Code of Virginia § 30-168.

The Joint Commission on Health Care (the Commission) is established in the legislative branch of state government. The purpose of the Commission is to study, report and make recommendations on all areas of health care provision, regulation, insurance, liability, licensing, and delivery of services. In so doing, the Commission shall endeavor to ensure that the Commonwealth as provider, financier, and regulator adopts the most cost-effective and efficacious means of delivery of health care services so that the greatest number of Virginians receive quality health care. Further, the Commission shall encourage the development of uniform policies and services to ensure the availability of quality, affordable and accessible health services and provide a forum for continuing the review and study of programs and services.

The Commission may make recommendations and coordinate the proposals and recommendations of all commissions and agencies as to legislation affecting the provision and delivery of health care. For the purposes of this chapter, "health care" shall include behavioral health care.

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Performance of Health Care Workforce Programs

Contents

Performance of Health Care Workforce Programs

POLICY OPTIONS IN BRIEF

There are 2 policy options in the report for consideration.

Option: Direct a review of health care workforce programs' eligibility, screening criteria, and service requirements via letter to state agencies. The review should identify opportunities to align programs with Virginia's health care workforce needs based on available supply and demand data.
(Option 1, page 10)

Option: Direct the Virginia Health Workforce Development Authority, in collaboration with Virginia Works, to develop a plan to increase capacity for reporting and monitoring of health care workforce programs while balancing the administrative burden to state agencies.
(Option 2, page 15)

FINDINGS IN BRIEF

Virginia's General Assembly appropriated $683 million in state funds for 34 health care workforce programs in Fiscal Years 2023 and 2024

The Virginia General Assembly appropriated $318 million for 24 programs exclusively focused on health care workforce, and $365 million for 10 programs partially focused on health care workforce, among other occupational sectors. Ninety percent of state funding supports programs intended to expand the pipeline of health care professionals in secondary, post-secondary, and post-graduate settings. The remaining programs aim to retain health care professionals in Virginia with financial incentives or salary adjustments, or by improving workforce well-being.

State-funded programs are reaching their intended target audience but lack focus on areas of most need

Nearly 80 percent of programs provide services to individuals for whom the program was designed, but programs rarely focus on the health care professional specialties, settings, or geographical areas of highest need in Virginia. Five programs require or prioritize applicants who fulfill service requirements in shortage areas. However, expanding shortage areas in Virginia are diluting the identification of areas of extreme need.

Sparse, inconsistent data collection makes reporting on program quality and impact difficult

Most programs use passive strategies to measure implementation, and track program completion as the main outcome. Nineteen programs have no reporting requirements and only five programs report a positive impact on measured program outcomes, including increased wages and retention and reduced vacancy rates. With program monitoring responsibilities spread across two entities, programs' barriers to data collection and reporting are not consistently reviewed or addressed.

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Performance of Health Care Workforce Programs

The Commonwealth of Virginia, consistent with national trends, is facing a historic challenge with ongoing health care workforce shortages. The COVID-19 pandemic exacerbated pre-pandemic health care workforce concerns, with already critical shortage areas being hit the hardest. As of July 2024, all 133 localities in Virginia are federally designated as behavioral health shortage areas, 98 localities are federally designated as dental health shortage areas, and 96 localities are designated as primary care shortage areas. Strains to provide services and attract and retain health care workers have been reported across almost every health care profession.

In response to these concerns, multiple entities in Virginia have documented the root causes of workforce shortages in Virginia, including analyzing trend data by health care profession and recommending strategies to address areas of need (see APPENDIX 1 for a summary of recent reports). One strategy, among many pursued in Virginia, includes funding programs to recruit and retain health care professionals to address specific workforce shortages. However, as Joint Commission on Health Care (JCHC) staff reported in November 2023, few programs have been evaluated for effectiveness.

To ensure state investments in health care workforce programs are yielding anticipated benefits, the JCHC directed staff to monitor and report on the performance and impact of state-funded health care workforce programs. The study resolution (APPENDIX 2) directed staff to:

- Develop a framework for measuring the performance and impact of health care workforce programs;

- Obtain relevant data to populate metrics measuring each program's outputs and outcomes;

- Develop and implement a process for reporting on the performance of programs that is meaningful, transparent, and actionable; and

- Consider policy options through which the state may improve the performance of state-funded health care workforce programs.

For the purposes of this study, JCHC staff define health care workforce programs as any initiative or organized strategy that has at least one primary objective directly and intentionally benefiting the health care workforce, including strategies to recruit or retain health care professionals and improve workforce well-being. Consistent with the study

> **Health care workforce programs funded through sources other than the state** are a significant part of the health care workforce development landscape in Virginia. In 2023, JCHC staff identified 44 federally or privately funded programs focused on recruiting, retaining, or improving the well-being of health care professionals (see APPENDIX 4).

resolution, JCHC staff prioritized programs receiving state funding (see sidebar) that have been implemented for at least one year, to ensure programs had an opportunity to report on outcomes. For a summary of program selection criteria and comprehensive list of programs considered for this study, see APPENDIX 3.

Virginia's General Assembly appropriated $683 million in state funds for 34 health care workforce programs in Fiscal Years 2023 and 2024

Across Fiscal Years 2023 and 2024, the Virginia General Assembly appropriated $318 million for 24 workforce programs exclusively focused on health care and $365 million for 10 workforce programs partially focused on health care, totaling a $683 million state investment. Whereas programs exclusively focused on health care target health professions, programs partially focused on health care address multiple high-demand occupational sectors, such as computer science or engineering. In most cases, programs with a multi-sector focus do not account for costs by sector, making it difficult to determine what portion of their funding is dedicated to health care.

Stakeholders disagree on what programs are health care workforce programs

Actual state spending on health care workforce programs may be higher or lower depending on how health care workforce programs are defined. Virginia defines three different types of general workforce programs in the *Code of Virginia* § 2.2-2036; however, there is no definition of what a health care workforce program entails nor a centralized inventory of existing programs. Five stakeholders interviewed for this study disagreed on their program's inclusion as a health care workforce program. All operated within the education sector, where the delineation between programs designed to educate aspiring health care professionals and programs designed to target health care professional shortages is not always clear.

Using criteria established for this study, JCHC staff identified 19 health care workforce programs operated by nine fiscal agents under the Education Secretariat and 15 programs operated by three fiscal agents under the Health and Human Resources Secretariat (TABLE 1).

TABLE 1. Virginia health care workforce programs operate within the Education and Health and Human Resources Secretariats

Secretariat	Fiscal Agent	Number of Programs
Education	College of William and Mary	1
	Eastern Virginia Medical School	1
	Southern Virginia Higher Education Center	1
	State Council of Higher Education for Virginia	6
	University of Mary Washington	1
	University of Virginia	2
	Virginia Commonwealth University	1
	Virginia Community College System	4
	Virginia Department of Education	2
	Total	*19*
Health and Human Resources	Virginia Department of Behavioral Health and Developmental Services	3
	Virginia Department of Health	10
	Virginia Department of Medical Assistance Services	2
	Total	*15*

