Virginia Department of Health, Office of Health Equity

Primary Care Needs Assessment
Virginia

James River Park System, Richmond City

2021

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Introduction

Purpose and Process

The Virginia Primary Care Office (PCO) is sponsored by the Virginia Department of Health, Office of Health Equity (VDH-OHE). The purpose of the PCO Needs Assessment is to identify communities with the greatest unmet health care needs, disparities, and health workforce shortages within the state of Virginia and to identify the key barriers to accessing primary health care.

The Virginia PCO approached their Primary Care Needs Assessment (PCNA) similarly to the method used to update the Virginia State Rural Health Plan. Virginia's rural health leadership hosted a variety of local community-based conversations with leaders and citizens in rural communities across the state to develop an equity driven, asset focused approach to identifying the needs of the various rural communities and the solutions each community has developed to meet those challenges. The PCO hoped to hear from those who access the healthcare safety net to inform conclusions and recommendations. The process began in November 2019 but was paused when the COVID-19 pandemic began. Travel was suspended and the entire PCO office staff was deployed to assist with agency pandemic needs. The PCNA work began again in the spring of 2021.

A variety of methods were used to elicit information for anyone who engages with the primary care system in Virginia. We developed a short survey for people to complete via Survey Monkey, held stakeholder meetings, interviewed subject matter experts and conducted literature reviews for each subject to identify gaps, best practices and key metrics to track progress.

The COVID-19 pandemic that began in 2020 underscored the importance of ensuring equity throughout our healthcare systems. Pandemics exploit weak points in health systems, and as a result, they impact some groups more than others; people who already struggle to access care tend to

grow sicker and die at higher rates than the general population.

Primary care can help build the resiliency of health systems against pandemics by making sure that these groups can achieve the same level of access and quality of care as the general population. The stakeholders in this assessment identified many ways that the pandemic impacted some groups differently than others, and what that means for primary care. To the extent possible, this assessment seeks to learn from them about how we can strengthen our primary care system against the current and future pandemics.

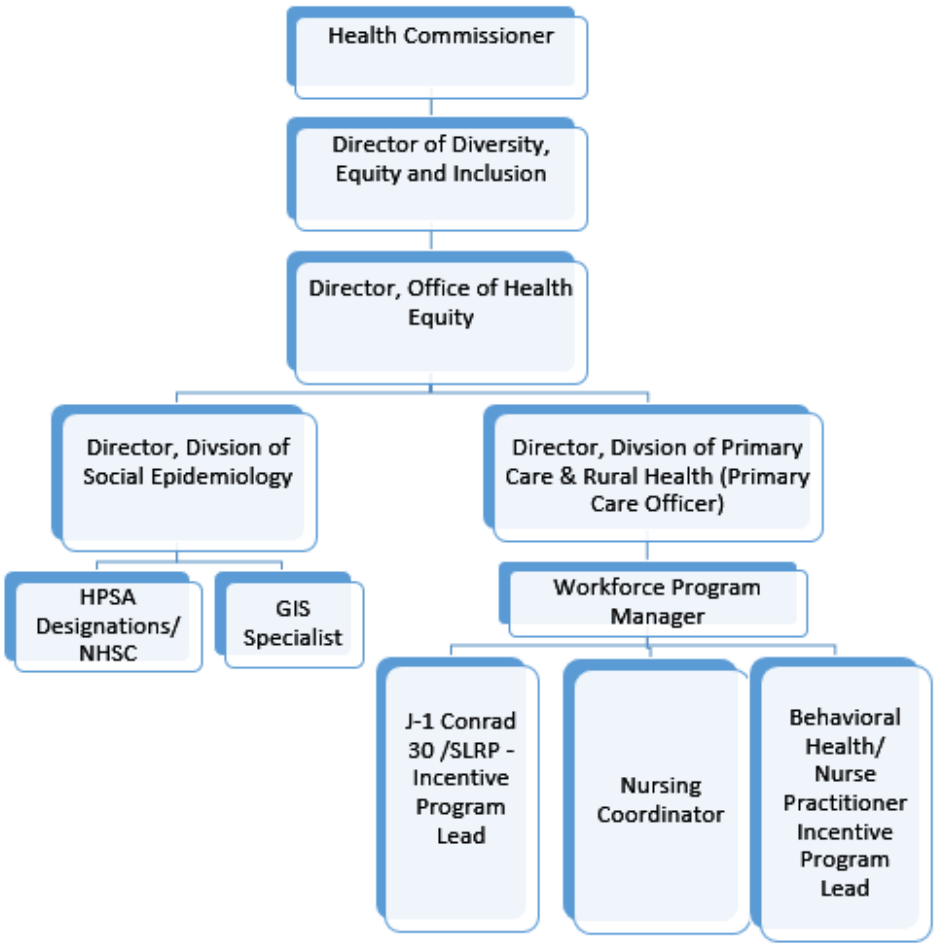
The Virginia Primary Care Office

Structure

Fairy Stone State Park, Patrick County

The Virginia PCO (VA-PCO) is funded by a cooperative agreement between HRSA and the VDH-OHE. The VA-PCO has been level funded since 2018 but administrative costs along with programmatic requirements have increased, necessitating the Virginia State Office of Rural Health to supplement the workforce and designation activities for rural populations.

The Director of the VA-PCO oversees the Division of Primary Care & Rural Health (DPCRH) within the VDH-OHE and reports to the director of the OHE. The OHE director reports to the newly appointed Officer of Diversity, Equity and Inclusion (ODEI) who reports to the Commissioner of Health. PCO Activities are split between the DPCRH and the OHE Division of Social Epidemiology (DSE). The DSE manages the designation work along with the analytics necessary to identify the distribution of providers and the DPCRH oversees the 15 different incentive programs that place providers into shortage areas. The current Organizational Chart for the Virginia PCO on the next page:



Organizational Chart: The Primary Care Office brings together staff from multiple divisions within the Office of Health Equity.

Funding

There are four overarching goals that dictate the work of the VA-PCO:

1. Complete the Primary Care Needs Assessment,
2. Conduct Shortage Designation Coordination,
3. Conduct Efforts to expand access to primary care, and,
4. Develop a strategic primary care workforce plan.

The VA-PCO sponsors a State Loan Repayment Program (SLRP) grant and supplements the staffing costs for this funding source.The PCO budget is broken down by the following percentages:

Staff Salary and Fringe (total of 1.8 FTE)	81%
Other costs including travel, rent, computer costs, supplies	4 %
Indirect Costs	15%
Total	100%

The State Office of Rural Health Grant provides additional funding by for travel to PCO meetings, recruitment events, office supplies and additional salary support.

Key Accomplishments

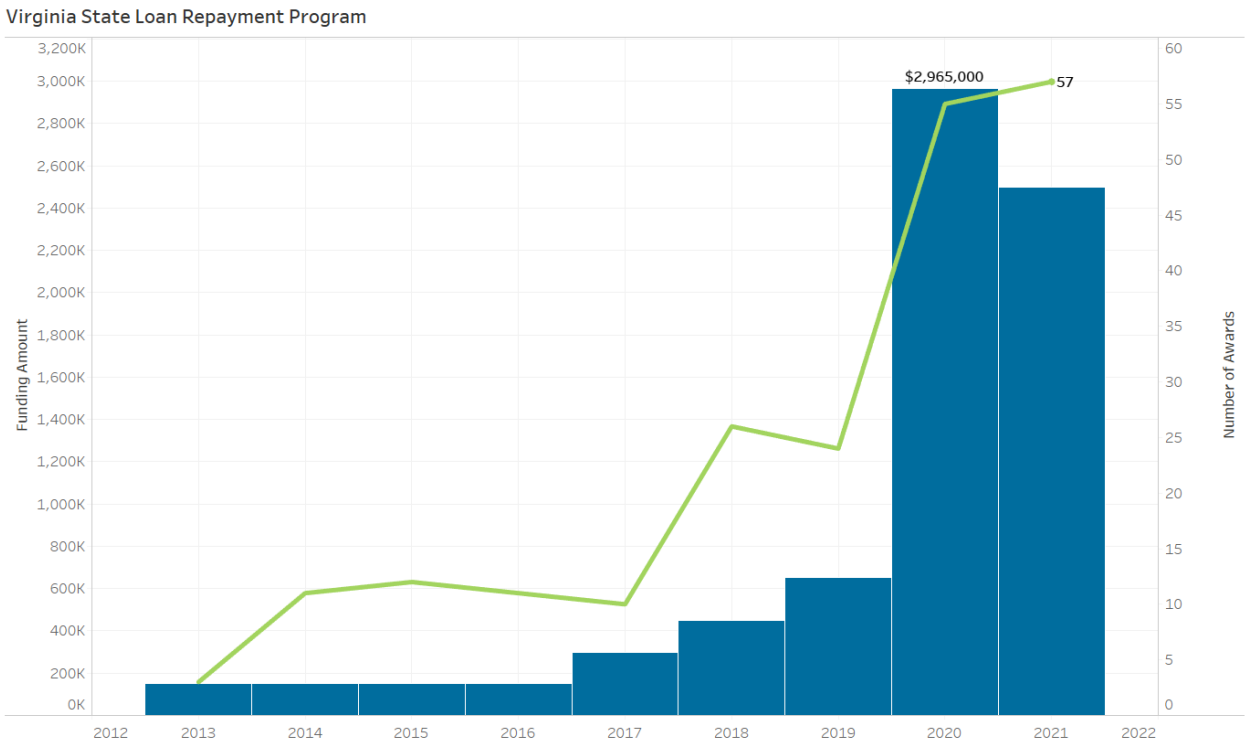
Current PCO staff have been in place for the past 6.5 years. By retaining key staff, the PCO has implemented a vision for shortage designations and workforce recruitment and retention. The vision includes engaging key partners and educating stakeholders and to increase funds for placing obligated providers into Virginia's HPSAs.

Loan Repayment Funding

The PCO manages the Federal State Loan Repayment Program (SLRP) and funding for SLRP has steadily increased from $150,000 a year in 2013 to $500,000 in 2021. Between 2013-2018, SLRP applicants were required to find their own matching funds, which ended up disincentivizing the program. Seeing this, the PCO workforce staff educated communities, employers, foundations, and applicants about SLRP and its potential. These efforts expanded knowledge and interest in the SLRP program and stakeholders provided matching funds for applicants and eventually became advocates for the program by directly observing the difference SLRP makes for providers and the community they serve. For the first time in several years, 2018 saw more applicants than funding. These efforts made the case to leadership who supported a budget request to the General Assembly for SLRP matching funds and in 2018 the Virginia General Assembly awarded $300,000 yearly as matching funds toward the federal SLRP. Community foundations and the State Office of

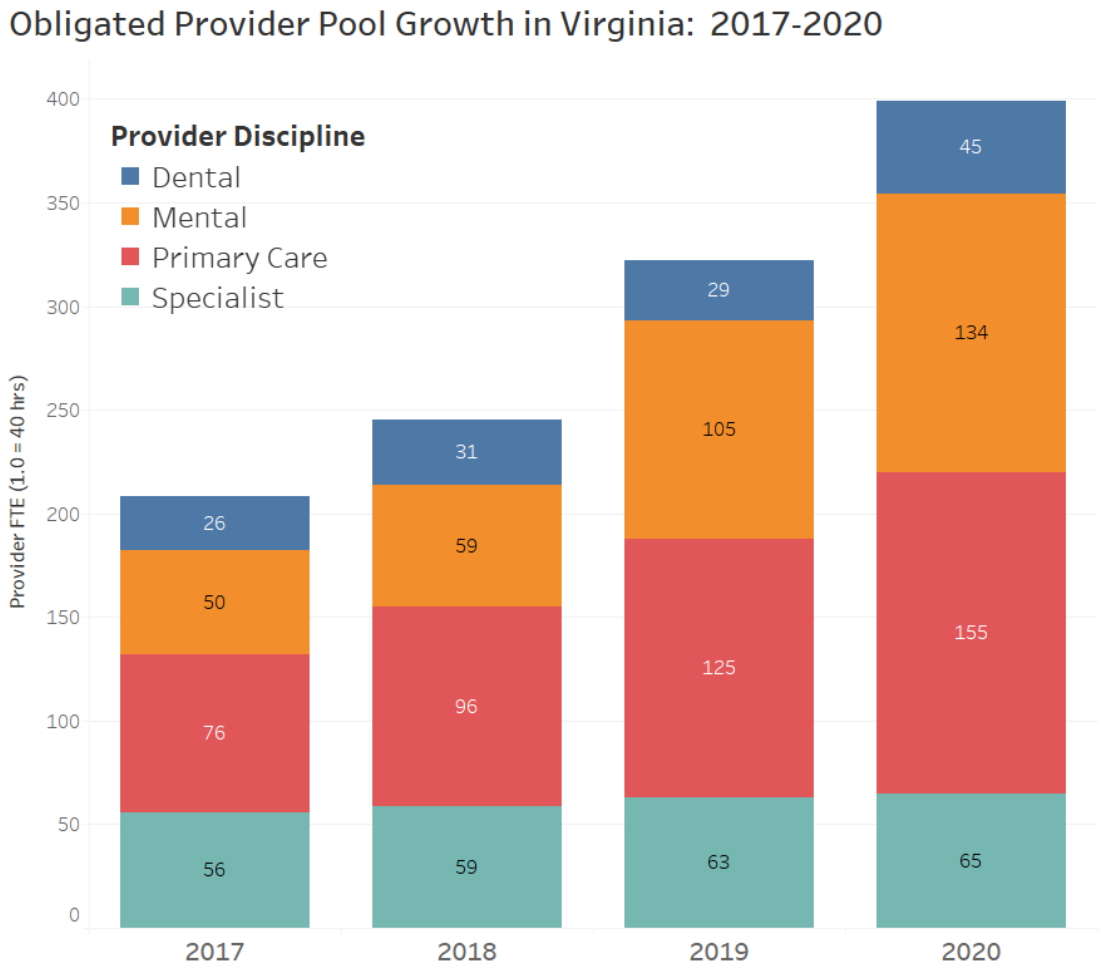
Rural Health have provided the additional match relieving communities of the extra burden when recruiting a provider.

