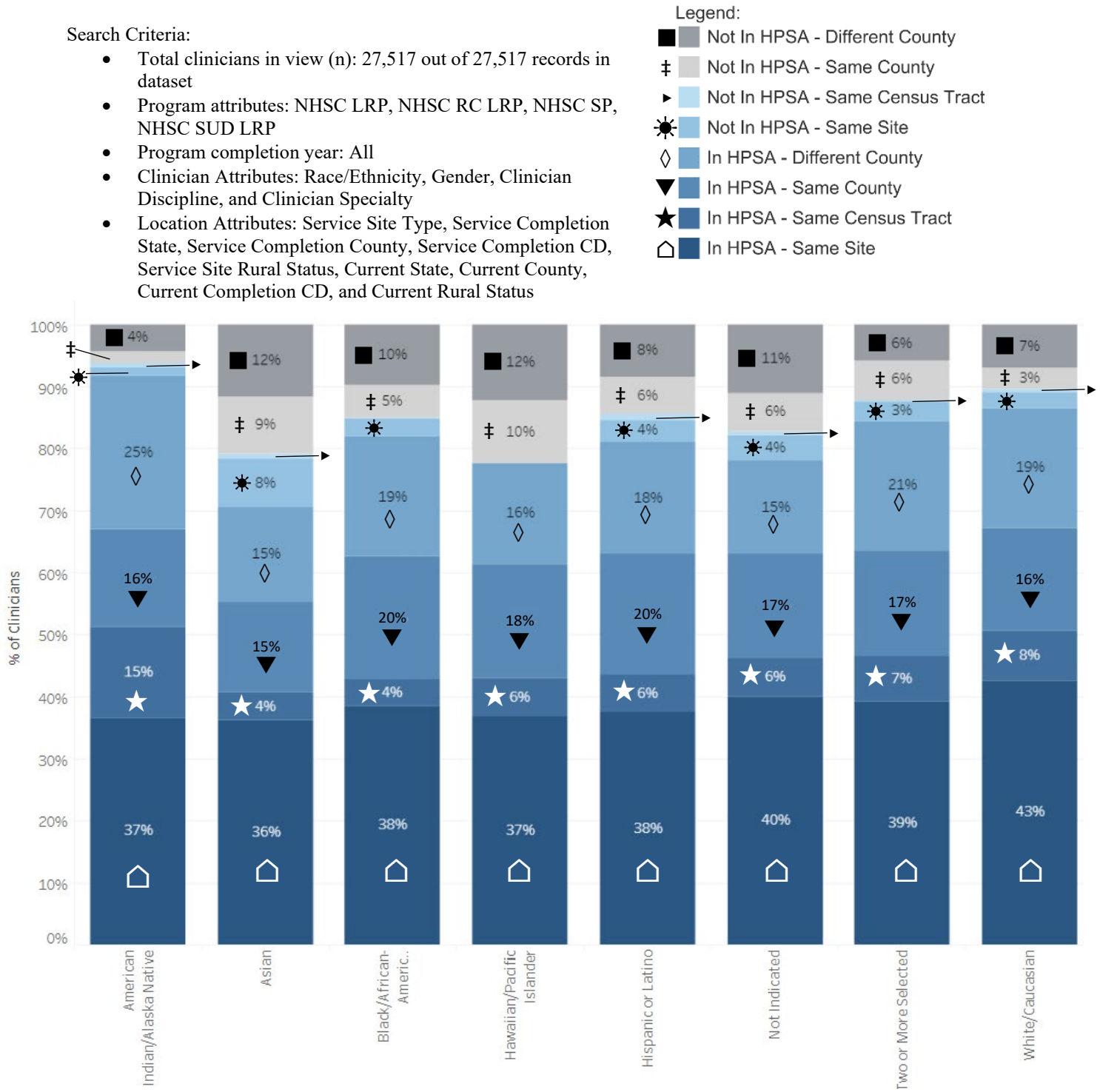
[6] Moore, J. D., Lords, A. M., Casanova, M. P., Reeves, A. J., Lima, A., Wilkinson, C., et al. (2024). Exploring healthcare provider retention in a rural and frontier community in Northern Idaho. *BMC Health Services Research, 24*, 381. https://doi.org/10.1186/s12913-024-10807-5

[7] In fy2024 NHSC made 41 award enhancements for applicants who demonstrated proficiency in Spanish.

Figure 2: Using the BHW Dashboard to Assess Post-Service Retention of NHSC Alumni by Race/Ethnicity

Search Criteria:

- Total clinicians in view (n): 27,517 out of 27,517 records in dataset
- Program attributes: NHSC LRP, NHSC RC LRP, NHSC SP, NHSC SUD LRP
- Program completion year: All
- Clinician Attributes: Race/Ethnicity, Gender, Clinician Discipline, and Clinician Specialty
- Location Attributes: Service Site Type, Service Completion State, Service Completion County, Service Completion CD, Service Site Rural Status, Current State, Current County, Current Completion CD, and Current Rural Status



Source: Health Resources and Services Administration. *Bureau of Health Workforce clinician dashboards*. https://data.hrsa.gov/topics/health-workforce/clinician-dashboards

Abbreviations: HPSA, Health Professional Shortage Area; NHSC LRP, National Health Service Corps Loan Repayment Program; NHSC RC LRP National Health Service Corps Rural Community Loan Repayment Program; NHSC SP, National Health Service Corps Scholarship Program; NHSC SUD LRP, National Health Service Corps Substance Use Disorder Workforce Loan Repayment Program

Data collection: HRSA/BHW has gathered data on the current work location of recipients of its programs, including National Health Service Corps and Nurse Corps alumni who completed service from fiscal year (FY) 2012 to FY 2022. Program participant data was used from the BHW Management Information System Solution, and was matched with current work location data using National Provider Identifier for these providers and HPSA data in the Shortage Designation Management System.

