Technical Advisory Panel of the Cooperative Agreement
Agenda
April 2, 2019 – 10:00 a.m.-4:00 p.m.
Madison Building Mezzanine Conference Room
109 Governor Street
Richmond, Virginia 23218

Welcome and Introductions	Joe Hilbert
Draft Minutes – December 14, 2017	Mr. Hilbert
Overview of the year	Erik Bodin
Overview of the Active Supervision Framework	Pete Knox and Judi Knecht
Break	
Public Comment Period	
Quarterly Quality Metrics Report	Tom Eckstein
Working Lunch, Discussion of metrics and suggested changes	
Discussion of metrics and suggested changes	Panel Members
Break	
Process and Output Measures	Lina Zimmerman
Discussion of process and output measures	Panel Members
Next Steps	Mr. Hilbert
Adjourn	

Members (Bobby Cassell and George Hunnicutt, Jr.) participating by videoconference:
Wise County Health Department
134 Roberts Avenue SW
Wise, Virginia 24293

If persons participating by videoconference at the Wise County Health Department experience technical issues during the meeting, please call (804) 249-9005, Conference number 522345.

Parking is available in Richmond for TAP members and staff by special pass (provided) at the parking deck on the southeast corner of 14th Street and East Franklin Street, with entrances to the deck off 14th Street and off 15th Street.

Technical Advisory Panel of the Cooperative Agreement
Minutes
December 14, 2017 – 8:00 a.m.
Office of Emergency Medical Services, Class Room A & B
1041 Technology Park Drive
Glen Allen, Virginia

Videoconference Location
Wise County Health Department
134 Roberts Avenue SW
Wise, Virginia

Members present: Dr. Norm Oliver (Virginia Department of Health "VDH"), Chair; Don Beatty (Virginia Bureau of Insurance); Bobby Cassell by videoconference (consumer); Dr. Stephen Combs (Wellmont Health System "WHS"); Todd Dougan (WHS); Tom Eckstein (Arundel Metrics); George Hunnicutt, Jr. by videoconference (Pepsi Cola Bottling of Norton); Pete Knox (Peter Knox Consulting); Lynn Krutak (Mountain States Health Alliance "MSHA"); Sarah Milder (Arundel Metrics); Andy Randazzo (Anthem); and Dr. Morris Seligman (MSHA).

Members absent: Sean Barden (Mary Washington Healthcare) and Dr. Ron Clark (Virginia Commonwealth University Health System).

VDH staff present: Erik Bodin, Director, Office of Licensure and Certification; Joseph Hilbert, Director, Governmental and Regulatory Affairs; and Catherine West, Administrative Assistant.

Others Present: Amanda Lavin, Office of the Attorney General.

Welcome, Introductions, and Review of Agenda

Dr. Oliver called the meeting to order at 8:00 a.m. He told the Technical Advisory Panel (TAP) that a quorum of members was present at the Glen Allen location. Dr. Oliver told the TAP that this meeting would cover one item, Indicator 1.E from the Long-Term Measures – Active Supervision of the Cooperative Agreement: Draft Measures and Performance Indicators that was tabled at the last meeting. The panel would also review and adopt short term measures as well as discuss the timeline for submission of the panel's recommendations to the Commissioner and next steps. Dr. Oliver told the panel that after the December 4 and 5, 2017 meeting, VDH staff revised the short term measures document that will be discussed today so that it linked with the long term measures the TAP previously approved and suggested time frames such as 60 days, 120 days, and 180 days. For ease of discussion, those measures have been assigned a designator (e.g., A, B, 1.1, etc.). There was a brief discussion of the update on the cooperative agreement that was provided at the Southwest Virginia Health Authority meeting that was held on December 13, 2017. Dr. Levine and Dr. Melton attended the meeting with Dr. Oliver, Mr. Bodin, and Mr. Hilbert attending by telephone. The Authority will be providing the Commissioner with recommendations for active supervision.

Dr. Oliver told the videoconference participants that since the Glen Allen location is unable to see them when a document is being viewed over the videoconference equipment, if they wish to speak during any of the discussions, to interrupt as necessary so that they can be heard.

While all non-roll call votes were by show of hands, in all instances, Mr. Cassell's and Mr. Hunnicutt's votes were cast by voice method.

Approval of Minutes

Dr. Oliver asked the members if any changes needed to be made to the draft minutes from the December 4 and 5, 2017 TAP meeting. Hearing no discussion, Ms. Milder made a motion to adopt the draft minutes with Mr. Beatty seconding the motion. The minutes were approved unanimously by a voice vote.

Long-Term Measures – Active Supervision of the Cooperative Agreement: Draft Measures and Performance Indicators

Outcome 1 – Create Value in the Marketplace

Indicator 1.E

Mr. Dougan made a motion to approve this indicator by replacing the existing wording in its entirety with the following: "The results of the Anthem Q-HIP be communicated to the Commissioner as it is available on an annual basis." Dr. Seligman seconded the motion.

There was a discussion pertaining to the history of the Anthem Q-HIP, applicability of the Q-HIP metrics to the Medicare and pediatric populations, the extent to which the Q-HIP metrics are revised based on periodic review, and how Anthem compares Q-HIP results across different facilities.

During discussion by the panel members, Mr. Eckstein proposed an amendment to add the following sentence to the end of Mr. Dougan's proposed amendment: "These results shall include comparisons to the other Anthem providers and percentiles where available." Mr. Randazzo proposed adding the words "Virginia network" between the words "Anthem" and providers in this sentence. Both of these amendments were agreed to. The indicator now reads: "The results of the Anthem Q-HIP be communicated to the Commissioner as it is available on an annual basis. These results shall include comparisons to the other Anthem Virginia network providers and percentiles where available." Dr. Oliver called for a vote by show of hands on the amended motion. The vote was 12 ayes and 0 nays. The motion was approved.

Short Term Milestones to Ensure Success of Plan Development to be Achieved Within 12 Months of Closing of Merger

There was an initial discussion concerning the rationale underlying VDH's staff recommendation for an initial detailed outline, and first draft plan, to be submitted prior to the new health system's final submission of the various plans required as conditions to the Commissioner's Order. Mr. Hilbert said that the intention of the short term metrics is to help enable the new health system to be successful. Ms. Krutak stated that it is not the new health system's intention

to develop the required plans "in a vacuum" without ongoing communication with the Commissioner. Mr. Beatty said that it was important for there to be a relationship between the Commissioner and the new health system based on "mutual, arms-length respect." There was further discussion concerning the extent to which the proposed short term metrics may suggest that the Commissioner does not trust the New Health System to satisfy the conditions set forth in the Order. Mr. Knox stated that the new health system has lots of talented people working for it, but also explained that 70 percent of all mergers fail and 70 percent of all planned strategies never actually get implemented. Consequently, he said that the "deck is stacked against" the new health system.

Short Term Item A

Mr. Eckstein made a motion to approve this item as a block as written with Mr. Knox seconding the motion. During discussion by the panel members, Mr. Eckstein amended his motion to change the wording for the first two sub-items to "New health system will update the Office of Licensure and Certification of the progress of the plan preparation at 90 days following closing" and "A draft of the plan will be submitted to the Office of Licensure and Certification 30 days before submission of the final plan." The last sub-item remains as proposed, "Submission of final draft plan to VDH Office of Licensure and Certification staff within 6 months of closing." Dr Oliver called for a vote by show of hands on the amended motion. The vote was 10 ayes and two nays. The motion was approved.

Short Term Item B

Mr. Knox made a motion to approve this item as a block as written with Mr. Eckstein seconding the motion. During discussion by the panel members, Mr. Eckstein proposed an amendment to make the wording similar for this item as for Item A above. The proposed amendment was agreed to. The first sub-item is now "New health system will update the Office of Licensure and Certification of the progress of the plan preparation at six months following closing." The second sub-item is now "A draft of the plan will be submitted to the Office of Licensure and Certification 60 days before submission of the final plan." The last sub-item remains the same as proposed, "Submission of final draft plan to VDH Office of Licensure and Certification staff within 12 months of closing." Dr. Oliver called for a vote by show of hands on the amended motion. The vote was nine ayes and three nays. The motion was approved.

Item 1.2

After a brief break, Dr. Oliver proposed that the TAP may want to review other conditions that are worded in the same manner as Items A and B so that the panel could discuss making similar amendments to those items as was done in Items A and B. Mr. Eckstein made a motion to approve this item with amendments to sub-items 1 and 2 with Ms. Milder seconding the motion. Sub-item 1 now reads: "New health system will update the Office of Licensure and Certification of the progress of the plan preparation at six months following closing." Sub-item 2 now reads: "A draft of the plan will be submitted to the Office of Licensure and Certification 60 days before submission of the final plan." The last sub-item remains as proposed. Dr. Oliver called for a vote by show of hands on the motion. The vote was eight ayes and four nays. The motion was approved.

Item 3.1

Mr. Knox made a motion to approve this item with Mr. Eckstein seconding the motion. During discussion by the panel members, it was decided to include 3.1.A, 3.1.B, and 3.1.C in the discussion and to amend the wording in a similar manner as were Items A and B. Mr. Eckstein proposed adding the words "a comprehensive access plan (see Performance Indicator 3.B)" between the words "Compile" and "and submit;" add the word "it" between the words "submit" and "to VDH Office of;" add the word "including" between the words "staff" and "baseline data;" and delete the words "to be included in comprehensive access plan (see Performance Indicator 3B)" between the words "access measures" and "for Southwest Virginia." In addition, Mr. Eckstein proposed replacing all of the wording in 3.1.A with the following: "New health system will update the Office of Licensure and Certification of the progress of the plan preparation at three months following closing." Finally, Mr. Eckstein proposed the following changes to 3.1.B: replace the words "Submit initial" with the word "A" at the start of the sentence; add the words "of the" between the words "draft" and "plan;" add the words "will be submitted" between the words "plan" and "to;" add the word "the" between the words "to" and "VDH Office;" add the words "30 days before submission of the final plan "after the words "Licensure and Certification;" and delete the words "staff within 4 months of closing for review and comment." Item 3.1.C remains as proposed. The proposed amendment was agreed to. Item 3.1 now reads:

> 3.1 -Compile a comprehensive access plan (see Performance Indicator 3,B) and submit it to VDH Office of Licensure and Certification staff including baseline data for all access measures for Southwest Virginia
> 3.1.A - New health system will update the Office of Licensure and Certification of the progress of the plan preparation at three months following closing
> 3.1.B - A draft of the plan will be submitted to the VDH Office of Licensure and Certification 30 days before submission of the final plan
> 3.1.C - Submit final draft plan to VDH Office of Licensure and Certification staff within 6 months of closing

Dr. Oliver called for a vote by show of hands on the amended motion. The vote was eight ayes and four nays. The motion was approved.

Item 1.1

Mr. Knox made a motion to approve this item by replacing the existing wording in its entirety with the following: " Submit the most recent data from the Anthem Q-HIP to VDH Office of Licensure and Certification." Ms. Krutak seconded the motion. Dr. Oliver called for a vote by show of hands on the motion. The vote was 12 ayes and 0 nays. The motion was approved.

Item 1.3

Mr. Knox made a motion to approve this item with Ms. Milder seconding the motion. During discussion by the panel members, Mr. Eckstein proposed adding the words "and" between the

words “cost” and “quality;” adding the word “develop” between the words “and” and “experience;” add the word “measure” between the words “experience” and the words “for employee;” and adding the words “desirable within six months but required at 12 months” to the end of the sentence. The item now reads: “Compile and submit to VDH Office of Licensure and Certification staff baseline data on cost and quality and develop experience measure for employee and family population; desirable within six months but required at 12 months.” The proposed amendment was agreed to. Dr. Oliver called for a vote by show of hands on the amended motion. The vote was 11 ayes and one nay. The motion was approved.

Item 1.4

Mr. Knox made a motion to approve this item by adding the words “desirable within six months but required at 12 months” after the words “programs for employers.” Mr. Eckstein seconded the motion. Dr. Oliver called for a vote by show of hands on the motion. The vote was eight ayes and four nays. The motion was approved.

Item 1.5

Mr. Eckstein made a motion to approve this item by adding the words “desirable within six months but required at 12 months” after the words “programs for employers.” Mr. Knox seconded the motion. Dr. Oliver called for a vote by show of hands on the motion. The vote was eight ayes and four nays. The motion was approved.

Item 2.1

Mr. Dougan made a motion to approve this item by adding the words “desirable within six months but required at 12 months” after the words “peer counties.” Mr. Eckstein seconded the motion. During discussion by the panel members, Mr. Eckstein proposed an amendment to add the words “as well as other counties in the Commonwealth, as available;” after the words “peer counties” and before the words added by Mr. Dougan “desirable within six months.” The proposed amendment was agreed to. The item now reads: “Compile and submit to VDH Office of Licensure and Certification staff baseline data for all population health metrics for Southwest Virginia and for socioeconomic peer counties as well as other counties in the Commonwealth, as available; desirable within six months but required at 12 months.” Dr. Oliver called for a vote by show of hands on the amended motion. The vote was 12 ayes and 0 nays. The motion was approved.

Item 3.2

Mr. Eckstein made a motion to approve this item by adding the words “desirable at six months but required at 12 months” as the last sentence of the item. Ms. Milder seconded the motion. Dr. Oliver called for a vote by show of hands on the motion. The vote was 12 ayes and 0 nays. The motion was approved.

Item 4.1

Mr. Eckstein made a motion to approve this item by adding the words “desirable at six months but required at 12 months” after the words “providers in Southwest Virginia.” Mr. Knox

seconded the motion. During discussion by the panel members, this wording was changed to "as part of the needs assessment and recruitment plan (Indicator 4.A)." The proposed amendment was agreed to. The item now reads: "Compile and submit to VDH Office of Licensure and Certification staff baseline data concerning health care providers in Southwest Virginia as part of the needs assessment and recruitment plan (indicator 4.A)." Dr. Oliver called for a vote by show of hands on the amended motion. The vote was 11 ayes and 0 nays (Ms. Milder was no longer at the meeting). The motion was approved.

Item 5.1

Mr. Eckstein made a motion to approve this item with Mr. Knox seconding the motion. During discussion by the panel members, an amendment was proposed to add the words "; upon closing, the quarter prior and the next quarter, as available" after the words "financial metrics." The proposed amendment was agreed to. Dr. Oliver called for a vote by show of hands on the amended motion. The vote was 11 ayes and 0 nays (Ms. Milder was no longer at the meeting). The motion was approved.

Item 5.A.1

Mr. Eckstein made a motion to add the following language: "Compile and submit to VDH Office of Licensure and Certification staff financial projection data within 120 days after closing," which would constituent Item 5.A.1. Ms. Krutak seconded the motion. Dr. Oliver called for a vote by show of hands on the motion. The vote was 11 ayes and 0 nays (Ms. Milder was no longer at the meeting). The motion was approved.

Item 5.2

Mr. Knox made a motion to approve this item with Mr. Eckstein seconding the motion. During discussion by the panel members, Mr. Eckstein proposed adding the words "desirable at closing but required at 12 months" after the words "quality and service metrics." The proposed amendment was agreed to. Dr. Oliver called for a vote by show of hands on the amended motion. The vote was 11 ayes and 0 nays (Ms. Milder was no longer at the meeting). The motion was approved.

Item 6.1

Mr. Eckstein made a motion to approve this item with Mr. Knox seconding the motion. During discussion by the panel members, Ms. Krutak proposed adding the word "initial" between the words "data on" and "Board engagement" as well as adding the words "survey within 18 months of closing" after the words "Board engagement." The item now reads: "Compile and submit to VDH Office of Licensure and Certification staff baseline data on initial Board engagement survey within 18 months of closing." The proposed amendment was agreed to. Dr. Oliver called for a vote by show of hands on the amended motion. The vote was eight ayes and three nays (Ms. Milder was no longer at the meeting). The motion was approved.

Item 6.2

Mr. Knox made a motion to approve this item with Mr. Eckstein seconding the motion. During discussion by the panel members, Mr. Eckstein proposed adding the words 'at six and 12 months after the date of closing" after the words "on employee turnover." The proposed amendment was agreed to. Dr. Oliver called for a vote by show of hands on the amended motion. The vote was seven ayes and four nays (Ms. Milder was no longer at the meeting). The motion was approved.

Item 7.1

Mr. Knox made a motion to approve this item with Mr. Eckstein seconding the motion. During discussion by the panel members, Mr. Eckstein proposed replacing the word "on" with the words "as part of the" between the words "baseline data" and "investment in the research" and adding the words "plan (Indicator 7.A)" after the words "Virginia service area." The proposed amendment was agreed to. The item now reads: "Compile and submit to VDH Office of Licensure and Certification staff baseline data as part of the investment in the research enterprise in the Virginia service area plan (indicator 7.A)." Dr. Oliver called for a vote by show of hands on the amended motion. The vote was seven ayes and four nays (Ms. Milder was no longer at the meeting). The motion was approved.

Item 8.1

Mr. Eckstein made a motion to approve this item with Mr. Knox seconding the motion. During discussion by the panel members, Mr. Knox proposed replacing the words "dollars to be allocated to Southwest Virginia with specific goals defined" with the words "goals of spending in southwest Virginia; desirable at six months but required at 12 months" after the words "spending plan including." The proposed amendment was agreed to. The item now reads: "Complete and submit to VDH Office of Licensure and Certification staff the short and long term monetary spending plan including goals of spending in southwest Virginia." Dr. Oliver called for a vote by show of hands on the amended motion. The vote was nine ayes and two nays (Ms. Milder was no longer at the meeting). The motion was approved.

Item 8.2

Mr. Eckstein made a motion to approve this item by adding the words "desirable at six months but required at 12 months" after the words "Licensure and Certification staff." Mr. Knox seconded the motion. Dr. Oliver called for a vote by show of hands on the motion. The vote was 11 ayes and 0 nays (Ms. Milder was no longer at the meeting). The motion was approved.

Public Comment

There were no comments from any member of the public.

Next Steps

After a brief break for the TAP members to pick up their lunches, Dr. Oliver told the panel members that the work on the short-term milestones and long-term indicators was completed. The regulations require that the TAP provide recommendations to the Commissioner and the

report that the TAP will submit to the Commissioner will consist of the approved short-term milestones and long-term indicators as well as the final minutes from the November 14, 2017 and December 4 and 5, 2017 meetings and the draft minutes from today's meeting, December 14, 2017. Dr. Oliver also told the panel that it was clear from the votes during the discussions of the short-term milestones and long-term indicators that there was no clear consensus on those items. Dr. Oliver recommended that panel members who feel strongly about recommendations that should not should not be considered share those concerns on an individual basis with the Commissioner. He further stated that the regulations indicate that the Commissioner has the final authority on active supervision of the cooperative agreement. Dr. Oliver further stated that the Southwest Virginia Health Authority would be submitting recommendations to the Commissioner regarding active supervision of the cooperative agreement.

There was a brief discussion on a timeline for the submission of recommendations to the Commissioner; that the final report of the panel would be sent to all TAP members as well as posting it online; the process by which the Commissioner would share her decision with the new health system; and future meetings of the TAP.

Adjourn

The meeting adjourned at approximately 12:04 p.m.

Active Supervision Framework for the Ballad COPA/CA

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JANUARY 2019

Table of Contents

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Introduction and Background

Introduction and Background

P4

- The Tennessee Terms of Certification, which govern Ballad's Certificate of Public Advantage and the Virginia Letter Authorizing a Cooperative Agreement require Ballad to submit to the states various Plans and Reports.
- These requirements are necessary for the states to perform their regulatory duty of Active Supervision, monitoring and auditing Ballad to ensure compliance and a continuing Public Advantage.

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Active Supervision Framework

Active Supervision Framework Overview

P6

Desired Outcome

- Improved health and well being throughout the region
- Reduced costs per capita
- Improved experience for individuals throughout the region

The Active Supervision Framework

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The Path to the Desired Outcome:

- Detailed **plans**, with **strategies** and **tactics** that are defined and implemented over a given time period to move toward the desired outcome.
- A **data centered approach** to understanding **performance improvement** and **progress** toward the desired outcome that overlays the plans' strategies and tactics.
- A reporting process that is sufficiently rigorous and disciplined to allow states to monitor performance and progress.

The Active Supervision Framework

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Important Information for the States:

- Are the plans, strategies and tactics the right ones to achieve the desired outcome?
- Are the tactics associated with the plans being implemented in a timely and effective manner?
- Is measureable progress being achieved on the defined strategies over time?
- Is measureable progress being made on annual outcome measures on a year over year basis?
- Is measureable progress being made on the population health outcome (pg. 20) and leading (pg. 21) indicators over time?
- Is measureable progress being made on the health equity indicators over time?

The Active Supervision Framework

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The Path to Maintain an Effective Active Supervision System:

- A detailed **ten-year longitudinal measurement template** to measure progress toward the desired outcome.
- A disciplined **reporting structure** to appropriately track progress toward the desired outcome.
- An **open dialogue** to share information and prevent misunderstanding.

The Active Supervision Framework

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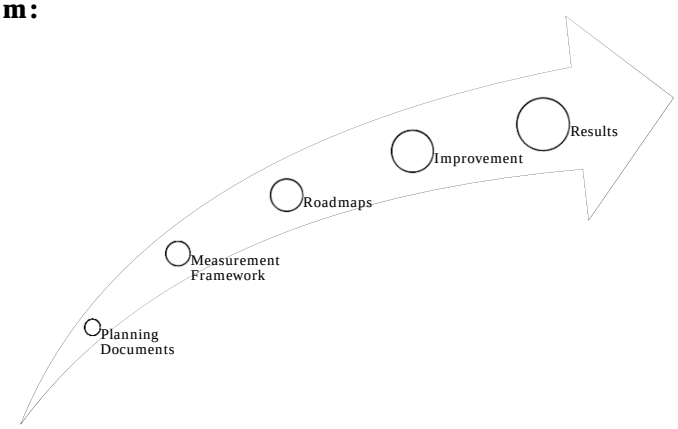
The Path to Maintain an Effective Active Supervision System:



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The Active Supervision Framework

Planning Documents in the Active Supervision Framework:

- Ballad's Plans
  - Strategies
  - Tactics
- TAP Measures & Performance Indicators
- Quality Indicators

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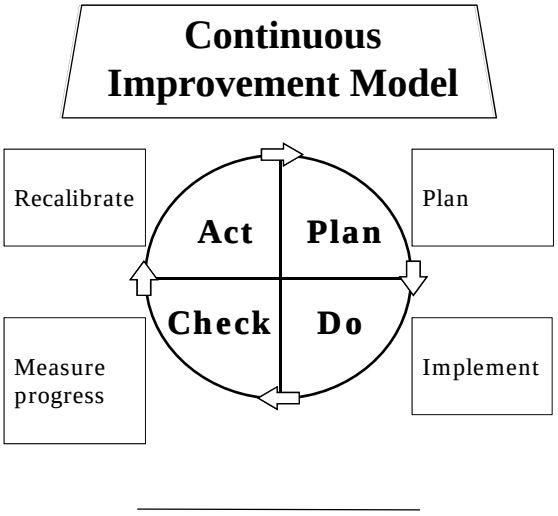
Core concept



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The Measurement Framework

The Measurement Framework

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Overview of the Measurement Framework:

- The measurement framework is intended to create a **data centric approach** to the Active Supervision process. Utilizing a data centric approach is an objective way to monitor progress and maintain authenticity in reporting.

The Measurement Framework

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Measurement Framework Categories:

1. **Tactical** - usually associated with completing a task or assignment - often a yes/no measure - just do it (activity)
2. **Spread and Scale** - current performance on existing measures tracked over time
3. **Outcome Measure** - end of year performance on Sub-Index Measures
4. **Leading Indicators** - an indicator that more often than not will produce a change in direction before a corresponding change in the long-term outcome.
5. **Risk-based Population Indicators** - a set of triple aim indicators for defined populations
6. **Health Equity Indicators** - refer to Section 2.02 of TOC

The Measurement Framework

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- Each measurement area of focus serves an important purpose in a **linked system of measures**. The linked system of measures provides a valuable **line of sight** in the Active Supervision process, from tactics to the desired outcome of improvement in the overall health and wellbeing of the region. If any one of the areas of focus is missing, the clear line of sight is diminished and the Active Supervision capability would be severely restricted.

The Five Measurement Categories

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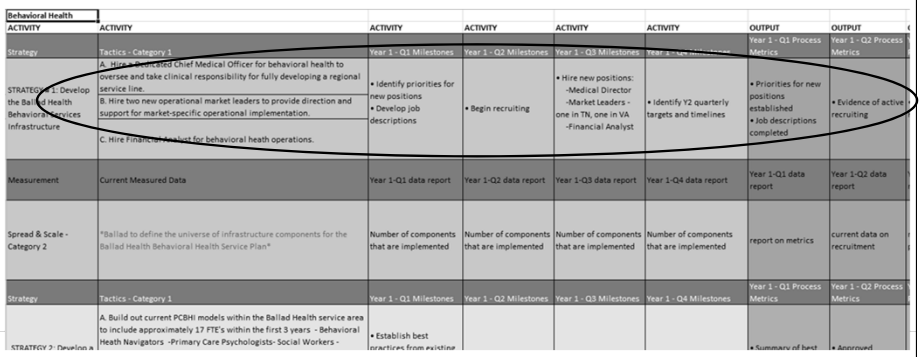
- **Category 1** measurement

Tactical: usually associated with completing a task or assignment - often a yes/no measure – "just do it" (activity)



Behavioral Health ACTIVITY	ACTIVITY	ACTIVITY	ACTIVITY	ACTIVITY	ACTIVITY	OUTPUT	OUTPUT
Strategy	Tactics - Category 1	Year 1 - Q1 Milestones	Year 1 - Q2 Milestones	Year 1 - Q3 Milestones	Year 1 - Q4 Milestones	Year 1 - Q1 Process Metrics	Year 1 - Q2 Process Metrics
STRATEGY 1: Develop the Ballad Health Behavioral Services Infrastructure	A. Hire a Dedicated Chief Medical Officer for behavioral health to oversee and take clinical responsibility for fully developing a regional service line. B. Hire two new operational market leaders to provide direction and support for market-specific operational implementation. C. Hire Financial Analyst for behavioral heath operations.	• Identify priorities for new positions • Develop job descriptions	• Begin recruiting	• Hire new positions: -Medical Director -Market Leaders - one in TN, one in VA -Financial Analyst	• Identify Y2 quarterly targets and timelines	• Priorities for new positions established • Job descriptions completed	• Evidence of active recruiting
Measurement	Current Measured Data	Year 1-Q1 data report	Year 1-Q2 data report	Year 1-Q3 data report	Year 1-Q4 data report	Year 1-Q1 data report	Year 1-Q2 data report
Spread & Scale - Category 2	*Ballad to define the universe of infrastructure components for the Ballad Health Behavioral Health Service Plan*	Number of components that are implemented	Number of components that are implemented	Number of components that are implemented	Number of components that are implemented	report on metrics	current data on recruitment
Strategy	Tactics - Category 1	Year 1 - Q1 Milestones	Year 1 - Q2 Milestones	Year 1 - Q3 Milestones	Year 1 - Q4 Milestones	Year 1 - Q1 Process Metrics	Year 1 - Q2 Process Metrics
STRATEGY 2: Develop a	A. Build out current PCBHI models within the Ballad Health service area to include approximately 17 FTE's within the first 3 years - Behavioral Heath Navigators -Primary Care Psychologists- Social Workers -	• Establish best practices from existing				• Summary of best	• Approved

The Five Measurement Categories

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- **Category 2** measurement - Spread and Scale

current performance on existing measures tracked over time

Behavioral Health ACTIVITY	ACTIVITY	ACTIVITY	ACTIVITY	ACTIVITY	ACTIVITY
Strategy	Tactics – Category 1	Year 1 – Q1 Milestones	Year 1 – Q2 Milestones	Year 1 – Q3 Milestones	Year 1 – Q4 Milestones
STRATEGY 3: Supplement Existing Regional Crisis System – For Youth and Adults	A. Expand SBIRT to identify individuals at risk of behavioral health crises – Hospital EDs and Hospital Admissions B. The data collected with SBIRT will help inform future initiatives including identifying additional locations for PCBHI. C. Supplement trauma-informed care initiatives throughout the region D. Expand the Respond program to ALL VA and TN hospitals. E. Increase efficiency of transportation services by deploying 4 vehicles F. Work to implement a Zero Suicide initiative which focuses on creating a high-reliability zero-harm approach to prevent suicide within healthcare and behavioral health systems. G. Conduct region-specific Crisis Services Planning for youth and adults to identify specific gaps H. Enhance Regional Mobile Crisis and Stabilization Programs for youth	• Conduct regional crisis planning study – including a component focusing on mobile crisis for youth • Plan SBIRT Pilot Programs for VA and TN	• Continue regional planning study • Plan Respond expansion in VA and TN • Begin gap analysis of current care management plans with respect to Zero Suicide • Continue planning SBIRT Pilot Programs for VA and TN	• Complete regional crisis planning study – including a component focusing on mobile crisis for youth • Finalize site selection for SBIRT pilot and Respond expansion programs • Initiate study related to trauma-informed care initiatives	• Begin implementation planning for regional crisis plan • Establish SBIRT Pilot Program in VA and TN • Expand Respond to Pilot hospitals • Complete study/approve recommendations from Zero Suicide evaluation • Complete study relate to trauma-informed ca initiatives
	current measured data	Year 1-Q1 data report	Year 1-Q2 data report	Year 1-Q3 data report	Year 1-Q4 data report
Spread & Scale – Category 2	(data on existing program) "for Ballad to build out"	report on milestones not achieved	• report on milestones not achieved • current data reported for existing regional crisis system	report on milestones not achieved	• report on milestones not achieved • current data reported for existi programs

The Five Measurement Categories

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- **Category 2** measurement - Spread and Scale

POTENTIAL EXAMPLES:

- deferral rates
- staff training rates related to suicide prevention
- rate of follow up appointments
- time to respond to crisis

Note: We believe these data (numbers, status, disposition) are currently sent to the states.

The Five Measurement Categories

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- **Category 3** measurement

Outcome Measure: end of year performance on Sub-Index Measures

ACTIVITY	ACTIVITY	ACTIVITY	OUTPUT	OUTPUT	OUTPUT	OUTPUT	OUTCOME
Year 1 – Q2 Milestones	Year 1 – Q3 Milestones	Year 1 – Q4 Milestones	Year 1 – Q1 Process Metrics	Year 1 – Q2 Process Metrics	Year 1 – Q3 Process Metrics	Year 1 – Q4 Process Metrics	Years 1–10 Outcome Measures – Category 3
• Gain final approval of new PCBHI sites and implementation needs • Begin recruiting	• Hire initial 4.4 FTEs, supporting a minimum three primary care practices	• Continue hiring as necessary • Establish new PCBHI programs	• Summary of best practices from existing programs • Listing of contacted PCP practices	• Approved implementation plans • Evidence of active recruiting	• Initial 4.4 FTEs hired	• New PCBHI programs established • Number of referrals from a Ballad PCBHI model to a behavioral health specialist • Percent satisfied with service as indicated on their patient satisfaction survey • Y2 milestones and metrics accepted	• % with follow up after hospitalization for mental illness (within 7 days) • % with follow up after hospitalization for mental illness (within 30 days • Antidepressant Medication Management – Effecive Acute Phase Treatment • Antidepressant Medication Management – Effecive Acute Phase Treatment
Year 1-Q2 data report	Year 1-Q3 data report	Year 1-Q4 data report	Year 1-Q1 data report	Year 1-Q2 data report	Year 1-Q3 data report	Year 1-Q4 data report	Annual Report
• report on milestones not achieved • current data reported for existing programs	report on milestones not achieved	• report on milestones not achieved • current data reported for existing programs	report on metrics not achieved	• report on metricss not achieved • current data reported for existing programs	report on metrics not achieved	• report on metrics not achieved • current data reported for existing programs	report on Outcome Measures
			Year 1 – Q1 Process	Year 1 – Q2	Year 1 – Q3		Years 1–10 Outcome Measures –

The Five Measurement Categories

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- **Category 4** measurement

Leading Indicators: an indicator that more often than not will produce a change in direction before a corresponding change in the long-term outcome.

(Note: Ballad to develop lead indicators via logic models for each of 25 Population Health Outcome measures.)

The Five Measurement Categories

P22

- **Category 5** measurement

Risk-based population Indicators: a set of triple aim indicators for defined populations

(Examples: employee population, Anthem risk-based populations)

The Five Measurement Categories

P23

- **Category 6** measurement

Health Equity Indicators: refers to Section 2.02 of TOC

The region currently served by the Applicants is part of the Appalachian Region and includes ten counties in Northeast Tennessee and eleven counties and two independent cities in Southwest Virginia (the GSA). This region has a number of health, economic and other factors, which when combined, present a unique and challenging environment for the improvement of the quality and access of health care and health outcomes in the region. These unique challenges were reaffirmed in a recent report issued by the Appalachian Regional Commission, Robert Wood Johnson Foundation and the Foundation for a Healthy Kentucky (*Health Disparities in Appalachia*), which found that the performance in the Appalachian Region is worse than the performance in the United States as a whole in seven (7) of the ten (10) leading causes of death: heart disease, cancer, chronic obstructive pulmonary disease (COPD), injury, stroke, diabetes, and suicide. Additionally, the study found the "years of potential life lost" (YPLL), a measure of premature mortality, is 25% higher in the Appalachian Region than in the nation as a whole.

The Measurement Framework

P24

Longitudinal template:

brings together the five measurement categories and the correlation between them over a 10 year timeframe.

Longitudinal Template

This Longitudinal Template provides a clean line of sight by bringing together the five measurement categories and the correlation between them over a 10 year timeframe.

	Short-Term outcomes			Mid-Term Outcomes			
	Year 1	**year 2**	**year 3**	**year 4**	**year 5**	**year 6**	**year 7**
Rural/Behavioral/Children's	Tactical components completed Spread & Scale BASELINE Outcome data	Tactical components completed Spread & Scale performance Outcome data	Tactical components completed Spread & Scale performance Outcome data	Tactical components completed Spread & Scale performance Outcome data	Tactical components completed Spread & Scale performance Outcome data	Tactical components completed Spread & Scale performance Outcome data	Tactical Spread & Outcome
Population Health	Tactical components completed 1st draft of Leading Indicators 1st draft of Population Indicators	Tactical components completed Leading Indicators performance Population Indicators performance	Tactical components completed Leading Indicators performance Population Indicators performance	Tactical components completed Outcome data Population Indicators performance	Tactical components completed Outcome data Population Indicators performance	Tactical components completed Outcome data Population Indicators performance	Tactical Outcome Populati
Health Equity Indicators	*Health Disparities in Appalachia*	development of plan for Health Equity Measures/Study		repeat study on Health Equity			

P25

Plan Roadmaps

Plan Roadmaps

P26

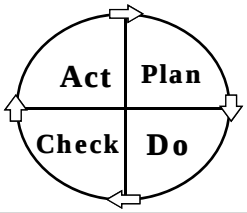
- The roadmap templates bring together the plans, tactics, strategies, measurement template and reporting cycles into a single composite view. The roadmaps **connect all of the dots** and provide a clear understanding of the complex relationships between all of the moving parts.

Plan Roadmaps

P27

Components of the Plan Roadmaps:

- Individual plans: Rural; Children's; Behavioral; Population Health; Health Research/Graduate Medical Education; and HIE.
- Key strategies associated with each plan
- Tactics associated with each strategy within the plans
- Imbedded measurement categories within each plan
- Important timeframes for reporting



Plan Roadmaps

Population Health Improvement RoadMap as of 1/20/2019

Responsible Party	Activity, Plan, or Report	Year 1 2018 Q1	Q2	Q3	Q4	2019 Q1	Q2	Q3
Recalibrate								
States & Ballad	**Develop (& revisit) process for reviewing data & materials** - 6.03(b)(i)	3/31/2018	6/1/2018	7/19/2018		ongoing		ongoing
Plan								
	Plan for Improving the Health of the Population							
Ballad	Outline of PH plans - Conditions 33-36 and Letter dated 1/12/2018		4/30/2018					
Ballad	Draft of PH Plan- Conditions 33-36 and Letter dated 1/12/2018		6/30/2018					
Ballad	Submit Population Heath Plan - TDH 3.04(b) & 3.06(a-c)			7/31/2018				
TDH	Review/Comment/propose modification of Population Heath Plan - TDH 3.04(b) & 3.06(a-c)			8/31/2018				
Ballad	Modify Population Heath Plan - TDH 3.04(b) & 3.06(a-c)			9/30/2018				
Ballad	Submit Population Heath Plan - VDH Condition 36			7/31/2018				
VDH	Review/Comment/propose modification of Population Heath Plan - VDH Condition 36			8/30/2018				
Ballad	Modify Population Heath Plan - VDH Condition 36			9/30/2018				
Project Portfolio for Population Health								
	Reduce adult smoking - Exhibit D							
Ballad	Project 1							
Ballad	Project 2							
Ballad	Project 3							
Ballad	etc.							
	Reduce percentage of mothers who smoke during pregnancy - Exhibit D							
Ballad	Project 1							
Ballad	Project 2							
Ballad	Project 3							
Ballad	etc.							

Plan Roadmaps

P29

- The plan roadmap templates serve as the navigation system for all parties. They serve as a single **reference for the ongoing Active Supervision and reporting**. As a single source of information, the roadmaps are integral to maintaining a sense of order to the complex Active Supervision process.

Plan Roadmaps

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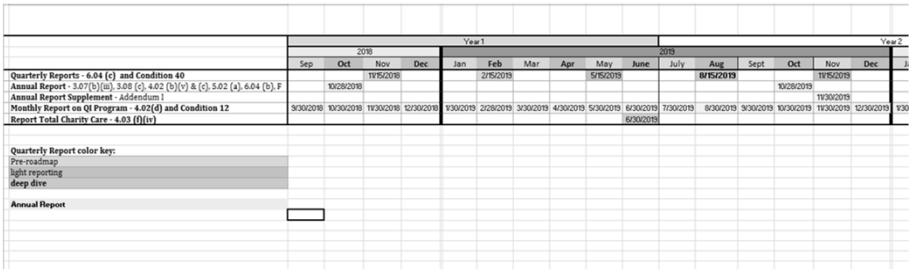
The first tab of the Plan Roadmaps includes a condensed **reporting schedule**.



	Year 1										Year 2						
	2018				2019												
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	J
Quarterly Reports - 6.04 (c) and Condition 40			11/15/2018			2/15/2019			5/15/2019			8/15/2019			11/15/2019		
Annual Report - 3.07(b)(iii), 3.08 (c), 4.02 (b)(v) & (c), 5.02 (a), 6.04 (b), F		10/28/2018												10/28/2019			
Annual Report Supplement - Addendum I															11/30/2019		
Monthly Report on QI Program - 4.02(d) and Condition 12	9/30/2018	10/30/2018	11/30/2018	12/30/2018	1/30/2019	2/28/2019	3/30/2019	4/30/2019	5/30/2019	6/30/2019	7/30/2019	8/30/2019	9/30/2019	10/30/2019	11/30/2019	12/30/2019	1/30
Report Total Charity Care - 4.03 (f)(iv)										6/30/2019							

Quarterly Report color key:

Pre-roadmap

light reporting

deep dive

Annual Report

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Reporting Process

Reporting Process

P32

Overview of the Reporting Process:

- The reporting process is intended to provide the States with necessary information to understand and evaluate progress and performance toward desired outcomes. The reporting process requires a rigor, discipline and cadence in order to **maintain the integrity** of the Active Supervision role entrusted to the states. The process is highly dependent upon **a foundation of measurement and data to objectively understand progress and performance**.

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Reporting Process

Key Areas of Focus in the Active Supervision Process:

- Research and knowledge on the key variables impacting the overall health of a population.
- Progress on implementing the tactics identified in the plans.
- Performance associated with advancing key strategies within the plans.
- Performance associated with key annual outcome measures.
- Performance associated with leading and outcome measures in the population health plan.
- Progress and performance associated with measuring the health of the population.
- Communication of key issues, barriers and changes impacting the region relevant to health and ongoing Public Advantage.
- Relationship building with groups and organizations important to the success of health improvement in the region.

P34

Reporting Process

The Active Supervision System:

- The Active Supervision process consists of three key connecting points:
  - "Light Dives"
  - "Deep Dives"
  - "Between Dives"
- While the process is rigorous, it also takes into consideration the time and resource commitment required in a reporting environment. **The light dives** are designed to provide information on progress related to tactics, along with any related issues or barriers associated with implementing the plans. **The deep dives** are intended to be face- to-face encounters providing an in-depth review of research, strategy execution, outcome measures, population health measures and overall health of the population. **The between dive** focus is to provide communication on key issues, barriers and changes as well as relationship building between cycles.

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"Light" Reporting

"Light" Reporting

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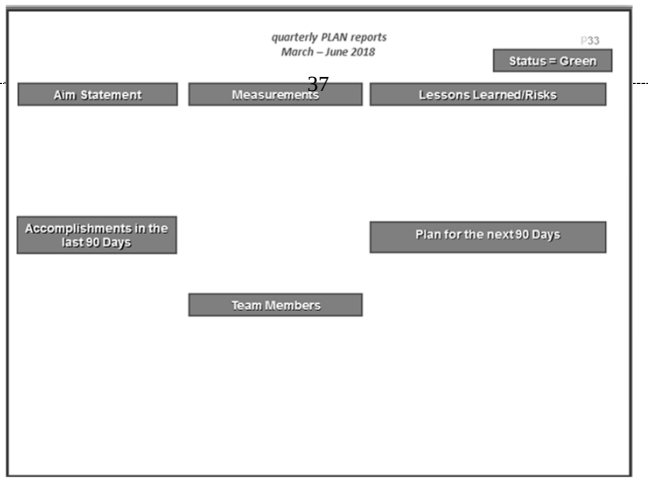
Objectives of "Light" Reporting:

- Provide an **update on the progress** associated with Ballad's plans, strategies, and tactics
- Provide an **update on the barriers**, roadblocks and delays associated with Ballad's plans, strategies, and tactics
- Provide an update on the **successes** associated with Ballad's plans, strategies, and tactics
- Provide an update on the focus of work in the next cycle

"Light" Reporting

SAMPLE TEMPLATE



37

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"DEEP DIVE" Reporting

"Deep Dive"

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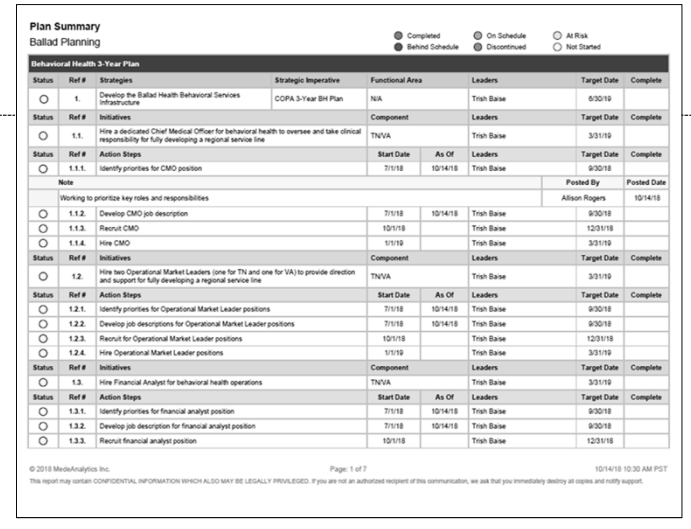
Objectives of "Deep Dives":

- Provide and **in-depth update** on Plans, strategies, and associated work.
- Provide an **overview of the successes, areas of concern and barriers** associated with implementing the Plans, strategies and tactics
- Provide a **clean line of sight** for the States between Plans, strategies, infrastructure building, activities, measurement and structure.
- Build confidence in the capabilities and capacity of Ballad to deliver results on the work

"Deep Dive" Reporting

SAMPLE TEMPLATE



Plan Summary
Ballad Planning

○ Completed ○ On Schedule ○ At Risk
● Behind Schedule ● Discontinued ○ Not Started

Behavioral Health 3-Year Plan								
Status	Ref #	Strategies	Strategic Imperative	Functional Area		Leaders	Target Date	Complete
○	1.	Develop the Ballad Health Behavioral Services Infrastructure	COPA 3-Year BH Plan	N/A		Trish Baise	6/30/19	
Status	Ref #	Initiatives		Component		Leaders	Target Date	Complete
○	1.1.	Hire a dedicated Chief Medical Officer for behavioral health to oversee and take clinical responsibility for fully developing a regional service line		TN/VA		Trish Baise	3/31/19	
Status	Ref #	Action Steps		Start Date	As Of	Leaders	Target Date	Complete
○	1.1.1.	Identify priorities for CMO position		7/1/18	10/14/18	Trish Baise	9/30/18	
	Note						Posted By	Posted Date
	Working to prioritize key roles and responsibilities						Allison Rogers	10/14/18
○	1.1.2.	Develop CMO job description		7/1/18	10/14/18	Trish Baise	9/30/18	
○	1.1.3.	Recruit CMO		10/1/18		Trish Baise	12/31/18	
○	1.1.4.	Hire CMO		1/1/19		Trish Baise	3/31/19	
Status	Ref #	Initiatives		Component		Leaders	Target Date	Complete
○	1.2.	Hire two Operational Market Leaders (one for TN and one for VA) to provide direction and support for fully developing a regional service line		TN/VA		Trish Baise	3/31/19	
Status	Ref #	Action Steps		Start Date	As Of	Leaders	Target Date	Complete
○	1.2.1.	Identify priorities for Operational Market Leader positions		7/1/18	10/14/18	Trish Baise	9/30/18	
○	1.2.2.	Develop job descriptions for Operational Market Leader positions		7/1/18	10/14/18	Trish Baise	9/30/18	
○	1.2.3.	Recruit for Operational Market Leader positions		10/1/18		Trish Baise	12/31/18	
○	1.2.4.	Hire Operational Market Leader positions		1/1/19		Trish Baise	3/31/19	
Status	Ref #	Initiatives		Component		Leaders	Target Date	Complete
○	1.3.	Hire Financial Analyst for behavioral health operations		TN/VA		Trish Baise	3/31/19	
Status	Ref #	Action Steps		Start Date	As Of	Leaders	Target Date	Complete
○	1.3.1.	Identify priorities for financial analyst position		7/1/18	10/14/18	Trish Baise	9/30/18	
○	1.3.2.	Develop job description for financial analyst position		7/1/18	10/14/18	Trish Baise	9/30/18	
○	1.3.3.	Recruit financial analyst position		10/1/18		Trish Baise	12/31/18	

10/14/18 10:30 AM PST

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Sample "Deep Dive" AGENDA

8:00-8:15 Welcome and Introductions
8:15-8:30 Overview of market and market conditions
8:30-10:00 Review Behavioral Health Plan
- 15 minutes - High level summary
- 30 minutes - Review data by measurement categories
- 30 minutes – dive into 2 A3s (problem areas)
- 15 minute – group discussion

10:00-11:30 Review Children's Health Plan
- 15 minutes - High level summary
- 30 minutes - Review data by measurement categories
- 30 minutes – dive into 2 A3s (problem areas)
- 15 minute – group discussion

11:30-12:00 Lunch
12:00-1:30 Review Rural Health Plan
- 15 minutes - High level summary
- 30 minutes - Review data by measurement categories
- 30 minutes – dive into 2 A3s (problem areas)
- 15 minute – group discussion

1:30-3:00 Review Population Health Plan
- 15 minutes - High level summary
- 30 minutes - Review data by measurement categories
- 30 minutes – dive into 2 A3s (problem areas)
- 15 minute – group discussion

3:00-3:30 Report on HIE and HR/GME
3:30-4:00 Identify work to be accomplished by each party between cycles

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Between Dives

Between Dives

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Objectives between cycles:

- Provide ongoing open communication to
  - build trust
  - Clarify roles and expectations
  - Provide guidance
  - Facilitate connections

Between Dives

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Expectations between cycles:

- Email and ad hoc conference calls
  - Ask clarifying questions
  - Remove unnecessary barriers
  - Provide update to the plans and any project in the portfolio
- Bi-weekly calls –
  - report on successes,
  - updates on any roadblocks, barriers, and areas of concern
- Monthly phone calls
  - Confirm upcoming due dates
  - Confirm receipt of recently submitted deliverables
  - Confirm tasks without deliverables were accomplished by due date

Between Dives

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- Monthly reports
- Waivers – as needed
- Notices – as needed

Reporting Process

P46

Cadence of the Reporting Process:

The sequence of dives will be set up on an annual calendar. The light dives will consist of reporting on progress in the 1st and 3rd quarters. The deep dives will consist of reporting on progress in the 2nd and 4th quarters. The between dives will provide the connection throughout the year.

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The End.

BalladHealth

It's your story. We're listening.

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Johnson City, TN 37604
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fax 423-915-5101

balladhealth.org

February 27, 2019 via: Email only

M. Norman Oliver, MD, MA
Commissioner, Virginia Department of Health
109 Governor Street
Richmond, Virginia 23219

Dear Commissioner Oliver,

Pursuant to Condition 12, in the Virginia Cooperative Agreement (CA), Ballad hereby submits the February 2019 Monthly Quality Priority Metrics Report. The CA requests the report also be presented to the Technical Advisory Panel (TAP). Per an email communication from Lina Zimmerman on August 20, 2018, we were instructed to submit our monthly report to the Commissioner only and that it would be forwarded to the TAP.

As always, we welcome any questions or comments that you may have.