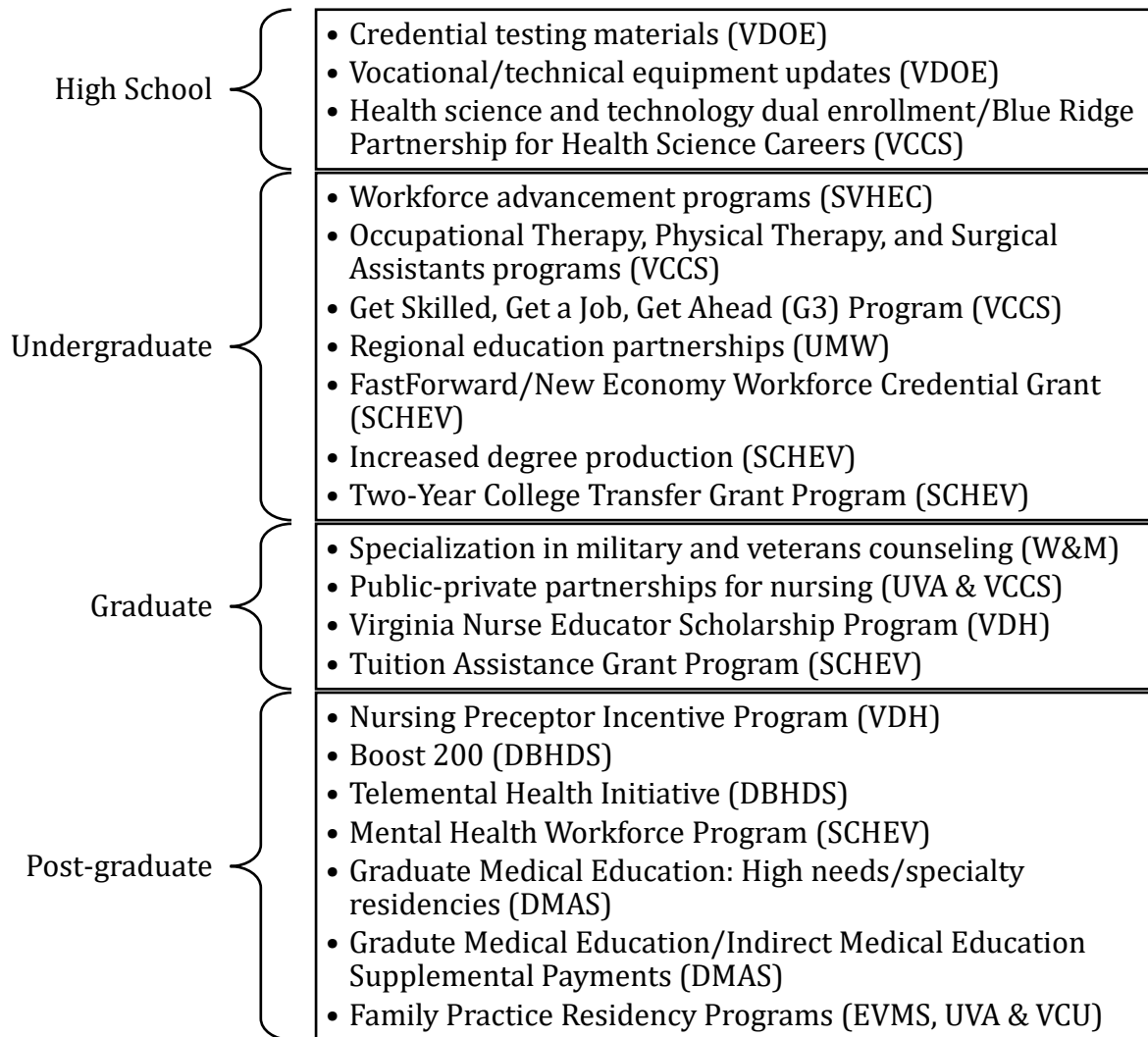SOURCE: JCHC analysis of state appropriations act, 2024.

Ninety percent of state funding for health care workforce programs focuses on expanding the pipeline of health care professionals

Virginia's demand for health care professions continues to rise faster than supply. Data compiled by the Virginia Board of Workforce Development (see sidebar) indicate that the health care and social assistance industry remains the top employer in Virginia, comprising 13 percent of all employment in the state, and the occupation with the highest number of job openings in Virginia is registered nurses.

To address deficiencies in supply, Virginia has appropriated $618 million, or 90 percent of state funding for health care workforce efforts, into 24 programs that seek to expand educational opportunities for aspiring health care professionals. These programs cover the spectrum of the educational pipeline from high school through post-graduate training (FIGURE 1).

> The **Virginia Board of Workforce Development** serves as the state workforce development board for Virginia and advises on meeting workforce development needs in the Commonwealth through recommendation of policies and strategies to increase coordination and efficiency of workforce programs.

FIGURE 1. Virginia funds health care workforce programs throughout the education pipeline

High School
- Credential testing materials (VDOE)
- Vocational/technical equipment updates (VDOE)
- Health science and technology dual enrollment/Blue Ridge Partnership for Health Science Careers (VCCS)

Undergraduate
- Workforce advancement programs (SVHEC)
- Occupational Therapy, Physical Therapy, and Surgical Assistants programs (VCCS)
- Get Skilled, Get a Job, Get Ahead (G3) Program (VCCS)
- Regional education partnerships (UMW)
- FastForward/New Economy Workforce Credential Grant (SCHEV)
- Increased degree production (SCHEV)
- Two-Year College Transfer Grant Program (SCHEV)

Graduate
- Specialization in military and veterans counseling (W&M)
- Public-private partnerships for nursing (UVA & VCCS)
- Virginia Nurse Educator Scholarship Program (VDH)
- Tuition Assistance Grant Program (SCHEV)

Post-graduate
- Nursing Preceptor Incentive Program (VDH)
- Boost 200 (DBHDS)
- Telemental Health Initiative (DBHDS)
- Mental Health Workforce Program (SCHEV)
- Graduate Medical Education: High needs/specialty residencies (DMAS)
- Gradute Medical Education/Indirect Medical Education Supplemental Payments (DMAS)
- Family Practice Residency Programs (EVMS, UVA & VCU)

VDOE = Virginia Department of Education; VCCS = Virginia Community College System; SVHEC = Southern Virginia Higher Education Center; UMW = University of Mary Washington; SCHEV = State Council of Higher Education for Virginia; W&M = College of William and Mary; UVA = University of Virginia; VDH = Virginia Department of Health; DBHDS = Department of Behavioral Health and Developmental Services; DMAS = Department of Medical Assistance Services; EVMS = Eastern Virginia Medical School; VCU = Virginia Commonwealth University

SOURCE: JCHC staff analysis of program documentation and stakeholder interviews, 2024.

Ten programs fund institutions to increase health care credentials in high school and post-secondary settings

State-funded health care workforce programs identified within the education sector are distinct from state funds appropriated for general K-12 and post-secondary education. The ten programs supporting credential attainment, totaling $69 million in state funds for Fiscal Years 2023 and 2024, were intentionally created and funded to address a specific health care workforce need or shortage area. For example, while Virginia's Career and Technical Education (CTE) programs are federally funded, the General Assembly appropriates general funds each year to support necessary updates to program equipment and bear the costs of credential testing for students studying science, technology, engineering, math, and health care. Similarly, the Blue Ridge Partnership for Health Science Careers is an employer-led coalition to support regional needs for health care and health science workers, and the General Assembly appropriates funds to community colleges participating in the Partnership to offset the costs of dual enrollment courses (see sidebar). These programs facilitate students' credential attainment and preparation to join the health care workforce.

> **Dual enrollment** is a program that allows high school students to take college-level courses at a participating Virginia college or university. These courses count towards both a high school diploma and a college degree.

Four programs provide financial assistance for undergraduate and graduate educational costs of aspiring health care professionals

Nearly half of state funds appropriated for health care workforce recruitment programs in Virginia ($300 million of $618 million for Fiscal Years 2023 and 2024) are distributed to four programs that provide financial assistance for the costs of education. Each of these programs targets student populations at different points in their pathway toward high-demand occupations, including health care. For example, FastForward (formerly known as the New Economy Workforce Credential Program) provides funding for noncredit workforce training that leads to a credential, while the Get Skilled, Get a Job, and Get Ahead (G3) Program offers tuition assistance for students enrolled in associate degree-granting programs. The Two-Year College Transfer Grant Program supports nursing students, among others, who complete an associate's degree at a Virginia two-year institution and then transfer to a Virginia four-year institution. Finally, the Tuition Assistance Grant Program, in part, provides payments to graduate students enrolled in health-related professional programs at private Virginia colleges and universities.

Ten programs support opportunities for health care professionals to meet post-graduate clinical experience requirements

Many health care professions require both a degree and additional clinical training and experience before individuals can fully practice in their field. Virginia appropriates $249

million in state funds for health care workforce programs to support trainees, the teachers and preceptors who provide instruction and supervision to the trainees, and institutions that host and support trainees. For example, Virginia appropriates general funds to support family medicine residencies at Eastern Virginia Medical School, Virginia Commonwealth University, and University of Virginia. Boost 200 pays for the costs of pre-licensed counselor and social worker supervision hours. Finally, the Virginia Department of Health's Nursing Preceptor Incentive Program offers financial incentives for practitioners who serve as otherwise uncompensated preceptors for advanced practice registered nurse (APRN), registered nurse (RN), and licensed practical nurse (LPN) students.