Definitions: HPSA Retention: Percentage of program alumni who currently work in a HPSA. Community Retention: Percentage of program alumni who currently work in a HPSA or within the same community where they completed service. Same community is defined as the same site or same census tract. Rural Community Status: Percentage of program alumni who currently work in a rural community.

Notes: 1. The number of clinicians tracked for each metric is a subset of the total number of clinicians who completed service within a given time frame, as indicated by the service completion fiscal year. For example, the 1-Year Retention metric only includes the subset of clinicians who completed service in FY 2022, while the 2-Year Retention metric only includes the subset of clinicians who completed service in FY 2021. The metrics for Retention Across All Years, Community Retention, and Rural Community Status all include the full dataset of all clinicians. 2. Note that American Indian/Alaska Native NHSC participants have the highest retention rate, potentially because many are serving their commitment in Native American or Alaska Native communities.

Short-Term Recommendation PST-3: HRSA's Division of External Affairs should maintain a robust and credible presence on major social media platforms to expand its outreach to younger audiences. It should ensure that the content is appropriate to the platform, regularly updated, and appealing to end users.

Rationale

Established social media platforms include Facebook, YouTube, and LinkedIn, but HRSA should also build its presence on platforms that appeal to younger users, such as Instagram.[8] NHSC applicants and alumni already use all of these social media platforms to discuss and communicate their perspectives on the program, posting both positive messages and misinformation. It would be in the best interests of NHSC to have a presence on each of these social media platforms to learn from this feedback, ensure information is factual, and provide responses when appropriate. Maintaining an up-to-date online presence is important to ensure factual discourse about NHSC and protect the program's reputation. These platforms also offer HRSA the opportunity to communicate with diverse audiences proactively and widely. Bolstering the social media presence would help HRSA reach younger audiences and share information about NHSC to an expanded pipeline of prospective future applicants and service-minded health care providers.

Participant Long-Term (PLT) Recommendations

Long-Term Recommendation PLT-1: NHSC sites should look for federal funding sources to support retention of NHSC participants after completion of services—e.g., through retention bonuses or incremental salary increases based on years of service after fulfilling the NHSC commitment—particularly at rural sites.

[8] Pew Research Center. *Social media fact sheet*. (January 31, 2024). https://www.pewresearch.org/internet/fact-sheet/social-media/

Rationale

Chief executive officers (CEOs) from several NHSC sites reported to the Council that they are competing with the private sector for a shrinking pool of skilled clinicians.[9] NHSC Scholar alumni, Claude Jones, DO, MPH, MSc Law, president and CEO of Care Alliance Health Center in Cleveland, OH, remarked that public institutions bear more training costs, while private health systems offer higher salaries and bonuses to already-trained providers. He shared that his organization used federal funding to provide retention bonuses.

Public institutions would benefit from new financial incentives to keep providers in their health centers. Public health employees describe high levels of job satisfaction—yet nearly half are planning to leave or retire, and of those, 49 percent describe pay as the top reason for leaving.[10] From a survey conducted in early 2022, as the COVID-19 pandemic was waning, the National Association of Community Health Centers found high rates of workforce attrition among its members, who said many employees left for better financial opportunities at competing health care organizations, where they received up to a 25-percent increase in salary.[11]

The American Medical Association points out that physician burnout and turnover are extremely costly, resulting in money lost through the expenses of recruitment and onboarding as well as those related to lower patient revenue and lower productivity.[12] Other researchers calculated that "turnover of PCPs results in approximately $979 million in excess health care expenditures for public and private payers annually, with $260 million attributable to PCP burnout-related

[9] See meeting minutes of the November 14–15, 2023, public meeting of the NACNHSC: https://www.hrsa.gov/sites/default/files/hrsa/advisory-committees/national-health-service-corps/nacnhsc-november-2023-meeting-minutes.pdf

[10] de Beaumont Foundation. (2022, March). *The impact of the COVID-19 pandemic. Rising stress and burnout in public health: Results of a national survey of the public health workforce*. https://debeaumont.org/wp-content/uploads/dlm_uploads/2022/03/Stress-and-Burnout-Brief_final.pdf

[11] National Association of Community Health Centers. (n.d.). *Current state of the health center workforce: pandemic challenges and policy solutions to strengthen the workforce of the future.* https://www.nachc.org/wp-content/uploads/2022/03/NACHC-2022-Workforce-Survey-Full-Report-1.pdf

[12] American Medical Association. (2018, October 11). *How much physician burnout is costing your organization*. https://www.ama-assn.org/practice-management/physician-health/how-much-physician-burnout-costing-your-organization

turnover."[13] Increasing retention can counter the high cost of attrition, turnover, and filling of open positions at NHSC sites.

