# Health Research and Graduate Medical Education Three-Year Plans for the State of Tennessee

March 29, 2019

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It's your story. We're listening.

# Disclaimer

This work represents a specific response to the details and requirements as listed in section 3.03 of the Certificate of Public Advantage ("COPA") issued by the Tennessee Department of Health. As such the items mentioned in this plan are intended to be the groundwork for the efforts Ballad Health and the members of the academic and research community of Southwest Virginia and Tennessee (collectively known as the Tennessee Virginia Regional Health Sciences Consortium  (TVRHSC)) commit to undertake. The elements of this document are not intended to limit or presume the work of the TVRHSC that is yet to occur. Where examples are used, they are intended to be illustrative in nature, unless otherwise specified, and not to indicate the sole scope or direction of the work of the TVRHSC. This document is the result of many hours of work on the part of the majority of academic and research institutions across east Tennessee and Southwest Virginia in addition to Ballad Health. We appreciate all of the thoughtfulness and dedication it has taken to assemble this response.

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# Introduction

- Pursuant to section 3.03 of the Certificate of Public Advantage, the Tennessee Department of Health requested the submission of final versions of the Health Research (HR) Plan and Graduate Medical Education (GME) Plan by January 31, 2019.

- Given that the spending requirements for the HR and GME plans are combined in the COPA, Ballad Health combined the plans into a single document.

- The content of these plans is consistent with requirements as outlined in COPA section 3.03 and represents those actions to be taken by Ballad Health deemed by the State of Tennessee to constitute public benefit.

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# Definition of Terms

- Consortium
  - In this document that term refers to the collection of the members of the Coordinating Council and the Research Council and the Education and Training Council.

- Health Professions Education (HPE)
  - The COPA and the Cooperative Agreement, issued by the state of Virginia, utilized "Health Research and Graduate Medical Education" as the title of this effort. Based on the identified needs of the region and public health benefit aims outlined in the Cooperative Agreement, we intend to be more inclusive of the research and academic needs of the region. *"Health Professions Education" includes, but is not limited to,* Graduate Medical Education (GME); Nursing; Dentistry; Optometry; Undergraduate Medical Education (UME); Public Health; Physical Therapy; Allied Health; and other professions. Parts of this plan are specific to certain disciplines, but are discussed with the knowledge that they are not the exclusive focus in the work of this plan.

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# Definition of Terms

- Undergraduate Medical Education (UME)

  o Those activities related to Allopathic and Osteopathic (MD and DO) medical school education. In this document UME refers to all related activities of medical students.

- Graduate Medical Education (GME)

  o Those activities related to Allopathic and Osteopathic (MD and DO) education. In this document GME refers to all related activities of Medical and Surgical residents.

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# TN COPA HR/GME Requirements

## TN COPA Requirements: Section 3.03

1. Develop plan collaboratively with key Tennessee stakeholders

2. Set forth how academic infrastructure will provide effective training for the next generation of healthcare professionals that are needed to address the healthcare needs in Tennessee

3. Set forth program gap analysis and the formation of program development plans based on assessed needs, clinical capacity and availability of programs

4. Identify fellowship training opportunities to support the regional base of sub-specialty physicians along with collaboration opportunities when professors and research leaders can work together to close gaps in regional specialty services or provide clinical oversight

5. Set forth how spending investments in research and growth in the health research enterprise in Tennessee will attract additional research funding from national sources, including in the area of translational research

6. Establish budgeted research expenditures for the second and third full Fiscal Years and thereafter update research expenditures to address subsequent years no later than ninety (90) days prior to the end of the Fiscal Year for which the then-existing HR/GME Plan ends. Allocate spending priority research projects identified by Ballad and Tennessee stakeholders in pursuit of this goal.

7. Set forth the targeted number of persons to be trained by physician specialty or healthcare professional category, the location(s) of such training, the schedule for starting such training, and the expected gross annual expenditure related to such training

8. The plan shall not reduce or eliminate any medical residency programs or available resident positions presently operated, except for reductions or eliminations resulting from reductions in state of TN or federal funding to the COPA hospitals for graduate medical education provided

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# Spending Requirements

| | | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 | Total: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Expanded Access to HealthCare Services | Behavioral Health Services | $1,000,000 | $4,000,000 | $10,000,000 | $10,000,000 | $10,000,000 | $10,000,000 | $10,000,000 | $10,000,000 | $10,000,000 | $10,000,000 | $85,000,000 |
| | Children's Services | $1,000,000 | $2,000,000 | $3,000,000 | $3,000,000 | $3,000,000 | $3,000,000 | $3,000,000 | $3,000,000 | $3,000,000 | $3,000,000 | $27,000,000 |
| | Rural Health Services | $1,000,000 | $3,000,000 | $3,000,000 | $3,000,000 | $3,000,000 | $3,000,000 | $3,000,000 | $3,000,000 | $3,000,000 | $3,000,000 | $28,000,000 |
| Health Research and Graduate Medical Education | | $3,000,000 | $5,000,000 | $7,000,000 | $10,000,000 | $10,000,000 | $10,000,000 | $10,000,000 | $10,000,000 | $10,000,000 | $10,000,000 | $85,000,000 |
| Population Health Improvement | | $1,000,000 | $2,000,000 | $5,000,000 | $7,000,000 | $10,000,000 | $10,000,000 | $10,000,000 | $10,000,000 | $10,000,000 | $10,000,000 | $75,000,000 |
| Region-wide Health Information Exchange | | $1,000,000 | $1,000,000 | $750,000 | $750,000 | $750,000 | $750,000 | $750,000 | $750,000 | $750,000 | $750,000 | $8,000,000 |
| Total: | | $8,000,000 | $17,000,000 | $28,750,000 | $33,750,000 | $36,750,000 | $36,750,000 | $36,750,000 | $36,750,000 | $36,750,000 | $36,750,000 | $308,000,000 |

- The State of Tennessee requested information regarding the "methodology for allocation of funds between Tennessee and Virginia" for the Health Research and Graduate Medical Education Plans

  o Investments and expenditures specific and unique to Tennessee geographies or Tennessee residents will be allocated 100% as a "Tennessee Expenditure"

  o For investments and expenditures that are not specific or unique to Tennessee (i.e., system-level investments, infrastructure investments, investment in specialists serving multiple geographies, etc.), the following allocation methodologies will be considered in order to determine what portion of the investment or expenditure is identified as a "Tennessee Expenditure"

    ▪ Utilization allocation – Utilization of defined service (or services) by Tennessee residents as a percentage of the total utilization

    ▪ Ad Hoc/Judgment – When neither of the allocation methodologies described above are applicable, Ballad Health will devise an appropriate ad hoc methodology, or use professional judgment, which could include Consortium input, to allocate funding

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# Important Dates

Plans Due in First Twelve Months (January 31, 2019)

- Health Information Exchange (HIE) Plan

- Health Research/Graduate Medical Education (HR/GME Plan)

*\* Ballad Health previously submitted a draft version of the HR/GME plan on November 30, 2018 State of Tennessee. This document presents the final version of that plan.*

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# Process for Plan Development

**Initiate**
- Engaged Resources and External Consultants
- Named Executive Steering Team

**Plan**
- Gathered Internal and External Stakeholder Input
- Developed Initial Plans and Discussed Galvanizing Strategies

**Review**
- Received feedback from Internal and External Stakeholders
- Provide Tennessee Department of Health (TDH) with Draft Plans Submitted to Virginia Department of Health (VDH)
- Review Draft Plans with VDH and TDH

**Finalize**
- Incorporate VDH/TDH and Stakeholder Feedback
- Finalize Investment Schedules
- Submit Final Plans to VDH/TDH
- Make final revisions with State Input during 30 day state review and 30 day Ballad Health response period
- Obtain Ballad Health Board Approval

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# Process and Participation for Plan Development

In developing this plan, Ballad Health has referenced previously developed regional plans and analyses and solicited extensive consortium stakeholder feedback from Virginia and Tennessee including:

- Reviewed the following documents and plans:
  - Key Priorities for Improving Health in Northeast Tennessee and Southwest Virginia: A Comprehensive Community Report [1]
  - SW VA Health Authority (SVHA) Blueprint[2]
  - A Review of The Commonwealth of Virginia Application for a Letter Authorizing a Cooperative Agreement[3]
- Conducted approximately 50 individual and group consortium interviews
- Held several meetings with Virginia and Tennessee regional external groups, including members of the Southwest Virginia Health Authority

[1] *Report Published by the East Tennessee State University College of Public Health*
[2] *Report Published by the Southwest Virginia Health Authority*
[3] *Report Published by the Southwest Virginia Health Authority*

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# Process and Participation for Plan Development Collaborating Partners

Collaborating Partners

- East Tennessee State University
- Emory & Henry College
- Northeast State Community College
- Southwest VA Higher Ed Center
- Lincoln Memorial University
- Milligan College
- James H. Quillen VA Medical Center
- University of Virginia- Wise
- Gatton College of Pharmacy
- Appalachian School of Pharmacy
- Virginia Highlands Community College
- Tusculum College

- King University
- Walters State Community College
- Lees-McRae College
- Mountain Empire Community College
- Graduate Medical Education Consortium of SWVA
- Southwest Virginia Community College
- Area Health Education Center 21
- Southwest Virginia Health Authority
- Virginia College of Medicine
- SWVA Area Health Education Center

*Note: Not all of the partners listed above have participated to this point in the process. However, all will contacted as the Plan is finalized.*

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# Table of Contents for HR/GME Plan

1. Plan Overview
   o Tennessee Terms of Certification
   o Key Metrics Addressed
   o Key Strategies
   o Crosswalk to Conditions
   o Investment Plan
2. Strategic Approach
3. Implementation Roadmap

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# Health Research (HR) & Graduate Medical Education (GME)

*1. Plan Overview*

# *Plan Overview*
## HR/GME Plan Key Metrics Over 3-Year Performance Period

**Health Research** [1]

- A summary of all active academic partnerships along with a description of:
  - Research topics
  - A listing of the entities engaged in research
  - The principal researcher(s) who is/are responsible for each project
  - Grant money applied for or expected
  - Anticipated expenditures
- A report on the outcome of previously reported research projects including references to any published results

**Health Education** [1]

- A summary containing the number of accredited resident positions for each residency program in the Geographic Service Area, also including the number of such positions that are filled

In addition to the required metrics above, Ballad Health will also track, for example:
- Matching dollars from sources external to Ballad Health for both Health Research and Health Education
- Metrics associated with other specific programs, research grants, etc., as required (i.e. REACH)

[1] Per Tennessee COPA section 6.04(d).  The Virginia CA did not present similar specific reporting metrics beyond the requirements for plan approval presented in Conditions 24 and 25

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# Context for Strategies Presented

- ***The region has academic and healthcare capacity*** to perform funded clinical trials, program evaluation, and basic science and translative research, ***but it is underperforming.***

- A successful regional effort ***requires the development of a "research ecosystem"*** which provides ***comprehensive support to researchers, students, and entrepreneurs.***

- The rural nature of the region, ***with fragmented academic capacity and distance from traditional funders*** works against us.

