

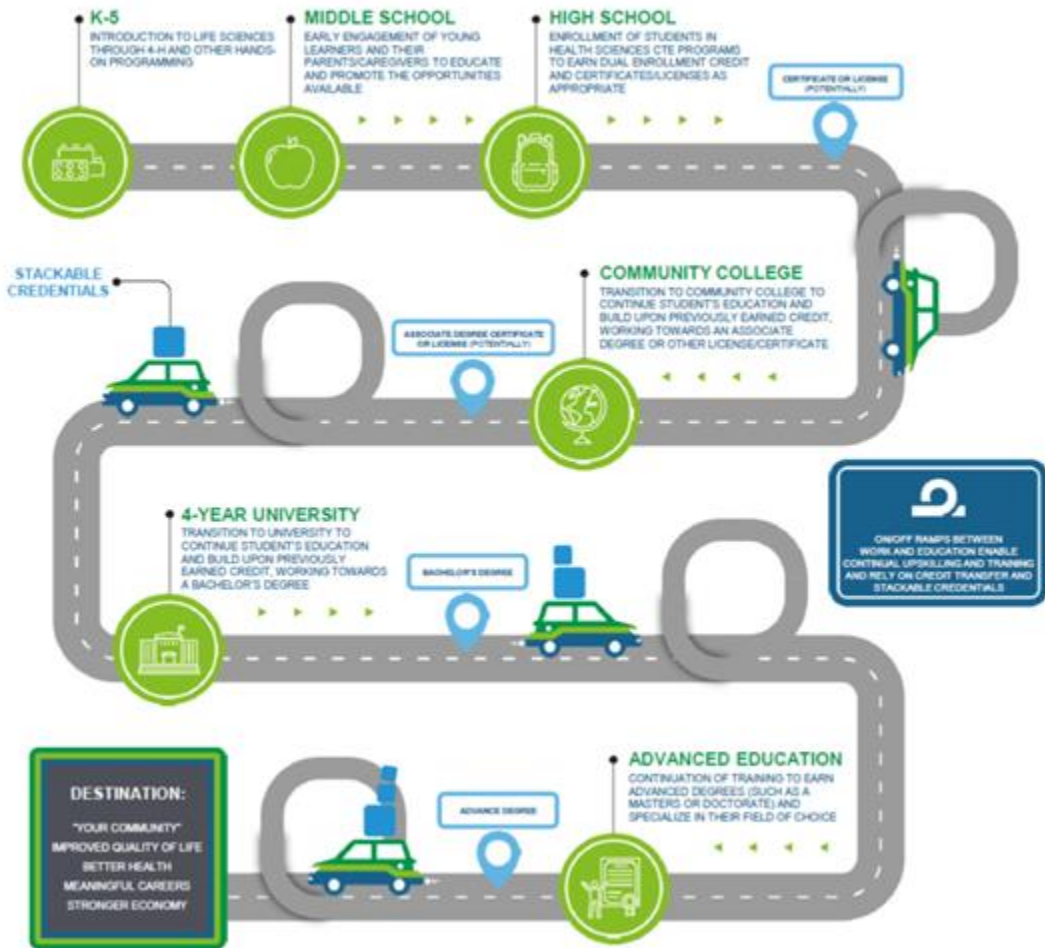
A map of the Blue Ridge Partnership for Health Science Careers region in North Carolina. The map shows the outlines of counties, with a thick black line indicating the partnership's boundary. The region is divided into nine numbered areas: 1 (dark green, western), 2 (purple, west-central), 3 (green, south-central), 4 (maroon, east-central), 5 (light green, southeastern), 6 (purple, northeast), 7 (blue, north-central), 8 (purple, north-west), and 9 (blue, north-east).

# Blue Ridge Partnership for Health Science Careers

## A model for growing CTE HQWBL opportunities

## Health Science Highway

- It's a journey
- Life Happens – on/off ramps
- Good and meaningful jobs along life's way
- Build skills; stack credentials
- Earn-to-Learn
- Teach and train



# The Problem

There is a critical need for a short-term solution to the health workforce shortage,  
but a longer-term strategy is needed.

*This demands a concurrent approach.*

Education and training for health workforce is complex and expensive

*This demands a collaborative approach.*

Health science jobs are not just about health. Life Sciences & Health industry is a large source of local employment, provides critical infrastructure for traded industry sectors and contributes to the local economy as well as the attractiveness of regions.

Formed in 2019

Established as a  
501c4 organization  
in February 2023



**Blue Ridge Partnership**  
for Health Science Careers

A regional collaboration of **educators, employers, workforce organizations, and economic development professionals** committed to raising the rigor and aligning health sciences education to meet the employment needs for the Health & Life Sciences industry in the Roanoke and New River Valleys, Alleghany Highlands, and greater Lynchburg (GO Virginia Region 2).

# Stakeholder Organizations

All 17 School Districts in GO Virginia Region 2  
Plus Rockbridge County Public Schools

## Founding stakeholder school districts

Roanoke City Public Schools  
Roanoke County Public Schools  
Botetourt County Public Schools  
Franklin County Public Schools  
Craig County Public Schools  
Salem City Schools

## Community Colleges

Virginia Western Community College  
Central Virginia Community College  
New River Community College  
Mountain Gateway Community College

## Founding Four-year Institutions

Roanoke College  
Ferrum College  
Virginia Tech  
Radford University Carilion  
Hollins University  
Roanoke Higher Education Center

## Post-Graduate Institutions

Virginia Tech Carilion School of Medicine  
Fralin Biomedical Research Institute at Virginia Tech Carilion  
Via College of Osteopathic Medicine

## Founding Employers

|                                  |                                    |
|----------------------------------|------------------------------------|
| Carilion Clinic                  | American Health Care               |
| LewisGale Regional Health System | Commonwealth Care                  |
| Centra Health                    | Richfield Living                   |
| Friendship Living                | Home Instead                       |
| Medical Facilities of America    | Freedom First Enterprises*         |
|                                  | <i>Fiscal agent for the BRPHSC</i> |

**Note:** Life Sciences employers are being recruited for the next phase of Partnership growth to help develop pathways in biotechnology and biosciences.

## Economic Development

Greater Roanoke Workforce Development Board  
New River/Mount Rogers Workforce Development Board  
Central Virginia Workforce Development Board  
VERGE – Roanoke Blacksburg Technology Council, Roanoke  
Accelerator and Mentor Program (RAMP)

## Current Partnership Stakeholders GO Virginia Region 2



GO Virginia Region 2 consists of the cities of Covington, Lynchburg, Radford, Roanoke, and Salem; and the counties of Allegheny, Amherst, Appomattox, Bedford, Botetourt, Campbell, Craig, Floyd, Franklin, Giles, Montgomery, Pulaski, and Roanoke.

\* (Founding Stakeholder Districts)  
 \*\* (Part of GO Virginia Region 8)

# Board of Directors



**Blue Ridge Partnership**  
for Health Science Careers

*President* – Cynthia Lawrence, Director, Office of Workforce Development, Carilion Clinic

*Vice President* – David Tucker, President and Chief Operating Officer, Commonwealth Care

*Treasurer* – Paul Phillips, President, Freedom First Enterprises

*Secretary* – Marilyn Herbert-Ashton, Vice President of Institutional Advancement, Virginia Western Community College

**Verletta White, Ed.D.**

Superintendent, Roanoke City Public Schools

**Ken Nicely, Ed.D.**

Superintendent, Roanoke County Public Schools

**Jonathan Russ, Ed. D.**

Superintendent, Botetourt County Public Schools

**Curtis Hicks, Ed. D.**

Superintendent, Salem City Schools

**Kim Halterman, Ed.D.**

Superintendent, Alleghany Public Schools

**Bobby Sandel, Ed.D.**

President, Virginia Western Community College

**Pat Huber, Ed. D.**

President, New River Community College

**John Rainone, Ed. D**

President, Mountain Gateway Community College

**John Capps, Ed.D.**

President, Central Virginia Community College

**Angela Joyner Ed. D.**

Executive Director, The Center for Career and Talent Development, Radford University

**Kathy Wolfe, Ph.D.**

Vice President of Academic Affairs, Roanoke College

**Morgan Romeo**

Executive Director, Greater Roanoke Workforce Development Authority

**Todd Putney**

HR Consultant

**Alan Fabian**

Chief Executive Officer, HCA LewisGale Regional Health System

**Veronica van Montfrans**

Director, Translational Biology Medicine & Health, Virginia Tech

## **Advisors to the board:**

Jeanne Armentrout, Chief Administration Officer, Carilion Clinic

Dr. William C. Hazel, Claude Moore Charitable Foundation

Shirley Bazdar, Claude Moore Charitable Foundation

Dr. Carrie Sutter, George Mason University

Amy Adams, George Mason University

# Overview of Current Funding



## State Budget Appropriations

### Focus: Dual Enrollment

#### GA 2021 - HB1800

\$1 M to VCCS (recurring) allocated to VWCC, NRCC, MGCC to help cover tuition costs for high school students who are dual enrolled in health sciences courses (*including health care related cybersecurity and mechatronics*).

GA 2024 — budget amendment revision \$1.1 M to include CVCC.



## Claude Moore Foundation

### Focus: Expand Pathways

Ongoing - \$1,045,543 awarded since January 2021 to strengthen and expand health sciences courses in 18 K-12 districts in GO Virginia Region 2.