State-funded programs that focus on retaining health care professionals in Virginia primarily use financial incentives

State funds dedicated to retaining health care professionals are largely channeled through programs providing financial incentives, such as scholarships or loan repayment, to individuals who perform a period of professional service in Virginia.

The Virginia Department of Health operates seven state-funded scholarship and loan repayment programs for health care professionals that require participants to practice in Virginia following graduation for varying amounts of time (TABLE 2). Five of these programs target the nursing profession, while the Virginia Student Loan Repayment Program and the Behavioral Health Loan Repayment Program are available to multiple professions. In addition, the State Council of Higher Education for Virginia operates one scholarship program for Virginia optometry students. As there are no schools of optometry in Virginia, the program provides funds for students to attend out-of-state schools and colleges of optometry in exchange for a period of service in Virginia.

TABLE 2. Eight state-funded scholarship and loan repayment programs require periods of service in Virginia

Program	Maximum Financial Incentive Per Year	Years of Full Time Service in Virginia
Virginia Department of Health		
Long-Term Facility Nursing Scholarship	$2,000 for LPNs or RNs $1,000 for CNAs	One year
Mary Marshall CNA Scholarship	$1,000	One year
Mary Marshall LPN Scholarship	$2,000	One year
Mary Marshall RN Scholarship	$2,000	One year
Virginia Behavioral Health Loan Repayment Program	$30,000	Two years
Virginia Nurse Practitioner/Nurse Midwife Scholarship Program	$20,000	One year
Virginia Student Loan Repayment Program	$100,000	Two years
State Council of Higher Education for Virginia		
Grants for students in optometry	$20,000	Two years

LPN = Licensed Practical Nurses; RN = Registered Nurses; CNA = Certified Nurse Assistants

NOTE: Financial incentives represent the maximum allowable amount per year. Actual awards may vary based on available funding and the number of qualified applicants.

SOURCE: JCHC staff analysis of program documentation and stakeholder interviews, 2024.

Programs addressing workforce salaries and well-being are not commonly state-funded in Virginia

There are limited circumstances in which the General Assembly has direct influence on health professionals' salaries. However, the General Assembly can directly influence salaries when health professionals are state employees. For example, to address retention issues in three treatment facilities operated by the Department of Behavioral Health and Developmental Services, the General Assembly appropriated funds to increase salaries of direct care staff, including LPNs, RNs, and nurse managers. Health professionals' well-being programs are also more commonly funded by private employers (see sidebar) than the General Assembly.

> **Workforce well-being programs** are typically privately funded, based on JCHC's 2023 inventory of health care workforce programs in Virginia. JCHC staff identified six workforce well-being programs in 2023, four of which were funded by the private sector.

However, the General Assembly does fund one well-being program for health professionals,

appropriating funds for the Southwest Virginia Graduate Medical Education Consortium to provide educational, cultural, and social support to medical residents in Southwest Virginia. The Consortium collects feedback from residents that is then shared with residency sites to increase retention of physicians in Southwest Virginia following residency completion.

State-funded programs are reaching their intended target populations but lack focus on areas of most need

Examining the alignment of participants to the program's target population, defined as program reach, is critical to understanding whether state-funded efforts are benefiting their intended populations. Twenty-seven of 34 programs (or nearly 80 percent) included in this study provide services to individuals for whom the program was designed. However, a deeper examination of program reach indicates programs rarely focus services on the specialties, settings, or geographical areas of highest need. Seven programs either did not collect data on program participants or felt their program's reach could be improved.

Programs most often use eligibility or selection criteria to ensure appropriate participation

Twenty of the 27 programs that collect data on program participants do so initially through an application process. For programs in the education sector, the application process for programs may be incorporated into the institution's existing application process. For example, students selected for the military and veterans counseling program are students currently enrolled in the Master of Education in Counseling program at the College of William and Mary. For programs outside of the education sector, applications are often reviewed by an external group to select final program participants. For example, each of the Virginia Department of Health's loan repayment and scholarship programs uses an advisory committee to review applicants and rank participants for selection.

The remaining seven programs that collect data on program participants establish eligibility criteria to target appropriate individuals and provide funding to all those who are eligible, to the extent funding allows, without any additional selection process.

Participant selection processes could be more targeted to prioritize specific groups of participants, but rarely do so. Three behavioral health programs place a priority on demographic characteristics of health professionals with the goal of supporting professionals who are culturally aligned with the individuals they serve. Boost 200 and the Virginia Behavioral Health Loan Repayment Program prioritize persons of color during participant selection and currently provide more than two-thirds of their programs' funding to priority individuals. The aforementioned programs and the Virginia Telemental Health Initiative also prioritize individuals who are multilingual. However, program staff note the limited pool of multilingual providers is a consistent barrier.

Programs target some health care professions in high demand, but not all

Categorizing any health care profession as being in high demand is subject to many considerations, including areas of specialization, practice settings, and differences in geographic or regional employment needs. There are multiple metrics available to determine health care workforce demand in Virginia, including the Virginia Office of Education Economics' (VOEE) high demand occupation list, focused on entry-level professions, the Virginia Department of Health Professions workforce projections for primary care and behavioral health professions, and the U.S. Department of Health and Human Services Health Professional Shortage Areas, which are based on population-to-provider ratios for primary care physicians, dentists, and psychiatrists.

Programs vary in the extent to which eligibility or selection criteria are aligned with current demand metrics. Program staff interviewed for this study frequently articulated that their programs were developed to address a specific shortage area, resulting in rigid criteria for program eligibility with most programs targeting one health care profession (TABLE 3). Only two programs allow flexibility in criteria to continually re-align services with evolving high demand occupations. FastForward and the G3 Program align their eligibility criteria with VOEE's high demand occupation list, issued annually based on the most recent employment data.

TABLE 3. Most programs target one type of health care profession

Target Health Care Profession	Number of Programs
Programs targeting one profession	15
Nursing	8
Physicians	4
Behavioral Health	3
Programs targeting multiple professions	10
Nursing	3
Physicians	3
Behavioral Health	2
Other	2
Programs targeting general health professions	9
Health Sciences	7
High Demand Health Care Occupations	2

SOURCE: JCHC staff analysis of program documentation and stakeholder interviews, 2024.

Few programs with service requirements prioritize practice settings or geographic areas of need

Ten programs provide a financial incentive to participants who perform a period of service in Virginia. While the collective goal of these programs is to retain providers in areas of need, five programs do not set any parameters for where the service requirements must be performed. The five remaining programs either require or prioritize applicants who fulfill service requirements in health professional shortage areas or specific facilities, such as long-term care facilities or state-operated psychiatric hospitals. No programs with service requirements prioritize rural localities.

An additional barrier to attracting health care professionals to the highest areas of need is the expanding number of health professional shortage areas (HPSA) in Virginia. As of July 2024, every locality in Virginia is designated as a behavioral health shortage area and more than 70 percent of localities are also either a primary care or dental professional shortage area. However, U.S. Health & Human Resources assigns each HPSA a score from 1 to 25 (or 26 for dental health) to assist states with determining priorities for the assignment of clinicians. Using this gradient metric, programs could identify localities within the top quartiles of need for additional support.

➔ **Option 1:** JCHC could send letters to state agencies with fiscal oversight of health care workforce programs requesting a review of program eligibility, screening criteria, and service requirements. This review should identify opportunities to align programs with Virginia's health care workforce needs based on available supply and demand data. Agencies should report to the Joint Commission on Health Care by October 1, 2025, any anticipated changes to program eligibility, screening requirements, and service requirements, or barriers to doing so.

Sparse, inconsistent data collection makes reporting on program quality and impact difficult

Collecting data and reporting on program quality and effectiveness is one of the primary ways in which state governments can build trust with stakeholders, increase accountability, and improve performance. For an issue like health care workforce, where there is shared responsibility between multiple levels of government and the private sector to address shortages, reporting can also ensure efficient use of resources and the transparency of effective strategies.

Passive strategies to document implementation provide limited details on program quality

Collecting data on the extent to which agencies consistently deliver a program's key functions or components, known as the fidelity of program implementation, is a precursor for determining program effectiveness. Programs that do not measure implementation

fidelity are unable to determine what parts of a program are most effective or ineffective, and programs with poor implementation fidelity may unknowingly diminish the impact of the most effective program components.