The Tobacco Region & Revitalization Commission reached out to the PCO in 2019 to begin the Tobacco Region Talent Acquisition Program. This $1,500,000 program places providers within HPSAs in the tobacco region of Virginia. The total number of loan repayment awards for all funding sources has increased from three in 2015 to 57 in 2021.



Obligated Provider Growth

In addition to expanding the SLRP program, Virginia has been successful in expanding the number of obligated providers practicing in Virginia in other programs. The number of obligated provider Full Time Equivalency (FTE)s across all programs (excluding NURSE CORPS programs) serving in Virginia has increased from 208 in 2017 to 399 in 2020. The Virginia PCO's aggressive efforts to conduct outreach, improve the accuracy of HPSA scores, and seek funding for programs has been a significant factor in this effort.



Behavioral Health Program

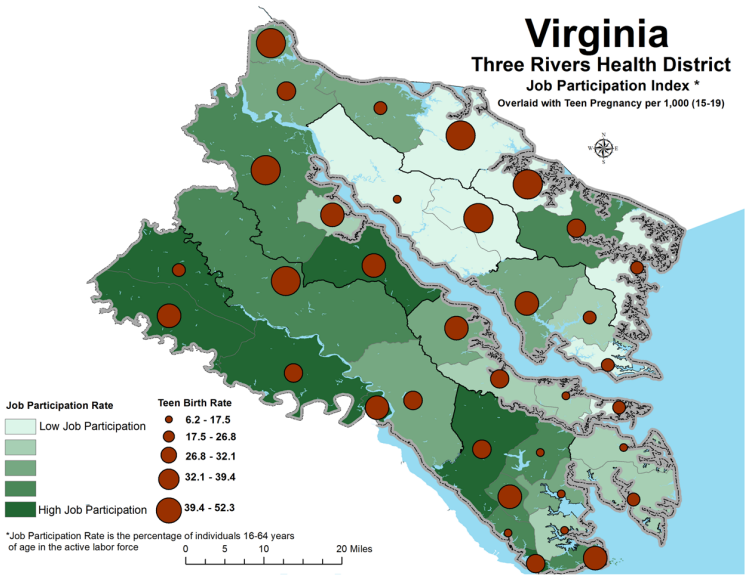
Most areas within Virginia are designated Mental Health Shortage Areas. In order to mitigate the shortages, the PCO conducted several statewide sessions to envision a loan repayment program specific for behavioral health providers. These sessions created a document that was used by stakeholders to develop and advocate for the Virginia Behavioral Health Loan Repayment Program (VA-BHLRP) which the Virginia General Assembly funded in 2021. The initial funding for this program is $1,500,000 along with $85,000 for staff support . The funding is a budget line-item which will become permanent this year.

Nurse Preceptorships

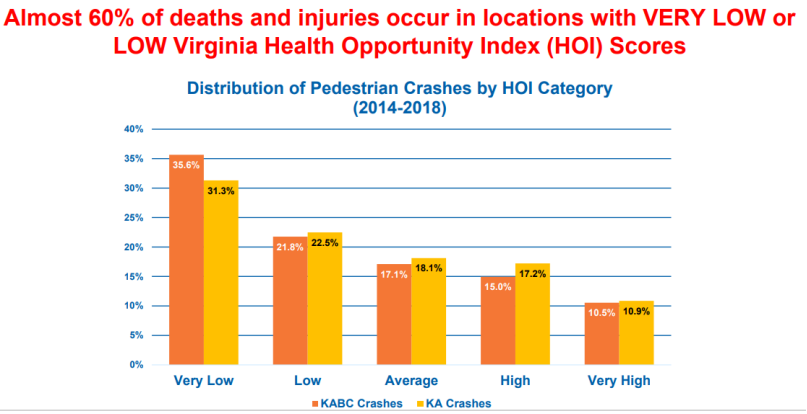
Similar to the VA-BHLRP, the Nursing Preceptorship Incentive Program was funded in 2021 by the Virginia General Assembly. The purpose of this program is to provide financial incentives for Advanced Practice RN student preceptors who are otherwise uncompensated to help increase access to care throughout the Commonwealth. This program works in partnership with the Virginia AHEC Program to oversee the programmatic elements and the funding is awarded to the PCO for distribution to applicants. The General Assembly awarded $500,000 in initial funding.

Health Opportunity Index

The HOI was developed by the Virginia Department of Health, Office of Health Equity. The HOI consists of 13 indicators. Each indicator is composed of one or more processes that help explain how socioeconomic status (SES), and geography influence life expectancy and other outcomes. Using these 13 indicators, the HOI is able to explain 87% of the variance in life expectancy throughout Virginia. The Tool was developed to assist the public, businesses, policy makers, communities, healthcare organizations, and public health professionals in identifying key social and economic factors (also known as social determinants of health (SDOH)) that affect the health outcomes of the residents of Virginia communities. The set of factors chosen to be included within the HOI was designed to capture the processes by which "opportunities to be healthy" emerge; using tools for geospatial analysis with data from the HOI is an effective method of identifying health disparities as well as the SDOH which drive these disparities out of control. In Virginia, the index has been used in combination with other indicators to target recruitment and retention resources, including identifying high priority target areas for J-1 Visa applicants.



The HOI also provides insight to challenges faced by different communities. Local Health Districts have used the HOI to identify areas of high teen pregnancy, low birth weight, hospitalizations, and other health outcomes, along with the specific HOI factors that are contributing to outcomes in their district. This allows them to target specific HOI factors in the neighborhoods most at risk. For instance, Three Rivers Health District used the HOI to understand patterns of teen birth in their district. The Job Participation rate was associated with teen births. The ability to highlight which census tracts have the lowest opportunities for optimal health can lead to specific policies, social, economic, environmental, and structural changes to advance health equity.



The Virginia Department of Transportation (VDOT) has also embraced the Health Opportunity Index. VDOT took notice of the HOI after the Richmond Health District's Vision Zero program identified a strong association between the HOI and traffic injuries and deaths in the Greater Richmond region. After conducting their own analysis, VDOT included the HOI in its Pedestrian Safety Action Plan as one of several criteria to set priority corridors for pedestrian infrastructure.[1]

Hungry Mother State Park, Smyth County

[1] Cole, Mark et al. Oct 27 2019. "Planning and Prioritizing Projects for Health." *PBIC + Health Transportation Webinar Series*. Pedestrian and Bicycle Information Center. Part 4.

Focus Areas

Based on information provided by the PCNA workgroup, key informant interviews, and the stakeholder survey, PCO staff identified six focus areas for the PCNA:

- Expanding Access
- Health Careers Pipeline
- Recruitment & Retention
- Special Populations
- Behavioral Health
- Oral Health

The following sections discuss each focus area.

Expanding Access

Access to primary health care services continues to be an issue in Virginia. Four approaches to care have been identified by Virginia PCO stakeholders as part of the solution to expanding access to care in Virginia: (1) increased practice of non-physician providers, (2) increased use of community health workers (CHWs), (3) community paramedicine, and, (4) increased telehealth access.

Non-physician providers (NPPs), including nurse practitioners and physician assistants, serve as an extension of traditional primary care physicians, allowing physicians to focus on core tasks and complex cases, practice more efficiently, and extend primary care to communities that may otherwise lack access. Dental Hygienists fill a similar role in the oral health field. Community members may struggle to access primary care due to a lack of health insurance or geographic or language barriers. The expanded role of non-physician providers will help to alleviate the demand for physicians and dentists. It will also help to diversify the workforce geographically and demographically. A diverse healthcare workforce makes care more inclusive and accessible to all Virginians, and increases trust in the medical advice and the health system. In an industry with ongoing shortages, it is essential that these providers are able to practice to the full extent of their education and training.

In recent years, Virginia has made great strides in expanding the scope of practice of nurse practitioners and dental hygienists. A 2018 law expanded on existing remote practice capabilities by allowing nurse practitioners with five years of experience to practice autonomously. Similarly, laws passed in 2016 and 2017 allowed dental hygienists to practice remotely, under the supervision of a licensed dentist, in a variety of settings, including defined safety net facilities, schools, long-term care facilities, and behavioral health and development programs.[2]

Nevertheless, Virginia still has room to expand access to care with non-physician providers. Other states provide a wide range of models that Virginia could emulate for both nurse practitioners[3] and dental hygienists.[4] Some small changes could have a large impact on access. For instance, shortening the clinical practice requirement for nurse practitioners, which currently stands at five years, would allow more nurse practitioners to practice autonomously, hastening their ability to fill workforce gaps in rural and other underserved areas. Similarly, removing the requirement that dentists examine patients in-person within 90-days after being seen by a remotely practicing dental hygienist, could improve access to essential screening and preventive services in rural and institutional settings. The Department of Health Professions reviews scope of practice issues, and determines the appropriateness and limits of such changes. Access to care should be a critical component of such reviews.

In addition to the non-physician providers previously mentioned, community health workers (CHWs) help to relieve disparities in access to healthcare. Those most in need of primary care services are often faced with situational barriers that prevent them from accessing healthcare. CHWs are trusted members of the community who are trained to provide basic healthcare services, health education and coaching, and patient navigation. CHWs are able to apply their knowledge and skills to various groups and populations,

[2] Virginia Board of Dentistry. Practice of a Dental Hygienist under Remote Supervision. Guidance Document 60-13.
[3] See Association of Advanced Practice Nurses Practice Information by State for up to date information on state scopes of practice.
[4] See American Dental Hygienists Association Scope of Practice page, or the Oral Health Workforce Research Center Variation in Dental Hygiene Scope of Practice by State for information on state scopes of practice.

making them versatile contributors to a community's health[5]. These workers can act as a liaison between patients and healthcare providers, a role often referred to as "patient navigator (PN)," helping those in need to access care.[6] Community health workers are often perceived as an extension of primary care because of their additional preliminary role in connecting patients to healthcare.

US Patent Office Building, Alexandria City

Despite the expanded roles of non-physician providers, there are populations that remain difficult to reach. Community Paramedicine (CP) allows paramedics and emergency medical technicians to operate in expanded roles by assisting with public health and primary health care and preventive services to the underserved populations in the community. The goal is to improve access to care and avoid duplicating services. Emergency medical services (EMS) act as an equalizer in the healthcare sphere, providing services to a wide variety of populations, including populations that may be difficult to reach such as the unhoused or housing insecure. These communities often receive healthcare services through emergency service providers on an acute basis.[7] There are a few EMS agencies in Virginia that utilize a CP model. In general, these agencies are large and urban based with the necessary workforce to cover emergency calls first and have also identified a funding stream to cover the costs.

Technology also provides an opportunity to expand access by improving the convenience, timeliness and reach of a variety of healthcare services. Telehealth allows patients to

[5] HealthPayerIntelligence. (2019, November 15). Community health workers fill gaps in rural healthcare. HealthPayerIntelligence. Retrieved September 17, 2021.
[6] Roles of community health workers - RHIHUB TOOLKIT. Roles of Community Health Workers - RHIhub Toolkit. (n.d.). Retrieved September 17, 2021.
[7] Craig Evans Interview

virtually access healthcare services that would otherwise require in-person face-to-face interaction. These services expand access to health care in terms of both convenience and necessity. The likelihood of someone addressing health concerns and seeking regular medical exams and screenings might increase if they are able to do so from the comfort of their own home. Telehealth offers a solution to individuals with accessibility issues, including those with limited access to transportation or mobility limitations, who need to meet with a provider. For those seeking behavioral/mental health counseling or treatment, telehealth provides discreet forms of care that help alleviate feelings of embarrassment or shame that are sometimes caused by the stigma surrounding mental health issues.

While telehealth has the potential to expand access to health care services, many Virginians face barriers to accessing telehealth itself. Many Virginians living in rural communities do not have access to the high-speed broadband internet needed to take advantage of telehealth services. Even in geographic areas that can easily access broadband, some Virginians cannot afford to pay monthly fees for broadband/internet services. When neither broadband access nor cost are a concern, certain populations might not be technologically literate.