## GO Virginia Region 2

### Focus: Accelerate Implementation

\$100K awarded to BRPHSC to help establish organization

- Data collection
- Progress/Impact report
- Information repository

**Completed – report accessible**  
[www.virginiahealthcareers.org](http://www.virginiahealthcareers.org)

BRPHSC leverages existing resources and funding mechanisms.



# Blue Ridge Partnership for Health Science Careers Board of Directors



## Committees: Approximately 100 people involved

Each Committee identifies goals, responsibilities, and core deliverables. Each Committee includes a mix of all stakeholder groups to facilitate collaboration. Meet monthly; Report quarterly.

### Academic Planning

**Co-Chairs:** Glen Mayhew, Radford University  
Archie Freeman, Roanoke City Public Schools

### Joint Communications

**Chair:** Pete Larkin, Carilion Clinic  
Contract Service Provider: Allie Buth

### Student Engagement

**Co-Chairs:** Donna Rhodes, Carilion Clinic

Luann Morrow, Virginia College of Osteopathic Medicine, AHEC

#### Area Workgroup Leaders:

New River Valley: Megan Atkinson, Pulaski Co. Schools

Alleghany Highlands: Ginni Phillips, Health Educator

Greater Lynchburg: Carrie White, Centra Health

Greater Roanoke: Veronica vans Montfrans, Virginia Tech

### Talent Pathways

**Chair:** Morgan Romeo, Greater Roanoke Workforce Development Authority

**Workgroup:** Biotech/Biosciences – Brett Malone, VTCRC & Amy White, VWCC

**Workgroup:** Healthcare – Melissa Glick, Commonwealth Care

### IT/Analytics

**Chair:** Doug Crowder, Carilion Clinic

**Advisor to Chair:** Jen Meno-Denneny, GMU

### Diversity

**Co-Chairs:** Dr. Mirta Martin, Ferrum College

Armida Valles-Klute, Carilion Clinic

### Finance Committee

**Chair:** Paul Phillips, Freedom First

**Advisors:** Kelly Tester, Freedom First

Chris Hendron, Valerie Hall; Carilion Clinic



**Blue Ridge Partnership**  
for Health Science Careers

# How did we get started?

# Every Committee has a Charter

## Charter: ORGANIZATIONAL

### ORGANIZATION PURPOSE, SCOPE, AND GOALS

**PURPOSE OF ORGANIZATION:** Our Partnership's mission is to foster widespread collaboration between businesses and education, leveraging existing resources to align curricula and training with the current needs and future growth strategies of Life Sciences & Health (L S & H) employers through trans-disciplinary innovation. Our aim is to enhance job readiness, placement, and support economic development. We envision collaborative development and scaling up of education-to-employment pathways within the Life Sciences & Health industry. By equipping students (both youth and adults) with education, skills, and workplace experience, we strive to create seamless transitions into promising careers within GO Virginia Region 2, and secondarily, across the Commonwealth. Guided by our core values of collaboration, innovation, impact, inclusivity, responsiveness, and empowerment, we are dedicated to empowering individuals, enriching the region's workforce, and contributing to the overall growth and success of the Life Sciences & Health cluster.

**GOAL(S):**

Workforce Development: Align and raise the rigor of health and life science education to meet the needs of employers and industry standards.

Awareness and Value: Increase knowledge and awareness of the existence and value of health and life science professionals among stakeholders.

Policy Education: Educate policy/lawmakers, stakeholders, and legislative committees on the challenges faced by the health and life science workforce.

Recruitment and Retention: Identify 5-10 workforce recruitment and retention strategies to increase the health and life science workforce.

Regional Workforce Improvement: Implement strategies to improve the health and life sciences workforce in Go Virginia Region 2.

|                        |  |
|------------------------|--|
| <b>DELIVERABLE(S):</b> | <p>Align and raise the rigor of health and life science education to meet employer needs and industry standards.</p> <p>Increase knowledge and awareness of the existence and value of health and life science professionals among stakeholders.</p> <p>Educate policy/lawmakers, stakeholders, or legislative committees on the challenges faced by the health and life science workforce.</p> <p>Identify and present workforce recruitment and retention strategies to increase the health and life science workforce.</p> <p>Implement strategies to improve the health and life sciences workforce in Go Virginia Region 2.</p> |
|------------------------|--|

### BOARD STRUCTURE AND RESPONSIBILITIES

|                             |   |
|-----------------------------|---|
| <b>BOARD MEMBERS:</b>       | <p>There shall be no fewer than 3 and no more than 25 members. Members shall consist of representatives from K-12 districts, community colleges, four-year colleges/universities, higher education centers, health and life science employers, relevant community partners delivering training or co-curricular programming, economic development professionals, and philanthropic organizations that support the health and life sciences industry cluster.</p> <p>See BRPHSC Articles of Incorporation and By-laws for more detail.</p> |
| <b>REPORTING HIERARCHY:</b> | <p>The Board shall receive reports quarterly from the Committees. Board members shall share progress reports and relevant information with their respective organizations in furtherance of the mission of the BRPHSC.</p>  |
| <b>TERM LENGTH:</b>         | <p>Board members serve a term of 3 years.</p>   |
| <b>MEETING CADENCE:</b>     | <p>Quarterly or at least three times per year.</p>  |

# Every Committee has a Logic Model

## Academic Planning Logic Model

| TARGET POPULATION<br><i>Who will directly benefit?</i>   | INPUTS<br><i>Resources dedicated to or consumed by our effort?</i>  | ACTIVITIES<br><i>What will we do in quantifiable terms?</i>   | OUTPUTS<br><i>Direct products of our activities</i>  | SHORT TERM OUTCOMES (6-18 mos.)<br><i>Initial changes in condition, beliefs, skills</i>   | LONG TERM OUTCOMES (2 - 5 years) Changes in Policy Programs, Practices  | INDICATORS<br><i>Longer term indicators of impact</i>  |
|--|---|---|--|---|---|--|
| <p><b>PRIMARY:</b><br/>Communities of GoVirginia Region 2.</p> <p>Employers from acute care (hospital systems, home care agencies and hospice)</p> <p>Employers from long term care</p> <p>Employers from bio and life science</p> <p>Student learners of all ages within Region 2</p> <p>Employers in emerging fields with current and future intersections to health and life sciences.</p> <p>Children's Behavioral Health (CBHS) service providers.</p> <p>Adult Behavioral Health service providers.</p> <p>Policymakers within the Commonwealth.</p> <p><b>SECONDARY:</b><br/>Other GO Virginia Regions.</p> | <p>Inventory of courses taught in the GO Virginia Region 2.</p> <p>Health Sciences strategic initiatives.</p> <p>K-12 strategic initiatives.</p> <p>Partnerships with state &amp; community agencies.</p> <p>Collaborations w/ state &amp; local colleges, universities &amp; technical schools.</p> <p>Community collaboratives.</p> <p>Statewide workforce initiatives.</p> <p>Grants for tuition and training re-imbursement.</p> <p>Curriculum models that represent best practices (i.e. Texas Education Agency)</p> | <p>Facilitate the data collection related to student enrollment and performance.</p> <p>Coordinate with Talent Pathways and IT/Analytics to ensure student learner is accounted for in employment data.</p> <p>Tuition and policy reviews including licensure and credentialing agencies.</p> <p>Identify state, federal, and community resources to support curriculum development initiatives.</p> <p>Identify strategies for the development of education-to-employment pathways.</p> <p>Identify strategies for the development of shared appointment models.</p> <p>Coordinate with Joint Communications to raise awareness of health and life science education-to-employment pathways.</p> <p>Work collaboratively with other regions to help support in their curriculum assessments.</p> | <p>Inventory of courses taught in the GO Virginia Region 2, organized by award, accredited site, average tuition and expected salary ranges.</p> <p>Recommended core curriculum health sciences for dual-enrolled high school students.</p> <p>Continual alignment of education-to-employment pathways for critically needed jobs.</p> | <p>Ensure curriculum aligns with regional employer needs.</p> <p>Advocacy for unified statewide approach.</p> <p>Advocacy for a standardized and rigorous K-16 curriculum in Virginia.</p> <p>Increase knowledge and awareness of the existence and value of Health and health Science Professionals.</p> <p>Through community partnerships and stakeholder engagement, identify and educate policy/law makers, other stakeholders, or legislative committees on the Health and Health Science education priorities and barriers.</p> <p>Ensure access and considerations for racial, ethnic and cultural diversity in the development of education-to-employment pathways.</p> | <p>Implement strategies for aligning curriculum for health and life sciences with the appropriate licensures and credential processes to help meet the needs of employers.</p> <p>Ensure pathways for most critically needed jobs, prioritized by timeframe needed (i.e. 3-5 years, 5+).</p> <p>Increase in the availability of a broad array of educational pathways and experiential workplace learning opportunities for all students in Region 2.</p> <p>Engage employers in academic curriculum.</p> <p>Develop model in partnership with employers to increase the number of qualified instructors, such as dual-appointment.</p> | <p><b>Primary:</b><br/>*Increase in the availability of a broad array of educational pathways and experiential workplace learning opportunities for all students in Region 2.<br/>*Engage employers in academic curriculum.<br/>*Develop a model in partnership with employers to increase the number of qualified instructors, such as dual-appointment.<br/>* Establish a pathway for qualified professionals to enter the instructor role.<br/>*<br/><b>Secondary:</b><br/>*Increase enrollment and accelerate the conferring of certifications and degrees in high-need jobs.<br/>*Student retention and levels of attainment.<br/>*Increase in educated, experienced, professional, and credentialed workforce.<br/>*Increase in funding sources for academic partners.<br/>*Improved workplace readiness upon graduation (further define which KPIs within workplace readiness to monitor).<br/>*Continual alignment of education-to-employment pathways for critically needed jobs.</p> |