Sincerely,

Gary Miller, Senior Vice President Ballad Health
Interim COPA Compliance Officer

Cc via email: Lisa Piercey, MD, MBA, Commissioner, TN Department of Health
Erik Bodin, Director, Office of Licensure and Certification
Allyson Tysinger, Sr. Assistant Attorney General/Chief
Jeff Ockerman, Director, Division of Health Planning
Janet Kleinfelter, Deputy Attorney General
Larry Fitzgerald, COPA Monitor
Tim Belisle, General Counsel Ballad Health

Priority Metrics

BalladHealth

Ballad Health

Desired Performance		Baseline	FY18	Jul-18	Aug-18	Sep-18	Q1FY19	Oct-18	Nov-18	Dec-18	Q2FY19	FYTD19
	Quality Target Measures											
↓	lower is better	**PSI 3 Pressure Ulcer Rate**	**0.71**	1.12	1.13	0.23	0.72	0.69	0.66	0.23	0.23	0.38	0.54
↓	lower is better	**PSI 6 Iatrogenic Pneumothorax Rate**	**0.38**	0.23	0.31	0.15	0.16	0.21	0.16	0.00	0.00	0.05	0.13
↓	lower is better	**PSI 7 Central Venous Catheter-Related Blood Stream Infection Rate**	**0.15**	0.05	0.00	0.00	0.21	0.07	0.00	0.23	0.00	0.08	0.07
↓	lower is better	**PSI 8 In Hospital Fall with Hip Fracture Rate**	**0.06**	0.07	0.18	0.00	0.00	0.06	0.00	0.19	0.00	0.06	0.06
↓	lower is better	**PSI 9 Perioperative Hemorrhage or Hematoma Rate**	**4.15**	1.67	2.00	2.53	0.69	1.77	0.66	1.28	2.01	1.32	1.54
↓	lower is better	**PSI 10 Postoperative Acute Kidney Injury Requiring Dialysis**	**1.00**	0.11	0.00	0.00	0.00	0.00	0.00	2.36	2.43	1.64	0.84
↓	lower is better	**PSI 11 Postoperative Respiratory Failure Rate**	**14.79**	8.34	10.38	9.08	6.83	8.77	8.17	7.16	6.09	7.12	7.91
↓	lower is better	**PSI 12 Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate**	**5.42**	3.51	4.97	3.54	2.57	3.70	3.14	3.62	3.77	3.51	3.61
↓	lower is better	**PSI 13 Postoperative Sepsis Rate**	**8.81**	3.88	1.44	3.88	5.54	3.65	1.36	1.23	6.36	3.00	3.32
↓	lower is better	**PSI 14 Postoperative Wound Dehiscence Rate**	**2.22**	0.99	0.00	0.00	0.00	0.00	0.00	2.57	2.42	1.65	0.83
↓	lower is better	**PSI 15 Unrecognized Abdominopelvic Accidental Puncture/Laceration Rate**	**1.34**	0.98	0.00	1.08	1.08	0.72	1.14	0.00	1.08	0.75	0.73
↓	lower is better	**CLABSI**	**0.774**	0.652	0.000	1.090	0.780	0.620	0.600	0.840	0.000	0.490	0.560
↓	lower is better	**CAUTI**	**0.613**	0.640	0.600	1.280	0.660	0.850	1.830	1.090	0.640	1.170	1.010
↓	lower is better	**SSI COLON Surgical Site Infection**	**1.170**	1.899	8.110	3.370	2.600	4.580	0.000	0.000		0.000	2.620
↓	lower is better	**SSI HYST Surgical Site Infection**	**1.000**	0.610	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000
↓	lower is better	**MRSA**	**0.040**	0.054	0.090	0.290	0.030	0.130	0.080	0.060	0.210	0.120	0.130
↓	lower is better	**CDIFF**	**0.585**	0.623	0.240	0.400	0.570	0.400	0.420	0.160	0.350	0.310	0.360
		Quality Priority Metrics											
↓	lower is better	**Levofloxacin Days Of Therapy per 1000 patient days**		**50.01**	58.40	57.31	38.64	51.50	51.15	58.54	48.94	52.88	52.20
↓	lower is better	**Meropenem Days Of Therapy per 1000 patient days**		**42.94**	43.87	35.42	37.53	38.90	40.11	39.30	41.24	40.22	39.60
↓	lower is better	**Inpatient Opioid Administration Rate by Patient Days**		**1.26**	0.78	0.76	0.71	0.75	0.96	0.83	3.10	1.63	0.81
↓	lower is better	**Emergency Department Opioid Administration Rate by ED Visits**		**0.12**	0.14	0.12	0.12	0.13	0.12	0.11	0.14	0.12	0.12
↓	lower is better	**Left Without Being Seen**		**0.71%**	1.12%	0.85%	1.08%	1.05%	0.96%	0.73%	0.83%	1.05%	0.96%
↑	higher is better	**HCOMP1A P Patients who reported that their nurses "Always" communicated well**		**78.0%**	82.0%	82.0%	83.0%	80.0%	81.0%	86.0%	79.0%	80.0%	84.0%
↑	higher is better	**HCOMP2A P Patients who reported that their doctors "Always" communicated well**		**80.0%**	82.0%	81.0%	82.0%	80.0%	81.0%	87.0%	81.0%	80.0%	83.0%
↑	higher is better	**HCOMP5A P Patients who reported that staff "Always" explained about medicines before giving it to them**		**64.0%**	67.0%	71.0%	68.0%	64.0%	60.0%	72.0%	62.0%	64.0%	68.0%
↑	higher is better	**HCOMP6Y P Patients who reported that YES, they were given information about what to do during their recovery at home**		**86.0%**	86.0%	88.0%	86.0%	87.0%	88.0%	84.0%	87.0%	87.0%	86.4%
↓	lower is better	**Sepsis In House Mortality**		**7.5%**	9.3%	9.0%	9.2%	9.3%	8.3%	6.5%	9.7%	8.2%	8.6%
↑	higher is better	**SMB: Sepsis Management Bundle****		**56.6%**	41.5%	56.3%	61.3%	47.1%	54.7%	64.5%	61.0%	60.5%	54.6%
↓	lower is better	**Median Time from ED Arrival to Departure for Outpatients (18b)****		**148**	121	126	130	126.5	129	124	123.68	127.2	124.5
↓	lower is better	**Median Time from ED Arrival to Transport for Admitted Patients (ED1)****		**316**	226.75	226.5	226	226.5	224	226.5	238	226.87	224

no data/no cases

****FY19; discharge dates May- Oct 2018**

Quality Target Measures Baseline: FY17 Hospital Compare Posting

Quality Priority Measures Baseline: FY18

Priority Metrics

BalladHealth

Bristol Regional Medical Center

Desired Performance		Baseline	FY18	Jul-18	Aug-18	Sep-18	Q1FY19	Oct-18	Nov-18	Dec-18	Q2FY19	FYTD19
	Quality Target Measures											
↓	lower is better	**PSI 3 Pressure Ulcer Rate**	**0.80**	2.28	2.32	0.00	2.46	1.57	2.21	0.00	0.00	0.78	1.18
↓	lower is better	**PSI 6 Iatrogenic Pneumothorax Rate**	**0.32**	0.07	0.85	0.00	0.00	0.28	0.83	0.00	0.00	0.29	0.29
↓	lower is better	**PSI 7 Central Venous Catheter-Related Blood Stream Infection Rate**	**0.09**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 8 In Hospital Fall with Hip Fracture Rate**	**0.06**	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 9 Perioperative Hemorrhage or Hematoma Rate**	**4.72**	4.54	7.55	0.00	0.00	2.37	3.24	3.61	3.25	3.36	2.88
↓	lower is better	**PSI 10 Postoperative Acute Kidney Injury Requiring Dialysis**	**0.97**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.75	1.98	1.02
↓	lower is better	**PSI 11 Postoperative Respiratory Failure Rate**	**16.50**	10.80	9.26	13.07	8.55	10.58	14.71	0.00	20.83	12.22	11.44
↓	lower is better	**PSI 12 Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate**	**4.25**	2.43	7.14	6.10	0.00	4.47	3.18	0.00	6.04	3.19	3.82
↓	lower is better	**PSI 13 Postoperative Sepsis Rate**	**8.88**	3.57	0.00	0.00	0.00	0.00	0.00	0.00	12.20	4.29	2.22
↓	lower is better	**PSI 14 Postoperative Wound Dehiscence Rate**	**1.95**	0.00	0.00	0.00	0.00	0.00	0.00	16.95	10.99	9.09	4.35
↓	lower is better	**PSI 15 Unrecognized Abdominopelvic Accidental Puncture/Laceration Rate**	**1.38**	1.25	0.00	4.50	0.00	1.57	5.62	0.00	0.00	1.74	1.65
↓	lower is better	**CLABSI**	**1.202**	0.722	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
↓	lower is better	**CAUTI**	**0.824**	0.958	0.840	0.890	0.980	0.900	1.040	1.790	1.770	1.560	1.220
↓	lower is better	**SSI COLON Surgical Site Infection**	**0.000**	1.330	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000
↓	lower is better	**SSI HYST Surgical Site Infection**	**0.000**	1.590	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000
↓	lower is better	**MRSA**	**0.056**	0.094	0.000	0.310	0.000	0.110	0.000	0.160	0.320	0.160	0.130
↓	lower is better	**CDIFF**	**0.719**	0.740	0.320	0.160	0.700	0.390	0.470	0.170	0.000	0.220	0.300
		Quality Priority Metrics											
↓	lower is better	**Levofloxacin Days Of Therapy per 1000 patient days**		**45.00**	36.90	27.40	29.20	31.20	44.61	42.40	42.87	43.29	36.10
↓	lower is better	**Meropenem Days Of Therapy per 1000 patient days**		**41.60**	34.28	28.80	31.45	31.50	24.05	24.00	28.96	25.67	28.60
↓	lower is better	**Inpatient Opioid Administration Rate by Patient Days**		**1.81**	0.00	0.00	0.86	0.96	0.85	0.84	6.80	2.83	0.92
↓	lower is better	**Emergency Department Opioid Administration Rate by ED Visits**		**0.16**	0.01	0.01	0.01	0.14	0.12	0.14	0.14	0.13	0.13
↓	lower is better	**Left Without Being Seen**		**1.00%**	0.88%	0.13%	1.23%	0.97%	1.28%	0.39%	0.30%	0.67%	0.83%
↑	higher is better	**HCOMP1A P Patients who reported that their nurses "Always" communicated well**		**85.0%**	85.0%	89.0%	83.0%	86.0%	82.0%	82.0%	80.0%	81.0%	83.0%
↑	higher is better	**HCOMP2A P Patients who reported that their doctors "Always" communicated well**		**83.0%**	82.0%	88.0%	81.0%	84.0%	78.0%	83.0%	80.0%	80.0%	82.0%
↑	higher is better	**HCOMP5A P Patients who reported that staff "Always" explained about medicines before giving it to them**		**67.0%**	59.0%	68.0%	63.0%	64.0%	71.0%	68.0%	64.0%	68.0%	66.0%
↑	higher is better	**HCOMP6Y P Patients who reported that YES, they were given information about what to do during their recovery at home**		**90.0%**	91.0%	93.0%	88.0%	91.0%	87.0%	87.0%	90.0%	88.0%	89.0%
↓	lower is better	**Sepsis In House Mortality**		**11.2%**	11.9%	4.30%	13.0%	10.1%	10.6%	6.8%	13.3%	10.2%	9.81%
↑	higher is better	**SMB: Sepsis Management Bundle****		**48.3%**	22.2%	46.2%	54.5%	42.4%	30.8%	78.6%	80.0%	64.3%	54.7%
↓	lower is better	**Median Time from ED Arrival to Departure for Outpatients (18b)****		**151**	150	123	183	150	140	138	147	140	143.5
↓	lower is better	**Median Time from ED Arrival to Transport for Admitted Patients (ED1)****		**284**	275	288	276.5	276.5	300	294	293.5	294	290.75

no data/no cases

****FY19; discharge dates May- Oct 2018**

Quality Target Measures Baseline: FY17 Hospital Compare Posting

Quality Priority Measures Baseline: FY18

Priority Metrics

BalladHealth

Johnston Memorial Hospital

Desired Performance		Baseline	FY18	Jul-18	Aug-18	Sep-18	Q1FY19	Oct-18	Nov-18	Dec-18	Q2FY19	FYTD19
	Quality Target Measures											
↓	lower is better	**PSI 3 Pressure Ulcer Rate**	1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 6 Iatrogenic Pneumothorax Rate**	0.34	0.14	2.09	0.00	0.00	0.69	0.00	0.00	0.00	0.00	0.34
↓	lower is better	**PSI 7 Central Venous Catheter-Related Blood Stream Infection Rate**	0.13	0.00	0.00	0.00	2.91	0.97	0.00	0.00	0.00	0.00	0.53
↓	lower is better	**PSI 8 In Hospital Fall with Hip Fracture Rate**	0.06	0.16	0.00	0.00	0.00	0.00	0.00	2.17	0.00	0.74	0.37
↓	lower is better	**PSI 9 Perioperative Hemorrhage or Hematoma Rate**	4.50	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 10 Postoperative Acute Kidney Injury Requiring Dialysis**	1.29	0.00	0.00	0.00	0.00	0.00	0.00	30.30	0.00	10.87	5.62
↓	lower is better	**PSI 11 Postoperative Respiratory Failure Rate**	16.39	14.28	0.00	0.00	0.00	0.00	0.00	33.33	0.00	11.90	6.13
↓	lower is better	**PSI 12 Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate**	5.25	5.79	0.00	0.00	0.00	0.00	0.00	8.93	10.99	6.76	3.28
↓	lower is better	**PSI 13 Postoperative Sepsis Rate**	10.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 14 Postoperative Wound Dehiscence Rate**	2.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 15 Unrecognized Abdominopelvic Accidental Puncture/Laceration Rate**	0.64	0.00	0.00	0.00	9.90	3.83	0.00	0.00	0.00	0.00	1.96
↓	lower is better	**CLABSI**	0.000	0.000	0.000	0.000	5.050	1.740	0.000	0.000	0.000	0.000	0.770
↓	lower is better	**CAUTI**	0.000	0.000	0.000	2.270	2.300	1.610	0.000	0.000	0.000	0.000	0.810
↓	lower is better	**SSI COLON Surgical Site Infection**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000
↓	lower is better	**SSI HYST Surgical Site Infection**	0.000	0.000	0.000		0.000	0.000	0.000	0.000		0.000	0.000
↓	lower is better	**MRSA**	0.000	0.000	0.000	0.430	0.000	0.150	0.000	0.000	0.000	0.000	0.070
↓	lower is better	**CDIFF**	1.052	0.550	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		Quality Priority Metrics											
↓	lower is better	**Levofloxacin Days Of Therapy per 1000 patient days**		41.70	42.89	28.27	40.64	37.30	25.85	41.10	46.73	37.89	37.60
↓	lower is better	**Meropenem Days Of Therapy per 1000 patient days**		41.69	36.22	39.91	33.53	36.60	22.65	30.70	30.70	28.02	32.30
↓	lower is better	**Inpatient Opioid Administration Rate by Patient Days**		0.87	0.95	1.00	0.89	0.95	0.96	0.94	1.12	1.01	0.95
↓	lower is better	**Emergency Department Opioid Administration Rate by ED Visits**		0.15	0.17	0.14	0.11	0.14	0.12	0.15	0.14	0.14	0.14
↓	lower is better	**Left Without Being Seen**		0.20%	0.31%	0.11%	1.36%	0.60%	0.92%	0.96%	2.20%	1.37%	0.97%
↑	higher is better	**HCOMP1A P Patients who reported that their nurses "Always" communicated well**		77.0%	84.0%	74.0%	80.0%	80.0%	73.0%	77.0%	82.0%	77.0%	78.0%
↑	higher is better	**HCOMP2A P Patients who reported that their doctors "Always" communicated well**		79.0%	83.0%	80.0%	79.0%	80.0%	76.0%	81.0%	90.0%	81.0%	81.0%
↑	higher is better	**HCOMP5A P Patients who reported that staff "Always" explained about medicines before giving it to them**		60.0%	65.0%	57.0%	66.0%	63.0%	53.0%	53.0%	70.0%	58.0%	61.0%
↑	higher is better	**HCOMP6Y P Patients who reported that YES, they were given information about what to do during their recovery at home**		87.0%	84.0%	85.0%	85.0%	85.0%	85.0%	87.0%	91.0%	88.0%	86.0%
↓	lower is better	**Sepsis In House Mortality**		10.48%	8.00%	13.59%	2.25%	8.22%	10.48%	5.17%	9.09%	8.09%	7.99%
↑	higher is better	**SMB: Sepsis Management Bundle****		54.8%	54.5%	66.7%	46.2%	55.6%	66.7%	75.0%	33.3%	55.2%	55.4%
↓	lower is better	**Median Time from ED Arrival to Departure for Outpatients (18b)****		137.5	121	133	134	133	139.5	145.5	136.5	139.5	135.25
↓	lower is better	**Median Time from ED Arrival to Transport for Admitted Patients (ED1)****		259	253	235	226	235	255	237	238	238	237.5

no data/no cases

****FY19; discharge dates May- Oct 2018**

Quality Target Measures Baseline: FY17 Hospital Compare Posting

Quality Priority Measures Baseline: FY18

Priority Metrics

BalladHealth

Smyth County Community Hospital

Desired Performance		Baseline	FY18	Jul-18	Aug-18	Sep-18	Q1FY19	Oct-18	Nov-18	Dec-18	Q2FY19	FYTD19
	Quality Target Measures											
↓	lower is better	**PSI 3 Pressure Ulcer Rate**	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 6 Iatrogenic Pneumothorax Rate**	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 7 Central Venous Catheter-Related Blood Stream Infection Rate**	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 8 In Hospital Fall with Hip Fracture Rate**	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 9 Perioperative Hemorrhage or Hematoma Rate**	4.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 10 Postoperative Acute Kidney Injury Requiring Dialysis**	1.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 11 Postoperative Respiratory Failure Rate**	16.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 12 Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate**	4.21	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 13 Postoperative Sepsis Rate**	9.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 14 Postoperative Wound Dehiscence Rate**	2.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 15 Unrecognized Abdominopelvic Accidental Puncture/Laceration Rate**	1.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**CLABSI**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
↓	lower is better	**CAUTI**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
↓	lower is better	**SSI COLON Surgical Site Infection**	16.667	0.000				0.000			0.000	0.000	
↓	lower is better	**SSI HYST Surgical Site Infection**	0.000	0.000									
↓	lower is better	**MRSA**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
↓	lower is better	**CDIFF**	0.174	0.331	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		Quality Priority Metrics											
↓	lower is better	**Levofloxacin Days Of Therapy per 1000 patient days**		56.30	56.40	65.30	24.03	48.60	44.14	55.30	50.30	49.91	49.30
↓	lower is better	**Meropenem Days Of Therapy per 1000 patient days**		10.10	1.50	19.29	8.01	9.60	2.76	11.60	12.90	9.09	9.30
↓	lower is better	**Inpatient Opioid Administration Rate by Patient Days**		0.78	0.88	0.75	0.81	0.81	0.75	0.81	0.75	0.77	0.80
↓	lower is better	**Emergency Department Opioid Administration Rate by ED Visits**		0.14	0.17	0.14	0.15	0.15	0.17	0.14	0.00	0.10	0.15
↓	lower is better	**Left Without Being Seen**		0.33%	0.57%	0.43%	0.93%	0.65%	0.15%	0.18%	0.66%	0.42%	0.54%
↑	higher is better	**HCOMP1A P Patients who reported that their nurses "Always" communicated well**		86.0%	84.0%	86.0%	77.0%	83.0%	76.0%	98.0%	79.0%	82.0%	83.0%
↑	higher is better	**HCOMP2A P Patients who reported that their doctors "Always" communicated well**		83.0%	87.0%	86.0%	76.0%	84.0%	77.0%	94.0%	85.0%	84.0%	84.0%
↑	higher is better	**HCOMP5A P Patients who reported that staff "Always" explained about medicines before giving it to them**		75.0%	71.0%	76.0%	71.0%	72.0%	46.0%	82.0%	67.0%	63.0%	68.0%
↑	higher is better	**HCOMP6Y P Patients who reported that YES, they were given information about what to do during their recovery at home**		87.0%	96.0%	94.0%	85.0%	93.0%	86.0%	81.0%	79.0%	83.0%	88.0%
↓	lower is better	**Sepsis In House Mortality**		2.92%	6.06%	0.00%	3.85%	3.66%	0.00%	0.00%	0.00%	0.00%	2.11%
↑	higher is better	**SMB: Sepsis Management Bundle****		81.1%	100.0%	80.0%	100.0%	94.4%	100.0%	71.4%	80.0%	80.0%	89.3%
↓	lower is better	**Median Time from ED Arrival to Departure for Outpatients (18b)****		106.75	94	109	108	108	95	100	107	100	103.5
↓	lower is better	**Median Time from ED Arrival to Transport for Admitted Patients (ED1)****		175	205	195.5	174.5	195.5	177.5	185.5	176	177.5	181.5

no data/no cases

****FY19; discharge dates May- Oct 2018**

Quality Target Measures Baseline: FY17 Hospital Compare Posting

Quality Priority Measures Baseline: FY18

Priority Metrics

BalladHealth

Dickenson County Hospital

Desired Performance		Baseline	FY18	Jul-18	Aug-18	Sep-18	Q1FY19	Oct-18	Nov-18	Dec-18	Q2FY19	FYTD19
	Quality Target Measures											
↓	lower is better	**PSI 3 Pressure Ulcer Rate**			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 6 Iatrogenic Pneumothorax Rate**			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 7 Central Venous Catheter-Related Blood Stream Infection Rate**			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 8 In Hospital Fall with Hip Fracture Rate**			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 9 Perioperative Hemorrhage or Hematoma Rate**											
↓	lower is better	**PSI 10 Postoperative Acute Kidney Injury Requiring Dialysis**											
↓	lower is better	**PSI 11 Postoperative Respiratory Failure Rate**											
↓	lower is better	**PSI 12 Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate**											
↓	lower is better	**PSI 13 Postoperative Sepsis Rate**		0.00									
↓	lower is better	**PSI 14 Postoperative Wound Dehiscence Rate**											
↓	lower is better	**PSI 15 Unrecognized Abdominopelvic Accidental Puncture/Laceration Rate**											
↓	lower is better	**CLABSI**											
↓	lower is better	**CAUTI**											
↓	lower is better	**SSI COLON Surgical Site Infection**											
↓	lower is better	**SSI HYST Surgical Site Infection**											
↓	lower is better	**MRSA**		0.000									
↓	lower is better	**CDIFF**		0.386									
		Quality Priority Metrics											
↓	lower is better	**Levofloxacin Days Of Therapy per 1000 patient days**											
↓	lower is better	**Meropenem Days Of Therapy per 1000 patient days**											
↓	lower is better	**Inpatient Opioid Administration Rate by Patient Days**											
↓	lower is better	**Emergency Department Opioid Administration Rate by ED Visits**											
↓	lower is better	**Left Without Being Seen**		**0.81%**	0.72%	0.52%	0.80%	0.68%	0.51%	0.33%	0.74%	0.52%	0.60%
↑	higher is better	**HCOMP1A P Patients who reported that their nurses "Always" communicated well**		**57.0%**						100.0%	83.0%	89.0%	89.0%
↑	higher is better	**HCOMP2A P Patients who reported that their doctors "Always" communicated well**		**100.0%**						100.0%	83.0%	89.0%	89.0%
↑	higher is better	**HCOMP5A P Patients who reported that staff "Always" explained about medicines before giving it to them**		**100.0%**							50.0%	50.0%	50.0%
↑	higher is better	**HCOMP6Y P Patients who reported that YES, they were given information about what to do during their recovery at home**		**100.0%**						50.0%	100.0%	83.0%	83.0%
↓	lower is better	**Sepsis In House Mortality**				**0.00%**		**0.00%**			**0.00%**	**0.00%**	**0.00%**
↑	higher is better	**SMB: Sepsis Management Bundle****											
↓	lower is better	**Median Time from ED Arrival to Departure for Outpatients (18b)****		**103**	105	112	93.5	105	68	122	103	103	105
↓	lower is better	**Median Time from ED Arrival to Transport for Admitted Patients (ED1)****		**136**	347.5	229	209.5	229	186	135	184	184	197.75

no data/no cases

****FY19; discharge dates May- Oct 2018**

Quality Target Measures Baseline: FY17 Hospital Compare Posting

Quality Priority Measures Baseline: FY18

Priority Metrics

BalladHealth

Hancock County Hospital

Desired Performance		Baseline	FY18	Jul-18	Aug-18	Sep-18	Q1FY19	Oct-18	Nov-18	Dec-18	Q2FY19	FYTD19
	Quality Target Measures											
↓	lower is better		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better											
↓	lower is better											
↓	lower is better											
↓	lower is better											
↓	lower is better											
↓	lower is better											
↓	lower is better		0.000									
↓	lower is better		0.000									
↓	lower is better											
↓	lower is better											
↓	lower is better		0.000									
↓	lower is better		0.000									
	Quality Priority Metrics											
↓	lower is better		143.93	137.90	133.90	64.81	112.20	81.08	166.70	50.00	93.45	105.70
↓	lower is better		72.12	43.10	205.36	9.26	85.90	145.45	188.89	90.00	141.45	113.70
↓	lower is better		0.79	0.07	0.10	0.10	0.09	2.14	1.25	6.55	3.31	0.73
↓	lower is better		0.20	0.19	0.17	0.10	0.15	0.20	0.18	0.45	0.28	0.17
↓	lower is better		0.53%	0.89%	0.74%	0.30%	0.65%	0.94%	0.00%	0.00%	0.32%	0.50%
↑	higher is better		92.0%	100.0%	92.0%		95.0%	100.0%	100.0%	83.0%	93.0%	94.0%
↑	higher is better		87.0%	100.0%	83.0%		90.0%	89.0%	100.0%	75.0%	85.0%	88.0%
↑	higher is better		89.0%	75.0%	75.0%		75.0%	75.0%			75.0%	75.0%
↑	higher is better		86.0%	83.0%	88.0%		86.0%	100.0%	100.0%	100.0%	100.0%	93.0%
↓	lower is better		0.00%	0.00%	0.00%	33.33%	10.00%	25.00%	0.00%	0.00%	10.00%	11.25%
↑	higher is better		70.0%	100.0%	0.0%	100.0%	66.7%	50.0%	50.0%	66.7%	57.1%	60.0%
↓	lower is better		128	121	126	138	126	109.5	99	95	99	121
↓	lower is better											

no data/no cases

**FY19; discharge dates May- Oct 2018

Quality Target Measures Baseline: FY17 Hospital Compare Posting

Quality Priority Measures Baseline: FY18

Priority Metrics

BalladHealth

Indian Path Community Hospital

Desired Performance		Baseline	FY18	Jul-18	Aug-18	Sep-18	Q1FY19	Oct-18	Nov-18	Dec-18	Q2FY19	FYTD19
	Quality Target Measures											
↓	lower is better	**PSI 3 Pressure Ulcer Rate**	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 6 Iatrogenic Pneumothorax Rate**	0.45	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 7 Central Venous Catheter-Related Blood Stream Infection Rate**	0.14	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 8 In Hospital Fall with Hip Fracture Rate**	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 9 Perioperative Hemorrhage or Hematoma Rate**	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 10 Postoperative Acute Kidney Injury Requiring Dialysis**	1.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 11 Postoperative Respiratory Failure Rate**	12.36	7.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 12 Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate**	5.38	4.30	0.00	0.00	20.00	5.92	0.00	22.22	27.78	14.49	9.77
↓	lower is better	**PSI 13 Postoperative Sepsis Rate**	9.09	10.23	0.00	0.00	38.46	14.93	0.00	0.00	0.00	0.00	8.33
↓	lower is better	**PSI 14 Postoperative Wound Dehiscence Rate**	2.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 15 Unrecognized Abdominopelvic Accidental Puncture/Laceration Rate**	1.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**CLABSI**	0.000	0.898	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
↓	lower is better	**CAUTI**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
↓	lower is better	**SSI COLON Surgical Site Infection**	0.000	1.690	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000
↓	lower is better	**SSI HYST Surgical Site Infection**	7.143	0.000			0.000	0.000	0.000	0.000		0.000	0.000
↓	lower is better	**MRSA**	0.080	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
↓	lower is better	**CDIFF**	0.813	0.510	0.000	1.670	0.780	0.830	0.700	1.450	0.000	0.700	0.760
		Quality Priority Metrics											
↓	lower is better	**Levofloxacin Days Of Therapy per 1000 patient days**		33.60	45.59	31.91	34.16	37.20	20.96	19.50	39.30	26.59	31.90
↓	lower is better	**Meropenem Days Of Therapy per 1000 patient days**		49.20	48.94	52.56	56.47	52.70	28.23	40.30	52.30	40.28	46.50
↓	lower is better	**Inpatient Opioid Administration Rate by Patient Days**		1.06	0.98	0.84	0.85	0.89	0.89	0.77	1.10	0.92	0.86
↓	lower is better	**Emergency Department Opioid Administration Rate by ED Visits**		0.09	0.12	0.08	0.08	0.09	0.10	0.08	0.09	0.09	0.09
↓	lower is better	**Left Without Being Seen**		0.94%	1.43%	1.14%	1.44%	1.34%	1.29%	1.26%	1.01%	1.19%	1.27%
↑	higher is better	**HCOMP1A P Patients who reported that their nurses "Always" communicated well**		80.0%	81.0%	84.0%	81.0%	82.0%	76.0%	86.0%	83.0%	81.0%	81.0%
↑	higher is better	**HCOMP2A P Patients who reported that their doctors "Always" communicated well**		83.0%	74.0%	83.0%	84.0%	80.0%	83.0%	88.0%	82.0%	84.0%	82.0%
↑	higher is better	**HCOMP5A P Patients who reported that staff "Always" explained about medicines before giving it to them**		64.0%	66.0%	58.0%	74.0%	65.0%	64.0%	82.0%	69.0%	70.0%	68.0%
↑	higher is better	**HCOMP6Y P Patients who reported that YES, they were given information about what to do during their recovery at home**		87.0%	89.0%	86.0%	87.0%	87.0%	93.0%	88.0%	85.0%	89.0%	88.0%
↓	lower is better	**Sepsis In House Mortality**		6.60%	5.41%	4.35%	9.33%	6.42%	4.00%	2.70%	4.00%	3.57%	5.08%
↑	higher is better	**SMB: Sepsis Management Bundle****		70.5%	88.9%	62.5%	55.6%	66.7%	80.0%	100.0%	77.8%	83.3%	76.0%
↓	lower is better	**Median Time from ED Arrival to Departure for Outpatients (18b)****		130	118	143.5	126.5	126.5	122.5	122	120	122	122.25
↓	lower is better	**Median Time from ED Arrival to Transport for Admitted Patients (ED1)****		102	221	223.5	204	221	195	193	191	193	199.5

no data/no cases

****FY19; discharge dates May- Oct 2018**

Quality Target Measures Baseline: FY17 Hospital Compare Posting

Quality Priority Measures Baseline: FY18

Priority Metrics

BalladHealth

Holston Valley Medical Center

Desired Performance		Baseline	FY18	Jul-18	Aug-18	Sep-18	Q1FY19	Oct-18	Nov-18	Dec-18	Q2FY19	FYTD19
	Quality Target Measures											
↓	lower is better	**PSI 3 Pressure Ulcer Rate**	1.07	3.21	3.23	0.00	1.18	1.50	0.00	0.00	1.14	0.36	0.92
↓	lower is better	**PSI 6 Iatrogenic Pneumothorax Rate**	0.57	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 7 Central Venous Catheter-Related Blood Stream Infection Rate**	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 8 In Hospital Fall with Hip Fracture Rate**	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 9 Perioperative Hemorrhage or Hematoma Rate**	4.04	0.92	0.00	6.05	0.00	2.10	0.00	1.99	2.07	1.38	1.73
↓	lower is better	**PSI 10 Postoperative Acute Kidney Injury Requiring Dialysis**	0.87	0.31	0.00	0.00	0.00	0.00	0.00	3.31	0.00	1.15	0.59
↓	lower is better	**PSI 11 Postoperative Respiratory Failure Rate**	16.84	6.40	10.31	19.23	4.98	11.61	9.95	8.33	0.00	5.97	8.64
↓	lower is better	**PSI 12 Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate**	6.14	3.77	6.05	1.90	1.96	3.27	0.00	3.72	0.00	1.29	2.28
↓	lower is better	**PSI 13 Postoperative Sepsis Rate**	9.47	3.57	3.94	10.91	7.27	7.46	0.00	0.00	10.24	3.57	5.47
↓	lower is better	**PSI 14 Postoperative Wound Dehiscence Rate**	2.42	1.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 15 Unrecognized Abdominopelvic Accidental Puncture/Laceration Rate**	1.62	1.58	0.00	0.00	0.00	0.00	0.00	0.00	5.10	1.58	0.81
↓	lower is better	**CLABSI**	0.682	0.330	0.000	0.000	0.000	0.000	1.220	0.000	0.000	0.430	0.190
↓	lower is better	**CAUTI**	0.938	0.500	0.000	0.000	1.020	0.300	0.000	1.050	0.000	0.330	0.310
↓	lower is better	**SSI COLON Surgical Site Infection**	1.364	0.850	20.000	0.000	0.000	6.520	0.000	0.000		0.000	3.610
↓	lower is better	**SSI HYST Surgical Site Infection**	0.641	0.290	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000
↓	lower is better	**MRSA**	0.012	0.030	0.000	0.290	0.000	0.090	0.000	0.000	0.430	0.140	0.120
↓	lower is better	**CDIFF**	0.741	1.060	0.420	0.750	0.930	0.690	0.580	0.000	0.300	0.290	0.490
		Quality Priority Metrics											
↓	lower is better	**Levofloxacin Days Of Therapy per 1000 patient days**		37.64	41.85	34.19	35.49	37.20	49.61	41.10	44.25	44.99	41.10
↓	lower is better	**Meropenem Days Of Therapy per 1000 patient days**		84.83	84.50	70.79	76.72	77.30	77.49	66.50	70.40	71.46	74.40
↓	lower is better	**Inpatient Opioid Administration Rate by Patient Days**		2.15	1.22	1.13	1.02	1.12	1.14	1.13	8.10	3.46	1.13
↓	lower is better	**Emergency Department Opioid Administration Rate by ED Visits**		0.18	0.15	0.15	0.14	0.15	0.12	0.13	0.19	0.15	0.14
↓	lower is better	**Left Without Being Seen**		2.01%	2.98%	1.29%	1.96%	2.07%	1.98%	1.80%	1.62%	1.80%	1.94%
↑	higher is better	**HCOMP1A P Patients who reported that their nurses "Always" communicated well**		81.0%	80.0%	83.0%	84.0%	83.0%	80.0%	78.0%	76.0%	78.0%	80.0%
↑	higher is better	**HCOMP2A P Patients who reported that their doctors "Always" communicated well**		81.0%	80.0%	81.0%	84.0%	82.0%	79.0%	80.0%	75.0%	78.0%	80.0%
↑	higher is better	**HCOMP5A P Patients who reported that staff "Always" explained about medicines before giving it to them**		67.0%	59.0%	62.0%	72.0%	65.0%	60.0%	63.0%	64.0%	62.0%	64.0%
↑	higher is better	**HCOMP6Y P Patients who reported that YES, they were given information about what to do during their recovery at home**		90.0%	87.0%	88.0%	87.0%	87.0%	87.0%	89.0%	86.0%	88.0%	87.0%
↓	lower is better	**Sepsis In House Mortality**		13.30%	12.71%	11.11%	13.73%	12.53%	10.98%	8.48%	10.18%	9.84%	11.27%
↑	higher is better	**SMB: Sepsis Management Bundle****		25.2%	53.8%	35.7%	53.3%	47.6%	41.7%	23.1%	16.7%	29.3%	39.7%
↓	lower is better	**Median Time from ED Arrival to Departure for Outpatients (18b)****		175	176	151.5	177	176	161	178	193	178	176.5
↓	lower is better	**Median Time from ED Arrival to Transport for Admitted Patients (ED1)****		434	405	446	409	409	382	397	440	397	405

no data/no cases

****FY19; discharge dates May- Oct 2018**

Quality Target Measures Baseline: FY17 Hospital Compare Posting

Quality Priority Measures Baseline: FY18

Priority Metrics

BalladHealth

Lonesome Pine Hospital

Desired Performance		Baseline	FY18	Jul-18	Aug-18	Sep-18	Q1FY19	Oct-18	Nov-18	Dec-18	Q2FY19	FYTD19
	Quality Target Measures											
↓	lower is better	**PSI 3 Pressure Ulcer Rate**	1.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 6 Iatrogenic Pneumothorax Rate**	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 7 Central Venous Catheter-Related Blood Stream Infection Rate**	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 8 In Hospital Fall with Hip Fracture Rate**	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 9 Perioperative Hemorrhage or Hematoma Rate**	4.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 10 Postoperative Acute Kidney Injury Requiring Dialysis**	1.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 11 Postoperative Respiratory Failure Rate**	10.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 12 Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate**	4.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 13 Postoperative Sepsis Rate**	5.82	0.00	0.00	0.00	0.00	0.00	0.00	166.67	0.00	58.82	29.41
↓	lower is better	**PSI 14 Postoperative Wound Dehiscence Rate**	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 15 Unrecognized Abdominopelvic Accidental Puncture/Laceration Rate**	1.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**CLABSI**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
↓	lower is better	**CAUTI**	0.000	1.210	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
↓	lower is better	**SSI COLON Surgical Site Infection**	0.000		0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000
↓	lower is better	**SSI HYST Surgical Site Infection**	5.556	0.000		0.000	0.000	0.000	0.000	0.000		0.000	0.000
↓	lower is better	**MRSA**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
↓	lower is better	**CDIFF**	0.315	0.370	0.000	0.000	3.750	1.400	0.000	0.000	0.000	0.000	0.710
		Quality Priority Metrics											
↓	lower is better	**Levofloxacin Days Of Therapy per 1000 patient days**		125.00	65.90	122.00	129.80	104.70	121.21	84.10	67.72	87.61	98.50
↓	lower is better	**Meropenem Days Of Therapy per 1000 patient days**		63.60	80.49	40.65	78.45	66.50	63.59	25.50	40.63	43.24	54.90
↓	lower is better	**Inpatient Opioid Administration Rate by Patient Days**		1.40	0.69	0.78	0.61	0.69	1.54	0.84	5.60	2.66	0.89
↓	lower is better	**Emergency Department Opioid Administration Rate by ED Visits**		0.12	0.14	0.13	0.12	0.13	0.15	0.08	0.12	0.12	0.12
↓	lower is better	**Left Without Being Seen**		0.31%	0.26%	0.37%	0.19%	0.19%	0.25%	0.13%	0.04%	0.11%	0.20%
↑	higher is better	**HCOMP1A P Patients who reported that their nurses "Always" communicated well**		83.0%	82.0%	78.0%	82.0%	81.0%	89.0%	89.0%	81.0%	87.0%	85.0%
↑	higher is better	**HCOMP2A P Patients who reported that their doctors "Always" communicated well**		83.0%	84.0%	84.0%	78.0%	83.0%	85.0%	89.0%	87.0%	87.0%	85.0%
↑	higher is better	**HCOMP5A P Patients who reported that staff "Always" explained about medicines before giving it to them**		76.0%	58.0%	75.0%	67.0%	66.0%	79.0%	92.0%	70.0%	80.0%	74.0%
↑	higher is better	**HCOMP6Y P Patients who reported that YES, they were given information about what to do during their recovery at home**		86.0%	87.0%	89.0%	90.0%	88.0%	75.0%	93.0%	93.0%	85.0%	86.0%
↓	lower is better	**Sepsis In House Mortality**		4.40%	8.70%	6.25%	0.00%	4.90%	3.03%	0.00%	8.30%	3.90%	4.11%
↑	higher is better	**SMB: Sepsis Management Bundle****		44.8%	50.0%	53.3%	50.0%	51.3%	50.0%	50.0%	61.5%	54.1%	52.6%
↓	lower is better	**Median Time from ED Arrival to Departure for Outpatients (18b)****		117	114.25	126.5	119.5	119.25	129.5	105.5	114.75	114.75	117.125
↓	lower is better	**Median Time from ED Arrival to Transport for Admitted Patients (ED1)****		244	223.5	240	242.5	231.5	251.25	263	261.75	261.25	246.875

no data/no cases

****FY19; discharge dates May- Oct 2018**

Quality Target Measures Baseline: FY17 Hospital Compare Posting

Quality Priority Measures Baseline: FY18

Priority Metrics

BalladHealth

Norton Community Hospital

Desired Performance		Baseline	FY18	Jul-18	Aug-18	Sep-18	Q1FY19	Oct-18	Nov-18	Dec-18	Q2FY19	FYTD19
	Quality Target Measures											
↓	lower is better	**PSI 3 Pressure Ulcer Rate**	**0.33**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 6 Iatrogenic Pneumothorax Rate**	**0.38**	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 7 Central Venous Catheter-Related Blood Stream Infection Rate**	**0.15**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 8 In Hospital Fall with Hip Fracture Rate**	**0.06**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 9 Perioperative Hemorrhage or Hematoma Rate**	**4.96**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 10 Postoperative Acute Kidney Injury Requiring Dialysis**	**1.10**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 11 Postoperative Respiratory Failure Rate**	**12.33**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 12 Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate**	**4.14**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 13 Postoperative Sepsis Rate**	**35.72**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 14 Postoperative Wound Dehiscence Rate**	**2.79**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 15 Unrecognized Abdominopelvic Accidental Puncture/Laceration Rate**	**1.74**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**CLABSI**	**0.000**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
↓	lower is better	**CAUTI**	**0.000**	0.000	0.000	4.570	0.000	1.710	0.000	0.000	0.000	0.000	0.840
↓	lower is better	**SSI COLON Surgical Site Infection**	**0.000**	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000
↓	lower is better	**SSI HYST Surgical Site Infection**	**0.000**	0.000	0.000		0.000	0.000					0.000
↓	lower is better	**MRSA**	**0.000**	0.000	0.000	1.190	0.000	0.450	0.000	0.000	0.000	0.000	0.210
↓	lower is better	**CDIFF**	**0.265**	0.300	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		Quality Priority Metrics											
↓	lower is better	**Levofloxacin Days Of Therapy per 1000 patient days**		**50.10**	59.59	49.71	34.76	48.00	38.04	47.55	59.00	48.20	48.30
↓	lower is better	**Meropenem Days Of Therapy per 1000 patient days**		**53.34**	64.94	24.24	12.49	33.90	13.20	21.70	42.70	25.87	29.90
↓	lower is better	**Inpatient Opioid Administration Rate by Patient Days**		**0.61**	0.79	0.82	0.58	0.73	0.76	0.80	1.00	0.85	0.75
↓	lower is better	**Emergency Department Opioid Administration Rate by ED Visits**		**0.11**	0.15	0.15	0.14	0.15	0.14	0.12	0.14	0.13	0.14
↓	lower is better	**Left Without Being Seen**		**0.19%**	0.20%	0.25%	0.37%	0.28%	0.30%	0.25%	0.13%	0.41%	0.34%
↑	higher is better	**HCOMP1A P Patients who reported that their nurses "Always" communicated well**		**83.0%**	83.0%	84.0%	86.0%	84.0%	83.0%	88.0%	89.0%	87.0%	85.0%
↑	higher is better	**HCOMP2A P Patients who reported that their doctors "Always" communicated well**		**82.0%**	77.0%	82.0%	75.0%	79.0%	78.0%	89.0%	91.0%	86.0%	82.0%
↑	higher is better	**HCOMP5A P Patients who reported that staff "Always" explained about medicines before giving it to them**		**65.0%**	65.0%	71.0%	67.0%	68.0%	57.0%	71.0%	71.0%	67.0%	67.0%
↑	higher is better	**HCOMP6Y P Patients who reported that YES, they were given information about what to do during their recovery at home**		**80.0%**	81.0%	89.0%	74.0%	83.0%	81.0%	85.0%	86.0%	84.0%	84.0%
↓	lower is better	**Sepsis In House Mortality**		**3.92%**	3.28%	5.26%	5.00%	4.32%	3.92%	3.64%	9.62%	5.70%	4.57%
↑	higher is better	**SMB: Sepsis Management Bundle****		**77.6%**	100.0%	66.7%	100.0%	94.4%	80.0%	83.3%	66.7%	76.5%	85.7%
↓	lower is better	**Median Time from ED Arrival to Departure for Outpatients (18b)****		**138.75**	142.5	125	147	142.5	138	147	137	138	140.25
↓	lower is better	**Median Time from ED Arrival to Transport for Admitted Patients (ED1)****		**225**	230	213	224	224	238	226.5	247	288	228.25

no data/no cases

****FY19; discharge dates May- Oct 2018**

Quality Target Measures Baseline: FY17 Hospital Compare Posting

Quality Priority Measures Baseline: FY18

Priority Metrics

BalladHealth

Franklin Woods Community Hospital

Desired Performance		Baseline	FY18	Jul-18	Aug-18	Sep-18	Q1FY19	Oct-18	Nov-18	Dec-18	Q2FY19	FYTD19
	Quality Target Measures											
↓	lower is better	**PSI 3 Pressure Ulcer Rate**	**0.30**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 6 Iatrogenic Pneumothorax Rate**	**0.38**	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 7 Central Venous Catheter-Related Blood Stream Infection Rate**	**0.15**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 8 In Hospital Fall with Hip Fracture Rate**	**0.06**	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 9 Perioperative Hemorrhage or Hematoma Rate**	**4.37**	2.27	14.71	0.00	0.00	5.00	0.00	0.00	19.61	5.75	5.35
↓	lower is better	**PSI 10 Postoperative Acute Kidney Injury Requiring Dialysis**	**1.09**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 11 Postoperative Respiratory Failure Rate**	**12.09**	15.78	54.05	0.00	0.00	18.69	0.00	0.00	0.00	0.00	9.26
↓	lower is better	**PSI 12 Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate**	**4.36**	2.34	0.00	14.29	0.00	4.74	0.00	14.29	0.00	5.38	5.04
↓	lower is better	**PSI 13 Postoperative Sepsis Rate**	**0.00**	8.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 14 Postoperative Wound Dehiscence Rate**	**2.15**	1.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 15 Unrecognized Abdominopelvic Accidental Puncture/Laceration Rate**	**1.45**	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**CLABSI**	**0.000**	0.910	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
↓	lower is better	**CAUTI**	**0.428**	0.434	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
↓	lower is better	**SSI COLON Surgical Site Infection**	**1.504**	5.110	7.690	6.670	7.140	7.140	0.000	0.000		0.000	4.690
↓	lower is better	**SSI HYST Surgical Site Infection**	**0.000**	1.200	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000
↓	lower is better	**MRSA**	**0.039**	0.081	0.500	0.000	0.000	0.170	0.000	0.000	0.000	0.000	0.090
↓	lower is better	**CDIFF**	**0.259**	0.319	0.560	0.000	0.000	0.190	1.160	0.620	0.660	0.820	0.490
		Quality Priority Metrics											
↓	lower is better	**Levofloxacin Days Of Therapy per 1000 patient days**		**33.60**	24.69	35.10	36.50	32.10	32.99	38.68	47.60	39.76	35.90
↓	lower is better	**Meropenem Days Of Therapy per 1000 patient days**		**29.93**	0.67	28.67	25.79	26.70	31.78	42.90	45.90	40.19	33.50
↓	lower is better	**Inpatient Opioid Administration Rate by Patient Days**		**0.71**	0.65	0.69	0.68	0.68	0.84	0.74	0.94	0.84	0.72
↓	lower is better	**Emergency Department Opioid Administration Rate by ED Visits**		**0.14**	0.19	0.13	0.13	0.15	0.10	0.12	0.12	0.11	0.13
↓	lower is better	**Left Without Being Seen**		**0.63%**	50.00%	0.76%	0.91%	1.27%	0.59%	0.46%	0.55%	0.54%	1.00%
↑	higher is better	**HCOMP1A P Patients who reported that their nurses "Always" communicated well**		**84.0%**	100.0%	85.0%	81.0%	81.0%	83.0%	83.0%	84.0%	83.0%	82.0%
↑	higher is better	**HCOMP2A P Patients who reported that their doctors "Always" communicated well**		**82.0%**	66.7%	82.0%	83.0%	81.0%	81.0%	85.0%	90.0%	85.0%	83.0%
↑	higher is better	**HCOMP5A P Patients who reported that staff "Always" explained about medicines before giving it to them**		**70.0%**	70.4%	69.0%	75.0%	69.0%	67.0%	68.0%	66.0%	67.0%	68.0%
↑	higher is better	**HCOMP6Y P Patients who reported that YES, they were given information about what to do during their recovery at home**		**87.0%**	64.3%	83.0%	87.0%	87.0%	89.0%	86.0%	88.0%	88.0%	87.0%
↓	lower is better	**Sepsis In House Mortality**		**3.80%**	5.41%	9.09%	9.76%	8.11%	4.65%	2.04%	6.25%	4.29%	5.94%
↑	higher is better	**SMB: Sepsis Management Bundle****		**78.8%**	75.0%	66.7%	50.0%	64.3%	66.7%	100.0%	66.7%	76.9%	70.4%
↓	lower is better	**Median Time from ED Arrival to Departure for Outpatients (18b)****		**139**	158	148	157	157	150.5	165.5	141	150.5	153.75
↓	lower is better	**Median Time from ED Arrival to Transport for Admitted Patients (ED1)****		**131.75**	251.5	236	259	251.5	210	267	248	248	249.75