Recommendations:

Expanding access to healthcare is a very complicated issue and recommendations made within this document will ideally be picked up by others within the safety net system to address needs and break down silos as they currently exist.

- Explicitly add consideration of impact on Access to Care to the Virginia Board of Health Professions Criteria for Evaluating the Need for Regulation.
    - The Virginia Board of Health Professions uses seven criteria when evaluating the need for regulation. One of the criteria is "Economic Impact," which includes "costs result[ing] from restriction of the supply of practitioner."[8] However, higher costs are associated with more restrictive levels of regulation when discussing application, indicating conflict with other considerations in this criteria. Access to Care, with a focus on safety net, rural, and vulnerable populations, should be a specific criteria.
- Expand Medicaid Reimbursement to include Community Paramedicine and Community Health Workers.

[8] Board of Health Professions. 2019. "Policies and Procedures for the Evaluation of the Need to Regulate Health Occupations and Professions." Guidance document: 75-2. Virginia Department of Health Profession.

    - Community Health Workers and EMS personnel who perform community paramedicine functions for their community often fill the gaps created by the lack of available health care providers. Expansion of Medicaid reimbursement to include these two groups could have significant positive impacts on communities that lack access to traditional health care.[9]
- Allocate federal and state funds to support planning and realization of transportation infrastructure.
    - Expand funding for door to door medical transportation models
    - Expand the Rural Transportation Planning Program which uses federal and state funding to aid in transportation planning in rural areas.
- Provide funding and technological assistance for non-emergency transportation programs to expand access to employment, medical appointments, necessary errands and community activity[10]
    - Programs such as the Transportation Reimbursement Incentive Program (TRIP) in Riverside County, CA and the Veterans Administration Highly Rural Transportation Grants program are examples of two programs to duplicate or expand in Virginia.
- Adapt the expanded COVID-19 telehealth reimbursement regulations by CMS permanently. This includes expanding the type of provider eligible to bill Medicare along with expanding where a patient and provider are located for the service.

[9] Virginia State Rural Health Plan 2022-26 page 10-8
[10] Virginia State Rural Health Plan 2022-26, page 7-5,

Improving the Health Careers Pipeline

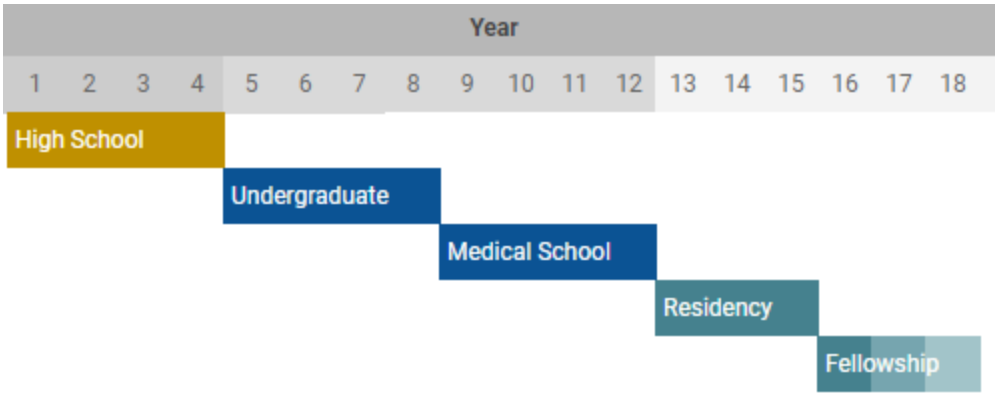
In order to become a family medicine physician, a minimum of 11 consecutive years of rigorous academics after high school graduation are required. This is a commitment financially, socially, and academically. Specialty physicians such as psychiatrists, pediatricians, and OB/GYNs require an additional year of residency training, with specialities requiring even more training.

The physician pipeline (The Pipeline) refers to the type of education and exposure a future physician must have to become a licensed, practicing physician in Virginia. Virginia PCO Stakeholders identified the need to improve the academic pipeline. Pipeline programs are designed to provide educational and career support to students belonging to racial/ethnic minorities or those from disadvantaged backgrounds who have challenges applying to or entering health professions programs. These initiatives aim to increase the diversity of the nation's health professions workforce and to offer high quality, culturally-competent care within underserved communities. Ideally, the pipeline begins as early as elementary school with substantive experiences starting in middle school or high school. The pipeline can span decades for one student making it difficult to track and measure success.

The work of a physician within safety net organizations is often referred to as a calling - and one that not every physician hears. Safety net providers work long hours in health professional shortage areas (HPSAs) with fewer resources, lower pay, and limited professional opportunities compared to counterparts working within larger healthcare systems or more resourced areas.

Introducing young people to the idea of becoming a healthcare professional early in their life exposes them to the possibility of attaining a health career. The physician pipeline includes high school, undergraduate education, graduate medical education, and residency. Pipeline programs are considered a best practice to recruit underrepresented minority students and underserved students into medicine, perhaps exposing them to their calling.

The pipeline to become a licensed physician is as follows:



Successful and comprehensive pipelines programs focus on the recruitment, retention, and support of trainees from disadvantaged and/or underrepresented backgrounds leading to improved distribution of health professionals to high need areas and settings. Ensuring a national health workforce that is diverse and representative of the communities it serves are shown to facilitate the delivery of effective, high quality, culturally sensitive, and patient-centered care.[11]

Example of pipeline activities

<table>
<tr><td rowspan="5">Outreach to students through health fairs, physicals, career days</td><td>Pre-college application workshops</td><td colspan="4"></td></tr>
<tr><td>Weeklong summer/afterschool programs</td><td colspan="3">Academic enhancement programs</td><td colspan="2"></td></tr>
<tr><td>Health Careers Camps</td><td colspan="3">shadowing</td><td>Community clerkships</td><td>Community rotations</td></tr>
<tr><td>Summer time mentoring</td><td colspan="3">Mini-medical school</td><td colspan="2">Primary Care Training Tracks</td></tr>
<tr><td>Pre-health coursework</td><td colspan="3">Volunteering for athletic physicals, RAM events, healthcare facilities,</td><td colspan="2">Rural Training Tracks</td></tr>
<tr><td>K- 8</td><td>High School</td><td>Community College</td><td>Undergraduate</td><td>Post-Baccalaureate</td><td>Medical School</td><td>Residency</td></tr>
</table>

The need to produce healthcare professionals has never been greater. In 2020, the Association of American Medical Colleges predicted a national shortage of primary care physicians between 21,400 and 55,200 by 2033, which is just 12 years from 2021 - a gap of

[11] US Bureau of Health Workforce. 2018. Health Careers Pipeline and Diversity Programs. US Health Resources and Services Administration.

500 in each state.[12] These estimates were made before the COVID-19 pandemic, which only exacerbated the need for an adequate physician supply within a health care system when workers were stretched to breaking points. The students who will fill the gap in 2033 are currently completing high school or entering college.

The need for additional exposure to family medicine was identified by authors Mash and DeVillers in 1999. They surveyed medical students and 88% concluded that there should be an earlier exposure to Family Medicine and Primary Care in their training. Community-based education is an important strategy for training students appropriately for delivering primary health care services.[13] This was again identified in 2006 where authors Dornan et al. conclude that early exposure to primary care increased recruitment to a primary care medical practice or a rural medical practice.[14] They write "Early experience motivated and satisfied students of the health professions and helped them acclimatize to clinical environments, develop professionally, interact with patients with more confidence and less stress, develop self-reflection and appraisal skills, and develop a professional identity. It strengthened their learning and made it more real and relevant to clinical practice. It helped students learn about the structure and function of the healthcare system, and about preventive care and the role of health professionals."

Finally, in 2019, fourth-year medical students were asked to identify factors that influenced their choice to become a family physician. They identified perspective, choice and exposure with the need for high quality preceptors, the value of a rural experience and institutional support to pursue family medicine as additional factors of influence.[15] This is critical for the pipeline. Future family physicians must be exposed to family medicine earlier in their medical career by quality preceptors who understand their communities. If not, they will continue to choose specialty care.

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[12] American Association of Medical Colleges, Press Release *AAMC Report Reinforces Physician Shortage* https://www.aamc.org/news-insights/press-releases/aamc-report-reinforces-mounting-physician-shortage Retrieved October 10, 2021

[13] Mash & Villiers. Oct. 1999. Community-based training in family medicine--a different paradigm. Medical Education. 33(10): 725-9

[14] Dornan et al. Feb 2006. How can experience in clinical and community settings contribute to early medical education? A BEME systematic review. Medical Teacher. 28(1):3-18.

[15] Kost, A; Bently A.; Phillips J.; et al; Fam Med. 2019;51(2):129-136.
DOI: 10.22454/FamMed.2019.13697
Factors That Influence Student Choice in Family Medicine A National Focus Group

Guest River Gorge, Wise County

A solution to physician and health professional shortages is the National Area Health Education Center Program (AHEC). AHECs started in 1972 with the purpose to recruit, train, and retain a health professions workforce committed to underserved populations. AHECs are community based and partner with local medical and health profession schools to meet community healthcare needs. These partnerships focus on exposure, education, and training of the current and future health care workforce. AHECs work with safety net providers placing students and residents as a part of their training into longitudinal experiences. These experiences immerse students and physician residents into rural and underserved communities where they are more likely to stay after graduation.

The Virginia Healthcare Workforce Development Authority (VHWDA) serves as the statewide AHEC and their mission is to facilitate the development of a statewide health professions pipeline that identifies, educates, recruits, and retains a diverse, geographically distributed and culturally competent quality workforce for all Virginians. The VHWDA hosts eight regional centers each working with their local medical school and other health professions schools to promote health professions to students. The VHWDA oversees two pipeline focused programs, The AHEC Scholars Program and the expansion of residency slots in Virginia.

In 2015, Virginia realized the need to develop innovative ways to create additional residency training slots to meet the challenge of Virginia medical school graduates outpacing the number of residency positions in the state. (VHWDA website) The VHWDA, in a partnership with the Virginia Department of Medical Assistance Services expanded the residency

program slots in Virginia. This program is funded by the Virginia General Assembly and continues today.

The Virginia AHEC Scholars Program recruits, trains, and supports a diverse group of medical and other students from across the state. Training opportunities create a multidisciplinary team of health professionals committed to both community service and the transformation of health care in Virginia. Selected applicants participate in a two-year educational program and may be eligible to receive a stipend.[16]

The COVID-19 pandemic made life extremely difficult for our health professionals. Therefore, we need to encourage students with the potential and desire to heal others as best we are able. Investing in the health profession pipeline is one way to do that.

Recommendations:

- Increase funding for the Virginia AHEC Program to expand graduate medical education and health professions education opportunities
- Expand community based training opportunities for health profession students
    - Health profession students need longitudinal experiences at safety net organizations. These type of experiences can be supported by federal funding through The Teaching Health Centers Graduate Medical Education Program, Rural Residency Planning and Development Programs and School Based Health Centers
- Expand pipeline programs to all middle and high schools in Virginia
    - Health Careers Camps and technical training at the high school level exposes students to career tracks and addresses potential barriers students encounter
    - Allow for dual enrollment into community college for high school students enrolled in health career classes decreasing the time required for certification or pre-requisites
    - Encourage health professionals to interact with middle and high school students through shadowing opportunities and teaching at local schools

[16] Virginia Health Workforce Development Authority. “Virginia AHEC Scholars Program.” https://www.vhwda.org/initiatives/ahec-scholars

Recruitment and Retention

The health workforce is the most important element in any health care system. Efforts to expand the pipeline and practice scopes will fall flat if we cannot recruit providers to practice in safety net and underserved settings and retain them once they are here.

Recruiting and retaining primary care, mental health, and dental professionals in shortage areas and safety net facilities requires a long-term approach, beginning with early exposure, continuing with practical experience in these settings during education, and extending to support for practitioners choosing to practice in these settings.

Recruiting should begin with early exposure to the benefits of practicing in health professions, and the benefit to the community. Those considering these professions need information on available loan and scholarship opportunities. Finally, those choosing to practice in shortage and safety net settings need community and professional support to encourage retention.

Recruitment

Top 5 Private Sector Employers in Rural Virginia, 2018			
Industry Sector	**Employment**	**Total Earnings**	**Earning per job**
Retail trade	53,773	$1,419,966	$26,407
Manufacturing	50,174	$2,938,104	$58,558
Health care and social assistance	49,853	$2,282,113	$45,777
Accommodation and food services	32,279	$681,814	$21,123
Other services (except government and government enterprises)	31,234	$984,755	$31,528

Source: VDH Office of Health Equity Analysis of US Bureau of Economic Analysis Data, 2018. Includes data for both employees and proprietors, and includes the value of salaries, wages, proprietor's income, and benefits.

Health professionals can drive opportunity in vulnerable communities. An analysis by the OHE estimated that 10 providers supported by Virginia's SLRP program supported $3.4 million in economic activity and almost 26 jobs, both in and outside of the health sector, in

the communities they serve. This is in addition to the economic and welfare benefits of the health services themselves.