Recently, NHSC added a $10,000-per-year enhancement to loan repayment awards for maternal health providers serving in high-need Maternity Care Target Areas and a $15,000 increase in awards for PCPs serving in primary care HPSAs. NHSC also initiated a $5,000 award for participants who demonstrate Spanish-language proficiency. These examples signal that the NHSC recognizes the utility of financial incentives and has the capacity to offer them without new legislation or statutory authority. HRSA should collect data on the implementation of its newer financial incentives and use the results to inform expansion of current initiatives or creation of new ones. The NHSC program itself demonstrates the effectiveness of using financial incentives to encourage more PCPs to serve in HPSAs. HRSA's own data demonstrate that the higher the award, the longer the retention of NHSC participants (see Figure 3).

[13] Sinsky, C. A., Shanfelt, T. D., Dyrbye, L. N., Sabety, A. H., Carlasare, L. E., & West, C. P. (2022). Health care expenditures attributable to primary care physician overall and burnout-related turnover: A cross-sectional analysis. *Mayo Clinic Proceedings, 97*(4), 603–702.

Figure 3: Using the BHW Dashboard to Assess Post-Service Retention of NHSC Alumni by Total Awarded

Search criteria:

- Total clinicians in view (n): 27,517 out of 27,517 records in dataset
- Program attributes: NHSC LRP, NHSC RC LRP, NHSC SP, NHSC SUD LRP
- Program completion year: All
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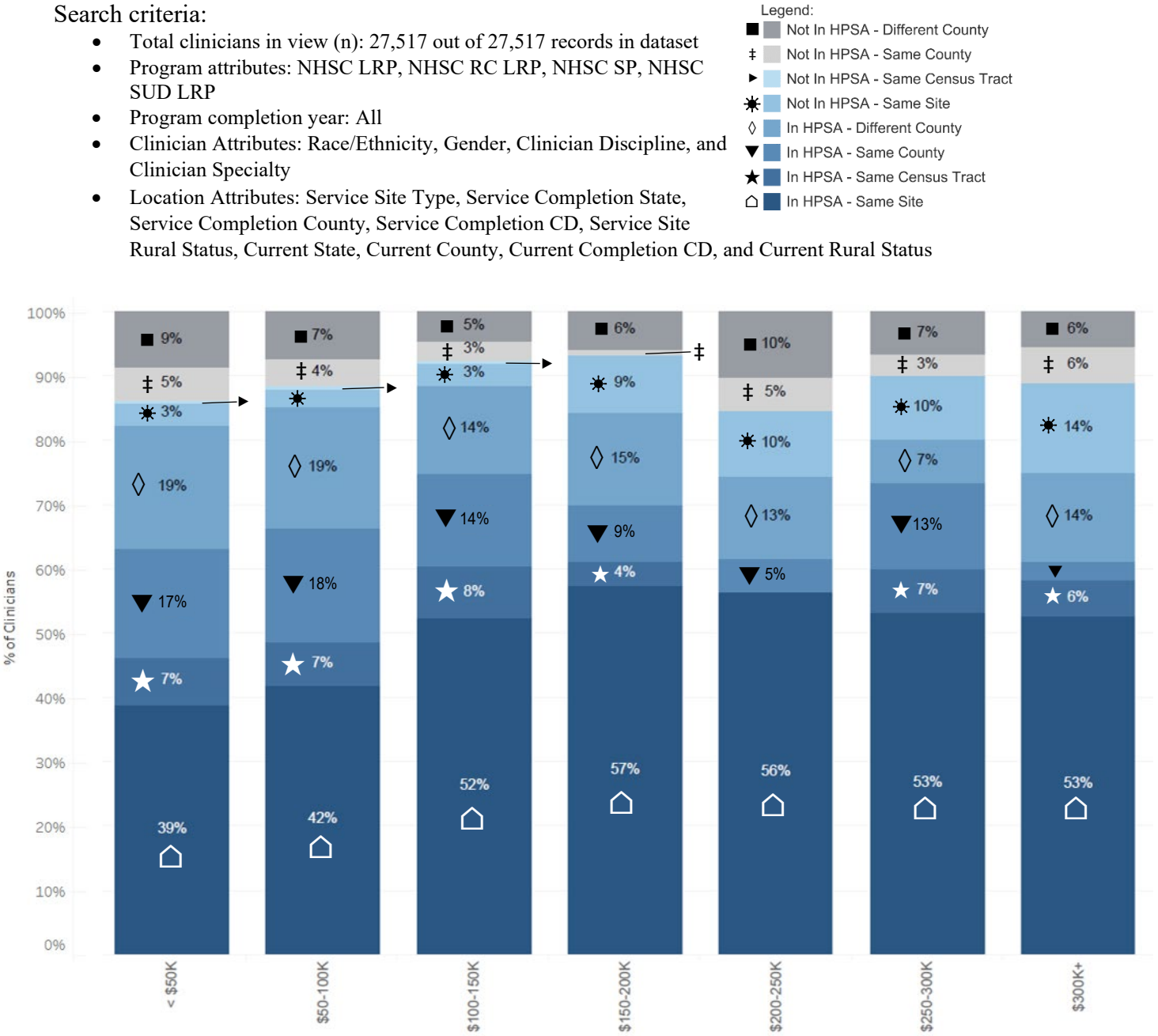

Source: Health Resources and Services Administration. *Bureau of Health Workforce clinician dashboards*. https://data.hrsa.gov/topics/health-workforce/clinician-dashboards

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Long-Term Recommendation PLT-2: The NHSC should recommend that medical schools with NHSC scholars establish a secure database of program participants and alumni to serve as the foundation for new mentoring and community-building programs. The database should be searchable and include information such as alumni's current location and contact information, self-reported professional history, and personal interests. The NACNHSC can send a partnership letter to the dean of each medical school with a history of NHSC applicants to recommend the creation of this database specific to their alumni and current program participants.