For this study, 29 of 34 programs provided documentation indicating that a process was in place to verify that the programs' key components were being implemented as intended. Most programs used passive methods for measuring implementation fidelity with very limited participant engagement, including audit reports to verify financial disbursements or verification reports where participants attest to completing certain requirements (e.g., submission of an employment verification form to demonstrate they are meeting their service requirements). While passive methods can be used to ensure funds are distributed correctly or program requirements are complete, they are insufficient for determining the quality of implementation or understanding the value of program to participants.

In contrast, three programs use active strategies to monitor the quality and fidelity of program implementation. Staff of each program described how actively monitoring implementation facilitated rapid changes in the program's components to address emerging participant needs, improve effectiveness, and address sustainability:

- Boost 200 pilot tested and then provided customized licensure exam preparation services for social workers enrolled in the program after understanding the different rules and challenges to successfully passing exams required for full licensure;

- The State Council of Higher Education for Virginia's Mental Health Workforce Pilot identified misalignment between when program funding became available and when new graduates were looking for employment, resulting in delayed recruitment timelines; and

- The Virginia Telemental Health Initiative described needing to increase pre-licensed counselors' access to their clinical team more than expected given early feedback on the complexity of clients being served.

State-funded programs track completion but rarely measure program impact

Program effectiveness is measured as the impact of a program on an individual and considers both short-term outcomes and long-term outcomes, after a program is complete. For this review, 23 of the 24 programs reporting short-term outcomes measured whether participants completed all program requirements. This includes, for example, participants in loan repayment and scholarship programs completing their service requirements, or participants in educational programs earning a credential. While program completion rates provide important context for effectiveness, they alone cannot speak to the value of a program unless coupled with longer-term outcomes.

At the time of this study, seven of 34 health care workforce programs (20 percent) reported collecting data on long-term outcomes. For two programs, data collection was not yet

complete and final results are pending.[1] The five remaining programs reported a positive impact on measured program outcomes (TABLE 4).

TABLE 4. Five programs reported data on program impact

Fiscal Agent	Program Name	Program Impact
State Council of Higher Education for Virginia	FastForward	Health care practitioner students earning a credential increased median wages by 51%, from $17,152 to $25,860, and health care support students earning a credential increased their median wages by 56%, from $14,625 to $22,887.
Virginia Commonwealth University	Family Practice Residency Program	The 3-year average of physicians remaining in Virginia following completion of their residency is 57%.
Virginia Community College System	G3 Program	Program completers in health care more than doubled their median wages, from $19,360 to $44,972.
Virginia Department of Behavioral Health and Developmental Services	Salary increases for direct care staff	Eighteen months after implementing salary increases, vacancy rates decreased from 30.52% to 17.93% for Direct Service Associates, from 44.33% to 42.60% for LPNs, and from 24.04% to 19.53% for RNs.
Virginia Department of Health	Southwest Virginia Graduate Medical Education Consortium	8 of 15 physicians (53%) completing their medical residencies in the last calendar year continue to practice in rural communities.

SOURCE: JCHC staff analysis of program documentation and stakeholder interviews, 2024.

Half of state-funded programs do not require reporting by law or regulation

Nineteen of 34 health care workforce programs, totaling $38.4 million in state funds for FY23 and FY24, have no requirement to report on program implementation or outcomes in state law or state regulation. There is no clear pattern among programs without required reporting: they operate within the Education and the Health and Human Services Secretariats, across ten state agencies, and consist of legacy programs, implemented for more than 10 years, and newer programs, implemented following elevated workforce concerns during the COVID-19 pandemic. While not required to do so, eight of nineteen programs without reporting requirements produce documentation on program

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[1] Programs with pending outcome data include Boost 200, and the occupational therapy, physical therapy, and surgical technology assistants programs through the Virginia Community College System.

implementation and outcomes, either through accreditation reviews, audits, or annual reports.

Fifteen programs have mandated reporting requirements: 11 through state appropriations act language, three through regulation, and one program has federal reporting requirements. As such, 23 of 34 programs were able to provide extant documentation on their work, although the completeness of information on program implementation or outcomes varied. With limited and variable reporting, JCHC staff spent considerable time conducting interviews with program staff and analyzing data to further elucidate the quality of program implementation and impact (see APPENDIX 5 for methods).

Monitoring of state-level health care workforce programs is fragmented

Virginia's executive and legislative capacity to monitor health care workforce programs has increased in the past two years, yet no single entity receives reports or has oversight for all 34 programs reviewed for this study.

No consistent entity receives reports on health care workforce programs

Fifteen programs that are required to submit reports do so to five different state entities.[2] Required reports are most frequently submitted to the fiscal agency or board for the program (7 programs), to the Department of Planning and Budget (4 programs), or to the appropriate staff on the House Appropriations and Senate Finance and Appropriations Committees (3 programs). Less often, reports are submitted to the Governor or, broadly, members of the General Assembly (2 programs). In addition, programs that create reports voluntarily may not always intend to make those reports publicly available. Several voluntary reports were created for internal purposes, such as financial audits, or for funders other than the state. JCHC staff obtained internal reports for most programs by request.

Multiple state entities are responsible for workforce program monitoring and evaluation activities

In addition to the entities receiving reports, the Virginia General Assembly has tasked multiple executive and legislative entities with various program monitoring duties. During the 2023 legislative session, the General Assembly established a new state agency, Virginia Works (known as the Virginia Department of Workforce Development and Advancement in Chapter 20.2 of the *Code of Virginia*). The agency has several duties related to workforce program monitoring, to include health care workforce programs, such as:

- Regularly tracking metrics related to workforce development programs; and

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[2] Two programs are required to report to more than one entity.

- Developing strategies to modify policies, procedures, or processes to ensure effective and efficient administration of workforce development programs.

Virginia Works was officially operational at the beginning of Fiscal Year 2025 and has already begun implementing annual evaluations of workforce development and training programs, as required by *Code of Virginia* § 2.2-214.3. This effort collects six core metrics from each program, including the number of people trained, the total number of job placements, job retention rate, program cost per placement, starting wage, and progressed wage. While this metric framework may align with traditional workforce development programs, it does not completely align with anticipated outcomes for different types of health care workforce programs. In addition, only 11 of the 34 programs identified for this review are currently reporting data to Virginia Works. Per Virginia Works, the balance of programs is not considered in scope because they focus on degree attainment, not workforce development.

During the 2024 legislative session, the Virginia General Assembly also expanded responsibilities of the Virginia Health Workforce Development Authority (VHWDA) to seek data for program evaluation purposes and to partner with other state agencies and institutions to help manage and analyze health workforce data. The mission of VHWDA is to facilitate the development of a statewide health professions pipeline that identifies, educates, recruits, and retains a diverse, appropriately geographically distributed, and culturally competent quality workforce. VHWDA's expanding role in Virginia and efforts to build capacity for health care workforce needs assessments and strategic planning make it uniquely suited to understand the context in which health care workforce programs operate, including their challenges and strengths.

Program barriers to data collection and reporting are not consistently reviewed or addressed

Lack of consistency in both the reporting and monitoring is a risk for timely identification of systemic barriers and challenges to health care workforce program quality, effectiveness, and sustainability. Indeed, program staff interviewed for this study acknowledge receiving very little feedback on submitted reports, even when challenges to program implementation are identified. For example, one staff person indicated that they received no follow-up on reports that their program was not meeting its metrics, or any direction to look further into the program shortcomings.

In interviews with program staff, stakeholders articulated multiple barriers to both program reporting and program sustainability that have largely been unaddressed. For example, several programs expressed frustration with program funding amounts, stating that their funding declined during the recession and was never restored, or that they did not understand how their funding amounts were calculated, or that they received inconsistent funding amounts across similar types of programs. Seven programs also

identified the need for additional staff, either at the agency level or at the program level, for appropriate administration and oversight.

Eight stakeholders felt limited in their ability to expand programs without additional funding for faculty, due to either accreditation standards that set faculty-student ratios and require smaller cohorts, or additional clinical opportunities and training placements. Two of the programs noted there is lack of desire or incentive for clinical sites to take on students as they may decrease overall productivity or create more work.