Economic Impact of SLRP Matching Funds 2015-2016

Locality	Supported Providers	Economic Impact	Jobs Supported
Charles City County	Licensed Clinical Social Worker	$137,002	1.4
Franklin County	Physician Assistant	$148,219	1.6
Fredericksburg city	Nurse Practitioner-Mental Health	$270,839	2.2
Halifax County (3 total)	Family Medicine Physician OB/GYN Dentist	$1,102,486	7.0
Northampton County	Dentist	$304,132	1.9
Orange County	Dentist	$361,188	1.9
Prince Edward County	Nurse Practitioner-Family	$157,116	1.8
Smyth County	Psychiatrist	$424,988	3.6
Regional Impact	NA	$495,046	4.5
Total	**10 recipients**	**$3,401,016**	**25.9**

Source: Analysis prepared by Health Economist Stephanie Norris, Office of Health Equity using IMPLAN Economic Analysis software.

Nevertheless, stories of medical professionals saddled with student debt abound. Among Virginia physicians under age 40, almost a quarter reported student debt loads higher than a quarter million dollars.[17] For the same age group, 42% of Virginia dentists report carrying $200,000 or more student debt,[18] while 34% of Licensed Clinical Psychologists under 40 report carrying $150,000 or more.[19] This debt can be difficult to pay off, especially for primary care providers in safety net programs and shortage areas.

A multitude of scholarship and loan repayment programs geared towards health professionals exist (See Appendix II). Loan repayment programs can offer substantial debt relief, while some scholarship programs can cover the entire cost of health education, allowing students to graduate with no or minimal debt. A few of these programs have been

[17] Virginia Healthcare Workforce Data Center. Jan 2021. *Virginia's Physician Workforce: 2020*. Virginia Department of Health Professions.
[18] Virginia Healthcare Workforce Data Center. Jul 2021. *Virginia's Licensed Clinical Psychologist Workforce: 2020*. Virginia Department of Health Professions.
[19] Virginia Healthcare Workforce Data Center. Apr 2021. *Virginia's Dentistry Workforce: 2020*. Virginia Department of Health Professions.

around for decades, but both the number of programs and the amount of funding available has taken off in recent years, nationally and in Virginia. Many new programs are geared toward substance abuse and behavioral health, an area of increasing need. For instance, the National Health Service Corps (NHSC) has created several programs directed to substance abuse, while the General Assembly recently funded a new state Behavioral Health Loan Repayment Program. Other practitioners have not been left out, however. The White House announced a $1.5 billion investment in NHSC and Nurse Corps programs on Nov. 22, 2021,[20] while the Virginia Tobacco Commission launched an historic investment in the Virginia SLRP in 2019.

While this funding is essential, it comes with only limited support for administration, outreach, and technical assistance. Many of these programs are administered by the Primary Care Office, while in others the PCO provides technical assistance and outreach, including HPSA designations and site certifications. Providers need assistance navigating a complex array of programs, eligibility requirements, and competitive criteria. To ensure this funding is put to best use, we must ensure we have the capacity to process and target these funds, and to recruit providers from all corners and communities of Virginia.

Retention

Employee retention is one of the most important ingredients for success for healthcare organizations. Improving employee retention allows organizations to avoid the high costs associated with replacing employees, improve patient care, and enhance the overall quality of service to the communities served.

Retention is normally problematic for health care providers. The COVID-19 pandemic has brought added urgency to the issue. According to one survey published in the Lancet, 38% of health care workers reported experiencing anxiety or depression, 43% suffered work overloads, and 49% had burnout. Stress was highest in women, and in Black and Latinx workers.[21] This issue is exacerbated in shortage areas and safety net facilities. Several factors can contribute to the turnover rate at safety net facilities including lower pay, longer

[20] The White House Briefing Room. Nov 22, 2021. "Vice President Harris Announces Historic Funding to Bolster Equitable Health Care During Pandemic and Beyond." Statements and Releases.
[21] Prasad et al. May 01, 2021. "Prevalence and correlates of stress and burnout among US healthcare workers during the COVID-19 pandemic: A national cross-sectional survey study." THE LANCET. Vol 35, 100879.

hours, and heavy patient load. Patient panels tend to be more complicated than private practice with multiple comorbidities.

There is limited data on retention and turnover in Virginia and it is therefore paramount to begin to measure variations in pattern of retention and turnover in the Commonwealth. Data collected should include annual turnover rate and stability rates shortage areas and safety net settings. Optimizing health workforce retention is the key to ensuring locally delivered; appropriate and sustainable health services and can contribute significantly to overcoming the rural workforce shortage.

Recommendations

To effectively address healthcare workforce deficiencies, it is imperative that the state invests in implementing, adequately resourcing, and evaluating staffing models, which effectively stabilize the remote primary care workforce as a matter of priority. The results are also important for quantifying workforce patterns in rural areas.

- Continue federal and state funding for loan repayment programs for eligible health care professional disciplines identified in the SLRP
    - Loan repayment programs are proven to work in recruiting and retaining health professionals into health professional shortage areas
    - Allow for up to 10% of the funding sources go for administration of the programs. Each incentive program requires administrative support for tracking and verifying the employment of providers for a minimum of two years.
- Virginia's recruitment and retention efforts should include coordinated planning, pipeline, and education efforts to help boost the diversity of the health workforce.
- Invest in a robust database to track the retention locations of providers. There is limited data on retention and turnover in Virginia and it is therefore paramount to begin to measure variations in pattern of retention and turnover in the Commonwealth.
- The PCO, the Virginia AHEC and other statewide workforce programs convene periodically to implement strategies that expand the pipeline programs in the state and increase provider diversity by recruiting and supporting students underrepresented in the health professions

- Implement a strategic state spending plan that increases the number of primary care, mental health, or dental residency positions and tie those positions to the workforce needs of the state.
- Create a collective statewide marketing plan in collaboration with other state agencies to recruit health professionals into underserved and rural areas.
- Develop a “One Stop” recruitment and retention program to consolidate outreach, marketing, and technical assistance for providers interested in state or federal programs, including NHSC and Nurse Corps programs.
- Continue to implement incentive programs that work
    - The following incentive programs address health professional shortage areas (HPSAs) medically underserved areas or populations (MUA/P), and other shortages designated by the Governor as having a critical need and are currently funded:
        - Virginia Student Loan Repayment Program (VA-SLRP)
        - Virginia Conrad 30 Waiver Program
        - Nursing Scholarships (3)
        - National Interest Waiver Program (NIW)
        - Virginia Behavioral Health Student Loan Repayment Program (BH-LRP)
        - Nursing Preceptor Incentive Program (NPIP)
- Study the options and efficacy of providing a tax credit to qualified providers working in shortage areas and at designated safety net facilities.

Riverwalk Trail, Danville City

Special Populations

A successful health system will ensure that primary care is accessible to everyone. However, some groups are continually excluded from primary care health systems as a result of their socioeconomic status, physical or mental state, or other social determinants of health. The Office of Health Equity identifies and monitors groups in Virginia that face barriers to care, and works with the Primary Care Office which provides assistance through grants. Some groups that continually face barriers to accessing primary care in Virginia include; people who are low income/unemployed, underinsured, chronically ill, disabled, veterans, housing insecure/homeless, or incarcerated. To the extent possible, this report seeks to outline how the landscape of our healthcare workforce and disparities impact these groups based on the last five years of monitoring and stakeholder engagement.

Correctional Healthcare

Incarcerated people are unique in terms of how they access primary healthcare and what their needs are. Since incarcerated people are the responsibility of local governments and the commonwealth, they access primary care through the correctional facilities they are involved with, such as state prisons, and local or regional jails.

State Prisons

Healthcare workforce recruitment and retention is increasingly difficult for Virginia's state prisons due to a confluence of social and labor market forces. Benefit structures are not staying competitive with surrounding areas, while at the same time, negative perception makes it difficult to attract healthcare workers to prison systems. PCNA stakeholder interviews revealed that loan repayment programs help a great deal to retain full time employees.

Despite their utility for retention, loan repayment programs are limited in how much they can help prisons recruit and retain their workforce because they rely heavily on contract staffing. Approximately 60% of the 1,500 healthcare workers in Virginia's state prison system are contract employees. This allows these facilities to provide more competitive salary ranges. Contracting is especially prominent in central and eastern Virginia where prisons struggle to compete with the high salary opportunities available to healthcare

workers nearby at universities and large hospitals. Contracting leads to wage compression, shorter lengths of service, and a less stable workforce overall. Additionally, contract staff face additional barriers when accessing loan repayment programs.

Public perceptions of prison healthcare also have implications for workforce stability. In the last five years, prisons have been a major topic in public discourse surrounding U.S. criminal justice systems, and they receive high scrutiny. With regards to workforce retention, one result of this scrutiny is that stakeholders in prisons, as well as jails, report increased misinformation and negative perception around what it means to be a healthcare worker for corrections. They report being viewed as part of a punitive system rather than providers of care. Ultimately, maintaining a workforce is about more than incentives; employees also need to believe in the work they are doing. Prisons need better resources and support for healthcare overall to increase confidence in their system.

Working conditions in prisons reflect an overall lack of resources and support for prisons which can further disincentivize healthcare workers from employment. Prisons are chronically understaffed. Budgetarily, they are staffed for ambulatory care but since the population is there full time and faces a higher burden of disease, the frequency of contact can resemble inpatient care. Prisons also lack electronic healthcare records, meaning charts and notes are handwritten. FOIA requests and low capacity to respond takes away from time spent on patient care by healthcare workers and directs it towards administration. Not only are more healthcare staff needed, but administrative support staff who can reduce this burden on healthcare workers are needed too.

The number of designated federal and state correctional facilities has shifted since 2015:

Designation	2015	2021
Primary Care	10	9
Mental Health	15	9
Dental Health	4	7

This shift is due to turnover in positions that fulfill the administrative tasks for required updates. Virginia's OHE, PCO, and DOC are collaborating to update and reinstate some of these designations.

Local and Regional Jails

Local and regional jails are a new addition to the PCNA because they provide primary care to the many people who circulate through their facilities each year, and they face unique challenges in maintaining their healthcare workforce. A local or regional jail is likely to employ only a handful of healthcare staff full time, usually LPNs and RNs. Dentists, physicians, psychiatrists, and other mental healthcare workers are often independently contracted.

Like prisons, jails are finding it difficult to attract healthcare workers due to misinformation about what it means to work in correctional systems. One of the stakeholder participants cited that their jail even works with local programs to demystify what a career in jails really looks like. Nurses actually get to perform a greater range of their medical responsibilities in jails than in other places. However, it is more challenging to fill RN positions than LPNs, and a certain number of RNs are needed in order to fulfill critical functions such as incoming medical exams.

Jails are notable for their healthcare workforce shortages because they serve so many vulnerable groups, but also do not qualify for HPSA designations like prisons do.

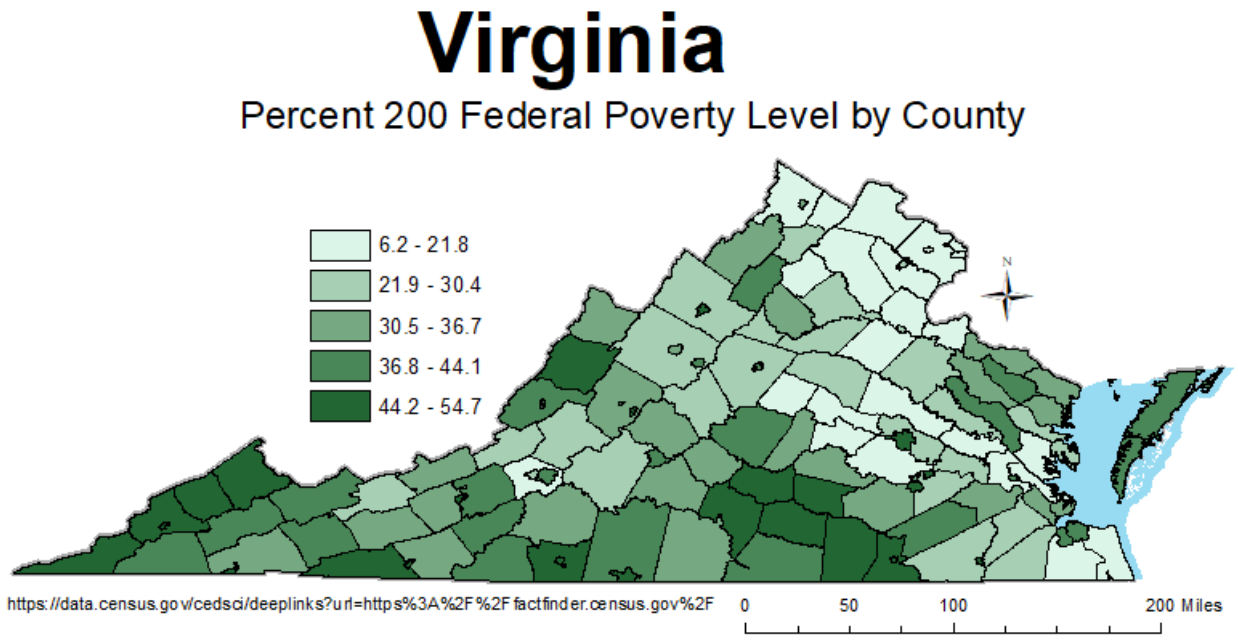
Low socioeconomic status

Studies have shown that individuals in low-income categories have worse health outcomes across various diseases. These individuals have limited financial resources available to enable them to live a healthier life. The United Way of Virginia estimated there were over 900,000 Asset Limited, Income Constrained, Employed (ALICE) Virginia households in 2018.[22] Working members of these households often juggle financial and household obligations while working multiple jobs with erratic schedules. The COVID-19 pandemic has had a profound impact on ALICE and other low-income households, adding a "pandemic divide" to already existing inequality in the state.[23]

According to the Urban Institute, addressing the problems requires addressing root causes of limited resources and opportunity, and poor job quality. Partnerships with economic and

[22] United for ALICE. "Research Center - Virginia". UnitedForALICE.org.
[23] United for ALICE. Oct 2021. "The Pandemic Divide: An ALICE Analysis of National COVID Surveys." UnitedForAlice.org.

community development organizations, direct financial assistance, and programs providing services such as childcare or financial counseling, provide long-term solutions.