Rationale

The opportunity to join a lifelong professional and personal community of like-minded, service-oriented leaders is one of the most valuable and compelling benefits of participating in the NHSC. Many prestigious programs and institutions, such as the White House Fellows, the Rhodes Scholarship, and the Harry S. Truman Scholarship Foundation; colleges and universities; and private-sector entities already benefit from a similar value proposition.

Building a reliable database of program alumni would be valuable for both program participants and alumni and could enhance the recruitment process. It would enable mentorship, networking, and community building among NHSC participants and alumni during and long after the NHSC work experience. Research indicates that clinicians who are involved in interpersonal mentoring are more likely to have a strong commitment to an institution.[14] Once a database is established, program administrators can leverage the information to strengthen support for current program participants. Meanwhile, alumni can use the database in a private capacity to organize local, regional, and national alumni activities.

As the network and community become stronger and more accessible during and after program participation, recruitment will be enhanced alongside the perceived value of the program for

[14] Fleig-Palmer, M. M., & Rathert, C. (2015). Interpersonal mentoring and its influence on retention of valued health care workers: the moderating role of affective commitment. *Health Care Management Review, 40*(1), 56–64, doi: 10.1097/HMR.0000000000000011

those medical schools that want to highlight their success in producing PCPs. Medical school deans and admission officers can also use the information in the medical school's database to highlight personal stories and achievements of NHSC alumni. Additionally, they can use the database to connect candidates with specific alumni best able to answer questions during the application process.

The personal touch is an important part of recruitment; the private sector understands this concept. Generic information alone is not enough. Prospective applicants have specific questions about how the NHSC works and what participation means for their immediate and long-term future in the field. Alumni are great advocates for the program. Applicants are drawn to the personal stories and experiences of current NHSC participants and alumni. Alumni have expressed that they could picture themselves serving at particular sites because of the power of the stories of those who served before them. Self-selection through voluntary participation ensures that the most passionate people take part. HRSA has indicated that the NHSC seeks to strengthen connections among participants and alumni, and recognizes that alumni are key to recruitment.[15]

Long-Term Recommendation PLT-3: To effectively recruit clinicians to medically underserved areas, especially those that continue to struggle to attract applicants, the NHSC should partner with sites to address barriers to onsite, short-term housing for clinicians. HRSA should explore the following options:

- Link NHSC sites with area universities or Area Health Education Centers (AHECs) that offer clinical rotations and that may be able to partner in support of housing.
- Encourage NHSC sites to collaborate with other sites to learn about innovative approaches to housing, work with community partners to tackle housing barriers, or seek funding to develop housing.

[15] See meeting minutes of the March 19–20, 2024, public meeting of the NACNHSC. https://www.hrsa.gov/sites/default/files/hrsa/advisory-committees/national-health-service-corps/nacnhsc-march-2024-minutes.pdf

- Partner with the U.S. Department of Housing and Urban Development to provide technical assistance (TA) for rural clinics on existing tax credits and other programs that could support the development of affordable housing for scholars.[16]

Rationale

Insufficient housing is a barrier to both recruitment and retention. HRSA's Division of Regional Operations (DRO) recognizes that it is very difficult to recruit young clinicians to sites in remote locations because of the lack of housing, limited education options (for those with school-aged children), and lack of cultural diversity, among a host of challenges. Studies bear out that the lack of affordable housing has a profound impact on medical residents and creates substantial barriers to recruitment of clinicians.[17,18] Securing onsite housing is a strategy that has been effective for health care organizations in domestic and international medically underserved communities.[19]

Long-Term Recommendation PLT-4: HRSA should facilitate short-term clinical rotations in Federally Qualified Health Centers (FQHCs) or rural NHSC sites. Rotations should be electives offered to medical students, residents, or other learners. Rotations should be offered to those already accepted into an NHSC program as well as to prospective future applicants, as this early exposure and introduction to mentorship may support career development and encourage future NHSC program engagement.

[16] For example, see the Low-Income Housing Tax Credit program: https://www.huduser.gov/portal/datasets/lihtc.html

[17] Brewster, R. C. L., Butler, A., Michelson, C. D., & Kesselheim, J. (2023). Evaluation of housing affordability among US resident physicians. *JAMA Network Open, 6*(6), e2320455. doi:10.1001/jamanetworkopen.2023.20455

[18] Stermer, B. (2023, December 13). *Housing shortages are making recruitment and retention even more challenging for some rural healthcare providers*. Rural Health Information Hub. https://www.ruralhealthinfo.org/rural-monitor/healthcare-workforce-housing

[19] Stermer B. (2023, December 13). *Housing shortages are making recruitment and retention even more challenging for some rural healthcare providers.* Rural Health Information Hub. https://www.ruralhealthinfo.org/rural-monitor/healthcare-workforce-housing

Rationale

At a public Council meeting, Cindy Peavy, RN, CLSSGB, executive director of Arbor Family Health in rural Louisiana, noted that once clinicians begin work, they become familiar with an organization's mission and community needs, which contributes to long-term engagement and retention.[20] She and other NHSC site leaders called for more outreach to educate clinicians still in training about FQHCs and other public health practice settings.