no data/no cases

****FY19; discharge dates May- Oct 2018**

Quality Target Measures Baseline: FY17 Hospital Compare Posting

Quality Priority Measures Baseline: FY18

Priority Metrics

BalladHealth

Johnson City Medical Center

Desired Performance		Baseline	FY18	Jul-18	Aug-18	Sep-18	Q1FY19	Oct-18	Nov-18	Dec-18	Q2FY19	FYTD19
	Quality Target Measures											
↓	lower is better	**PSI 3 Pressure Ulcer Rate**	0.26	0.00	0.00	0.00	0.00	0.00	0.69	0.76	0.00	0.49	0.24
↓	lower is better	**PSI 6 Iatrogenic Pneumothorax Rate**	0.26	0.27	0.00	0.51	0.56	0.35	0.00	0.00	0.00	0.00	0.18
↓	lower is better	**PSI 7 Central Venous Catheter-Related Blood Stream Infection Rate**	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.77	0.00	0.26	0.12
↓	lower is better	**PSI 8 In Hospital Fall with Hip Fracture Rate**	0.06	0.00	0.71	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.12
↓	lower is better	**PSI 9 Perioperative Hemorrhage or Hematoma Rate**	3.60	1.13	0.00	2.13	2.39	1.50	0.00	0.00	0.00	0.00	0.74
↓	lower is better	**PSI 10 Postoperative Acute Kidney Injury Requiring Dialysis**	1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.44	1.52	0.80
↓	lower is better	**PSI 11 Postoperative Respiratory Failure Rate**	11.98	6.57	6.58	0.00	15.04	6.58	6.76	11.30	5.92	8.10	7.37
↓	lower is better	**PSI 12 Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate**	5.85	3.63	6.32	3.94	4.50	4.91	8.46	2.00	4.18	4.82	4.86
↓	lower is better	**PSI 13 Postoperative Sepsis Rate**	14.88	3.00	0.00	0.00	0.00	0.00	5.00	0.00	0.00	1.57	0.83
↓	lower is better	**PSI 14 Postoperative Wound Dehiscence Rate**	2.35	1.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 15 Unrecognized Abdominopelvic Accidental Puncture/Laceration Rate**	1.34	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**CLABSI**	1.080	1.130	0.000	1.940	1.800	1.250	1.120	3.230	0.000	1.520	1.370
↓	lower is better	**CAUTI**	0.997	1.498	2.320	4.210	0.000	2.090	9.870	2.710	1.430	4.660	3.300
↓	lower is better	**SSI COLON Surgical Site Infection**	1.911	1.670	18.180	14.290	7.690	12.900	0.000	0.000		0.000	7.550
↓	lower is better	**SSI HYST Surgical Site Infection**	2.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000
↓	lower is better	**MRSA**	0.055	0.183	0.190	0.180	0.090	0.150	0.270	0.100	0.190	0.190	0.170
↓	lower is better	**CDIFF**	0.531	0.496	0.100	0.380	0.410	0.300	0.400	0.000	0.600	0.340	0.320
		Quality Priority Metrics											
↓	lower is better	**Levofloxacin Days Of Therapy per 1000 patient days**		22.70	22.23	23.19	29.77	25.10	25.14	22.50	21.60	23.08	24.10
↓	lower is better	**Meropenem Days Of Therapy per 1000 patient days**		32.68	36.04	36.82	37.31	36.70	34.33	40.30	32.60	35.74	36.20
↓	lower is better	**Inpatient Opioid Administration Rate by Patient Days**		0.92	0.96	0.97	0.85	0.93	0.89	0.91	1.10	0.97	0.92
↓	lower is better	**Emergency Department Opioid Administration Rate by ED Visits**		0.04	0.06	0.06	0.04	0.05	0.06	0.04	0.05	0.05	0.05
↓	lower is better	**Left Without Being Seen**		0.72%	1.44%	1.80%	1.35%	1.51%	1.25%	0.59%	0.97%	0.94%	1.26%
↑	higher is better	**HCOMP1A P Patients who reported that their nurses "Always" communicated well**		77.0%	75.0%	73.0%	69.0%	73.0%	76.0%	80.0%	76.0%	77.0%	75.0%
↑	higher is better	**HCOMP2A P Patients who reported that their doctors "Always" communicated well**		76.0%	76.0%	74.0%	69.0%	73.0%	77.0%	76.0%	77.0%	77.0%	75.0%
↑	higher is better	**HCOMP5A P Patients who reported that staff "Always" explained about medicines before giving it to them**		60.0%	64.0%	56.0%	49.0%	57.0%	59.0%	63.0%	53.0%	59.0%	58.0%
↑	higher is better	**HCOMP6Y P Patients who reported that YES, they were given information about what to do during their recovery at home**		82.0%	85.0%	83.0%	83.0%	84.0%	86.0%	90.0%	87.0%	88.0%	86.0%
↓	lower is better	**Sepsis In House Mortality**		16.60%	10.50%	12.57%	10.83%	11.32%	10.63%	10.81%	14.38%	11.74%	11.06%
↑	higher is better	**SMB: Sepsis Management Bundle****		55.6%	41.7%	77.8%	70.0%	61.3%	66.7%	55.6%	66.7%	62.5%	61.8%
↓	lower is better	**Median Time from ED Arrival to Departure for Outpatients (18b)****		153	144	165.5	157.5	157.5	154	186	170.5	170.5	161.5
↓	lower is better	**Median Time from ED Arrival to Transport for Admitted Patients (ED1)****		260	320.5	266	293	293	280	335	218	286.5	293

no data/no cases

****FY19; discharge dates May- Oct 2018**

Quality Target Measures Baseline: FY17 Hospital Compare Posting

Quality Priority Measures Baseline: FY18

Priority Metrics

BalladHealth

Johnson County Community Hospital

Desired Performance		Baseline	FY18	Jul-18	Aug-18	Sep-18	Q1FY19	Oct-18	Nov-18	Dec-18	Q2FY19	FYTD19
	Quality Target Measures											
↓	lower is better	**PSI 3 Pressure Ulcer Rate**			0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00
↓	lower is better	**PSI 6 Iatrogenic Pneumothorax Rate**			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 7 Central Venous Catheter-Related Blood Stream Infection Rate**			0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00
↓	lower is better	**PSI 8 In Hospital Fall with Hip Fracture Rate**			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 9 Perioperative Hemorrhage or Hematoma Rate**											
↓	lower is better	**PSI 10 Postoperative Acute Kidney Injury Requiring Dialysis**											
↓	lower is better	**PSI 11 Postoperative Respiratory Failure Rate**											
↓	lower is better	**PSI 12 Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate**											
↓	lower is better	**PSI 13 Postoperative Sepsis Rate**											
↓	lower is better	**PSI 14 Postoperative Wound Dehiscence Rate**											
↓	lower is better	**PSI 15 Unrecognized Abdominopelvic Accidental Puncture/Laceration Rate**											
↓	lower is better	**CLABSI**											
↓	lower is better	**CAUTI**											
↓	lower is better	**SSI COLON Surgical Site Infection**											
↓	lower is better	**SSI HYST Surgical Site Infection**											
↓	lower is better	**MRSA**											
↓	lower is better	**CDIFF**											
		Quality Priority Metrics											
↓	lower is better	**Levofloxacin Days Of Therapy per 1000 patient days**											
↓	lower is better	**Meropenem Days Of Therapy per 1000 patient days**											
↓	lower is better	**Inpatient Opioid Administration Rate by Patient Days**											
↓	lower is better	**Emergency Department Opioid Administration Rate by ED Visits**											
↓	lower is better	**Left Without Being Seen**		**0.69%**	0.94%	1.42%	0.97%	1.12%	0.78%	0.48%	0.56%	0.61%	0.88%
↑	higher is better	**HCOMP1A P Patients who reported that their nurses "Always" communicated well**		**100.0%**									
↑	higher is better	**HCOMP2A P Patients who reported that their doctors "Always" communicated well**		**100.0%**									
↑	higher is better	**HCOMP5A P Patients who reported that staff "Always" explained about medicines before giving it to them**		**100.0%**									
↑	higher is better	**HCOMP6Y P Patients who reported that YES, they were given information about what to do during their recovery at home**		**100.0%**									
↓	lower is better	**Sepsis In House Mortality**											
↑	higher is better	**SMB: Sepsis Management Bundle****						**0.0%**				**0.0%**	
↓	lower is better	**Median Time from ED Arrival to Departure for Outpatients (18b)****		**86**	73.5	96	91	91	60	84	72	72	78.75
↓	lower is better	**Median Time from ED Arrival to Transport for Admitted Patients (ED1)****		**152**	143	153		148					148

no data/no cases

****FY19; discharge dates May- Oct 2018**

Quality Target Measures Baseline: FY17 Hospital Compare Posting

Quality Priority Measures Baseline: FY18

Priority Metrics

BalladHealth

Sycamore Shoals Hospital

Desired Performance		Baseline	FY18	Jul-18	Aug-18	Sep-18	Q1FY19	Oct-18	Nov-18	Dec-18	Q2FY19	FYTD19
	Quality Target Measures											
↓	lower is better	**PSI 3 Pressure Ulcer Rate**	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 6 Iatrogenic Pneumothorax Rate**	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 7 Central Venous Catheter-Related Blood Stream Infection Rate**	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 8 In Hospital Fall with Hip Fracture Rate**	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 9 Perioperative Hemorrhage or Hematoma Rate**	4.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 10 Postoperative Acute Kidney Injury Requiring Dialysis**	1.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 11 Postoperative Respiratory Failure Rate**	13.37	4.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 12 Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate**	5.23	4.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 13 Postoperative Sepsis Rate**	0.00	4.65	0.00	0.00	58.82	18.87	0.00	0.00	0.00	0.00	9.26
↓	lower is better	**PSI 14 Postoperative Wound Dehiscence Rate**	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 15 Unrecognized Abdominopelvic Accidental Puncture/Laceration Rate**	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**CLABSI**	0.900	1.090	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
↓	lower is better	**CAUTI**	0.000	0.460	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
↓	lower is better	**SSI COLON Surgical Site Infection**	3.226	3.130	0.000	50.000	0.000	14.290	0.000	0.000		0.000	6.670
↓	lower is better	**SSI HYST Surgical Site Infection**	0.000	0.000	0.000		0.000	0.000					0.000
↓	lower is better	**MRSA**	0.067	0.134	0.000	0.960	0.000	0.310	0.000	0.000	0.000	0.000	0.150
↓	lower is better	**CDIFF**	0.604	0.672	0.890	0.960	1.840	1.230	0.000	0.000		0.000	0.740
		Quality Priority Metrics											
↓	lower is better	**Levofloxacin Days Of Therapy per 1000 patient days**		29.20	21.07	25.57	18.02	21.60	30.15	34.40	33.20	32.58	27.30
↓	lower is better	**Meropenem Days Of Therapy per 1000 patient days**		31.02	24.24	38.35	51.88	38.20	63.87	32.40	56.60	50.96	44.60
↓	lower is better	**Inpatient Opioid Administration Rate by Patient Days**		0.68	0.88	0.71	0.61	0.73	0.78	0.64	0.55	0.66	0.72
↓	lower is better	**Emergency Department Opioid Administration Rate by ED Visits**		0.12	0.16	0.13	0.12	0.14	0.13	0.12	0.13	0.13	0.13
↓	lower is better	**Left Without Being Seen**		0.65%	1.17%	0.58%	0.76%	0.83%	0.58%	0.00%	0.62%	0.46%	0.66%
↑	higher is better	**HCOMP1A P Patients who reported that their nurses "Always" communicated well**		78.0%	82.0%	78.0%	83.0%	81.0%	90.0%	84.0%	74.0%	83.0%	82.0%
↑	higher is better	**HCOMP2A P Patients who reported that their doctors "Always" communicated well**		80.0%	92.0%	82.0%	83.0%	86.0%	83.0%	80.0%	86.0%	83.0%	84.0%
↑	higher is better	**HCOMP5A P Patients who reported that staff "Always" explained about medicines before giving it to them**		64.0%	79.0%	67.0%	68.0%	72.0%	72.0%	76.0%	60.0%	70.0%	71.0%
↑	higher is better	**HCOMP6Y P Patients who reported that YES, they were given information about what to do during their recovery at home**		86.0%	89.0%	92.0%	85.0%	89.0%	91.0%	78.0%	84.0%	85.0%	87.0%
↓	lower is better	**Sepsis In House Mortality**		14.03%	9.52%	8.82%	10.26%	9.57%	3.03%	6.90%	12.00%	6.90%	7.91%
↑	higher is better	**SMB: Sepsis Management Bundle****		72.0%	50.0%	66.7%	50.0%	55.6%	66.7%	50.0%	100.0%	66.7%	62.5%
↓	lower is better	**Median Time from ED Arrival to Departure for Outpatients (18b)****		166	112.5	115	142	115	129	132.5	111	129	122
↓	lower is better	**Median Time from ED Arrival to Transport for Admitted Patients (ED1)****		222	211	200.5	223.5	211	215	191	215.5	215	213

no data/no cases

****FY19; discharge dates May- Oct 2018**

Quality Target Measures Baseline: FY17 Hospital Compare Posting

Quality Priority Measures Baseline: FY18

Priority Metrics

BalladHealth

Laughlin Memorial Hospital

Desired Performance		Baseline	FY18	Jul-18	Aug-18	Sep-18	Q1FY19	Oct-18	Nov-18	Dec-18	Q2FY19	FYTD19
	Quality Target Measures											
↓	lower is better	**PSI 3 Pressure Ulcer Rate**	0.27									
↓	lower is better	**PSI 6 Iatrogenic Pneumothorax Rate**	0.37									
↓	lower is better	**PSI 7 Central Venous Catheter-Related Blood Stream Infection Rate**	0.15									
↓	lower is better	**PSI 8 In Hospital Fall with Hip Fracture Rate**	0.06									
↓	lower is better	**PSI 9 Perioperative Hemorrhage or Hematoma Rate**	4.52									
↓	lower is better	**PSI 10 Postoperative Acute Kidney Injury Requiring Dialysis**	1.10									
↓	lower is better	**PSI 11 Postoperative Respiratory Failure Rate**	8.98									
↓	lower is better	**PSI 12 Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate**	6.16									
↓	lower is better	**PSI 13 Postoperative Sepsis Rate**	9.38									
↓	lower is better	**PSI 14 Postoperative Wound Dehiscence Rate**	2.22									
↓	lower is better	**PSI 15 Unrecognized Abdominopelvic Accidental Puncture/Laceration Rate**	2.17									
↓	lower is better	**CLABSI**	0.000	0.000	0.000	9.170	0.000	2.790	0.000	0.000	0.000	0.000	1.660
↓	lower is better	**CAUTI**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
↓	lower is better	**SSI COLON Surgical Site Infection**	2.326	1.538	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000
↓	lower is better	**SSI HYST Surgical Site Infection**											
↓	lower is better	**MRSA**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
↓	lower is better	**CDIFF**	0.441	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.040	0.370	0.180
		Quality Priority Metrics											
↓	lower is better	**Levofloxacin Days Of Therapy per 1000 patient days**			74.00	69.00	67.00	70.00	65.60	62.60	60.50	62.90	66.50
↓	lower is better	**Meropenem Days Of Therapy per 1000 patient days**		0.00	45.10	10.30	36.40	30.60	36.30	22.20	39.60	32.70	31.70
↓	lower is better	**Inpatient Opioid Administration Rate by Patient Days**			0.78	0.96	0.96		0.89	0.85			0.89
↓	lower is better	**Emergency Department Opioid Administration Rate by ED Visits**											
↓	lower is better	**Left Without Being Seen**		0.54%	0.47%	1.21%	1.72%	1.14%	0.91%	0.88%	1.14%	0.98%	1.06%
↑	higher is better	**HCOMP1A P Patients who reported that their nurses "Always" communicated well**			69.0%	73.0%	69.0%	70.0%	63.0%	73.0%	79.0%	70.0%	70.0%
↑	higher is better	**HCOMP2A P Patients who reported that their doctors "Always" communicated well**			78.0%	79.0%	84.0%	81.0%	73.0%	85.0%	82.0%	79.0%	80.0%
↑	higher is better	**HCOMP5A P Patients who reported that staff "Always" explained about medicines before giving it to them**			51.0%	67.0%	59.0%	60.0%	45.0%	61.0%	50.0%	51.0%	56.0%
↑	higher is better	**HCOMP6Y P Patients who reported that YES, they were given information about what to do during their recovery at home**			81.0%	82.0%	84.0%	83.0%	86.0%	80.0%	64.0%	79.0%	81.0%
↓	lower is better	**Sepsis In House Mortality**											
↑	higher is better	**SMB: Sepsis Management Bundle****		51.2%	100.0%	83.3%	50.0%	75.0%	83.3%	100.0%		90.0%	81.8%
↓	lower is better	**Median Time from ED Arrival to Departure for Outpatients (18b)****		110	127	94	127.5	127	122	124	125	124.5	124.5
↓	lower is better	**Median Time from ED Arrival to Transport for Admitted Patients (ED1)****		192	222	220	230	222	224	207.5		215.75	222

no data/no cases

****FY19; discharge dates May- Oct 2018**

Quality Target Measures Baseline: FY17 Hospital Compare Posting

Quality Priority Measures Baseline: FY18

Priority Metrics

BalladHealth

Takoma Regional Hospital

Desired Performance		Baseline	FY18	Jul-18	Aug-18	Sep-18	Q1FY19	Oct-18	Nov-18	Dec-18	Q2FY19	FYTD19
	Quality Target Measures											
↓	lower is better	**PSI 3 Pressure Ulcer Rate**	0.34									
↓	lower is better	**PSI 6 Iatrogenic Pneumothorax Rate**	0.45									
↓	lower is better	**PSI 7 Central Venous Catheter-Related Blood Stream Infection Rate**	0.15									
↓	lower is better	**PSI 8 In Hospital Fall with Hip Fracture Rate**	0.06									
↓	lower is better	**PSI 9 Perioperative Hemorrhage or Hematoma Rate**	4.98									
↓	lower is better	**PSI 10 Postoperative Acute Kidney Injury Requiring Dialysis**	1.11									
↓	lower is better	**PSI 11 Postoperative Respiratory Failure Rate**	12.51									
↓	lower is better	**PSI 12 Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate**	7.58									
↓	lower is better	**PSI 13 Postoperative Sepsis Rate**	9.48									
↓	lower is better	**PSI 14 Postoperative Wound Dehiscence Rate**	2.24									
↓	lower is better	**PSI 15 Unrecognized Abdominopelvic Accidental Puncture/Laceration Rate**	1.49									
↓	lower is better	**CLABSI**	0.000	1.150	0.000	24.390	0.000	5.150	0.000	0.000	0.000	0.000	2.910
↓	lower is better	**CAUTI**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
↓	lower is better	**SSI COLON Surgical Site Infection**	0.000	2.220	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000
↓	lower is better	**SSI HYST Surgical Site Infection**	0.000	0.000									
↓	lower is better	**MRSA**	0.000	0.000	0.000	1.780	0.000	0.520	0.000	0.000	0.000	0.000	0.280
↓	lower is better	**CDIFF**	0.124	0.420	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		Quality Priority Metrics											
↓	lower is better	**Levofloxacin Days Of Therapy per 1000 patient days**		62.82	92.40	96.70	66.39	85.20	111.24	99.70	52.88	87.94	86.60
↓	lower is better	**Meropenem Days Of Therapy per 1000 patient days**		13.90	16.81	21.63	17.91	18.80	21.21	8.20	29.55	19.65	27.30
↓	lower is better	**Inpatient Opioid Administration Rate by Patient Days**		0.80	0.78	0.49	0.83	0.70	0.54	0.64	4.50	1.89	0.66
↓	lower is better	**Emergency Department Opioid Administration Rate by ED Visits**		0.07	0.10	0.09	0.10	0.09	0.09	0.04	0.16	0.10	0.08
↓	lower is better	**Left Without Being Seen**		2.48%	0.07%	0.35%	0.20%	0.20%	0.07%	0.31%	0.07%	0.05%	0.13%
↑	higher is better	**HCOMP1A P Patients who reported that their nurses "Always" communicated well**		84.0%	89.0%	78.0%	91.0%	87.0%	91.0%	85.0%	84.0%	87.0%	87.0%
↑	higher is better	**HCOMP2A P Patients who reported that their doctors "Always" communicated well**		82.0%	80.0%	77.0%	88.0%	82.0%	82.0%	86.0%	94.0%	86.0%	84.0%
↑	higher is better	**HCOMP5A P Patients who reported that staff "Always" explained about medicines before giving it to them**		70.0%	71.0%	68.0%	67.0%	68.0%	67.0%	85.0%	83.0%	76.0%	72.0%
↑	higher is better	**HCOMP6Y P Patients who reported that YES, they were given information about what to do during their recovery at home**		91.0%	89.0%	92.0%	90.0%	90.0%	96.0%	91.0%	93.0%	94.0%	92.0%
↓	lower is better	**Sepsis In House Mortality**											
↑	higher is better	**SMB: Sepsis Management Bundle****		31.7%	50.0%	25.0%	71.4%	47.6%	14.2%	88.9%	16.7%	59.1%	46.5%
↓	lower is better	**Median Time from ED Arrival to Departure for Outpatients (18b)****		163	166	127	130	130	183	189	142	188	154
↓	lower is better	**Median Time from ED Arrival to Transport for Admitted Patients (ED1)****		277	245.5	294	259	259	287	280.5	285	285	280.5

no data/no cases

****FY19; discharge dates May- Oct 2018**

Quality Target Measures Baseline: FY17 Hospital Compare Posting

Quality Priority Measures Baseline: FY18

Priority Metrics

BalladHealth

Hawkins County Memorial Hospital

Desired Performance		Baseline	FY18	Jul-18	Aug-18	Sep-18	Q1FY19	Oct-18	Nov-18	Dec-18	Q2FY19	FYTD19
	Quality Target Measures											
↓	lower is better	**PSI 3 Pressure Ulcer Rate**	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 6 Iatrogenic Pneumothorax Rate**	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 7 Central Venous Catheter-Related Blood Stream Infection Rate**	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 8 In Hospital Fall with Hip Fracture Rate**		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 9 Perioperative Hemorrhage or Hematoma Rate**		0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00
↓	lower is better	**PSI 10 Postoperative Acute Kidney Injury Requiring Dialysis**		0.00					0.00			0.00	0.00
↓	lower is better	**PSI 11 Postoperative Respiratory Failure Rate**		0.00									
↓	lower is better	**PSI 12 Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate**		0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00
↓	lower is better	**PSI 13 Postoperative Sepsis Rate**		0.00					0.00			0.00	0.00
↓	lower is better	**PSI 14 Postoperative Wound Dehiscence Rate**		0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00
↓	lower is better	**PSI 15 Unrecognized Abdominopelvic Accidental Puncture/Laceration Rate**	1.36	12.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**CLABSI**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
↓	lower is better	**CAUTI**	0.000	1.620	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
↓	lower is better	**SSI COLON Surgical Site Infection**	0.000										
↓	lower is better	**SSI HYST Surgical Site Infection**											
↓	lower is better	**MRSA**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
↓	lower is better	**CDIFF**	0.000	0.260	0.000	0.000	0.000	0.000	0.000	3.180	0.000	1.110	0.580
		Quality Priority Metrics											
↓	lower is better	**Levofloxacin Days Of Therapy per 1000 patient days**		135.90	135.60	102.80	61.95	100.10	99.74	76.00	68.49	81.41	90.80
↓	lower is better	**Meropenem Days Of Therapy per 1000 patient days**		74.51	109.04	62.66	85.55	85.80	28.87	34.30	35.62	32.93	59.30
↓	lower is better	**Inpatient Opioid Administration Rate by Patient Days**		1.58	0.87	0.90	0.70	0.82	1.08	1.02	6.20	2.77	1.79
↓	lower is better	**Emergency Department Opioid Administration Rate by ED Visits**		0.12	0.12	0.11	0.13	0.12	0.09	0.12	0.13	0.11	0.12
↓	lower is better	**Left Without Being Seen**		2.24%	0.00%	0.49%	0.26%	0.24%	0.17%	0.68%	0.09%	0.32%	0.28%
↑	higher is better	**HCOMP1A P Patients who reported that their nurses "Always" communicated well**		84.0%	81.0%	87.0%	96.0%	88.0%	77.0%	91.0%	80.0%	83.0%	85.0%
↑	higher is better	**HCOMP2A P Patients who reported that their doctors "Always" communicated well**		80.0%	88.0%	80.0%	100.0%	89.0%	74.0%	76.0%	64.0%	71.0%	79.0%
↑	higher is better	**HCOMP5A P Patients who reported that staff "Always" explained about medicines before giving it to them**		70.0%	83.0%	90.0%	100.0%	91.0%	60.0%	100.0%	50.0%	63.0%	77.0%
↑	higher is better	**HCOMP6Y P Patients who reported that YES, they were given information about what to do during their recovery at home**		87.0%	87.0%	80.0%	79.0%	82.0%	88.0%	86.0%	77.0%	83.0%	83.0%
↓	lower is better	**Sepsis In House Mortality**		2.50%	9.09%	0.00%	0.00%	3.45%	0.00%	0.00%	0.00%	0.00%	2.04%
↑	higher is better	**SMB: Sepsis Management Bundle****		47.3%	75.0%	60.0%	50.0%	60.0%	33.3%	100.0%	75.0%	68.4%	64.7%
↓	lower is better	**Median Time from ED Arrival to Departure for Outpatients (18b)****		91	68	83	65	68	101	118	87	101	84.75
↓	lower is better	**Median Time from ED Arrival to Transport for Admitted Patients (ED1)****		215	204	202	219	204	232	233	230	232	219

no data/no cases

****FY19; discharge dates May- Oct 2018**

Quality Target Measures Baseline: FY17 Hospital Compare Posting

Quality Priority Measures Baseline: FY18

Priority Metrics

BalladHealth

Russell County Hospital

Desired Performance		Baseline	FY18	Jul-18	Aug-18	Sep-18	Q1FY19	Oct-18	Nov-18	Dec-18	Q2FY19	FYTD19
	Quality Target Measures											
↓	lower is better	**PSI 3 Pressure Ulcer Rate**	**0.41**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 6 Iatrogenic Pneumothorax Rate**	**0.40**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 7 Central Venous Catheter-Related Blood Stream Infection Rate**	**0.17**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 8 In Hospital Fall with Hip Fracture Rate**		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 9 Perioperative Hemorrhage or Hematoma Rate**	**0.89**	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 10 Postoperative Acute Kidney Injury Requiring Dialysis**		0.00									
↓	lower is better	**PSI 11 Postoperative Respiratory Failure Rate**		0.00									
↓	lower is better	**PSI 12 Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate**		0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**PSI 13 Postoperative Sepsis Rate**		250.00									
↓	lower is better	**PSI 14 Postoperative Wound Dehiscence Rate**		0.00		0.00	0.00	0.00	0.00			0.00	0.00
↓	lower is better	**PSI 15 Unrecognized Abdominopelvic Accidental Puncture/Laceration Rate**	**1.39**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	lower is better	**CLABSI**	**0.000**	4.785	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
↓	lower is better	**CAUTI**	**0.000**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
↓	lower is better	**SSI COLON Surgical Site Infection**											
↓	lower is better	**SSI HYST Surgical Site Infection**											
↓	lower is better	**MRSA**	**0.000**	0.310	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
↓	lower is better	**CDIFF**	**0.498**	0.620	0.000	0.000	0.000	0.000	0.000	0.000	4.050	1.360	0.750
		Quality Priority Metrics											
↓	lower is better	**Levofloxacin Days Of Therapy per 1000 patient days**		**25.20**	18.90	14.60	17.28	16.90	33.90	31.60	49.60	38.37	27.70
↓	lower is better	**Meropenem Days Of Therapy per 1000 patient days**		**2.48**			2.16	0.70	7.91	0.00	10.20	6.04	3.40
↓	lower is better	**Inpatient Opioid Administration Rate by Patient Days**		**0.30**	0.25	0.22	0.28	0.25	0.36	0.26	0.35	0.32	0.28
↓	lower is better	**Emergency Department Opioid Administration Rate by ED Visits**		**0.14**	0.13	0.12	0.13	0.13	0.14	0.12	0.13	0.13	0.13
↓	lower is better	**Left Without Being Seen**		**0.26%**	1.29%	0.56%	0.57%	0.79%	0.99%	0.48%	0.73%	0.69%	0.75%
↑	higher is better	**HCOMP1A P Patients who reported that their nurses "Always" communicated well**		**90.0%**	90.0%	75.0%	88.0%	85.0%	86.0%	90.0%	100.0%	92.0%	88.0%
↑	higher is better	**HCOMP2A P Patients who reported that their doctors "Always" communicated well**		**88.0%**	69.0%	71.0%	92.0%	76.0%	86.0%	84.0%	95.0%	89.0%	81.0%
↑	higher is better	**HCOMP5A P Patients who reported that staff "Always" explained about medicines before giving it to them**		**64.0%**	70.0%	100.0%	50.0%	67.0%	78.0%	67.0%	100.0%	83.0%	76.0%
↑	higher is better	**HCOMP6Y P Patients who reported that YES, they were given information about what to do during their recovery at home**		**82.0%**	82.0%	100.0%	91.0%	89.0%	100.0%	79.0%	100.0%	89.0%	89.0%
↓	lower is better	**Sepsis In House Mortality**		**7.41%**	0.00%	7.14%	0.00%	3.45%	0.00%	14.29%	0.00%	6.67%	5.96%
↑	higher is better	**SMB: Sepsis Management Bundle****		**76.7%**	66.7%	66.7%	83.3%	72.2%	77.8%	40.0%	100.0%	72.0%	76.1%
↓	lower is better	**Median Time from ED Arrival to Departure for Outpatients (18b)****		**106**	108.5	83.5	101.5	101.5	94	98	105	98	99.75
↓	lower is better	**Median Time from ED Arrival to Transport for Admitted Patients (ED1)****		**189.25**	167.5	158	175	167.5	202	170	174	174	172

no data/no cases

****FY19; discharge dates May- Oct 2018**

Quality Target Measures Baseline: FY17 Hospital Compare Posting

Quality Priority Measures Baseline: FY18

Priority Metrics

BalladHealth

Unicoi County Hospital

Desired Performance		Baseline	FY18	Jul-18	Aug-18	Sep-18	Q1FY19	Oct-18	Nov-18	Dec-18	Q2FY19	FYTD19
	Quality Target Measures											
↓	lower is better	**PSI 3 Pressure Ulcer Rate**	0.40									
↓	lower is better	**PSI 6 Iatrogenic Pneumothorax Rate**	0.40									
↓	lower is better	**PSI 7 Central Venous Catheter-Related Blood Stream Infection Rate**	0.17									
↓	lower is better	**PSI 8 In Hospital Fall with Hip Fracture Rate**	0.06									
↓	lower is better	**PSI 9 Perioperative Hemorrhage or Hematoma Rate**	4.75									
↓	lower is better	**PSI 10 Postoperative Acute Kidney Injury Requiring Dialysis**										
↓	lower is better	**PSI 11 Postoperative Respiratory Failure Rate**										
↓	lower is better	**PSI 12 Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate**	4.76									
↓	lower is better	**PSI 13 Postoperative Sepsis Rate**										
↓	lower is better	**PSI 14 Postoperative Wound Dehiscence Rate**										
↓	lower is better	**PSI 15 Unrecognized Abdominopelvic Accidental Puncture/Laceration Rate**	1.26									
↓	lower is better	**CLABSI**	0.000	0.000		0.000		0.000				0.000
↓	lower is better	**CAUTI**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
↓	lower is better	**SSI COLON Surgical Site Infection**										
↓	lower is better	**SSI HYST Surgical Site Infection**										
↓	lower is better	**MRSA**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
↓	lower is better	**CDIFF**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		Quality Priority Metrics										
↓	lower is better	**Levofloxacin Days Of Therapy per 1000 patient days**										
↓	lower is better	**Meropenem Days Of Therapy per 1000 patient days**		5.50								
↓	lower is better	**Inpatient Opioid Administration Rate by Patient Days**										
↓	lower is better	**Emergency Department Opioid Administration Rate by ED Visits**										
↓	lower is better	**Left Without Being Seen**		0.46%	0.70%	1.17%	1.22%	1.02%	2.00%	0.31%	0.00%	0.41%	0.72%
↑	higher is better	**HCOMP1A P Patients who reported that their nurses "Always" communicated well**		86.0%	73.0%	100.0%	83.0%	82.0%	75.0%	80.0%	100.0%	82.0%	82.0%
↑	higher is better	**HCOMP2A P Patients who reported that their doctors "Always" communicated well**		83.0%	84.0%	95.0%	75.0%	86.0%	92.0%	93.0%	50.0%	85.0%	86.0%
↑	higher is better	**HCOMP5A P Patients who reported that staff "Always" explained about medicines before giving it to them**		75.0%	52.0%	83.0%	75.0%	63.0%	0.0%	63.0%	0.0%	42.0%	57.0%
↑	higher is better	**HCOMP6Y P Patients who reported that YES, they were given information about what to do during their recovery at home**		87.0%	71.0%	91.0%	100.0%	82.0%	83.0%	80.0%	75.0%	80.0%	81.0%
↓	lower is better	**Sepsis In House Mortality**										
↑	higher is better	**SMB: Sepsis Management Bundle****		61.8%	66.7%	40.0%	28.6%	40.0%	16.7%	42.9%	0.0%	28.6%	34.5%
↓	lower is better	**Median Time from ED Arrival to Departure for Outpatients (18b)****		124	170	134	125.5	134	159	122		140.5	134
↓	lower is better	**Median Time from ED Arrival to Transport for Admitted Patients (ED1)****		206	206	222	212	212	207	201		204	207

no data/no cases

****FY19; discharge dates May- Oct 2018**

Quality Target Measures Baseline: FY17 Hospital Compare Posting

Quality Priority Measures Baseline: FY18

BalladHealth
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January 30, 2019 via: FedEx and Email

M. Norman Oliver, MD, MA
Commissioner, Virginia Department of Health
109 Governor Street
Richmond, Virginia 23219

Lisa Piercey, MD, MBA
Commissioner, Tennessee Department of Health
5th Floor Andrew Johnson Tower
710 James Robertson Parkway
Nashville, Tennessee 37243

Dear Commissioners Oliver and Piercey,

Pursuant to the letter from Marissa J. Levine, MD, MPH, FAAFP, previous State Health Commissioner of the Commonwealth of Virginia Department of Health (VDOH) dated January 12, 2018, Ballad Health is hereby submitting the following Performance Indicators:

- *Risk-based Contract Baseline data - PI 2(c)(i)*
- *Employee Health Plan Baseline Data – PI 2(c)(ii)*
- *Physician Participation in Clinical Services Network – Baseline Data – PI 2(e)*
- *Physician Participation in Common Clinical IT Platform - Baseline Data - PI 2 (f)*
- *Employer Health Outreach Program - Baseline Data - PI 2 (g)(i)*
- *Table A Measures Baseline Data - PI 3 (c)(ii)*
- *Table B Measures Baseline Data - PI 4 (b)*
- *Physician/Physician Extender Baseline Data – PI 5(a)*
- *Table C Measures Baseline Data - PI 6(b)*

Pursuant to TOC Section 3.02 (c) and CA Condition 32 and 33, Ballad Health hereby submits the

Rural Health Services Plan (Confidential Exhibits submitted under separate cover per instruction from the state)

Pursuant to TOC Section 3.05 (b) & 3.06 (a-c) and CA Condition 8, Ballad Health hereby submits the

HIE Plan

Pursuant to TOC Section 3.03 (b) (c) & (d) and CA Condition 24 & 25, Ballad Health hereby submits the

Health Research/GME Plan

As always, we welcome any questions or comments that you may have.

Sincerely,

Gary Miller, Senior Vice President Ballad Health
Interim COPA Compliance Officer

Cc via email: Jeff Ockerman, Director, Division of Health Planning
Janet Kleinfelter, Deputy Attorney General
Erik Bodin, Director, Office of Licensure and Certification
Allyson Tysinger, Sr. Assistant Attorney General/Chief
Larry Fitzgerald, COPA Monitor
Tim Belisle, General Counsel Ballad Health

Required Deliverable Submission

January 31, 2019

Virginia CA: Quantitative Measures, Performance Indicator 2(c)(i) and (ii):

See attached

Virginia Cooperative Agreement Value-Based Contract Questions

Ballad Health has three risk-based contracts: Medicare Share Savings Programs (MSSP); Humana Medicare Advantage; and United Healthcare Medicare Advantage:

Question 1: *The rate of increase of the total cost of care measured by per member per year for all risk-based contracts, demonstrating that the rate of increase is below the regional trend for similar payer populations on an annual basis calculated on a rolling 3-year average.*

Within 12 months of closing the merger, the New Health System will compile and submit to the VDH Office of Licensure and Certification baseline data on cost, quality and customer experience for all current risk-based or value-based payer contracts.

Medicare Shared Savings Program (MSSP): *AnewCare Collaborative – Ballad Health's accountable care organization – is one of only twenty-one accountable care organizations in the county to generate savings for the fifth year in a row, according to results released by the U.S. Centers of Medicare and Medicaid Services.*

		2015	2016	2017	2018	2016/ 2015	2017/ 2016	2018/ 2017	Average Change
Cost: Expenditures PMPM	AnewCare	$766	$755	$833	NA	-1.4%	10.3%	NA	4.5%
	Comparison: All MSSP	$832	$837	$878	NA	0.6%	4.9%	NA	2.8%
Quality: Annual Quality Score	AnewCare	93%	96%	88%	NA	3.2%	-8.3%	NA	-2.6%
	Comparison: All MSSP	91%	94%	92%	NA	3.3%	-2.1%	NA	0.6%
Patient Experience	AnewCare	85%	95%	92%	NA	11.7%	-3.1%	NA	4.3%
	Comparison: All MSSP	93%	89%	90%	NA	-4.0%	1.0%	NA	-1.5%
Savings Rate	AnewCare:	8.8%	4.6%	3.5%	NA	-47.7%	-23.9%	NA	-35.8%
	Comparison: All MSSP	0.7%	0.9%	1.3%	NA	28.6%	44.4%	NA	36.5%

Assumptions / Notes:

1. MSSP populations can change each year. Provider groups can be added and removed each year. This must be considered when comparing metrics across years. 2018 data will not be available until August 2019.
2. Quality measures are a combination of survey, electronic medical record, and utilization measures. Each year, quality measures can change. When a new measure is introduced, ACOs receive full-credit. After the pay-for-reporting time period (which can be one or two years), measures go to pay-for-performance. These changes can skew the overall quality scores.
3. Sources:
    a. Cost: 2015 – 2017: Final CMS Reconciliation Reports: 2015, 2016, and 2017. Note the 2018 report will be available August 2019

NA: Not Available

b. Quality: 2015 – 2017: Final CMS Quality Reports: 2015, 2016, and 2017. Note the 2018 report will be available August 2019
c. Patient Experience: 2015 – 2017: Final CMS Quality Reports: 2015, 2016, and 2017. Note the 2018 report will be available August 2019

Humana Medicare Advantage: Mountain States Medical Group (MSMG) transitioned to a shared savings model with Humana MA in 2014. Within the first 3 years in the program, MSMG was able to drastically reduce the potential deficit they were facing ($2.56M) and turn this to a surplus in 2016 by improving transitions of care, working on a more robust care coordination model, and adequately capturing the disease burden of their patient population. Humana MA does not provide regional comparisons on these metrics.

		2015	2016	2017	2018	2016/ 2015	2017/ 2016	2018/ 2017	Average Change
Cost: Paid PMPM	LMSMG	$744	$799	$702	NA	7.0%	-12.1%	NA	-2.0%
Quality: Overall Star Rating	LMSMG	3.68	4.04	NA	NA	9.8%	NA	NA	NA
Patient Experience: Star Rating	LMSMG	NA	NA	3.77	3.92 (year to date)	NA	NA	Not finalized	NA
Medical Expense Ratio	LMSMG	90.8%	84.7%	81.5%	NA	-6.7%	-3.8%	NA	-5.3%

Assumptions / Notes:

1. Sources:
    a. Cost: 2016 – 2017: Humana Blue Ridge Medical Group Dashboards
    b. Quality: 2015 – 2016: Humana HEDIS Summary Report
    c. Patient Experience: 2017: Patient Experience Year Over Year Report

NA: Not Available

Virginia Cooperative Agreement Value-Based Contract Questions

United Healthcare Medicare Advantage: Mountain States Medical Group (MSMG) transitioned to a shared savings model with UHC MA in 2017. Due to the foundation that had already been developed by their work with the MSSP and Humana MA population, MSMG was able to generate a sizeable shared savings distribution in year 1 (2017). United Healthcare MA does not provide regional comparisons on these metrics nor do they provide patient experience results.

		2015	2016	2017	2018	2016/ 2015	2017/ 2016	2018/ 2017	Average Change
Cost: Paid PMPM	LMSMG	NA	NA	$673	NA	NA	NA	NA	NA
Quality: Star Rating	LMSMG	2.31	2.92	3.03	2.48	26.4%	3.8%	-18.2%	4.0%
Patient Experience: NA	LMSMG	Not Applicable							
Benefit Cost Ratio	LMSMG	NA	NA	77.0%	NA	NA	NA	NA	NA

Assumptions / Notes:

1. Sources:
    a. Cost: 2017: Blue Ridge Medical Management 2017 Financial Statement
    b. Quality: 2015-2018: PCOR Quality Reports - Mountain States Health Alliance Health System Summary Reports

Question 2: *Within 12 months of closing the merger, the New Health System will compile and submit to the VDH Office of Licensure and Certification baseline data on cost, quality and customer experience for the New Health System's employees and their family members who are provided health insurance through the New Health System.*

Ballad's Team member Health Plan began July 1st, 2018. Once a full year of the health plan has been completed with three months of claims runout, a baseline will be provided. This will be available in November 2019.

For Quality, we propose to provide the FY19 Ballad Wellness Report at the same time of the other team member health plan information.

NA: Not Available

Required Deliverable Submission

January 31, 2019

Virginia CA: Quantitative Measures, Performance Indicator 2(e):

Physician Participation in Clinical Services Network Baseline Data: "The percentage of independent physicians in the Clinical Services Network. This percentage should increase each year for the first five years. The baseline percentage shall be provided to VDH Office of Licensure and Certification within 12 months of the merger."

RESPONSE:

At this time, the Ballad Health Clinical Services Network has not yet been formed. The target date for formation is July 1, 2019. Therefore the baseline percentage of independent physicians in the Clinical Services Network is zero percent (0%).

Required Deliverable Submission

January 31, 2019

Virginia CA: Quantitative Measures, Performance Indicator 2(f):

Physician Participation in Common Clinical IT Platform Baseline Data: "The percentage of independent physicians on the Common Clinical IT Platform. This percentage should increase each year for the first five years. The baseline percentage shall be provided to VDH Office of Licensure and Certification within 12 months of the merger."

RESPONSE:

In this response, "independent physicians" refers to GSA community based physicians, and excludes hospital based physicians. The "Common Clinical IT Platform" is defined as Ballad Health's instance of Epic, with the opportunity for independent physicians to use this instance as their electronic health record via Ballad Health's Community Connect program. There are currently 986 independent physicians in the GSA. At this time, there are no independent physicians on Ballad Health's Community Connect program; therefore the baseline percentage of independent physicians on the Common Clinical IT Platform is zero percent (0%).

Required Deliverable Submission

January 31, 2019

Virginia CA: Quantitative Measures, Performance Indicator 2(g)(i):

(g) The number of employers with whom the New Health System has health outreach programs. This number should increase each year. The baseline number of employers shall be provided to the VDH Office of Licensure and Certification within 12 months of closing of the merger.

(i) Participant outcomes where health outreach programs are being provided to employers. Improvement in participant outcomes should be shown on an annual basis.

RESPONSE:

(g) Ballad Health currently has 70 employers to whom we provide "health outreach programs".

(i) Ballad Health does not track outcomes across all its existing employer outreach programs – it depends on the type of outreach engagement Ballad has with the specific employer. Even if Ballad Health is tracking outcomes year over year through the health risk assessments, Ballad's engagement level in impacting the outcomes is dependent on the individual employer relationship as well. Utilization metrics are tracked across all these outreach programs.

Ballad Health defines those as employers in both TN and VA for whom we provide at least one of the following services:

- *Health risk assessments/biometric screenings*
- *On-site clinics*
- *Flu vaccine clinics*
- *Mobile health coach services*
- *Executive health program*
- *WorkSTEPS program*

Ballad Health did not include those for whom we provide occupational medicine in this count.

Required Deliverable Submission

January 31, 2019

Virginia CA: Quantitative Measures, Performance Indicators 3 (c)(ii) and 4(b) Tables A & B Baseline Data:

See attached

Virginia Cooperative Agreement, Performance Indicator 3c(ii): Within 12 months of the closing of the merger, The New Health System will provide the VDH Office of Licensure and Certification with baseline data for the measures contained in Table A for the southwest Virginia population and socioeconomic peer counties selected by the New Health System and approved by the Commissioner.

Virginia Cooperative Agreement, Performance Indicator 4b: Within 12 months of the closing of the merger, The New Health System will provide the VDH Office of Licensure and Certification with baseline data for the measures contained in Table B for the southwest Virginia population.

Starting Assumptions

During Year 1 of the new system, Ballad Health and the Departments of Health in Tennessee and Virginia have collaboratively worked to operationalize the measurement system contemplated in the Tennessee Certificate of Public Advantage and the Commonwealth of Virginia Cooperative Agreement. Given the lack of precedence for a measurement and management scheme such as this, the parties identified three principles which would guide our efforts. The system we design should:

1. Allow for effective evaluation of the success of individual interventions to shape our strategic approaches to improving community health.
2. Enable both states to fulfill their duties of active supervision according to their respective agreements.
3. Serve as a learning model for similar community health improvement initiatives nationally.

Measurement Assessment Process

Ballad Health reviewed each metric and corresponding source data. The system has conducted review sessions with key internal and external stakeholders. Internally, these included clinical teams, information technology, operations, strategic planning, operational excellence, enterprise project management, finance, human resources, and executive management. Externally, these included the Department of Biostatistics and Epidemiology and Dean's Office at East Tennessee State University College of Public Health, Northeast Tennessee Health Department leadership, Southwest Virginia Health Department leadership, and the Ballad's Population Health Clinical Steering Committee (which includes internal and external membership).

Regular meetings regarding measurement were also held with the Virginia and Tennessee state health department which included as necessary the state Behavioral Risk Factor Surveillance System Coordinator, State Immunization System Coordinators, and State Dental Directors. There have also been bi-weekly calls between Ballad Health and both states to have continuous conversation regarding data and evaluation.

Overall Limitations Identified

Ballad Health, East Tennessee State University's Department of Biostatistics and Epidemiology, key stakeholders, and the states and their consultants identified several challenges and limitations associated with population health measurement in general and in some cases with specific components of the COPA and CA measurement scheme. Generally, these limitations include: 1) lack of sufficient sample size for sources of certain survey based data which limits precision of estimates 2) data lag times 3) inability to measure programmatic/intervention success in estimate based surveys 4) lack of completeness for state immunization registries 5) lack of comparison data for certain measures relying on Ballad Health records or data collection 6) lack of visibility into data requiring a "claims view" for populations not currently managed by Ballad Health under risk based contracts and 7) lack of data necessary to produce the proposed measurement.

Report Summary

This report complies with the conditions set forth in the Commonwealth of Virginia Cooperative Agreement requiring submission of baselines for measures contained in Tables A and B to the Virginia Department of Health's Office of Licensure and Certification. This report also puts forward suggested changes to some of the measures to align approaches with Tennessee, identify a more appropriate data source and/or reflect applicable metric descriptions. The majority of the population health and access measures require only minor adjustments to definition or the data source. Please see the "Notes" column on Tables A and B for commentary on the suggested changes.

There are six measurements which rely on survey data such as the Behavioral Risk Factor Surveillance System (BRFSS) where it is Ballad's understanding that the regional sample size is not statistically valid, the random sample of the Youth Tobacco Survey tool does not include many of our areas and is completely voluntary by school systems, and the measurement estimation method is not effective to fulfill our mutual goal of measuring programmatic/intervention effectiveness. These include Population Health measures: Youth Tobacco Use, Frequent Mental Distress, and Access measures: Personal Care Provider, Screening-Breast, Screening-Cervical and Screening-Colorectal. Because the estimation issue cannot be completely resolved for the BRFSS measurements, we propose that they be moved to only long-term outcome evaluation and instead allow for Ballad to use internal data for baseline establishment, target setting and yearly impact analysis for improvement. As for the Youth Tobacco Use survey tool, Ballad wishes to discuss with the Commonwealth possible alternatives that both organizations may identify for more appropriate measurement and tracking.

The tables and narrative below present each population health and access measure, describes all proposed changes, reflects baselines where available, outlines methodology for baseline calculation for publicly available data, and proposes peer counties.

TABLE A: Population Health Metrics

The following table outlines data source, description, baseline date and responsible party for baseline establishment for all population health measures. Information below displays the baseline data year as the most recent data available as of January 1, 2018. Notes reflect changes made to these measures in Tennessee, proposed changes and any other relevant information.