# Talent Pathways Update

As of 9/26/23

## Current Update

- VA DOL Grant received – being implemented; coordinated with GRWDB and GMU to draft grant submission for VA DOL grant – health + technology
- Coordinating with GMU, Verge, Carilion Clinic, VWCC, VTCRC to draft grant submission to GO Virginia for biotechnology and biosciences career pathways.
- Established two workgroups: healthcare and biotechnology/biosciences
- GO Virginia Region 2 TPI grant awarded – collaborating
- Developing shared work appointment model – Professors of Practice
- Developing Student Scholars program with Academic Planning

## Risks, Considerations, and Barriers

### **CONSIDERATIONS:**

- Need to have more active employer stakeholders represented from the New River Valley and Lynchburg
- Biotechnology industry is still not represented – being addressed

### **BARRIERS:**

- Competing priorities for employers affects time available for input
- Professors of Practice – multiple accrediting bodies and regulatory bodies.

## Next Steps

- **Career Maps:** ongoing work to complete Career Cluster mapping for most needed regional jobs for posting on [www.virginiahealthcareers.org](http://www.virginiahealthcareers.org).
- Continue to recruit representatives from the Biotechnology and Biosciences clusters to the Talent Pathways Task Force.
- Explore collaborations with technology sector to for cross career exposure and grant opportunities.
- Explore the concept of Professors of Practice, externships with employers

## Overall progress towards vision

Progress towards career pathway outlines

65%

# Core Values

- **COLLABORATION:** We build and nurture partnerships to achieve mutual success
- **INNOVATION:** We implement creative solutions to address emerging problems.
- **TRANSPARENCY:** We are open, honest and accountable in our relationships, processes and actions.
- **FISCAL RESPONSIBILITY:** We leverage existing resources and established funding mechanisms.
- **DIVERSITY:** We celebrate and respect the uniqueness of cultures, communities and beliefs and abilities.
- **WELCOMING and BELONGING:** We ensure that all individuals and communities have equal opportunity to co-create their futures and contribute to the health and well-being of our community.





**Blue Ridge Partnership**  
for Health Science Careers

What were some early wins?



## Most Needed Jobs As Conveyed By Employers in Region 2

### Immediate – 2 years

- Nurse Assistant (NA)
  - Patient Care Technician
  - Certified Nurse Assistant (CNA)
  - Psychology Technician
  - Certified Medical Assistant (CMA)
  - Licensed Practical Nurse (LPN)
  - Registered Nurse (RN)
  - DON (Director of Nursing)
  - Nurse Supervisor (RN preferred)
  - Nurse Unit Manager (RN preferred)
  - Physical Therapy Assistant
  - Occupational Therapy Assistant
  - Physical Therapist
  - Occupational Therapist
  - Speech Therapist
  - Dietary Aide
- Call Center Operators – career path in communications
  - Registered Dietician
  - Food Service Manager and Cooks – can be entry level jobs for Registered Dietician
  - Surgical Technician
  - Respiratory Care
  - Pharmacy Technician
  - Sonographer
  - ETL Developer
  - Network Engineer
  - EMT to Paramedic
  - Maintenance – Building Engineers, Plumbing, Electrician, Carpentry, HVAC
  - Biomedical Technology Engineering
  - Radiological Technologist (X-Ray Tech and more)

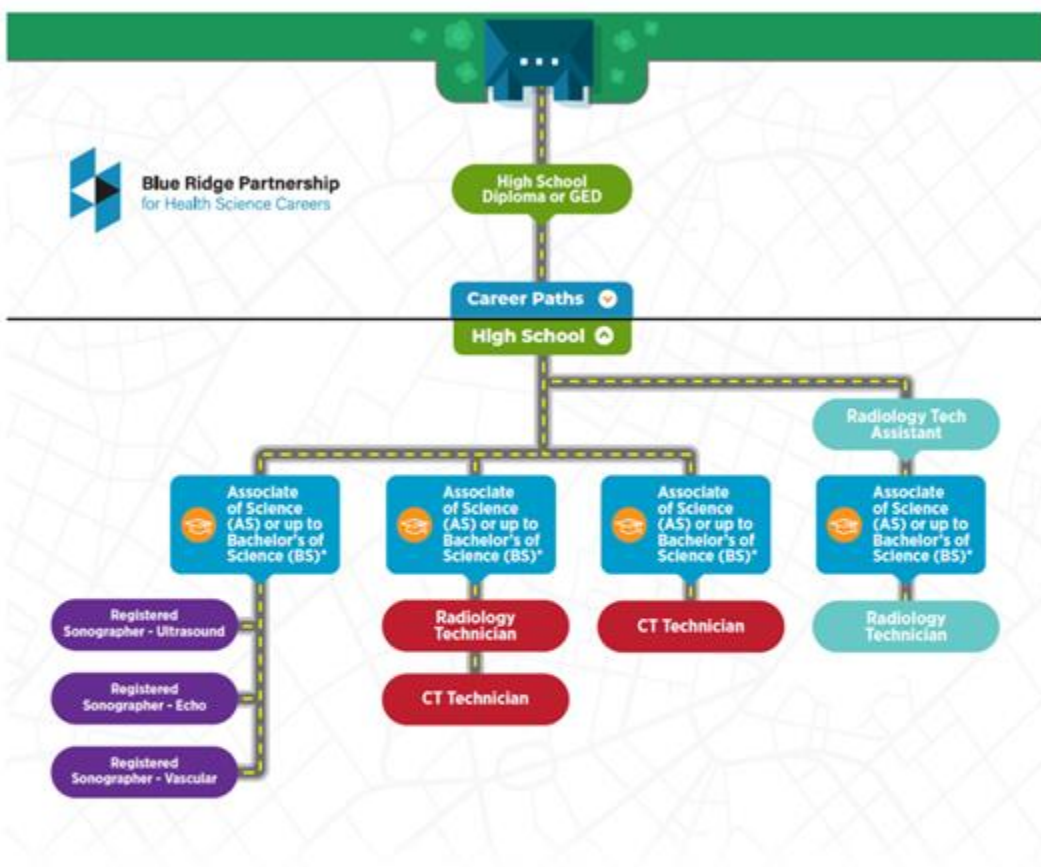
# Most Needed Jobs As Conveyed By Employers in Region 2

## 2-5 Years

- Biomedical Technology – robotics, engineering
- Bioinformatics specialists for population health data analysis
- AI and algorithm - decision science - mathematicians and systems engineers
- Communications management for telehealth (text/video)
- Aging in place – architecture, technology, hospitality

## 5-10 Years

- Clinical research associates
- Research project managers – navigate federal regulatory environment
- Medical writer – grant writer
- Environmental health – urban planning



| Sonography Programs**                     |              | Interested In Research Positions In The Field of Imaging? |
|---|--------------|---|
| Associate of Applied Science (AAS) Degree |              |   |
| College                                   | Salary Range | Bachelor of Science in Biology or Engineering             |
| ECPI                                      | \$53k-\$108k |   |

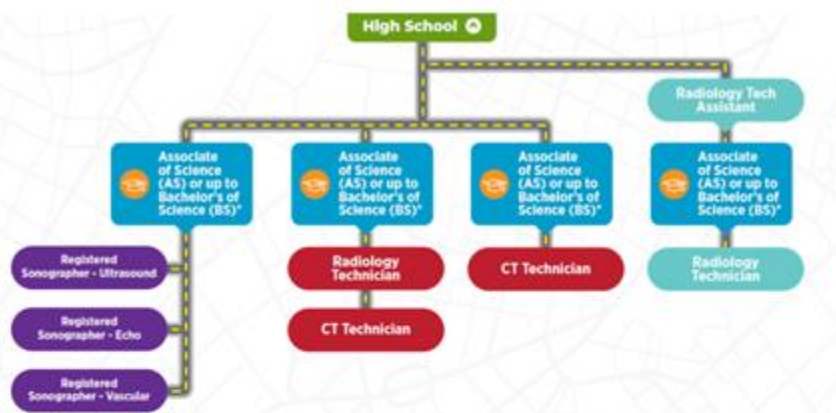
## Imaging Pathway

DRAFT

Mapping 10 job clusters based on the master inventory.

# Imaging Pathway (continued)

DRAFT



| Sonography Programs**                     |              | Interested in Research Positions in the Field of Imaging? |
|---|--------------|---|
| Associate of Applied Science (AAS) Degree |              |   |
| College                                   | Salary Range |   |
| ECPI                                      | \$53k-\$108k |   |
| Piedmont Virginia Community College       | \$53k-\$108k |   |
| CT Technology Programs**                  |              |   |
| Associate of Applied Science (AAS) Degree |              |   |
| College                                   | Salary Range |   |
| Virginia Western Community College        | \$49k-\$84k  |   |
| Central Virginia Community College        | \$49k-\$84k  |   |
| Southside Virginia Community College      | \$49k-\$84k  |   |
| Radiologic Technician Programs**          |              |   |
| Associate of Applied Science (AAS) Degree |              |   |
| College                                   | Salary Range |   |
| Virginia Western Community College        | \$27k-\$71k  |   |
| Central Virginia Community College        | \$27k-\$71k  |   |
| Southside Virginia Community College      | \$27k-\$71k  |   |

\*Admissions process required. \*\*For the most up-to-date information, contact the school or business.