- Ballad's merger, ***which brings 1 million patient records in the region under a common data platform, aggregates significant healthcare and academic capacity, and provides a common approach to a region of unique demographics that make up the region,*** provides an opportunity to increase our regional performance.

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# *Plan Overview*
## Strategies for the 3-Year HR/GME

**Strategies that Serve Both Health Research and Education**

**Strategy #1:** Establish the Tennessee Virginia Regional Health Sciences Consortium (TVRHSC)

**Strategy #2:** Identify Targeted Hiring Needs to Build Research Capacity and Academic Program Growth

**Strategies that Serve Health Research**

**Strategy #3:** Develop & Operationalize Consortium Research  Infrastructure to Support Health Research in the Region

**Strategies that Serve Health Professions Education**

**Strategy #4:** Develop and Operationalize an Education and Training Infrastructure to Support the Region

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# *Plan Overview*
## Strategies Related to TN COPA HR/GME Requirements

| TN COPA Requirements: Section 3.03 | 1. Establish Consortium | 2. Targeted Hiring Needs | 3. Research Structure | 4. Education Structure |
|---|---|---|---|---|
| 1. Develop plan collaboratively with key Tennessee stakeholders | Y | Y | Y | Y |
| 2. Set forth how academic infrastructure will provide effective training for the next generation of healthcare professionals that are needed to address the healthcare needs in Tennessee | | Y | Y | Y |
| 3. Set forth program gap analysis and the formation of program development plans based on assessed needs, clinical capacity and availability of programs | Y | Y | Y | Y |
| 4. Identify fellowship training opportunities to support the regional base of sub-specialty physicians along with collaboration opportunities when professors and research leaders can work together to close gaps in regional specialty services or provide clinical oversight | Y | Y | | Y |
| 5. Set forth how spending investments in research and growth in the health research enterprise in Tennessee will attract additional research funding from national sources, including in the area of translational research | Y | Y | | Y |
| 6. Establish budgeted research expenditures for the second and third full Fiscal Years and thereafter update research expenditures to address subsequent years no later than ninety (90) days prior to the end of the Fiscal Year for which the then-existing HR/GME Plan ends. Allocate spending priority research projects identified by Ballad and Tennessee stakeholders in pursuit of this goal. | | | Y | |
| 7. Set forth the targeted number of persons to be trained by physician specialty or healthcare professional category, the location(s) of such training, the schedule for starting such training, and the expected gross annual expenditure related to such training | | | | Y |
| 8. The plan shall not reduce or eliminate any medical residency programs or available resident positions presently operated, except for reductions or eliminations resulting from reductions in state of TN or federal funding to the COPA hospitals for graduate medical education provided | | | | Y |

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# *Plan Overview*
## TN COPA HR/GME Plan Estimated Investment Summary

| HR/GME Plan | FY2020 | FY2021 | FY2022 | Year 1-3 Total |
|---|---|---|---|---|
| Amounts Associated with Projects Already Committed to by Ballad Health - Associated with HR/GME Plan Activities [1] | $907,000 | $1,402,680 | $1,799,860 | $4,109,540 |
| *Mandated Minimum Expenditures* | **$3,000,000** | **$5,000,000** | **$7,000,000** | **$15,000,000** |
| *Amounts Available for Investment in Strategies Presented in the Plan* | *$2,093,000* | *$3,597,320* | *$5,200,140* | *$10,890,460* |
| *Preliminary Budget for Strategies Presented in Plan [2]* | | | | |
| #1 Establish the Tennessee Virginia Regional Health Sciences Consortium (TVRHSC) | $401,000 | $460,000 | $473,000 | $1,334,000 |
| #2 Identify Targeted Hiring Needs to Build Research Capacity and Academic Program Growth | $860,000 | $1,010,000 | $1,535,000 | $3,405,000 |
| #3 Develop & Operationalize Consortium Research Infrastructure to Support Health Research in the Region | $333,000 | $1,099,000 | $1,450,000 | $2,882,000 |
| #4 Develop & Operationalize an Education and Training Infrastructure to Support the Region | $815,000 | $1,365,000 | $1,105,000 | $3,285,000 |

[1] *Includes investments committed to for the following: REACH, Pediatric Residencies, Addiction Fellowship, Population Health Plan Program Evaluation, and Dental Residency*

[2] *Activites related to each strategy presented in the HR/GME Plan.  For purposes of presentation, Ballad Health estimated amounts associated with each tactic.  However, it is understood that final planning and tactical recommendations, including financial investments necessary, will be calculated by Ballad Health and/or requested by the Consortium, as applicable.*

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# Health Research (HR) & Graduate Medical Education (GME)

*2. Strategic Approach*

# *Plan Overview*
## Strategies for the 3-Year HR/GME

**Strategies that Serve Both Health Research and Education**

***Strategy #1:*** *Establish the Tennessee Virginia Regional Health Sciences Consortium (TVRHSC)*

**Strategy #2:** Identify Targeted Hiring Needs to Build Research Capacity and Academic Program Growth

**Strategies that Serve Health Research**

**Strategy #3:** Develop & Operationalize Consortium Research Infrastructure to Support Health Research in the Region

**Strategies that Serve Health Professions Education**

**Strategy #4:** Develop and Operationalize an Education and Training Infrastructure to Support the Region

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# *Strategy #1: Establish the Tennessee Virginia Regional Health Sciences Consortium  (TVRHSC)*
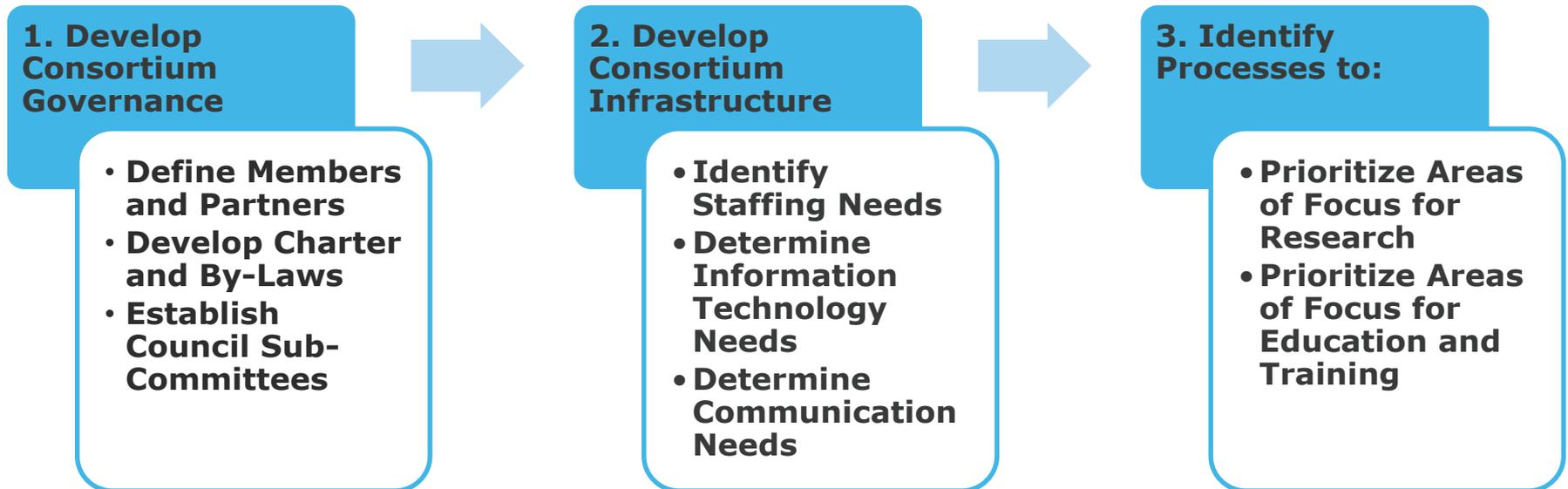
***As a rural area where research and health academic capacity is dispersed across a large geography and number of competitive institutions, a consortium would:***

- ***Promote better communication regarding needs and opportunities***

- ***Create a platform to bring focus to research and training capacity***

- ***Improve the region's ability to compete for funded research and build strong training programs.***

*Based on feedback received from key stakeholders:*

- Consensus exists that the region is underperforming in attracting research dollars, due in part to fragmentation and lack of focus

- Unique demographics, education, and healthcare capacity make the region attractive to potential funders if properly organized

- The region has difficulty attracting healthcare professionals

- There is need for coordination of student placements in sub-acute and acute settings

- Opportunity exists for a regional process to assess, identify, and address gaps in key training programs, and to evaluate the creation of new training programs
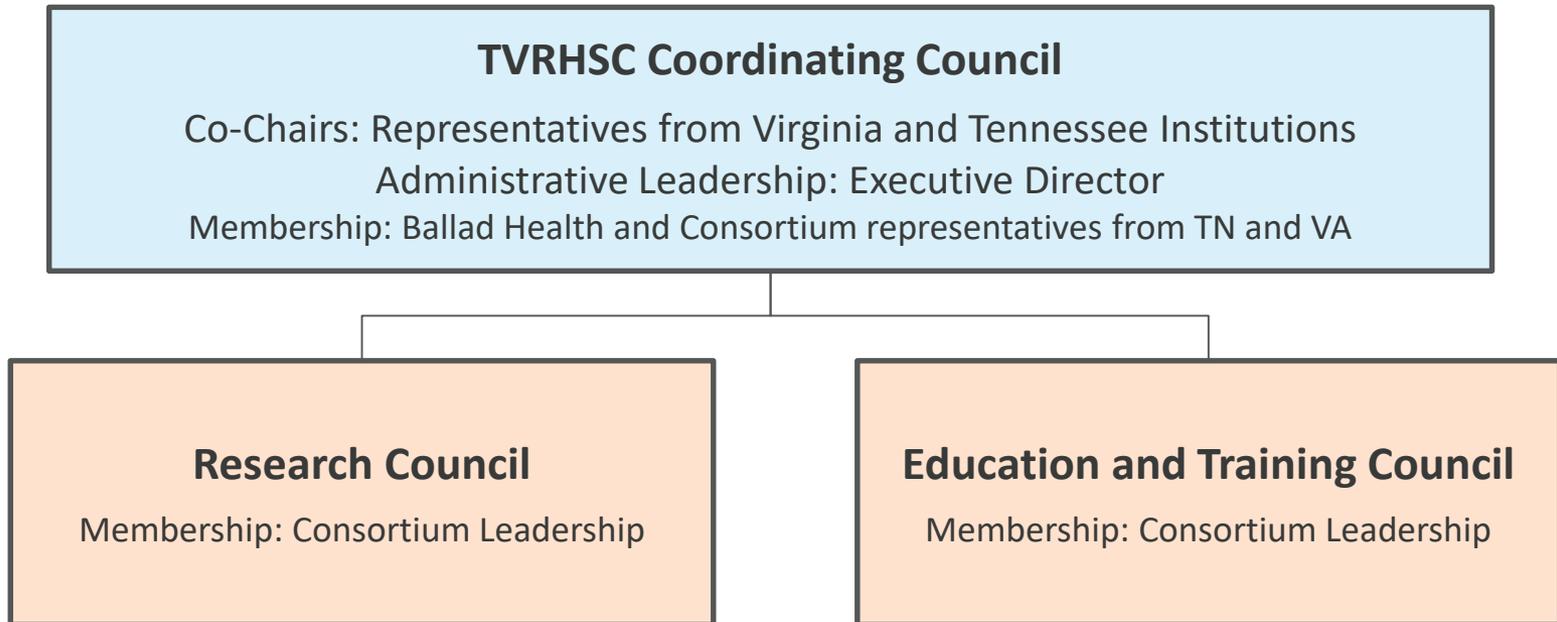
# *Strategy #1: Establish the Tennessee Virginia Regional Health Sciences Consortium (TVRHSC)*