Item	Measure	Data Source	Description	Baseline Year	Ballad Baseline	Peer Baseline	Responsible Party for data provision	Notes
A1	Mothers who smoke during pregnancy	Birth Statistics, State Departments of Health	Percentage of mothers who report smoking during pregnancy	2015	VA-26.5%	VA-17.4%	VA	http://www.vdh.virginia.gov/data/maternal-child-health/
A2	Youth Tobacco Use	National Survey on Drug Use and Health, VA Youth Survey	Percentage of high school students who self-reported current cigarette, smokeless tobacco, cigar or electronic vapor products use on at least 1 day during the 30 days before the survey.	TBD	TBD	TBD	VA	-TN recognized problems with the use of the YRBS. They constructed and implemented the new TN Youth Wellness Survey in both the COPA and peer counties. -NSDUH is at the state level only. -Per Gina Roberts, VA Department of Health Division of Prevention and Health Promotion, county level data is not

								calculated using the VA Youth Survey. Counties may collect that data themselves, but it is completely voluntary. Ballad requests additional discussions on this metric.
A3	Obesity Sub-population	Ballad Health	Increase the proportion of physician office visits that include counseling or education related to weight and physical activity.	TBD	TBD	TBD	Ballad	Propose to change the description of this measure to "Increase the proportion of obese individuals 3+ y/o receiving counseling related to weight and physical activity". TN changed the measure to "Percentage of well child visits in patients 0-2 years old that include education about nutrition and age-appropriate physical activity". Ballad requests additional discussions on this metric.
A4	Breastfeeding initiation	Birth Statistics, State Departments of Health	Percentage of live births whose birth certificates report that baby is breastfed.	2017	Not available	Not available	VA	Not available through public data source. Ballad requests additional discussions on this metric.
A5	NAS Births	Active case reports submitted by clinicians or VDH VHI data	Number of reported cases with clinical signs of withdrawal, excluding mothers enrolled in MAT, per 1,000 live births	2017	VA-27.57	VA-19.31	VA	http://www.vdh.virginia.gov/data/opioid-overdose/
A6	Children on-time vaccinations	State Immunization Information System	Children receiving on-time vaccinations (% of children aged 24 months receiving 4:3:1:FS:3:1:4 series).	2017	Not available	Not available	VA	Not available through public data source. Ballad requests additional discussions on this metric.
A7	HPV Vaccination-Female	Current: Ballad Health Proposed: State Immunization Status Surveys	Percentage of females who received recommended doses of human papillomavirus vaccine.	2017	TBD	TBD	VA	TN agreed to change data source to their State Immunization Information System. Ballad proposes the same change in VA.
A8	HPV Vaccination-Male	Current: Ballad Health Proposed: State Immunization Status Surveys	Percentage of males who received recommended doses of human papillomavirus vaccine.	2017	TBD	TBD	VA	TN agreed to change data source to their State Immunization Information System. Ballad proposes the same change in VA.

A9	Teen Births	Vital Statistics, State Departments of Health	Rate of births per 1,000 females aged 15-19 years of age.	2015	VA-40.2	VA-35.2	VA	http://www.vdh.virginia.gov/data/maternal-child-health/
A10	Third Grade Reading Level	Current: KIDS COUNT data center, 4th grade Proposed: State Departments of Education/ Accountability Files	VA: Percentage of 3rd graders with pass rate on English reading assessment.	School year 2017-2018	VA-78.2%	VA-73.1%	VA	Ballad proposes to change data source to 3rd graders receiving a passing score on the 3rd Grade English Reading SOL.
A11	Children receiving dental sealants	Current: Ballad Proposed: Medicaid dental payer	Percentage of Medicaid enrollees aged 6-9 years who have received dental sealants on the recommended molars by age.	2017	TBD	TBD	VA	Ballad proposes to change data source to the Medicaid dental payer to mirror new approach in TN.
A12	Frequent Mental Distress	Current: BRFSS Proposed: Internal SBIRT results once implemented to set baseline and establish targets.	Percentage of adults who reported their mental health was not good 14 or more days in the past 30 days.	2013-14	8-30 of the past 30 days: Cumberland Plateau=25% Lenowisco=22% Mt Rogers=18.9%	TBD	VA	http://www.vdh.virginia.gov/content/uploads/sites/68/2016/12/2013-2014MENTHEALTH_Districts.pdf Data only available publicly by health district, which includes more than our 11 counties. It also does not parse out 14-30 days as a metric. It describes it as 8-30 of the past 30 days. Proposed peer counties are spread throughout many health districts and cannot be pulled using public data source.
A13	Infant Mortality	Death Statistics, State Departments of Health	Number of infant deaths (before age 1) per 1,000 live births.	2015	5.6	8.4	VA	http://www.vdh.virginia.gov/data/maternal-child-health/

Calculations for Public Data: For many metrics, there was only publicly available data for use in baseline calculation. Those metrics include mothers who smoke during pregnancy, NAS births, Teen Births, Infant Mortality, and Third Grade Reading levels, and was available by county as well as the population per county. A weight was given to each county by calculating the population of the county or city over the population of the entire Ballad service area in Virginia (11 counties and 2 cities). For each of these measures, the county specific data point was multiplied by the weighted factor and all points were then summed to find the weighted average for the Ballad service area in Virginia.

For Infant Mortality, the publicly available data points per county were the number of infant deaths and the number of infant births. We were able to create a rate per 1,000 by diving the infant deaths by the infant births and multiplying this value by 1,000, we did this process for all 11 counties and 2 cities in the Ballad service area. To calculate the weighted average for this measure, Ballad Health then used the process described above as we did for the other measures.

Ballad Health proposes further discussion to access county level and/or raw data to best calculate baselines and set targets and better utilize existing methodology when county level/raw data is available.

Virginia Peer Counties and Methodology for Selection

Ballad Health utilized the Department of Biostatistics and Epidemiology in the College of Public Health at East Tennessee State University to analyze the counties in Virginia, compare them to the counties in the Ballad service area, and provide suggestions for the peer counties. The analysis and results are outlined below. Ballad Health acknowledges these proposed counties still need approval by the Virginia Commissioner of Health.

For this analysis, these counties were used as the "service area" and does not include the two cities:

- Buchanan
- Dickenson
- Grayson
- Lee
- Russell
- Scott
- Smyth
- Tazewell
- Washington
- Wise
- Wythe

While there is no group that is precisely the same as the Virginia Service Area, the following eight counties, as a statistical composite, are reasonably close:

- Alleghany
- Bland
- Carroll
- Giles
- Halifax
- Henry
- Patrick
- Pulaski

For the chart below, a population-based weighting system was used, so that each metric (except the average population) is based on the relative population of each county. For example, in the Service Area, Smyth County represents 10% of the total population of the Service Area, while Grayson represents 5%. As such, for all metrics, Smyth County is weighted twice as heavily as Grayson. The weighting of each county, then, is proportionate to their population compared to the total population of the area.

Metric		"Service Area"	"Comparison Area"
Population Data	Average (mean) Population by county	29,678	26,006
Selected Demographic Information	Population Under 18	19.37%	19.62%
	Population Over 64	19.30%	21.7%
	Percent White	95.48%	83.14%
	Percent Black	2.56%	13.98%
	Population at 125% of Poverty Level	25.36%	23.25%
	Population at 200% of Poverty Level	42.07%	39.93%
	Children Living in Poverty	27.42%	25.04%
	Primary Care Physicians per capita	2229:1	2146:1
Selected Health Statistics	Years of Potential Life Lost	9,805	10,000

	Adult Smoking	18.83%	18.24%
	Adult Obesity	30.53%	31.70%
	Diabetes Rate	12.58%	13.55%
	Some College	52.47%	53.10%
	Household Income	$38,838	$41,856
	Teen Birth Rate	49.14	41.04
	Poor Mental Health Days	3.66	3.58

As you can see, there are some differences between the two groups, both in terms of demographics (notably the race distribution) and in terms of health statistics (notably in the Teen Birth Rate). In terms of health statistics, the Comparison Area is slightly better in 7 of the 10 metrics that we evaluated. However, some differences are inevitable, when comparing composite groups of counties.

TABLE B: Access Metrics

The following table outlines data source, description, baseline date and responsible party for baseline establishment for all population health measures. Information below displays the baseline data year as the most recent data available as of January 1, 2018 or 2018 for those metrics requiring calculation post merger. Notes reflect changes made to these measures in Tennessee, proposed changes and any other relevant information. For some measures, baselines reflected are for the entire 21 county service area in Northeast Tennessee and Southwest Virginia. Each are indicated with representative area.

Item	Measure	Data Source	Description	Baseline Year	Ballad Baseline	Responsible Party for data provision	Notes
B1	Population within 25 miles of an urgent care center (%)	Virginia U.S. Census Population Data 2010; Facility Addresses	Population within 25 miles of any urgent care center; urgent care centers may be owned by the New Health System or a competitor and may or may not be located in the geographic service area	2018	TBD	Ballad	Currently at the zipcode level. TN has requested this at a census block level and Ballad is working to produce.
B2	Population within 25 miles of an urgent care center open nights and weekends (%)	Virginia U.S. Census Population Data 2010; Facility Addresses	Population within twenty-five (25) miles of any urgent care center open at least three (3) hours after 5pm Monday to Friday and open at least five (5) hours on Saturday and Sunday; urgent care center may be owned by the New Health System or a competitor and may or may not be located in the geographic service area	2018	TBD	Ballad	Currently at the zipcode level. TN has requested this at a census block level and Ballad is working to produce

B3	Population within 10 miles of an urgent care facility or emergency department (%)	Tennessee U.S. Census Population Data 2010; Facility Addresses	Population within 10 miles of any urgent care center or emergency room; urgent care centers and emergency rooms may be owned by the New Health System or a competitor and may or may not be located in the geographic service area	2018	Ballad-93.5%	Ballad	Currently at the zipcode level. TN has requested this at a census block level and Ballad is working to produce
B4	Population within 15 miles of an emergency department (%)	Tennessee U.S. Census Population Data 2010; Facility Addresses	Population within 15 miles of any emergency room; emergency rooms may be owned by the New Health System or a competitor and 97.0may or may not be located in the geographic service area	2018	Ballad-97.0%	Ballad	Currently at the zipcode level. TN has requested this at a census block level and Ballad is working to produce
B5	Population within 15 miles of an acute care hospital (%)	Tennessee U.S. Census Population Data 2010; Facility Addresses	Population within 15 miles of any acute care hospital; acute care hospital may be owned by the New Health System or a competitor and may or may not be located in the geographic service area	2018	Ballad-97.0%	Ballad	Currently at the zipcode level. TN has requested this at a census block level and Ballad is working to produce
B6	Pediatric Readiness of Emergency Department	Ballad Health	Average score of New Health System Emergency Departments on the National Pediatric Readiness Project Survey from the National EMSC Data Analysis Resource Center	2018	VA Facilities-76.5%	Ballad	TN requested to use unweighted average. Ballad requests additional discussions on this metric.
B7	Appropriate Emergency Department Wait Times	Ballad Health; CDC National Center for Health Statistics National Hospital Ambulatory Care Survey	Percentage of all hospital emergency department visits in which the wait time to see an emergency department clinician is within the recommended timeframe	CY2017	VA-53.5%	Ballad	Changing measure language and threshold to align better with published CDC source (% of time door-to-doc is under 15 min). https://www.cdc.gov/nchs/fastats/emergencydepartment.htm
B8	Specialist Recruitment and Retention	Ballad Health	Percentage of recruitment targets for specialist and subspecialist regional shortages filled	2018	0.0%*	Ballad	Measure language updated *cannot be calculated until Provider Needs Assessment is completed

B9	Personal Care Provider	Current: BRFSS Proposed: Ballad including team members	Percentage of adults who reported having one person they think of as a personal doctor or health care provider	2014	Cumberland Plateau=64.8% Lenowisco=85.3% Mt Rogers=72.5%	VA	http://www.vdh.virginia.gov/content/uploads/sites/68/2016/12/2014HEALTHCARECOVERAGE-PERSONALDOC_Districts.pdf Data only available publicly by health district, which includes more than our 11 counties. Proposed peer counties are spread throughout many health districts and cannot be pulled using public data source. Ballad would like to discuss access to county level data.
B10	Preventable Hospitalizations – Medicare	Hospital Discharge Data System	Number of discharges for ambulatory care-sensitive conditions per 1,000 Medicare enrollees	2017	Ballad-51.0	VA	Ballad is working to produce this for the VA service area.
B11	Preventable Hospitalizations – Adults	Hospital Discharge Data System	Number of discharges for ambulatory care-sensitive conditions per 1,000 adults aged 18 years and older	2017	Ballad-33.8	VA	Ballad is working to produce this for the VA service area.
B12	Screening - Breast Cancer	Current: BRFSS Proposed: Ballad including team members	Percentage of women aged 50-74 who reported having a mammogram within the past two years	2014	Cumberland Plateau=69.4% Lenowisco= No Data Mt Rogers= No Data	VA	http://www.vdh.virginia.gov/content/uploads/sites/68/2017/01/2014CANCER-Mammogram_Districts.pdf. Ballad would like to discuss access to county level data.
B13	Screening - Cervical Cancer	Current: BRFSS Proposed: Ballad including team members	Percentage of women who have received a pap smear according to the U.S. Preventive Services Task Force recommendations for cervical cancer screening-**Currently, BRFSS language does not use wording presented here**	2014	No Data for Cumberland Plateau, Lenowisco, or Mount Rogers Health Districts	VA	The current BRFSS question does not reflect the current clinical guidelines. http://www.vdh.virginia.gov/content/uploads/sites/68/2017/01/2014CANCER-PapTest_Districts.pdf. Ballad

							would like to discuss access to county level data.
B14	Screening - Colorectal Cancer	Current: BRFSS Proposed: Ballad including team members	Percentage of adults who meet U.S. Preventive Services Task Force recommendations for colorectal cancer screening	2014	Cumberland Plateau=72.7% Lenowisco= No Data Mt Rogers= 63.2%	VA	http://www.vdh.virginia.gov/content/uploads/sites/68/2017/01/2014CANCER-Sigmoidoscopy-Colonoscopy_Districts.pdf. Ballad would like to discuss access to county level data.
B15	Screening - Diabetes	Ballad Health	Percentage of overweight (BMI 25+) patients aged 40-70 who are screened for diabetes	2017	Ballad-Range: 63.0%-84.4%	Ballad	Measure language updated. This range represents the two different medical record compilations from the legacy systems patient populations. Ballad Health does not currently have a master patient index to provide unique patient tracking between systems.
B16	Screening - Hypertension	Ballad Health	Percentage of adults 18+ screened for hypertension	2017	Ballad-Range: 94.5%-98.3%	Ballad	Measure language updated to focus at member-level. This range represents the two different medical record compilations from the legacy systems patient populations. Ballad Health does not currently have a master patient index to provide unique patient tracking between systems.
B17	Asthma ED Visits – Age 0-4	Current: Hospital Discharge Data System Proposed: Ballad Health	Asthma Emergency Department Visits Per 10,000 (Age 0-4)	2017	TBD	VA	The current Virginia discharge dataset does not include ED activity. Ballad Health proposes using internal data as the system has 75%+ of local discharges.

B18	Asthma ED Visits – Age 5-14	Current: Hospital Discharge Data System Proposed: Ballad Health	Asthma Emergency Department Visits Per 10,000 (Age 5-14)	2017	TBD	VA	The current Virginia discharge dataset does not include ED activity. Ballad Health proposes using internal data as the system has 75%+ of local discharges.
B19	Prenatal Care in First Trimester	State Department, Vital Statistics	Percentage of live births in which the mother received prenatal care in the first trimester	2014	1.3%	VA	The data shown is Late/ No Prenatal care as that is the only publicly available data. http://www.vdh.virginia.gov/data/maternal-child-health/. Ballad would like to discuss access to county level data.
B20	Follow-Up After Hospitalization for Mental Illness (7 day)	Ballad Health; NCQA The State of Health Care Quality Report	Percentage of adults and children aged 6 years and older who are hospitalized for treatment of selected mental health disorders and had an outpatient visit, an intensive outpatient encounter or a partial hospitalization with a mental health practitioner within seven (7) days post-discharge	2017	VA-45.5%	Ballad	Results will be based solely on MSSP population and team members, growing to a broader set as claims data is acquired.
B21	Follow-Up After Hospitalization for Mental Illness (30 day)	Ballad Health; NCQA The State of Health Care Quality Report	Percentage of adults and children aged 6 years and older who are hospitalized for treatment of selected mental health disorders and had an outpatient visit, and intensive outpatient encounter or a partial hospitalization with a mental health practitioner within thirty (30) days post-discharge	2017	Ballad-47.4%	Ballad	Results will be based solely on MSSP population and team members, growing to a broader set as claims data is acquired. *Due to the small sample size, results are subject to high variability as a result.
B22	Antidepressant Medication Management – Effective Acute	Ballad Health; NCQA The State of Health Care Quality Report	Percentage of adults aged 18 years and older with a diagnosis of major depression, who were newly treated with antidepressant medication and remained	2017	VA-74.9%	Ballad	Results will be based solely on MSSP population and team members, growing to a broader set as claims data is acquired.

	Phase Treatment		on an antidepressant medication for at least 84 days (12 weeks)				
B23	Antidepressant Medication Management – Effective Continuation Phase Treatment	Ballad Health; NCQA The State of Health Care Quality Report	Percentage of adults aged 18 years and older with a diagnosis of major depression, who were newly treated with antidepressant medication and remained on an antidepressant medication for at least 180 days (6 months)	2017	VA-62.8%	Ballad	Results will be based solely on MSSP population and team members, growing to a broader set as claims data is acquired.
B24	Engagement of Alcohol or Drug Treatment	Ballad Health; NCQA The State of Health Care Quality Report	Adolescents and adults 13+ who initiated treatment and who had two or more additional services with a diagnosis of alcohol or other drug dependence within 30 days of the initiation visit.	2017	Ballad-1.9%	Ballad	Results will be based solely on Ballad Team Member population, growing to a broader set as claims data is acquired. Due to extremely low numbers for VA, Ballad proposes to use system level data for this metric.
B25	SBIRT administration - hospital admissions	Ballad Health	Percentage of patients 13 y/o+ admitted to a New Health System hospital who are screened for alcohol and substance abuse, provided a brief intervention, and referred to treatment (SBIRT)	2019	0%	Ballad	Lower age limit added.
B26	SBIRT administration - ED visits	Ballad Health	Percentage of patients 13 y/o+ admitted to a New Health System emergency department who are screened for alcohol and substance abuse, provided a brief intervention, and referred to treatment (SBIRT)	2019	0%	Ballad	Lower age limit added.
B27	Patient Satisfaction and Access Surveys	Ballad Health	Successful completion of patient satisfaction and access surveys, according to Section 4.02(c)(iii)	2017	Yes- Exists	Ballad	

B28	Patient Satisfaction and Access Survey – Response Report	Ballad Health	Report documents a satisfactory plan for the New Health System to address deficiencies and opportunities for improvement related to perceived access to care services and documents satisfactory progress towards the plan.	2017	No- Does not exist as Standard Process	Ballad	
B29	Lung Cancer Screening	All Payers Claim Database, Relevant regional data that includes uninsured population	Percentage of people age 55-80 who have a 30-pack year smoking history and currently smoke or have quit within the past 15 years who have a low dose CT in the past 15 months.	FY 2018	VA-28.4%	VA	

Required Deliverable Submission

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Virginia CA: Quantitative Measures, Performance Indicators 5 (a):

5. The comprehensive physician/physician extender needs assessment and recruitment plan required by Condition 32 will identify clinical staff gaps and will include targets and their associated measures to close identified gaps and timelines within which the New Health System expects to reach the applicable target. The annual report should show that the targets established in the plan are on track to be or were achieved in accordance with the timelines set in the plan.

(a) Within 12 months of closing of the merger, the New Health System will provide the VDH Office of Licensure and Certification with baseline data concerning physician/physician extenders in southwest Virginia.

RESONSE:

See attached

Row Labels	Sum of FTE
Abingdon	**71.21**
Cardiology	**5.16**
APP	2.70
Physician	2.46
Dermatology	**0.50**
APP	0.00
Physician	0.50
Diabetes & Endocrinology	**2.90**
APP	1.90
Physician	1.00
Family Medicine	**6.75**
APP	3.90
MD	2.85
Gastroenterology	**1.95**
APP	0.20
Physician	1.75
General Surgery	**8.00**
APP	4.00
Physician	4.00
Internal Medicine	**5.40**
APP	1.00
MD	4.40
Nephrology	**1.70**
Physician	1.70
Neurology	**2.00**
APP	1.00
Physician	1.00
OBGYN	**6.20**
MD	5.00
NP	1.20
Occupational Medicine	**0.80**
APP	0.80
Physician	0.00
Oncology	**4.20**
APP	2.00
MD	2.20
Orthopedic Surgery	**3.50**
Physician	3.50
Pain Management	**1.25**
APP	1.00
Physician	0.25
Pediatric Hospitalist	**2.80**
APP	0.00
Physician	2.80

PSYCH	**1.05**
PhD	0.75
Physician	0.30
Pulmonology/ Critical Care	**2.00**
Physician	2.00
Pulmonology/Sleep	**0.60**
APP	0.60
Sleep	**0.25**
APP	0.25
Urgent Care	**5.50**
APP	3.60
Physician	1.90
Urology	**2.00**
APP	1.00
Physician	1.00
Wound Care	**6.70**
APP	4.70
Physician	2.00
Big Stone Gap	**12.85**
Family Medicine	**3.80**
APP	2.00
MD	1.80
General Surgery	**2.00**
APP	1.00
Physician	1.00
Internal Medicine	**2.00**
APP	2.00
MD	0.00
OBGYN	**1.80**
MD	1.00
NP	0.80
Pediatrics	**1.00**
MD	1.00
Sleep	**0.25**
APP	0.20
Physician	0.05
Spine and Rehab	**1.50**
APP	0.50
Physician	1.00
Wound Care	**0.50**
APP	0.50
Bristol	**20.25**
Family Medicine	**2.90**
APP	0.90
MD	2.00
ID	**3.00**
Physician	3.00

Oncology	**4.50**
APP	1.50
MD	3.00
Palliative Care	**1.00**
MD	1.00
PSYCH	**6.10**
APP	4.10
Physician	2.00
Sleep	**0.75**
Physician	0.75
Urgent Care	**2.00**
APP	2.00
Physician	0.00
Coeburn	**3.00**
Family Medicine	**1.00**
APP	1.00
Internal Medicine	**2.00**
APP	1.00
MD	1.00
Dickenson County	**5.00**
Internal Medicine	**3.00**
APP	2.00
MD	1.00
PSYCH	**2.00**
APP	2.00
JMH	**16.00**
Hospitalists	**16.00**
APP	5.00
Physician	11.00
Lebanon	**4.94**
Cardiology	**0.19**
APP	0.10
Physician	0.09
General Surgery	**1.00**
APP	0.00
Physician	1.00
Orthopedic Surgery	**1.05**
APP	1.00
Physician	0.05
Pulmonology/Sleep	**0.70**
APP	0.40
Physician	0.30
Urgent Care	**2.00**
APP	2.00
Physician	0.00
Lee/Jonesville	**2.20**
Family Medicine	**2.20**

APP	1.20
MD	1.00
Lonesome Pine	**7.00**
Hospitalists	**7.00**
APP	4.00
Physician	3.00
Lonesome Pine, Big Stone Gap	**0.50**
Wound Care	**0.50**
APP	0.50
Marion	**8.50**
Cardiology	**0.65**
APP	0.20
Physician	0.45
Gastroenterology	**0.25**
APP	0.00
Physician	0.25
Nephrology	**0.30**
Physician	0.30
OBGYN	**1.00**
NP	1.00
Oncology	**1.40**
APP	1.00
MD	0.40
Orthopedic Surgery	**3.00**
APP	2.00
Physician	1.00
Urgent Care	**0.90**
APP	0.50
Physician	0.40
Urology	**1.00**
APP	1.00
Physician	0.00
Mountain View	**7.00**
Hospitalists	**7.00**
APP	4.00
Physician	3.00
Norton	**37.60**
Cardiology	**1.00**
APP	0.80
Physician	0.20
ENT	**1.00**
APP	0.00
Physician	1.00
Family Medicine	**4.20**
APP	1.00
MD	3.20
General Surgery	**1.00**

APP	0.00
Physician	1.00
Hospitalists	**3.00**
Physician	3.00
Internal Medicine	**9.30**
APP	1.50
MD	7.80
OBGYN	**3.00**
MD	1.00
NP	2.00
Occupational Medicine	**1.00**
APP	0.00
Physician	1.00
Oncology	**3.20**
APP	1.00
MD	2.20
Orthopedic Surgery	**2.00**
APP	1.00
Physician	1.00
Pediatrics	**3.00**
APP	1.00
MD	2.00
Pulmonology	**3.30**
APP	0.20
Physician	3.10
Sleep	**0.20**
APP	0.20
Urgent Care	**2.00**
APP	2.00
Physician	0.00
Wound Care	**0.40**
Physician	0.40
RCMC	**6.80**
Family Medicine	**2.00**
APP	1.00
MD	1.00
Hospitalists	**4.00**
APP	3.00
Physician	1.00
Internal Medicine	**0.80**
APP	0.80
MD	0.00
Russell County	**6.35**
Oncology	**1.40**
APP	1.00
MD	0.40
PSYCH	**4.95**

APP	4.75
Physician	0.20
SCCH	**11.00**
Family Medicine	**5.00**
APP	4.00
MD	1.00
Hospitalists	**6.00**
APP	4.00
Physician	2.00
Grand Total	**220.20**

Row Labels	Sum of FTE
Cardiology	**7.00**
APP	3.80
Physician	3.20
Dermatology	**0.50**
APP	0.00
Physician	0.50
Diabetes & Endocrinology	**2.90**
APP	1.90
Physician	1.00
ENT	**1.00**
APP	0.00
Physician	1.00
Family Medicine	**27.85**
APP	15.00
MD	12.85
Gastroenterology	**2.20**
APP	0.20
Physician	2.00
General Surgery	**12.00**
APP	5.00
Physician	7.00
Hospitalists	**43.00**
APP	20.00
Physician	23.00
ID	**3.00**
Physician	3.00
Internal Medicine	**22.50**
APP	8.30
MD	14.20
Nephrology	**2.00**
Physician	2.00
Neurology	**2.00**
APP	1.00
Physician	1.00
OBGYN	**12.00**
MD	7.00
NP	5.00
Occupational Medicine	**1.80**
APP	0.80
Physician	1.00
Oncology	**14.70**
APP	6.50
MD	8.20
Orthopedic Surgery	**9.55**

APP	4.00
Physician	5.55
Pain Management	**1.25**
APP	1.00
Physician	0.25
Palliative Care	**1.00**
MD	1.00
Pediatric Hospitalist	**2.80**
APP	0.00
Physician	2.80
Pediatrics	**4.00**
APP	1.00
MD	3.00
PSYCH	**14.10**
APP	10.85
PhD	0.75
Physician	2.50
Pulmonology	**3.30**
APP	0.20
Physician	3.10
Pulmonology/ Critical Care	**2.00**
Physician	2.00
Pulmonology/Sleep	**1.30**
APP	1.00
Physician	0.30
Sleep	**1.45**
APP	0.65
Physician	0.80
Spine and Rehab	**1.50**
APP	0.50
Physician	1.00
Urgent Care	**12.40**
APP	10.10
Physician	2.30
Urology	**3.00**
APP	2.00
Physician	1.00
Wound Care	**8.10**
APP	5.70
Physician	2.40
Grand Total	**220.20**

Required Deliverable Submission

January 31, 2019

Virginia CA: Quantitative Measures, Performance Indicators 6(b):

See attached

VA DOH: 6(b) Table C

"Summary of Monitoring Measures Baseline Data"

Report Contact: Melanie Stanton

Ballad Health Performance Improvement and Quality

January, 2019

Report Summary:

This report provides a summary of performance for the Monitoring measures as established in Table C of the Virginia Cooperative agreement. This report was also submitted in the Annual Report as required by the Tennessee Cooperative Agreement. FY 18 performance is compared to the established baseline of Hospital Compare, July 2017 release. The targets for Ballad Health's first year is to at least maintain or improve over the established baseline.

Monitoring Structural Measures:

Ballad Health Facility	**Nurse Care Registry**	**Multispecialty Surgical Registry**	**General Surgery Registry**	**HIT Receive Lab Data Electronically**	**Tracking Clinical Results between Visits**	**Safe Surgery Checklist Use Outpatient**	**Safe Surgery Checklist Use Inpatient**
Johnson City Medical Center	YES	YES	YES	YES	YES	YES	YES
Laughlin Memorial Hospital	YES	NO	YES	YES	YES	YES	YES
Takoma Regional Hospital	NO	NO	YES	YES	YES	YES	YES
Franklin Woods Community Hospital	YES	YES	YES	YES	YES	YES	YES
Dickenson County Hospital	NO	NO	YES	YES	--	--	--
Hancock County Hospital	NO	NO	NO	NO	--	--	--
Hawkins County Memorial Hospital	NO	NO	YES	YES	NO	YES	YES
Holston Valley Medical Center	NO	YES	YES	YES	NO	YES	YES
Indian Path Community Hospital	YES	YES	YES	YES	YES	YES	YES
Lonesome Pine Hospital	NO	NO	YES	YES	NO	YES	YES
Norton Community Hospital	NO	YES	YES	YES	YES	YES	YES
Bristol Regional Medical Center	NO	YES	YES	YES	NO	YES	YES
Johnston Memorial Hospital	NO	YES	YES	YES	YES	YES	YES
Russell County Hospital	NO	NO	YES	YES	YES	YES	YES
Smyth County Community Hospital	NO	YES	YES	YES	YES	YES	YES
Sycamore Shoals Hospital	YES	YES	YES	YES	YES	YES	YES
Johnson County Community Hospital	--	--	--	--	YES	YES	YES
Unicoi County Hospital	NO	NO	YES	YES	YES	YES	YES

Monitoring Measures	Baseline	FY18 Performance Rate	Status
HCLEAN HSPAP Patients who reported that their room and bathroom were “Always” clean	73.64	72.524	⊗
HCLEAN HSPSNP Patients who reported that their room and bathroom were “Sometimes” or “Never” clean	10.53	10.407	
HCLEAN HSPUP Patients who reported that their room and bathroom were “Usually” clean	16.41	17.968	
HCOMP1A P Patients who reported that their nurses “Always” communicated well	82.12	77.796	⊗
HCOMP1SNP Patients who reported that their nurses “Sometimes” or “Never” communicated well	4.6	5.143	
HCOMP1U P Patients who reported that their nurses “Usually” communicated well	13.05	14.206	
HCOMP2A P Patients who reported that their doctors “Always” communicated well	80.02	80.060	✓
HCOMP2SNP Patients who reported that their doctors “Sometimes” or “Never” communicated well	6.34	5.937	
HCOMP2U P Patients who reported that their doctors “Usually” communicated well	13.63	14.008	
HCOMP3A P Patients who reported that they “Always” received help as soon as they wanted	67.63	66.972	⊗
HCOMP3SNP Patients who reported that they “Sometimes” or “Never” received help as soon as they wanted	9.11	9.107	
HCOMP3U P Patients who reported that they “Usually” received help as soon as they wanted	25.77	23.451	
HCOMP4A P Patients who reported that their pain was “Always” well controlled	68.41	69.675	✓
HCOMP4SNP Patients who reported that their pain was “Sometimes” or “Never” well controlled	9.32	8.266	
HCOMP4U P Patients who reported that their pain was “Usually” well controlled	22.73	22.129	
HCOMP5A P Patients who reported that staff “Always” explained about medicines before giving it to them	64.12	64.363	✓
HCOMP5SNP Patients who reported that staff “Sometimes” or “Never” explained about medicines before giving	18.69	18.617	
HCOMP5U P Patients who reported that staff “Usually” explained about medicines before giving it to them	19.88	16.659	
HCOMP6Y P Patients who reported that YES, they were given information about what to do during their	85.94	86.306	✓
HCOMP6N P Patients who reported that NO, they were not given information about what to do during their	14.2	12.600	
HCOMP7SA Patients who “Strongly Agree” they understood their care when they left the hospital	52.14	50.560	⊗
HCOMP7A Patients who “Agree” they understood their care when they left the hospital	41.16	41.061	
HCOMP7D SD Patients who “Disagree” or “Strongly Disagree” they understood their care when they left the	6.09	5.292	
HHSP RATING910 Patients who gave their hospital a rating of 9 or 10 on a scale from 0 (lowest) to 10 (highest)	70.67	69.320	⊗
HHSP RATING06 Patients who gave their hospital a rating of 6 or lower on a scale from 0 (lowest) to 10 (highest)	9.19	9.132	
HHSP RATING78 Patients who gave their hospital a rating of 7 or 8 on a scale from 0 (lowest) to 10 (highest)	19.49	19.263	
HQUIETHSP AP Patients who reported that the area around their room was “Always” quiet at night	64.68	62.197	⊗
HQUIETHSP UP Patients who reported that the area around their room was “Usually” quiet at night	24.39	28.462	
HQUIETHSPSNP Patients who reported that the area around their room was “Sometimes” or “Never” quiet at	10.58	9.460	
HRECMND DY Patients who reported YES, they would definitely recommend the hospital	71.34	71.569	✓
HRECMND DN Patients who reported NO, they would probably not or definitely not recommend the hospital	6.48	6.009	
HRECMND PY Patients who reported YES, they would probably recommend the hospital	22.23	22.163	
Cataracts Improvement	--	--	
OP29 Avg Risk Polyp Surveillance	0.73	0.833	✓
OP30 High risk Polyp Surveillance	0.83	0.890	✓
OP3b Median Time to Transfer AMI	47.42	34.570	✓
OP5 Median Time to ECG AMI and Chest Pain	5.22	8.730	⊗
OP4 Aspirin at Arrival AMI Chest Pain	97.0%	98.1%	✓
ED1b ED Door to Transport	227.29	268.510	⊗
ED2b ED Decision to Transport	124.5	82.980	✓
STK4 Thrombolytic Therapy (retired)	--	--	
EDV Emergency Department Volume	See ED Volumes Table (pg 3)		
OP18b Avg time ED arrival to discharge	124.53	127.260	⊗
OP20 Door to Diagnostic Evaluation	15.09	16.340	⊗
OP21 Time to pain medicaton for long bone fractures	37.84	45.290	⊗
OP22 Left without being seen	0.900%	0.846%	✓
OP23 Head CT stroke patients	0.632	0.768	✓

Monitoring Measures	Baseline	FY18 Performance Rate	Status
IMM2 Immunization for Influenza	97.4%	98.2%	✓
IMM3OP27 FACADHPCT HCW Influenza Vaccination	97.0%	98.0%	✓
VTE6 HAC VTE	0.017	0.032	✗
PC01 Elective Delivery	0.003	0.000	✓
Hip and Knee Complications	0.029	0.016	✓
PSI90 Complications / patient safety for selected indicators	0.83	1.050	✗
PSI4SURG COMP Death rate among surgical patients with serious treatable complications	140.6	176.718	✗
READM30 COPD Chronic obstructive pulmonary disease 30day readmission rate	0.182	0.194	✗
READM30 AMI Acute myocardial infarction (AMI) 30day readmission rate	0.129	0.129	✓
READM30HF Heart Failure 30Day readmissions rate	0.205	0.236	✗
READM30PN Pneumonia 30day readmission rate	0.177	0.167	✓
READM30 STK Stroke 30day readmission rate	0.093	0.104	✗
READM30 CABG Coronary artery bypass graft (CABG) surgery 30day readmission rate	0.087	0.125	✗
READM30 HIPKNEE 30day readmission rate following elective THA / TKA	0.038	0.038	✓
READM30 HOSPWIDE 30day hospitalwide allcause unplanned readmission	0.12	0.131	✗
MORT30 CABG Coronary artery bypass graft surgery 30day mortality rate	0.02	0.030	✗
MORT30 COPD 30day mortality rate COPD patients	0.018	0.026	✗
MORT30AMI Acute myocardial infarction (AMI) 30day mortality rate	0.047	0.047	✓
MORT30HF Heart failure 30day mortality rate	0.039	0.030	✓
MORT30PN Pneumonia 30day mortality rate	0.047	0.055	✗
MORT30STK Stroke 30day mortality rate	0.082	0.054	✓
OP8 MRI Lumbar Spine for Low Back Pain	38.0%	34.1%	✓
OP9 Mammography Followup Rates	8.0%	6.9%	✓
OP10 Abdomen CT Use of Contrast Material	6.0%	7.0%	✗
OP11 Thorax CT Use of Contrast Material	1.0%	0.7%	✓
OP13 Outpatients who got cardiac imaging stress tests before lowrisk outpatient surgery	3.0%	3.8%	✗
OP14 Outpatients with brain CT scans who got a sinus CT scan at the same time	2.0%	1.0%	✓

Emergency Department Volumes Table:

Facility	Low	Medium	High	Very High
Bristol Regional Medical Center			X	
Dickenson County Hospital	X			
Franklin Woods Community Hospital		X		
Hancock County Hospital		X		
Hawkins County Community Hospital	X			
Holston Valley Medical Center				X
Indian Path Hospital		X		
Johnson City Medical Center				X
Johnson County Hospital	X			
Johnston Memorial Hospital			X	
Laughlin Memorial Hospital		X		
Lonesome Pine Hospital		X		
Norton Community Hospital		X		
Russell County Hospital	X			
Smyth County Community Hospital	X			
Sycamore Shoals Hospital		X		
Takoma Regional Hospital		X		
Unicoi Memorial Hospital	X			

BalladHealth
It's your story. We're listening.

Alan Levine
Executive Chairman,
President and Chief Executive Officer

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balladhealth.org

January 29, 2019

M. Norman Oliver, MD, MA
Acting Commissioner Virginia Department of Health
109 Governor Street
Richmond, VA 23219

Re: Final Plan Submissions

Via: FedEx & Email

Dear Commissioner Oliver:

Please find enclosed Ballad Health's submission of the following plans:

- Rural Services (updated from August 24, 2018 submission)
- Health Information Exchange (HIE)
- Health Research and Graduate Medical Education (HR/GME)

We have incorporated feedback from various prior discussions with the Department's Staff into the revised Rural Health Plan for the State of Tennessee. Please accept this as the final submission. This submission does contain updated exhibits that were previously submitted, including several with future business plans that contain sensitive information. Those will be provided in a separate attachment. We respectfully request that your offices treat the exhibits that are marked as "Confidential" as proprietary information under Tenn. Code Ann. 68-11-1310, Virginia Code Section 15.2-5384.1.C.1, and Virginia's Rules and Regulations Governing Cooperative Agreements (12VAC5-221-40.D).

On November 29, 2018, Ballad Health submitted drafts of the HIE and HR/GME plans as required by the Virginia Department of Health's January 12, 2018 letter regarding "Final Cooperative Agreement Measures." These drafts for the Commonwealth were also provided to the State of Tennessee at the same time. The enclosed HIE and HR/GME plans attached hereto are specific to the requirements of the Cooperative Agreement, Conditions 8, 24, and 25 and they incorporate the comments we received from the Commonwealth and the State of Tennessee.

We would be happy to meet with you in the coming weeks to review these plans and answer any questions you may have. Thank you and we look forward to discussions regarding these plans.

Sincerely,

Alan Levine

Cc via email: Lisa Piercey, MD, Commissioner, Tennessee Department of Health
Jeff Ockerman, Director, Division of Health Planning
Janet M. Kleinfelter, Deputy Attorney General
Erik Bodin, Director, Office of Licensure and Certification
Allyson K. Tysinger, Senior Assistant Attorney General/Chief
Larry Fitzgerald, COPA Monitor
Tim Belisle, General Counsel Ballad Health
Gary Miller, Senior Vice President Ballad Health

Final Rural Health Services Plan for the Commonwealth of Virginia

January 29, 2019

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Introduction

- Final versions of the following plans were requested by the Commonwealth of Virginia Department of Health in a January 12, 2018 letter regarding "Final Cooperative Agreement Measures." These plans are due in final form by July 31, 2018.
  - Behavioral Health Services Plan
  - Children's Health Services Plan
  - Rural Health Services Plan
  - Population Health Plan
- The content of these Plans is consistent with requirements as outlines in the Cooperative Agreement and represent those actions to be taken by Ballad Health deemed by the Commonwealth to constitute public benefit.

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 Commonwealth requested information regarding the "methodology for allocation of funds between Tennessee and Virginia" for the Behavioral, Children's and Rural Health Services Plans
  - Investments and expenditures specific and unique to Virginia geographies or Virginia residents will be allocated 100% as a "Virginia Expenditure"
  - For investments and expenditures that are not specific or unique to Virginia (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 "Virginia Expenditure"
    - Demographic allocation – Virginia population served (or total Virginia service area population) as a percentage of the total population served (or total service area population served)
    - Utilization allocation – Utilization of defined service (or services) by Virginia residents as a percentage of the total utilization
    - Ad Hoc/Judgment – When neither of the allocation methodologies described above are applicable, Ballad will devise an appropriate ad hoc methodology, or use professional judgment to allocate funding

Important Dates

Plans Due in First Six Months (July 31, 2018)

- Behavioral Health Services*
- Children's Health Services*
- Rural Health Services*
- Population Health*
- Capital
- Quality Improvement (VA)

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

- HIE
- Health Research/Graduate Medical Education

** Consistent with the The Commonwealth of Virginia Department of Health request, Ballad previously submitted final versions of these Plans prior to the July 31, 2018 deadline. This document presents the updated versions of those plans, incorporating feedback received from the Commonwealth on August 30, 2018, following review of the final submissions. Additional modifications have been made to the Rural Health Plan. Please accept this as the final version.*

Process for Plan Development

Initiate

- Engaged Resources
- Named Executive Steering Team

Plan

- Gathered Internal and External Stakeholder Input
- Developed Initial Plans/Prioritize

Review

- Socialized Plans to Internal and External Stakeholders
- Submitted Draft Plans to Virginia Department of Health (VDH)
- Reviewed Draft Plans with VDH

Finalize

- Incorporated VDH and Stakeholder Feedback
- Finalized Investment Schedules
- Submitted Final Plans to VDH
- Make final revisions with State Input during 30 day state review and 30 day Ballad response period
- Obtain Ballad Health Board Approval

Process and Participation for Plan Development

In developing these plans, Ballad has referenced previously developed plans and analyses and solicited extensive stakeholder input including:

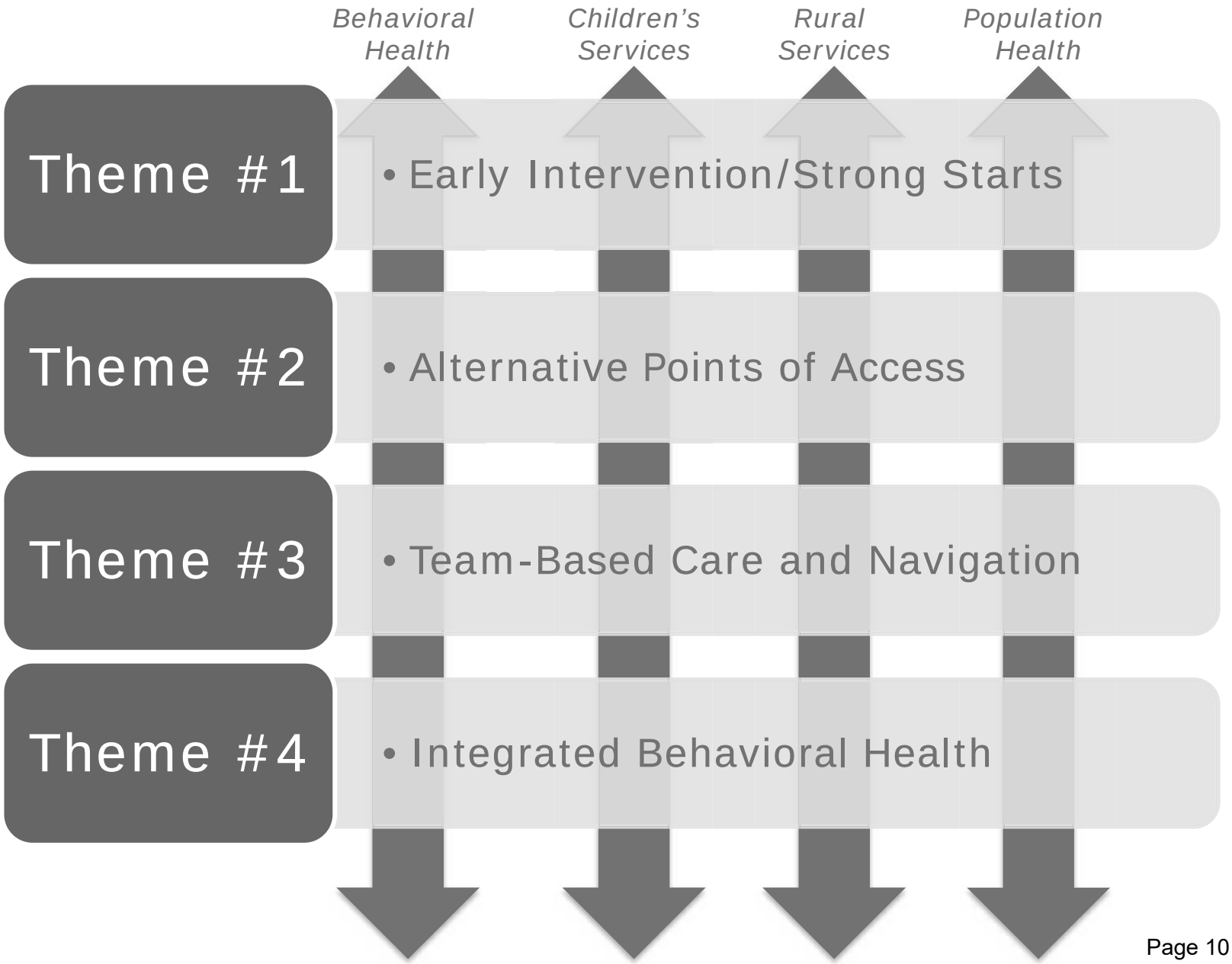
- Reviewing the following documents and plans:
  - Authority's Blueprint for Health Improvement & Health-Enabled Prosperity
  - Virginia Plan for Well-Being
  - Key Priorities for Improving Health in Northeast Tennessee and Southwest Virginia: A Comprehensive Community Report [1]
  - Legacy WHS and MSHA Community Health Needs Assessments
- Conducting approximately individual 150 interviews
- Holding approximately 40 meetings with external groups

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

Process and Participation for Plan Development (continued)

- Convening the Population Health Clinical Committee
- Presenting the plan overview to the Southwest Virginia Health Authority and a number of Ballad community boards in Virginia and in an open meeting in Abingdon
- Convening the Accountable Care Community Steering Committee
  - Healthy Kingsport and United Way SWVA were selected through an RFP process to co-manage this effort for both TN and VA
  - Obtained cross-state participation in initial meeting with discussion of metrics with special focus on those most amendable to community intervention
  - Conducting bi-weekly calls with lead organizations
- Submitted draft plans to the State for review and feedback on June 30, 2018. Additionally, Ballad representatives and representatives from the Commonwealth met on July 10, 2018 to review and discuss the draft plans. Feedback from that meeting and subsequent communications have been incorporated into the final document submitted July 31, 2018. The Commonwealth provided feedback to those plans in a letter to Ballad, dated August 30, 2018. Feedback from that letter is included in these updated plans.

Strategic Themes Across All Plans



Strategic Themes Across All Plans (continued)

1. **Early intervention and strong starts**
   - Efforts will be designed around the concept of primary, secondary and tertiary prevention, with a special population focus on children.
   - Example: Prevent cervical cancer through HPV vaccinations AND detect in early stages through effective screening.
2. **Alternative Points of Access**
   - Preventive and acute services must be easily accessible by the population and designed with their preferences and limitations in mind.
   - Example: Mobile blood pressure and diabetes screening co-located at food assistance delivery sites.

Strategic Themes Across All Plans (continued)

3. Team Based Care and Navigation

- Care teams will be designed around the needs of the whole person and include perspectives and skills from pharmacists, social workers, community health workers, navigators and case managers.
- Example: Embed behavioral health navigators in primary care practices to link patients with necessary behavioral health services at Ballad Health and our CSB partners.

4. Integrated Behavioral Health

- A behavioral health perspective will be designed into all care processes and systems.
- Example: Perform Screening, Brief Intervention and Referral to Treatment on ED and Inpatient admits to identify behavioral health risk and initiate treatment in patients regardless of their presenting problem.

Table of Contents for Each Plan

- Plan Overview
  - VA Cooperative Agreement Requirements
  - Key Metrics Assessed
  - Key Strategies
  - Crosswalk to Conditions
  - Investment Plan
- Strategic Approach
- Implementation Roadmap

Rural Health Services
Plan for the Commonwealth of Virginia

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Rural Health Services Plan

1. Plan Overview

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Plan Overview
VA Cooperative Agreement Rural Health Services Plan Requirements

VA Cooperative Agreement Requirement
1. Effectively address and detail how meaningful and measurable improvements and enhancement in the Virginia service area to same-day access for primary care services, access to specialty care within five days, access to maternal and prenatal health services, access to pediatric and pediatric specialty services, access to "essential services" as defined in condition 27, preventive and restorative dental services, corrective vision services, and access to emergency services will be achieved
2. Detail how active and effective collaboration with local businesses, school divisions, and industry on community development necessary to attract and retain providers in the Virginia service area will be achieved
3. Have an active and effective focus on managing the burden of disease and breaking the cycle of disease
4. Detail how the New Health System will actively and effectively consult with the Southwest Area Health Education Center and regional educational institutions on the development of workforce development strategies
5. Detail how effective development of health professions education needed to help the New Health System's workforce and the regional pipeline of allied health professionals adapt to new opportunities created as the New Health System evolves and develops will be achieved
6. Include a methodology for allocation of funds between Virginia and Tennessee. The plan shall include milestones and outcome metrics consistent with those approved by the Commissioner after receipt of the recommendations from the Technical Advisory Panel

Sources: Virginia Cooperative Agreement, Section 33; Virginia Cooperative Agreement, Amendment 1, January 12, 2018.