Regarding program reporting capacity, program staff indicated a lack of reporting requirements creates an environment where agencies may devalue the importance of documenting program effectiveness in favor of other competing priorities. In addition, programs without reporting requirements rarely seek resources to update their reporting infrastructure or build additional capacity for more robust data collection. One agency, for example, stated that their current system of managing programs through a series of disconnected Excel sheets was so time-consuming that they could not carve out any additional resources for long-term follow-up on program participants.

Even when programs desire to collect long-term outcomes and have the capacity to do so, four program staff indicated it is difficult to track participants after graduation and to know where individuals are employed. Reporting is voluntary once participants have completed their service requirements or graduated, and they are therefore no longer obligated to provide employment verification. There are also gaps in data that are reported, making it difficult to get a full picture of participants' experiences. For example, FastForward tracks changes in participants' wages, but staff noted that the employment data only show what industries students are going into, not the kinds of jobs they are getting within those industries.

➔ **Option 2:** JCHC could submit a Section 1 bill requiring the Virginia Health Workforce Development Authority, in collaboration with Virginia Works, to develop a plan to increase capacity for reporting and monitoring of health care workforce programs. The plan should be submitted to the Joint Commission on Health Care by October 1, 2025, and consider:

- Processes required to maintain an accurate inventory of state-funded health care workforce programs;

- Strategies to increase capacity of state agencies to design, collect, analyze, and report data on program implementation and outcomes, as needed;

- Recommendations to align reporting requirements to meet the program monitoring duties of VHWDA and Virginia Works while balancing the administrative burden of state agencies to report such information.

Appendix 1: Reports on Virginia's Health Care Workforce

Multiple organizations have released reports in the last three years to describe Virginia's health care workforce shortages and evidence-based strategies to address areas of need.

1. Virginia Health Care Foundation. (January 2022). Assessment of the capacity of Virginia's licensed behavioral health workforce. https://www.vhcf.org/wp-content/uploads/2022/01/BH-Assessment-Final-1.11.2022.pdf

   Key Findings:

   While Virginia regularly ranks at the top of national scorecards as the best state for business and a top state for public education, when it comes to availability of behavioral health (BH) services, that is not the case. The shortage of BH professionals is not a new problem, the severity of the shortage is, however.

   - A large and disproportionate number of Virginia's licensed BH professionals are at or nearing retirement age (61% of Psychiatrists are aged 55 or older).

   - Virginia's BH workforce does not reflect the racial and ethnic diversity of the Commonwealth's population.

   - 93 of Virginia's 133 localities are federally-designated Mental Health Professional Shortage Areas; 37% of Virginians (3.2 million) live in them. Two localities have no licensed BH professionals; 35 have no trained BH prescriber (Psychiatrist, Psych NP).

   - In many communities with no or a few BH professionals, a large number of households do not have broadband internet access and are unable to access tele-health services. One-in-five Virginians (20%) live in these communities.

   - Virginia localities with no or a few BH professionals have poorer outcomes on key BH indicators than those with more BH professionals.

   - Although Virginia's 40 graduate-level BH programs, combined, graduate nearly 800 individuals annually, the number who ultimately become licensed in Virginia is insufficient to maintain even the current inadequate supply of BH professionals.

   Recommended Strategies:

   There are multiple strategies to address Virginia's significant shortage of BH professionals. It will likely require all or most of them to be successful. It will also take a number of years to see the results. As such, time is of the essence.

   Several immediate strategies include:

   - Virginia's participation in Interstate Compacts for each licensed BH professional. This would enable licensed BH professionals from other Compact states to practice

in the Commonwealth. The most productive Compacts provide full reciprocity of licensure.

- o Legislation authorizing Virginia's participation in a Compact for Licensed Professional Counselors is likely to be considered during the 2022 General Assembly session. It will provide for reciprocity. *(Note: HB1433 and SB802 passed during the 2023 General Assembly session, authorizing Virginia to become a signatory to the Counseling Compact).*

- o Legislation approving Virginia's participation in a Compact for Licensed Clinical Psychologists passed in 2020. While it is helpful, it only allows LCPs from other states to provide services in Virginia via telehealth. Given broadband access issues in most of Virginia's mental health professional shortage areas, this approach provides limited relief.

- o A Compact for Licensed Clinical Social Workers, which would include reciprocity, is currently under development at the national level and will likely be ready for the General Assembly's consideration in the next few years. *(Note: The passage of HB326 from the 2024 General Assembly Session authorized Virginia to become a signatory for the Social Work Licensure Compact).*

- State funding for more psychiatric residencies and Fellowships for Child and Adolescent Psychiatrists. The data cannot be ignored. Virginia currently has a dearth of Psychiatrists and 677 of them (61%) are at or near retirement age (55 years or older). Virginia's psychiatric residency programs graduate only about 32 residents a year, combined. The small number of Child and Adolescent Psychiatrists in Virginia is particularly concerning, especially with recent reports of the traumas high numbers of children are experiencing as a result of the pandemic.

- State payment for the clinical supervision required for licensure of Masters prepared social workers and counselors. A pilot program would determine the efficacy of paying these fees for pre-licensees who practice in MHPSAs or of whom there is a disproportionately low number (e.g., bilingual, people of color). It would also have the immediate benefit of adding more therapists in the field to help address the tremendous current demand for services.

Longer term strategies are needed, as well. These include working with the State Council on Higher Education of Virginia and Virginia's BH graduate programs to produce more of each type of licensed BH professional and prioritizing the state's MHPSAs for last-mile broadband development.

2. Andrew, M., Briscombe, B., Vardavas, R., Wolters, N., Qureshi, N., Nham, W., & Abir, M. (2024). Identifying Strategies for Strengthening the Health Care Workforce in the Commonwealth of Virginia. *Rand Health Quarterly*, *11*(2).

https://acrobat.adobe.com/id/urn:aaid:sc:US:a3d2d6c1-3221-4cdc-ae91-d3a756976b32

Key Findings:

- If current trends persist, nursing, primary care, and behavioral health workforce shortages will worsen across Virginia.

- To reverse these trends, the Commonwealth will need to implement multiple interventions to boost recruitment, retention, and the structural efficiency of health care delivered by these professions.

Strategies for Increasing Retention:

- Promote team-based care through regulatory and reimbursement reform and by creating career ladders for upward movement.

- Implement programs to address mental health and well-being among workers.

- Address underlying causes of stress and burnout, such as inappropriate patient-provider ratios, unrealistic throughput requirements, and heavy documentation burdens.

- Reduce license restrictions on physician assistants and nurse practitioners.

- Streamline documentation requirements by eliminating redundant and needless paperwork.

- Create more-diverse health care workplaces.

- Increase the legal consequences of violence toward health care providers.

- Recruit local students from rural communities to bolster rural workforces.

Strategies for Increasing Recruitment:

- Increase Medicaid reimbursement for primary care and behavioral health.

- Increase residency slots and funding for primary care and psychiatry.

- Increase scholarships and loan forgiveness programs and advertise their availability.

- Craft targeted loan forgiveness opportunities in primary care fields. For example, repay loans for physicians practicing in settings that qualify for the Public Service Loan Forgiveness Program.

- Enable rural applicants and first-generation students to receive loan forgiveness up front.

- Increase wages for nursing faculty and preceptors to match those in engineering and business.

- Reduce stringent supervision requirements for behavioral health trainees.

- Develop and expand programs to expose children in kindergarten through 12th grade to health professions.
- Implement outreach strategies for youth from underrepresented communities.
- Leverage nursing and behavioral health retirees to increase the pool of licensed supervisors.
- Shorten the duration of application for licensure in behavioral health.

Strategies for Increasing Structural Efficiency:

- Incentivize health workers to move from areas with more provider capacity to those with less capacity.
- Increase the use of telehealth to support rural practitioners.
- Leverage technologies, such as voice recognition and artificial intelligence, to reduce documentation burdens.
- Enable colocation of primary care and behavioral health services in the same setting.