**1. Develop Consortium Governance**

- **Define Members and Partners**
- **Develop Charter and By-Laws**
- **Establish Council Sub-Committees**

**2. Develop Consortium Infrastructure**

- **Identify Staffing Needs**
- **Determine Information Technology Needs**
- **Determine Communication Needs**

**3. Identify Processes to:**

- **Prioritize Areas of Focus for Research**
- **Prioritize Areas of Focus for Education and Training**

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# Strategy #1: Establish the Tennessee Virginia Regional Health Sciences Consortium  (TVRHSC)

## 1. Develop Consortium Governance

The establishment of a Coordinating Council, and the establishment of at least two subject-matter specific councils with oversight of Education and Training, and Research.

**TVRHSC Coordinating Council**

Co-Chairs: Representatives from Virginia and Tennessee Institutions
Administrative Leadership: Executive Director
Membership: Ballad Health and Consortium representatives from TN and VA

**Research Council**

Membership: Consortium Leadership

**Education and Training Council**

Membership: Consortium Leadership

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# Strategy #1: Establish the Tennessee Virginia Regional Health Sciences Consortium (TVRHSC)

**1. Develop Consortium Governance (*Continued*):**

- Define Consortium Members and Partners
  - *Consortium Members*: defined regional academic institutions
  - *Consortium Partners*: defined community-based stakeholders, regional employers and community groups
- Develop a Charter and By-Laws for the Consortium
  - Develop Mission and Vision for the Consortium
  - Establish processes, roles, and responsibilities
  - Develop process and criteria for fund allocation between VA and TN
- Establish Council Subcommittees as defined by the Education and Training Council as well as the Research Council to afford greater input and participation on TVRHSC initiatives.
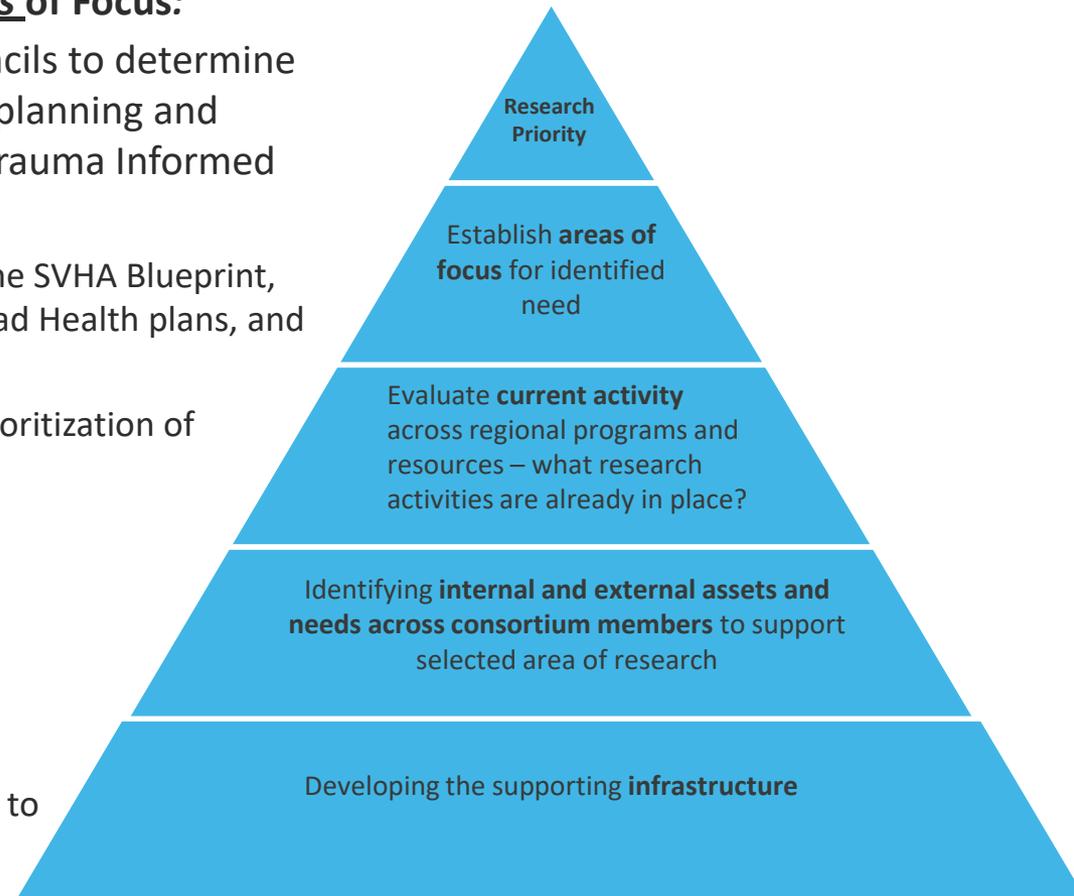
**2. Develop Consortium Infrastructure*:***

- Identification of needed/dedicated staff to manage the operations of the consortium
  - Dedicated staff to support consortium activities and manage member requests, including creation/management of databases and communication channels

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# Strategy #1: Establish the Tennessee Virginia Regional Health Sciences Consortium  (TVRHSC)

**3. Identify Process to Prioritize _Research Areas_ of Focus:**

- Utilize the Coordinating and Research Councils to determine priority research areas of focus for further planning and consideration in the region (For example: Trauma Informed Care; Addiction)

  - Leveraging the regional priorities outlined in the SVHA Blueprint, Comprehensive Community Report, other Ballad Health plans, and other Accountable Care Community priorities.

  - Develop evidence-based criteria to assist in prioritization of opportunities.

    - Examples of such criteria could include: community needs; matching opportunities; economic return to the region; and overall competitiveness of the research proposals

- Establish process for implementation of research plans

  - Individual consortium members decide "how" to participate in prioritized research focus areas (financial support, in-kind support, other supportive services, do not participate)

  - This graphic illustrates a possible process for implementation
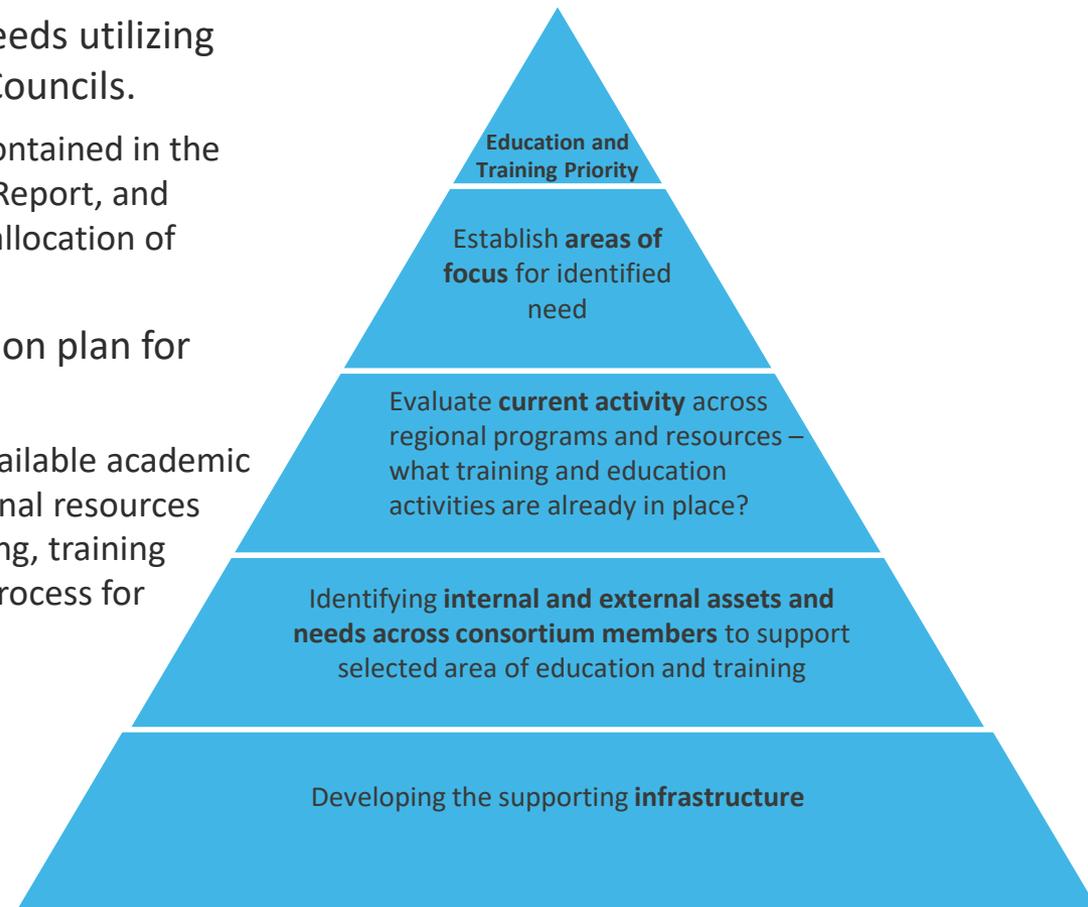
**Research Priority**

Establish **areas of focus** for identified need

Evaluate **current activity** across regional programs and resources – what research activities are already in place?

Identifying **internal and external assets and needs across consortium members** to support selected area of research

Developing the supporting **infrastructure**

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# Strategy #1: Establish the Tennessee Virginia Regional Health Sciences Consortium  (TVRHSC)

**4. Identify Process to Prioritize _Education and Training Areas_ of Focus*:**

- Evaluate priority education and training needs utilizing the Coordinating and Education/Training Councils.

  - Utilizing and building upon the information contained in the SVHA Blueprint, Comprehensive Community Report, and other regional work, priorities will be set for allocation of funds and resources

- Establish process to develop implementation plan for training and education

  - Develop a consistent approach to evaluate available academic and community resources, identifying additional resources needed to initiate new, and/or improve existing, training programs. This graphic illustrates a possible process for implementation.

Education and Training Priority

Establish **areas of focus** for identified need

Evaluate **current activity** across regional programs and resources – what training and education activities are already in place?