Plan Overview
Rural Health Services Plan Key Metrics

- B8: Specialist Recruitment and Retention
- B9: Personal Care Provider
- B10: Preventable Hospitalizations - Medicare
- B11: Preventable Hospitalizations - Adults
- B12: Screening – Breast Cancer
- B13: Screening – Cervical Cancer
- B14: Screening – Colorectal Cancer
- B15: Screening – Diabetes
- B16: Screening – Hypertension
- B17: Asthma ED Visits – Age 0-4
- B18: Asthma ED Visits – Age 5-14
- B19: Prenatal Care in the First Trimester
- B22: Antidepressant Medication Management – Effective Acute Phase Treatment
- B23: Antidepressant Medication Management – Effective Continuation Phase Treatment
- B29: Screening For Lung Cancer

ED = emergency department

Plan Overview

Strategies for the 3-Year Rural Health Services Plan

Strategy #1: Expand Access to Primary Care Practices Through Additions of Primary Care Physicians and Mid-Levels to Practices in Counties of Greatest Need

Strategy #2: Recruitment of Physician Specialists to Meet Rural Access Needs

Strategy #3: Implement Team-Based Care Models to Support Primary Care Providers, Beginning with Pilots in High Need Counties

Strategy #4: Develop and Deploy Virtual Care Services

Strategy #5: Coordinate Preventive Health Care Services

Plan Overview

Strategies Related to VA Cooperative Agreement Rural Health Services Plan Requirements

VA Cooperative Agreement Requirement	1. Additions of Primary Care Physicians and Mid-Levels	2: Recruitment of Physician Specialists	3:Team-Based Care Models	4: Deploy Virtual Care Services	5: Coordinate Preventive Services
1.a. Same-day access for primary care services	Y		Y	Y	
1.b. Access to specialty care within five days		Y	Y	Y	
1.c. Access to maternal and prenatal health services	Y	Y	Y	Y	Y
1.d. Access to pediatric and pediatric specialty services	Y		Y	Y	
1.e. Preventive and restorative dental services					Y
1.f. Corrective vision services					Y
1.g. Access to emergency services				Y	
2. Collaboration with local organization on community development to attract and retain providers	See Health Research and GME Plan				
3. Managing the burden of disease and breaking the cycle of disease	Y	Y	Y	Y	Y
4. Consult with the SAHEC and regional educational institutions on the development of workforce development strategies	See Health Research and GME Plan				
5. Development of health professions education	See Health Research and GME Plan				

Plan Overview

Rural Health Services Estimated Investment Summary

Rural Health Services Plan	Year 1		Year 2		Year 3		Year 1-3 Total	
	Low	High	Low	High	Low	High	Low	High
#1 - Expand Access to PCPs - Add Primary Care Physicians and Mid-levels	$660,000		$1,440,000		$1,720,000		$3,820,000	
#3 - Team-Based Care Models to Support PCPs	$150,000		$630,000		$1,000,000		$1,780,000	
#4 - Deploy Virtual Care Services	$140,000		$660,000		$230,000		$1,030,000	
#5 - Coordinate Preventive Care	$50,000		$50,000		$50,000		$150,000	
Sub-Total	**$1,000,000**		**$2,780,000**		**$3,000,000**		**$6,780,000**	
#2 - Recruitment of Physician Specialists	$0	$420,000	$220,000	$1,230,000	$0	$1,640,000	$220,000	$3,290,000
Total	**$1,000,000**	**$1,420,000**	**$3,000,000**	**$4,010,000**	**$3,000,000**	**$4,640,000**	**$7,000,000**	**$10,070,000**
CA-Mandated Minimum Expenditures	*$1,000,000*		*$3,000,000*		*$3,000,000*		*$7,000,000*	
Potential Funding Needed in Excess of Minimum Spending Requirements	***$0***	***$420,000***	***$0***	***$1,010,000***	***$0***	***$1,640,000***	***$0***	***$3,070,000***

Note: This does not account for an additional spend over the 3 year time frame in TN for primary care and specialists providers of up to $6.86M.

Specialist recruiting (see Strategy #2) expenditures are presented as a range, due the following uncertainties, which can have significant impacts on the actual annual investment expenditures:

- Timing – Due to the challenges of recruiting specialists to rural environments, the amount of time necessary to successfully recruit a specialist can vary dramatically.
- Economic considerations – Ballad has a robust compliance function that monitors matters pertaining to physician compensation and other economic relationships between the system and its medical staff. However, the challenges of recruiting to a rural environment often results in rapidly changing economic demands among potential recruits.
- Possible partnership opportunities –Ballad supports private practitioner employment, and will always work with private practices to provide recruitment assistance when appropriate. Such recruitment assistance often results in economic investments by Ballad less than the investments required to employ a specialist.

Rural Health Services Plan

2. Strategic Approach

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Strategic Approach
Strategy #1: Add Primary Care Physicians and Mid-Level Providers to Practices in Counties of Greatest Need

Why?

- Adding primary care physicians ("PCP"s) and mid-level providers (Physician Assistants and Nurse Practitioners) is important to expanding access in rural areas.
- Staffing practices with mid-level practitioners allows existing physicians to work at the top of their license and reduce overall cost of care.

How?

- Continuously evaluate needs of the Ballad service area. To identify the areas of highest need, Ballad will monitor and maintain the following information and research:
  - Monitoring and maintaining of provider needs assessment results
  - Evaluation of community needs assessments
  - Evaluate appointment availability and target counties with low appointment availability and limited PCP or urgent care infrastructure relative to the county population.
  - Within high-needs counties, evaluate specific practices that have a high proportion of attributed lives, space capacity, and support staff to prioritize order of deployment.
- Hire at least one additional primary care physician in 2019 in Russell County, and one Pediatrician in Wise County during 2020. Continue evaluation of primary care needs in rural counties and respond with updated recruitment plans as needed.
- Develop recruitment plan and hire two mid-levels in 2019, one in 2020, and two in 2021. When adding mid-level practitioners, ensure they have availability to support walk-in appointments, and in select practices, expand evening/ weekend hours, thereby more effectively supporting current physicians on staff.

Strategic Approach

Strategy #1: Add Primary Care Physicians and Mid-Level Providers to Practices in Counties of Greatest Need

Metrics Addressed

- Additional primary care resources help to address all of the access metrics listed previously in the Plan Overview – Key Metrics slide and increase percentage of the rural population with same day primary care access.

Potential Barriers to Success

- The implementation plan is dependent on the recruitment of primary care physicians and mid-level providers to rural communities. To the extent that these professionals can not be recruited in the timeframe indicated, certain aspects of the plan may be delayed.

Potential Mitigation Tactics

- Identify opportunities to increase access with e-visits
- Increase provider capacity through process reengineering and improved scheduling of expanded care teams
- Provide recruiting assistance to community providers

Strategic Approach
Strategy #2: Recruit Physician Specialists to Meet Rural Access Needs

Why?

- A core group of local and regional specialists is essential to creating a system of local access in rural communities and minimizing the need for residents to travel for care. Specialists are particularly difficult to recruit to rural areas, resulting in the need to (1) commit significant focus and resources to attract and retain them, and (2) thoughtfully develop regional approaches to specialty access for rural residents.

How?

- Review and revise system-wide recruitment plan for rural counties, taking into consideration community-based need, rural hospital medical staff needs, and growing telehealth capabilities. It is important to note that there is often insufficient population in rural counties to support specialists so they are often recruited to the tertiary hubs, located in urban areas. Specialists recruited to Holston Valley Medical Center and Bristol Regional Medical Center will still treat a number of patients from rural counties and that has been accounted for in this list of priorities.
- In order to allocate the expense associated with these urban-based specialists to the rural populations they serve, Ballad calculated an allocation ratio for each sub-specialty as follows:
  - Historical (FY2017) Clinic Visits from Patients originating from a rural zip code/Total Clinic Visits
  - If information was incomplete or not available for a specific sub-specialty, Ballad applied the average of all computed ratios
  - Ballad then applied these ratios to the total practice expense for each sub-specialty assumed in the recruitment plan to determine what portion of the practice expenses would be representative of resources dedicated to rural residents
  - The ratios used to allocate sub-specialty total practice expenses to rural residents ranged from 47% to 52%, with the average being 49% (for those instances, as described above) when the average was utilized to allocate costs. For reference, the rural population in Ballad's service area, as a % of total population in the service area, is 61.3%.

Strategic Approach
Strategy #2: Recruit Physician Specialists to Meet Rural Access Needs

How?

- Execute on Ballad recruitment plan, based on priorities by specialty and location. Access to specialty care provided through:
  - Locating specialty practice full-time in rural communities
  - Providing rotating specialty clinics in rural communities
  - Providing rural residents with telehealth access to specialists located in urban areas
  - Providing preferred/reserved appointment scheduling for rural residents traveling to urban areas for specialist care
- Coordinate with Ballad's ongoing Health Research and GME Plan workgroup to leverage opportunities for recruitment and development from regional medical schools and networks.
- Review needs and progress annually and update as necessary.

Current Rural Specialist Priorities

Specialty	Practice Location (County)
Cardiology	Wise, VA
Orthopedics	Wise, VA
Pulmonary	Wise, VA
Psychiatry	Russell, VA
Psychiatry NP	Russell, VA
Nephrology	Washington, VA
CardioThoracic	Sullivan, TN
Neurosurgery	Sullivan, TN
General Surgery, Colorectal	Sullivan, TN

Strategic Approach

Strategy #2: Recruit Physician Specialists to Meet Rural Access Needs

Metrics Addressed

- B8: Specialist Recruitment and Retention
- B10: Preventable Hospitalizations - Medicare
- B11: Preventable Hospitalizations – Adults
- This strategy will also increase the percentage of the rural population with access to specialty care within five days

Potential Barriers to Success

- The implementation plan is dependent on the recruitment of specialist providers. To the extent that these professionals can not be recruited in the timeframe indicated, certain aspects of the plan may be delayed.

Potential Mitigation Tactics

- Identify opportunities to increase access with e-visits
- Increase provider capacity through process reengineering
- Provide recruiting assistance to community providers

Strategic Approach
Strategy #3: Develop and Deploy Team-based Care Models

Why

- PCPs in Ballad Health's service area often lack resources to address challenging populations such as patients with chronic diseases or behavioral health needs. Team-based care models offer screening and care coordination services which improve outcomes and overall healthcare costs.

How

- Evaluate existing Ballad and private practitioner care coordination resources to ensure effective resourcing within each region, and maximum impact for patients.
- Evaluate and determine appropriate team-based model for rural populations and implement one pilot each year, beginning in 2019.
- Focus on team-based care models that address chronic care needs outside of behavioral health (note: Integration of primary care and behavioral health addressed in Behavioral Health Plan).
- Recruit positions to support regional programs - outlining a schedule of rotation for the teams. Teams to include:
  - Care Coordinator
  - Community Health Worker
  - Health Coach
  - Pharmacist
- Leverage virtual health as available to extend access to specialty care within the system. (see Strategy #4 below).

PCP = Primary Care Provider

Strategic Approach
Strategy #3: Develop and Deploy Team-based Care Models

Metrics Addressed

- Additional team-based care models help to address all of the access metrics listed previously in the Plan Overview – Key Metrics slide.

Potential Barriers to Success

- The implementation plan is dependent on the recruitment and training of health care professionals, including relatively new functions like community health workers. To the extent that these professionals can not be recruited in the timeframe indicated, certain aspects of the plan may be delayed.

Potential Mitigation Tactics

- Incorporate training programs as an initiative in the Health Research and Graduate Medical Education plan

Strategic Approach
Strategy #4: Develop and Deploy Virtual Care Services

Why?

- **Infrastructure:** Ballad Health's existing virtual programs lack common platforms or workflows and are disconnected from enterprise-level goals for access. A core infrastructure is needed to support virtual care services, including the following priorities:
  - **Tele-Stroke:** With five existing sites among Ballad Health hospitals, tele-stroke provides a strategic opportunity to scale existing virtual health initiatives with relatively limited investment. Early success here will build traction and facilitate the development of the virtual health infrastructure within the system.
  - **Behavioral Health:** The region is experiencing significant unmet need for behavioral services. However, a significant percentage of patients are diagnosed with lower acuity conditions that do not require face-to-face visits. Shifting lower acuity patients to virtual settings will reinforce broader strategies to extend the capacity of highly skilled BH providers (e.g., psychiatrists). Behavioral telehealth offers virtual face-to-face counseling and improves consistency of coordination with primary care providers.
  - **Pediatric Emergency and Specialty Services:** As discussed in the Children's Health Services Plan, Ballad is committed to providing telehealth services to Niswonger Children's Hospital Emergency Room Physicians and Specialists to all Ballad hospital emergency departments during 2019. The availability of telehealth resources in the Ballad hospitals will also be evaluated for use as outpatient access points for specialist consults.

Strategic Approach
Strategy #4: Develop and Deploy Virtual Care Services

How?

- Create a centralized virtual health team (leadership and support staff) that is resourced to support deployment of virtual health strategies and assess gaps. Deploy and/or realign necessary infrastructure, including staff and technology, to support the envisioned virtual care network.
- Add telehealth equipment to ensure all Ballad hospitals have at least one comprehensive cart for high-acuity episodes (e.g., tele-stroke) and one secondary cart for lower-acuity episodes (e.g., consults).
- Expand tele-stroke services to a broader geography, providing enhanced access to this critical service.
- Expand behavioral health telemedicine services by adding 10 outpatient sites for low acuity patients. This capability will support a "hub and spoke" model for behavioral telehealth with Ballad hospital-based services.
- Build on Ballad Health's EPIC roll-out and plan for the deployment of E-visits (email) as an additional means of access to care.
- Collectively, these telehealth resources in Ballad's rural communities will provide additional access to both adult and pediatric specialists.

Strategic Approach
Strategy #4: Develop and Deploy Virtual Care Services

Metrics Addressed

- B8: Specialist Recruitment and Retention
- B10: Preventable Hospitalizations - Medicare
- B11: Preventable Hospitalizations – Adults
- B22: Antidepressant Medication Management – Effective Acute Phase Treatment
- B23: Antidepressant Medication Management – Effective Continuation Phase Treatment

Potential Barriers to Success

- The implementation plan is dependent on the availability health care professionals to provide telehealth services. To the extent that these professionals can not be recruited in the timeframe indicated, certain aspects of the plan may be delayed.
- Legislative and payor policy may hinder full adoption of various virtual care services like telehealth and E-visits.

Potential Mitigation Tactics

- Collaborate with state resources to advocate for legislative policy support

Strategic Approach
Strategy #5: Coordinate Preventive Health Care Services

Why?

- While increasing access to effective primary care and behavioral health is addressed in other strategies and plans, access to more specialized preventive health care services in rural areas is important to overall health and well-being. These services include maternal and prenatal health, preventive dental, and corrective vision services.

How?

- **Maternal and Prenatal Health**: Access to obstetrical care in rural areas is a nation-wide problem. A multi-stakeholder approach to infant and maternal mortality, pre-term birth, low birthweight, and neonatal abstinence syndrome is required. This includes establishing relationships with a personal care provider and public health communication campaigns to allow for early identification of pregnancy; programs to support primary care providers delivery of pre-natal care such as early identification and triage protocols for high-risk pregnancies; virtual hospital consults with MFM providers; centering pregnancy programs, and post-partum VLARC insertion. Successful models of collaborative action such as the South Carolina Birth Outcome Initiative exist and have shown success in rural geographies. A Maternal and Prenatal Health plan will be developed as part of the population health planning process, and potentially may be a specific area of focus for the Accountable Care Community.

Strategic Approach

Strategy #5: Coordinate Preventive Health Care Services

How?

- **Dental Services:** Ballad will propose an initiative to increase the current reach of dental sealant programming in schools be included as part of the community partnership activities designed to strengthen community action (see the Strengthen Community Action process outlined in the Population Health Plan under Focus Area Three)
- To increase the availability of additional preventive and restorative dentistry in the region, Ballad is an exploring the opportunity to create a hospital sponsored rural dental residency program that would draw dental students from regional schools of dentistry, and provide additional capacity to treat individuals who cannot afford dental care. It is recommend that this initiative be evaluated as part of the Academics and Research plan.
- **Vision Services:** Ballad will proposing that an initiative to increase the reach of current community based vison screening and corrective services be included as part of the community partnership activities designed to strengthen community action (see the Strengthen Community Action process outlined in the Population Health Plan under Focus Area Three)

Strategic Approach
Strategy #5: Coordinate Preventive Health Care Services

Metrics Addressed

- B19:Prenatal Care in the First Trimester

Potential Barriers to Success

- The implementation plan is dependent on the collaboration of community partners. To the extent that these partnerships take longer to develop than expected, certain aspects of the plan may be delayed.

Potential Mitigation Tactics

- Per the population health plan, leverage the Accountable Care Community to engage in these initiatives

Rural Health Services Plan

3. Implementation Roadmap

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Implementation Roadmap
Milestones and Metrics for Measuring Strategies: 2019

Implementation Milestones and Metrics: Q1 and Q2

Strategies	Q1 Milestones	Q1 Metrics	Q2 Milestones	Q2 Metrics
1. **Expand Access to PCPs Through Additions of Mid-levels**	• Begin process for determining priority locations for mid-levels in Virginia • Begin recruiting PCP for Virginia location	• *Process initiated* • *Recruitment progress*	• Determine priority locations for mid-levels and begin recruitment	• *Priority locations determined and recruitment initiated*
2. **Recruit Physician Specialists**	• Begin process for determining locations/specialties	• *Process initiated*	• Finalize priority locations for specialists and begin recruiting	• *Priority locations determined and recruitment initiated*
3. **Implement Team-Based Care Models to Support PCPs**	• Initiate development of operational plan and metrics for regional deployment of an enhanced team-based care model	• *Operational plan initiated*	• Complete operational plan and metrics for regional deployment of an enhanced team-based care model • Recruit staff for initial regional pilot site	• *Operational plan complete* • *Begin staff recruitment*
4. **Deploy Virtual Care Services**	• Develop plan for deployment of comprehensive telehealth equipment to nine (9) Ballad EDs	• *Deployment plan completed*	• Begin deployment of comprehensive telehealth equipment to nine (9) Ballad EDs • Begin service plan for addition of telehealth service programs to Ballad EDs – focusing first on tele-stroke, tele-peds, and tele-behavioral	• *Equipment deployed consistent with deployment plan* • *Initiate service planning*
5. **Coordinate Preventive Services**	• Refer to other plans		• Refer to other plans	

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Implementation Roadmap
Milestones and Metrics for Measuring Strategies: 2019

Implementation Milestones and Metrics: Q3 and Q4

Strategies	Q3 Milestones	Q3 Metrics	Q4 Milestones	Q4 Metrics
1. **Expand Access to PCPs Through Additions of Mid-levels**	• Hire providers for initial sites	• *Providers hired for initial sites*	• Evaluate and refine operations in first sites • Continue hiring per plan	• *New providers hired* • *New provider pipeline* • *Y2 milestones and metrics accepted* • *# of patients treated by additional PC providers*
2. **Expand Access to PCPs Through Continuity Clinics**	• Hire providers for initial sites	• *Providers hired for initial sites*	• Evaluate and refine operations in first sites • Continue hiring per plan	• *New providers hired* • *New provider pipeline* • *Y2 milestones and metrics accepted* • *# of patients treated by additional specialists*
3. **Implement Team-Based Care Models to Support PCPs**	• Hire staff and begin operations for regional pilot site • Begin planning for second and third rural expansion sites	• *Staff hired for pilot site* • *Second and third rural expansion sites initiated*	• Evaluate and refine operations in first regional pilot site • Complete planning for second and third rural expansion sites	• *Evaluation report and future recommendations* • *Second and third rural expansion site plans complete* • *Y2 milestones and metrics accepted* • *# of patient lives under management of a team based care model*
4. **Deploy Virtual Care Services**	• Continue deployment of comprehensive telehealth equipment to nine (9) Ballad EDs • Continue service plan for addition of telehealth service programs to Ballad EDs – focusing first on tele-stroke, tele-peds, and tele-behavioral	• *Equipment deployed consistent with deployment plan* • *Plan continuation*	• Complete deployment of comprehensive telehealth equipment to nine (9) Ballad EDs • Complete service plan for addition of telehealth service programs to Ballad EDs – focusing first on tele-stroke, tele-peds, and tele-behavioral	• *All Ballad EDs have comprehensive telehealth equipment* • *Plan for service deployment approved* • *Y2 milestones and metrics accepted*
5. **Coordinate Preventive Services**	• Refer to other plans		• Refer to other plans	

Implementation Roadmap
Milestones and Metrics for Measuring Strategies: 2020

Strategies	2020 Milestones and Metrics
1. Expand Access to PCPs Through Additions PCPs and Mid-levels	• Evaluate mid-level performance in 2019 to identify impact and opportunities for improvement • Add at least one (1) additional mid-level provider to a PCP practice in 2020 • *Number of patients treated by additional primary care providers*
2. Recruit Physician Specialists	• Evaluate operations initiated in 2019 to identify impact and opportunities for improvement • *Number of patients treated by additional specialist providers*
3. Implement Team-Based Care Models to Support PCPs	• Evaluate operations initiated in 2019 to identify impact and opportunities for improvement • Initiate operations for second and third rural expansion sites for team-based care • *# of patient lives under management of a team based care model*
4. Deploy Virtual Care Services	• Add secondary carts ensuring all Ballad hospitals have primary and secondary telehealth equipment • Add tele-stroke hospital locations consistent with service deployment plan • Continue tele-peds specialty deployment consistent with plans (see Children's Health Services Plan) • Expand E-visit program • Add tele-behavioral health outpatient sites • *Number of patients treated through new tele-stroke services* • *Number of patients treated through new tele-behavioral services* • *Number of patients treated through new tele-pediatric services*
5. Coordinate Preventive Services	• *Refer to other plans*

Implementation Roadmap
Milestones and Metrics for Measuring Strategies: 2021

Strategies	2021 Milestones and Metrics
1. Expand Access to PCPs Through Additions PCPs and Mid-levels	• Evaluate mid-level performance in 2020 to identify impact and opportunities for improvement • Add at least one (1) additional mid-level provider to a PCP practice in 2021 • *Number of patients treated by additional primary care providers*
2. Recruit Physician Specialists	• Evaluate operations initiated in 2020 to identify impact and opportunities for improvement • *Number of patients treated by additional specialist providers*
3. Implement Team-Based Care Models to Support PCPs	• Evaluate operations initiated in 2020 to identify impact and opportunities for improvement • *# of patient lives under management of a team based care model*
4. Deploy Virtual Care Services	• Continue adding tele-stroke hospital locations consistent with service deployment plan • Continue tele-peds specialty deployment consistent with plans (see Children's Health Services Plan) • Add tele-behavioral health outpatient sites • *Number of patients treated through new tele-stroke services* • *Number of patients treated through new tele-behavioral services* • *Number of patients treated through new tele-pediatric services*
5. Coordinate Preventive Services	• *Refer to other plans*

Final Rural Health Services Plan for the Commonwealth of Virginia

January 29, 2019

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Health Information Exchange Plan for the Commonwealth of Virginia

January 29, 2019

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Introduction

- A final version of the Health Information Exchange (HIE) plan was requested by the Commonwealth of Virginia Department of Health in a January 12, 2018 letter regarding “Final Cooperative Agreement Measures.” The Plan is due in final form by January 31, 2019.

- The content of this plan is consistent with requirements as outlined in Cooperative Agreement, conditions 8 and 26 and represents those actions to be taken by Ballad Health deemed by the Commonwealth of Virginia to constitute public benefit.

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

Important Dates

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

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

** Consistent with The Commonwealth of Virginia Department of Health request, Ballad Health previously submitted a draft version of the HIE plan on November 30, 2018 and provided a copy to the State of Tennessee. This document presents the final version of that plan.*

Process for Plan Development

Initiate

- Engaged Resources
- Named Executive Steering Team

Plan

- Assessed Current HIE and Interoperability State and Future Vision
- Documented Future State & Develop Gap Analysis
- Developed Operational Model Framework
- Developed HIE and Interoperability Roadmap

Review

- Presented Draft Plan to Executive Steering Team
- Provide Tennessee Department of Health (TDH) with Draft Plan Submitted to Virginia Department of Health (VDH)
- Review Draft Plan 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

Process and Participation for Plan Development

In developing this plan, Ballad Health has referenced previously developed plans and analyses and solicited extensive stakeholder input including:

- Conducted approximately 50 individual interviews
- Held approximately 30 meetings with external groups, including:
  - State of Franklin Healthcare Associates
  - East Tennessee State University
  - Holston Medical Group
  - Tennessee Department of Health
  - Tennessee Department of Finance & Administration
  - Virginia Department of Health
  - etHIN
  - OnePartner
  - MedVirginia
  - Connect Virginia
  - The Sequoia Project
  - CollectiveMedical
  - Cleveland Clinic
  - Epic
  - CRISP
  - Velatura
  - The Center for Medical Interoperability
  - CareJourney

Table of Contents for HIE Plan

HIE Plan

1. Plan Overview

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Plan Overview
VA Cooperative Agreement HIE Plan Requirements

VA Cooperative Agreement Requirements – Conditions 8 and 26
1) Detail how the planned expenditure of funds will result in Ballad Health's meaningful participation in a regional health information exchange or a cooperative arrangement whereby privacy protected health information may be shared with independent physicians and other community-based providers for the purpose of providing seamless patient care 2) Detail how imposition of any fees or costs for access to the health information exchange or cooperative arrangement complies with federal anti-kickback statutes and rules and is a minimal amount not exceeding what is reasonable compared to other communities offering such services 3) Describe how Ballad Health will participate in the Commonwealth's ConnectVirginia health information exchange, ConnectVirginia's Emergency Department Care Coordination Program and Immunization Registry, and Virginia's Prescription Monitoring Program 4) Establish the foundation for data acquisition and exchange in a manner that would promote and support population health improvement efforts 5) Ensure that it has a high likelihood of preventing unnecessary and redundant care 6) Describe how Ballad Health will adopt a Common Clinical IT Platform and make access available on reasonable terms to all physicians in the service area; data collected shall be made reasonably available to researchers with creditable credentials and relationship with Ballad Health

Sources: Virginia Cooperative Agreement, Section 33; Virginia Cooperative Agreement, Amendment 1, January 12, 2018.

Plan Overview
HIE Strategies

Ballad Health will deploy foundational and tactical strategies to provide and promote interoperability in its Geographic Service Area (GSA). Many of these strategies are predicated on the successful extension of Epic system to Legacy Mountain State Health Alliance.

Strategy #1: Establish Ballad Health HIE Steering Committee

Strategy #2: Conduct Geographic Service Area Interoperability Research

Strategy #3: Identify Optimal Portfolio of Interoperability and Assemble Deployment Strategies

Strategy #4: Develop an HIE Recruitment and Support Plan

Strategy #5: Participate in ConnectVirginia's HIE and Other TN/VA Regulatory Programs

Plan Overview

Strategies Related to VA Cooperative Agreement HIE Plan Requirements

VA Cooperative Agreement Requirement	1. HIE Steering Committee	2. Inter-Operability Research	3. Optimal Portfolio and Deployment	4. HIE Recruitment & Support Plan	5. Participate in Connect-Virginia & Other TN/VA Programs
1) Detail how the planned expenditure of funds will result in Ballad Health's meaningful participation in a regional health information exchange or a cooperative arrangement whereby privacy protected health information may be shared with independent physicians and other community-based providers for the purpose of providing seamless patient care			Y	Y	
2) Detail how imposition of any fees or costs for access to the health information exchange or cooperative arrangement complies with federal anti-kickback statutes and rules and is a minimal amount not exceeding what is reasonable compared to other communities offering such services			Y	Y	
3) Describe how Ballad Health will participate in the Commonwealth's ConnectVirginia health information exchange, ConnectVirginia's Emergency Department Care Coordination Program and Immunization Registry, and Virginia's Prescription Monitoring Program					Y
4) Establish the foundation for data acquisition and exchange in a manner that would promote and support population health improvement efforts	Y	Y	Y	Y	Y
5) Ensure that it has a high likelihood of preventing unnecessary and redundant care	Y				Y
6) Describe how Ballad Health will adopt a Common Clinical IT Platform and make access available on reasonable terms to all physicians in the service area; data collected shall be made reasonably available to researchers with creditable credentials and relationship with Ballad Health	Y	Y	Y	Y	

Plan Overview
HIE Estimated Investment Summary

Health Information Exchange Plan	Year 1		Year 2		Year 3		Year 1-3 Total	
	Low	High	Low	High	Low	High	Low	High
Strategy #1: Establish Ballad Health HIE Steering Committee	$157,000		$157,000		$157,000		$471,000	
Strategy #2: Conduct Geographic Service Area Interoperability Research	$81,000		$0		$0		$81,000	
Strategy #3: Identify Optimal Portfolio of Interoperability and Assemble Deployment Strategies	$241,000		$187,000		$187,000		$615,000	
Strategy #5: Participate in Connect Virginia's HIE and Other TN/VA Regulatory Programs	$213,000		$249,000		$249,000		$711,000	
Sub-Total	**$692,000**		**$593,000**		**$593,000**		**$1,878,000**	
Strategy #4: Develop an HIE Recruitment and Support Plan	$308,000	$308,000	$407,000	$2,797,000	$157,000	$1,684,000	$872,000	$4,789,000
Total	**$1,000,000**	**$1,000,000**	**$1,000,000**	**$3,390,000**	**$750,000**	**$2,277,000**	**$2,750,000**	**$6,667,000**
COPA-Mandated Minimum Expenditures	*$1,000,000*		*$1,000,000*		*$750,000*		*$2,750,000*	
Potential Funding Needed in Excess of Minimum Spending Requirements	***$0***	***$0***	***$0***	***$2,390,000***	***$0***	***$1,527,000***	***$0***	***$3,917,000***

HIE Plan

2. Strategic Approach

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Strategic Approach

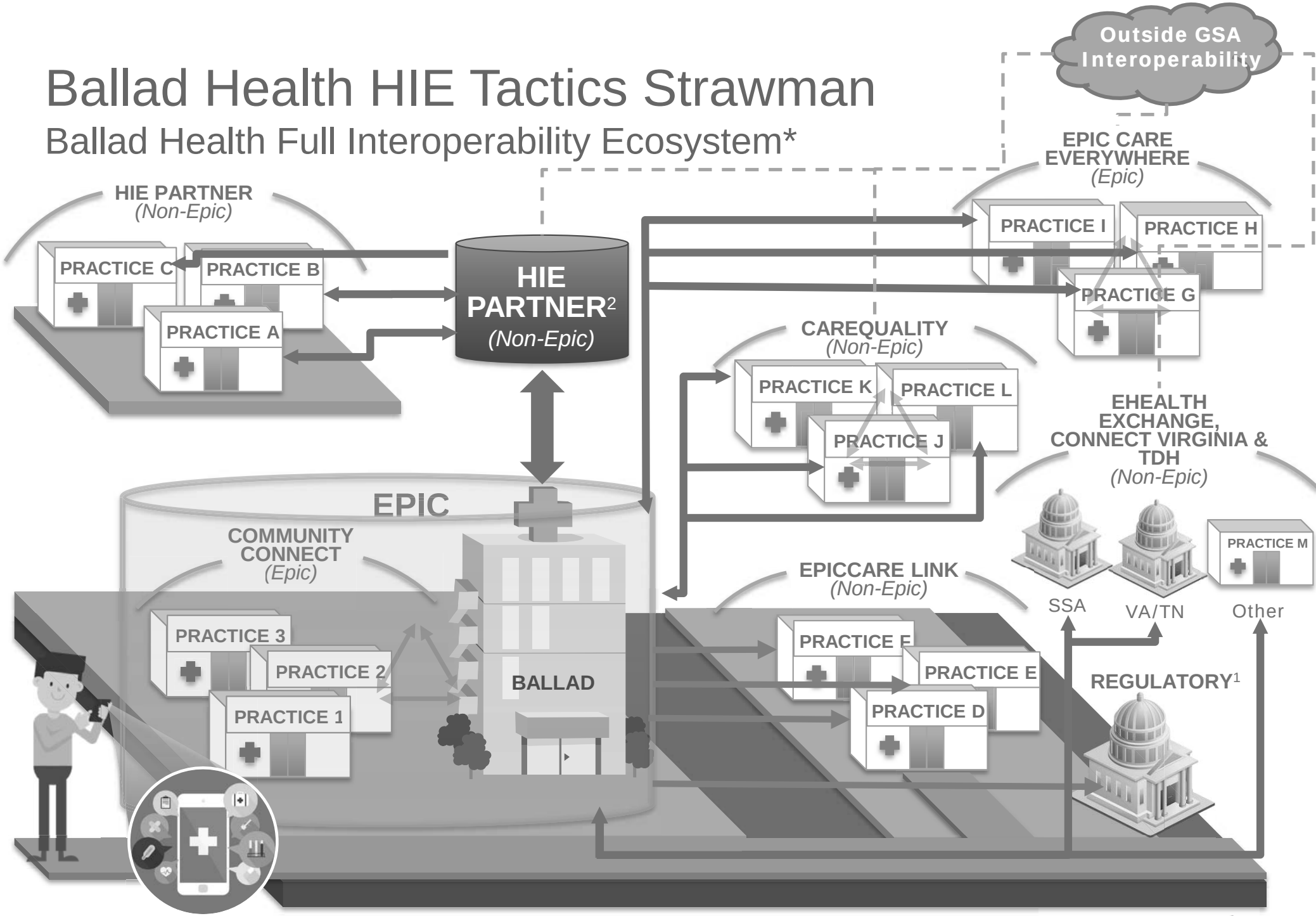
HIE Plan Guiding Principles (Key Design Requirements)

Ballad Health developed a set of Guiding Principles, reflecting management's philosophy, which helped to guide decision making for the plan. The Guiding Principles are as follows:

- Existing investment in Epic tools: Ballad Health's HIE Plan will capitalize on the existing investment in Epic tools exchanging relevant patient data as needed by providers
- OnePartner Standard Alignment: Ballad Health's endorsed HIE offerings should match or surpass the regional standards set by OnePartner or other available options
- HIE Approach: Partner with regional HIEs
- Degree of HIE Technological Innovation: Ballad Health wants to engage in visible, pioneering HIE, preferable via working with their regional HIE organizations and utilize standards-based interoperability (i.e., HL7, FHIR)
- Data Ownership Model: GSA patient information should preferably reside within a single warehouse or data repository to allow for population health analytics; protect from the resale or other commercial use of the HIE data; provide approved researchers with access
- HIE Entity Governance: A defined set of organizations participate in shared governance of the regional HIE
- Common Clinical IT Platform: Make reasonably accessible to all physicians in GSA

Ballad Health HIE Tactics Strawman

Ballad Health Full Interoperability Ecosystem*



** Information retrieval is dictated by existing patient relationship*

[1] Includes EDCC, PDMP, Immunization, etc.

[2] HIE Partner may serve as a TEFCA defined health information network (HIN) and/or Qualified Health Information Network (QHIN)

Strategy #1: Establish Ballad Health HIE Steering Committee

Why?

- Independent Providers* will benefit from a well governed steering committee that is responsive to their/ the Geographic Service Area's HIE needs
- A well-developed HIE governance structure will ensure the successful deployment and ongoing management of the organization's HIE strategies and initiatives

How?

- Establish a Ballad Health HIE Steering Committee - Establish an HIE Steering Committee to manage the deployment and ongoing maintenance of Ballad Health's HIE program, including maintaining compliance with the COPA. Participants to include senior leadership representing:
  - Operations
  - Finance
  - Information technology
  - Legal
  - Ballad Medical Group
  - Population Health
  - Quality
  - External Providers
  - Privacy & Security
  - Marketing
- Appoint an HIE Program Director - Designate an HIE Program Director responsible for the day to day management of Ballad Health's program

*'Independent Providers' will be used throughout the document having the same meaning as 'Independent Physician and Other Providers' within COPA/CA

Strategy #2: Conduct Geographic Service Area Interoperability Research

Why?

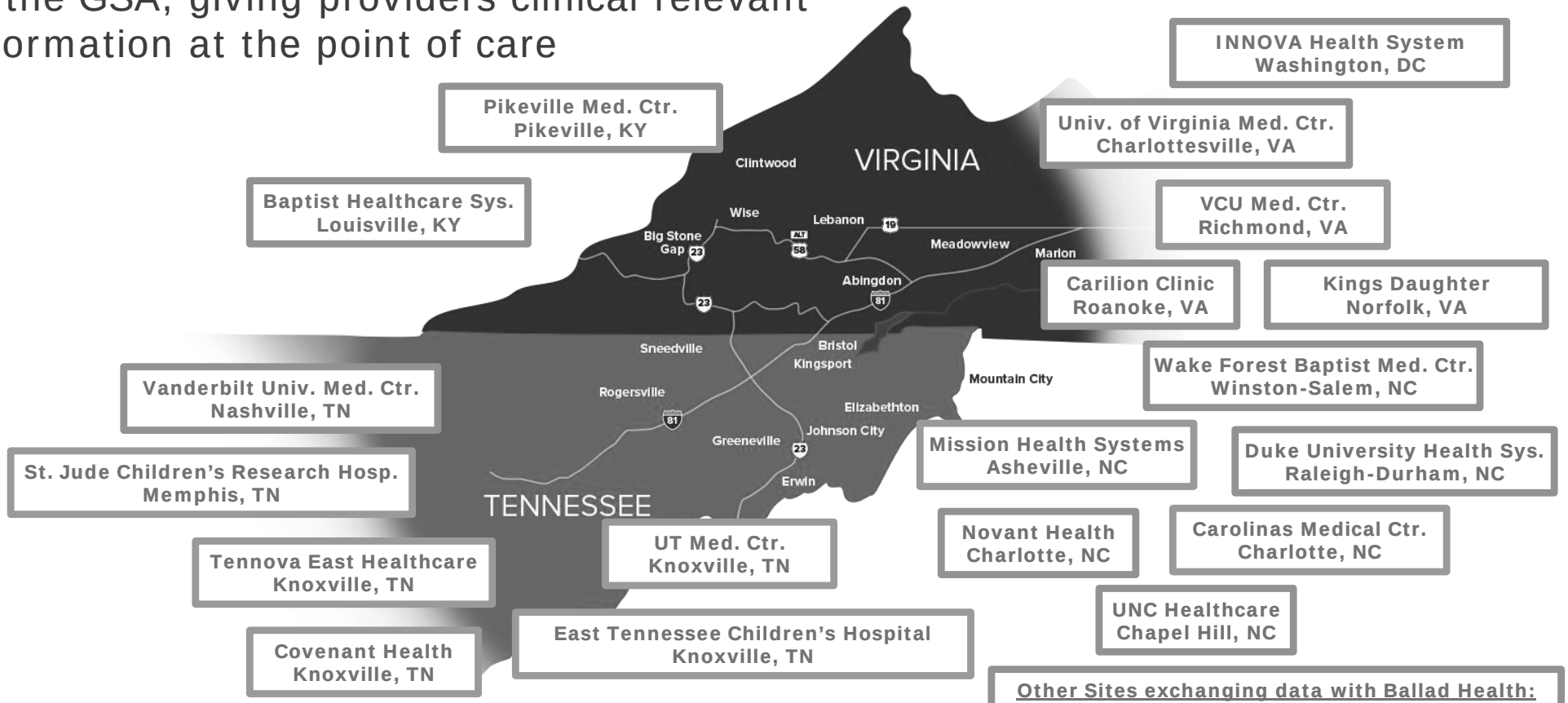
- Most HIE connectivity is voluntary and requires some level of investment by participating providers and healthcare organizations (no greater than allowed per federal anti-kickback statutes)
- Market research will allow Ballad Health to better understand the actual interest, readiness and willingness to pay of Geographic Service Area Independent Providers to engage in HIE within the region
- Independent Providers will be educated on the various offerings, including estimated costs to the provider and will be able to choose a solution that provides interoperability while fitting within the provider's budget, wants and needs

How?

- Ballad Health has already conducted an initial assessment of available interoperable options within the market place. Leveraging the initial assessment, Ballad Health will conduct research to gauge interest in menu offerings. This will allow Ballad Health to educate and survey Independent Providers within the region to understand their interest in the interoperability options. See following slides for the initial assessment. Additional information is provided in Appendix A: Environmental Scan and Appendix B: HIE Current State Analysis

Interoperability Option Assessment

Ballad Health already leverages Epic to exchange health information automatically with both Epic and non-Epic sites, inside and outside of the GSA, giving providers clinical relevant information at the point of care



Ballad Health exchanges data with major Epic referral sites via Epic-to-Epic Care Everywhere or non-Epic sites via Carequality.

Sites who use Cerner. MEDITECH, or Allscripts EMRs, may be members of the CommonWell Health Alliance Exchange which joined the Carequality network in 2018. Ballad Health will soon be able to exchange data with participating CommonWell members.

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Interoperability Option Assessment

Mutually Desired Depth of Interoperability

High → *Low*

Strategy	Epic Community Connect	Care Everywhere Epic-to-Epic	Carequality	eHealth Exchange & Connect-Virginia	HIE Partner	Portal, Messaging & Integration	Other Patient-driven HIE Tools	Regulatory
Depth of Interoperability	High	High	Medium	Medium	Medium	Low	NA	NA
Non-Ballad Health Provider Interoperability	Yes	Yes	Yes	No	Yes	No	No	No
Bi-Directional?	Yes	Yes	Yes	Yes	Yes (w/ Practice EHR Config.)	No (Limited)	No (Limited)	Varies
Effort to Implement	High	Low	Low	Medium	Medium	Low	Low	Varies
Governed By?	Shared	Ballad Health	Ballad Health	N/A	Shared	Ballad Health	Ballad Health	N/A
Cost to Ballad Health	$$$$	-	$	-	$$$	-	-	$
Cost to Independent Provider	$$$	-	$	Varies	TBD	-	N/A	N/A

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Interoperability Option Assessment

Interoperability Options

1. Epic Community Connect
   - Ballad Health would develop a program to extend its Epic instance to Independent Providers. Beyond the EHR functional benefit, Ballad Health and Independent Providers share a single patient record. Providers pay a one-time implementation fee and an ongoing maintenance fee
   - Enables seamless interoperability among Ballad Health and Independent Providers
2. Care Everywhere Epic-to-Epic
   - Ballad Health to exchange information with other Epic customers via Epic native interoperability
   - Epic users can use Happy Together, a functionality that presents all aggregated patient records in a single and user-friendly view
   - Enables interoperability among Ballad Health and other Epic facilities and providers both within and outside the Geographic Service Area

Interoperability Option Assessment

Interoperability Options (*Continued*)

3. Carequality
   - Ballad Health to exchange information with other non-Epic organizations via Carequality
   - Happy Together will present all aggregated patient records in a single and user-friendly view, within Epic. Independent Providers' views and functionality will vary by non-Epic system. Independent Providers will be responsible to pay any set up or ongoing fees charged by their vendor
   - Enables interoperability among Ballad Health and/or other Carequality participants and Independent Providers
4. eHealth Exchange & Connect-Virginia
   - Ballad Health to exchange information with large non-Epic customers, federal entities (VA, DOD,SSA), and non-Epic organizations using eHealth Exchange and Connect-Virginia when these exclusive networks are being used
   - Enables interoperability with other large non-Epic entities where patients may have been referred, outside of the region

Interoperability Option Assessment

Interoperability Options (*Continued*)

5. HIE Partner
   - Ballad Health to partner with or purchase an external HIE organization (could be national, state, regional) that supports community HIE with a centralized database and connects bi-directionally with Ballad Health. Ballad Health will provide oversight and financial support. Participating Independent Providers pay reasonable implementation and ongoing support fees
   - Enables interoperability between Ballad Health and Independent Providers. Also enables interoperability among Independent Providers
6. Portal, Messaging & Integration Services
   - Ballad Health to provide Independent Providers with free access to an Epic based portal with referral, secure messaging, and read-only access to Ballad Health's Epic system, one-way messaging services or interfaces. Ballad Health will provide resources and oversight to facilitate the setup, testing, and implementation on behalf of Independent Providers
   - Enables Independent Providers the ability to view and communicate with Ballad Health without incurring additional fees

Interoperability Option Assessment

Interoperability Options (*Continued*)

7. Other Patient-Driven HIE Tools
   - Ballad Health to provide Independent Providers and patients education around patient-driven HIE tools (such as Epic's Share Everywhere or leading retail vendor solutions such as Apple Health) by continually monitoring industry development, engaging the community, and promoting the use of these tools throughout the region
   - Enables patients to actively secure a copy of their electronic medical record and share with providers as needed
8. Comply with Regulatory Requirements
   - Ballad Health will participate in all required federal, state, or regional regulatory programs and encourages participation by other area providers (such as VA EDCC, VA PDMP, VA and TN Immunization Programs). Enables Independent Providers the ability to view and communicate with Ballad Health without incurring additional fees
   - Enables interoperability among Ballad Health, other health organizations and Independent Providers which improves patient care and reduces redundant services

Strategy #3: Identify Optimal Portfolio of Interoperability and Assemble Deployment Strategies

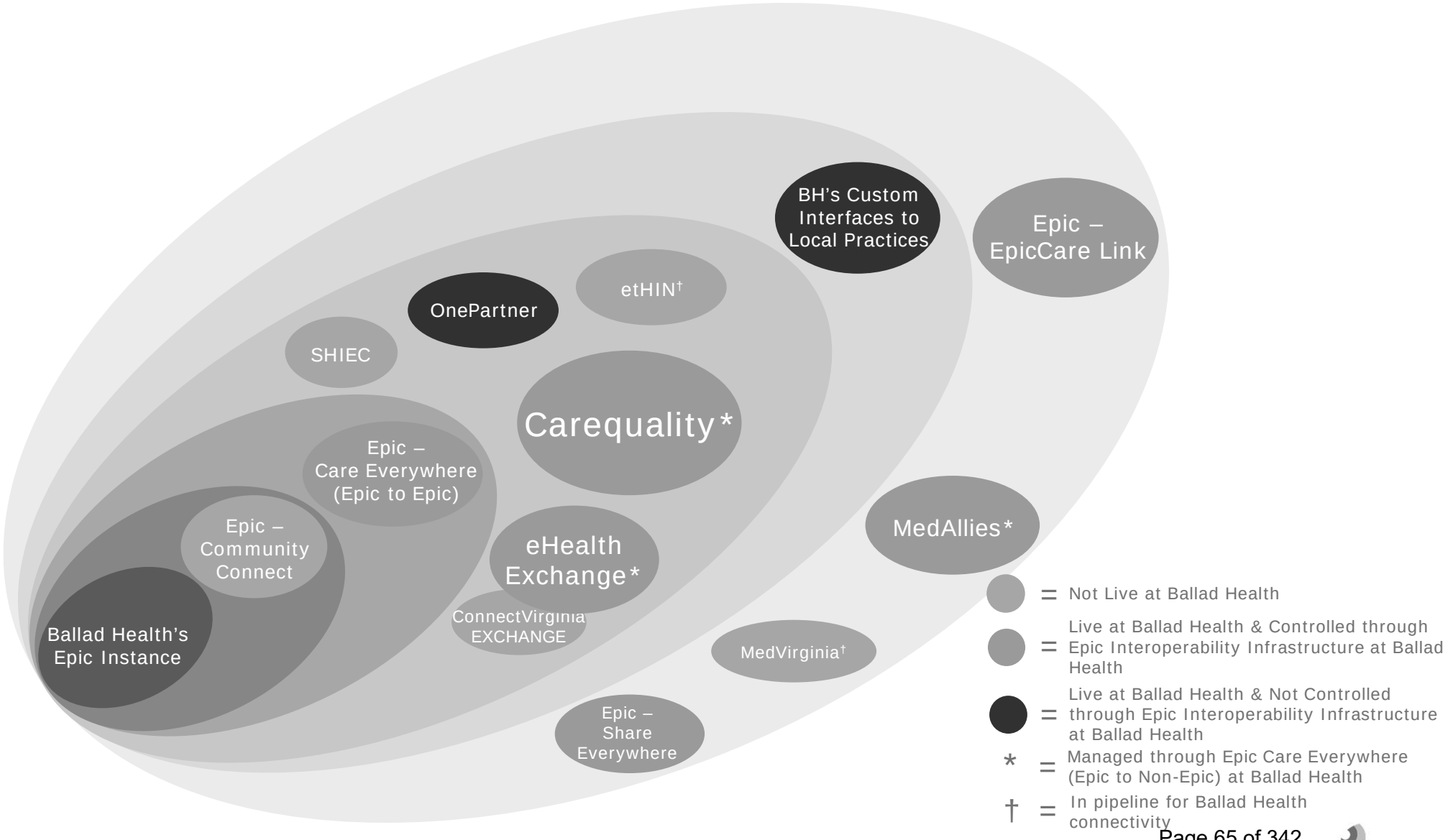
Why?

- While all the aforementioned interoperability options are available in the market, there is not a rationale plan to connect optimally with these capabilities.
- The goal is to obtain maximum concentration of patient encounters from the available funding. This will require prioritizing interoperability options in such a way that generates the maximum benefit and coverage with the least cost. The approach will be to layer the most impactful solution first, then the second most impactful solution and so forth. Resource constraints exist within Ballad Health as well as at the provider level (for example, some providers are still documenting on paper). This coupled with market choice limits the ability to obtain 100 percent of coverage and 100 percent of capabilities. The next slides are examples to illustrate the change to interoperability coverage over time based on this layering approach.

How?