Bachelor of Science in Biology or Engineering

Microscopy Assistant  
Microscopy Scientist  
Field Application Specialist,  
Cellular Imaging and Analysis  
Computer Analyst, Biological Image Processing  
Laboratory Technician (imaging)  
Research Specialist  
Transmission and Scanning Electron Microscopy Specialist

PhD with a Multidisciplinary Background

Biology, Mathematics, Biophysics  
Advanced Microscopy and Quantitative Neuroimaging  
Research Scientist  
Senior Scientist



**Blue Ridge Partnership**  
for Health Science Careers

Health  
Careers

Education  
Partners

Employer & Workforce  
Partners

Newsroom

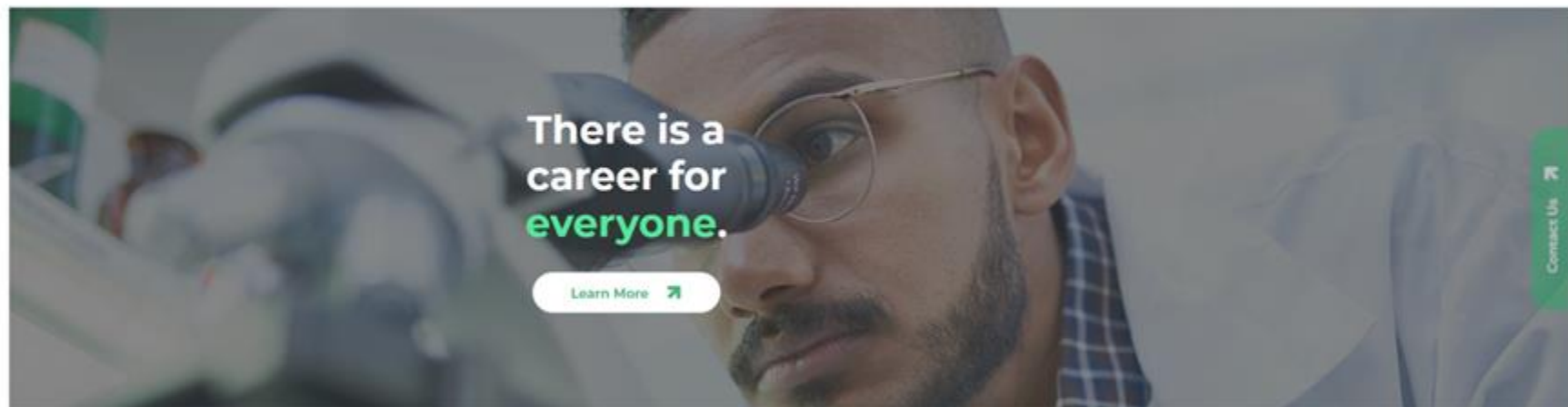
Leadership

Job Opportunities

Partner Login

Site translates to:

- Spanish
- Arabic
- Nepali
- Dari
- Swahili



The Blue Ridge Partnership for Health Science Careers is a collaboration of educators, employers, and economic development professionals in the Roanoke and New River Valleys, the Alleghany Highlands, and the greater Lynchburg region. As members of *GO Virginia Region 2*, we're committed to improving health sciences education and aligning instruction to meet the urgent workforce needs of the region's health employers, including hospitals, health systems, long-term care facilities, and emerging biomedical companies.

Our Partnership uses a new model for health sciences education and workforce development

# HOSPITALS, HEALTHCARE, HELICOPTERS & MORE

LET'S GET READY TO EXPLORE...

Custom book in partnership with Turn the Page  
Distributed through 4-H mobile lab  
Sponsored by Claude Moore Foundation



**Student Ambassadors: Advocates and Mentors  
in their schools and geographic areas.**





**STEM-H Goes Red for Women  
Pilot event between American Heart  
Association, VWCC, Roanoke City Public  
Schools, and Salem City Public Schools**





A TRADITION OF EXCELLENCE FOR ALL  
**LCS**  
LYNCHBURG CITY SCHOOLS

Heritage High School  
Nurse Aide I & II

EC Glass High School  
Dental Careers I & II



**African American Ministers and Lay Leaders: Community Ambassadors for Careers in Health & Life Sciences**



**Blue Ridge Partnership**  
for Health Science Careers

How will employers operationalize the innovative solutions of the Partnership?

**PILOT then SCALE**

## Employer Pilot Initiatives for Scaling

### Increased Employer Work-Based Education and Training

**Scholars** – a subset of learners from educational institutions who are engaged in High Quality Work-based Learning (HQWBL) within regional employers.

- **Distinct from traditional clinical rotations – clinical and non-clinical roles**
- Application process; Highly curated cohort experience
- Meets VA DOE requirements
- Paid internships, apprenticeships; builds on Earn-To-Learn model.
- Mentor pairing, possible financial assistance, exposures throughout the organization, leadership training, capstone showcase, guaranteed interview for employment with preferred consideration.

**Resources Needed:** central coordination across enterprise; VDOE POC to coordinate school district communications: internal employee training and campaign to support culture of learning beyond traditional clinical rotations.

## Employer Pilot Initiatives for Scaling

### Establish and Expand Shared Work Appointment Model

**Professors of Practice** - employed industry professionals (clinical and non-clinical) are encouraged and enabled to teach at K-12 or post-secondary schools while remaining employed. Includes credentialing, micro-credentialing, badging, and possible financial incentives. Cost sharing models and accreditation requirements are under development.

**Resources Needed:** tuition assistance for BS or Master's prepared employees; internal culture training and campaign to support dual appointment roles for employees; work time allowed

**Employers:** culture, scheduling shift to facilitate, reward teaching

**Schools:** program to accelerate the conferring of instructor credentials; ability to contract with employers for instructor time.

**Regulatory:** Alignment of requirements from regulatory, accreditation bodies



**Blue Ridge Partnership**  
for Health Science Careers

How will you know if the work of the Partnership is successful? Short-term and long-term?

**DATA**

## WORKFORCE DEMAND What is the Need?

## WORKFORCE SUPPLY Who can fill the need?

### Advance analyses and evaluation

Multivariate analyses of factors related to demand and supply

Multidimensional indicators for substate areas and population groups

Forecasting for future demand

### Intermediate analyses and data

Comparisons with other states and US averages

Estimates for population subgroups and practice settings

Retrospective analyses of demand and need

### Descriptive Diagnostic Analyses

Population counts and characteristics for state and counties

Health status of population

Direct measures of demand

Indirect measures of demand

### Descriptive Diagnostic Analyses

Licenses, certifications, and employment

Ratios and baselines

State and substate counts

New entrants and exits  
Tables and maps

### Intermediate analyses and data

Comparisons with other states and US averages

Retrospective analysis for trends

Distribution by practice types and settings

Distributions by populations served

### Advance analyses and evaluation

Projections/Forecasting of supply

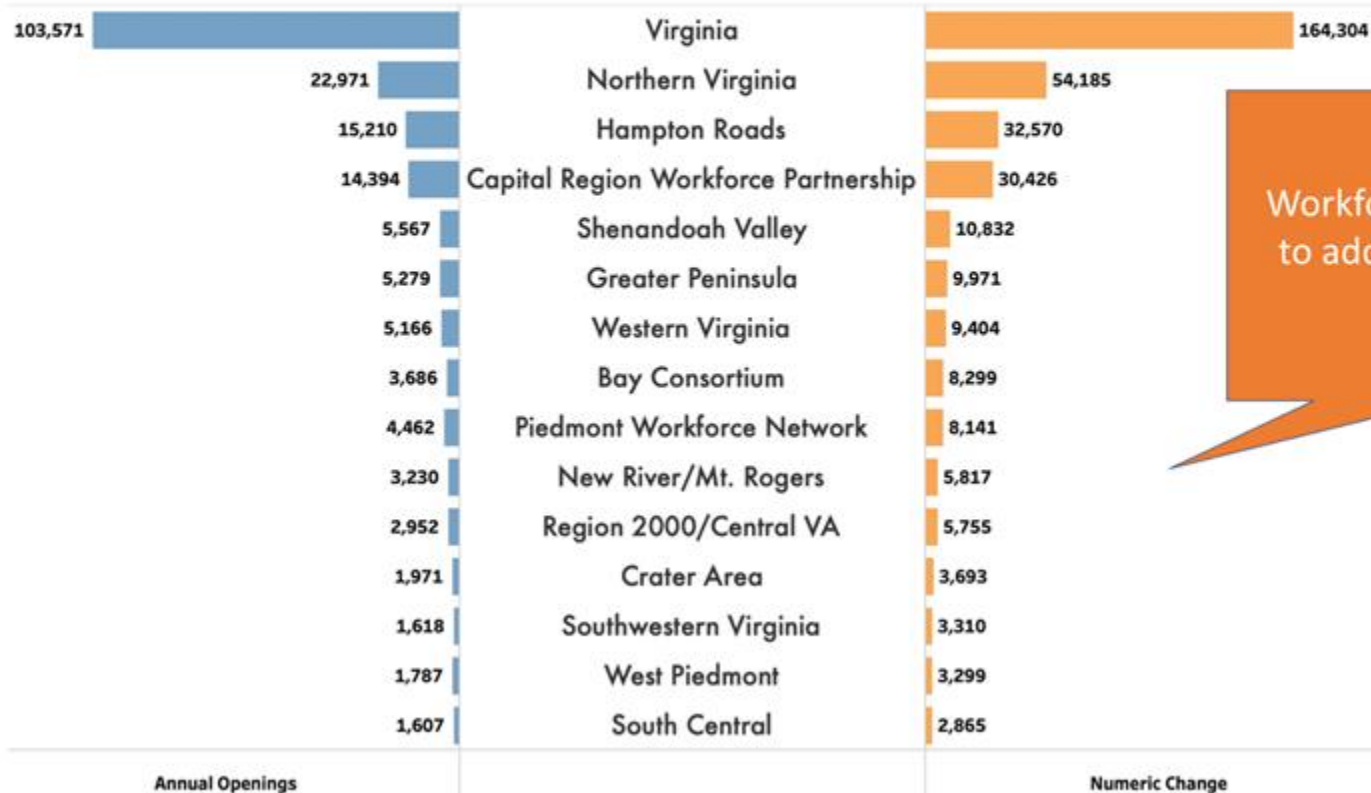
Multivariate analyses of aspects of supply