Identifying **internal and external assets and needs across consortium members** to support selected area of education and training

Developing the supporting **infrastructure**

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# *Strategy #1: Establish the Tennessee Virginia Regional Health Sciences Consortium (TVRHSC)*

**5. Develop regional resources for sharing of knowledge**

- **Build upon/support current Southwest Virginia GMEC conference**

- **Establish regional symposium**

  - Highlight research completed

  - Professional development

  - Exchange of ideas

- **Explore potential for inter-institutional professional development**

  - Site visits

  - Collaboration and shared resources and equipment

# *Strategy #1: Establish the Tennessee Virginia Regional Health Sciences Consortium  (TVRHSC)*

**Potential Barriers to Success**

- Challenges in engaging regional partners

- Time required to establish fully functional consortium

**Mitigation Tactics**

- Communicate early and often to begin the process of engaging regional partners. Ensure clear and transparent communication

- Develop a clear timeline for establishing the consortium and ensure incremental progress is made to begin addressing needs of the region as consortium and its components are developed

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# *Plan Overview*
## Strategies for the 3-Year HR/GME

**Strategies that Serve Both Health Research and Education**

**Strategy #1:** Establish the Tennessee Virginia Regional Health Sciences Consortium (TVRHSC)

***Strategy #2: Identify Targeted Hiring Needs to Build Research Capacity and Academic Program Growth***

**Strategies that Serve Health Research**

**Strategy #3:** Develop & Operationalize Consortium Research  Infrastructure to Support Health Research in the Region

**Strategies that Serve Health Professions Education**

**Strategy #4:** Develop and Operationalize an Education and Training Infrastructure to Support the Region

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# Strategy #2: Identify Targeted Hiring Needs to Build Research Capacity and Academic Program Growth

***As a rural area where research and academic capacity is dispersed across a large geography and number of competitive institutions, a consortium focus on targeted hiring would:***

- ***Determine recruitment needs for new talent and funding to the region to fill existing gaps, advance faculty diversity, and enrich research and mentoring opportunities***

- ***Would promote a research-focused climate and support health education***

- ***Raise brand awareness for the region***

*Based on feedback received from key stakeholders:*

- Consensus exists there is an opportunity to fill gaps in health research, health education and direct patient care through key individual or cluster hires

- There is a need to support healthcare professionals through mentorship opportunities, career development, and research opportunities

- There is a need for community development and increased potential for local students to be exposed to the broad range of healthcare employment opportunities

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# *Strategy #2: Identify Targeted Hiring Needs to Build Research Capacity and Academic Program Growth*

1. **Collaborate with regional partners to complete workforce analyses**

2. **Develop process for selecting and prioritizing targeted hires based on the analysis and the healthcare needs of the region**.

   - Selection and prioritization should take into consideration:
     - The key regional health needs
     - The current supply gaps of health professionals and expertise
     - The infrastructure to train the spectrum of health professionals required

   - For example, a hire can occur when there is an unmet need given the current health professionals AND there is no immediate or short-term possibility of fulfilling this need by training candidates in existing academic programs

3. **Recruit experienced Researchers and Educators**

   - Working with consortium participants, coordinate and unify vision and direction for recruitment

   - Identify mechanisms for targeted faculty hires to hold joint appointments across academic programs

   - Establish infrastructure to support interdisciplinary collaboration for these hires

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# *Strategy #2: Identify Targeted Hiring Needs to Build Research Capacity and Academic Program Growth*

**Potential Barriers to Success**

- Challenges in attracting talent to the region

**Potential Mitigation Tactics**

- Support marketing efforts to highlight assets within the region
- Continue pursuing the development of talent within the region

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# *Plan Overview*
## Strategies for the 3-Year HR/GME

**Strategies that Serve Both Health Research and Education**

**Strategy #1:** Establish the Tennessee Virginia Regional Health Sciences Consortium (TVRHSC)

**Strategy #2:** Identify Targeted Hiring Needs to Build Research Capacity and Academic Program Growth

**Strategies that Serve Health Research**

***Strategy #3: Develop & Operationalize Consortium Research Infrastructure to Support Health Research in the Region***

**Strategies that Serve Health Professions Education**

**Strategy #4:** Develop and Operationalize an Education and Training Infrastructure to Support the Region

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# *Strategy #3: Develop & Operationalize Infrastructure to Support Health Research in the Region*

**As a rural area where research capacity is dispersed across a large geography and number of competitive institutions, an aligned health research infrastructure - whether developed through the consortium, within Ballad Health, or within other regional partners - would:**

- **Provide a mechanism for decision-making when there are competing investment priorities**

- **Build upon existing institutional research efforts and allow for regional collaboration**

- **Increases visibility and influence of the region to attract and retain established research investigators, thus enhancing the research culture of the region**

*Based on feedback received from key stakeholders:*

- This could strengthen capabilities to translate research ideas into externally funded research grants and contracts awards

- Attract industry research sponsors to the region in key population health priority areas

- Increase visibility and influence of the region to attract and retain established research investigators

- Allow for economies of scale and controls to maximize expenditure efficiencies

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# Strategy #3: Develop & Operationalize Infrastructure to Support Health Research in the Region

1. **Establish programmatic goals by leveraging previous studies**

   - For example, build upon the areas of focus for research as developed in the Key Priorities for Improving Health in Northeast Tennessee and Southwest Virginia: A Comprehensive Community Report [1]

     – Including, but not limited to, CVD/Stroke, Obesity, Childhood Obesity, Diabetes, Substance Abuse, and mental health

   - Align with the priorities of the Accountable Care Community, which include Strong Starts, Strong Youth, Strong Teens and Strong Families

   - Potential for creation of broad-based research support

     – Wealth of regional population data may be used to attract federal, state, foundational, industry funding and rural health academic collaborators and leading researchers

2. **Evaluate existing research assets leveraging the Research Council**

   - Establish Research infrastructure spanning the region

     – For example, consider creation of a common Institutional Review Board, regional data repositories, and research informatics

     – Seek to enhance the efforts that are currently operating in local institutions and helping to coordinate across the region

[1] *Report Published by the East Tennessee State University College of Public Health*

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# *Strategy #3: Develop & Operationalize Infrastructure to Support Health Research in the Region*

2.  **Evaluate existing research assets leveraging the Research Council (continued)**

    - Collaborate with partner institutions for research in all aspects of healthcare in the region.

        – Align current and future projects in clinical trials, translational, and bench research activities amongst physicians, nurses, and allied health professionals.

        – Current efforts include examples like the *Obesity Center* at Emory and Henry, the *Healthy Appalachia Institute* at UVA-Wise, and the *Tennessee Public Health Training Center* at ETSU.

    - Expanding the reach and capability of the region's collection of individual institutions and working together for a common goal of betterment for all

        – For example, affiliate with regional research efforts such as the *Opioid Research Consortium of Central Appalachia (ORCA)* [1]

3.  **Evaluate measures and outcomes in other Ballad Health COPA/CA plans**

    - For example, funding set aside in support of outcomes measurement for the Population Health plan.

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[1] Participants include Virginia Tech (Kimberly Horn, PI) and ETSU (Rob Pack, Co-PI), with letters of support from West Virginia University, Marshall University, University of Kentucky, Carilion Healthcare, Ballad Health, and others.

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*Strategy #3: Develop & Operationalize Infrastructure to Support Health Research in the Region*

## Potential Barriers to Success

- Challenges in engaging regional partners

- Ensuring proposed goals remain manageable given current regional challenges

- Challenges in attracting talent supporting operational goals

- Complexity of strategy and potential to lose focus

- The political nature/sensitivity of distributing funds

- Continued  funding/sustainability

- Over-reliance on external talent (talent outside of the region that the states are concerned will be difficult to recruit to the region)

- Dearth of successful models for  inter-professional collaboration

- Disconnected goals (mile wide inch deep approach)

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# *Strategy #3: Develop & Operationalize Infrastructure to Support Health Research in the Region*

## **Potential Mitigation Tactics**

- Develop and execute on a Communication Plan, to ensure clear, transparent and regular communication when engaging regional partners

- Develop a clear criteria for the allocation of resources as well as adjudication/ escalation planning should there be challenges in reaching consensus

- The Consortium should ensure clear scope and objectives for projects undertaken and establish measurements of success

- Support marketing efforts to highlight assets within the region

- Continue pursuing the development of local talent within the region

- Ballad Health and the TVRHC members expect recommendations from other Plan sponsors and the Accountable Care Community to assist in the prioritization of the TVRHC's goals and strategies.

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# *Plan Overview*
## Strategies for the 3-Year HR/GME

**Strategies that Serve Both Health Research and Education**

**Strategy #1:** Establish the Tennessee Virginia Regional Health Sciences Consortium (TVRHSC)

**Strategy #2:** Identify Targeted Hiring Needs to Build Research Capacity and Academic Program Growth

**Strategies that Serve Health Research**

**Strategy #3:** Develop & Operationalize Consortium Research Infrastructure to Support Health Research in the Region

**Strategies that Serve Health Professions Education**

***Strategy #4: Develop and Operationalize an Education and Training Infrastructure to Support the Region***

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# *Strategy #4: Develop and Operationalize an Education and Training Infrastructure to Support the Region*

*As a rural area where academic capacity is dispersed across a large geography and number of competitive institutions, an aligned education and training infrastructure – whether developed through the consortium, within Ballad Health, or within other regional partners - would:*

- *Improve local access to high quality care by anticipating future workforce development needs Physicians, Nurse Practitioners, Physician Assistants, Nurses, Allied Health, and other professionals*

- *Align community workforce needs with educational programs, students, and graduates*

- *Encourage/incentivize Health Professions Education graduates to stay in the region by creating a coordinated regional approach to connect local talent with academic and industry opportunities*

- *Collaborate to develop innovative program opportunities to create and establish new nursing and allied health programs and to increase enrollment in these programs where regional shortages in health care resources exist.*

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# Strategy #4: Develop and Operationalize an Education and Training Infrastructure to Support the Region

**Based on feedback received from key stakeholders -** There is an opportunity to create a mechanism within the region to promote awareness of health careers and facilitate entry into health professions and career progression.

"The community wants access to a 'consolidation of opportunities'"

"We need access to data for community college partners and students in the area. This would foster innovation."