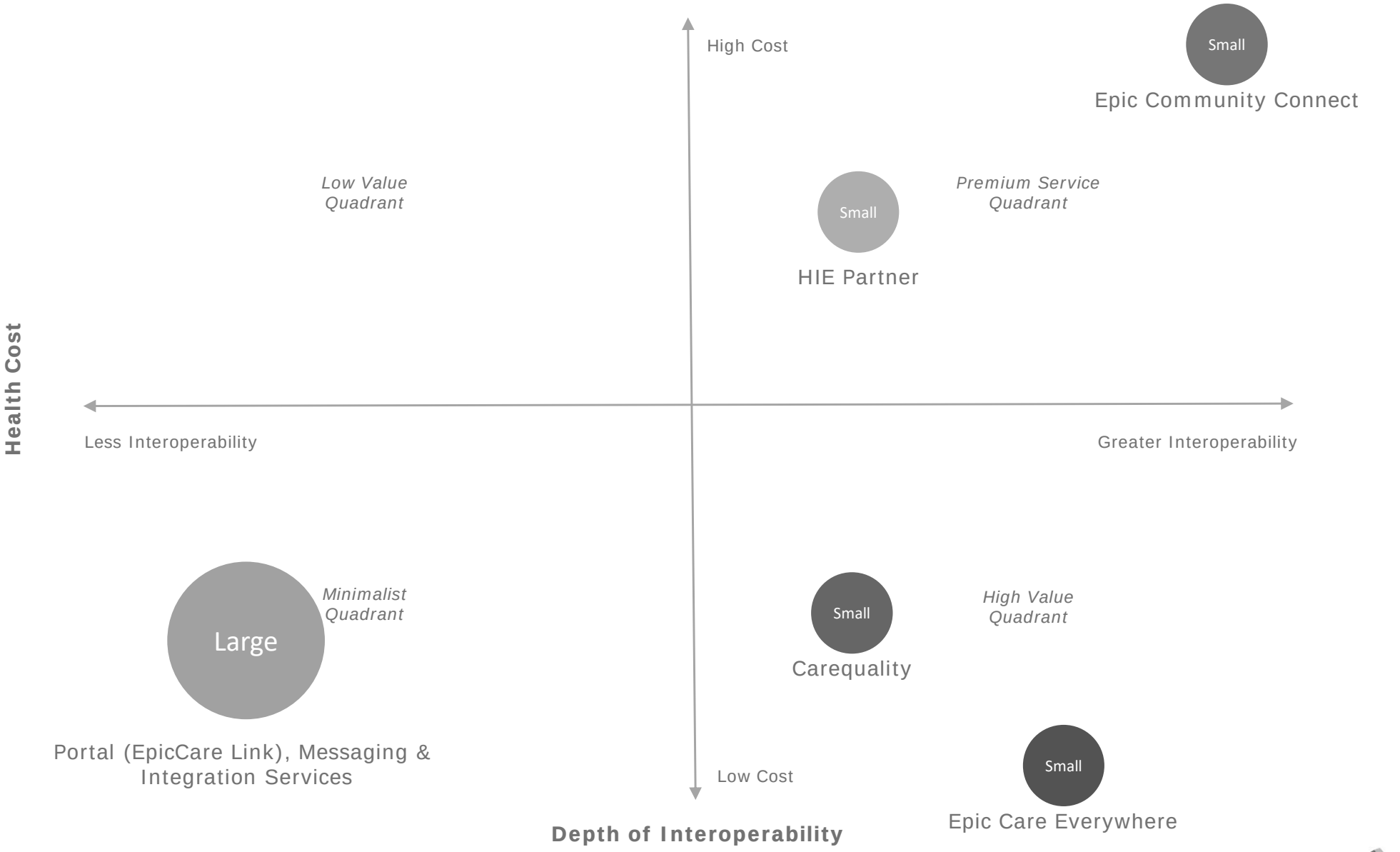
- Develop an HIE plan with deployment strategies. Based on the initial assessment of the current interoperability environment in the GSA and the market survey gauging interest of area providers, Ballad Health will formulate a future state and develop an HIE plan that address gaps between where it wants to be and where it is today.

HIE Current State Analysis – HIE Capability in the Ballad Health Service Area



Layering Approach - Illustrative

Strategy Interoperability Projected Value & Adoption Comparison: Short-Term



Size of bubbles reflects the relative projected # of GSA providers exchanging information via Strategy

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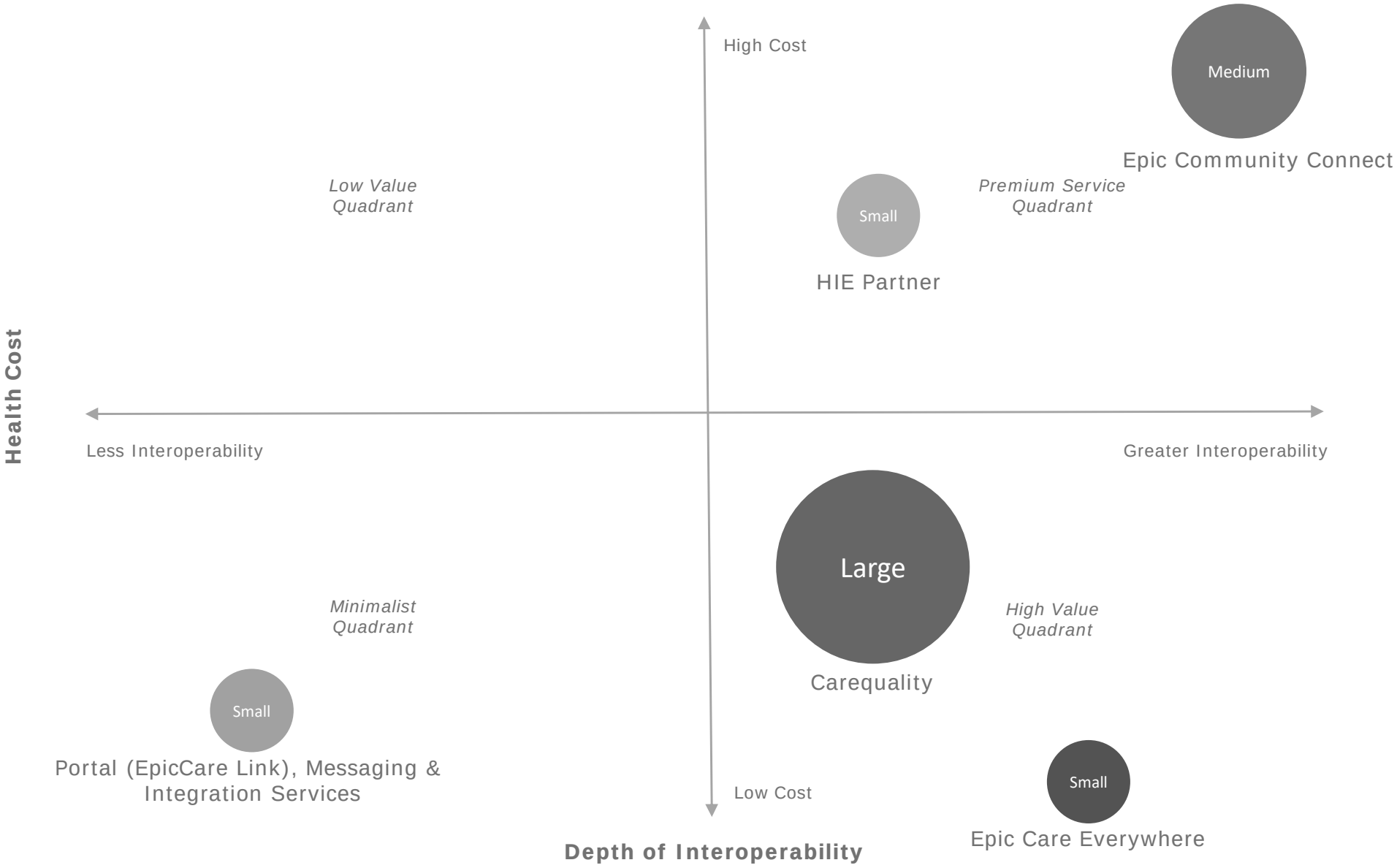
Layering Approach - Illustrative

Strategy Interoperability Projected Value & Adoption Comparison: Long-Term



Size of bubbles reflects the relative projected # of GSA providers exchanging information via Strategy

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Strategy #4: Develop an HIE Recruitment and Support Plan

Why?

- A recruitment and support plan will identify and engage practices interested in Ballad Health's HIE program and educate them. It will identify the support necessary to ensure successful deployment.
- Independent Providers will be made aware of Ballad Health's program and have an opportunity to ask/address their questions

How?

- Based on outcomes of Strategies #2 and #3, Ballad Health will design and deploy an HIE Recruitment Plan. The plan will include communications both within Ballad Health and with the Independent Providers. It will include marketing activities and materials to approach the Independent Providers within the region regarding the menu offerings
- Ballad Health will identify a marketing staff member who will be responsible to recruit participation from the Independent Providers in the region in the various interoperability options. Staff will coordinate activities with the HIE Partner.

Strategy #5: Participate in ConnectVirginia's HIE and Other TN/VA Regulatory Programs

Why?

- Enables interoperability among Ballad Health, other health organizations and Independent Providers which improves patient care and reduces redundant services
- Enables Independent Providers the ability to view and communicate with Ballad Health without incurring additional fees

How?

- Ballad Health will continue to participate in the VA Emergency Department Care Coordination (EDCC) Program and roll out to the Tennessee facilities
- Ballad Health will continue to participate in the Commonwealth's Prescription Drug Monitoring Program (PDMP) program
- Ballad Health will continue to participate in the VA and TN Immunizations Programs
- Ballad Health will continue to participate in other VA and TN Regulatory reporting/sharing programs such as: VA State Dept. of Health Reporting - Electronic Laboratory Reporting, State Dept. of Health Reporting - Syndromic Surveillance (TN & VA), Tennessee Hospital Association TennCare

HIE Plan

3. Implementation Roadmap

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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
1. Establish Ballad Health Steering Committee	• Establish a Ballad Health Interoperability Steering with Committee with internal and external representation	• *Formed HIE Steering Committee*	• Develop Interoperability Committee Charter, Roles and Responsibilities	• *Approved Charter*
2. Conduct Geographic Service Area Interoperability Research	• Initiate Market Research to Gauge Interest in Menu Offerings		• Complete Market Research to Gauge Interest in Menu Offerings	
3. Identify Optimal Portfolio of Interoperability and Assemble Deployment Strategies	• N/A - Activity initiated once Strategy #2 completed		• N/A - Activity initiated once Strategy #2 completed	

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 Ballad Health Steering Committee	• Recruit an Interoperability Program Director	• *Posted Program Director Position*	• Hire an Interoperability Program Director • Identify Y2 quarterly targets and timelines	• *Filled Program Director Position* • *Y2 milestones and metrics accepted*
2. Conduct Geographic Service Area Interoperability Research	• Compile and Interpret Market Research Results		• Identify Y2 quarterly targets and timelines	• *Y2 milestones and metrics accepted*
3. Identify Optimal Portfolio of Interoperability and Assemble Deployment Strategies	• N/A - Activity initiated once Strategy #2 completed		• Utilize Market Research Result to initiate draft HIE roll-out plan • Identify Y2 quarterly targets and timelines	• *Y2 milestones and metrics accepted*

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 an HIE Recruitment and Support Plan	• N/A - Activity initiated once Strategies #2 and #3 are completed		• N/A - Activity initiated once Strategies #2 and #3 are completed	
5. Participate in ConnectVirginia's HIE and Associated Programs	• Participate in ConnectVirginia EDCC program • Participate in ConnectVirginia PDMP program • Participate in Virginia Immunization program • Participate in other Tennessee and Virginia regulatory programs	• *Ballad Health VA EDs participating* • *Ballad Health VA applicable entities participating* • *Ballad Health VA facilities participating* • *Ballad Health facilities participating as required*	• Participate in ConnectVirginia EDCC program • Participate in ConnectVirginia PDMP program • Participate in Virginia Immunization program • Participate in other Tennessee and Virginia regulatory programs	• *Ballad Health VA EDs participating* • *Ballad Health VA applicable entities participating* • *Ballad Health VA facilities participating* • *Ballad Health facilities participating as required*

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 an HIE Recruitment and Support Plan	• N/A - Activity initiated once Strategy #2 and #3 are completed		• N/A - Activity initiated once Strategies #2 and #3 completed • Identify Y2 quarterly targets and timelines	• *Y2 milestones and metrics accepted*
5. Participate in ConnectVirginia's HIE and Associated Programs	• Participate in ConnectVirginia EDCC program • Participate in ConnectVirginia PDMP program • Participate in Virginia Immunization program • Participate in other Virginia regulatory programs	• *Ballad Health VA EDs participating* • *Ballad Health VA applicable entities participating* • *Ballad Health VA facilities participating* • *Ballad Health VA facilities participating as regulated*	• Participate in ConnectVirginia EDCC program • Participate in ConnectVirginia PDMP program • Participate in Virginia Immunization program • Participate in other Virginia regulatory programs • Identify Y2 quarterly targets and timelines	• *Ballad Health VA and TN EDs participating* • *Ballad Health VA applicable entities participating* • *Ballad Health VA facilities participating* • *Ballad Health VA facilities participating as regulated* • *Y2 milestones and metrics accepted*

Implementation Roadmap

Milestones and Metrics for Measuring Strategies: FY 2021

Strategies	2021
1. Establish Ballad Health HIE Steering Committee	• Issue a Request for Proposals (RFP) to regional HIE vendors
2. Conduct Geographic Service Area Interoperability Research	• Update as new providers enter the market • Refresh to meeting changing provider needs
3. Identify Optimal Portfolio of Interoperability and Assemble Deployment Strategies	• Finalize Health Information Exchange (HIE) Plan • Develop Community Connect program business plan • Develop deployment plan to pilot Community Connect at a practice • Deploy EpicCare Link, MedAllies and Interfaces to independent providers • Initiate assistance to independent providers to implement the Carequality network
4. Develop an HIE Recruitment and Support Plan	• Develop an HIE recruitment plan • Develop an HIE communication and marketing plan • Hire marketing staff
5. Participate in ConnectVirginia's HIE and Associated Programs	• Continue to participate in ConnectVirginia EDCC program • Continue to participate in ConnectVirginia PDMP program • Continue to participate in Virginia Immunization program • Continue to participate in other Tennessee and Virginia regulatory programs

Implementation Roadmap

Milestones and Metrics for Measuring Strategies: FY 2022

Strategies	2022
1. Establish Ballad Health HIE Steering Committee	• Choose an HIE Partner
2. Conduct Geographic Service Area Interoperability Research	• Update as new providers enter the market • Refresh to meeting changing provider needs • Continue to identify, test and connect to large organizations where patients overlap outside of the GSA
3. Identify Optimal Portfolio of Interoperability and Assemble Deployment Strategies	• Continue to deploy EpicCare Link, MedAllies and Interfaces to Independent Providers • Continue assistance to independent providers to implement the Carequality network • Continue to promote and utilize Epic Care Everywhere • Deploy Community Connect to Independent Providers • Deploy Epic's Share Everywhere to patients • Deploy health apps (i.e., Apple Health, Google Health) • Deploy HIE Partner
4. Develop an HIE Recruitment and Support Plan	• Continue marketing menu offerings to Independent Providers
5. Participate in ConnectVirginia's HIE and Associated Programs	• Continue to participate in ConnectVirginia EDCC program • Continue to participate in ConnectVirginia PDMP program • Continue to participate in Virginia Immunization program • Continue to participate in other Tennessee and Virginia regulatory programs

Appendix A

Environmental Scan

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Appendix A
Environmental Scan – Overview

- Advancements in technology make it easier to share information real time, at the point of care
  - Health information exchange has historically centered around document based exchange
  - Application programming interfaces (APIs) using the Fast Healthcare Interoperability Resources (FHIR) standard allows developers to create applications that can be plugged into an EHR's operating system and feed information directly into the provider workflow
- Recently introduced laws require interoperability
  - The 21st Century Cures Act establishes penalties of up to $1M per violation for organizations that engage in information blocking
  - The Trusted Exchange Framework and Common Agreement (TEFCA) establishes a technical and governance infrastructure for the connection of health information exchange organizations
  - Laws seek to leverage shared data to promote new, innovative services

Appendix A
Environmental Scan – Overview *(Cont.)*

- Some models of sustainable HIEs have emerged
  - Chesapeake Regional Information System for our Patients ("CRISP") relies upon grants and state mandated health system participation fees to achieve economic stability
    - Has achieved almost 100% participation of Maryland hospitals and ~80% participation of ambulatory practices
- Obstacles of competing interests, costs, and perceived value still exist
  - Fee for service reimbursements models continue to incentivize competing health providers to limit vs. promote information sharing
  - Many health providers have to join multiple health information exchange networks, each with its own requirements, setup and maintenance fees
  - Many health information exchange services are costly and fail to offer a solution that integrates into a provider's workflow

Appendix A
Environmental Scan – HIE Uncertainty and Risk

- **Financial sustainability** - Creating a viable, sustainable financial model post federal, state and local grants. Many HIEs have rapidly failed once public funding was no longer provided
- **Integrating into a providers workflow** - Integrating the HIE technology solution into the workflow of the attending physician or care manager is a critical success factor but difficult to achieve
- **Achieving a critical mass of information** - Having sufficient information to provide value is a critical success factor for HIEs. Achieving this point requires time and costs
- **Privacy and security** - Ensuring health data privacy and security is maintained once information is collected and stored, particularly given increasing cyber attacks/ threats
- **Adoption** - Achieving adoption of an HIE with the smaller independent practices is a challenge due to low ROI or trust issues
- **Standards** - Many competing organizations created with the goal of becoming 'the' standard for interoperability
- **Regulatory** - Uncertainty around ONC's current TEFCA interoperability initiative and the impact on HIE's and providers, as well as future meaningful use requirements on providers

Appendix A
Environmental Scan – Regulatory

- Trusted Exchange Framework and Common Agreement (TEFCA)
  - Originates from the 21st Century Cures Act (Section 4003(b) &(c))
  - Goals of TEFCA:
    - Build on existing work already done by the industry
    - Provide a single 'on ramp' to interoperability (join any HIN)
    - Be scalable to support the entire nation
    - Build a competitive market allowing all to compete on data services
    - Achieve long-term sustainability
  - Participants will be able to join any Health Information Network (HIN) and have access to all data nationally
  - HINs will connect to Qualified Health Information Networks (QHIN) – QHIN will connect to each other to ensure national coverage
  - ONC will select Recognized Coordinating Entity (RCE) to operationalize and oversee TEFCA
  - Final rule due late 2018

Appendix A
Environmental Scan – Emerging Technology

- An application programming interface (API) is a set of standards that enable communication between multiple sources. APIs act as a software broker enabling two applications to talk to one another.
- API usage can be broken down into two categories:
  - APIs for traditional provider integration
  - Open API for patient data sharing
- Fast Healthcare Interoperability Resources (FHIR) is a standard for exchanging healthcare information electronically. APIs using FHIR allow applications to access health data at the source of truth in a standardized way.
- SMART Health IT (formally called SMART on FHIR) is an app platform for healthcare. It is an open, standards based technology platform that enables innovators to create apps that seamlessly and securely run across the healthcare system.
- There are HIE organizations (such as Chesapeake Regional Information System for our Patients – “CRISP”) starting to leverage FHIR APIs and that have realized early success by “removing the fraction in HIE”.

Appendix A

Environmental Scan – Center for Medical Interoperability

- 501(c)(3) cooperative, think tank research and development lab
- Founded by health systems to simplify and advance data and sharing among medical technologies and systems
- Are taking a centralized, vendor-neutral approach to:
  - Performing technical work that enables person-centered care
  - Testing and certifying devices and systems
  - Promoting adoption of scalable solutions
  - Turning data into meaningful information at the point of care
- Have highly ambitious, industry revolutionary goals

Appendix A
Environmental Scan – Attributes of Successful HIEs

Chesapeake Regional Information System for our Patients ("CRISP")

- Maryland's designated statewide HIE, primarily serving MD, WV, and the Washington D.C. regions. Connected to acute care facilities, LTCs, rad/lab facilities and ambulatory practices. A member of Carequality.
- A centralized and federated hybrid HIE whose services include:
  - Traditional HIE: HIE portal, Encounter Notification Services (ADT notification)
  - Analytics: CAliPHR (quality measure reporting), Data Visualization (Tableau)
  - API enabled point-of-care data access (in-house developed): "In-Context Alerts"
- Benefit from federal and state grants
- Participation fees are only charged to acute facilities
- Almost 100% coverage for Maryland's hospitals (mandated ADT data submission as a minimum)
- Connected to ~80% ambulatory practices in some fashion (the newer API-enabled services adoption still fairly low)
- Have experience working with various EHR vendors, particularly Epic and Cerner

Appendix B

HIE Current State Analysis

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Appendix B

HIE Current State Analysis – Overview

- The national state of healthcare interoperability is improving but remains immature
  - Advancement in technology make it easier to share information real time, at the point of care
  - Recently introduced laws require interoperability
  - Some models of sustainable HIEs have emerged
  - Obstacles of competing interests, costs, and perceived value still exist
- Healthcare organization interoperability within Ballad Health's market is no exception
  - Complex and confusing array of regionally aligned organizations/ services and frameworks
  - Most services/ frameworks are geared towards larger health delivery networks/ organizations
  - Options remain cost and technically prohibitive for small, independent practices, limiting value and their participation

Appendix B

HIE Current State Analysis – HIE Capability in the Ballad Health Service Area

HIE Approach	Epic – Community Connect	Epic – Care Everywhere (Epic-to-Epic)*	Epic – EpicCare Link	Epic – Share Everywhere
Overview	Epic system extension with a **shared community record**. Deepest degree of interoperability, but external providers need **to install Ballad Health's Epic instance** and pay ongoing maintenance fees	**Epic's interoperability application** that can be used to exchange patient data **with other healthcare organizations using Epic**.	Provides **read-only access** to approved providers via portal. **Can support referral, secure messages. Free** to external providers of interest.	Allows **patients to grant view-only access** to any providers who have internet access. The provider granted access can send a progress note back.
Exchange Approach	• Centralized • Same Platform	• Federated • Bi-directional	• Centralized • Outgoing Only	• Centralized • Outgoing Only
Degree of Workflow Integration	5 - Same Platform	4 - Push/Auto Query	1 - Portal/Mail Box	2 - Pull
Degree of Data Exchange	5 - Very High	4 - High	5 - Very High	2 - Moderate

** Data exchange via Carequality, eHealth Exchange and MedAllies that enables Epic to non-Epic exchange is managed through Care Everywhere platform at Ballad Health. However, these HIE approaches are listed separately in later slides.*

Appendix B
HIE Current State Analysis – HIE Capability in the Ballad Health Service Area *(Cont.)*

HIE Approach	Carequality*	eHealth Exchange*	ConnectVirginia ("EXCHANGE")	MedVirginia
Overview	A **network-to-network trust framework** with participants such as EHR vendor networks, payer networks, lab networks, etc. An organization needs to "opt-in" for Carequality before data exchange. **Epic network is in Carequality**.	A network with federal (incl. VA, DOD, SSA) and non-federal (e.g. health system) participants. Mainly meant **for larger orgs**. Commonly used to **connect with federal entities**. One-to-one set up and testing is required between two participants that wish to exchange data.	ConnectVirginia's **service** to provide the trust and legal framework for organizations to **join the eHealth Exchange network**.	Primarily enabled **thru eHealth Exchange**. Special interests in life insurance. **Independent Providers** only have **portal access** and **don't contribute data. No member in Ballad Health GSA**. In network for Carequality.
Exchange Approach	• Federated • Bi-directional	• Federated • Bi-directional	• Federated • Bi-directional	• Federated • Bi-directional (Health Systems) / View Only (Providers)
Degree of Workflow Integration	4 - Push/Auto Query	4 - Push/Auto Query	4 - Push/Auto Query	2 - Pull
Degree of Data Exchange	2 - Moderate	2 - Moderate	2 - Moderate	2 - Moderate

** Not an Epic product, but managed through Care Everywhere platform at Ballad Health.*

Appendix B
HIE Current State Analysis – HIE Capability in the Ballad Health Service Area *(Cont.)*

HIE Approach	etHIN	OnePartner	SHIEC Patient Centered Data Home	MedAllies*
Overview	East TN HIE. **Can provide auto-query,** longitudinal medical record and ADT alerting service. Likely **low coverage** (~5%) **within Ballad Health GSA** currently. In network for SHIEC PCDH and eHealth Exchange.	**Tri-cities local HIE.** Ballad Health has an outgoing interface to this HIE. **Can provide point-of-care alert**. In network for SHIEC PCDH and joining eHealth Exchange.	A method of data exchange **among HIEs.** Alert-initiated. Longitudinal patient record in "home" HIE. **Break the walls among states**. Members in TN include etHIN & OnePartner, none for VA.	A secure mailbox service. Use **Direct messaging**. Currently used at Ballad Health to send patient's CCD to patient's PCP after discharge.
Exchange Approach	• Centralized • Bi-directional	• Centralized • Bi-directional	• Federated • Bi-directional	• Federated • Bi-directional
Degree of Workflow Integration	4 - Push/Auto Query	3 - Auto Alert, then Pull	3 - Auto Alert, then Pull	1 - Portal/Mail Box
Degree of Data Exchange	3 - Fairly High	3 - Fairly High	3 - Fairly High	2 - Moderate

** Not an Epic product, but managed through Care Everywhere platform at Ballad Health.*

Appendix B
HIE Current State Analysis – HIE Capability in the Ballad Health Service Area *(Cont.)*

Regulatory Initiative	General Information	Information Exchanged
Commonwealth's Prescription Drug Monitoring Program	• Collects prescription data into a central database which can then be used by limited authorized users to assist in deterring the illegitimate use of prescription drugs.	• Prescription
State Dept of Health Reporting - Electronic Laboratory Reporting (VA)	• Provides VA automated transmission of reportable laboratory findings to state and local public health departments.	• Lab results
State Dept of Health Reporting - Immunization (TN & VA)	• Provides TN and VA state registries with documented vaccinations.	• Immunization
State Department of Health Reporting - Syndromic Surveillance (TN & VA)	• Provides TN and VA a review of patient demographic data (names, diagnoses, medications, etc.) from Emergency Department and Inpatient encounters.	• Patient Demographics
Tennessee Hospital Association	• Health Information Exchange for TennCare. THA coordinates its members feeds then deliver to TennCare. Enabled through custom interface. Required for membership in THA.	• ADT
ConnectVirginia's Emergency Department Care Coordination Program	• Virginia Emergency Department Care Coordination Program. Enabled through custom interface with Collective Medical.	• Outgoing ADT • Incoming documentation

Health Research and Graduate Medical Education Three-Year Plans for the Commonwealth of Virginia

January 29, 2019

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Disclaimer

This work represents a specific response to the details and requirements as listed in the January 12, 2018 letter from the Health Commissioner of the Commonwealth of Virginia and Paragraphs 24 and 25 of the Cooperative Agreement. 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.

Introduction

- Pursuant to the January 12, 2018 letter from the Health Commissioner of the Commonwealth and Paragraphs 24 and 25 of the Cooperative Agreement (CA), the Commonwealth requested the submission of draft versions of the Health Research (HR) Plan and Graduate Medical Education (GME) Plan by November 30, 2018. The Plans are due in final form by January 31, 2019.

- Given that the spending requirements for the HR and GME plans are combined in the CA, Ballad Health combined the plans (as described in Paragraphs 24 and 25 of the CA) into a single document.

- The content of these plans is consistent with requirements as outlined in Cooperative Agreement, conditions 23-25 and represents those actions to be taken by Ballad Health deemed by the Commonwealth of Virginia to constitute public benefit.

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 Cooperative Agreement has 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.

Definition of Terms

- Undergraduate Medical Education (UME)
  - 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)
  - 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.

VA CA HR/GME Requirements

VA CA Requirement: Condition 24
1. Develop plan collaboratively with key Virginia stakeholders
2. Effectively address the access, quality, and population health goals of the Authority's Blueprint for Health Improvement & Health-Enabled Prosperity
3. Establish an appropriate structure for an ongoing academic collaborative
4. Set forth how training Virginia, deployed based on an evidence-based assessment of needs, clinical capacity, and program availability will be developed
5. Set forth how a new community-based, rural training track, primary-care residency, or preventative medicine residency in Virginia will be established
6. Set forth how community psychiatry rotations in southwest Virginia will be established in collaboration with existing psychiatry residency programs
7. Set forth how incentives for clinical employees to pursue clinical degrees will be developed through such mechanisms as, for example, loan forgiveness, clinical rotation sites, clinical hours, and preceptorship
8. Include a methodology for allocation of funds between Virginia and Tennessee

VA CA HR/GME Requirements

VA CA Requirement: Condition 25

1. Develop plan collaboratively with key Virginia stakeholders
2. Effectively address the access, quality, and population health goals of the Authority's Blueprint for Health Improvement & Health-Enabled Prosperity and contain metrics that will be periodically to determine if the goals are met
3. Establish an appropriate structure for an ongoing academic collaborative
4. Include a methodology for allocation of funds between Virginia and Tennessee
5. Include appropriate evidence-based criteria pursuant to which research funding made available as a result of the cooperative agreement will be deployed in Virginia based on community needs, matching opportunities, economic return to the region, and overall competitiveness of the research proposals.

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 Commonwealth requested information regarding the "methodology for allocation of funds between Tennessee and Virginia" for the Health Research and Graduate Medical Education Plans
  - Investments and expenditures specific and unique to Virginia geographies or Virginia residents will be allocated 100% as a "Virginia Expenditure"
  - For investments and expenditures that are not specific or unique to Virginia (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 "Virginia Expenditure"
    - Demographic allocation – Virginia population served (or total Virginia service area population) as a percentage of the total population served (or total service area population served)
    - Utilization allocation – Utilization of defined service (or services) by Virginia 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

Important Dates

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

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

** Consistent with The Commonwealth of Virginia Department of Health request, Ballad Health previously submitted a draft version of the HIE plan on November 30, 2018 and provided a copy to the State of Tennessee. This document presents the final version of that plan.*

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

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*

Process and Participation for Plan Development 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

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.

Table of Contents for HR/GME Plan

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

1. Plan Overview

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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

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.

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

Plan Overview

Strategies Related to VA Cooperative Agreement HR/GME Requirements

VA CA Requirement: Condition 24		1. Establish Consortium	2. Targeted Hiring Needs	3. Research Structure	4. Education Structure
1.	Develop plan collaboratively with key Virginia stakeholders	Y	Y	Y	Y
2.	Effectively address the access, quality, and population health goals of the Authority's Blueprint for Health Improvement & Health-Enabled Prosperity		Y	Y	Y
3.	Establish an appropriate structure for an ongoing academic collaborative	Y		Y	Y
4.	Set forth how training Virginia, deployed based on an evidence-based assessment of needs, clinical capacity, and program availability will be developed	Y	Y		Y
5.	Set forth how a new community-based, rural training track, primary-care residency, or preventative medicine residency in Virginia will be established	Y	Y		Y
6.	Set forth how community psychiatry rotations in southwest Virginia will be established in collaboration with existing psychiatry residency programs	Y	Y		Y
7.	Set forth how incentives for clinical employees to pursue clinical degrees will be developed through such mechanisms as, for example, loan forgiveness, clinical rotation sites, clinical hours, and preceptorship		Y		Y
8.	Include a methodology for allocation of funds between Virginia and Tennessee	Y			

Plan Overview

Strategies Related to VA Cooperative Agreement HR/GME Requirements

VA CA Requirement: Condition 25		1. Establish Consortium	2. Targeted Hiring Needs	3. Research Structure	4. Education Structure
1.	Develop plan collaboratively with key Virginia stakeholders	Y	Y	Y	Y
2.	Effectively address the access, quality, and population health goals of the Authority's Blueprint for Health Improvement & Health-Enabled Prosperity and contain metrics that will be periodically to determine if the goals are met		Y	Y	Y
3.	Establish an appropriate structure for an ongoing academic collaborative	Y		Y	Y
4.	Include a methodology for allocation of funds between Virginia and Tennessee	Y			
5.	Include appropriate evidence-based criteria pursuant to which research funding made available as a result of the cooperative agreement will be deployed in Virginia based on community needs, matching opportunities, economic return to the region, and overall competitiveness of the research proposals.			Y	

Plan Overview

VA CA 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.

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

2. Strategic Approach

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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

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

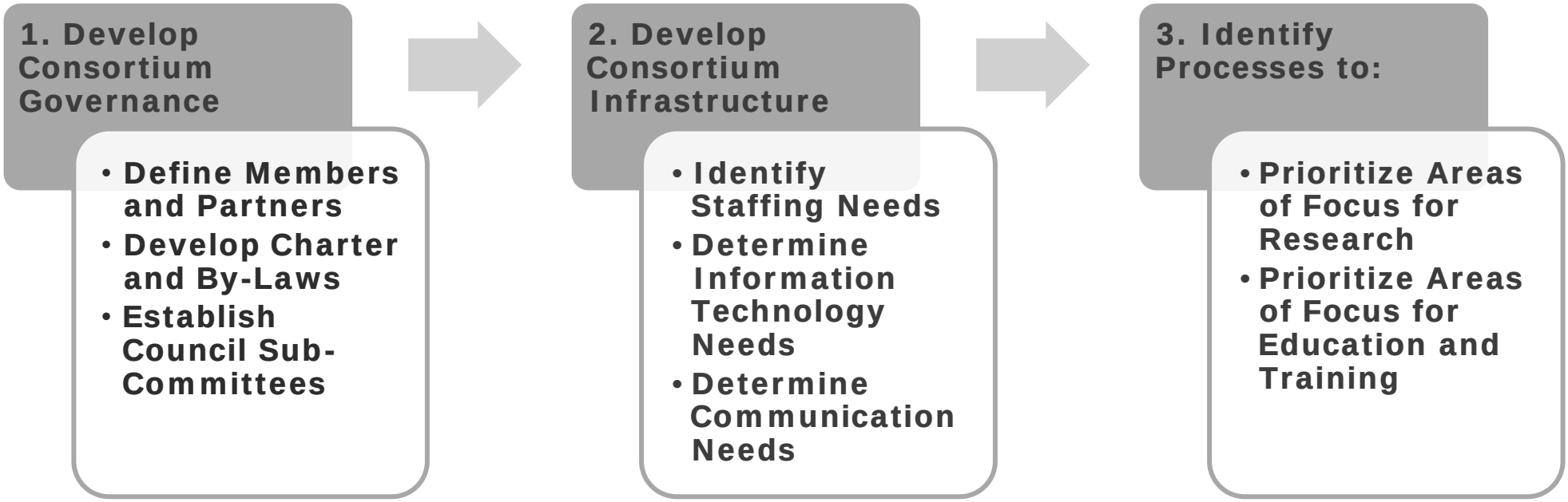
As a rural area where research and health academic capacity is dispersed across a large geography and number of competitive institutions, a consortium would:

- ***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

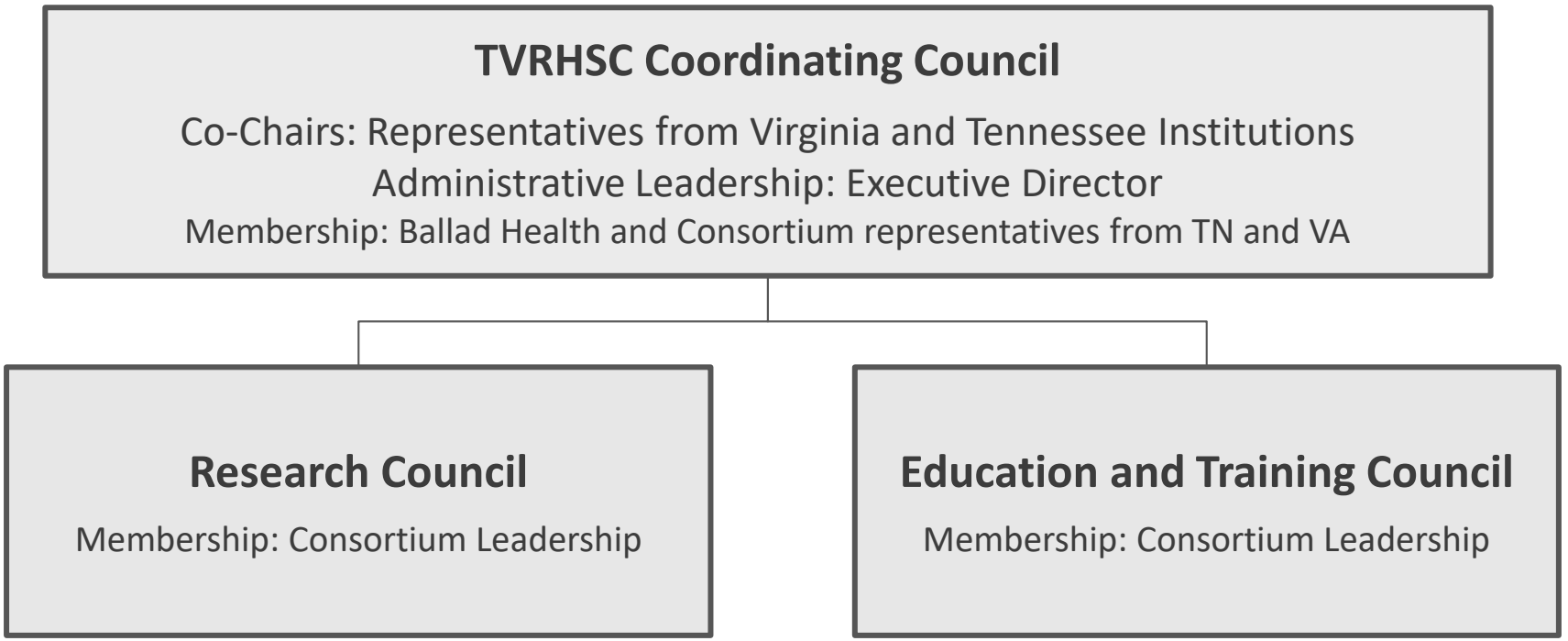
Strategy #1: Establish the Tennessee Virginia Regional Health Sciences Consortium (TVRHSC)



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.



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.

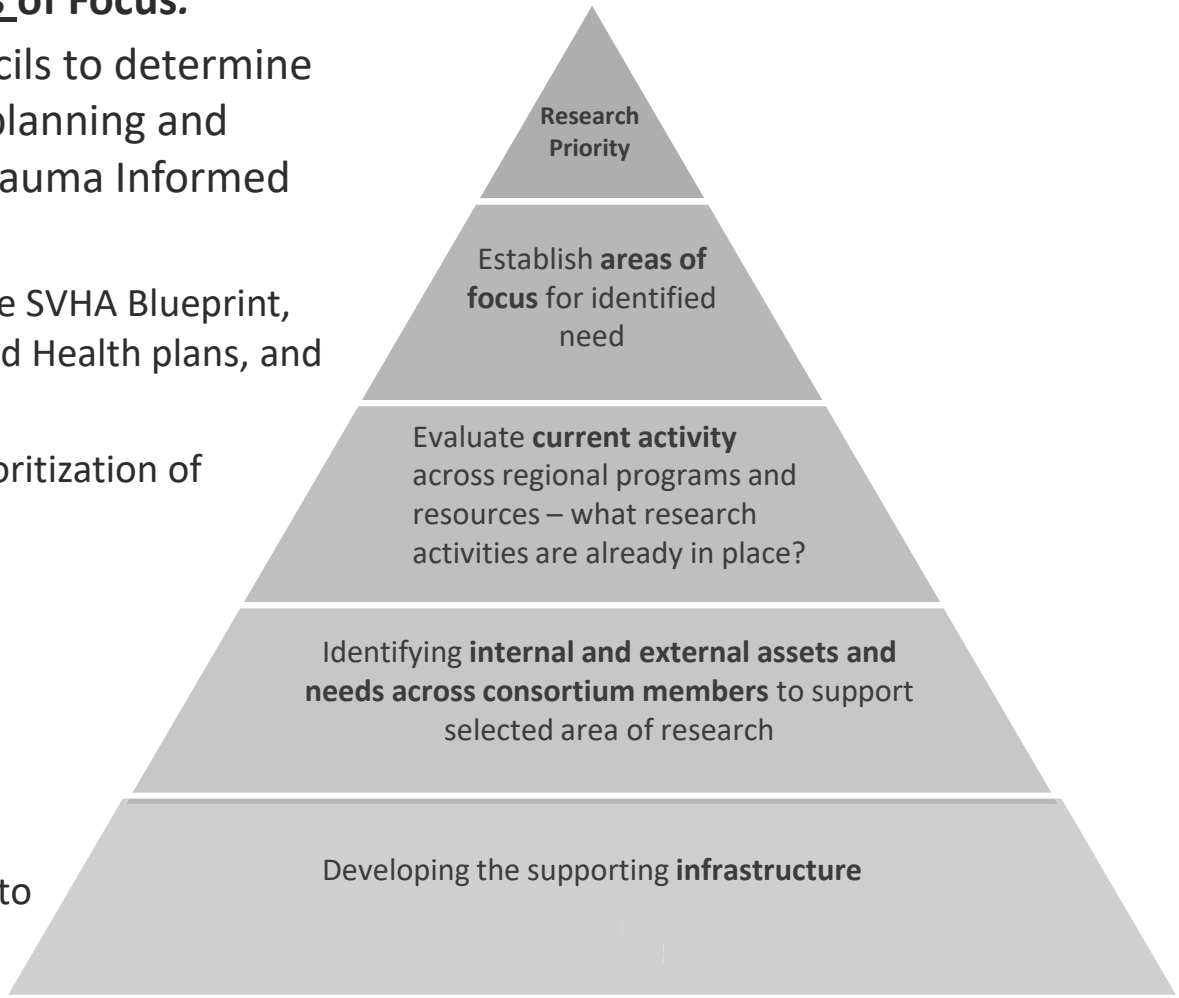
2. Develop Consortium Infrastructure*:*

- 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

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

3. Identify Process to Prioritize *Research Areas* of Focus*:*

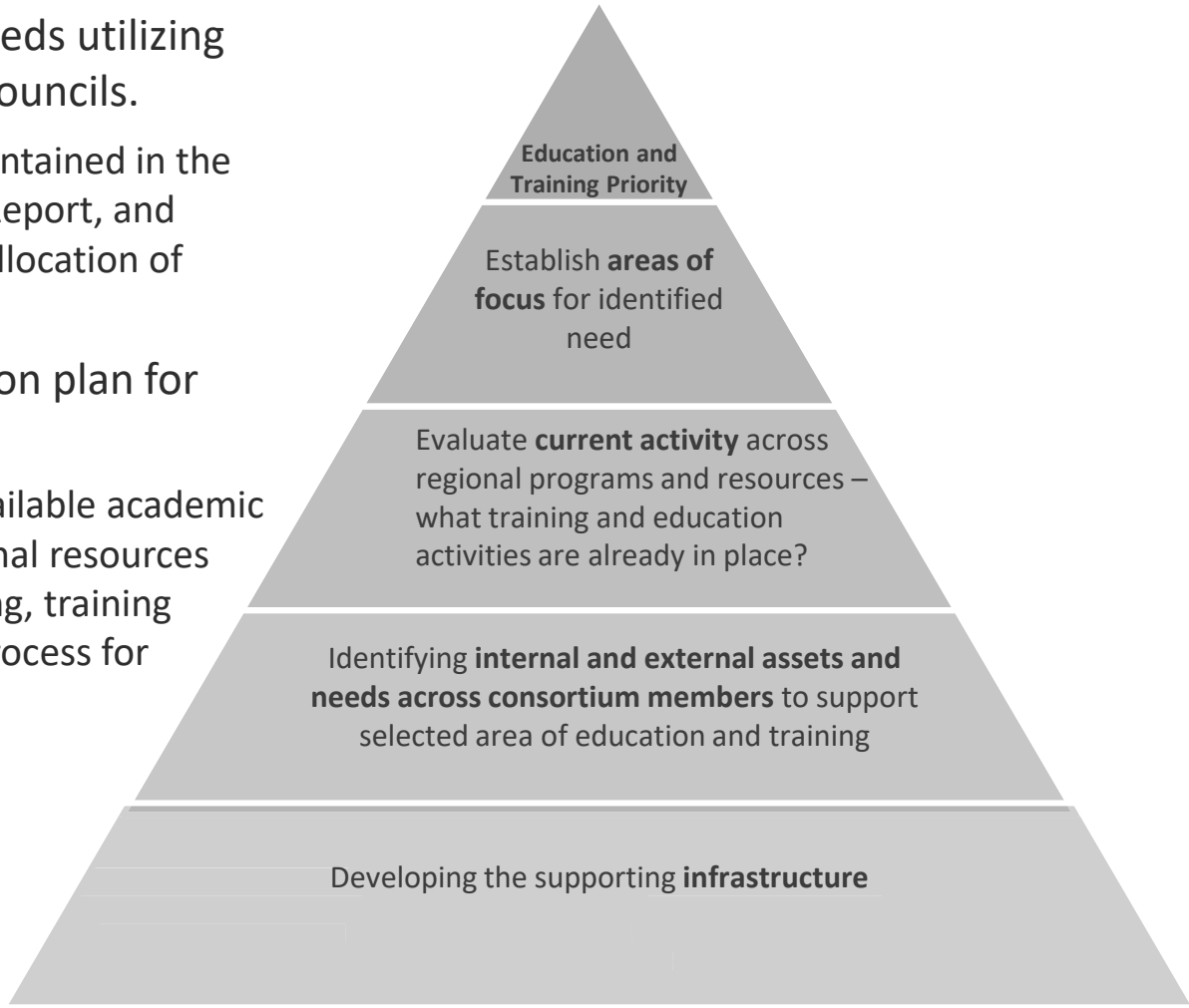
- Utilize the Coordinating and Research Councils to determine priority research areas of focus for further planning and consideration in the region (For example: Trauma Informed Care; Addiction)
  - Leveraging the regional priorities outlined in the SVHA Blueprint, Comprehensive Community Report, other 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



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.



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

Potential 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

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

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

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**
   - Identify mechanisms for targeted faculty hires to hold joint appointments across academic programs
   - Establish infrastructure to support interdisciplinary collaboration for these hires

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

Plan Overview

Strategies for the 3-Year HR/GME

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Strategies that Serve Health Professions Education

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

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

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*

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.

[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.

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

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

Plan Overview

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Strategies that Serve Health Professions Education

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

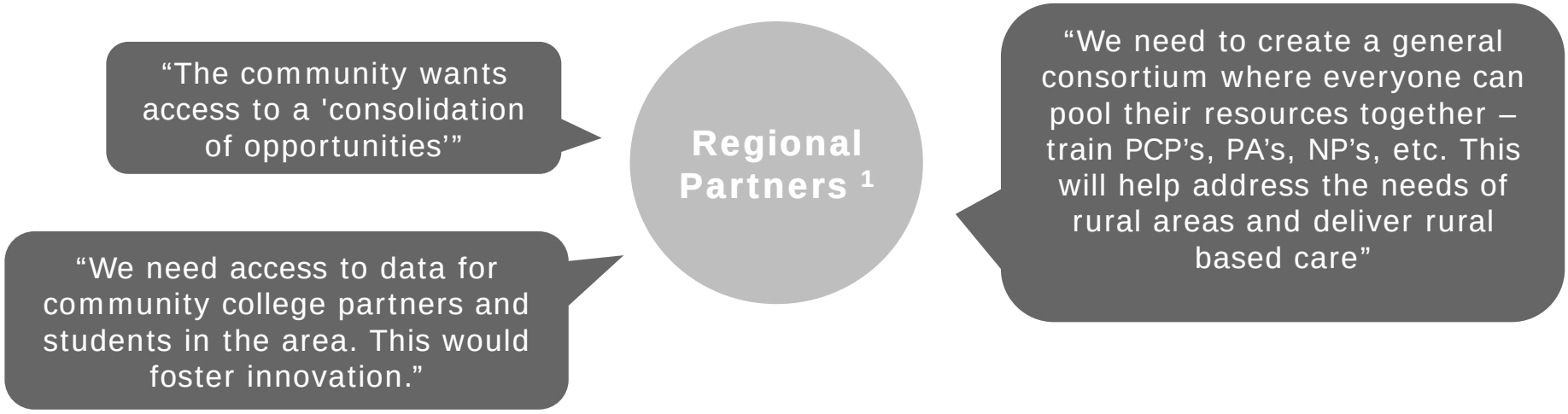
Strategy #4: Develop and Operationalize an Education and Training Infrastructure to Support the Region

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.***

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.