Medicaid/Underinsured

The last PCNA focused heavily on Medicaid and underinsured populations; at the time of the report Virginia was one of 19 states that had chosen not to expand Medicaid under the Affordable Care Act. However, this changed when on January 1, 2019, Virginia expanded Medicaid resulting in more insured individuals. It expanded eligibility for Medicaid to adults ages 19-64 whose incomes are below 138% of the federal poverty line[24]. Subsequently, Virginia was the only state in the nation to see a drop in its uninsured rate between 2018 and 2019.[25] Enrollment has continued through the pandemic, with 201,900 net change in Medicaid expansion enrollment since January 2020.[26]

[24] Virginia Association of Free and Charitable Clinics. "Medicaid Expansion in Virginia." https://www.vafreeclinics.org/medicaid-expansion
[25] Virginia Medicaid Program. Dec 30, 2020. "Virginia Medicaid Agency Announces 500,000 Expansion Enrollment Milestone." Virginia Department of Medical Assistance Services. https://www.dmas.virginia.gov/media/2829/virginia-medicaid-announces-500-000-enrollment-milestone-for-expansion-december-30-2020.pdf
[26] Equity in action Dashboard. "Medicaid Expansion". Office of the Chief Diversity, Equity, and Inclusion Officer.

Disabled Populations

An estimated 8% of Virginia's population under 65 years old are disabled, having serious difficulty with hearing, vision, cognition or ambulation.[27] Primary care providers often struggle to provide care to disabled patients, who often need extensive care and coordination among multiple specialities. PCNA workgroup members noted that this is a particular concern in rural areas, where primary care providers and schools are often asked to make up for a lack of resources and specialists. Providers may not be equipped for these roles, and attempts to fill the gap can take additional time and resources, affecting their ability to provide care generally. PCNA interviews also highlighted the need for improving access to oral health for disabled populations. Interviewees noted there is low tolerance for this type of care and is an important component of primary health care.

Housing Insecure/Homeless

12.5% of households in Virginia have severe cost burden compared to 14.2% national average, ranking Virginia at 25th in the nation for housing insecurity[28]. Additionally, in 2020 5,957 are experiencing homelessness in Virginia on any given day[29]. People who are homeless or housing insecure struggle to access primary care services because they face competing immediate needs, cannot afford it, or they cannot contact or use the system. At the same time, homeless people in particular have a high burden of disease, and may struggle with mental health or addiction.

Chronically ill

The COVID-19 pandemic brought infectious diseases into focus. However, chronic diseases such as cardiovascular disease and diabetes, are the leading causes of death in Virginia, according to the CDC. These pose a huge financial burden on Virginia's economy and to the finances and quality of life of its residents. Managing chronic diseases requires consistent resources, effort and coordination by both providers and patients. Lapses or persistent deficiency in any of these can lead to hospitalizations that could have been avoided with

[27] US Census Bureau. 2019. "Quick Facts: Virginia". https://www.census.gov/quickfacts/VA
[28] Virginia Department of Health. 2020. "Virginia Housing Insecurity." Equity at a Glance Dashboards. https://www.vdh.virginia.gov/equity-at-a-glance/virginia/housing/
[29] United States Interagency Council on Homelessness. "Virginia Homelessness Statistics." https://www.usich.gov/homelessness-statistics/va/

proper care in the community. This care is generally more economical and effective than episode-based hospitalizations.

Smithfield Station, Isle of Wight

Monitoring Primary Care for Special Populations

Health outcomes data for special populations is often lacking. People who are homeless or housing insecure may often switch primary care systems due to being more mobile, or may infrequently or never engage with them. Veterans, by comparison, access a different primary care system than the general public does. Still further, these populations are not mutually exclusive so one individual may face any combination of challenges to accessing primary care. Special populations require custom approaches to monitoring primary care. Better approaches to monitoring the health of special populations is needed. The Office of Health Equity is using some of its COVID-19 funding to hire two Vulnerable Population Specialists. These specialists will examine available data and, hopefully, develop better methods to monitor the health status of these populations. Funding for these positions, however, is short-term and may not provide the resources needed to overcome this intractable problem.

Recommendations

- Continue funding for Vulnerable Populations Specialists within OHE to examine data and provide recommendations to improve the health status of special populations.
    - Executive support for collaboration between state agencies, including the Department of Behavioral Health and Developmental Services, Department of Health, Department of Corrections, Department of Social Services and other agencies to share and improve baseline data on vulnerable populations could facilitate data development and improve services overall.
- Design and fund healthcare workforce Incentive programs specifically for recruitment and retention of difficult to recruit providers at correctional facilities
- Include correctional facilities for eligibility or scoring purposes in state recruitment and retention programs.
- Encourage federal partners to categorize correctional facilities, including juvenile facilities, as an auto HPSA/MUA/MUP in order to attract incentive program providers, and include these facilities for eligibility or scoring purposes in state recruitment and retention programs
- Encourage federal partners to improve rules around HPSA designations for facilities
    - State and regional jails are not currently eligible for facility HPSA designations, and rules setting minimum bed limits exclude Virginia's juvenile facilities, making the ineligible for most federal recruitment and retention programs
    - HPSA scores for correctional facilities used to be completely independent of the surrounding community. In 2014, the scoring matrix for correctional facilities was changed. The maximum score is 12 unless a prison is in a geographic HPSA. The market for providers at correctional facilities is different that surrounding area. Correctional facility scores should not be artificially limited.

Behavioral and Mental Health

The social isolation resulting from the COVID-19 pandemic, reinforced the importance of mental healthcare. According to a CDC Morbidity and Mortality Weekly Report (MMWR), in June 2020, 40.9% of survey respondents reported having at least one adverse mental health event, including symptoms of anxiety and depression, increased substance use, suicidal ideation, and trauma/ stressor-related disorder as a direct result of the pandemic. Anxiety and depressive symptoms increased as much as four times what was reported in the same MMWR week of 2019.[30] There are also racial and ethnic disparities in the increased prevalence of adverse mental health events.[31]

Even prior to the COVID-19 pandemic, however, a substance use disorder crisis had already emerged. Nationally, the number of drug overdose deaths quadrupled between 1999 and 2019, reaching epidemic proportions. In 2019, over 70% of these deaths involved an opioid.[32] However, methamphetamines have also been a growing cause for concern nationally and in Virginia. In 2015, Virginia experienced just 29 deaths involving methamphetamines.[33] In 2020, that number jumped to 387.[34] Virginia's overdose deaths have jumped precipitously during the pandemic, increasing from 1,627 in 2019 to 2,309 in 2020. That record will likely be broken in 2021.[35]

Lack of access to mental healthcare remains a persistent problem in much of the state. Some of the aggravating factors include a lack of consistent access to Broadband, inability to recruit or retain mental health workers, and pipeline issues that limit the exposure to rural practice. As in other disciplines, mental and behavioral health workers tend to

[30] Czeisler MÉ , Lane RI, Petrosky E, et al. Mental Health, Substance Use, and Suicidal Ideation During the COVID-19 Pandemic — United States, June 24–30, 2020. MMWR Morb Mortal Wkly Rep 2020;69:1049–1057. DOI: http://dx.doi.org/10.15585/mmwr.mm6932a1
[31] McKnight-Eily LR, Okoro CA, S.trine TW, et al. Racial and Ethnic Disparities in the Prevalence of Stress and Worry, Mental Health Conditions, and Increased Substance Use Among Adults During the COVID-19 Pandemic — United States, April and May 2020. MMWR Morb Mortal Wkly Rep 2021;70:162–166. DOI: http://dx.doi.org/10.15585/mmwr.mm7005a3
[32] Centers for Disease Control and Prevention. "Understanding the Epidemic." CDC Website.
[33] O'Connor, Katie. Aug 1, 2019. "Reflecting national trends, meth arrests and deaths continue to climb in Virginia". Virginia Mercury.
[34] Petska, Alicia. Aug 1, 2021. "As overdose deaths reach record levels in Virginia, meth is seen as a growing threat." The Roanoke Times
[35] Forensic Epidemiology Division. "All Drug Overdoses, All Substances." Office of the Chief Medical Examiner.

aggregate around urban centers for employment, but those that do rural rotations and residencies are most likely to have an advanced and flexible skill set.[36,37] This indicates the need for incentives to expand rural residencies and rotations to increase the number of providers with that flexible skillset.

The COVID-19 pandemic allowed implementation of telehealth services as a temporary safety measure, but may also be a baseline for more permanent use as a means to improve access to mental healthcare. The stigma associated with mental illness remains a deterrent, particularly for addiction related ailments, to seeking treatment. The reduced need to travel and the privacy afforded by telehealth improves the likelihood of seeking mental healthcare. Access to consistent Broadband services will be important to the success of a permanent telehealth program.[38]

In addition to expanded broadband access, economic development of disinvested and remote areas is critical to an equitable healthcare infrastructure. Historically, mental health practitioners are grouped in areas with better mental health insurance benefits and a more educated populace, placing impoverished areas with lower levels of education at a disadvantage for provider recruitment.[39]

The current cohort of healthcare providers in Virginia also shows a racial disparity in the higher level and higher paying positions. Kiesha Smith, Executive Director of Virginia Health Workforce Authority, noted that "[W]hen recruiting and preparing communities of color for the workforce it is important that we do not place them disproportionately in entry level positions that are likely to struggle financially. To address the inequities in mental health access, we must also recruit through a lens of equity and look to future doctors, nurse practitioners, physician's assistants, and other positions to represent communities of color in the healthcare field. It is important that higher level positions be accessible for financial

[36] Balasubramanian M, Short S. The Future Health Workforce: Integrated Solutions and Models of Care. International Journal of Environmental Research and Public Health. 2021; 18(6):2849. https://doi.org/10.3390/ijerph18062849
[37] McGrail, M.R.; O'Sullivan, B.G. Faculties to Support General Practitioners Working Rurally at Broader Scope: A National Cross-Sectional Study of Their Value. Int. J. Environ. Res. Public Health 2020, 17, 4652.
[38] Stakeholder Working Group for Virginia's Primary Care Needs Assessment. March 11, 2021.
[39] Robiner, William N. The mental health professions: Workforce supply and demand, issues, and challenges. Clinical Psychology Review 2006; Review 26, 600–625. http://www.profkramer.com/assets/robiner-2006-mental-health-professions-supply-demand-hl.pdf

security and economic development and that we are not pigeonholing a population based on race or ethnicity."[40]

Wilderness Road State Park, Lee County

Stakeholder interviews noted that another pain point for mental health access is the pipeline to emergency rooms and jails. The lack of community mental healthcare shifts the narrative from prevention to punishment, particularly in terms of substance abuse treatment. The housing insecure, undocumented immigrants, and rural residents are especially vulnerable to the prospect of receiving treatment in jail or court ordered outpatient rehabilatation. The persistent stigma of substance use often leads individuals to lie about their drug use upon entering a jail. This, in turn, increases the risk of drug interactions as the patient is treated for other comorbidities.

Our current mitigation strategies center on incentive programs for provider recruitment and retention. Incentive programs are currently being expanded, beyond the longstanding National Health Service Corps (NHSC), State Loan Repayment Program (SLRP), and Conrad

[40] Stakeholder Working Group for Virginia's Primary Care Needs Assessment. March 11, 2021.

30 J-1 Visa Waiver options, with a direct focus on behavioral health. At this time, there are 29 Geographic and Population MPSAs finalized or under final review, covering 120 Counties (90% of total counties), 4.6 million residents (56% of 8.2 million VA total for 2019), and 633,217 residents living at or below the federal poverty level (73% of 822,775 VA total). New programs such as the NHSC Substance Use Disorder (SUD) program and the Virginia Behavioral Health Loan Repayment Program (BHLRP) will better target these areas.