**Regional Partners [1]**

"We need to create a general consortium where everyone can pool their resources together – train PCP's, PA's, NP's, etc. This will help address the needs of rural areas and deliver rural based care"

[1] Quotes obtained from interviews conducted with regional partners by consultants

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# *Strategy #4: Develop and Operationalize an Education and Training Infrastructure to Support the Region*

1. **Leveraging areas of focus identified in the Key Priorities for Improving Health in Northeast Tennessee and Southwest Virginia: A Comprehensive Community Report [1], to collaborate with regional partners to establish health education goals**

2. **Inventory existing assets and resources within the region**
   - Partner with Rural Health Services Plan and complete an analysis of undergraduate and graduate health education programs utilizing Ballad Health for training (Nursing, Allied Health, Public Health, Healthcare Administration, and UME/GME). Compare against workforce needs to find alignment and gaps

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# *Strategy #4: Develop and Operationalize an Education and Training Infrastructure to Support the Region*

3. **Establish a GME/Health Professions Education (HPE) office within Ballad Health to improve coordination of educational activities that utilize Ballad Health resources**

   - Ensure appropriate leadership and administrative support

   - Establish organizational alignment and Support across existing and new Health Professions Education programs across TN and VA

   - Training slots/rotations and faculty within the Ballad Health system are limited, and there is an opportunity to better coordinate slot/rotation access between rural and non-rural tracks
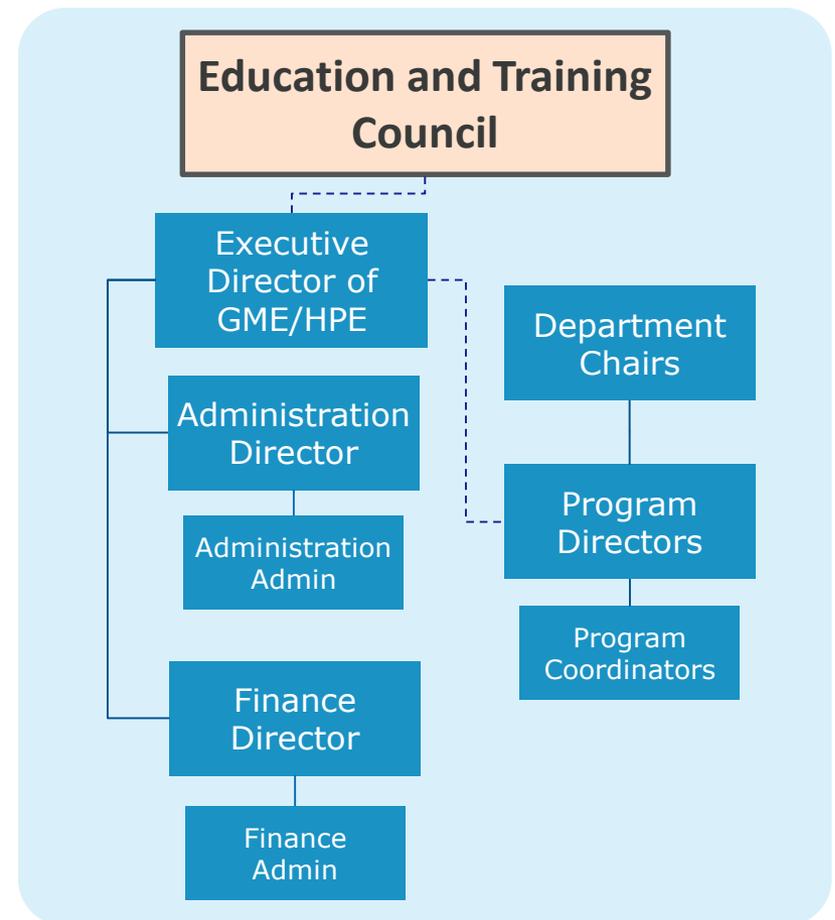


Education and Training Council
- Executive Director of GME/HPE
- Administration Director
- Administration Admin
- Finance Director
- Finance Admin
- Department Chairs
- Program Directors
- Program Coordinators

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# *Strategy #4: Develop and Operationalize an Education and Training Infrastructure to Support the Region*

4. **Work with the Education and Training Council to establish program management and staffing requirements and hire program management and support staff (e.g., Director, Facilitators, Counselors)**

5. **Partner with regional academic partners to develop strategies for promoting the development of additional, or absent, regional nursing and allied health professional training programs to address health care workforce needs**

   - Develop and implement innovative training programs to increase enrollment to address the regional nursing shortage

   - Develop and implement allied health programs to address regional needs

     - Evaluate the opportunity to implement a Medical Technology program in the region as no program currently exists

     - Collaborate to increase enrollment in existing Scrub Technician and related procedural Technician academic programs where annual graduates are not meeting the regional clinical resource needs

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# *Strategy #4: Develop and Operationalize an Education and Training Infrastructure to Support the Region*

6. **Identify and adopt a commercial technology platform aggregating disparate workforce supply and demand information.**

   - The proposal is to create a platform where prospective students can be connected with educational opportunities across the region. Further, after their education is complete, those graduates could be connected to employment opportunities across the region. This is potential for both healthcare and industry to employ and utilize. And can begin to offer hope for careers in disciplines local residents may not be aware of and opportunities that may be available locally

   - Create opportunities for healthcare professionals from around the country to see what opportunities exist in our region

   - Allow for planning and collaboration across the region

   - Improve potential for new recruits to find employment opportunities for their spouses

   - Platform could also assist in identifying and tracking evolving workforce needs

     – For example, assist in development of near and long term planning to address mental health professional shortages

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# *Strategy #4: Develop and Operationalize an Education and Training Infrastructure to Support the Region*

7. **Partner with state and regional academic and employment resources to develop strategies for promoting career progression for nurse and allied health professionals**

   - Evaluate the cost/benefit of implementing a comprehensive evidence-based incentive plan for clinical employees
   - Develop career ladders for nursing and allied health professions to promote development of highly trained workforce in health careers matching needs of the region
   - Complete implementation of new Ballad Health policies and programs designed to incentivize and retain health professionals

8. **Strengthen collaborations with existing psychiatry and mental health programs to establish rotations and other training opportunities in the region**

   - Collaboratively develop strategies to improve access to mental health care in both Virginia and Tennessee through training programs such as REACH
   - Evaluate partnerships with Virginia-based and Tennessee-based academic programs to add psychiatry and mental health rotations in rural VA

9. **Addiction is at epidemic levels in the region, as such, Ballad Health has partnered with ETSU to create an addiction fellowship program to serve patients in both Virginia and Tennessee**

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## *Strategy #4: Develop and Operationalize an Education and Training Infrastructure to Support the Region*

10. **To ensure stability in the care of the region's children, Ballad Health will fund 2 pediatric residency slots initially slated to be removed by previous sponsor**

11. **Develop mechanisms to ensure rural residents gain access to non-rural acute care facility-based, advanced clinical rotations**

   - Partner with ETSU, UVA, VCOM, DCOM and others to create and expand educational opportunities within, and external to, Ballad Health

12. **Develop models for retention of primary care providers**

   – Partner with the Southwest Virginia Health Authority and The Southwest Virginia Graduate Medical Education Consortium (GMEC) to evaluate stipends to primary care providers who commit to practice in underserved rural areas across region

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## Strategy #4: Develop and Operationalize an Education and Training Infrastructure to Support the Region

**13. Build upon existing medical training programs while ensuring no reduction in resident training slots.**

- Establish allocation for new or expansion of programs through current regional partners
- Continue current programs and partnerships to improve the future healthcare workforce for the region
  - Appendix A for current allocations and expenditures

**14. Investment in stipend increases for residents in both Virginia and Tennessee**

- Maintain and strengthen our medical training programs

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# Strategy #4: Develop and Operationalize an Education and Training Infrastructure to Support the Region

**Potential Barriers to Success**

- Inability to launch effective technology platform

- Challenges in attracting talent to the region

- Historical friction amongst regional partners

**Potential Mitigation Tactics**

- Ensure alignment on the scope of the technology platform. Once confirmed, establish a clear timeline for development and implementation

- Support marketing efforts to highlight assets within the region

- Continue pursuing the development of talent within the region

- Leverage the consortium to ensure clear and transparent communication between regional partners. Establish processes to manage disagreements and conflicts. Redirect focus to the goal of improving the health of the region.

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# *3. Implementation Roadmap*

# Implementation Roadmap
# Milestones and Metrics for Measuring Strategies: FY 2020

**Implementation Milestones and Metrics: Q1 and Q2**

| Strategies | Q1 Milestones | Q1 Metrics | Q2 Milestones | Q2 Metrics |
|---|---|---|---|---|
| 1. **Establish the Tennessee Virginia Regional Health Sciences Consortium (TVRHSC)** | • Establish Consortium Governance | • *Evidence of Roster of Coordinating Council and Health Research Council and Education and Training Council*<br><br>• *Finalized Governance Charter and By-laws* | • Coordinating Council has convened at least once in Q2<br>• Council Sub-Committees & membership established<br>• Identify staffing needs<br>• Explore technology needs | • *Coordinating Council Meeting minutes*<br><br>• *Evidence of Roster of Council Sub-Committee Chairs and members*<br>• *Evidence of Draft Job Descriptions*<br>• *Needs assessment initiated* |
| 2. **Identify Targeted Hiring Needs to Build Research Capacity and Academic Program Growth** | • Initiate regional workforce analysis | • *Scope and vendor selection* | • Coordinating Council review of regional workforce analysis | • *Committee minutes* |
| 3. **Develop & Operationalize Consortium Research Infrastructure to Support Health Research in the Region** | • Analysis of regional research infrastructure assets/gap analysis initiated | • *Draft of existing regional assets submitted* | • Draft regional research growth priorities and strategies<br>• Finalize research infrastructure plan | • *Draft Regional Research Priorities plan submitted*<br>• *Finalized Research Infrastructure Plan Submitted* |

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# *Implementation Roadmap*
# Milestones and Metrics for Measuring Strategies: FY 2020

**Implementation Milestones and Metrics: Q1 and Q2**

| Strategies | Q1 Milestones | Q1 Metrics | Q2 Milestones | Q2 Metrics |
|---|---|---|---|---|
| 4. **Develop & Operationalize an Education and Training Infrastructure to Support the Region** | • Facilitate collaboration between existing resources and regional employers<br><br>• Engage regional academic partners to identify key Education and Training challenges<br><br>• Administrative structure development of VA Dental residency program<br><br>• Assessment of existing Addiction programs completed<br><br>• Finalize organizational structure for Health Professions Education (HPE) Office | • *Inventory of existing Education and Training assets in the region*<br><br>• *Draft Education and Training assessment of challenges*<br><br>• *List of administrative activities completed for implementation of new residency*<br><br>• *SW VA Addiction Medicine Fellowship initial business plan developed*<br><br>• *Finalized HPE organizational structure* | • Begin communication with regional workforce initiatives<br><br>• Analysis for Education and Training program development plan completed<br><br>• Initiate Health Professions Graduate assessment of reasons students leave the region upon graduation<br><br>• Identify initial targeted recruitment<br><br>• Develop HPE job descriptions and begin recruitment<br><br>• Assessment of potential Psychiatry rotations | • *Meeting minutes indication initiation of conversation*<br><br>• *Draft Education and Training augmentation plan submitted*<br><br>• *Finalized assessment/ observations submitted, incentives contemplated*<br><br>• *Evidence of finalized job description and recruitment activities*<br><br>• *Evidence of finalized HPE job postings*<br><br>• *Inventory of existing and potential new rotation locations* |

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# *Implementation Roadmap*
# Milestones and Metrics for Measuring Strategies: FY 2020