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

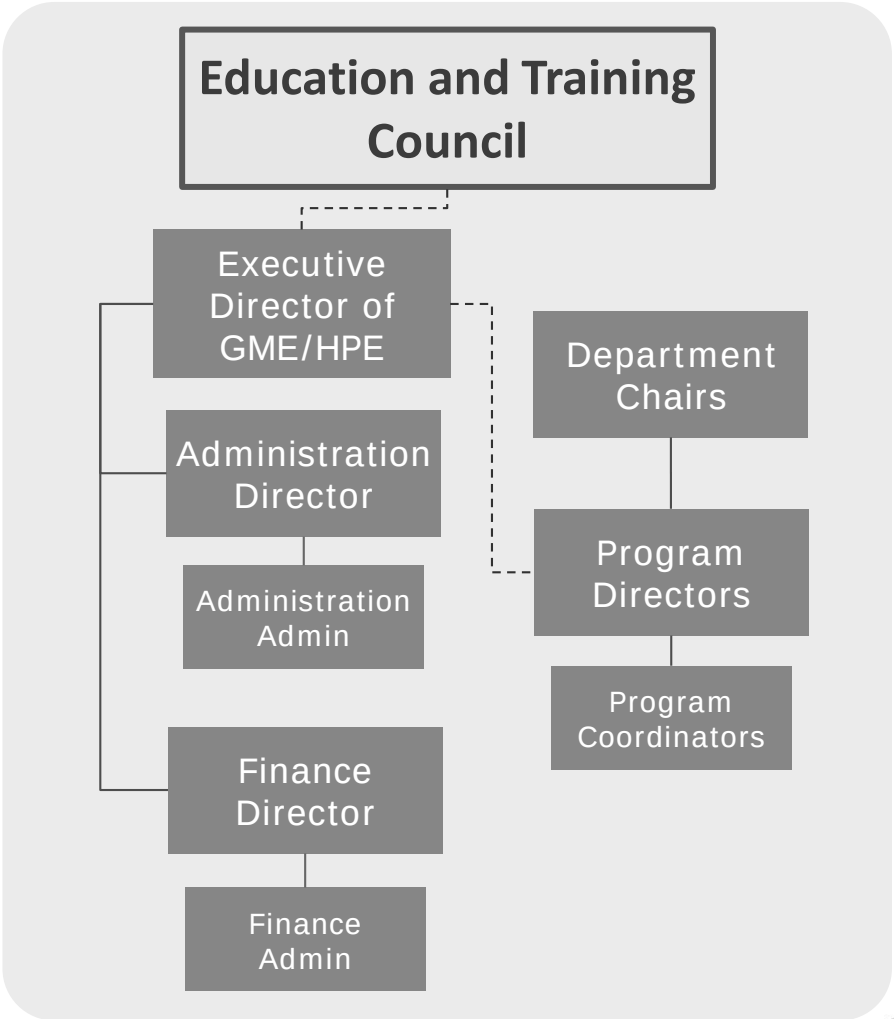
Strategy #4: Develop and Operationalize an Education and Training Infrastructure to Support the Region

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
3. **Facilitate collaboration between The Rural Health Services Plan, VA Area Health Education Centers (AHEC) and other regional workforce development initiatives to identify needed health professions and allied health education to meet the future needs of the region**
   - Coordinate with regional businesses and industry to determine workforce needs
   - Work to align vocational programs, community colleges, and 4-year colleges to fill workforce gaps

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

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

4. **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



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

5. **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)**
6. **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

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

7. 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

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

8. **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
9. **Establish new, community-based, rural-training track or prevention focused residency in Virginia**
   - Based on the needs of our region, and as mentioned in the Blueprint, we believe the area would benefit greatly from an effort to improve access to dental care. We seek to utilize the opportunity outlined within the Cooperative Agreement to address these gaps in preventative care.

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

10. **Strengthen collaborations with existing psychiatry and mental health programs to establish rotations 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
11. **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**
12. **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**

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

13. 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

14. 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

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

15. 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

16. Investment in stipend increases for residents in both Virginia and Tennessee

- Maintain and strengthen our medical training programs

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.

3. Implementation Roadmap

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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
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* • *Finalized Governance Charter and By-laws*	• Coordinating Council has convened at least once in Q2 • Council Sub-Committees & membership established • Identify staffing needs • Explore technology needs	• *Coordinating Council Meeting minutes* • *Evidence of Roster of Council Sub-Committee Chairs and members* • *Evidence of Draft Job Descriptions* • *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 • Finalize research infrastructure plan	• *Draft Regional Research Priorities plan submitted* • *Finalized Research Infrastructure Plan Submitted*

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

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

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 • Develop & Finalize Research Infrastructure Implementation Plan • Interviews conducted w/leading researcher(s) • Begin process of evaluation within Ballad COPA/CA plans	• *Final Regional Research Priorities plan submitted and approved* • *Finalized Research Infrastructure plan submitted* • *Evidence of recruitment progress* • *Minutes of meetings with leadership of other plans*	• Research Infrastructure Implementation begins • Offers made to leading researcher(s) • Initiate COPA/CA plan evaluation	• *Research Infrastructure Kickoff meeting held and working groups established* • *Evidence of recruitment progress* • *Report of metrics and outcomes from plan activities*

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

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 • Evaluate management and support positions added in FY 1 and adjust as necessary • Review/evaluate further infrastructure needs and implement as needed • Ensure ongoing engagement of regional partners. Academic and non-academic • Phase 1 and 2 Support Staffing complete
2. Identify Targeted Hiring Needs to Build Research Capacity and Academic Program Growth	Milestones • Complete recruitment of target hires • Evaluate positions added in FY2020 and adjust as necessary
3. Develop & Operationalize Consortium Research Infrastructure to Support Health Research in the Region	Milestones • Research Infrastructure Implementation initial milestones complete • Seek additional funding sources for research activities *Metrics* • *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* • *Matching funds* • *Anticipated expenditures* • *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 • Manage resident recruitment process • Manage accreditation status of new programs developed • Monitor effectiveness of new rotations and adjust as needed • Evaluate effectiveness of career progression incentives • Selection and Implementation of a Technology vendor *Metrics* • *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*

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 • Evaluate functional success of the consortium and adjust as needed • Review/evaluate further infrastructure needs and implement as needed • Expand engagement of regional partners. Academic and non-academic
2. Identify Targeted Hiring Needs to Build Research Capacity and Academic Program Growth	Milestones • 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 • Evaluate how will new research initiatives align with regional priorities and adjust as needed • Seek additional funding sources for research activities • Assess additional infrastructure and resource needs *Metrics* • *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* • *Matching funds* • *Anticipated expenditures* • *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 • Manage accreditation status of new programs developed • Monitor effectiveness of new rotations and adjust as needed • Evaluate effectiveness of career progression incentives • Evaluate alignment of new educational programs with workforce needs *Metrics* • *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*

Appendix A

Current Programming and Expenditures for Education and Training in the Region

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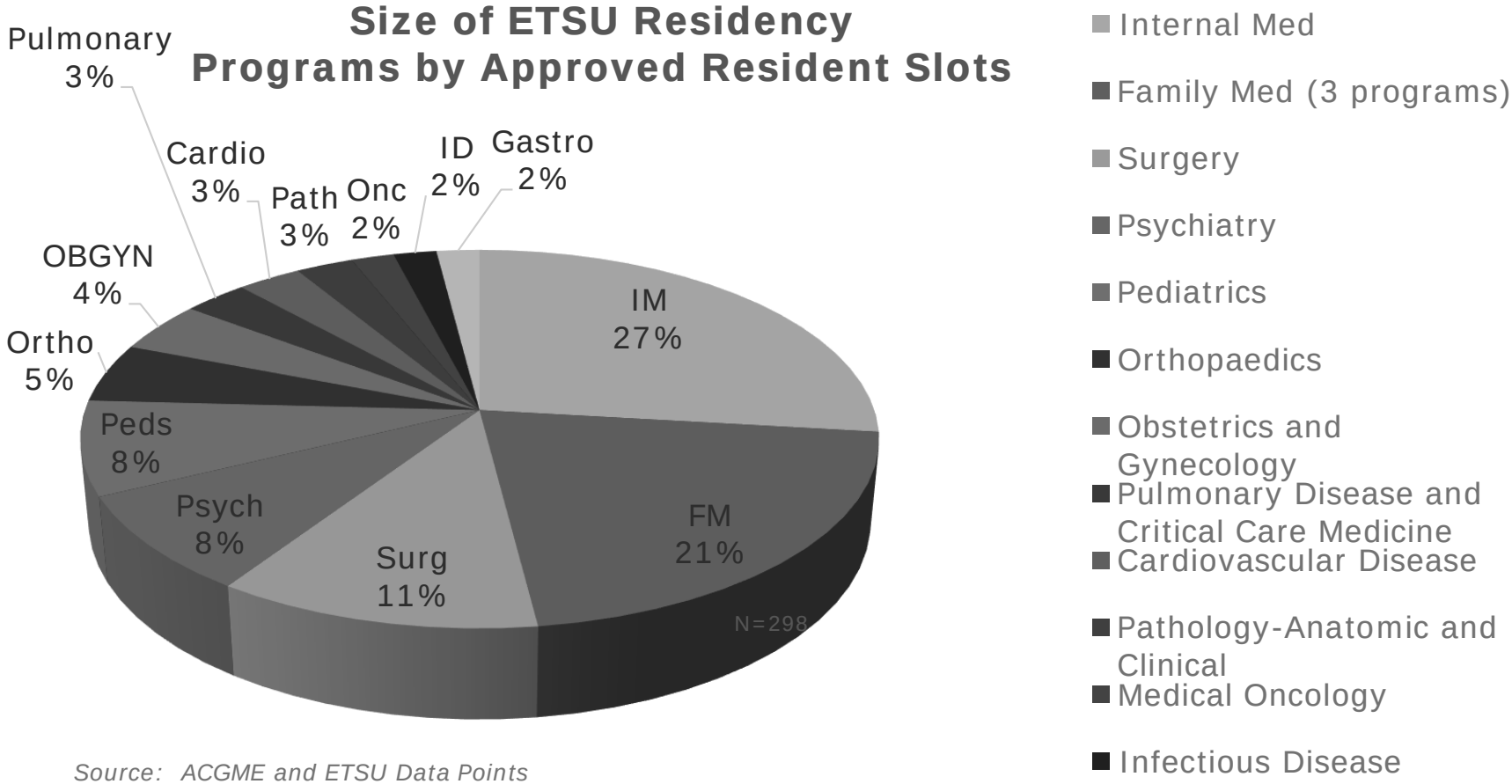
Ballad Health partners with ETSU to sponsor 15 GME programs

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



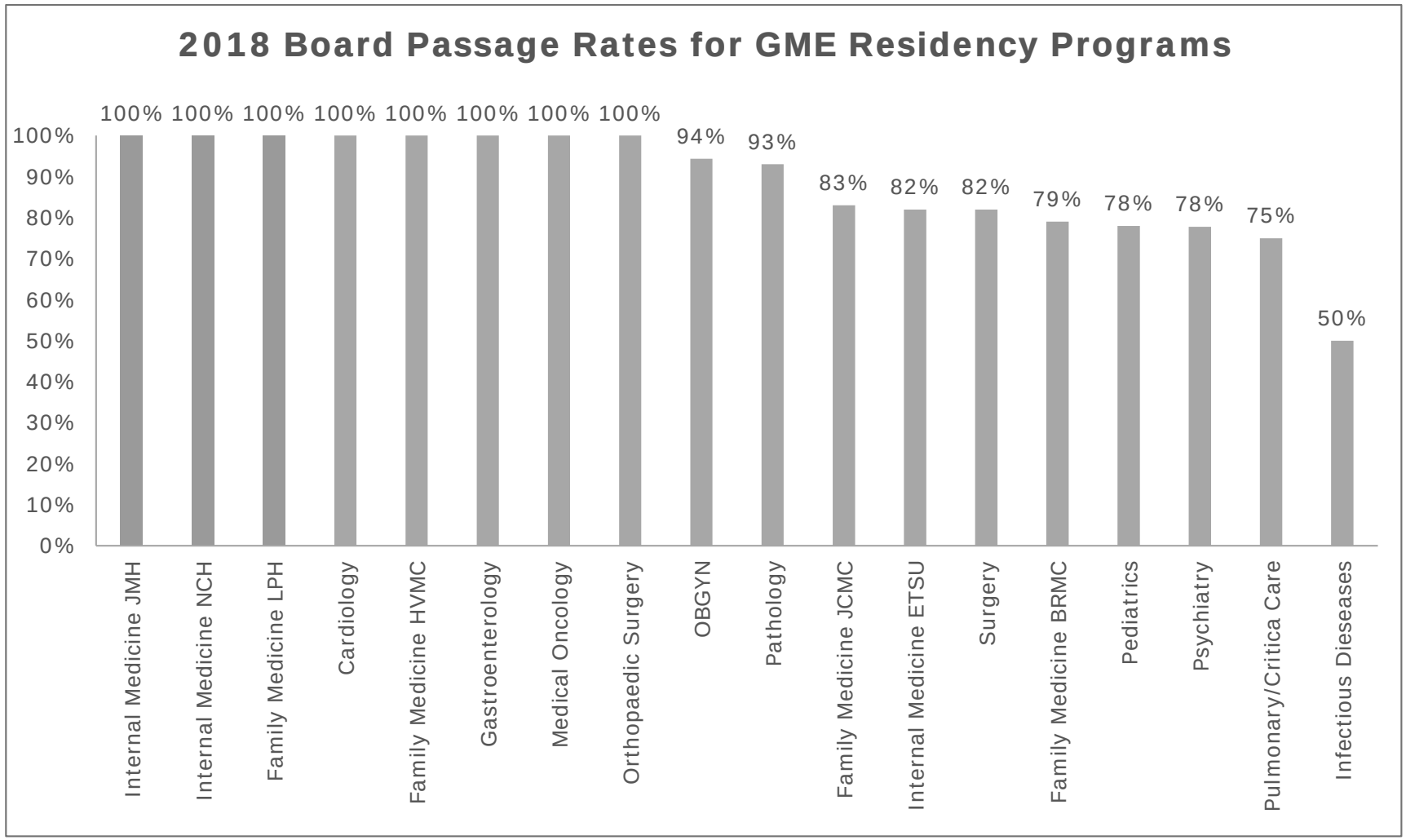
Source: ACGME and ETSU Data Points

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*

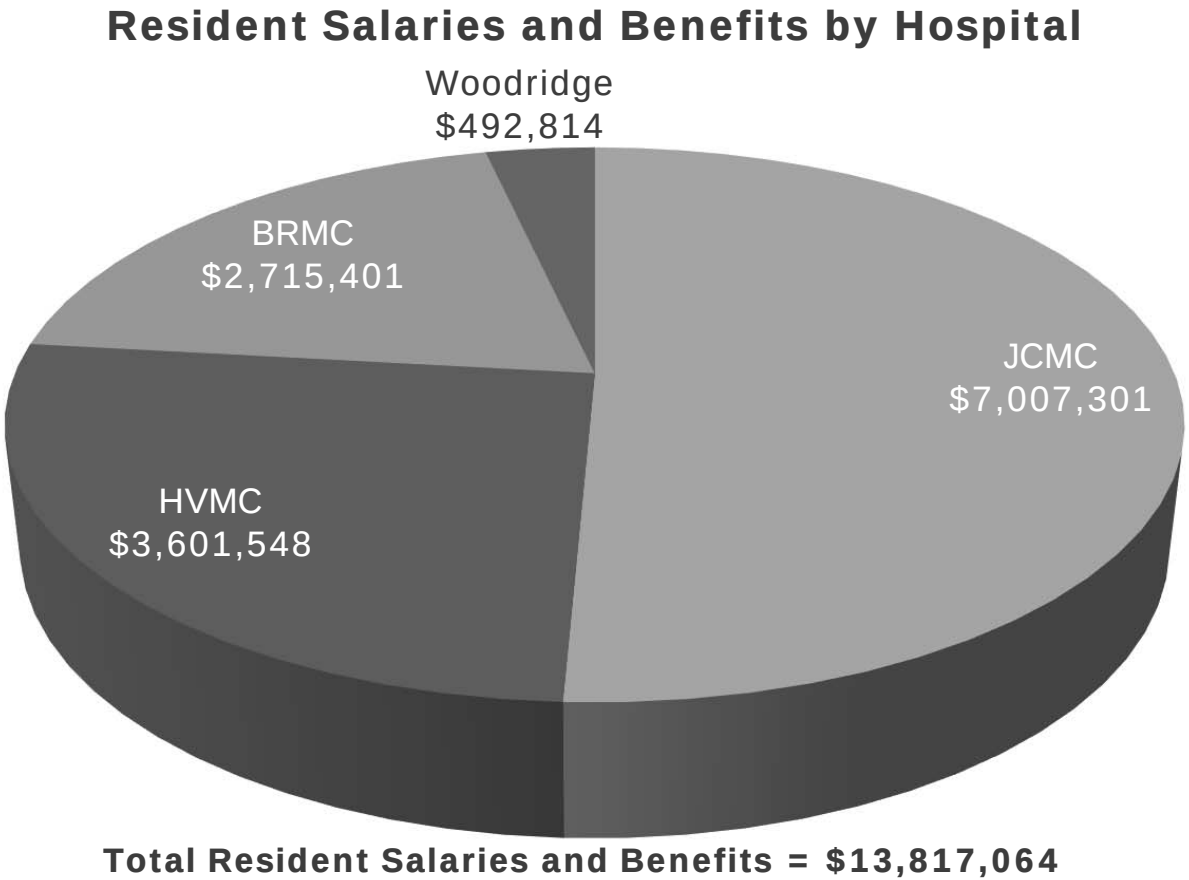
GME residency board passage rates



Source: ETSU Data Point

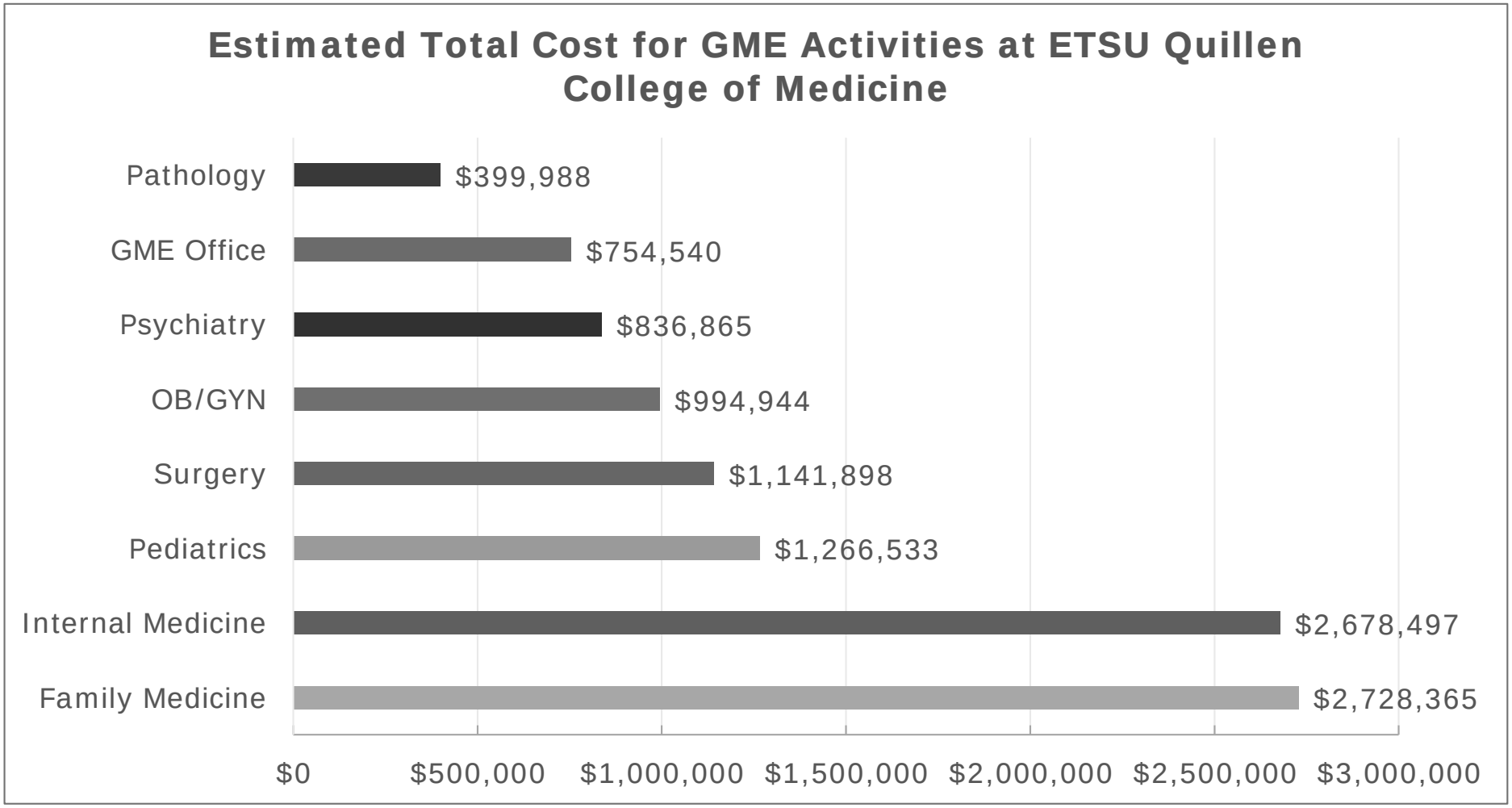
BalladHealth

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



Source: ETSU Data Point

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



Source: ETSU Data Point

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

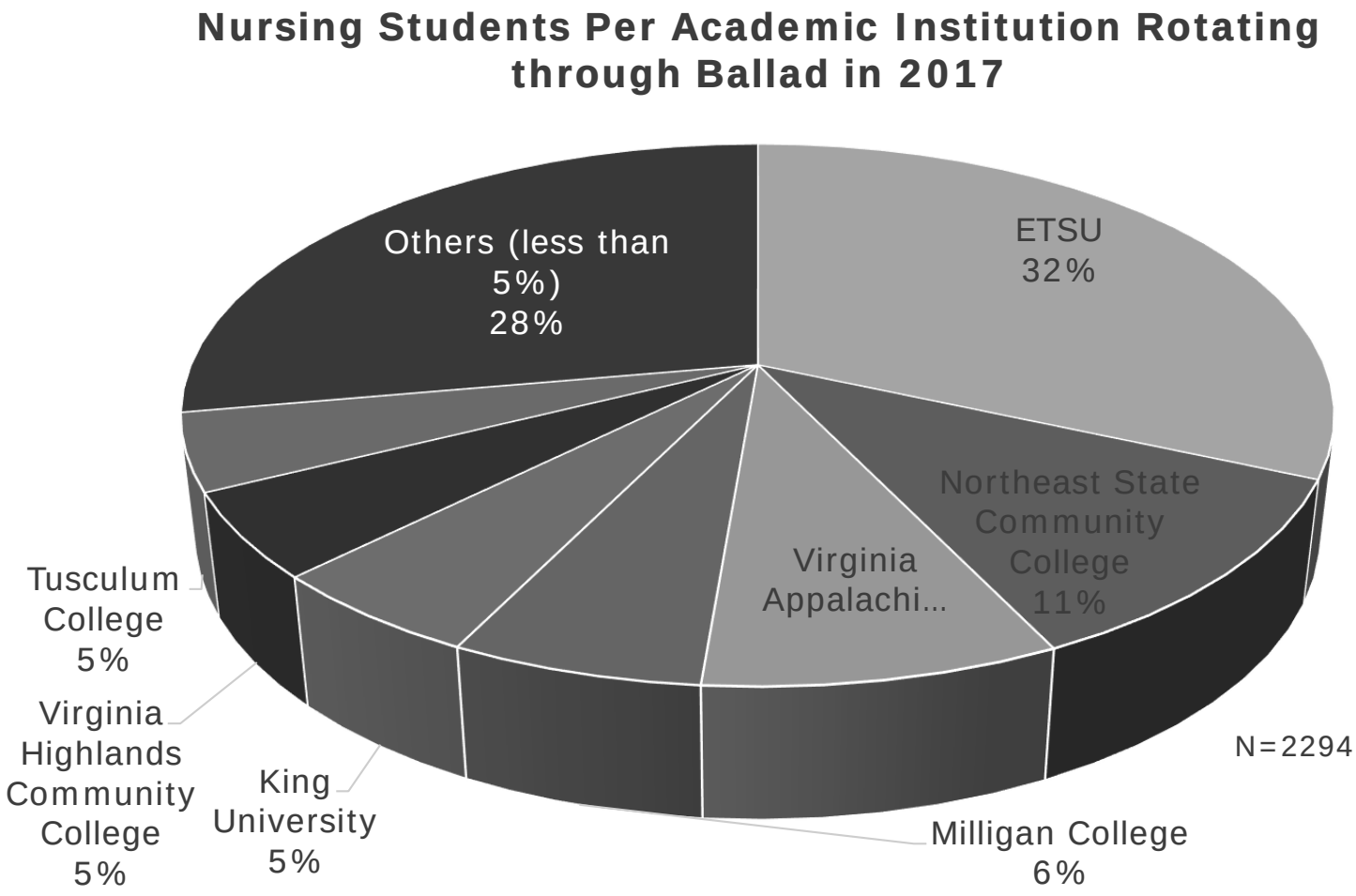
Overview of residency programs

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%

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%

Ballad had 2294 nursing students rotate at their sites in 2017



Source: ETSU Data Point

Health Research and Graduate Medical Education Three-Year Plans for the Commonwealth of Virginia

January 29, 2019

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Alan Levine
Executive Chairman,
President and Chief Executive Officer

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balladhealth.org

January 29, 2019

Lisa Piercey, MD
Commissioner, Tennessee Department of Health
5th Floor Andrew Johnson Tower
710 James Robertson Parkway
Nashville, Tennessee 37243

Re: Final Plan Submissions Via: FedEx & Email

Dear Commissioner Piercey:

Please find enclosed Ballad Health's submission of the following plans:

- Rural Services (updated from August 24, 2018 submission)
- Health Information Exchange (HIE)
- Health Research and Graduate Medical Education (HR/GME)

We have incorporated feedback from various prior discussions with the Department's Staff into the revised Rural Health Plan for the State of Tennessee. Please accept this as the final submission. This submission does contain updated exhibits that were previously submitted, including several with future business plans that contain sensitive information. Those will be provided in a separate attachment. We respectfully request that your offices treat the exhibits that are marked as "Confidential" as proprietary information under Tenn. Code Ann. 68-11-1310, Virginia Code Section 15.2-5384.1.C.1, and Virginia's Rules and Regulations Governing Cooperative Agreements (12VAC5-221-40.D).

On November 29, 2018, Ballad Health submitted drafts of the HIE and HR/GME plans as required by the Virginia Department of Health's January 12, 2018 letter regarding "Final Cooperative Agreement Measures." These drafts for the Commonwealth were also provided to the State of Tennessee at the same time. The enclosed HIE and HR/GME plans attached hereto are specific to the requirements of the Certificate of Public Advantage, Sections 3.03 and 3.05, and incorporate the comments we received from the Commonwealth and the State of Tennessee.

We would be happy to meet with you in the coming weeks to review these plans and answer any questions you may have. Thank you and we look forward to discussions regarding these plans.

Sincerely,

Alan Levine

Cc via email: M. Norman Oliver, MD, MAA, Commissioner,
Virginia Department of Health
Jeff Ockerman, Director, Division of Health Planning
Janet M. Kleinfelter, Deputy Attorney General
Erik Bodin, Director, Office of Licensure and Certification
Allyson K. Tysinger, Senior Assistant Attorney General/Chief
Larry Fitzgerald, COPA Monitor
Tim Belisle, General Counsel Ballad Health
Gary Miller, Senior Vice President Ballad Health

Final Rural Health Plan
For the State of Tennessee

January 29, 2019

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Introduction

- Final versions of the following Plans were requested by the State of Tennessee in the September 18, 2017 Terms of Certification, and were subsequently submitted on July 31, 2018. Feedback from multiple meetings and conversations with the state has been incorporated into these Plans.
  - Behavioral Health Plan
  - Children's Health Plan
  - Rural Health Plan
  - Population Health Plan
- The content of these Plans is consistent with requirements as outlined in the Terms of Certification governing the Certificate of Public Advantage and represent those actions to be taken by Ballad Health deemed by the State of Tennessee to constitute public benefit.

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

Important Dates

Plans Due in First Six Months (July 31, 2018)

- Behavioral Health Plan*
- Children's Health Plan*
- Rural Health Plan*
- Population Health Plan*
- Capital Plan

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

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

** Consistent with the The Commonwealth of Virginia Department of Health request, Ballad previously submitted draft versions (on June 30, 2018) of these Plans and provided those copies to the State of Tennessee. This document presents the final versions of these plans, incorporating feedback received from the State following review of the draft submissions during an on-site meeting at Ballad's corporate offices on July 10, 2018, submission of the updated plans on July 31, 2018, and a second review session at the Tennessee Department of Health offices on August 10, 2018.*

Process for Plan Development

Initiate

- Engaged Resources
- Named Executive Steering Team

Plan

- Gathered Internal and External Stakeholder Input
- Developed Initial Plans/Prioritize

Review

- Socialized Plans to Internal and External Stakeholders
- Provided Tennessee Department of Health (TDH) with Draft Plans Submitted to Virginia Department of Health (VDH)
- Reviewed Draft Plans with TDH and VDH

Finalize

- Incorporated TDH and Stakeholder Feedback
- Finalized Investment Schedules
- Submitted Final Plans to TDH
- Make final revisions with State Input during 30 day state review and 30 day Ballad response period
- Obtain Ballad Health Board Approval

Process and Participation for Plan Development

In developing these plans, Ballad has referenced previously developed plans and analyses and solicited extensive stakeholder input including:

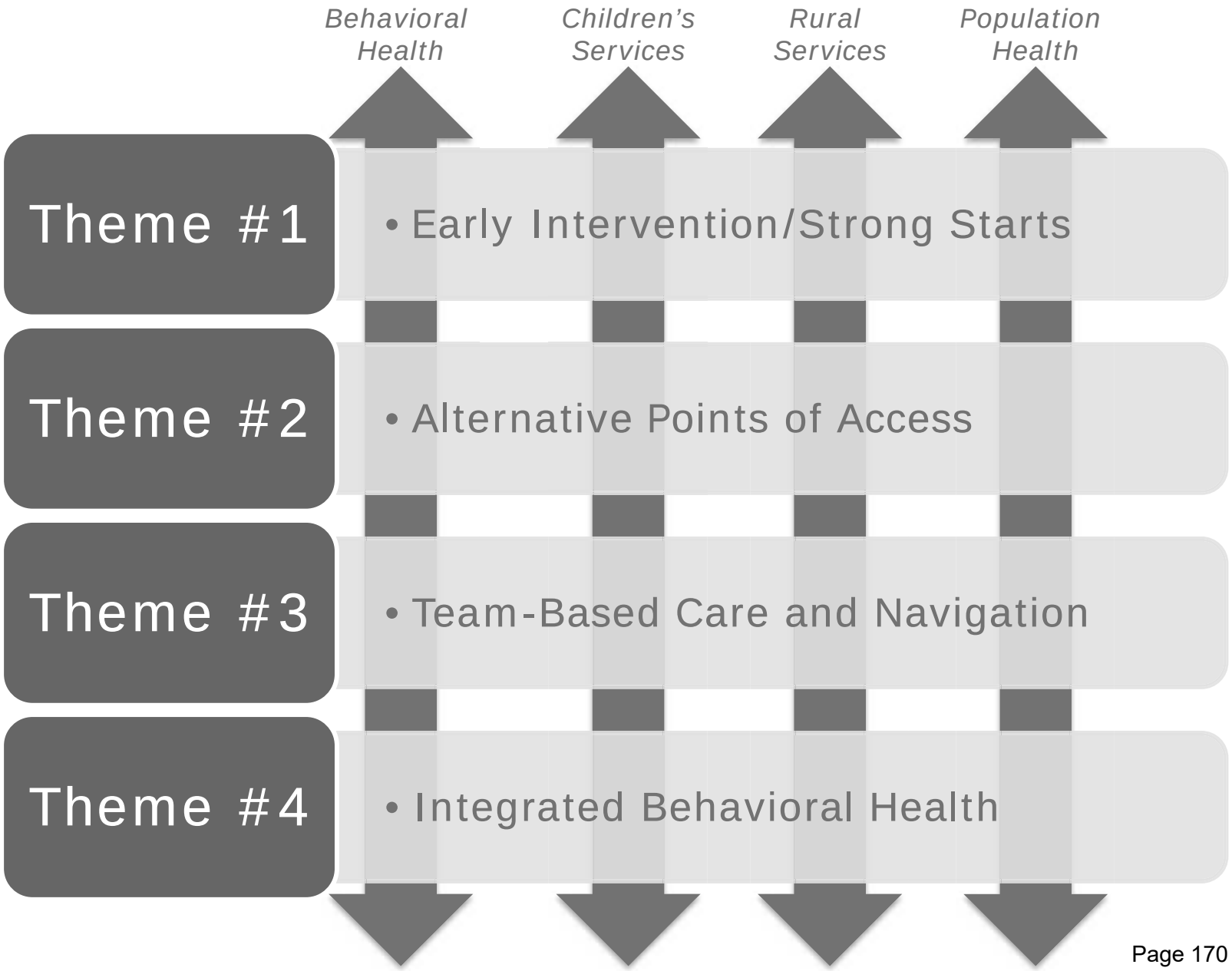
- Reviewing the following documents and plans:
  - Tennessee State Health Plan
  - Key Priorities for Improving Health in Northeast Tennessee and Southwest Virginia: A Comprehensive Community Report [1]
  - Legacy WHS and MSHA Community Health Needs Assessments
- Conducting approximately individual 150 interviews
- Holding approximately 40 meetings with external groups
- Convening the Population Health Clinical Committee
- Presenting the plan overview to a number of Ballad community boards in Tennessee and in an open meeting in Kingsport

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

Process and Participation for Plan Development (continued)

- Convening the Accountable Care Community Steering Committee
  - Healthy Kingsport and United Way SWVA were selected through an RFP process to co-manage this effort for both TN and VA
  - Obtained cross-state participation in initial meeting with discussion of metrics with special focus on those most amendable to community intervention
  - Conducting bi-weekly calls with lead organizations
- Provided draft Virginia plans to the State of Tennessee on June 30, 2018. Additionally, Ballad representatives and representatives from the State of Tennessee and the Virginia Commonwealth met on July 10, 2018 to review and discuss the draft plans. Feedback from that meeting and subsequent communications were incorporated into the July 31, 2018 plan submissions.
- Ballad representatives and representatives from the State of Tennessee and the Virginia Commonwealth met on August 10, 2018 to review and discuss the July 31 version of the plans. Feedback from that meeting has been incorporated into this submission.

Strategic Themes Across All Plans



Strategic Themes Across All Plans (continued)

1. **Early intervention and strong starts**
   - Efforts will be designed around the concept of primary, secondary and tertiary prevention, with a special population focus on children.
   - Example: Prevent cervical cancer through HPV vaccinations AND detect in early stages through effective screening.
2. **Alternative Points of Access**
   - Preventive and acute services must be easily accessible by the population and designed with their preferences and limitations in mind.
   - Example: Mobile blood pressure and diabetes screening co-located at food assistance delivery sites.

Strategic Themes Across All Plans (continued)

3. Team Based Care and Navigation

- Care teams should be designed around the needs of the whole person and include perspectives and skills from pharmacists, social workers, community health workers, navigators and case managers.
- Example: Embed behavioral health navigators in primary care practices to link patients with necessary behavioral health services at Ballad Health and our CSB partners.

4. Integrated Behavioral Health

- We should design a behavioral health perspective into all care processes and systems.
- Example: Perform Screening, Brief Intervention and Referral to Treatment on ED and Inpatient admits to identify behavioral health risk and initiate treatment in patients regardless of their presenting problem.

Table of Contents for Each Plan

- Plan Overview
  - TN Certificate of Public Advantage Requirements
  - Key Metrics Assessed
  - Key Strategies
  - Crosswalk to Conditions
  - Investment Plan
  - Existing Partnerships and Collaborations
- Strategic Approach
- Implementation Roadmap

Rural Health Plan

1. Plan Overview

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Plan Overview
TN COPA Rural Health Plan Requirements

TN COPA Requirement
Submit an initial comprehensive physician/physician extender needs assessment and recruitment plan for the first three (3) full Fiscal Years (collectively, the "Rural Health Plan"), covering each rural community in the Geographic Service Area. A critical goal of the Rural Health Plan shall be employing physicians primarily in underserved areas and other locations where quantity and/or specialty needs are not being met, and where Independent Physician groups are not interested in, or capable of, adding such specialties or expanding.

Sources: Tennessee Certificate of Public Advantage Section 3.02 (c)

Plan Overview
Rural Health Plan Key Metrics

- C8: Specialist Recruitment and Retention
- C9: Personal Care Provider
- C10: Preventable Hospitalizations - Medicare
- C11: Preventable Hospitalizations - Adults
- C12: Screening – Breast Cancer
- C13: Screening – Cervical Cancer
- C14: Screening – Colorectal Cancer
- C15: Screening – Diabetes
- C16: Screening – Hypertension
- C17: Asthma ED Visits – Age 0-4
- C18: Asthma ED Visits – Age 5-14
- C19: Prenatal Care in the First Trimester
- C22: Antidepressant Medication Management – Effective Acute Phase Treatment
- C23: Antidepressant Medication Management – Effective Continuation Phase Treatment

Metrics from Exhibit C, per the Tennessee Terms of Certification Governing the Certificate of Public Advantage, September 18, 2017
ED = emergency department.

Plan Overview

Strategies for the 3-Year Rural Health Plan

Strategy #1: Expand Access to Primary Care Practices Through Additions of Primary Care Physicians and Mid-Levels to Practices in Counties of Greatest Need

Strategy #2: Recruitment of Physician Specialists to Meet Rural Access Needs

Strategy #3: Implement Team-Based Care Models to Support Primary Care Providers, Beginning with Pilots in High Need Counties

Strategy #4: Develop and Deploy Virtual Care Services

Strategies Related to TN COPA Rural Health Plan Requirements

TN COPA Requirement	1. Additions of Primary Care Physicians and Mid-Levels	2: Recruitment of Physician Specialists	3:Team-Based Care Models	4: Deploy Virtual Care Services
Submit an initial comprehensive physician/physician extender needs assessment and recruitment plan for the first three (3) full Fiscal Years (collectively, the "Rural Health Plan"), covering each rural community in the Geographic Service Area. A critical goal of this [Rural Health Plan] shall be employing physicians primarily in underserved areas and other locations where quantity and/or specialty needs are not being met, and where Independent Physician groups are not interested in, or capable of, adding such specialties or expanding.	Y	Y	Y	Y

Plan Overview
Rural Health Services Estimated Investment Summary

Rural Health Plan	Year 1		Year 2		Year 3		Year 1-3 Total	
	Low	High	Low	High	Low	High	Low	High
#1 - Expand Access to PCPs - Add Primary Care Physicians and Mid-levels	$410,000		$920,000		$1,180,000		$2,510,000	
#3 - Team-Based Care Models to Support PCPs	$150,000		$630,000		$1,000,000		$1,780,000	
#4 - Deploy Virtual Care Services	$140,000		$660,000		$230,000		$1,030,000	
Sub-Total	**$700,000**		**$2,210,000**		**$2,410,000**		**$5,320,000**	
#2 - Recruitment of Physician Specialists	$300,000	$370,000	$790,000	$1,560,000	$590,000	$2,420,000	$1,680,000	$4,350,000
Total	**$1,000,000**	**$1,070,000**	**$3,000,000**	**$3,770,000**	**$3,000,000**	**$4,830,000**	**$7,000,000**	**$9,670,000**
COPA-Mandated Minimum Expenditures	*$1,000,000*		*$3,000,000*		*$3,000,000*		*$7,000,000*	
Potential Funding Needed in Excess of Minimum Spending Requirements	***$0***	***$70,000***	***$0***	***$770,000***	***$0***	***$1,830,000***	***$0***	***$2,670,000***

Note: This does not account for an additional spend over the 3 year time frame in VA for primary care and specialists providers of up to $7.11M.

Specialist recruiting (see Strategy #2) expenditures are presented as a range, due the following uncertainties, which can have significant impacts on the actual annual investment expenditures:

- Timing – Due to the challenges of recruiting specialists to rural environments, the amount of time necessary to successfully recruit a specialist can vary dramatically.
- Economic considerations – Ballad has a robust compliance function that monitors matters pertaining to physician compensation and other economic relationships between the system and its medical staff. However, the challenges of recruiting to a rural environment often results in rapidly changing economic demands among potential recruits.
- Possible partnership opportunities –Ballad supports private practitioner employment, and will always work with private practices to provide recruitment assistance when appropriate. Such recruitment assistance often results in economic investments by Ballad less than the investments required to employ a specialist.

Plan Overview
Existing Partnerships and Collaborations

Community Provider Collaborations

- Ballad is actively engaged with community providers to develop models supporting more efficient/higher quality care delivery. These models would include component focusing on specific COPA metrics. (*See Exhibit A for Future Business Plan information pertaining to these models*)
- Ballad is also exploring additional partnership opportunities with providers and payors across the region. Various models and structures are being considered, all intended to provide for higher quality, more coordinated, lower cost care to patient populations. (*See Exhibit A for Future Business Plan information pertaining to these models*)
- Ballad has historically provided education to area providers regarding industry changes (i.e. MACRA and MSSP). For example, in partnership with existing providers, Ballad is conducting three forums in September 2018 for physicians and allied health professionals across the region focusing on the most recent changes to the MACRA/MIPS and MSSP legislation. State of Franklin Healthcare Associates, Mountain Region Family Medicine, ETSU and Medical Care will co-sponsor the events with Ballad. (*See Exhibit B for examples of previous education*)

Plan Overview
Existing Partnerships and Collaborations (continued)

Community Pharmacy Extended Services Network

- Ballad is in the very early stages of discussion with a consortium of 45 independent community pharmacies throughout Northeast TN and Southwest VA offers unique partnership opportunities from a population health perspective to promote patient education and provide additional access for preventive screening services.

AnewCare

- Ballad continues to evaluate participation and expansion of MSSP through the Accountable Care Organization, AnewCare. Pending review of recently released rules from CMS regarding options for continued participation in MSSP, Ballad has discussed how AnewCare might be an option for other independent providers in the region. Participation could be a significant help to physicians with ongoing quality reporting requirements (i.e. MIPS) since the ACO assumes responsibility for reporting for participating providers. (*See Exhibit C for Future Business Plan information pertaining to AnewCare and MSSP participation*)

Plan Overview
Existing Partnerships and Collaborations (continued)

Community Paramedicine Well-Visit Program

Community Paramedics are part of an extended care team that can help to bring care to the patient in the home. This program can be the eyes and the ears of physicians and providers when patients are most vulnerable or otherwise unable to make it in to see their physician. Currently patients in this situation may utilize EMS/ ambulance transport to an Emergency Room (ER) facility for a less than life-threatening need. This diverts resources from other patients who need ER level of care and, at a minimum, increases wait times. Thus, it is important to identify these needs and to help meet the need in the outpatient arena. There was a desire identify the impact of this "Wellness Visit" type of service on inappropriate ER utilization in our region.

The legacy Ballad systems worked with local EMS to execute a pilot. The pilot examined whether or not visits from paramedics in the community could help decrease ER utilization by "frequent fliers."

At JCMC, the pilot entailed a nurse sending a referral to EMS. The Lieutenant on duty would attempt to meet the patient at the ER so that the home visit was not a cold call. After that EMS would make a visit to the home. Forty-two patients were identified by the facility as being appropriate for this service. Visits capture some of the social needs of the patient. This pilot resulted in an over 40% decrease in ER utilization. More importantly patients' needs were met in a convenient fashion. EMS personnel found some needs were not medical, but rather social. This pilot helped to provide evidence that there is a use case for this model of care in our region.

Existing Partnerships and Collaborations (continued)

Community Paramedicine Well-Visit Program (Continued)

Community Paramedics need a higher level of training and additional certification to be able to serve as the liaison between patients and physicians/ advanced practice providers (APPS).

Three organizations came together to help provide faculty for this training program – ETSU, Legacy Mountain States Health Alliance and Legacy Wellmont. A group of 14 individuals graduated from this program on 4/6/2018. At the current time Ballad is unable to send these resources into the community as the legislation to recognize this licensure is with the State of Tennessee awaiting approval.

When these individuals are able to go into the community, there will be a referral process to direct patients/participants to this service. Ballad will start by enrolling those who are at risk and who have a Ballad PCP, to receive this service. Ballad plans to make this service available to those individuals who need it most, regardless of participant's PCP affiliation. Ballad will develop a system where information obtained from the Paramedicine Well-Visit Program is shared with the PCP in a seamless and transparent way. (*See Exhibit D for informational pamphlet*)

Rural Health Plan

2. Strategic Approach

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Strategic Approach
Strategy #1: Add Primary Care Physicians and Mid-Level Providers to Practices in Counties of Greatest Need

Why?

- Adding primary care physicians ("PCP"s) and mid-level providers (Physician Assistants and Nurse Practitioners) is important to expanding access in rural areas.
- Staffing practices with mid-level practitioners allows existing physicians to work at the top of their license and reduce overall cost of care.

How?

- Evaluate existing resources *(see Exhibit E for a map of all Ballad primary care providers*) to better understand which populations within the services area are experiencing access barriers to primary care services
- Target rural counties with low appointment availability and limited PCP or urgent care infrastructure relative to the county population (*see Exhibit H for Future Business Plan information pertaining to Initial Provider Needs Assessment details*).
- Within high-needs counties, evaluate specific practices that have a high proportion of attributed lives, space capacity, and support staff to prioritize order of deployment.
- Hire at least one additional primary care physician in 2019 in Unicoi County. Continue evaluation of primary care needs in rural counties and respond with updated recruitment plans as needed.
- Develop recruitment plan and hire two mid-levels in 2019, one in 2020, and two in 2021. When adding mid-level practitioners, ensure they have availability to support walk-in appointments, and in select practices, expand evening/ weekend hours, thereby more effectively supporting current physicians on staff.

Strategic Approach

Strategy #1: Add Primary Care Physicians and Mid-Level Providers to Practices in Counties of Greatest Need

Metrics Addressed

- Additional primary care resources help to address all of the access metrics listed previously in the Plan Overview – Key Metrics slide and increase percentage of the rural population with same day primary care access.

Potential Barriers to Success

- The implementation plan is dependent on the recruitment of primary care physicians and mid-level providers to rural communities. To the extent that these professionals can not be recruited in the timeframe indicated, certain aspects of the plan may be delayed.

Potential Mitigation Tactics

- Identify opportunities to increase access with E-visits *(See Exhibit F)*
- Increase provider capacity through process reengineering and improved scheduling of expanded care teams
- Provide recruiting assistance to community providers

Strategic Approach
Strategy #2: Recruit Physician Specialists to Meet Rural Access Needs

Why?

- A core group of local and regional specialists is essential to creating a system of local access in rural communities and minimizing the need for residents to travel for care. Specialists are particularly difficult to recruit to rural areas, resulting in the need to (1) commit significant focus and resources to attract and retain them, and (2) thoughtfully develop regional approaches to specialty access for rural residents.

How?

- Review and revise system-wide recruitment plan for rural counties, taking into consideration community-based need, rural hospital medical staff needs, and growing telehealth capabilities. It is important to note that there is often insufficient population in rural counties to support specialists so they are often recruited to the tertiary hubs, located in urban areas. Specialists recruited to Holston Valley Medical Center, Bristol Regional Medical Center, and Johnson City Medical Center will still treat a number of patients from rural counties and that has been accounted for in this list of priorities (*see Exhibit H for Future Business Plan information pertaining to Initial Provider Needs Assessment details*).
- In order to allocate the expense associated with these urban-based specialists to the rural populations they serve, Ballad calculated an allocation ratio for each sub-specialty as follows:
  - Historical (FY2017) Clinic Visits from Patients originating from a rural zip code/Total Clinic Visits
  - If information was incomplete or not available for a specific sub-specialty, Ballad applied the average of all computed ratios
  - Ballad then applied these ratios to the total practice expense for each sub-specialty assumed in the recruitment plan to determine what portion of the practice expenses would be representative of resources dedicated to rural residents
  - The ratios used to allocate sub-specialty total practice expenses to rural residents ranged from 47% to 52%, with the average being 49% (for those instances, as described above) when the average was utilized to allocate costs. For reference, the rural population in Ballad's service area, as a % of total population in the service area, is 61.3%.

Strategic Approach
Strategy #2: Recruit Physician Specialists to Meet Rural Access Needs

How?

- Execute on Ballad recruitment plan, based on priorities by specialty and location. Access to specialty care provided through:
  - Locating specialty practice full-time in rural communities
  - Providing rotating specialty clinics in rural communities
  - Providing rural residents with telehealth access to specialists located in urban areas
  - Providing preferred/reserved appointment scheduling for rural residents traveling to urban areas for specialist care
- Coordinate with Ballad's ongoing Health Research and GME Plan workgroup to leverage opportunities for recruitment and development from regional medical schools and networks.
- Review needs and progress annually and update as necessary.

Current Rural Specialist Priorities

Specialty	Practice Location (County)
CardioThoracic	Sullivan, TN
Neurosurgery	Sullivan, TN
General Surgery, Colorectal	Sullivan, TN
Neurology (JCMC)	Washington, TN
Vascular NP	Washington, TN

Strategic Approach

Strategy #2: Recruit Physician Specialists to Meet Rural Access Needs

Metrics Addressed

- C8: Specialist Recruitment and Retention
- C10: Preventable Hospitalizations - Medicare
- C11: Preventable Hospitalizations – Adults

Potential Barriers to Success

- The implementation plan is dependent on the recruitment of specialist providers. To the extent that these professionals can not be recruited in the timeframe indicated, certain aspects of the plan may be delayed.

Potential Mitigation Tactics

- Identify opportunities to increase access with E-visits (*See Exhibit F*)
- Increase provider capacity through process reengineering
- Provide recruiting assistance to community providers

Strategic Approach
Strategies #1 and #2: Initial Rural Provider Needs Assessment

Ballad completed its initial provider needs assessment ("PNA") for the rural communities within the service area.