At the same November Council meeting, Care Alliance Health Center CEO Dr. Jones recommended that the NHSC work with the Accreditation Council for Graduate Medical Education, the American Osteopathic Association, and other partners to offer short rotations (e.g., 1 or 2 months) at NHSC sites to allow trainees to build experience serving in FQHCs and community health centers. Studies recognize that rural residency rotations provide a preview of a community and its demands that can help with recruitment.[21,22] Organizing such programs should be relatively straightforward for a site that already offers rotations and has a relationship with a medical school or other academic health system. HRSA could identify FQHCs or other sites that are well positioned to offer rotations and encourage medical schools to work with NHSC scholars to set

Rural Rotations in Indian Country

One example of how training in rural sites contributes to recruitment and retention comes from the Northern Navajo Medical Center in Shiprock, NM. This NHSC site partnered with the University of New Mexico to create a family medicine residency program that prepares physicians to provide care in rural communities. Residents spend 1 year at the University of New Mexico and 2 years in Shiprock, located in the Navajo nation. The partnership is a long-term standing residency program based within the Indian Health Service. The partnership came about because many residents who participated in rotations in Shiprock reported having very positive and influential experiences.

[20] See meeting minutes of the November 14–15, 2023, public meeting of the NACNHSC. https://www.hrsa.gov/sites/default/files/hrsa/advisory-committees/national-health-service-corps/nacnhsc-november-2023-meeting-minutes.pdf

[21] Pathman, D. E., Steiner, B. D., Jones, B. D., & Konrad, T. R. (1999). Preparing and retaining rural physicians through medical education. *Academic Medicine: Journal of the Association of American Medical Colleges, 74*(7), 810–820. doi: 10.1097/00001888-199907000-00016

[22] Rourke, J., Asghari, S., Hurley, O., Ravalia, M., Jong, M., Parsons, W., et al. (2018). From pipelines to pathways: the Memorial experience in educating doctors for rural generalist practice. *Rural Remote Health, 18*(1), 4427. doi: 10.22605/RRH4427

up rotations. Rotations are not costly, but housing remains an issue of concern, as noted above in Long-Term Recommendation PLT-3.

Rotations in family medicine practice may be a particularly good fit. State AHECs and teaching health centers could help NHSC sites coordinate short-term rotations. In Hawaii for example, a rural FQHC collaborated with the local medical school to recruit an obstetrician-gynecologist to the FQHC, which paved the way for an ongoing obstetrics and gynecology rotation for third- and fourth-year residents. Similarly, the University of Wisconsin Department of Obstetrics and Gynecology created a rural obstetrics and gynecology residency track, in which residents spend approximately 20 percent of their training at three rural sites, with onsite housing provided. Such efforts expose clinicians in training to medically underserved communities and the health centers therein, many of which are NHSC sites. This exposure contributes to a pipeline of providers who are more likely and better prepared to apply for NHSC programs and continue serving in the communities where they trained.

Navigating the transition from medical training into practice, especially in rural areas, can pose a steep learning curve. Through early training experiences, participants can meet mentors, increase self-awareness, build long-term confidence and commitment, increase professional as well as personal readiness, and make more successful transitions.[23]

[23] Russell, D., Matthew, S., Fitts, M., Liddle, Z., Murakami-Gold, L., Campbell, N., et al. (2021). Interventions for health workforce retention in rural and remote areas: a systematic review. *Human Resources for Health, 19*, Article 103. https://doi.org/10.1186/s12960-021-00643-7

Site Recruitment and Retention

Background

As it sought to learn more about NHSC site needs regarding site recruitment and retention, the Council learned that the number of rural sites that apply to participate in the NHSC program is lower than desired. Despite efforts to reach rural health centers, HRSA staff have faced difficulties establishing adequate, consistent contact. HRSA staff indicated that a key barrier to participation in the NHSC is the requirement that sites offer a sliding fee scale.

Site (S) Recommendations

Recommendation S-1: Increase participation of NHSC sites in rural HPSAs in NHSC by expanding methods of communication and engagement with potential sites, increasing the frequency of communication with existing sites, and improving the consistency of outreach. Examples include the following:

- Enhance training and communication through TA and other opportunities on this matter.
- Ensure consistent communication with sites.
- Emphasize collaboration between NHSC and state LRPs.
- Create regional focus groups (perhaps led by regional HRSA staff) to improve outreach.
- Consider how the calculation of HPSA scores may contribute to sites dropping out of the NHSC despite their continued need for NHSC providers.

Rationale

About 70 percent of HPSAs are in rural areas, but only 46 percent of NHSC sites and 32 percent of NHSC physicians are in rural areas. The Council recognizes that this may contribute to some NHSC-approved sites with high HPSA scores that do not have NHSC clinicians practicing,

regardless of discipline. As a result, there are significant gaps in the availability of primary care, mental health, and dental providers in all high-HPSA sites. The NHSC program does not necessarily need more sites overall but rather more participating sites and clinicians in the areas of highest need.

The Council acknowledges the importance of increasing health care access in areas with high HPSA scores. However, the Council has heard feedback from health centers around the country indicating that their low HPSA scores do not adequately reflect the challenges facing their community, such as high rates of homelessness, substance use disorders, and mental health disorders.[24] Updating the HPSA scoring system to evaluate additional data points that more accurately show the needs of the population served by health centers could help increase access to those with the highest need.