3. Claude Moore Foundation. (October 2023). Virginia Health Science & Human Services Workforce Strategic Recommendations Report. https://claudemoorefoundation.org/wp-content/uploads/2023/10/Strategic-Recommendations-Report-1.pdf

Strategic Recommendations:

- Agree on a consistent framework for workforce and career development such as the health workforce highway to enable collective impact activity amongst stakeholders, while organizing education, training, and career development, promoting continuous learning and upskilling, and fostering employee engagement and career satisfaction.
- Convene and empower a multi-agency workgroup to address unnecessary and burdensome regulatory and payment policies to comprehensively address and align health workforce regulations, payment, and policies to positively impact the work, workforce, education, and training.
- Immediately invest in programs to address critical shortages while developing ongoing strategies to address future workforce needs to include pathway development, faculty and supervision, earn-to-learn and learner support, career awareness, and Area Health Education Center matching, with immediate funding to meet critical needs.
- Formalize a statewide health workforce development model under the VHWDA that is based on the Blue Ridge Partnership for Health Sciences Careers, aligns with the nine Go Virginia regions, and is supported by a common infrastructure

to promote cooperation, coordination, and innovation between employers and educators, with the goal of improving job readiness, placement, and fostering economic development in the region. This model is unified by a common umbrella and supported by centralized infrastructure.

- Create a data governance and management structure that coordinates siloed health and human services workforce data to provide up to date information on evolving employer needs as well as monitoring the potential supply of workers on the highway.

Appendix 2: Study Resolution

Study Resolution

Performance of Health Care Workforce Programs Study

Authorized by the Joint Commission on Health Care on December 6, 2023

WHEREAS, the COVID-19 pandemic exacerbated existing health care workforce shortages in Virginia, and these shortages will persist without additional action; and

WHEREAS, Virginia invests state funds in multiple health care workforce programs to increase recruitment and retention in provider shortage areas; and

WHEREAS, a 2023 Joint Commission on Health Care review indicated that only 30 percent of Virginia's health care workforce programs report metrics on program impact; and

WHEREAS, other public and private entities studying health care workforce programs in Virginia found limited evidence on which to gauge the success of current health care workforce practices, programs, and policies; therefore, be it

RESOLVED, by the Joint Commission on Health Care, that staff be directed to monitor and report on the performance and impact of state-funded health care workforce programs.

In conducting its study, staff shall (i) develop a framework for measuring the performance and impact of health care workforce programs; (ii) obtain relevant data from state agencies and other public and private entities collecting data to populate metrics measuring each program's outputs and outcomes; (iii) develop and implement a process for reporting on the performance of programs that is meaningful, transparent, and actionable; and (iv) consider policy options through which the state may improve the performance of state-funded health care workforce programs.

The Joint Commission on Health Care shall make recommendations as necessary and review other related issues as warranted.

In accordance with § 30-169.1 of the Code of Virginia, all agencies of the Commonwealth, including the Virginia Department of Health, Virginia Department of Health Professions, and the Virginia Department of Medical Assistance Services, shall provide assistance, information, and data to the Joint Commission on Health Care for this study upon request.

Appendix 3: Programs Identified for Consideration

TABLE 5. Initiatives included and excluded from study by agency

Agency/Fiscal Agent	Program Name	FY23 State Funding	FY24 State Funding	Review Outcome	Rationale for Exclusion
Board of Health	Conditional grants for certain dental students			Excluded	Does not receive/will not receive ongoing state funding
Board of Health	Dentist Loan Repayment Program			Excluded	Does not receive/will not receive ongoing state funding
Board of Health	Physician Loan Repayment Program			Excluded	Does not receive/will not receive ongoing state funding
Board of Health	Conditional grants for certain dental hygiene students			Excluded	Does not receive/will not receive ongoing state funding
Board of Health	Conditional grants for certain medical students			Excluded	Does not receive/will not receive ongoing state funding
Board of Health	Conditional grants for certain medical students (Southwest Virginia)			Excluded	Does not receive/will not receive ongoing state funding
Board of Health	Conditional grants for certain physician assistant students			Excluded	Does not receive/will not receive ongoing state funding
Board of Health	Facility staffing standards			Excluded	Does not meet criteria for health care workforce program
Board of Health	Recruitment and retention of health care providers			Excluded	Does not meet criteria for health care workforce program
Boards within the Department of Health Professions	Nurse Licensure Compact			Excluded	Does not receive/will not receive ongoing state funding

Agency/Fiscal Agent	Program Name	FY23 State Funding	FY24 State Funding	Review Outcome	Rationale for Exclusion
Boards within the Department of Health Professions	Physical Therapy Licensure Compact			Excluded	Does not receive/will not receive ongoing state funding
Boards within the Department of Health Professions	Psychology Interjurisdictional Compact			Excluded	Does not receive/will not receive ongoing state funding
Boards within the Department of Health Professions	Audiology and Speech-Language Pathology Interstate Compact			Excluded	Is not operational/ beyond initial year of implementation
Boards within the Department of Health Professions	Counseling Compact			Excluded	Is not operational/ beyond initial year of implementation
Boards within the Department of Health Professions	Occupational therapy interjurisdictional licensure compact			Excluded	Is not operational/ beyond initial year of implementation
Boards within the Department of Health Professions	Collection of nurse workforce information			Excluded	Does not meet criteria for health care workforce program
College of William & Mary	Specialization in military and veterans counseling	$287,850	$287,850	Included	Meets criteria
Compensation Board	Behavioral health case managers and medical treatment positions	$7,332,246	$9,835,820	Excluded	Does not meet criteria for health care workforce program
Department of Behavioral Health and Developmental Services	Pilot to remove barriers to the mental health workforce	$3,012,750	$0	Included	Meets criteria

Agency/Fiscal Agent	Program Name	FY23 State Funding	FY24 State Funding	Review Outcome	Rationale for Exclusion
Department of Behavioral Health and Developmental Services	Telemental Health Initiative	$1,100,000	$1,100,000	Included	Meets criteria
Department of Behavioral Health and Developmental Services	Salary increases for direct care staff	$0	$54,593,304	Included	Meets criteria
Department of Medical Assistance Services	Graduate Medical Education/Indirect Medical Education supplemental payments	$109,729,111	$106,116,848	Included	Meets criteria
Department of Medical Assistance Services	Graduate medical education: High-needs/specialty residencies	$4,350,000	$4,350,000	Included	Meets criteria
Eastern Virginia Medical School	Eastern Virginia Area Health Education Center	$60,620	$60,620	Excluded	Does not meet criteria for health care workforce program
Eastern Virginia Medical School	Financial aid	$875,500	$1,225,700	Excluded	Does not meet criteria for health care workforce program
Eastern Virginia Medical School	Family Practice Residency Program	$658,597	$658,597	Included	Meets criteria
Office of the Governor	Health Workforce Development Advisor			Excluded	Does not meet criteria for health care workforce program
Public Colleges and Universities	Virginia Guaranteed Assistance Program	$722,698,444	$841,087,944	Excluded	Does not target health care professions
Public Colleges and Universities	Compensation for nursing faculty	$0	$5,750,000	Excluded	Is not operational/ beyond initial year of implementation
Southern Virginia Higher Education Center	Workforce advancement programs	$731,250	$731,250	Included	Meets criteria

Agency/Fiscal Agent	Program Name	FY23 State Funding	FY24 State Funding	Review Outcome	Rationale for Exclusion
State Council of Higher Education for Virginia	Tuition Assistance Grant Program	$90,813,320	$100,325,881	Included	Meets criteria
State Council of Higher Education for Virginia	Grants for students in optometry	$20,000	$20,000	Included	Meets criteria
State Council of Higher Education for Virginia	Two-Year College Transfer Grant Program	$3,885,256	$3,885,256	Included	Meets criteria
State Council of Higher Education for Virginia	FastForward Program (New Economy Workforce Credential Grant)	$13,500,000	$18,500,000	Included	Meets criteria
State Council of Higher Education for Virginia	Mental Health Workforce Pilot	$500,000	$500,000	Included	Meets criteria
State Council of Higher Education for Virginia	Increased degree production	$28,400,000	$28,400,000	Included	Meets criteria
State Council of Higher Education for Virginia	Southern Regional Education Board	$170,000	$170,000	Excluded	Does not meet criteria for health care workforce program
State Council of Higher Education for Virginia	Grants for high school teachers' credentials	$100,000	$100,000	Excluded	Does not receive/will not receive ongoing state funding
University of Mary Washington	Regional educational partnerships	$119,839	$108,844	Included	Meets criteria
University of Virginia	Family Practice Residency Program	$1,393,959	$1,393,959	Included	Meets criteria
University of Virginia	Public-private partnerships for nursing	$250,000	$250,000	Included	Meets criteria
Virginia Commonwealth University	Family Practice Residency Program	$4,336,607	$4,336,607	Included	Meets criteria
Virginia Community College System	Public-private partnerships for nursing	$191,884	$191,884	Included	Meets criteria