## Implementation Milestones and Metrics: Q3 and Q4

| Strategies | Q3 Milestones | Q3 Metrics | Q4 Milestones | Q4 Metrics |
|---|---|---|---|---|
| 1. **Establish the Tennessee Virginia Regional Health Sciences Consortium (TVRHSC)** | • Supporting Staff & Infrastructure finalized and begin phase 1 staff recruitment <br><br> • Develop technology plan <br> • Research and Education/Training focus areas prioritized <br> • Develop/enhance Regional Symposium | • *Supporting Staff Organizational Chart* <br> • *Evidence of finalized job descriptions and initial recruitment activity* <br> • *Initiate technology vendor discussions* <br> • *Process for identification of priority areas produced* <br> • *Evaluation of current programs* | • Coordinating Council and Subcommittee meetings <br> • Hire Phase 1 staff and begin recruitment of phase 2 staff <br> • Technology implementation <br> • Priority focus areas identified <br> • Develop/enhance Regional Symposium | • *Committee minutes* <br> • *List/Description of Tools Developed* <br> • *Evidence of accepted phase 2 offers* <br> • *Vendor selection* <br> • *Listing of priority areas* <br> • *Dates and agenda produced* |
| 2. **Identify Targeted Hiring Needs to Build Research Capacity and Academic Program Growth** | • Establish process for selecting/ prioritizing target hires <br> • Initiate recruitment process of Phase 1 targeted hires | • *Draft process developed for selecting/ prioritizing target hires* <br> • *Draft Job Descriptions for Phase 1 target hire(s)* | • Continue recruitment of Phase 1 target hires <br> • Begin Phase 2 of targeted hires | • *Draft Job Descriptions for Phase 2 target hire(s)* |

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# Implementation Roadmap
## Milestones and Metrics for Measuring Strategies: FY 2020

**Implementation Milestones and Metrics: Q3 and Q4**

| Strategies | Q3 Milestones | Q3 Metrics | Q4 Milestones | Q4 Metrics |
|---|---|---|---|---|
| 3. **Develop & Operationalize Consortium Research Infrastructure to Support Health Research in the Region** | • Finalize research priorities and strategies<br><br>• Develop & Finalize Research Infrastructure Implementation Plan<br><br>• Interviews conducted w/leading researcher(s)<br><br>• Begin process of evaluation within Ballad COPA/CA plans | • *Final Regional Research Priorities plan submitted and approved*<br><br>• *Finalized Research Infrastructure plan submitted*<br><br>• *Evidence of recruitment progress*<br><br>• *Minutes of meetings with leadership of other plans* | • Research Infrastructure Implementation begins<br><br>• Offers made to leading researcher(s)<br><br>• Initiate COPA/CA plan evaluation | • *Research Infrastructure Kickoff meeting held and working groups established*<br><br>• *Evidence of recruitment progress*<br><br>• *Report of metrics and outcomes from plan activities* |

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# *Implementation Roadmap*
# Milestones and Metrics for Measuring Strategies: FY 2020

## Implementation Milestones and Metrics: Q3 and Q4

| Strategies | Q3 Milestones | Q3 Metrics | Q4 Milestones | Q4 Metrics |
|---|---|---|---|---|
| 4. **Develop & Operationalize an Education and Training Infrastructure to Support the Region** | • Evaluation of commercial workforce supply/demand technology platforms<br><br>• Finalized Workforce Analysis Report<br><br>• Exploration of partnerships to develop additional or absent regional nursing and allied health needs<br><br>• Develop Allied Health incentive and career progression models<br><br>• Implementation of new Dental residency program timeline<br><br>• Implementation of new Optometry residency program timeline<br><br>• Initiate proposal for new Addiction Medicine Fellowship/expansion of psychiatry slots/rotations | • *Evidence of finalized Technology Vendor RFP developed*<br><br>• *Final Health Education/Workforce Analysis Plan*<br><br>• *Evidence of meeting with potential partners*<br><br><br>• *Draft Allied Health Incentive Models Plan*<br><br><br>• *Finalized Implementation Roadmap submitted*<br><br>• *Finalized Implementation Roadmap submitted*<br><br>• *Minutes of meetings with regional academic partners* | • Commercial workforce supply/demand technology platform initiation<br><br>• Initiate changes based on Workforce Analysis Report<br><br>• Development of needed nursing/allied health programs<br><br>• Evaluation of all incentive models vetted and finalized<br><br>• New residency program development activities completed<br><br>• Education and Training program augmentation initiated<br><br>• Evaluation of Primary Care provider retention program | • *Technology Vendor Demonstrations Started*<br><br>• *TBD Q4 Plan Aims achieved, plan for Q5 plans finalized*<br><br>• *Evidence of business models for new/expanded programs*<br><br>• *Draft concept of incentive plans with implementation roadmap*<br><br>• *List of program development activities completed*<br><br>• *Listing of new/expanded training locations-improved access to rural program residents seeking specialty rotations*<br><br>• *Draft concept model and business plan* |

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# *Implementation Roadmap*
# Milestones and Metrics for Measuring Strategies: FY 2021

| Strategies | Milestones and Metrics |
|---|---|
| 1. **Establish the Tennessee Virginia Regional Health Sciences Consortium (TVRHSC)** | Milestones<br>• Evaluate management and support positions added in FY 1 and adjust as necessary<br>• Review/evaluate further infrastructure needs and implement as needed<br>• Ensure ongoing engagement of regional partners. Academic and non-academic<br>• Phase 1 and 2 Support Staffing complete |
| 2. **Identify Targeted Hiring Needs to Build Research Capacity and Academic Program Growth** | Milestones<br>• Complete recruitment of target hires<br>• Evaluate positions added in FY2020 and adjust as necessary |
| 3. **Develop & Operationalize Consortium Research Infrastructure to Support Health Research in the Region** | Milestones<br>• Research Infrastructure Implementation initial milestones complete<br>• Seek additional funding sources for research activities<br>*Metrics*<br>• *A description of research topics*<br>• *A listing of the entities engaged in research*<br>• *The principal researcher(s) who is/are responsible for each project*<br>• *Grant money applied for or expected*<br>• *Matching funds*<br>• *Anticipated expenditures*<br>• *A report on the outcome of previously reported research projects including references to any published results* |
| 4. **Develop & Operationalize an Education and Training Infrastructure to Support the Region** | Milestones<br>• Manage resident recruitment process<br>• Manage accreditation status of new programs developed<br>• Monitor effectiveness of new rotations and adjust as needed<br>• Evaluate effectiveness of career progression incentives<br>• Selection and Implementation of a Technology vendor<br>*Metrics*<br>• *A summary containing the number of accredited resident positions for each residency program in the Geographic Service Area, also including the number of such positions that are filled* |

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# Implementation Roadmap
## Milestones and Metrics for Measuring Strategies: FY 2022

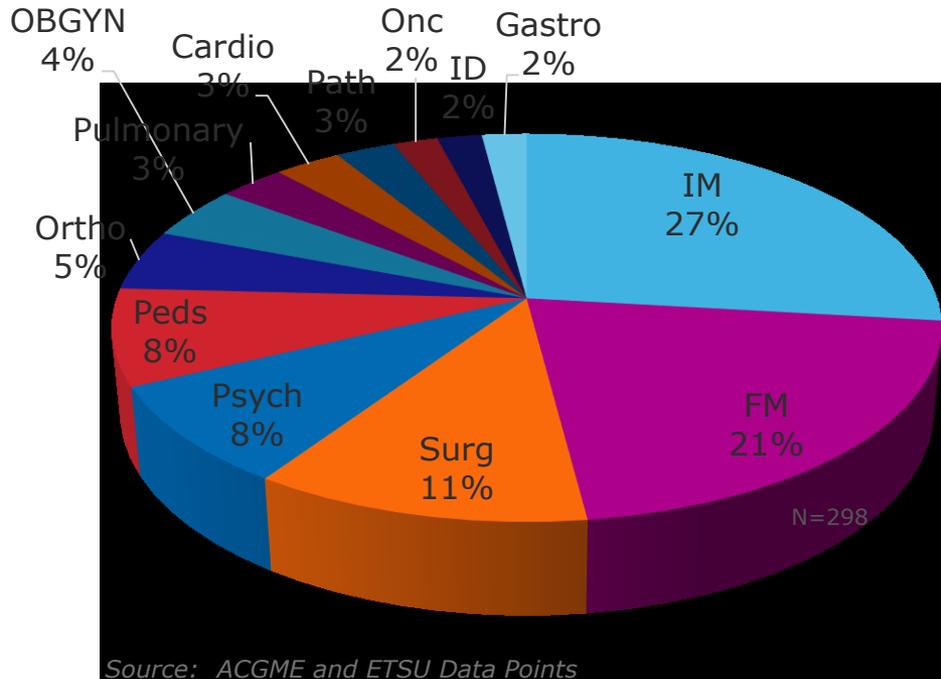| Strategies | Milestones and Metrics |
|---|---|
| 1. **Establish the Tennessee Virginia Regional Health Sciences Consortium (TVRHSC)** | Milestones<br>• Evaluate functional success of the consortium and adjust as needed<br>• Review/evaluate further infrastructure needs and implement as needed<br>• Expand engagement of regional partners. Academic and non-academic |
| 2. **Identify Targeted Hiring Needs to Build Research Capacity and Academic Program Growth** | Milestones<br>• Evaluate positions added in FY2021 and adjust as necessary/assess future hiring needs |
| 3. **Develop & Operationalize Consortium Research Infrastructure to Support Health Research in the Region** | Milestones<br>• Evaluate how will new research initiatives align with regional priorities and adjust as needed<br>• Seek additional funding sources for research activities<br>• Assess additional infrastructure and resource needs<br>*Metrics*<br>• *A description of research topics*<br>• *A listing of the entities engaged in research*<br>• *The principal researcher(s) who is/are responsible for each project*<br>• *Grant money applied for or expected*<br>• *Matching funds*<br>• *Anticipated expenditures*<br>• *A report on the outcome of previously reported research projects including references to any published results* |
| 4. **Develop & Operationalize an Education and Training Infrastructure to Support the Region** | Milestones<br>• Manage accreditation status of new programs developed<br>• Monitor effectiveness of new rotations and adjust as needed<br>• Evaluate effectiveness of career progression incentives<br>• Evaluate alignment of new educational programs with workforce needs<br>*Metrics*<br>• *A summary containing the number of accredited resident positions for each residency program in the Geographic Service Area, also including the number of such positions that are filled* |
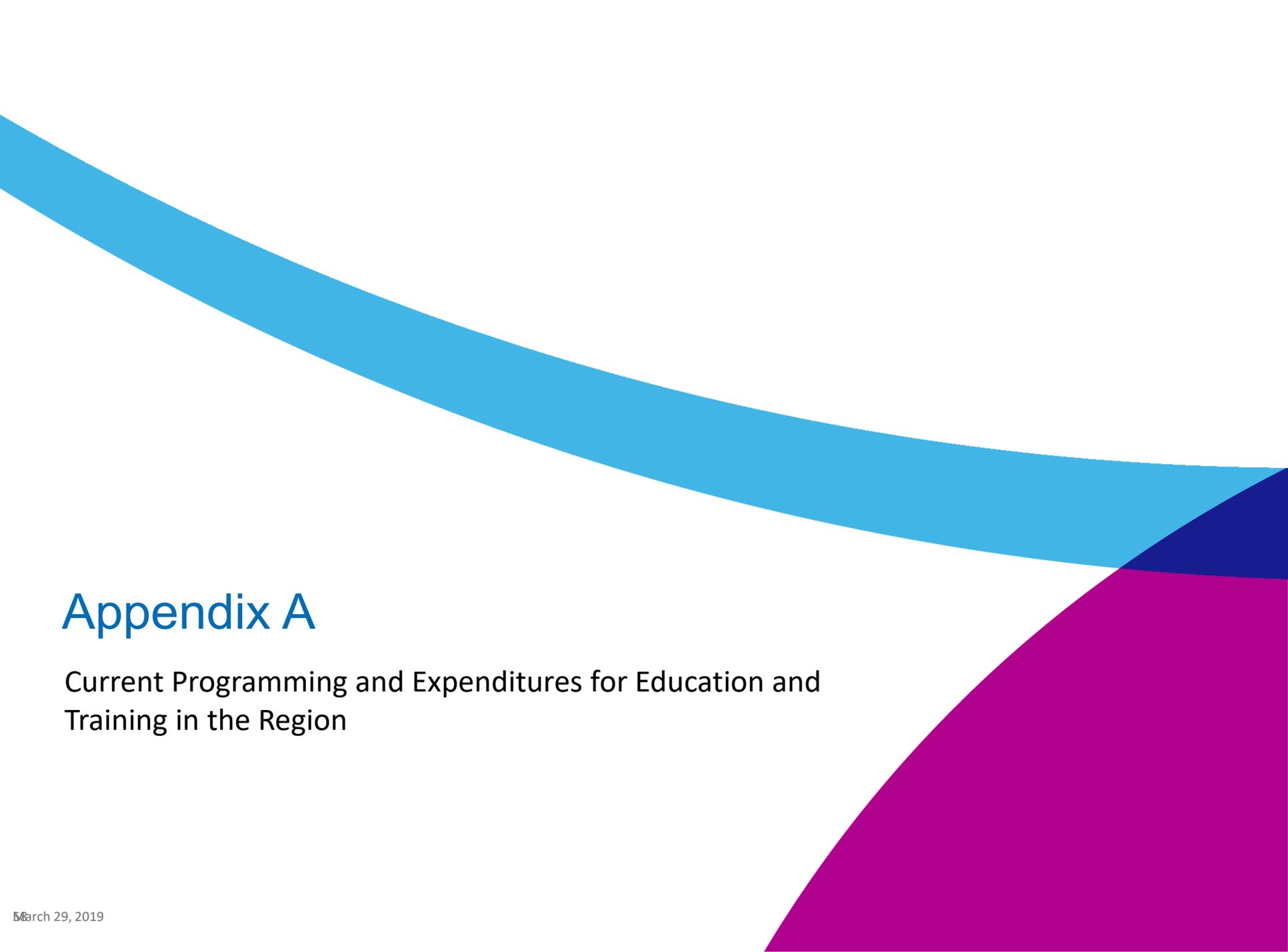
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# Appendix A