The impact of the HPSA scoring system on Indian Health Service programs may result in the low participation rates of NHSC clinicians.[25] Although tribal programs are automatically approved for participation in the NHSC, they tend to have lower HPSA scores and thus might experience more difficulty accessing NHSC awards despite being able to greatly benefit from them. Such sites perceive that they are at a competitive disadvantage because of their low HPSA scores, even though they are eligible for funds set aside specifically for tribal sites. The situation highlights the need for better communication and outreach with potential NHSC sites.

[24] According to the Nebraska Primary Care Association, "There was a dramatic shift that started 5 years ago when the Nearest Source of Care criteria was added to the scoring methodology that resulted in SIGNIFICANT drop in HPSA scores for all 7 Nebraska Health centers." Source: Letter to NHSC Director Luis Padilla, MD, from Amy R. Behnke, CEO, Health Center Association of Nebraska, dated February 27, 2019. The Dupage (IL) County Health Department submitted a public comment to the Council requesting that HRSA expand the HPSA designation to include local public health departments that that have more than 50 percent of their clients funded by Medicaid. (See meeting minutes of the March 19–20, 2024, public meeting of the NACNHSC: https://www.hrsa.gov/sites/default/files/hrsa/advisory-committees/national-health-service-corps/nacnhsc-march-2024-minutes.pdf). Council members have described their own organizations' experiences with low HPSA scores.

[25] The Indian Health Service administers its own Scholarship and Loan Repayment Programs.

NHSC received almost no responses to an intensive effort to contact individual rural sites through email and phone calls to invite them to participate in the NHSC program. NHSC should reevaluate communications with sites and consider new approaches.

As part of its intensive outreach, the DRO sought contact information on every rural health clinic; neither the HRSA Office of Rural Health nor the Centers for Medicare & Medicaid Services could provide that information. In some cases, states refused to provide the information because they see the NHSC as competing with their own LRPs. Although states can use their own funding in ways that the NHSC cannot—which would address the issue of perceived competition—some state programs mimic the NHSC exactly, resulting in competition for the same candidates.

The DRO has about 50 staff members who conduct site visits, and each is required to travel to at least 15 sites per year.[26] However, the NHSC program has 21,000 sites, so staff tend to prioritize sites that have never had a visit, particularly those with high HPSA scores and those where concerns or compliance issues have been raised. The Council believes that NHSC sites would benefit from more outreach and TA, which likely requires increasing the resources available to the sites. HRSA should consider whether retired NHSC alumni could be trained to assist with site visits (a model used by the Accreditation Council for Graduate Medical Education). The Council also suggests that HRSA work with state primary care associations to help FQHCs apply to the NHSC program.

Establishing regional focus groups of FQHCs and community health centers would give NHSC insights into barriers to NHSC participation in the highest-need areas. Focus groups could provide a platform to address the perception that the NHSC is in direct competition with state

[26] See meeting minutes of the June 27–28, 2023, public NACNHSC meeting. https://www.hrsa.gov/sites/default/files/hrsa/advisory-committees/national-health-service-corps/nacnhsc-june-2023-meeting-minutes.pdf

LRPs. They could also serve as a forum for discussing site requirements, such as the sliding fee scale, and best practices, such as innovative approaches to housing for NHSC participants.

Recommendation S-2: HRSA should consider strategies for alleviating the obstacles presented by the requirement that NHSC sites use a sliding fee scale.

Rationale

According to NHSC sites, the top reason that sites either do not apply for the NHSC, are not approved, or do not apply for recertification is the NHSC requirement around the sliding fee scale. The NHSC statute provides little detail about the sliding fee scale requirement. Community service providers frequently rely on various strategies to help offset the costs of care to the indigent and uninsured, including assessing whether clients are eligible for free services and requiring clients to enroll in Medicaid as a condition of providing care. In general, Medicaid enrollment is considered a positive step, because it links people to regular and preventive health care services. In addition, participating NHSC sites are already required to accept Medicaid beneficiaries.

Recommendation S-3: NHSC should consider creating targeted focus groups in areas with elevated numbers of site nonrenewal of designation or site decrease in HPSA scores to evaluate the impact of HPSA scores on site participation and recertification and to identify next steps to address committed stakeholders' concerns.

Rationale

While the methodology for determining HPSA scores is not perfect, it allows HRSA to increase access to services in health care shortage areas. Changes in HPSA scores sometimes render sites ineligible to receive NHSC scholars or loan repayors. These problems arise from a combination of factors including but not limited to a shift in population, provider demographics, or both;

changes in the economic status of a geographic region; changes in nearest sources of care; and primary care associations' reporting.

Expansion of Funding to Enhance Integrative Care

Background

Over its 50-plus years, the NHSC has expanded its focus beyond primary health care providers to incorporate disciplines that contribute to primary care, including oral and maternal health providers, as well as behavioral health providers. The Council believes an integrated approach to patient care is needed to improve health outcomes and overall well-being. For example, the American College of Lifestyle Medicine maintains that 80 percent of chronic disease could be prevented through nutrition and lifestyle measures.[27] *The White House National Strategy on Hunger, Nutrition, and Health* supports transformative programs, policies, and system changes, such as food-as-medicine programs, to reach the goal of ending hunger and increasing healthy eating and physical activity by 2030, so that fewer Americans experience diet-related diseases caused by health disparities.[28] The Council's recommendations are aimed at increasing access to preventive, integrated, and holistic care. HRSA can leverage current resources to promote existing public and private-sector programs, tools, and resources on preventive care for nutrition, diabetes, and obesity (see Appendix B).