However, State Mental Hospitals are excluded from NHSC benefits, while local and regional jails and juvenile corrections facilities are not eligible for HPSA designation. State programs such as SLRP and the new BHLRP are instrumental for filling these gaps. Even with expansion the incentive programs remain highly competitive.

Recommendations

- Continued funding for the Behavioral Health Loan Repayment Program
- Design and fund healthcare workforce Incentive programs specifically for recruitment and retention of difficult to recruit providers at mental health facilities, including Community Service Boards and State Mental Hospitals.
    - Prioritize disciplines that are the most difficult to recruit or retain and target them with this incentive program

Oral Health

Much like mental health, dental health is not treated like a part of primary care, even though insufficient dental and mental healthcare can lead to poor overall health outcomes.[41] Many of the challenges of meeting the dental health needs of Virginian's center on poor accessibility for rural, elderly, and otherwise vulnerable populations. Much of this is starting to be addressed by the expansion of Virginia's adult Medicaid benefits to include adult dental healthcare, expanded teledentistry, and programs that improve the pipeline for support staff. This will also help address the increased burnout and mental health concerns for the current cohort of dentists. These efforts have just begun to be implemented and promise to improve the overall health of Virginians.

The elderly, especially those in rural areas, are particularly vulnerable to the probability of inadequate dental care. Demographic trends in Virginia from 2000-2010 show elderly Virginians "migrating" from urban localities to rural areas with lower costs of living.[42] Traditional Medicare does not include dental benefits. 62% of Medicare recipients are enrolled in Medicare Advantage (MA) plans that provide dental services as a supplemental benefit. An additional 21% are enrolled in private stand-alone dental plans. Even with 83% of Medicare recipients enrolled in some sort of supplemental coverage, the average out-of-pocket expenses over all Medicare patients is 70% of dental spending.[43]

Oral health has overall health consequences as more than 90% of chronic, systemic illnesses have oral manifestations, such swelling or bleeding of the gums and mouth ulcers. Nationally, 68% of adults over the age of 65 have some form of gum disease. Poor oral

[41] Oakes, Diane; Monopoli, Michael. Medicare Dental Benefit Will Improve Health And Reduce Health Care Costs. Health Affairs Blog. February 2019. https://www.healthaffairs.org/do/10.1377/hblog20190227.354079/full/

[42] Juday, Luke. Virginia Population Shifts: Localities Face Challenges as Growth Slows. The Virginia News Letter. Vol. 93, No. 1, January 2017. https://vig.dev1.coopercenter.org/sites/vig/files/VirginiaNewsLetter_2017_V93-N1.pdf

[43] Willink, Amber; Reed, Nicholas S.; Swenor, Bonnielin; Leinbach, Leah; DuGoff, Eva H.; Davis, Karen. Dental, Vision, And Hearing Services: Access, Spending, And Coverage For Medicare Beneficiaries. Health Affairs. Vol. 39, No. 2, February 2020. https://doi.org/10.1377/hlthaff.2019.00451

health can also make systemic conditions more complex to treat due to chronic inflammation, bacterial infection, and tooth loss. Tooth loss can also have implications for diabetes and heart disease patients, particularly those with limited financial resources, who may need to choose low-fiber, highly processed food that is easier to chew. Chronic inflammation is often associated with exacerbating dementia and other forms of cognitive decline.[44] Residents of Long-Term Care Facilities (LTCF) face even greater challenges to achieving oral healthcare. Many of these patients are mobility challenged, making dental self-care difficult. Comorbidities that require nasal cannulas or masks to deliver oxygen necessary further complicate dental health concerns. One potential solution is to have dental hygienists on the staff of LTCFs full-time to effectively provide preventative and therapeutic dental care.[45]

Virginia Commonwealth University's School of Dentistry, located in Richmond, is the only dentist program in Virginia. While it is important to expand the pipeline for dentists, particularly for rural practice, dental hygienists and dental assistants are also in demand. Eastern Shore Rural Health System has already partnered with Eastern Shore Community College to formulate a base certification program for new dental assistants, with continuing education opportunities as a pathway to advancement. As noted earlier, dental hygienists have also gained some ability to practice remotely. Teledentistry and remote hygienists make it easier to schedule the 90 day dental exam required by law and streamline scheduling of in-person follow-ups with both a hygienist and dentist. In a time when isolation and stress caused by COVID safety measures remains a concern for all health professionals, it is important that we are mindful of the potential burnout among Virginia's current dental cohort, as well. Offering pipelines for advancement and additional resources to support staff will help to address many of these issues.

Beyond the ongoing improvement of support staff resources, there has also been improved access through Medicaid. When Virginia Medicaid was expanded in January of 2019, more than 400,000 adults became eligible to receive medical care through Medicaid.

[44] Oakes, Diane; Monopoli, Michael. Medicare Dental Benefit Will Improve Health And Reduce Health Care Costs. Health Affairs Blog. February 2019. https://www.healthaffairs.org/do/10.1377/hblog20190227.354079/full/

[45] Dahm, Tracee S., BSDH, MS; Bruhn, Ann, BSDH, MS; LeMaster, Margaret, BSDH, MS. Oral Care in the Long-Term Care of Older Patients: How Can the Dental Hygienist Meet the Need?. The Journal of Dental Hygiene. Vol. 89, No. 4, August 2015, 229-237. https://jdh.adha.org/content/89/4/229

Even with expanded Medicaid benefits, dental healthcare through Medicaid was still only an option for children under 18. In 2021, the Virginia General Assembly voted to expand Medicaid benefits to include adult dental healthcare. This development and the aforementioned expansion of teledentistry could greatly improve access for vulnerable populations.

According to the American Dental Association, on average a new dental practice requires an initial investment of $500,000, with nearly 40% of that spent on basic equipment needed to practice.[46] Even if lower real estate values in rural areas result in a lower startup cost it can still be difficult to have a profitable practice. Much of that has to do with poverty and intergenerational patterns of seeking dental care. Tim Wilson, a Physician's Assistant at a FQHC in Patrick County, VA, says that, beyond the obvious financial restrictions, those living in poverty also find time and transportation to be limited resources. It can be difficult to convince people not used to putting time into routine dental care to go to the dentist once they have the insurance, especially if transportation is an issue.

Recommendations

- Create funding avenues supporting start-up costs for new dental practices in shortage areas or those serving vulnerable populations, including low-interest loans, grants, and/or tax credits.
- Provide funding avenues to support hosts of dental residents in practices located in shortage areas or those serving vulnerable populations, including low-interest loans, grants, and/or tax credits.
- Create an incentive program that encourages LTCFs to have dental hygienists as permanent staff to improve the health outcomes of their residents.
- Expand the Eastern Shore Rural Health System/Eastern Shore Community College base certification program for new dental assistants, with continuing education opportunities, to other localities
- Explore opportunities for the placement of another dental school in Virginia, preferably in a rural area.

[46] American Dental Association. "The Real Cost of Owning a Dental Practice." ADA Martketplace.

Metrics

To monitor the progress of primary care in Virginia, and the effectiveness of the office, the Primary Care Office will track the following metrics. When possible, metrics will be tracked statewide, regionally, and within rural and urban areas.

Office Metrics

- Total number of obligated providers in the state in all programs
- Total federal dollars committed to obligated providers practicing in Virginia
- Share of Virginians in poverty covered by Health Professional Shortage Areas, broken out by discipline
- Number of outreach events for recruitment and retention programs
- Number of applications processed by the primary care office

Outcome Metrics

- Access to Care:
    - Avoidable hospitalizations (hospitalizations that could be avoided with adequate care in the community)
    - The share of Virginians reporting they have visited a doctor for a routine checkup within the past year in the Behavioral Health Risk Factor Surveillance System
- Pipeline:
    - Total number of graduates from Virginia Institutions completing degrees in health professions
- Recruitment and Retention:
    - Share of FTE shortages in HPSAs filled by obligated providers
- Special Populations:
    - The PCO is directing COVID funding to develop baseline data on vulnerable populations and will provide a qualitative assessment of progress
- Behavioral Health:

    - The number of obligated mental health and substance abuse providers located in state mental health facilities, including Community Service Boards, State Mental Hospitals, and Correctional Facilities
- Oral Health:
    - Share of Virginians reporting they have visited a dentist or dental clinic within the past year in the Behavioral Health Risk Factor Surveillance System

Natural Bridge State Park, Rockbridge County

Appendices

APPENDIX I: Health Professional Shortage Areas

One of the main roles of the Virginia Primary Care Office is to manage federal Health Professional Shortage Area designations for the commonwealth.

Background

For decades, one of the most pressing equity issues in the United States has been the uneven access to basic healthcare. In 1972, the US Health Resources and Services Administration (HRSA) created the National Health Service Corps (NHSC) as a scholarship program to address the mal-distribution in healthcare providers. In 1976, facility designations for NHSC provider placement were implemented. In 1978, Congress added Sections 330 and 332 to the U.S. Public Health Service Act (of 1944) as the reference for designating Medically Underserved Areas or Populations (MUA/Ps) and Health Professional Shortage Areas (HPSAs) shown to have inadequate access to healthcare, based geographic area or specific population needs. Through the 1980s, HRSA developed the regulations and criteria for designating and scoring Health Professional Shortage Areas (HPSAs) to rank degrees of provider shortages. During that time they also expanded NHSC to include a student loan repayment program for primary care providers, with Dental and Mental health to be added in the next decade. In 2002, Healthcare Safety Net Amendments authorized automatic facility HPSA designations for federally qualified health centers (FQHCs) and the FQHC look-a-likes. FQHCs include community health centers, public housing centers, outpatient health programs funded by the Indian Health Service (including urban Indian organizations receiving funds under Title V of the Indian Healthcare Improvement Act and tribal 638 programs), and programs serving migrants and the homeless. These amendments also authorized facility designations for rural health clinics by submitting an application.

Health Professional Shortage Areas (HPSAs)

Health Professional Shortage Areas are federally designated areas indicating a shortage of primary care providers in medical, dental or mental health, with a score indicating the

degree of shortage. HPSAs are used by various (primarily recruitment and retention) programs for eligibility and to allocate resources.

Types of HPSAs

There are essentially two types of HPSAs: area HPSAs and site HPSAs. Area HPSAs cover a geographic area such as a county or group of census tracts. Area HPSAs are further subdivided into geographic HPSAs and population HPSAs. Geographic HPSAs refer to a shortage of providers serving the entire population in an area, while population HPSAs refer to a shortage of providers serving a specific population (e.g., low income, Medicaid). From a user perspective, the main difference between these programs is that all primary care providers within a geographic HPSA are automatically enrolled in the Medicare Physician Bonus Payment program, which provides a 10% bonus payment to eligible providers.[47] Since population HPSAs often result in a higher score, increasing competitiveness for some programs, there is often a tradeoff when managing area HPSAs.

Site HPSAs cover a specific facility or network of safety net facilities. There are certain facilities that are automatically considered HPSAs (Federally Qualified Health Centers and Look-a-Likes), referred to as auto-HPSAs. All others, including state prisons and Community Service Boards work with the Primary Care Office to submit an application.

Virginia's HPSA Strategy

Criteria for designating HPSAs is complex (see Figure 1) and the variety of HPSAs means there are multiple opportunities to support recruitment and retention of providers. HPSAs exist to attract and retain providers to areas or safety net facilities experiencing a shortage. However, they provide tangible benefits to providers and health systems, which creates an incentive for employers and providers to seek HPSA designations or higher scores for their area or organizations. Therefore it is essential that the HPSA designation process be data-driven and equitable. The Virginia Primary Care Office has one designation specialist to manage HPSA data and ensure HPSA scores are accurate, and prioritizes efforts to designate HPSAs or change scores.

[47] Medicare Learning Network. Feb 2021. "Fact Sheet: Health Professional Shortage Area Physician Bonus Program". Centers for Medicare and Medicaid Services.

Figure 1: HPSA Designation Criteria

	Primary Care			Dental Health			Mental Health
Factor	Maximum Points Awarded	Multiplier	Total Points Possible	Maximum Points Awarded	Multiplier	Total Points Possible	Maximum Points Awarded
Population : Provider Ratio	5	x2	=10	5	x2	=10	7
% of Population below FPL	5	x1	=5	5	x2	=10	5
Travel distance/time to NSC	5	x1	=5	5	x1	=5	5
Infant Mortality Rate or Low Birth Weight	5	x1	=5				
Water Fluoridation	5	x1	=5	1	x1	=1	
Ratio of children under 18 to adults 18-64							3
Ratio of adults 65 and older to adults 18-64							3
Substance abuse prevalence							1
Alcohol abuse prevalence							1
Max Score			=25			=26	=25

Overall, the Virginia PCO favors the needs of safety net facilities and vulnerable populations. If the data appears to support a shortage, the Virginia PCO engages with stakeholders from a targeted community to learn their specific concerns and determine which type of HPSA is appropriate. Usually, the trade-off between bonus payments associated with geographic HPSAs and higher scores associated with population HPSAs is the main point of navigation. The increasingly diverse portfolio of incentive programs provides some flexibility and we are often - but not always - able to meet multiple needs

within a community. However, our main goal is always to accurately identify and describe shortage areas, and to arrive at accurate, data-driven designations and scores. Designations are also periodically reviewed by HRSA and PCO staff. If the data no longer supports it, designations may be withdrawn. This ensures that recruitment and retention resources are directed to current shortages.