Current Programming and Expenditures for Education and Training in the Region

# Ballad Health partners with ETSU to sponsor 15 GME programs

- 298 approved slots rotating through clinical sites, of which 264 are currently filled



**Size of ETSU Residency Programs by Approved Resident Slots**

OBGYN 4%
Cardio 3%
Path 3%
Onc 2%
ID 2%
Gastro 2%
Pulmonary 3%
Ortho 5%
Peds 8%
Psych 8%
Surg 11%
IM 27%
FM 21%
N=298

Source: ACGME and ETSU Data Points

Legend:
- Internal Med
- Family Med (3 programs)
- Surgery
- Psychiatry
- Pediatrics
- Orthopaedics
- Obstetrics and Gynecology
- Pulmonary Disease and Critical Care Medicine
- Cardiovascular Disease
- Pathology-Anatomic and Clinical
- Medical Oncology
- Infectious Disease

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# Ballad hospitals sponsor 3 GME residency programs involving 59 FTEs in Southwest Virginia
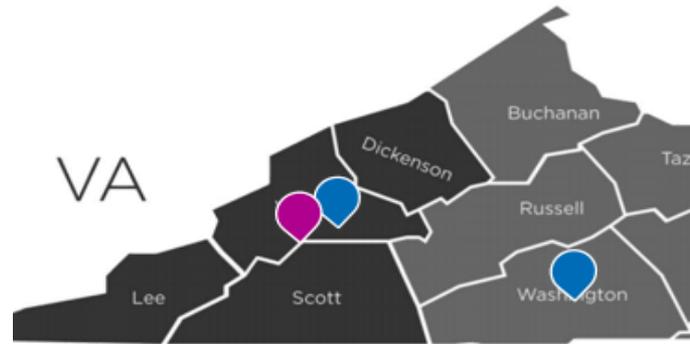


|  | Johnston Memorial Hospital | Norton Community Hospital | Lonesome Pine Hospital | Totals |
|---|---|---|---|---|
| Program(s) | Internal Medicine | Internal Medicine | Family Medicine | |
| Number of Approved Slots | 15 | 30 | TBD* | TBD* |
| Number of Slots Filled | 11 | 29 | 19 | 59 |
| Over/Under Cap | 4 under | 1 under | TBD* | N/A |

*Source: ACGME and ETSU Data Points*
*Note: * New program, cap has not been set yet*

# GME residency board passage rates

# The total DGME expenses for the Academic track total $13 million



**Resident Salaries and Benefits by Hospital**

Woodridge
$492,814

BRMC
$2,715,401

JCMC
$7,007,301

HVMC
$3,601,548

**Total Resident Salaries and Benefits = $13,817,064**
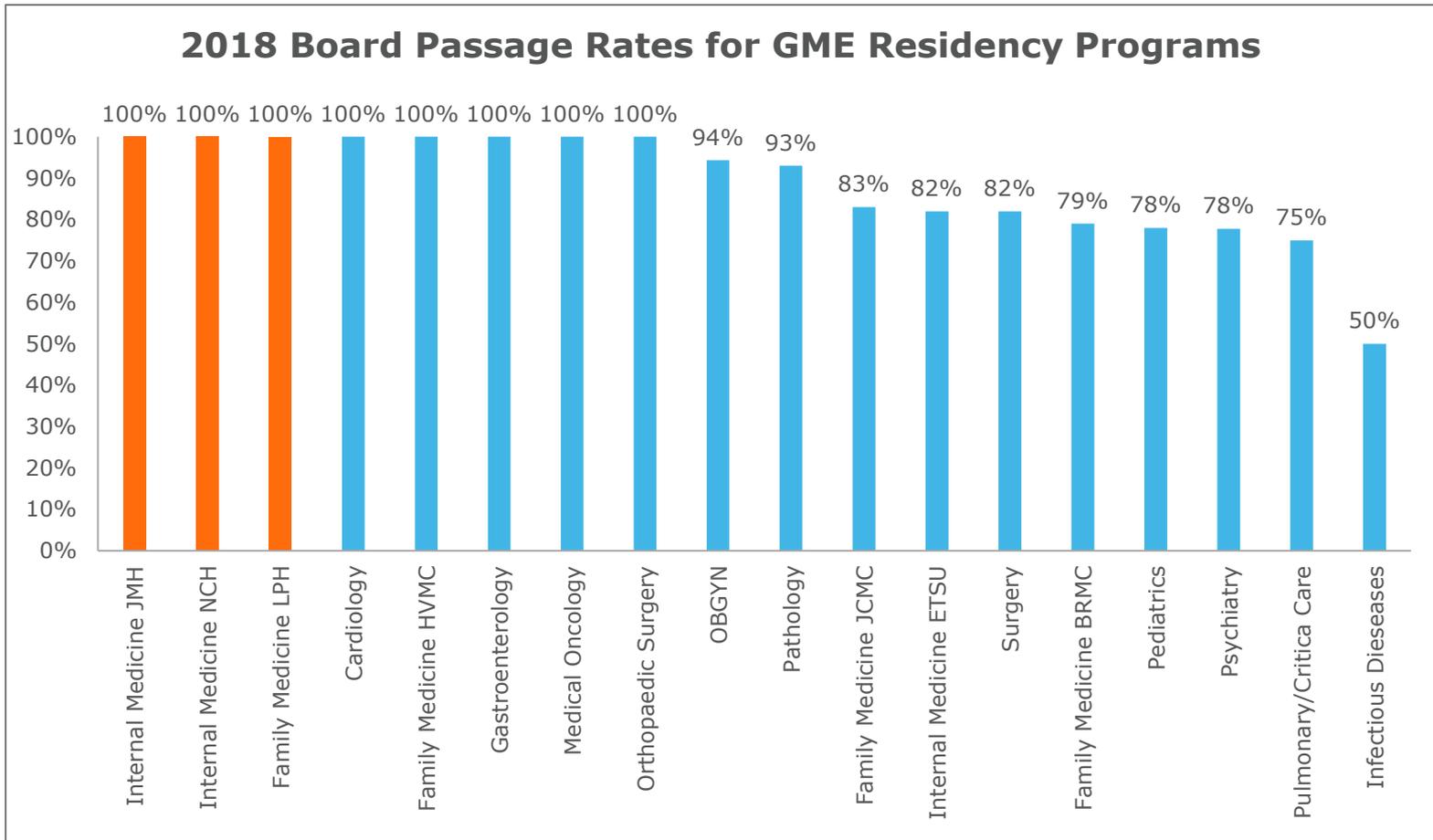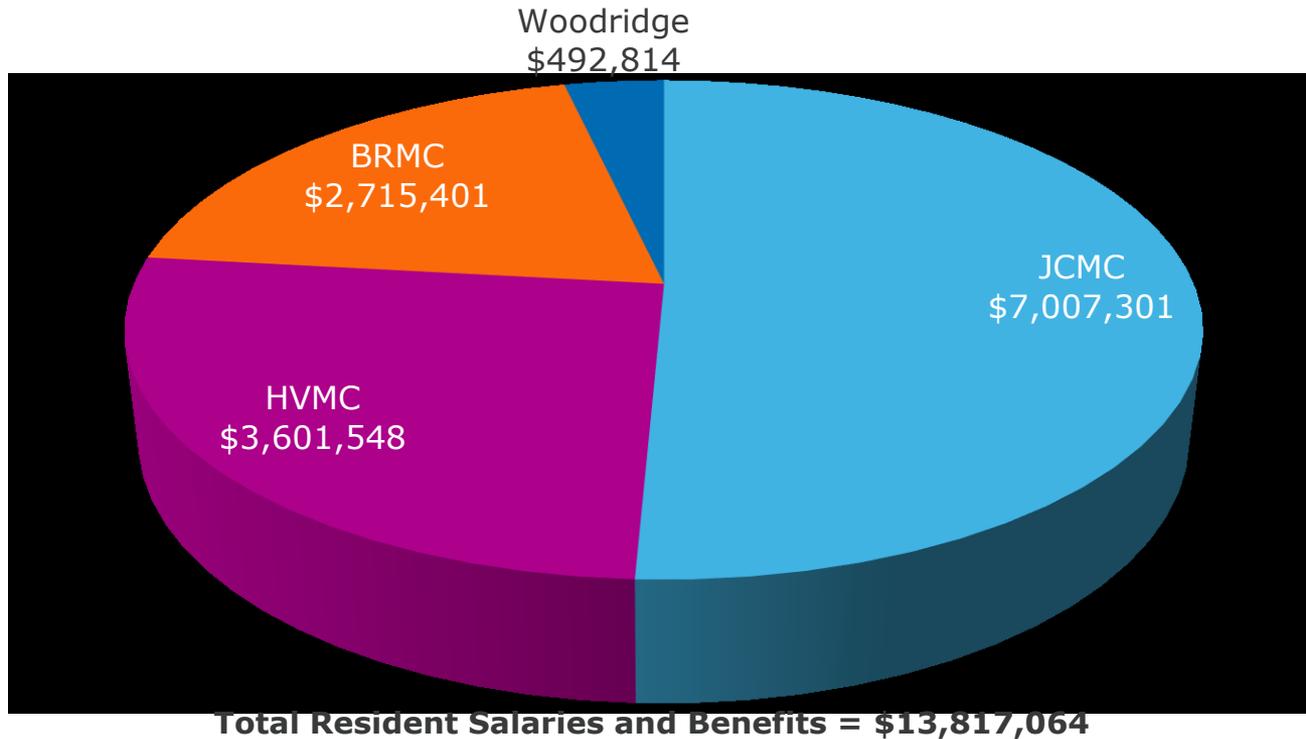
*Source: ETSU Data Point*