Expansion of Funding (EF) Recommendations

Recommendation EF-1: Encourage interdisciplinary and collaborative practice for NHSC participants to obtain training or certification on a lifestyle approach to preventive care

[27] American College of Lifestyle Medicine. (n.d.). *Lifestyle medicine patient handouts.* https://lifestylemedicine.org/project/patient-resources/
[28] The White House. (2023). *Biden-Harris administration national strategy on hunger, nutrition, and health.* https://www.whitehouse.gov/wp-content/uploads/2022/09/White-House-National-Strategy-on-Hunger-Nutrition-and-Health-FINAL.pdf

principles, with emphasis on a holistic approach to patient care and a focus on nutrition counseling and education.

Rationale

The health care costs of obesity alone have been estimated at nearly $173 billion annually, with numerous studies suggesting that the figure fails to account for other factors, including the costs of chronic diseases related to obesity.[29,30,31] Nutrition is a key component of an interdisciplinary approach to care that can improve the health and well-being of all citizens and, as such, change the trajectory of health care spending in this country.

Health professionals need help understanding how to work with all the members of a patient's health care team in an interdisciplinary approach to care. They also need training and education on the effect of diet, nutrition, and exercise on well-being and chronic disease and how to address health concerns related to nutrition. Training can provide guidance on how to:

- appropriately assess patients using a multifaceted approach—taking into consideration mental, oral, nutritional, social, and cultural health factors in addition to the individual's physical health;
- collaborate to address these factors with the patient's health care team; and
- refer patients to services to improve health outcomes, using social determinants of health as a guiding tool.

[29] Ward, Z.J., Bleich, S.N., Long, M. W., & Gortmaker, S.L. (2021). Association of body mass index with health care expenditures in the United States by age and sex. *PLoS ONE, 16*(3), Article e0247307. https://doi.org/10.1371/journal.pone.0247307

[30] Cawley, J., Biener, A., Meyerhoefer, C., Ding, Y., Zvenyach, T., Smolarz, B. G., et al. (2021). Direct medical costs of obesity in the United States and the most populous states. *Journal of Managed Care & Specialty Pharmacy,* 27(3), 354-366.

[31] Waters, H., & Graf, M. (2018, October). *America's obesity crisis: the health and economic costs of excess weight.* Milken Institute. https://milkeninstitute.org/report/americas-obesity-crisis-health-and-economic-costs-excess-weight

Focusing on a holistic approach that treats the whole patient and considering the many different aspects that affect an individual's overall well-being are crucial.

HRSA has already addressed behavioral and oral health and is working on initiatives around social and cultural determinants of health. Encouraging training on a lifestyle approach that promotes preventive, holistic care will increase the capacity of the health care team. It will also give PCPs another resource for integrating diet, exercise, and nutritional counseling into routine patient care. HRSA's BHW recognizes the utility of supporting education for nutrition professionals as part of a holistic approach to health care. For example, it offers the Native Hawaiian Health Scholarship Program, which funds education for those pursuing careers as dietitians and nutritionists as well as other medical, dental, and behavioral health providers in exchange for public health service.[32] BHW should also consider the potential opportunities for NHSC participants to have fellowships in nutrition.

Recommendation EF-2: NHSC should support integrated health care by bringing health educators to NHSC sites to address nutrition as a root of chronic disease. NHSC should assess the current availability of nutrition services to measure progress toward the National Strategy goal of reducing diet-related diseases by 2030 and evaluate the gaps in NHSC site services.

Rationale

It is crucial for NHSC clinicians to understand the impact of food insecurity and diet-related diseases, which disproportionately affect the underserved communities in which they practice.

[32] Health Resources and Services Administration, Bureau of Health Workforce. (2024, May.) *Apply to the Native Hawaiian health scholarship programs.* https://bhw.hrsa.gov/funding/apply-scholarship/native-hawaiian-health

HRSA funded a pilot program to lay the groundwork for including behavioral health providers into the NHSC, and it could do the same for registered dietitians or other allied health professionals. Supporting nutrition education and loan repayment for registered dietitians or nutritional health professionals through the NHSC program would create a pathway and an incentive for these professionals to work with NHSC sites and for NHSC sites to hire registered dietitians or other allied health professionals.

Recommendation EF-3: Implement clinical quality measures that promote interdisciplinary care and incentivize sites to improve collaboration among providers to enhance patient care. Work toward modernization or creation of a robust mechanism for improving metrics and data collection, particularly as they relate to equity and access to NHSC sites.

NHSC could work with sites to better integrate quality metrics to reflect the impact of nutritional services on patients.

Integrated Family Care

Through funding from the Centers for Disease Control and Prevention and the National Association of Community Health Centers, Borinquen Health Center in Miami-Dade County, FL, created the Family Fit Club to address childhood obesity. This comprehensive, team-based approach gives children and families at risk of chronic diseases related to overweight and obesity tools to improve their lifestyle through nutrition, exercise, and behavioral counseling. Children ages 7–13 receive in-person medical assessments and attend online nutrition and exercise classes (minimizing transportation barriers)—and their parents are encouraged to join them. In addition to Borinquen's team of pediatricians, other health care providers, nutritionists, and behavioral counselors, the program has a lot of support from local organizations that provide access to exercise facilities, a food pantry, and healthy cooking classes, for example. Most children in the Family Fit Club have lost weight or stabilized their weight and improved their blood pressure, lipid levels, and blood sugar levels. They also reported more active play time, less recreational screen time, and healthier eating habits. Borinquen applies the team-based, integrated approach to adult patients as well by linking shared medical appointments with nutritional counseling to improve health through lifestyle changes.