Assess for future changes in supply to inform projections

Standardized Data Sources from National and State Systems

# State-level Health Workforce Data

## Annual Openings vs Numeric Change (2018-2028)



Workforce strategies need to address turnover AND growth



# Region 2 Health Workforce Data

Growing  
*4 times faster*  
than all  
other  
occupations

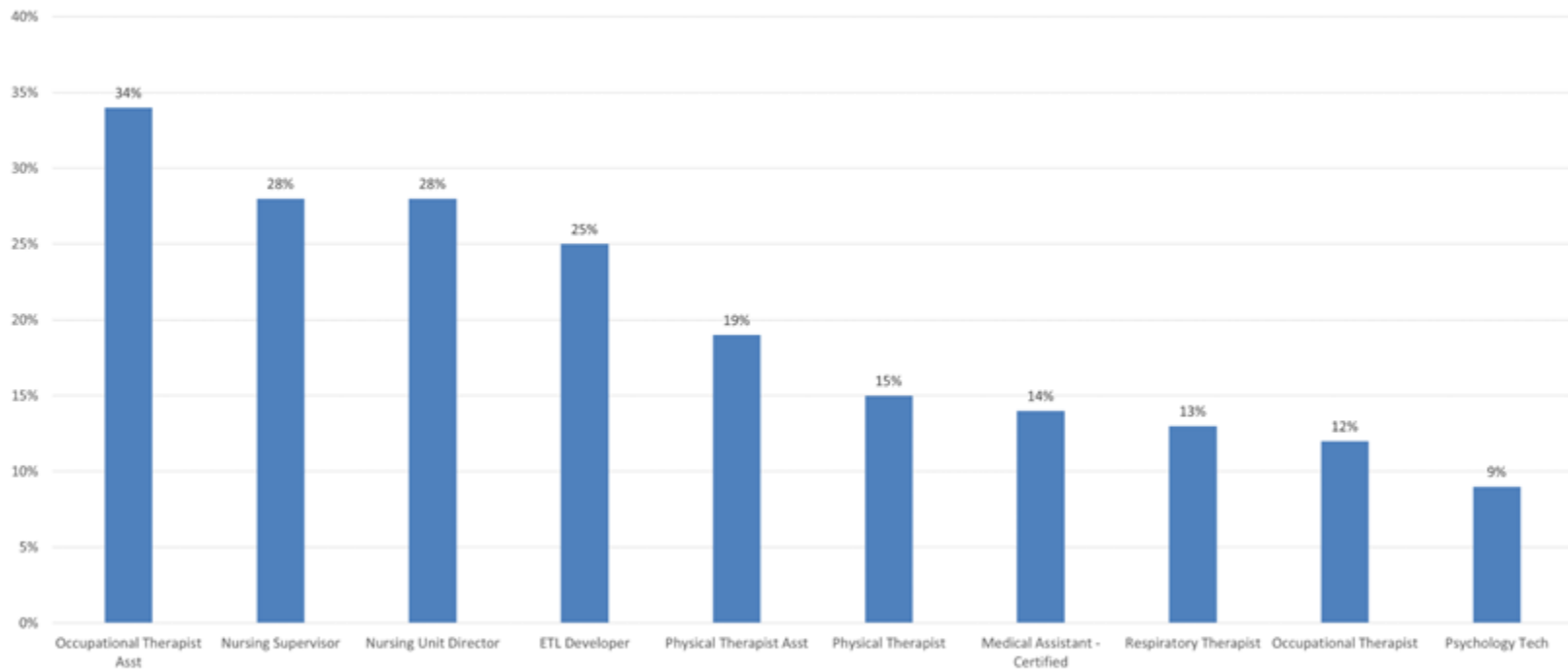
| Occupation   | Percent Change | Annual Change | Annual Openings | Education Required                |
|--|----------------|---------------|-----------------|-----------------------------------|
| Personal Care Aides                                    | 36.87          | 1,580         | 8,656           | Less than high school             |
| Phlebotomists  | 35.02          | 124           | 566             | Post-secondary non-degree         |
| Veterinary Technologists and Technicians               | 34.08          | 67            | 252             | Associate's degree                |
| Veterinary Assistants and Laboratory Animal Caretakers | 33.83          | 135           | 889             | High school diploma or equivalent |
| Occupational Therapy Assistants                        | 33.55          | 31            | 149             | Associate's degree                |
| Physician Assistants                                   | 32.62          | 84            | 254             | Master's degree                   |
| Home Health Aides                                      | 32.09          | 325           | 1,641           | Less than high school             |
| Veterinarians  | 31.27          | 93            | 226             | Doctoral or professional degree   |
| Nurse Practitioners                                    | 30.76          | 150           | 451             | Master's/doctoral degree          |
| Genetic Counselors                                     | 27.96          | 3             | 9               | Master's degree                   |
| Physical Therapist Assistants                          | 27.74          | 75            | 457             | Associate's degree                |
| Speech-Language Pathologists                           | 26.1           | 85            | 281             | Master's degree                   |

## Most Needed Jobs As Conveyed By Employers in Region 2 Now - 3 Years

- Nurse Assistant (NA)
- Patient Care Technician
- Certified Nurse Assistant (CNA)
- Psychology Technician
- Certified Medical Assistant (CMA)
- Licensed Practical Nurse (LPN)
- Registered Nurse (RN)
- DON (Director of Nursing)
- Nurse Supervisor (RN preferred)
- Nurse Unit Manager (RN preferred)
- Physical Therapy Assistant
- Occupational Therapy Assistant
- Physical Therapist
- Occupational Therapist
- Speech Therapist
- Dietary Aide
- Call Center Operators – career path in communications
- Registered Dietician
- Food Service Manager and Cooks – can be entry level jobs for Registered Dietician
- Surgical Technician
- Respiratory Therapist
- Pharmacy Technician
- Sonographer
- ETL Developer
- Network Engineer
- EMT to Paramedic
- Maintenance – Building Engineers, Plumbing, Electrician, Carpentry, HVAC
- Biomedical Technology Engineering
- Radiological Technologist (X-Ray Tech and more)

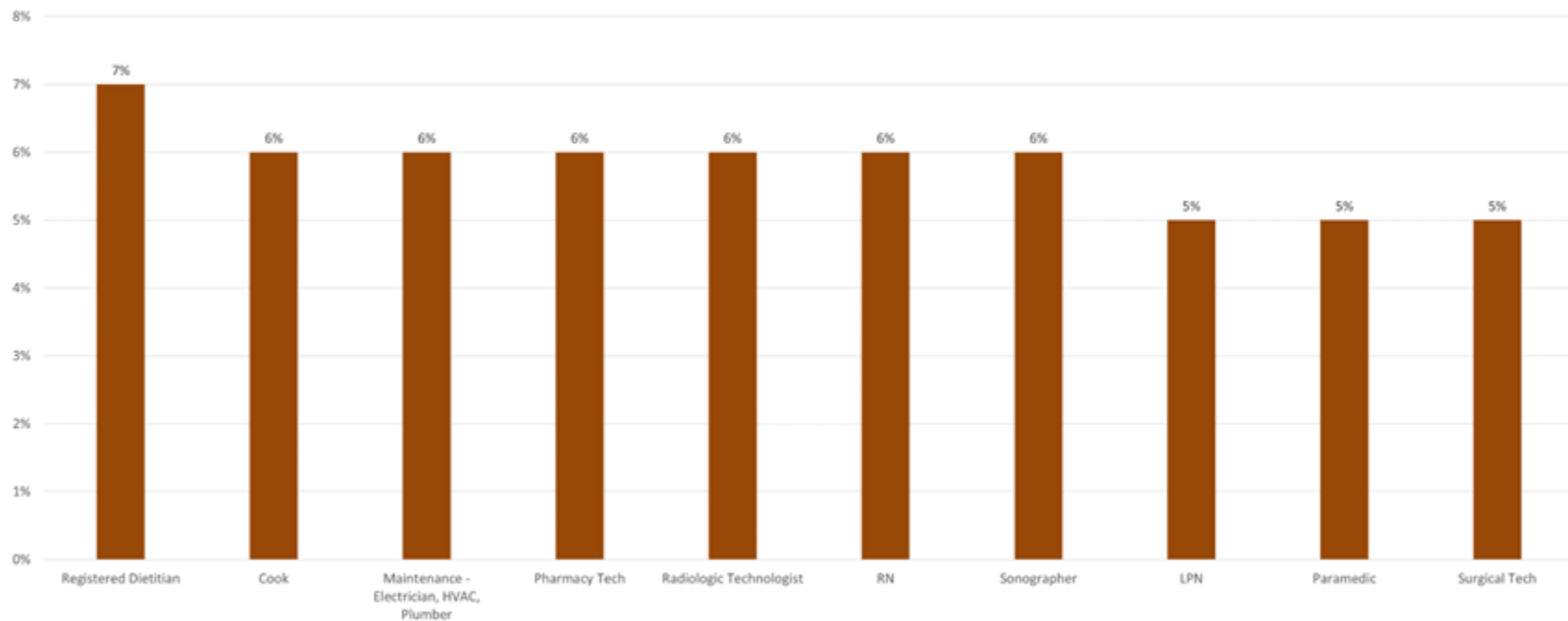
# Jobs with Much Faster Than Avg Growth Rate