Agency/Fiscal Agent	Program Name	FY23 State Funding	FY24 State Funding	Review Outcome	Rationale for Exclusion
Virginia Community College System	Occupational therapy, physical therapy, and surgical technology assistants programs	$413,689	$1,413,689	Included	Meets criteria
Virginia Community College System	Certified sonographer education and training program	$475,000	$475,000	Excluded	Does not receive/will not receive ongoing state funding
Virginia Community College System	Career and Technical Education at Laurel Ridge Community College	$104,950	$104,950	Excluded	Does not target health care professions
Virginia Community College System	Health science and technology dual enrollment/Blue Ridge Partnership for Health Science Careers	$1,000,000	$1,000,000	Included	Meets criteria
Virginia Community College System	Get Skilled, Get a Job, Get Ahead (G3) Program	$34,500,000	$34,500,000	Included	Meets criteria
Virginia Community College System	Network2Work	$2,000,000	$2,000,000	Excluded	Is not operational/ beyond initial year of implementation
Virginia Department of Education	Scholarships for high school teachers' credentials	$250,000	$250,000	Excluded	Does not target health care professions
Virginia Department of Education	Vocational/ technical equipment updates	$2,000,000	$2,000,000	Included	Meets criteria
Virginia Department of Education	Credential testing materials	$500,000	$500,000	Included	Meets criteria
Virginia Department of Education	Path to Industry Certification Program			Excluded	Does not receive/will not receive ongoing state funding

Agency/Fiscal Agent	Program Name	FY23 State Funding	FY24 State Funding	Review Outcome	Rationale for Exclusion
Virginia Department of Education	Virginia School Mental Health Providers Recruitment and Retention			Excluded	Does not receive/will not receive ongoing state funding
Virginia Department of Health	Child Health Investment Partnership of Roanoke	$24,679	$24,679	Excluded	Does not meet criteria for health care workforce program
Virginia Department of Health	Virginia Student Loan Repayment Program	$1,500,000	$1,500,000	Included	Meets criteria
Virginia Department of Health	Virginia Health Care Foundation	$2,000,571	$2,000,571	Excluded	Does not meet criteria for health care workforce program
Virginia Department of Health	Public-private partnerships for dental services			Excluded	Does not receive/will not receive ongoing state funding
Virginia Department of Health	Virginia Behavioral Health Loan Repayment Program	$1,600,000	$3,100,000	Included	Meets criteria
Virginia Department of Health	Nursing Preceptor Incentive Program	$500,000	$3,500,000	Included	Meets criteria
Virginia Department of Health	Mary Marshall Nursing Scholarships (CNA)	$35,000	$35,000	Included	Meets criteria
Virginia Department of Health	Long-Term Facility Nursing Scholarship	$64,000	$64,000	Included	Meets criteria
Virginia Department of Health	Virginia Nurse Practitioner/Nurse Midwife Scholarship Program	$936,000	$936,000	Included	Meets criteria
Virginia Department of Health	Virginia Nurse Educator Scholarship Program	$936,000	$936,000	Included	Meets criteria
Virginia Department of Health	Mary Marshall Nursing Scholarships (LPN)	$1,001,000	$1,001,000	Included	Meets criteria

Agency/Fiscal Agent	Program Name	FY23 State Funding	FY24 State Funding	Review Outcome	Rationale for Exclusion
Virginia Department of Health	Mary Marshall Nursing Scholarships (RN)	$1,001,000	$1,001,000	Included	Meets criteria
Virginia Department of Health	Southwest Virginia Graduate Medical Education Consortium	$164,758	$164,758	Included	Meets criteria
Virginia Department of Health	Virginia Health Workforce Development Authority	$300,000	$300,000	Excluded	Does not meet criteria for health care workforce program
Virginia Department of Health	Virginia Health Workforce Development Authority	$600,000	$600,000	Excluded	Does not meet criteria for health care workforce program
Virginia Department of Health	Earn to Learn Nursing Education Acceleration Program	$0	$5,000,000	Excluded	Is not operational/ beyond initial year of implementation

Appendix 4: 2023 Health Care Workforce Program Inventory

JCHC staff compiled a program inventory in 2023 to document health workforce initiatives operating in Virginia (TABLE 6). This inventory is not a comprehensive list but is representative of the spectrum of programs available across different funding sources, types of organizations, and geographical areas of focus. JCHC staff identified programs through document review, agency website review, and stakeholder interviews. Based on available information, JCHC staff categorized programs into five different focal areas:

1. Efforts to expand the workforce;
2. Efforts to improve distribution of the workforce;
3. Efforts to retain the workforce;
4. Efforts to improve workforce wellbeing; and
5. Efforts to study the workforce.

Table 6. Virginia health care workforce programs by focus area

Sponsoring Agency/Organization	Program Name	Program Focus Area
Appalachian Regional Commission	Appalachian Regional Commission J-1 Waiver Program	1, 2
Appalachian Regional Commission	POWER Initiative 2021 Request for Proposals	1, 2
Appalachian Regional Commission, Delta Regional Authority, Employment and Training Administration, U.S. Department of Labor	Workforce Opportunity for Rural Communities: Grant Initiative for the Appalachian, Delta, and Northern Border Regions	1, 2
Ballad Health and Lee County Public Schools	School-Based Telehealth Program in Lee County, Virginia	2
Blue Ridge Partnership for Health Science Careers	Health Sciences Education and Workforce Development Collaboration	1, 2
Central Virginia Community College	Central Virginia Community College Career and Technical Education Academy	1
Claude Moore Foundation	Claude Moore Scholars	1
Claude Moore Foundation	Healthcare Highways	1
Delta Dental of Virginia Foundation and Virginia Department of Health	Virginia Dental Loan Repayment Program	2

Sponsoring Agency/Organization	Program Name	Program Focus Area
George Mason University, James Madison University, University of Virginia, Virginia Tech, Old Dominion University, Virginia Military Institute, Virginia Commonwealth University, the College of William and Mary, and CISCO Systems, Inc.	4-VA Initiative	1
Health Resources & Services Administration	Nurse Corps Loan Repayment Program	1, 2
Health Resources & Services Administration	Pediatric Specialty Loan Repayment Program	2
Lynchburg Beacon of Hope	Future Centers	1
Lynchburg Beacon of Hope	Stay Close, Go Far	1, 2
Mary Washington and Germana Community College	Earn While You Learn	1
Mason Center for Health Workforce	Integration and Innovation	5
Mason Center for Health Workforce	Education and Training	1, 3
Medical Society of Virginia	Advocacy: Expanding telehealth and telemedicine	1, 2, 3, 4
Medical Society of Virginia	SafeHaven	3, 4
National Health Service Corps	Loan Repayment Program	2
National Health Service Corps	Rural Community Loan Repayment Program	2
National Health Service Corps	Students to Service Loan Repayment Program	2
National Health Service Corps	Substance Use Disorder Workforce Loan Repayment Program	2
Piedmont Virginia Community College	Network2Work	1
Sentara Health	Project CHOICE	1
Sentara Health	Sentara Scholars Program	1
State Council of Higher Education for Virginia	The Virginia Longitudinal Data System	5

Sponsoring Agency/Organization	Program Name	Program Focus Area
State Council of Higher Education for Virginia	Tuition Assistance Grant Program	1
United Way of Southwest Virginia	Ignite Internship Program	1, 2
United Way of Southwest Virginia	Educators in Industry	1, 2
United Way of Southwest Virginia	Major Clarity	1, 2
United Way of Southwest Virginia	5 C's Workshop	1, 2
University of Virginia and Piedmont Community College	Earn While You Learn	1
US Department of Health and Human Services	Exchange Visitor Program	2, 4, 5
US Veterans Health Administration	Cross Sector Partnership Pilot Program: Expanding Telehealth Services for Rural Veterans in Martinsville, VA	2
Virginia Career Works	New Economy Workforce Credential Grant Program	1
Virginia Commonwealth University	Pathways Connect	1
Virginia Commonwealth University	Pathways to Health Care Workforce	1
Virginia Community College System	FastForward Initiative	1
Virginia Community College System	Virginia Get Skilled, Get a Job, Get Ahead (G3) Program	1
Virginia Community College System	Virginia Career Coach Program	1, 2
Virginia Community Healthcare Association	Advocacy, education, and professional development programs	3, 4
Virginia Community Healthcare Association, University of Richmond, and Virginia Association of Free and Charitable Clinics	Community Health Center University	3
Virginia Department of Behavioral Health and Developmental Services	SystemLEAD	3
Virginia Department of Behavioral Health and Developmental Services	Direct Support Career Pathways Program	1, 3