Figure 2: Eligibility for Federal Incentive Programs

Shortage Designation Type	National Health Service Corps (NHSC)	Nurse Corps	Health Center Program	CMS Medicare Incentive Payment	CMS Rural Health Clinic Program	Conrad 30/ J1-Visa Waiver Program	National Interest Waiver Program
Primary Care							
Geographic HPSA	X	X		X	X	X	X
Population HPSA	X	X			X	X	X
Facility HPSA	X	X				X	X
Dental Health							
Geographic HPSA	X						
Population HPSA	X						
Facility HPSA	X						
Mental Health							
Geographic HPSA	X	X		X		X	X
Population HPSA	X	X				X	X
Facility HPSA	X	X				X	X
Exceptional MUP			X			X	X
Medically Underserved Area			X		X	X	X
Medically Underserved Population			X			X	X
State Governor's Certified Shortage Area					x		

Figure 3: Eligibility for Virginia State Incentive Programs

Shortage Designation Type	Virginia State Loan Repayment Program (SLRP)	Behavioral Health Loan Repayment Program (BH-LRP)	Nursing Preceptor Incentive Program (NPIP)	Nursing Scholarship Programs
Primary Care				
Geographic HPSA	X		X	X
Population HPSA	X		X	X
Facility HPSA	X		X	X
Dental Health				
Geographic HPSA	X			
Population HPSA	X			
Facility HPSA	X			
Mental Health				
Geographic HPSA	X	X	X	X
Population HPSA	X	X	X	X
Facility HPSA	X	X	X	X
Exceptional MUP		X	X	X
Medically Underserved Area		X	X	X
Medically Underserved Population		X	X	X
State Governor's Certified Shortage Area		X	X	X

Figure 4: Flexible Options for Provider Recruitment

Provider Recruitment Program:	Minimum Designation Required	Competitive HPSA Score
NHSC Scholarship Program:	HPSA score of 20	N/A
NHSC Loan Repayment Program:	Designated as HPSA	HPSA score of 18
Nurse Corps Scholarship Program:	HPSA score of 14	N/A
Nurse Corps Loan Repayment Program:	HPSA score of 14	N/A
Conrad 30/ J1-Visa Waiver Program:	Designated as HPSA or MUA/P	N/A
National Interest Waiver Program:	Designated as HPSA or MUA/P	N/A
State Loan Repayment Program (SLRP):	Designated as HPSA or MUA/P	Higher scores more competitive
Behavioral Health Loan Repayment Program (BH-LRP):	Designated as HPSA or MUA/P	Higher scores more competitive
Nursing Preceptor Incentive Program (NPIP):	Designated as HPSA or MUA/P	N/A
Nursing Scholarship Programs:	Designated as HPSA or MUA/P	N/A

Metrics

The Virginia PCO tracks a variety of metrics to ensure HPSAs are meeting the needs of the population generally. These focus on ensuring that vulnerable populations are covered by HPSAs. Our goal is to increase the share of target populations covered by HPSAs each year. See Figures 5, 6 and 7 for current and past coverage levels.

Figure 5: Primary Care

	2017		2021	
Population Covered	Count	Percent	Count	Percent
Counties	70	53%	79	59%
Total Population	2.0 Mil	24%	2.7 Mil	33%
Persons in Poverty (1 FPL)	332,250	38%	376,635	44%
Children (under 18)	402,332	22%	606,199	33%
Children in Poverty	99,796	39%	118,651	46%
Seniors (65+)	360,549	29%	452,859	36%
Seniors in Poverty	37,369	40%	43,220	46%
Population at 2 FPLs	733,720	36%	878,727	43%

Figure 6: Dental

	2017		2021	
Population Covered	Count	Percent	Count	Percent
Counties	79	59%	77	58%
Total Population	2.2 Mil	27%	2.3 Mil	28%
Persons in Poverty (1 FPL)	360,419	42%	393,142	45%
Children (under 18)	436,230	24%	451,088	25%
Children in Poverty	99,385	39%	106,726	42%
Seniors (65+)	426,601	34%	430,080	35%
Seniors in Poverty	41,952	45%	42,944	46%
Population at 2 FPLs	793,559	39%	846,999	42%

Figure 7: Mental

	2017		2021	
Population Covered	Count	Percent	Count	Percent
Counties	79	59%	120	90%
Total Population	2.4 Mil	30%	4.6 Mil	56%
Persons in Poverty (1 FPL)	358,553	41%	633,217	73%
Children (under 18)	504,242	27%	979,937	53%
Children in Poverty	99,282	39%	182,919	72%
Seniors (65+)	451,922	36%	808,044	65%
Seniors in Poverty	41,834	45%	69,909	75%
Population at 2 FPLs	804,531	40%	1.4 Mil	71%

Appendix II: Recruitment & Retention Programs

Recruitment and Retention programs include National Health Service Corps and Nurse Corps programs administered by federal partners, federal programs administered by state primary care offices, and Virginia state programs.

National Health Service Corps (NHSC) and Nurse Corps programs:

Field Strength for Individual National Health Service Corps (NHSC) Programs: 2017-2021

		Service Years				
Program	Provider Type	2017	2018	2019	2020	2021
NHSC Loan Repayment Program	Certified Nurse-Midwife (CNM)					1
	Dentist	10	12	12	15	27
	Health Service Psychologist (HSP)	8	3	3	3	4
	Licensed Clinical Social Worker (LCSW)	8	15	27	28	33
	Licensed Professional Counselor (LPC)	19	22	36	44	65
	Marriage and Family Therapist (MFT)					1
	Nurse Practitioner (NP)	18	17	32	49	63
	Obstetrics/Gynecology (ObGyn)			1	2	3
	Pediatrics			4	6	1
	Physician's Assistant (PA)	7	10	8	11	18
	Primary Care-DO	2	0	2	4	2
	Primary Care-MD	7	7	3	3	9
	Psychiatric Nurse Specialist (PNS)			1	2	1
	Psychiatrist			1	1	1
	Registered Dental Hygienist (RDH)	1	1	2	2	5
NHSC Scholarship Program	Dentist	3	8	6	8	5
	Nurse Practitioner (NP)					1
	Physician's Assistant (PA)	3	7	5	4	1
	Primary Care-DO	3	3	3	3	3
	Primary Care-MD	1		4	4	2
NHSC Students to Service (S2S)	Dentist		5	5	10	1
	Primary Care-DO					1
	Primary Care-MD	3	4	1	2	2
NHSC SUD Loan Repayment Program (SUD-LRP)	Substance Use Disorder Treatment (SUD)			2	5	8
Grand Total		93	114	158	206	258

NHSC Scholarship Program

Students pursuing a career in primary health care or general dentistry are eligible to receive up to four years of tuition and class materials assistance as well as a living stipend through the NHSC Scholarship program. Scholars are required to spend up to four years (two years minimum; one year of service for each full or partial year of scholarship funding) practicing in rural, urban, and frontier communities with limited access to care, upon graduation and licensure. Scholars, graduating in 2021-2022, must work at a site with an

associated HPSA score of 20 or higher. The minimum qualifying HPSA score for new graduates is announced annually.

NHSC Loan Repayment Program

In exchange for 2 years of full-time service (minimum 40 hours/week, 45 weeks/year) or half-time service (minimum 20 hours/week, 45 weeks/year) at an NHSC-approved service site, applicants working in primary care, mental, and dental health can receive up to $50,000 in loan repayment. Applicants working in higher HPSA scores are funded first until the NHSC-LRP funding is exhausted. Increased funding for NHSC by the federal government, in 2021, has made scores as low as 10 competitive for loan repayment. The competitive score for 2020, however, was 18.

NHSC developed the Student to Service Loan Repayment Program (S2S-LRP)

Under the National Health Service Corps (NHSC) Students to Service Loan Repayment Program (S2S LRP), medical students (MD or DO) and dental students (DMD or DDS) in their final year of school can receive up to $120,000 of loan repayment assistance in return for providing three years of full-time (no less than 40 hours per week, for a minimum of 45 weeks a year) or six years half-time (no less than 20 hours per week with a max of 39, for a minimum of 45 weeks per year) health care service in urban, rural, or frontier communities with limited access to care. This program requires a minimum associated HPSA score of 14 for the service obligation. The awards are based on availability of funding.

NHSC developed the Substance Use Disorder Loan Repayment Program (SUD-LRP)

In exchange for three years of full-time service (minimum 40 hours/week, 45 weeks/year) or half-time service (minimum 20 hours/week, 45 weeks/year) at an NHSC-approved SUD Treatment site, applicants working in primary care or mental health can receive up to $75,000 or $37,000 in loan repayment, respectively. Applicants with SUD Licensure/Certification or DATA 2000 Waivers and a completed scholarship service obligation receive priority in funding. Remaining applicants are ranked by disadvantaged backgrounds, then by characteristics that show that they'll likely remain in a HPSA – such as completing a Primary Care Training and Enhancement (PCTE) Fellowship.

NHSC Rural Community Loan Repayment Program (NHSC Rural Community LRP)

In exchange for three years of full-time service (minimum 40 hours/week, 45 weeks/year) or half-time service (minimum 20 hours/week, 45 weeks/year) at an NHSC-approved SUD Treatment site, applicants working in primary care or mental health can receive up to $100,000 or $50,000 in loan repayment, respectively. The National Health Service Corps (NHSC) Rural Community Loan Repayment Program (LRP) supports clinicians working to combat the opioid epidemic in the nation's rural communities. The NHSC Rural Community LRP makes loan repayment awards in coordination with the Rural Communities Opioid Response Program (RCORP) within the Federal Office of Rural Health Policy (FORHP) to provide evidence-based substance use disorder (SUD) treatment, assist in recovery, and to prevent overdose deaths in rural communities across the nation. Applicants with SUD Licensure/Certification or DATA 2000 Waivers and a completed scholarship service obligation receive priority in funding. Remaining applicants are ranked by disadvantaged backgrounds, then by characteristics that show that they'll likely remain in a HPSA – such as completing a Primary Care Training and Enhancement (PCTE) Fellowship, and finally those who serve at a SUD facility in a county with a high overdose mortality rate.

Substance Use Disorder Treatment and Recovery Loan Repayment Program (STAR-LRP)

In exchange for 6 years of full-time service (minimum 40 hours/week, 45 weeks/year) at a STAR LRP- approved facility, applicants working in primary care or mental health can receive up to $250,000 in loan repayment. Funding priority is given to applicants working within localities where either the average drug overdose death rate exceeds the most current national average overdose death rate per 100,000 people, as reported by the Centers for Disease Control and Prevention (CDC), or working within a Mental Health Professional Shortage Areas (MHPSAs).

Field Strength for All National Health Service Corps (NHSC) Programs: 2017-2021

Provider Discipline	Provider Type	Service Years 2017	2018	2019	2020	2021
Dental	Dentist	13	25	23	33	33
	Registered Dental Hygienist (RDH)	1	1	2	2	5
Mental	Health Service Psychologist (HSP)	8	3	3	3	4
	Licensed Clinical Social Worker (LCSW)	8	15	27	28	33
	Licensed Professional Counselor (LPC)	19	22	35	43	65
	Marriage and Family Therapist (MFT)					1
	Nurse Practitioner (NP)			7	8	13
	Physician's Assistant (PA)	1	1	2	1	2
	Psychiatric Nurse Specialist (PNS)			1	2	1
	Psychiatrist			1	1	1
	Substance Use Disorder Treatment (SUD)			2	5	8
Primary Care	Certified Nurse-Midwife (CNM)					1
	Licensed Professional Counselor (LPC)			1	1	
	Nurse Practitioner (NP)	18	17	25	41	51
	Obstetrics/Gynecology (ObGyn)			1	2	3
	Pediatrics			4	6	1
	Physician's Assistant (PA)	9	16	11	14	17
	Primary Care-DO	5	3	5	7	6
	Primary Care-MD	11	11	8	9	13
Grand Total		93	114	158	206	258

Nurse Corps Scholarship Program

Students enrolled in any of the following, accredited training programs:

- Graduate Level Nurse Practitioner
- Associate Degree School of Nursing (ADN)
- Collegiate School of Nursing (BSN, graduate degree)
- Diploma School of Nursing
- Nursing Bridge Program (RN to BSN, RN to MSN-NP, Direct Entry MSN-NP)

are eligible to receive up to four years of tuition and class materials assistance and a living stipend through the Nurse Corps Scholarship program. Scholars are required to spend up to four years (two years minimum; one year of service for each full or partial year of scholarship funding) practicing in rural, urban, and frontier communities with limited access to care, upon graduation and licensure. Scholars must work at a site with an associated HPSA score of 14 or higher.