BLS Growth Rates – Highest to Lowest



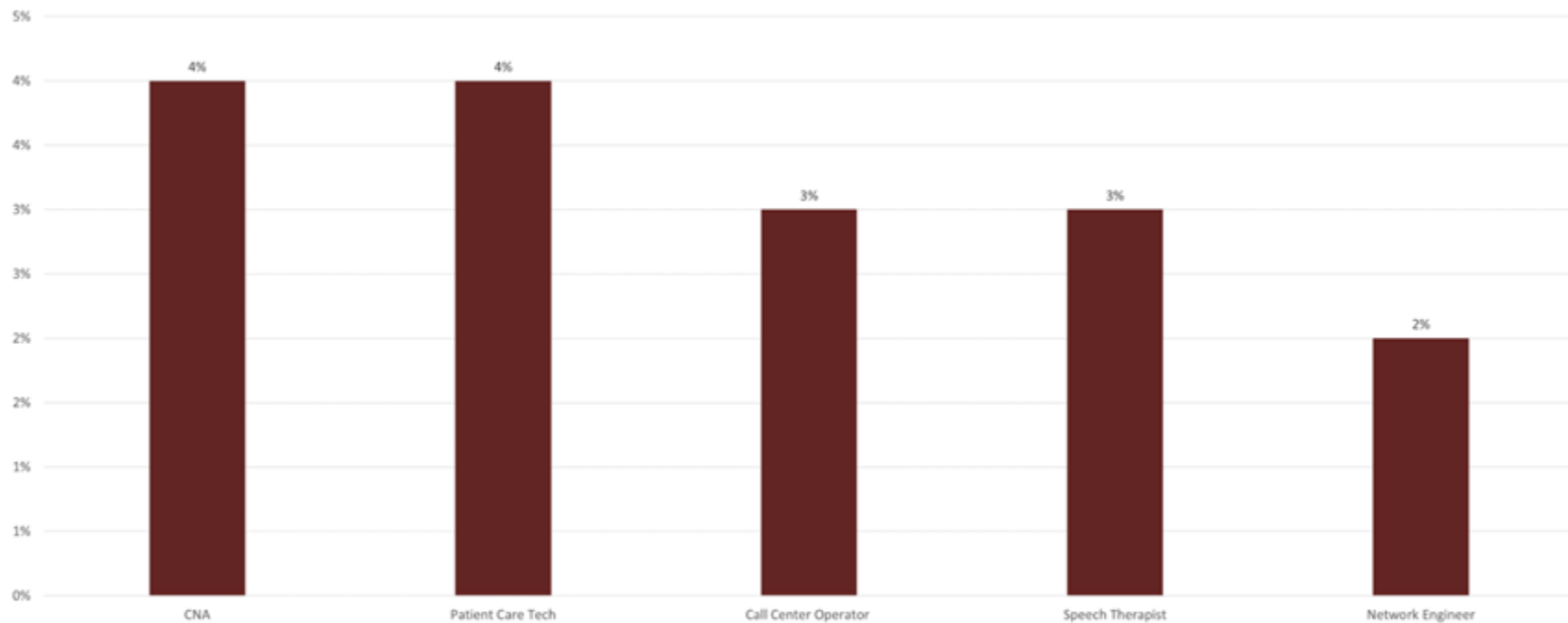
# Jobs with Faster Than Avg Growth Rate

BLS Growth Rates – Highest to Lowest



# Jobs with Avg Growth Rate

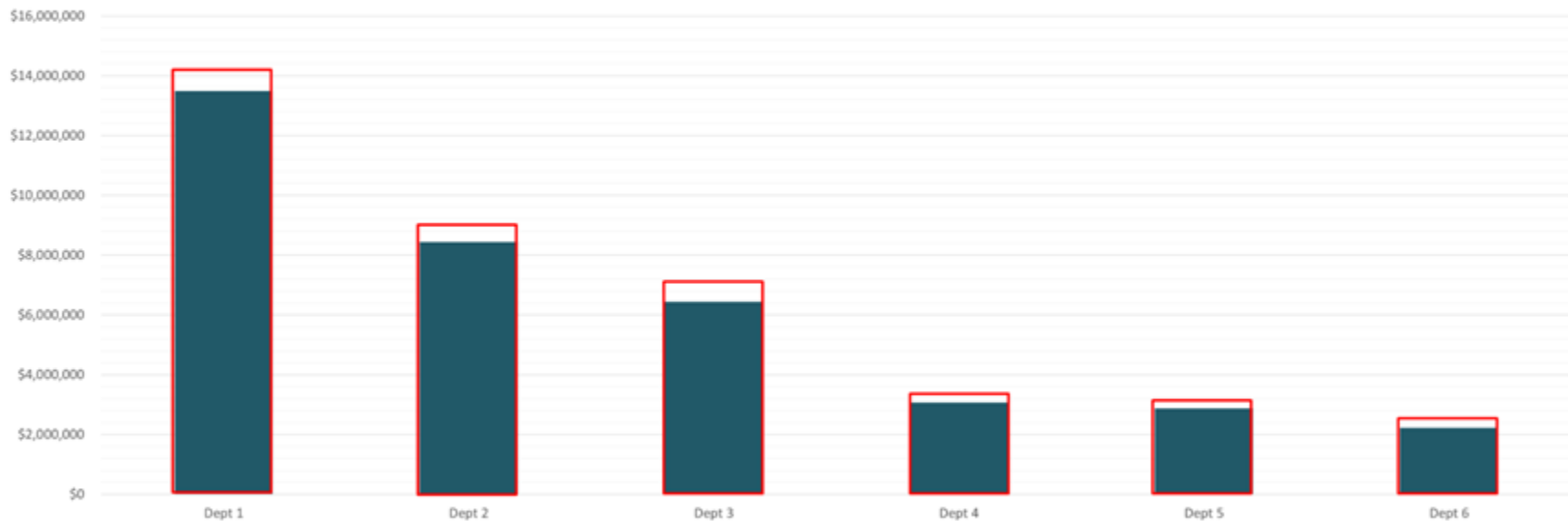
BLS Growth Rates – Highest to Lowest



# A Case Study:

## Patient Facing Departments with High Turnover & BLS Growth Projections Overlaid

Patient Facing Departments



## Current & Total FY 24 Vacancies

| Department     | Current Vacancies | FY24 Total Vacancies |
|----------------|-------------------|----------------------|
| Dept 1         | 572               | 1942                 |
| Dept 2         | 76                | 851                  |
| Dept 3         | 161               | 1384                 |
| Dept 4         | 121               | 590                  |
| Dept 5         | 45                | 384                  |
| Dept 6         | 76                | 515                  |
| <b>Totals:</b> | <b>1,051</b>      | <b>5,666</b>         |

# Critical Jobs Educational Program Gaps

## Jobs with No Local Programs

- Psychology/Psychiatric Technicians
- Communication Specialists (Dispatchers and/or Communication Officers)
- Patient Care Technicians
- Registered Dietitian
- Sonographer