# The total IME expenses are approximately $11 Million dollars for the Academic track

**Estimated Total Cost for GME Activities at ETSU Quillen College of Medicine**

| Department | Cost |
|---|---|
| Pathology | $399,988 |
| GME Office | $754,540 |
| Psychiatry | $836,865 |
| OB/GYN | $994,944 |
| Surgery | $1,141,898 |
| Pediatrics | $1,266,533 |
| Internal Medicine | $2,678,497 |
| Family Medicine | $2,728,365 |

*Source: ETSU Data Point*

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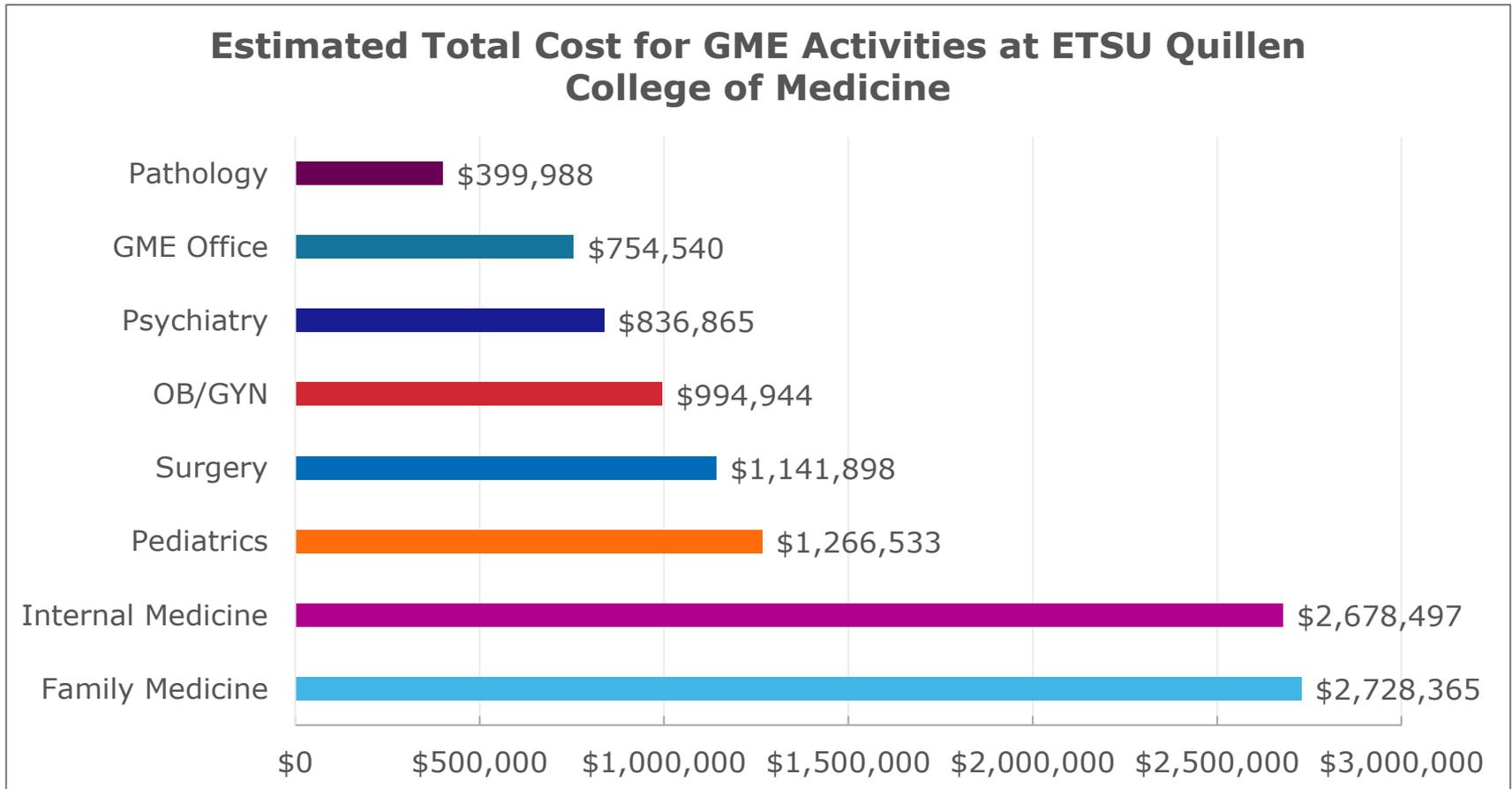
# GME Programs match rates in2017

| | 2015 | | | 2016 | | | 2017 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Quota | Filled | Percentage | Quota | Filled | Percentage | Quota | Filled | Percentage |
| **FM Bristol** | 8 | 8 | 100% | 8 | 8 | 100% | 8 | 8 | 100% |
| **FM JC** | 6 | 6 | 100% | 6 | 6 | 100% | 6 | 6 | 100% |
| **FM KGPT** | 6 | 6 | 100% | 6 | 6 | 100% | 6 | 6 | 100% |
| **Int Med** | 21 | 21 | 100% | 22 | 22 | 100% | 22 | 22 | 100% |
| **OB/GYN** | 3 | 3 | 100% | 3 | 3 | 100% | 3 | 3 | 100% |
| **Path** | 2 | 2 | 100% | 2 | 2 | 100% | 2 | 2 | 100% |
| **Peds** | 7 | 7 | 100% | 7 | 7 | 100% | 7 | 7 | 100% |
| **Psych** | 4 | 4 | 100% | 5 | 5 | 100% | 5 | 5 | 100% |
| **Surg** | 8 | 8 | 100% | 7 | 7 | 100% | 7 | 7 | 100% |
| **Card** | 3 | 3 | 100% | 3 | 3 | 100% | 3 | 3 | 100% |
| **GI** | 2 | 2 | 100% | 2 | 2 | 100% | 2 | 2 | 100% |
| **ID** | 2 | 1 | 50% | 2 | 0 | 0% | 2 | 2 | 100% |
| **Onc** | 3 | 3 | 100% | 1 | 1 | 100% | 2 | 2 | 100% |
| **Pul/CC** | 3 | 3 | 100% | 1 | 1 | 100% | 2 | 2 | 100% |

*Source:  ETSU Data Point*

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# Overview of residency programs

| Program | Match Rates | Program Status | Sites | Positions Available | Positions Filled | Board Passage Rate |
|---|---|---|---|---|---|---|
| Internal Medicine | 100% | Continued Accreditation | 4 | 80 | 72 | 82% |
| Surgery | 100% | Continued Accreditation | 4 | 34 | 30 | 82% |
| Psychiatry | 100% | Probationary Accreditation | 5 | 25 | 18 | 78% |
| Family Medicine – Bristol | 100% | Continued Accreditation | 2 | 24 | 24 | 79% |
| Pediatrics | 100% | Continued Accreditation | 1 | 24 | 21 | 78% |
| Family Medicine – JCMC | 100% | Continued Accreditation | 2 | 21 | 19 | 83% |
| Family Medicine – Holston | 100% | Continued Accreditation | 2 | 18 | 18 | 100% |
| Orthopedics | 100% | Continued Accreditation | 7 | 15 | 10 | 100% |
| OB/GYN | 100% | Continued Accreditation | 2 | 13 | 13 | 94% |
| Cardiology | 100% | Continued Accreditation | 2 | 9 | 9 | 100% |
| Pulmonology & Critical Care | 100% | Continued Accreditation | 4 | 9 | 6 | 75% |
| Pathology | 100% | Continued Accreditation | 3 | 8 | 8 | 93% |
| Gastroenterology | 100% | Continued Accreditation | 2 | 6 | 6 | 100% |
| Infectious Disease | 50% | Continued Accreditation | 2 | 6 | 4 | 50% |
| Oncology | 100% | Continued Accreditation | 1 | 6 | 6 | 100% |

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# Overview of residencies in Southwest Virginia

| Program | Match Rates | Program Status | Sites | Positions Available | Positions Filled | Board Passage Rate | Hired at Ballad |
|---|---|---|---|---|---|---|---|
| **Norton** | 56% (2018) | Initial Accreditation | 6 | 30 | 29 | 100% | 34% |
| **Johnston** | 100% | Initial Accreditation | 6 | 15 | 11 | 100% | 50% |
| **Lonesome Pine** | 53% | Initial Accreditation | 12 | New Program | 19 | 100% | 31.25% |

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# Ballad had 2294 nursing students rotate at their sites in 2017



**Nursing Students Per Academic Institution Rotating through Ballad in 2017**

- ETSU 32%
- Northeast State Community College 11%
- Virginia Appalachi...
- Milligan College 6%
- King University 5%
- Virginia Highlands Community College 5%
- Tusculum College 5%
- Others (less than 5%) 28%

N=2294

Source: ETSU Data Point

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# Health Research and Graduate Medical Education Three-Year Plans for the State of Tennessee

March 29, 2019

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It's your story. We're listening.