Provider Type	2019	2020	2021
Registered Nurse (RN)	9	8	16
Nurse Practitioner (NP)	6	4	10
Nurse Practitioner (NP)- Psychiatry	0	3	7
Registered Nurse Anesthetist (RNA)	1	1	0
Certified Nurse-Midwife (CNM)	0	1	1
Clinical Nurse Specialist (CNS)	0	0	0
Nursing Faculty	3	2	2
Total Urban	15	16	26
Total Rural	4	3	10
Total NURSE Corps Loan Repayment Program	15	14	28
Total NURSE Corps Scholarship Program	4	5	8
Grand Total	**19**	**19**	**36**

Nurse Corps Loan Repayment Program

NURSE Corps Loan Repayment Program offers registered nurses (RNs), advanced practice registered nurses, and nursing faculty up to 60 percent of their total outstanding qualifying educational loan balance incurred while pursuing an education in nursing. In exchange participants must complete a 2-year service commitment at either a health care facility with a critical shortage of nurses (indicated by a minimum Primary Care or Mental Health HPSA score of 14 or higher) or an eligible school of nursing in the case of nurse faculty. Qualifying participants may receive an additional 25 percent of their original loan balance if they choose to extend to a third year of service. Funding preference will be given to nurses based on the greatest financial need, the type of facility serving, and highest mental health or primary care HPSA scores. Funding preference will also be given to nurse faculty members with the greatest financial need working at schools of nursing with at least 50 percent enrollment of students from a disadvantaged background.

The VDH-OHE administers the following programs::

Federal-Virginia State Loan Repayment Program (VA-SLRP

VA-SLRP is authorized by Public Health Service Act, Title III, Section 338I, 42 U.S.C. 254q-1. The Commonwealth of Virginia has participated in loan repayment for many years and currently participates in the Health Resources and Services Administration, Bureau of Clinician Recruitment and Service (BCRS) Grants to States for Loan Repayment. This VA-SLRP is operated by the Virginia Department of Health - Office of Health Equity (VDH-OHE) providing a non-taxed option incentive to qualified medical, dental, behavioral health, and pharmacists professionals in return for a minimum of two (2) years of service at an eligible practice site in one of the federally designated Health Professional Shortage Areas (HPSAs) in a qualified field of practice in Virginia and requires a dollar for dollar match from the community/practice site. Currently, the maximum award for a four (4) year commitment is $140,000 and shall be for a qualifying educational loan. The participant shall meet and fulfill all requirements listed below in order to be eligible for VA-SLRP.

State Loan Repayment Program (SLRP) Field Strength: 2017-2021

		Service Years				
Provider ..	Provider Type	2017	2018	2019	2020	2021
Dental	Dentist	12	5	4	9	11
	Registered Dental Hygienist (RDH)				1	1
Mental	Health Service Psychologist (HSP)			2	5	2
	Licensed Clinical Social Worker (LCSW)	3	2		4	12
	Licensed Professional Counselor (LPC)			3	13	22
	Marriage and Family Therapist (MFT)			2	4	
	Nurse Practitioner (NP)	1	2	1	5	9
	Primary Care-MD			1	2	
	Psychiatrist	3	8	13	3	7
	Psychologist					6
	Registered Nurse (RN)				1	4
Primary Care	Certified Nurse-Midwife (CNM)				1	2
	Nurse Practitioner (NP)	5	12	26	31	48
	Obstetrics/Gynecology (ObGyn)	2	7	9	6	2
	Pediatrics	2				1
	Pharmacist			1	5	8
	Physician's Assistant (PA)	1	2		1	3
	Primary Care-DO				2	4
	Primary Care-MD	4	6	14	8	8
	Registered Nurse (RN)		1	2	6	13
Grand Total		33	45	78	107	163

Federal-Virginia Conrad 30 Waiver Program

Federal law requires that International Medical Graduates (IMGs), defined as individuals who are not United States (U.S.) citizens but are accepted to pursue graduate medical education or residency training in the U.S., shall obtain a J-1 exchange visitor visa or an H-1B visa. The J-1 visa allows the IMGs to remain in the U.S. until they complete their studies. Upon completion of their studies, the IMGs on J-1 visas (the "J-1 Physicians") shall return to their home country for at least two years before they can return to the U.S. Under certain circumstances, a J-1 Physician may request the U.S. Citizenship and Immigrations Service (USCIS) to waive the "two-year home country physical presence requirement." The waiver may be requested under any one of the following circumstances:

1. Extreme hardship to his/her spouse or children who are citizens or permanent residents of the U.S.
2. Persecution if forced to return to his/her home country
3. A U.S. government agency makes a request for the waiver on the basis that the J-1 Physician's work is in the national and/or public interest
4. A state department of health makes a request for the waiver on the condition that the physician agrees to practice in an area having a shortage of health care professionals. This provision allows state departments of health to sponsor up to thirty J-1 Physicians per federal fiscal year (September 1- September 30) under the Conrad 30 Waiver Program

The Virginia Conrad 30 program is a federal program for which VDH, OHE is charged with administrative and oversight responsibilities. These responsibilities include the processing of applications, the ongoing collection of required documents for 90 active participants at any given time (e.g., verifications of employment, etc.), and periodic statewide site visits, which are customary among the other state health departments.

Recently, the Virginia Conrad 30 program has realized great successes in consistently placing the maximum number of physicians each year throughout the Commonwealth. These physicians agree to practice medicine for three years in, or serve patients who reside in, a medically underserved area or health professional shortage area. To date, 90 physicians were placed across Virginia in the last three years. (Fiscal Year 2014 will start in October 1 and end September 30).

In addition to its participation in the Conrad State-30 Program, the Commonwealth of Virginia (the "Commonwealth") also participates in the Appalachian Regional Commission's (ARC) J-1 Visa Waiver Program. ARC is a federal government agency that considers J-1 visa waiver requests by state governors on behalf of medical facilities located in Health Professional Shortage Areas (HPSAs) in the respective state's Appalachian Region.

Conrad 30 Field Strength: 2017-2020

		Service Years			
Provider ..	Provider Type	2017	2018	2019	2020
Mental	Psychiatrist	7	6	6	8
Primary Care	Obstetrics/Gynecology (ObGyn)			1	1
	Pediatrics	2	2	2	
	Primary Care-MD	17	19	14	12
Specialist	Anesthesiology			1	2
	Cardiology	8	7	7	5
	Clinical Genetics	1			
	Critical Care	1	1		
	Emergency Medicine		2	3	5
	Endocrinology	3	4	3	4
	Gastroenterology	1	1		
	General Surgery	3	1	1	1
	Hematologist/Oncologist	7	11	9	8
	Hospitalist	23	22	24	23
	Infectious Diseases	1			
	Nephrologist	1	2	3	3
	Neurologist	2	2	3	4
	Orthopaedist	1	1	1	
	Palliative Medicine				1
	Pathologist	1	1	3	2
	Pediatrics	1	1	1	
	Pulmonologist			1	3
	Radiologist	1	2	3	2
	Rheumatologist	1	1		
	Thoracic Surgery				1
	Transplant Surgery				1
Grand Total		82	86	86	86

State-Mary Marshall RN/LPN Nursing Scholarship Program (MMSP)

The Code of Virginia Sections § 23-35.9 through § 23-35.13 and § 32.1-122.6:01 are used to administer this program. The General Assembly has in prior years appropriated funds each year for the Mary Marshall Nursing Scholarships. An additional portion of funds is secured

by the Department of Health Professions-Board of Nursing through a revolving Nursing Scholarship and Loan Repayment Fund pursuant to § 54.1-3011.1 and § 54.1-3011.2 of the Code of Virginia. The Mary Marshall Nursing Scholarship Program is for students earning a degree as a Registered Nurse (RN) or a Licensed Practical Nurse (LPN) enrolled in a nursing school in Virginia. Scholarships are competitive and are awarded by a Nursing Scholarship Advisory Committee appointed by the Board of Health. Health Workforce staff organizes and facilitates the Advisory Committee meetings but has no influence on the selection of applicants or awards. Awards are based upon criteria determined by the committee including scholastic attainments, character, need, and adaptability of the applicant for the service contemplated in the award. The service obligation can be fulfilled anywhere in Virginia in the chosen field of the recipient, RN or LPN. The current service obligation is one year for every $2000.00 received in the award. The application cycle is May 1 to June 30th of each year.

Virginia Long-term care facility nursing scholarship Program (LTFNSP)

The Code of Virginia Sections § 32.1-122.6:01, 54.1-3011.2 are used to administer this program. The General Assembly has historically never appropriated funds for this program.The Long-term care facility nursing scholarship is for students enrolled in undergraduate nursing programs. Undergraduate nursing programs are defined as those leading to a diploma, an associate degree, or baccalaureate degree in nursing and include Registered Nurses (RNs), Licensed Practical Nurses (LPNs), and Certified Nurses Aides (CNAs). Under the law, all scholarship awards are made by an Advisory Committee appointed by the State Board of Health. This program is currently unfunded.

State-Nurse Educator Scholarship Program (NE)

The Code of Virginia Sections § 23-35.9 and § 32.1-122.6:01 are used to administer this program. The General Assembly has in prior years appropriated funds each year for the Nurse Educator Scholarship Program. The Nurse Educator Scholarship Program is intended for part-time and full-time master and doctoral level nursing students. All scholarship awards are made by an Advisory Committee appointed by VDH-OHE serves as the staff element to the Advisory Committee and has no role in the determination of scholarship recipients. The Advisory Committee recommends the award selection criteria to the Commissioner. Awards are based on scholastic attainment, financial need, character, and

adaptability to the Nurse Educator specialty. The Nurse Educator Scholarship Program awards are competitive and are awarded by a Nurse Practitioner/Nurse Midwife and Nurse Educator Scholarship Advisory. This program is currently active, but unfunded.

State-Nurse Practitioner/Nurse Midwife Scholarship Program (NP/NM)

The Code of Virginia Section § 32.1-122.6:02 is used to administer this program. The General Assembly has in prior years appropriated funds each year for the Nurse Practitioner/Nurse Midwife Scholarship Program. The Nurse Practitioner/Nurse Midwife Scholarship Program awards are competitive and are awarded by a Nurse Practitioner/Nurse Midwife and Nurse Educator Scholarship Advisory Committee appointed by the Board of Health. Health Workforce staff organizes and facilitates the Advisory Committee meetings but has no influence on the selection of applicants or awards. Awards are based upon criteria determined by the committee and include scholastic attainments, character, need, and adaptability of the applicant for the service contemplated in such award. Recipients are full or part time graduate students in an accredited nurse practitioner or nurse midwife program in designated schools. Awards are for a single academic year and scholarships must be repaid with service, one year for every year an award is received. The recipient must engage in full-time nurse practitioner or nurse midwife work in a medically underserved area of Virginia. This program is currently active, but unfunded.

Virginia National Interest Waiver Program

The National Interest Waiver is a waiver of the job offer requirement for foreign nationals who would like to obtain permanent residence in the United States in the employment based second preference category. The waiver is available to individuals who are members of the professions holding advanced degrees and individuals of exceptional ability in the arts, sciences, and business.

Generally, individuals who apply to immigrate in the employment based second-preference category must have a job offer and the employer must obtain an approved “Labor Certification” from the Department of Labor. The National Interest Waiver relieves the petitioner only from the Labor Certification process. A petitioner requesting a National Interest Waiver on behalf of a qualified alien physician, or an alien physician self-petitioning

for second preference classification, still must meet all eligibility requirements for this immigrant classification in order to be eligible for the National Interest Waiver. The Code of Federal Regulation (CFR) at 8 CFR Parts 204 and 245 provide provisions of public law and regulations under which framework that second-preference immigrant physicians may petition for a National Interest Waiver. The National Interest Waiver requires physicians to provide five years of service either in an area designated as a HPSA, or Mental Health Professional Shortage Areas (MPSA) or at a VA facility or facilities. In either case, the alien physician must also obtain a determination from Health and Human Services Department (HHS), VA, or State Department of Health that the physician's work in such an area or facility is in the public interest. The application cycle is year round.

Virginia Behavioral Health Loan Repayment Program- State

The 2021 General Assembly established a $1.6 million Virginia Behavioral Health Student Loan Repayment Program (BH-LRP) to help recruit and retain behavioral health (BH) professionals to practice in underserved areas of the Commonwealth and/or provide counseling and treatment to underserved populations. This program will repay a portion of an eligible BH professional's student loan debt. In return, recipients commit to practicing in Virginia for a minimum of two years at an eligible site. Applications for the first year of this program will be reviewed and acted on in two cycles: October 15, 2021 – December 15, 2021 and February 1, 2022 – April 15, 2022.

Virginia Nursing Preceptor Incentive Program- State

The 2021 General Assembly established a $500,000 Nursing Preceptor Incentive Program (NPIP) to provide financial incentives for practitioners who serve as otherwise uncompensated preceptors for APRN students to help increase access to care, address the primary care shortage, handle mental health crises, and manage chronic diseases. All of these factors are crucial in improving the health and wellness of all Virginians. Application Cycles (registration): First cycle: October 1, 2021 to December 15, 2021, Thereafter, register December 1st through January 31st and July 1st through August 31st.