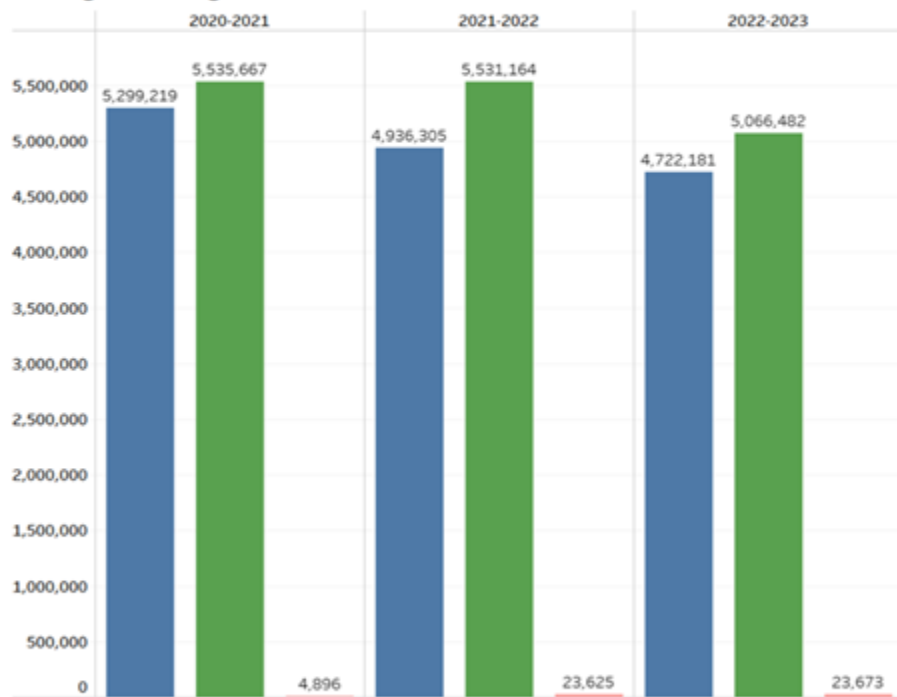
## Jobs with 1-2 Local Programs

- Physical Therapist Assistant
- Physical Therapist
- Respiratory Therapist
- Surgical Technologist
- Speech Therapist
- Radiologic Technologist
- Occupational Therapist

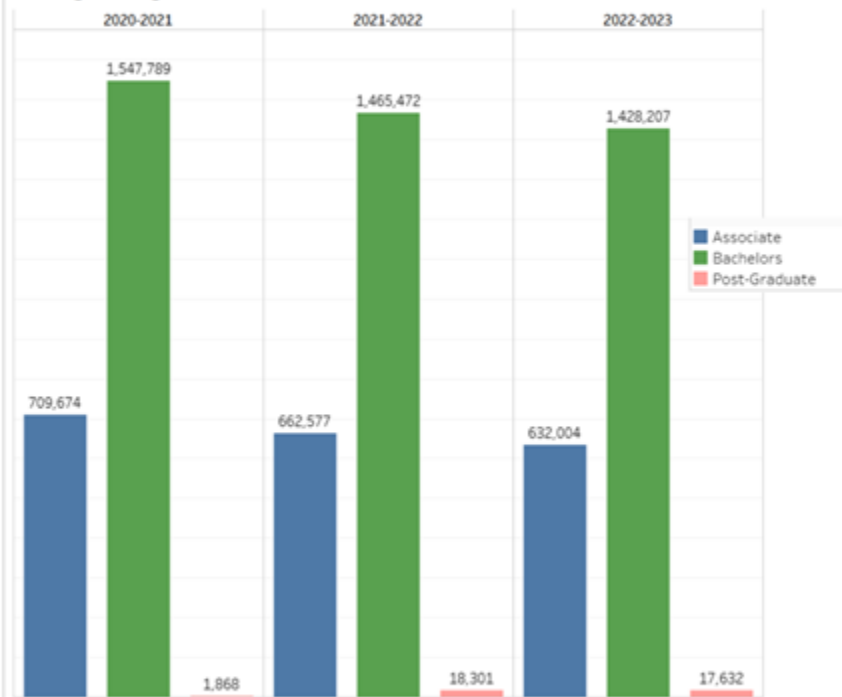


# Health Science Instructional Program Enrollment (Associate, Bachelors, Post-Graduate) Virginia and Region 2

Go Virginia All Regions



Go Virginia Region 2

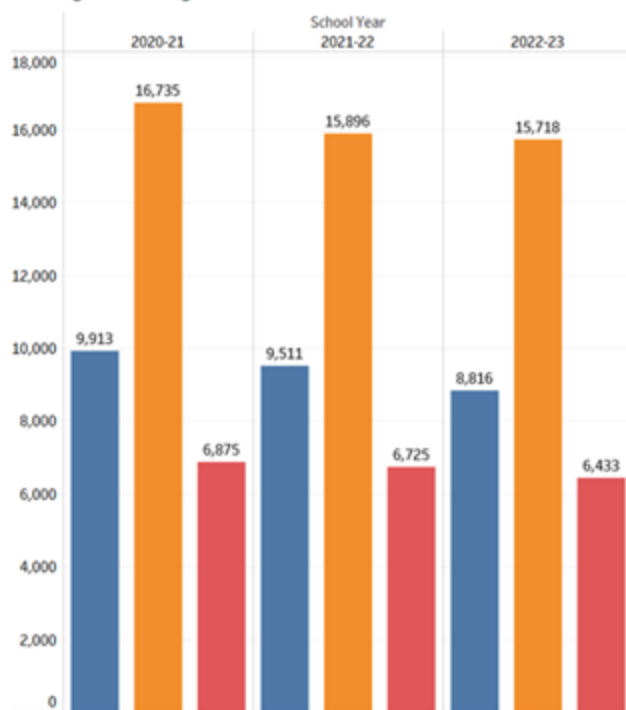


\*Comparison of Health Science confirmed degrees between Virginia and Go Virginia Region 2 (School Year: 2020-2021, 2021-2022, 2022-2023) Classification of Instructional Programs (CIP Codes) aligned with Health Science Occupations (SOCs 19,25, 29, and 31)

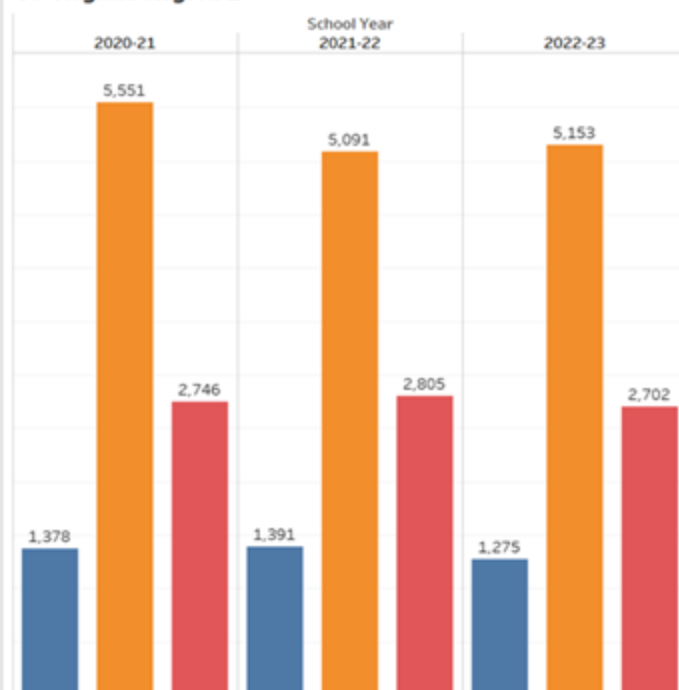
Data Source: State Council of Higher Education for Virginia 2023, Mason Health Workforce Center

# Health Science Degrees Conferred (Associate, Bachelor's, and Post-Graduate ) Virginia and Region 2

Go Virginia All Regions



Go Virginia Region 2



■ Associates  
■ Bachelors  
■ Post-Graduate

\*Comparison of Health Science confirmed degrees between Virginia and Go Virginia Region 2 (School Year: 2020-2021, 2021-2022, 2022-2023) Classification of Instructional Programs (CIP Codes) aligned with Health Science Occupations (SOCs 19,25, 29, and 31)

Data Source: State Council of Higher Education for Virginia 2023, Mason Health Workforce Center

# Employer Recruitment and Retention Data Measures Indicating Partnership Effectiveness

## Demographics

- Education program completed
- Level of education/degree/certification
- Ethnicity

## Efficiency (volumes/transactions)

- Number of applicants per role
- Applicant-to-hire ratio per role
- Offer acceptance rate per role
- Orientation time
- Time-to-fill per role
- High demand vacancies filled

## Effectiveness (quality/performance/outcomes)

- Manager perceptions for performance, onboarding, etc.
- Need for additional education/skills training (reduction in training costs)
- Turnover/retention per role (1 year, etc.)
- Employee career progressions (promotions)
- Employee performance (meeting or exceeding standards)
- Formal recognition received
- Reduction in recruitments costs