Rationale

Quality improvement measures pose a strong incentive for education and training to improve best practices, which result in better patient outcomes.

Conclusion

The Council applauds the investments HHS has made to increase the health care workforce in rural and underserved areas throughout the United States and its territories through the NHSC and other programs. In its 50-plus years, the NHSC has made remarkable contributions to increasing access to care and improving health equity.[33] Still, the United States faces a projected health care workforce shortage that threatens the health and well-being of its residents. The NHSC is uniquely positioned to enhance the workforce by increasing recruitment and retention of participating people and sites and expanding support for professional education to facilitate integrated, holistic care. This report seeks to bring to the attention of the NHSC leadership concerns of Council members and their colleagues. The Council hopes its recommendations provide insights that can help the NHSC enhance recruitment and retention of scholars and sites, cultivate a skilled health care workforce, and build on the successes of the NHSC program.

[33] National Advisory Council of the National Health Service Corps. (2022). *The National Health Service Corps at 50: accomplishments, adaptations, and aspirations*. https://www.hrsa.gov/sites/default/files/hrsa/advisory-committees/nhsc-50-accomplishments-adaptations-aspirations.pdf

Appendix A: NACNHSC Roster

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Appendix B: Selected Federal and National Initiatives and Trainings on Nutrition, Obesity, and Diabetes

The following list offers links to programs, tools, and resources available on nutrition, obesity, and diabetes, primarily from federal agencies.

***White House National Strategy on Hunger, Nutrition, and Health*, and Selected Related Federal Initiatives**

White House: 2022 National Strategy on Hunger, Nutrition, and Health, Implementation Strategy, and Fact Sheet, White House Challenge to End Hunger and Build Healthy Communities, Fact Sheet

Health Resources and Services Administration: Nutrition Centers of Excellence, State Title V MCH Block Grant

Administration for Community Living: Innovations in Nutrition Programs and Services

U.S. Department of Agriculture: Agricultural Science Center of Excellence for Nutrition and Diet (ASCEND) for Better Health

Other Federal Programs

Health Resources and Services Administration: Obesity Prevention in Rural Early Care and Education Settings Compendium, Identifying Evidence-Based and Evidence-Informed Nutrition Interventions to Advance Maternal Health in Title V Maternal and Child Health Services Block Grant Programs, Promising Practices—Diabetes

Centers for Disease Control and Prevention: Division of Nutrition, Physical Activity and Obesity, State and Local Strategies, Unfit to Serve: Obesity and Physical Inactivity Are Impacting National Security, National Diabetes Prevention Program, Becoming a Lifestyle Change Program Provider, Diabetes Self-Management Education and Support Toolkit, Native Diabetes Wellness Program

Administration for Community Living: National Resource Center on Nutrition and Aging, Instructional Campus on Aging Nutrition

Administration for Communities & Families: Coordinated Services for Families: An In-depth Look at Approaches That Coordinate Early Care and Education With Other Health and Human Services, Aging and Disability Evidence-based Programs and Practices, Wellness Initiative for Senior Education (WISE), Indigenous People's Task Force Indigi-Baby Maternal and Child Nutrition Initiative

National Institutes of Health: Managing Overweight and Obesity in Adults: Systematic Evidence Review from the Obesity Expert Panel, Talking with Patients about Weight Loss, National Diabetes Information Clearinghouse, Guiding Principles for the Care of People with

or at risk for Diabetes, Game Plan for Preventing Type 2 Diabetes, Diabetes Prevention Program, Health Information on Diabetes

Indian Health Service (IHS): Special Diabetes Program for Indians, Division of Diabetes Treatment and Prevention

Centers for Medicare & Medicaid Services: Medicare Diabetes Prevention Program

U.S. Department of Agriculture: FY 2023 Team Nutrition Grant for Supporting Nutrition Education for School-Aged Children, Expanded Food and Nutrition Education Program, National Institute of Food and Agriculture, Regional Nutrition Education and Obesity Prevention Centers of Excellence, the Gus Schumacher Nutrition Incentive Program, Produce Prescription Program, Eat Smart, Live Strong, My Plate for My Family, Power Up! Training and Professional Development Resources, Supplemental Nutritional Assistance Program (SNAP) Education Resources, Food Distribution Program on Indian Reservations Sharing gallery, Federal Resources on Diabetes

Department of Veterans Affairs**:** MOVE! Weight Management Program, National Center for Health Promotion and Disease Prevention, Whole Health Library

Nonfederal Programs Recommended on Federal Websites

Family Healthy Weight Programs

Association of State Public Health Nutritionists Training and Education Resources

University of Minnesota 2024 National Maternal Nutrition Intensive Course

Arizona State University TRANSCEND Program

American Academy of Pediatrics Intensive Health Behavior and Lifestyle Management, Obesity Treatment in Primary Care Chart

Accreditation Council for Graduate Medical Education Summit on Medical Education in Nutrition

American Medical Association Diabetes Prevention Toolkit

National Diabetes Prevention Program Coverage Toolkit