Sponsoring Agency/Organization	Program Name	Program Focus Area
Virginia Department of Education	Strengthening Career and Technical Education (Perkins V)	1
Virginia Department of Health	Mary Marshall Nursing Scholarship for Certified Nurses Assistants	1
Virginia Department of Health	Mary Marshall Nursing Scholarship for Licensed Practical Nurses	1
Virginia Department of Health	Mary Marshall Nursing Scholarship for Registered Nurses	1
Virginia Department of Health	Nurse Educator Scholarship Program	1
Virginia Department of Health	Nursing Preceptor Incentive Program	1
Virginia Department of Health	Physician Assistant Scholarships	1
Virginia Department of Health	Virginia State Loan Repayment Program	2
Virginia Department of Health	Virginia Behavioral Health Student Loan Repayment Program	2
Virginia Department of Health	Virginia Nurse Practitioner/Nurse Midwife Scholarship Program	2
Virginia Department of Health	Long-Term Care Facility Scholarship Program	1, 2
Virginia Department of Health	National Interest Waiver Program	1, 2
Virginia Department of Health	Virginia Conrad 30 Waiver Program	1, 2
Virginia Department of Health	Virginia Emergency Medical Service Scholarship	1, 2
Virginia Department of Health	Virginia Physician Loan Repayment Program	1, 2
Virginia Department of Health	Innovative Programming Awards	2
Virginia Department of Health	Primary Care Office	5
Virginia Department of Health	Workforce Development Training Team	3
Virginia Department of Health Professions	Behavioral Health Dashboard	5
Virginia Department of Health Professions	Healthcare Workforce Data Center	5

Sponsoring Agency/Organization	Program Name	Program Focus Area
Virginia Department of Medical Assistance Services	Indirect Medical Education Supplemental Payments	1
Virginia Department of Medical Assistance Services	Nurse Aide Training and Competency Evaluation Program	1
Virginia Department of Medical Assistance Services	High Demand Specialty Graduate Medical Education Program	1, 2
Virginia Department of Medical Assistance Services	Graduate Medical Education Program	1, 3
Virginia Employment Commission	Veterans Program	1
Virginia Foundation for Community College Education	Rural Virginia Horseshoe Initiative	1, 2
Virginia Health Care Foundation	Boost 200	2, 3
Virginia Health Care Foundation	Grant funding to health safety net organizations to hire providers	1
Virginia Health Care Foundation	Behavioral Health Hub	4
Virginia Health Care Foundation	Psychiatric Nurse Practitioner Scholarship Program	1, 2
Virginia Health Care Foundation and State Council of Higher Education for Virginia	Mental Health Workforce Pilot	1
Virginia Health Care Foundation and Delta Dental of Virginia	Sign Up, Pay Down	1
Virginia Health Workforce Development Authority	Virginia Area Health Education Centers Scholars Program	2, 3
Virginia Health Workforce Development Authority	Health Workforce Study	5
Virginia Health Workforce Development Authority	Virginia Area Health Education Centers	1, 2, 3
Virginia Hospital and Healthcare Association	On Board Virginia	1
Virginia Hospital and Healthcare Association	Workplace Violence Prevention Toolkit	3, 4
Virginia Hospital and Healthcare Association	Workplace Safety Task Force	4, 5
Virginia Ready	Credential Achievement Award	1

Sponsoring Agency/Organization	Program Name	Program Focus Area
Virginia Tech	Virginia Public Sector Leader Program	3
Virginia Tech	Developing a Destination for Talent	1, 3
Virginia Tobacco Region Revitalization Commission	Talent Attraction Program: Student Loan Repayment	2

Appendix 5: Sources and Methods

JCHC staff conducted their review of state-funded health care workforce programs in three steps: (1) program identification; (2) program review; and (3) program assessment.

Program identification

To identify state-funded health care workforce programs, JCHC staff developed a list of key words to search multiple sources for possible programs (TABLE 7).

TABLE 7. Key word list and program sources

Key Word List
Health / healthcare
Workforce
Career / career and technical / vocation / credential
Industry
Nurs* / Physician / midwi* / doctor
Medic* / clinic*
Behavioral / counselor / psych*/ mental / therap* / social worker
Practitioner / Provider / Professional
Shortage
Medical education / residency / preceptor

Program Sources
2022 Appropriation Act
2023 Special Session I Amendments to the 2023 Appropriation Act
2024 Appropriation Act
Code of Virginia Titles 22.1, 23.1, 32.1, 37.2, 40.1, 51.5, 53.1, 54.1, and 66
State agency websites

The initial keyword search identified 69 possible health care workforce programs. Two JCHC staff independently reviewed public information on each program and applied inclusion and exclusion criteria established for the study to refine the list of programs for review (TABLE 8). Staff discussed any differences in their determination of program inclusion or exclusion until consensus was reached. Of the 69 programs initially identified, 31 did not meet inclusion criteria. Thirty-eight programs moved on to the next step in the process.

TABLE 8. Study inclusion and exclusion criteria

Inclusion Criteria
• Met the definition of a health care workforce program and target a health care profession, as defined for this study
• Received state funding, in part or in whole, in Fiscal Year 2023 and Fiscal Year 2024
• Implemented for at least one year

Exclusion Criteria
• One-time or short-duration program with no continuing state funds
• Primarily focused on strategic planning, research activities, or data analysis

Program review

JCHC staff met with agency leadership and interviewed program staff, as needed, for each of the 38 programs identified for review. Programs were asked to provide data to document the five program elements of the RE-AIM framework. RE-AIM was originally developed as a framework for consistent reporting of research results and later used to organize reviews of the existing literature on health promotion and disease management in different settings. More recently, RE-AIM has been used to translate research into practice and to help plan programs and improve their chances of working in "real-world" settings.[1] The acronym stands for Reach, Effectiveness, Adoption, Implementation, and Maintenance:

- Reach – representativeness of individuals participating, compared to identified target population and/or state shortages
- Effectiveness – impact of the program on key outcomes (e.g., increased recruitment, increased retention)
- Adoption – organizational value of program and capacity, resources, expertise to deliver the program
- Implementation – fidelity to program protocol for delivery, time, and costs
- Maintenance – extent to which program is part of routine organizational practices and policies

During the process of interviewing program staff and collecting data, JCHC staff withdrew six programs from review for not meeting the inclusion criteria, and added two additional programs that were not identified through the key word search but did meet criteria. This adjustment brought the total programs for review to 34 programs. All programs responded to JCHC's request for information.

Program assessment

JCHC staff developed a standardized rubric to determine how programs fared on each of the five RE-AIM framework dimensions. Staff reviewed program documentation and notes from interviews with program staff to determine whether the program collected data on each dimension, used the data to determine their performance on that dimension, and whether the data provided positive results (TABLE 9). JCHC staff then reviewed programs' performance on each of the dimensions to identify areas of strength and opportunity across all programs.

TABLE 9. Rubric for applying the RE-AIM framework to health care workforce programs

Dimension	Data Collection	Data Use	Data Results
Reach	Does the program collect data on program participants and the program's target audience?	Does the program use data collected to determine participants' alignment with the intended target audience?	Are program participants aligned with the intended target audience?
Effectiveness	Does the program collect data on outcome measures?	Does the program use data collected to determine program impact?	Does the program have a positive impact on measured outcomes?
Adoption	Does the program collect data on sites participating and eligible to participate?	Does the program use data collected to determine sites' representativeness?	Are participating sites representative of all eligible sites?
Implementation	Does the program collect data on implementation fidelity?	Does the program use data collected to determine consistency of program implementation?	Is implementation consistent across participating sites/settings/subgroups?
Maintenance	Does the program collect data on long-term (≥ 6 months) outcomes?	Does the program use data collected to determine the long-term impact?	Does the program have a positive impact on measured long-term outcomes?

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[1] https://re-aim.org/

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