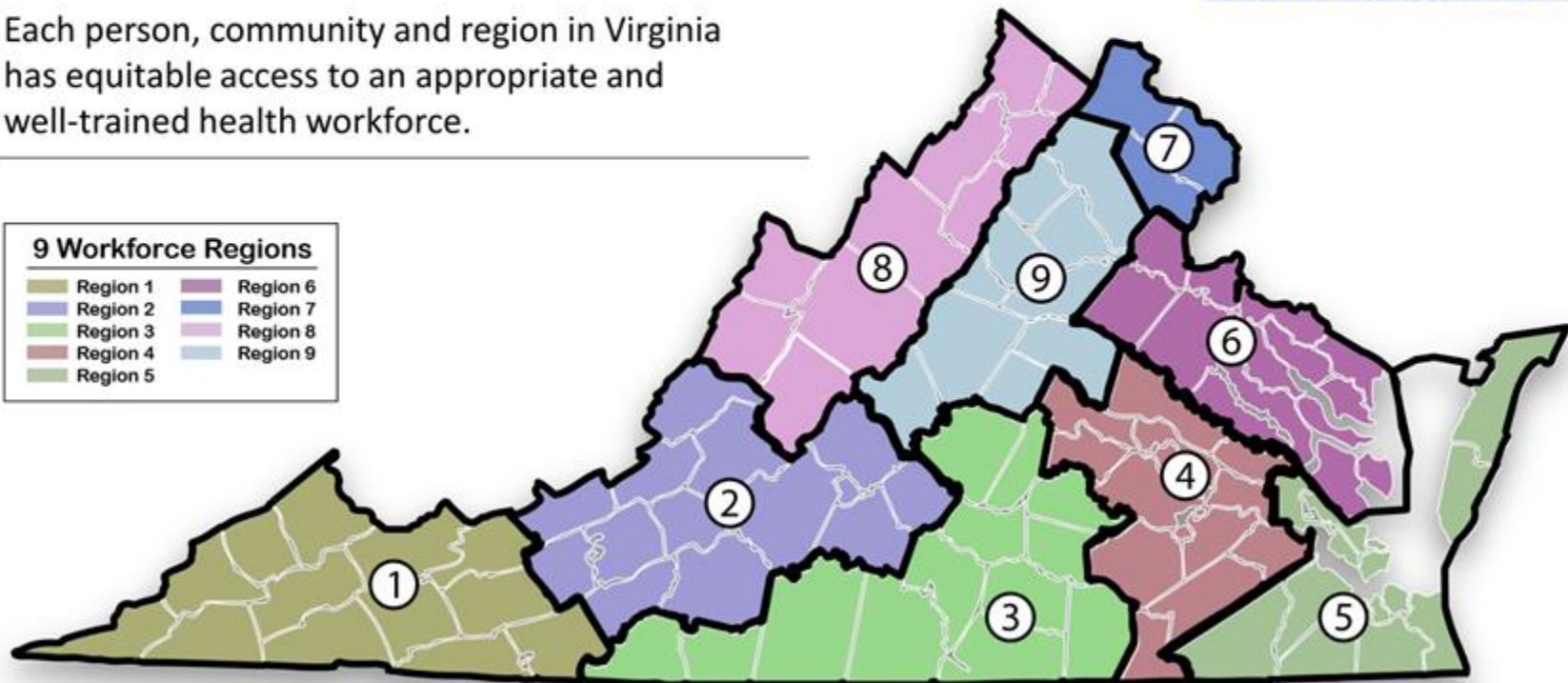


BRPHSC INITIATIVE FOR  
**GROWTH &  
OPPORTUNITY**  
IN EVERY REGION

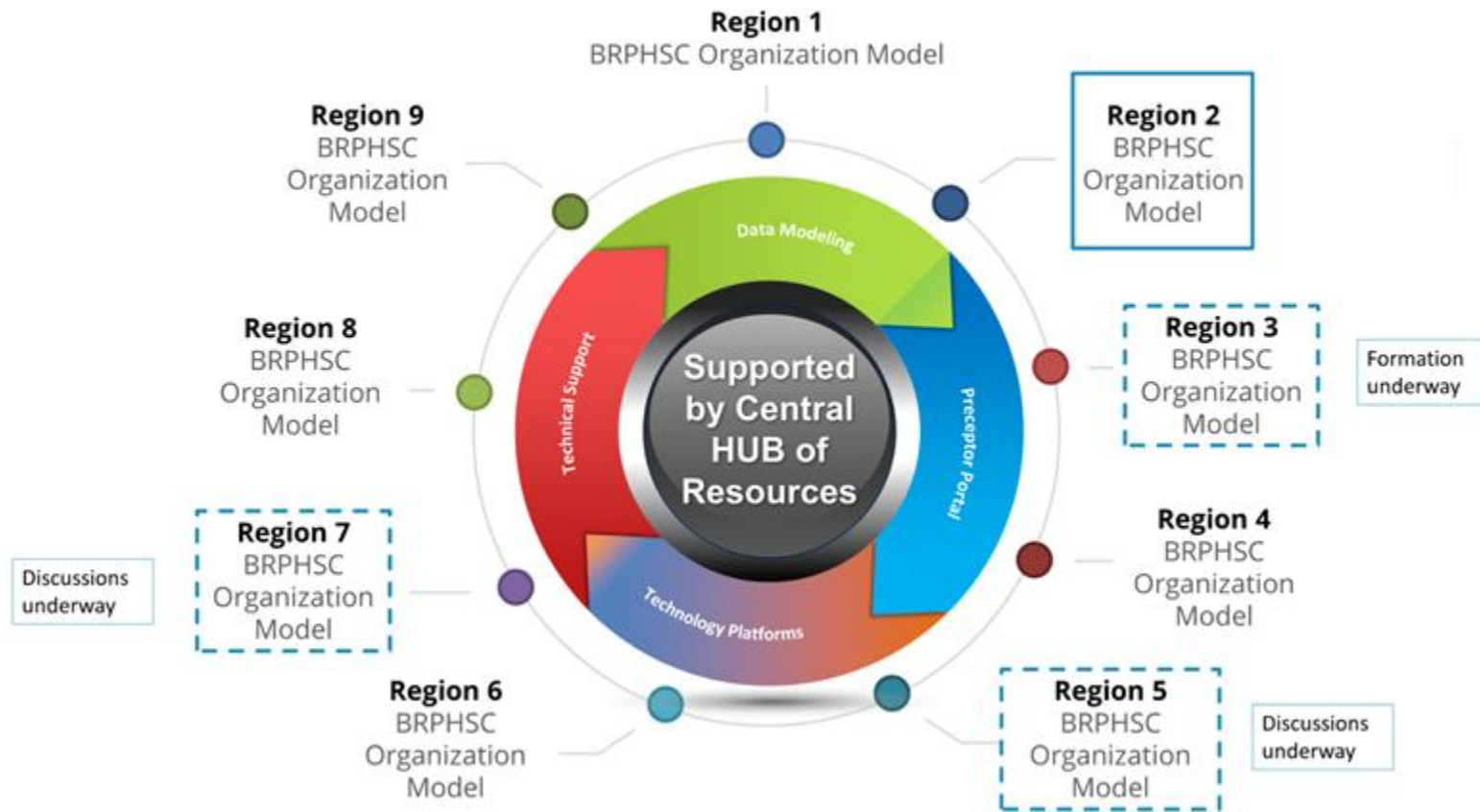
## Vision: Translate the BRPHSC model to all GO Virginia Regions Customized for regional employer needs

[www.govirginia.com](http://www.govirginia.com)

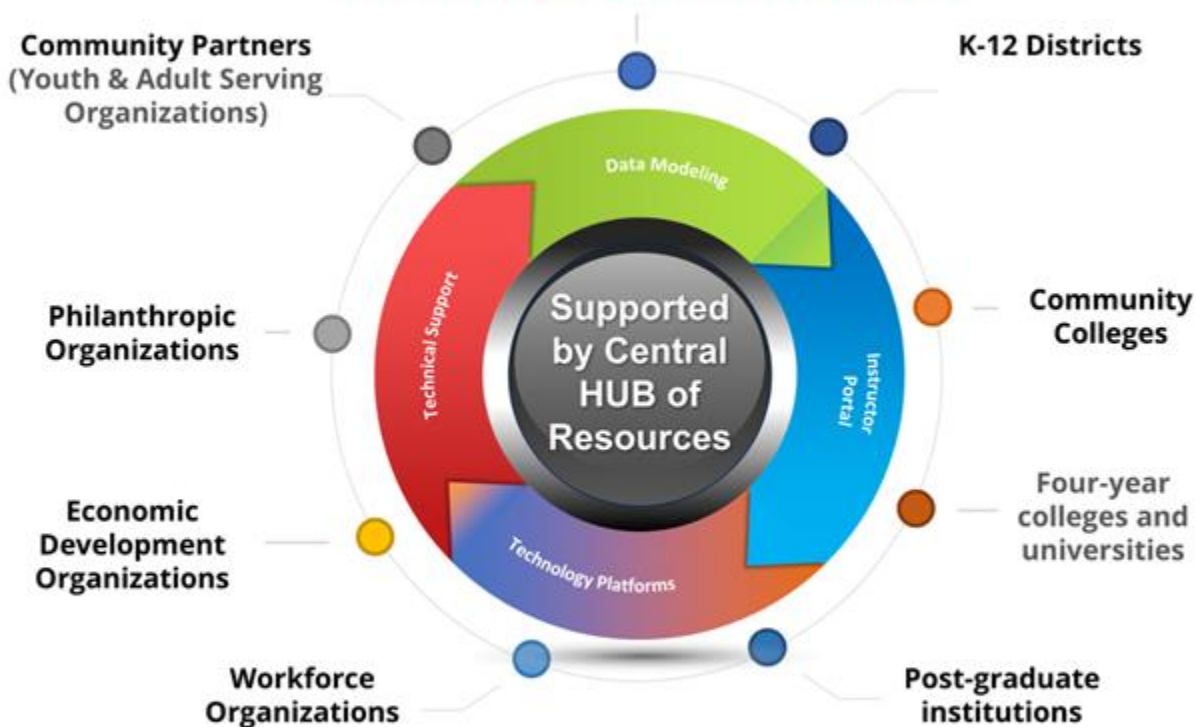
Each person, community and region in Virginia has equitable access to an appropriate and well-trained health workforce.



# Virginia Health Workforce Collective Impact Model



# Health & Life Sciences





**Questions?**