- The PNA for the rural areas considered three primary service area geographies: Northwest, Northeast, and Southern.
- Each of these geographies represents a natural "hub and spoke" referral pattern:
  - Northwest – Primary tertiary referral facility is Holston Valley Medical Center
  - Northeast – Primary tertiary referral facilities is Bristol Regional
  - Southern – Primary tertiary referral facility is Johnson City Medical Center
- When considering provider demands and supply by specialty, Ballad took into consideration access opportunities to specialists located within each of these geographies.
- The results of the initial rural PNA are presented on the following page (*see Exhibit H for Future Business Plan information pertaining to Initial Provider Needs Assessment details*).
- Ballad's current recruiting plans for FY's 2019-2021 are consistent with the results of the initial PNA. Please note:
  - The Rural Health Plan only presents primary care and specialist recruitment activity for providers incremental to the baseline period. Additional recruitment activity and plans for replacement positions is also ongoing.
  - In certain communities, additional recruitment is necessary to support community programs (i.e. Black Lung Clinic in Wise County)
  - Ballad will be working throughout FY2019 to produce its updated/comprehensive provider needs analysis

Strategic Approach
Strategies #1 and #2: Initial Rural Provider Needs Assessment

Level of Physician Need	Southern Region		Northeast Region		Northwest Region	
	Specialty	*(Need with APP Supply)*	Specialty	*(Need with APP Supply)*	Specialty	*(Need with APP Supply)*
Need for Greater than 20 Physicians	Adult Primary Care	*(No need)*	Adult Primary Care	*(No need)*	Adult Primary Care	*(No need)*
Need for 8 to 10 Physicians					Pediatrics (General)	*(8 to 10)*
Need for 3 to 5 Physicians			Pediatrics (General)	*(3 to 5)*	Psychiatry	*(3 to 5)*
			Psychiatry	*(2 to 3)*	Ophthalmology	*(3 to 5)*
Need for 2 to 3 Physicians	Plastic Surgery	(2 to 3)	Dermatology	*(2 to 3)*	Endocrinology	*(2 to 3)*
			Physical Med/Rehab	*(2 to 3)*	Podiatry	*(2 to 3)*
			Infectious Diseases	*(2 to 3)*	Neurology	*(2 to 3)*
			Plastic Surgery	*(2 to 3)*	Orthopedic Surgery	*(1 to 2)*
			Endocrinology	*(1 to 2)*		
Need for 1 to 2 Physicians	Thoracic Surgery	*(1 to 2)*	Neurology	*(1 to 2)*	Neurosurgery	*(1 to 2)*
	Physical Med/Rehab	*(< 1)*	Ophthalmology	*(1 to 2)*	Otorhinolaryngology	*(1 to 2)*
	Neurosurgery	*(< 1)*	Otorhinolaryngology	*(1 to 2)*	Infectious Diseases	*(1 to 2)*
	Urology	*(< 1)*	Rheumatology	*(1 to 2)*	Urology	*(1 to 2)*
			Nephrology	*(1 to 2)*	Immunology	*(< 1)*
			Urology	*(No need)*	Rheumatology	*(< 1)*
			Orthopedic Surgery	*(No need)*		

Strategic Approach
Strategy #3: Develop and Deploy Team-Based Care Models

Why

- PCPs in Ballad Health's service area often lack resources to address challenging populations such as patients with chronic diseases or behavioral health needs. Team-based care models offer screening and care coordination services which improve outcomes and overall healthcare costs.

How

- Evaluate existing Ballad and private practitioner care coordination resources to ensure effective resourcing within each region, and maximum impact for patients.
- Evaluate existing team-based models, and adjust as necessary for rural populations, and expand to one additional rural site in 2019, and two additional rural sites in 2020.
- Focus on team-based care models that address chronic care needs outside of behavioral health (note: Integration of primary care and behavioral health addressed in Behavioral Health Plan).
- Recruit positions to support regional programs - outlining a schedule of rotation for the teams. Teams to include (*See additional information within Exhibit G*):
  - Care Coordinator
  - Community Health Worker
  - Health Coach
  - Pharmacist
- Leverage virtual health as available to extend access to specialty care within the system. (see Strategy #4 below).

PCP = Primary Care Provider

Strategic Approach

Strategy #3: Develop and Deploy Team-Based Care Models

Metrics Addressed

- Additional team-based care models help to address all of the access metrics listed previously in the Plan Overview – Key Metrics slide.

Potential Barriers to Success

- The implementation plan is dependent on the recruitment, training, and resolution of scope of practice issues and licensing laws of health care professionals, including relatively new functions like community health workers. To the extent that these professionals can not be recruited in the timeframe indicated, certain aspects of the plan may be delayed.

Potential Mitigation Tactics

- Incorporate training programs as an initiative in the HR/GME Plan

Strategic Approach
Strategy #4: Develop and Deploy Virtual Care Services

Why?

- **Infrastructure:** Ballad Health's existing virtual programs lack common platforms or workflows and are disconnected from enterprise-level goals for access. A core infrastructure is needed to support virtual care services, including the following priorities:
  - **Tele-Stroke:** With five existing sites among Ballad Health hospitals, tele-stroke provides a strategic opportunity to scale existing virtual health initiatives with relatively limited investment. Early success here will build traction and facilitate the development of the virtual health infrastructure within the system.
  - **Behavioral Health:** The region is experiencing significant unmet need for behavioral services. However, a significant percentage of patients are diagnosed with lower acuity conditions that do not require face-to-face visits. Shifting lower acuity patients to virtual settings will reinforce broader strategies to extend the capacity of highly skilled BH providers (e.g., psychiatrists). Behavioral telehealth offers virtual face-to-face counseling and improves consistency of coordination with primary care providers.
  - **Pediatric Emergency and Specialty Services:** As discussed in the Children's Health Plan, Ballad is committed to providing telehealth services to Niswonger Children's Hospital Emergency Room Physicians and Specialists to all Ballad hospital emergency departments during 2019. The availability of telehealth resources in the Ballad hospitals will also be evaluated for use as outpatient access points for specialist consults.
  - **Cardiovascular Care:** Several Ballad Cardiovascular practices already leverage remote access clinics to manage patients in rural communities. The next phase of this effort is to utilize telemedicine resources to support the community primary care resources with the management of the cardiovascular patients, keeping the patient in the appropriate setting with the right level of care.

Strategic Approach
Strategy #4: Develop and Deploy Virtual Care Services

How?

- Create a centralized virtual health team (leadership and support staff) that is resourced to support deployment of virtual health strategies and assess gaps. Deploy and/or realign necessary infrastructure, including staff and technology, to support the envisioned virtual care network.
- Add telehealth equipment to ensure all Ballad hospitals have at least one comprehensive cart for high-acuity episodes (e.g., tele-stroke) and one secondary cart for lower-acuity episodes (e.g., consults).
- Expand tele-stroke services to a broader geography, providing enhanced access to this critical service.
- Expand behavioral health telemedicine services by adding 10 outpatient sites for low acuity patients. This capability will support a "hub and spoke" model for behavioral telehealth with Ballad hospital-based services.
- Build on Ballad Health's EPIC roll-out and plan for the expanded deployment of E-visits (email) as an additional means of access to care. *(See Exhibit F for further description of E-visit programs)*
- Collectively, these telehealth resources in Ballad's rural communities will provide additional access to both adult and pediatric specialists.

Strategic Approach
Strategy #4: Develop and Deploy Virtual Care Services

Metrics Addressed

- C8: Specialist Recruitment and Retention
- C10: Preventable Hospitalizations - Medicare
- C11: Preventable Hospitalizations – Adults
- C22: Antidepressant Medication Management – Effective Acute Phase Treatment
- C23: Antidepressant Medication Management – Effective Continuation Phase Treatment

Potential Barriers to Success

- The implementation plan is dependent on the availability health care professionals to provide telehealth services. To the extent that these professionals can not be recruited in the timeframe indicated, certain aspects of the plan may be delayed.
- Legislative and payor policy may hinder full adoption of various virtual care services like telehealth and E-visits.

Potential Mitigation Tactics

- Collaborate with state resources to advocate for legislative policy support

Metrics from Exhibit C, per the Tennessee Terms of Certification Governing the Certificate of Public Advantage, September 18, 2017

Rural Health Plan

3. Implementation Roadmap

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Implementation Roadmap
Milestones and Metrics for Measuring Strategies: 2019

Implementation Milestones and Metrics: Q1 and Q2

Strategies	Q1 Milestones	Q1 Metrics	Q2 Milestones	Q2 Metrics
1. **Expand Access to PCPs Through Additions of Mid-levels**	• Begin process for determining priority locations for mid-levels • Begin recruiting PCP	• *Process initiated* • *Recruitment progress*	• Determine priority locations for mid-levels and begin recruitment	• *Priority locations determined and recruitment initiated*
2. **Recruit Physician Specialists**	• Begin process for determining priority locations/specialties	• *Process initiated*	• Finalize priority locations for specialists and begin recruiting	• *Priority locations determined and recruitment initiated*
3. **Implement Team-Based Care Models to Support PCPs**	• Initiate development of operational plan and metrics for regional deployment of additional enhanced team-based care models	• *Operational plan initiated*	• Complete operational plan and metrics for regional deployment of additional enhanced team-based care models • Recruit staff for initial rural expansion site	• *Operational plan complete* • *Begin staff recruitment*
4. **Deploy Virtual Care Services**	• Develop plan for deployment of comprehensive telehealth equipment to nine (9) Ballad EDs	• *Deployment plan completed*	• Begin deployment of comprehensive telehealth equipment to nine (9) Ballad EDs • Begin service plan for addition of telehealth service programs to Ballad EDs – focusing first on tele-stroke, tele-peds, and tele-behavioral	• *Equipment deployed consistent with deployment plan* • *Initiate service planning*

Implementation Roadmap
Milestones and Metrics for Measuring Strategies: 2019

Implementation Milestones and Metrics: Q3 and Q4

Strategies	Q3 Milestones	Q3 Metrics	Q4 Milestones	Q4 Metrics
1. **Expand Access to PCPs Through Additions of Mid-levels**	• Hire providers for initial sites	• *Providers hired for initial sites*	• Evaluate and refine operations in first sites • Continue hiring per plan	• *New providers hired* • *New provider pipeline* • *Y2 milestones and metrics accepted* • *# of patients treated by additional PC providers*
2. **Expand Access to PCPs Through Continuity Clinics**	• Hire providers for initial sites	• *Providers hired for initial sites*	• Evaluate and refine operations in first sites • Continue hiring per plan	• *New providers hired* • *New provider pipeline* • *Y2 milestones and metrics accepted* • *# of patients treated by additional specialists*
3. **Implement Team-Based Care Models to Support PCPs**	• Hire staff and begin operations for regional pilot site • Begin planning for second and third rural expansion sites	• *Staff hired for pilot site* • *Second and third rural expansion sites initiated*	• Evaluate and refine operations in first regional pilot site • Complete planning for second and third rural expansion sites	• *Evaluation report and future recommendations* • *Second and third rural expansion site plans complete* • *Y2 milestones and metrics accepted* • *# of patient lives under management of a team based care model*
4. **Deploy Virtual Care Services**	• Continue deployment of comprehensive telehealth equipment to nine (9) Ballad EDs • Continue service plan for addition of telehealth service programs to Ballad EDs – focusing first on tele-stroke, tele-peds, and tele-behavioral	• *Equipment deployed consistent with deployment plan* • *Plan continuation*	• Complete deployment of comprehensive telehealth equipment to nine (9) Ballad EDs • Complete service plan for addition of telehealth service programs to Ballad EDs – focusing first on tele-stroke, tele-peds, and tele-behavioral	• *All Ballad EDs have comprehensive telehealth equipment* • *Plan for service deployment approved* • *Y2 milestones and metrics accepted*

Implementation Roadmap
Milestones and Metrics for Measuring Strategies: 2020

Strategies	2020 Milestones and Metrics
1. Expand Access to PCPs Through Additions PCPs and Mid-levels	• Evaluate mid-level performance in 2019 to identify impact and opportunities for improvement • Add at least one (1) additional mid-level provider to a PCP practice in 2020 • *Number of patients treated by additional primary care providers*
2. Recruit Physician Specialists	• Evaluate operations initiated in 2019 to identify impact and opportunities for improvement • *Number of patients treated by additional specialist providers*
3. Implement Team-Based Care Models to Support PCPs	• Evaluate operations initiated in 2019 to identify impact and opportunities for improvement • Initiate operations for second and third rural expansion sites for team-based care • *# of patient lives under management of a team based care model*
4. Deploy Virtual Care Services	• Add secondary carts ensuring all Ballad hospitals have primary and secondary telehealth equipment • Add tele-stroke hospital locations consistent with service deployment plan • Continue tele-peds specialty deployment consistent with plans (see Children's Health Plan) • Expand E-visit program *(See Exhibit F)* • Add tele-behavioral health outpatient sites • *Number of patients treated through new tele-stroke services* • *Number of patients treated through new tele-behavioral services* • *Number of patients treated through new tele-pediatric services*

Implementation Roadmap
Milestones and Metrics for Measuring Strategies: 2021

Strategies	2021 Milestones and Metrics
1. Expand Access to PCPs Through Additions PCPs and Mid-levels	• Evaluate mid-level performance in 2020 to identify impact and opportunities for improvement • Add at least one (1) additional mid-level provider to a PCP practice in 2021 • *Number of patients treated by additional primary care providers*
2. Recruit Physician Specialists	• Evaluate operations initiated in 2020 to identify impact and opportunities for improvement • *Number of patients treated by additional specialist providers*
3. Implement Team-Based Care Models to Support PCPs	• Evaluate operations initiated in 2020 to identify impact and opportunities for improvement • *# of patient lives under management of a team based care model*
4. Deploy Virtual Care Services	• Continue adding tele-stroke hospital locations consistent with service deployment plan • Continue tele-peds specialty deployment consistent with plans (see Children's Health Plan) • Add tele-behavioral health outpatient sites • *Number of patients treated through new tele-stroke services* • *Number of patients treated through new tele-behavioral services* • *Number of patients treated through new tele-pediatric services*

Rural Health Plan

Exhibits

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Exhibit A – Future Business Plan – Provider Collaboration Models

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Exhibit B – Examples of Ballad-Sponsored Educational Materials

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Exhibit B
Examples of Ballad-Sponsored Educational Materials

THE FEDERAL GOVERNMENT IS CHANGING HOW DOCTORS ARE PAID.
Please join us for dinner and education about how this affects you!

President Obama has signed the Medicare Access and CHIP Re-authorization Act (MACRA), and the Centers for Medicare and Medicaid Services has published 900 pages of rules to implement it.

This legislation, and these rules, are intended to accelerate the shift toward value-based reimbursement for physicians. This represents the biggest change in physician reimbursement in the history of the Medicare program and will have a profound impact on how you are paid for your professional services.

Mountain States Health Alliance has invited experts on MACRA from Premier, the largest alliance of healthcare providers, to provide free education on MACRA to physicians on our medical staffs across the region. This is a benefit to you, and an opportunity to ask questions about how this new payment system will affect you.

The federal government intends to implement this program by January, so we wanted to move quickly to provide this opportunity to our physician partners. We have scheduled two programs for your convenience, and you are welcome to attend either or both, free of charge.

Mountain States Health Alliance truly values the relationships we have with our physician partners and friends. These two programs are explicitly for your information, and are intended to make sure you have access to all the information you need. We hope you can join us, as we plan to attend as well.

SESSION 1
JUNE 1 | 6-8 P.M.
Food City Corporate Support Center
1 Food City Circle
(Use 351 Court Street for GPS)
Abingdon, VA 24210

SESSION 2
JUNE 2 | 6-8 P.M.
MeadowView Conference Resort & Convention Center – Cattails Ballroom
1901 Meadowview Pkwy.
Kingsport, TN 37660

RSVP BY MAY 24, 2016
Martha Taylor at 423-915-5121 or taylorma@msha.com
Please include the session of your choice with your RSVP.

MOUNTAIN STATES HEALTH ALLIANCE

Alan Levine, President and CEO | Marvin Eichorn, EVP and Chief Operating Officer
Morris Seligman, EVP and Chief Medical Officer | Lynn Krutak, SVP and Chief Financial Officer
Tony Keck, SVP and Chief Development Officer | Steve Kilgore, SVP and President/CEO, Blue Ridge Medical Mgmt. Corp.

Exhibit B

Examples of Ballad-Sponsored Educational Materials

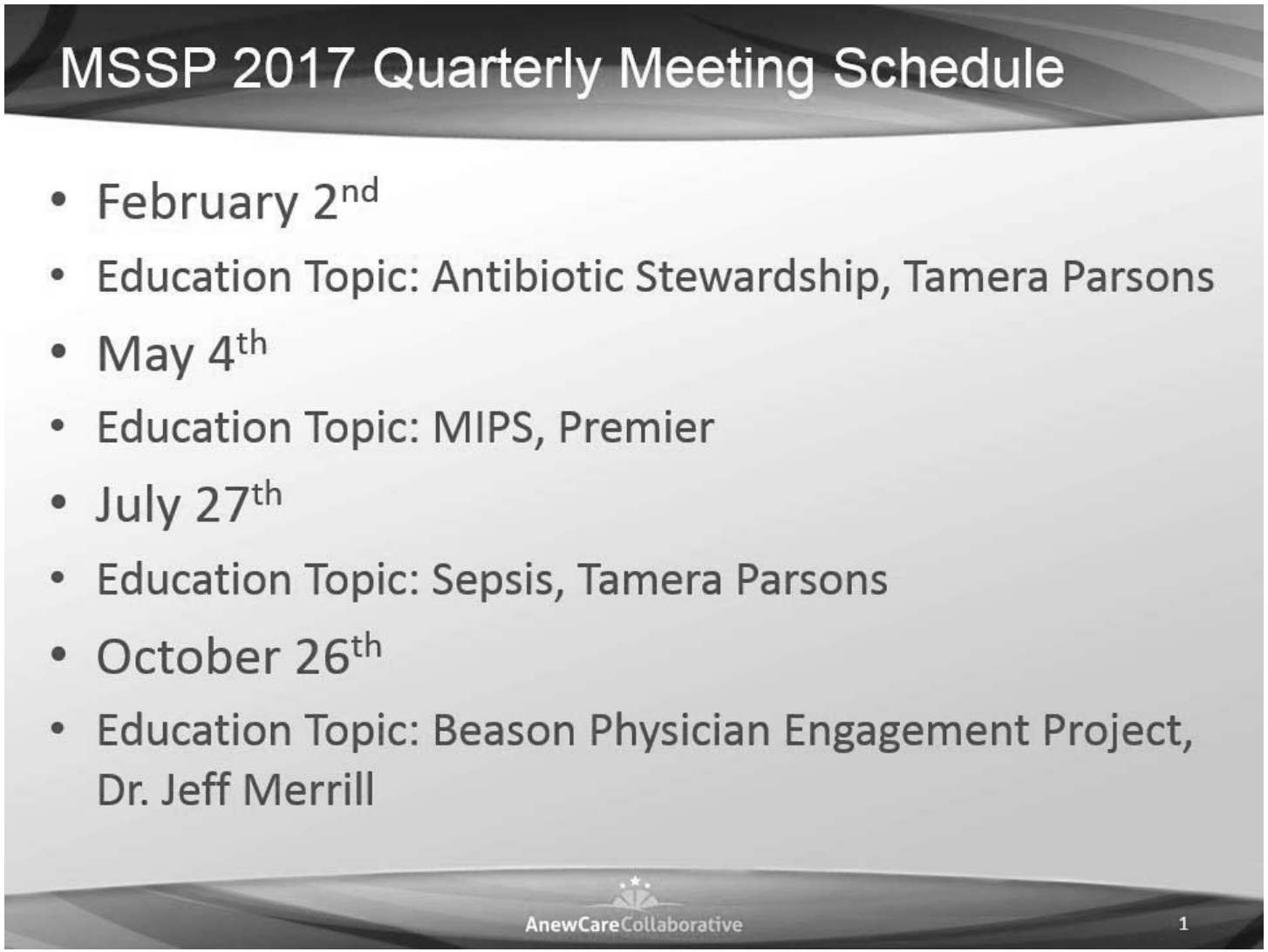
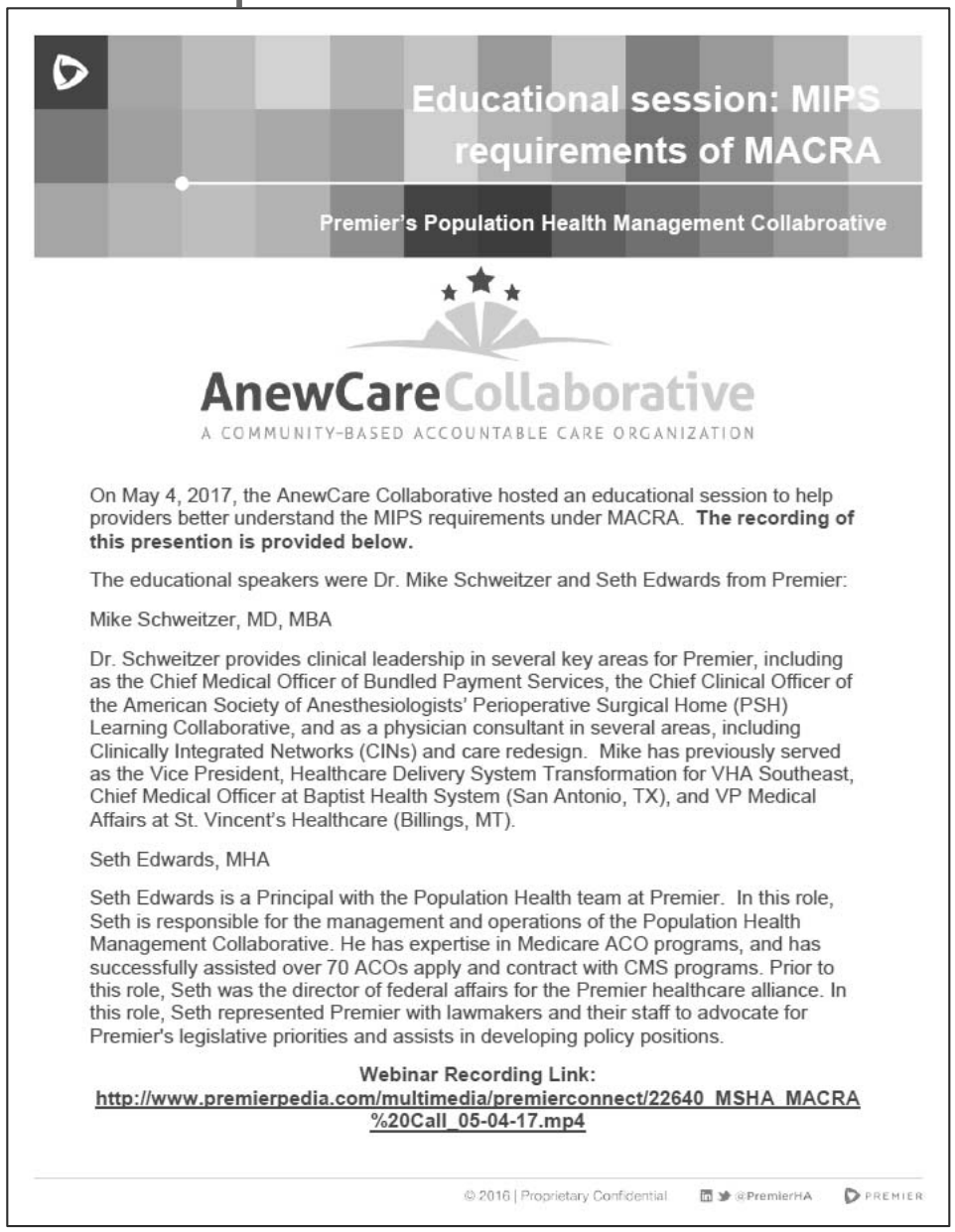


Exhibit B

Examples of Ballad-Sponsored Educational Materials



Educational session: MIPS requirements of MACRA

Premier's Population Health Management Collabroative

AnewCare Collaborative

A COMMUNITY-BASED ACCOUNTABLE CARE ORGANIZATION

On May 4, 2017, the AnewCare Collaborative hosted an educational session to help providers better understand the MIPS requirements under MACRA. **The recording of this presention is provided below.**

The educational speakers were Dr. Mike Schweitzer and Seth Edwards from Premier:

Mike Schweitzer, MD, MBA

Dr. Schweitzer provides clinical leadership in several key areas for Premier, including as the Chief Medical Officer of Bundled Payment Services, the Chief Clinical Officer of the American Society of Anesthesiologists' Perioperative Surgical Home (PSH) Learning Collaborative, and as a physician consultant in several areas, including Clinically Integrated Networks (CINs) and care redesign. Mike has previously served as the Vice President, Healthcare Delivery System Transformation for VHA Southeast, Chief Medical Officer at Baptist Health System (San Antonio, TX), and VP Medical Affairs at St. Vincent's Healthcare (Billings, MT).

Seth Edwards, MHA

Seth Edwards is a Principal with the Population Health team at Premier. In this role, Seth is responsible for the management and operations of the Population Health Management Collaborative. He has expertise in Medicare ACO programs, and has successfully assisted over 70 ACOs apply and contract with CMS programs. Prior to this role, Seth was the director of federal affairs for the Premier healthcare alliance. In this role, Seth represented Premier with lawmakers and their staff to advocate for Premier's legislative priorities and assists in developing policy positions.

Webinar Recording Link:
http://www.premierpedia.com/multimedia/premierconnect/22640_MSHA_MACRA%20Call_05-04-17.mp4

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Rural Health Plan

Exhibit C – Future Business Plan
Information Regarding ACO/MSSP Options

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Exhibit D – Community Paramedicine Well-Visit Pamphlet

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Exhibit D
Community Paramedicine Well-Visit Pamphlet

Washington County – Johnson City EMS

Well Visit Program

About the Program

Washington County – Johnson City EMS and Johnson City Medical Center Hospital have teamed up to offer a program to our patients in which a certified EMT or Paramedic will make periodic checks on patients who have been identified as frequent users of the EMS and Hospital System.

These healthcare professionals will schedule appointments to visit the patients in their home at the patients convenience. During the visit the healthcare provider will visit with the patient checking on how they are doing with their healthcare, identify any needs they may have, and ensure they have been able to obtain the medications that have been prescribed to them.

If the patient needs additional assistance the healthcare provider can assist them in identifying what is the most appropriate course of action.

There is no cost to the patient for these visits.

The goal of the program is to keep our patients at home and getting better.

How to Enroll

There is no requirement on the patients part to enroll initially. Mountain States Health Alliance and WC/JC EMS have identified patients who frequent the EMS and ED system. These patients will be contacted by an EMS or Hospital staff member and asked if they would be willing to enroll in the program. If the patient is agreeable they will need to provide some basic contact information and sign a consent for treatment form. We will take care of the rest!

Exhibit D
Community Paramedicine Well-Visit Pamphlet

Information we will need to start you in the program

Name:_____

Current Address:_____

City_____State_____Zip_____

Home Phone Number:_____

Cell Phone Number:_____

Best time to call: ☐Morning ☐Afternoon ☐Evening

Next of Kin or Alternate Contact

Name:_____

Phone Number:_____

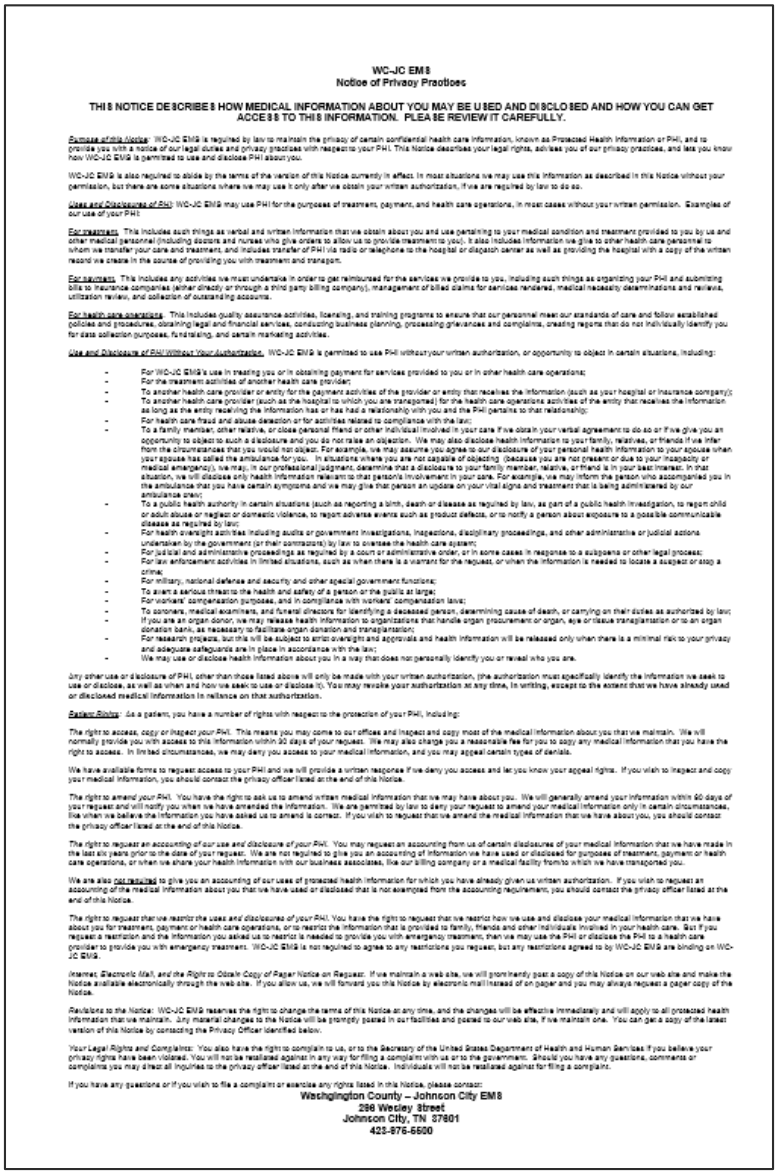
For questions about the program or to reschedule an appointment please call:

Washington County – Johnson City EMS
Non-Emergency Dispatch at 423-975-5515

If you are having an EMERGENCY please call:

911

Exhibit D
Community Paramedicine Well-Visit Pamphlet



WC-JC EMS
Notice of Privacy Practices

THIS NOTICE DESCRIBES HOW MEDICAL INFORMATION ABOUT YOU MAY BE USED AND DISCLOSED AND HOW YOU CAN GET ACCESS TO THIS INFORMATION. PLEASE REVIEW IT CAREFULLY.

Purpose of this Notice: WC-JC EMS is required by law to maintain the privacy of certain confidential health care information, known as Protected Health Information or PHI, and to provide you with a notice of our legal duties and privacy practices with respect to your PHI. This Notice describes your legal rights, advises you of our privacy practices, and lets you know how WC-JC EMS is permitted to use and disclose PHI about you.

WC-JC EMS is also required to abide by the terms of the version of this Notice currently in effect. In most situations we may use this information as described in this Notice without your permission, but there are some situations where we may use it only after we obtain your written authorization, if we are required by law to do so.

Uses and Disclosures of PHI: WC-JC EMS may use PHI for the purposes of treatment, payment, and health care operations, in most cases without your written permission. Examples of our use of your PHI:

For treatment. This includes such things as verbal and written information that we obtain about you and use pertaining to your medical condition and treatment provided to you by us and other medical personnel (including doctors and nurses who give orders to allow us to provide treatment to you). It also includes information we give to other health care personnel to whom we transfer your care and treatment, and includes transfer of PHI via radio or telephone to the hospital or dispatch center as well as providing the hospital with a copy of the written record we create in the course of providing you with treatment and transport.

For payment. This includes any activities we must undertake in order to get reimbursed for the services we provide to you, including such things as organizing your PHI and submitting bills to insurance companies (either directly or through a third party billing company), management of billed claims for services rendered, medical necessity determinations and reviews, utilization review, and collection of outstanding accounts.

For health care operations. This includes quality assurance activities, licensing, and training programs to ensure that our personnel meet our standards of care and follow established policies and procedures, obtaining legal and financial services, conducting business planning, processing grievances and complaints, creating reports that do not individually identify you for data collection purposes, fundraising, and certain marketing activities.

Uses and Disclosures of PHI Without Your Authorization. WC-JC EMS is permitted to use PHI without your written authorization, or opportunity to object in certain situations, including:

- For WC-JC EMS's use in treating you or in obtaining payment for services provided to you or in other health care operations;
- For the treatment activities of another health care provider;
- To another health care provider or entity for the payment activities of the provider or entity that receives the information (such as your hospital or insurance company);
- To another health care provider (such as the hospital to which you are transported) for the health care operations activities of the entity that receives the information as long as the entity receiving the information has or has had a relationship with you and the PHI pertains to that relationship;
- For health care fraud and abuse detection or for activities related to compliance with the law;
- To a family member, other relative, or close personal friend or other individual involved in your care if we obtain your verbal agreement to do so or if we give you an opportunity to object to such a disclosure and you do not raise an objection. We may also disclose health information to your family, relatives, or friends if we infer from the circumstances that you would not object. For example, we may assume you agree to our disclosure of your personal health information to your spouse when your spouse has called the ambulance for you. In situations where you are not capable of objecting (because you are not present or due to your incapacity or medical emergency), we may, in our professional judgment, determine that a disclosure to your family member, relative, or friend is in your best interest. In that situation, we will disclose only health information relevant to that person's involvement in your care. For example, we may inform the person who accompanied you in the ambulance that you have certain symptoms and we may give that person an update on your vital signs and treatment that is being administered by our ambulance crew;
- To a public health authority in certain situations (such as reporting a birth, death or disease as required by law, as part of a public health investigation, to report child or adult abuse or neglect or domestic violence, to report adverse events such as product defects, or to notify a person about exposure to a possible communicable disease as required by law;
- For health oversight activities including audits or government investigations, inspections, disciplinary proceedings, and other administrative or judicial actions undertaken by the government (or their contractors) by law to oversee the health care system;
- For judicial and administrative proceedings as required by a court or administrative order, or in some cases in response to a subpoena or other legal process;
- For law enforcement activities in limited situations, such as when there is a warrant for the request, or when the information is needed to locate a suspect or stop a crime;
- For military, national defense and security and other special government functions;
- To avert a serious threat to the health and safety of a person or the public at large;
- For workers' compensation purposes, and in compliance with workers' compensation laws;
- To coroners, medical examiners, and funeral directors for identifying a deceased person, determining cause of death, or carrying on their duties as authorized by law;
- If you are an organ donor, we may release health information to organizations that handle organ procurement or organ, eye or tissue transplantation or to an organ donation bank, as necessary to facilitate organ donation and transplantation;
- For research projects, but this will be subject to strict oversight and approvals and health information will be released only when there is a minimal risk to your privacy and adequate safeguards are in place in accordance with the law;
- We may use or disclose health information about you in a way that does not personally identify you or reveal who you are.

Any other use or disclosure of PHI, other than those listed above will only be made with your written authorization, (the authorization must specifically identify the information we seek to use or disclose, as well as when and how we seek to use or disclose it). You may revoke your authorization at any time, in writing, except to the extent that we have already used or disclosed medical information in reliance on that authorization.

Patient Rights: As a patient, you have a number of rights with respect to the protection of your PHI, including:

The right to access, copy or inspect your PHI. This means you may come to our offices and inspect and copy most of the medical information about you that we maintain. We will normally provide you with access to this information within 30 days of your request. We may also charge you a reasonable fee for you to copy any medical information that you have the right to access. In limited circumstances, we may deny you access to your medical information, and may appeal certain types of denials.

We have available forms to request access to your PHI and we will provide a written response if we deny you access and let you know your appeal rights. If you wish to inspect and copy your medical information, you should contact the privacy officer listed at the end of this Notice.

The right to amend your PHI. You have the right to ask us to amend written medical information that we may have about you. We will generally amend your information within 60 days of your request and will notify you when we have amended the information. We are permitted by law to deny your request to amend your medical information only in certain circumstances, like when we believe the information you have asked us to amend is correct. If you wish to request that we amend the medical information that we have about you, you should contact the privacy officer listed at the end of this Notice.

The right to request an accounting of our use and disclosure of your PHI. You may request an accounting from us of certain disclosures of your medical information that we have made in the last six years prior to the date of your request. We are not required to give you an accounting of information we have used or disclosed for purposes of treatment, payment or health care operations, or when we share your health information with our business associates, like our billing company or a medical facility from to which we have transported you.

We are also not required to give you an accounting of our uses of protected health information for which you have already given us written authorization. If you wish to request an accounting of the medical information about you that we have used or disclosed that is not exempted from the accounting requirement, you should contact the privacy officer listed at the end of this Notice.

The right to request that we restrict the uses and disclosures of your PHI. You have the right to request that we restrict how we use and disclose your medical information that we have about you for treatment, payment or health care operations, or to restrict the information that is provided to family, friends and other individuals involved in your health care. But if you request a restriction and the information you asked us to restrict is needed to provide you with emergency treatment, then we may use the PHI or disclose the PHI to a health care provider to provide you with emergency treatment. WC-JC EMS is not required to agree to any restrictions you request, but any restrictions agreed to by WC-JC EMS are binding on WC-JC EMS.

Internet, Electronic Mail, and the Right to Obtain Copy of Paper Notice on Request. If we maintain a web site, we will prominently post a copy of this Notice on our web site and make the Notice available electronically through the web site. If you allow us, we will forward you this Notice by electronic mail instead of on paper and you may always request a paper copy of the Notice.

Revisions to the Notice: WC-JC EMS reserves the right to change the terms of this Notice at any time, and the changes will be effective immediately and will apply to all protected health information that we maintain. Any material changes to the Notice will be promptly posted in our facilities and posted to our web site, if we maintain one. You can get a copy of the latest version of this Notice by contacting the Privacy Officer identified below.

Your Legal Rights and Complaints: You also have the right to complain to us, or to the Secretary of the United States Department of Health and Human Services if you believe your privacy rights have been violated. You will not be retaliated against in any way for filing a complaint with us or to the government. Should you have any questions, comments or complaints you may direct all inquiries to the privacy officer listed at the end of this Notice. Individuals will not be retaliated against for filing a complaint.

If you have any questions or if you wish to file a complaint or exercise any rights listed in this Notice, please contact:

Washington County – Johnson City EMS
256 Wesley Street
Johnson City, TN 37601
423-975-5600

Rural Health Plan

Exhibit E – Map of Ballad Medical Associates Primary Care Locations

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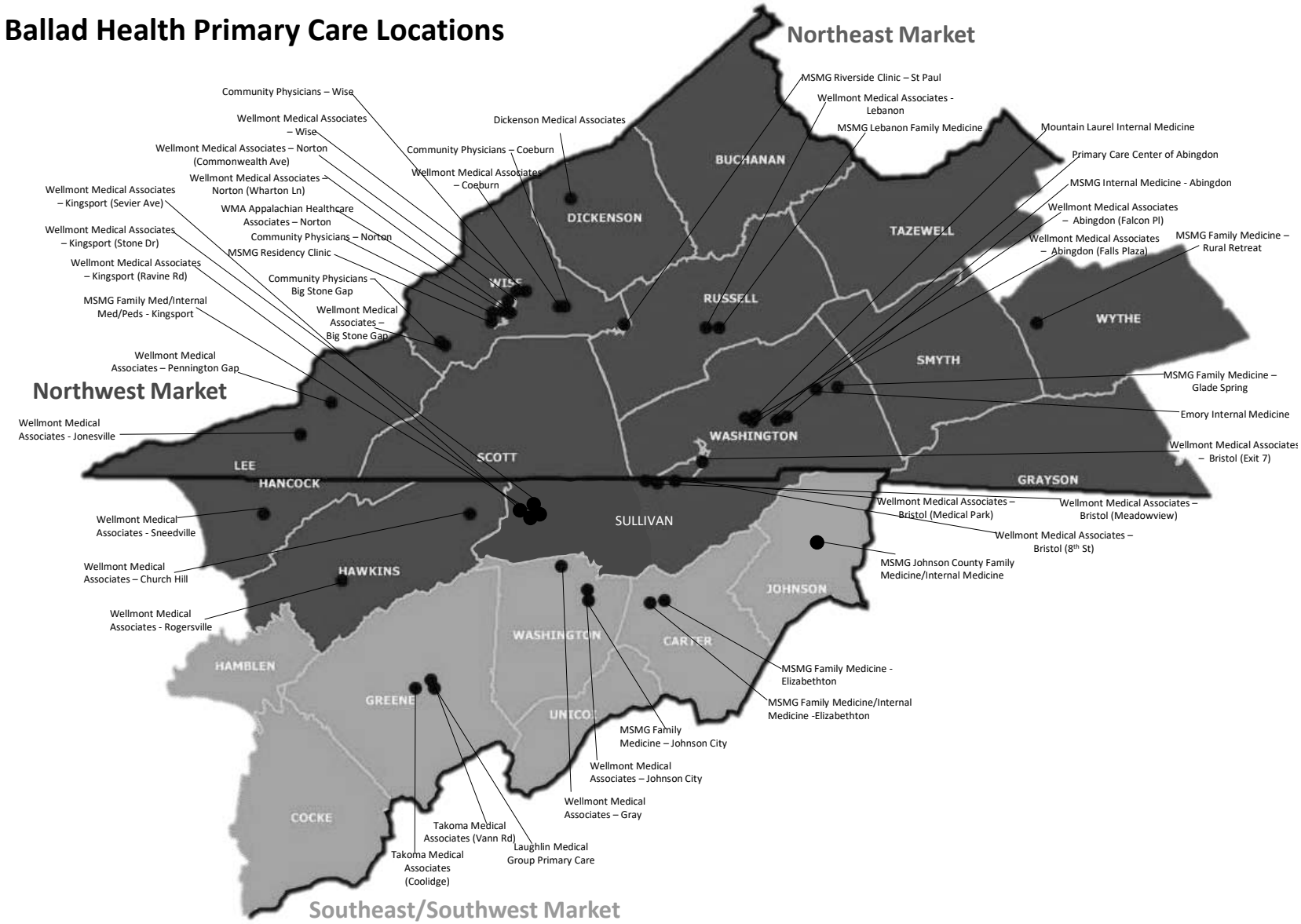
Exhibit E

Map of Ballad Medical Associates Primary Care Locations



Rural Health Plan

Exhibit F – E-visits

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Exhibit F

E-visits

When Ballad Health chose to expand its information technology to include a unified electronic medical record, the system chose EPIC. This was with the knowledge that one chart and one record across the entirety of the health system would provide numerous benefits for the communities we serve. One of the benefits of EPIC is the ability of patients to access their record via MyChart. MyChart gives patients the ability to create a free account with online access from anywhere they are able to access the internet. Embedded within the MyChart technology are E- visits.

E-visits allow an online opportunity to evaluate and treat patients suffering from minor ailments for a nominal fee. This works by the patient accessing a medically vetted E-visit questionnaire which is then sent to their provider for review. The provider, after reviewing the questionnaire is able to provide treatment, contact the patient for more information, or ask the patient to come to the clinic for an in person evaluation. The initial program, implemented by the legacy Wellmont Health System, was limited to visits for cough, diarrhea, red eye, sinusitis, simple urinary tract infection, vaginitis, heartburn, headache, fatigue, contact dermatitis, and swimmer's ear initially. With the successful implementation of the first wave of E-visits and requests from providers for other options, a second series is currently under development and will include abrasions/scrapes, acne, breast feeding issues, diaper rash, hay fever, head lice, influenza, insect bite, pink eye/conjunctivitis, rash and sunburn. In addition there are updates to the cough, diarrhea, and sinus E-visits along with the expansion of several of the previous and newer E-visits into our pediatric population. E-visits are one method in which Ballad Medical Associates will be able to continue to meet the needs of the patients of our region by providing the right care, at the right place and at the right time.

Rural Health Plan

Exhibit G – Team-Based Care

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Exhibit G
Team-Based Care

Team-Based Care

In the years prior to the merger both legacy Mountain States Medical Group and legacy Wellmont Medical Associates were on independent quality improvement journeys. These journeys included establishing a team-based model of care. Below is a description of members of the extended care team.

Care Coordinators

The first phase of this journey addressed making sure that the patients are receiving the evidence-based screenings appropriate for their age and risk profile. Ballad leverages technology and human resources to ensure that these "gaps in care" are presented to the physician / advanced practice provider (APP) at the time of the visit with the patient. At that time the physician/ APP will address the gaps in care. The human resources deployed for this are part of the extended care team and function on behalf of the PCP.

Exhibit G
Team-Based Care

Care Coordinators (continued)

Other work revolves around follow-up after hospitalization and ER visits. Team members call patients within 2 business days of discharge to assess the following:

- Whether discharge medications were obtained
- Patient and / or caregiver understanding of discharge medications
- Whether or not services such as Home Health have been initiated or if there are any barriers to that – if there are barriers these will be resolved
- Whether or not the patient has the appropriate DME supplies to assist in self-management at home e.g. raised toilet seat, walker
- Whether or not the patient has assistance at home (if this is needed)
- Whether or not the patient has a timely follow-up with the physician/ APP – if the patient needs a sooner appointment, this will be arranged

The care coordinators are tasked with finding and removing any barriers to care.

After visits to the emergency room there is a different focus

- Ensuring that the patient feels that the symptoms of concern are improving – if not the Care Coordinator will arrange for a sooner follow-up appointment with the PCP
- Patients are educated on their disease process, if applicable
- Patients are routinely educated on the appropriate settings for care and the use of urgent care

Exhibit G
Team-Based Care

Care Managers

The needs of medically complex patients are extensive and ever-changing. Care Managers reach out to high-risk patients and engage them in Care Management. The Care Managers engage in conversations with the patient and/or caregivers to understand the patient's perception of current health status. They are always looking to identify barriers to care. Care Managers focus on ensuring the patient and/or caregivers have an understanding of the patient's disease process(es) and the foundation for self-management. Care Managers evolve into a trusted link for the patient and/or caregivers to the healthcare system.

Care of the complicated patient is focused on ensuring the following:

- Patient's (and/or caregiver's) understanding of the disease process
- Patient's (and/or caregiver's) understanding of self-management skills and techniques
- Patient's (and/or caregiver's) understanding of all medications and the importance of medication adherence
- A focus on working toward short- and long-term goals that are part of the patient's care plan as formulated by the PCP
- Motivational interviewing to help the patient achieve therapeutic lifestyle changes and /or better self-management and improved health status

Summary: Ballad's team currently numbers 43 individuals (Care Coordinators and Care Managers) dedicated to serving patients in these roles.

Exhibit G
Team-Based Care

Clinical Psychologist (Pediatrics)

Ballad Medical Associates' Kingsport pediatric practice includes an embedded Clinical Psychologist. The model employs a "warm hand-off" approach to behavioral care. The Clinical Psychologist is available to see patients (and parents) immediately at the request of the pediatric primary care provider. In this way the needs of the patient are met in a timely manner without a repeat trip to the office. The Clinical Psychologist is also available for individual appointments with pediatric patients.

Clinical Pharmacists

Medication issues and errors are among the top reasons for hospital readmissions. Medications are also a source of confusion for patients leading to adverse events. The legacy Ballad systems embedded their first Clinical Pharmacist (CP) (as a shared team member between two practices) in 2015. Two additional CPs were subsequently added, one in 2016 and one in 2017. These professionals are available to see patients as part of a shared visit. This has increased the level of service to patients by allowing CPs to provide comprehensive medication management within the walls of the trusted PCP practice. These Care Team members have played a pivotal role in helping educate patients about their medications, optimizing opioid regimens, and reducing the potential for medication adverse events. As of 7/3/2018, the CPs performed 2,095 interventions (which represents a change being made to a medication or the ordering of a lab test for monitoring) as a result of their work in the Primary Care locations. Ballad anticipates needing more CPs and has plans to bring on additional team members, focused on medication-related outreach.

Exhibit G
Team-Based Care

Behavioral Healthcare Navigators (BHCNs)

Unmet social and behavioral health needs are an underlying cause of poor health status. In order to start addressing these needs more holistically, Ballad has partnered with a local Behavioral Health provider, Frontier Health. As a result of the partnership, two BHCNs as part of the Team-Based Model of Care. BHCNs take referrals from providers, care coordinators and care managers. The Behavioral Healthcare Navigators work to coordinate initial meetings with patients at the PCP office. Thereafter, the BHCN visits the patient in the home and works to solve unmet social needs. Where there is a behavioral health need, the BHCNs provide an expedited, warm hand-off to Frontier Health.

Population Health Advocate (Pediatrics)

The role of Population Health Advocate (PHA) has been added to the pediatric office to help support the needs of patients and families who require extra assistance. This individual makes sure that patients have appointments and keep them. If appointments are not made, they will make them. If transportation is needed they will assist. The advocate also serves as a liaison with the schools to make sure that the information transfer between school and pediatrician is smooth. If there are other resources the family requires, the PHA will make the connection.

Exhibit G
Team-Based Care

Next Generation

Ballad is currently evaluating the need for additional team-members within PCP offices to fully complement the team-based care approach described previously. Among consideration are additional BHCNs, Clinical Pharmacists, Clinical Psychologists, PHAs, outreach specialists, health coaches, and dieticians. The list is not meant to be exhaustive, nor does that mean that all these roles will be deployed. Strategies around team-based care are constantly being evaluated with a view to evolving the structure.

Current work also involves strategizing about bringing more services to the patient while the patient is at home (e.g. home Wellness Visits). This will allow patients to receive a higher level of care in their own home.

Rural Health Plan

*Exhibit H – **Future Business Plan** - Details Regarding the Initial Provider Needs Assessment*

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Final Rural Health Plan
For the State of Tennessee

January 29, 2019

BalladHealth™

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Health Information Exchange Plan for the State of Tennessee

January 29, 2019

BalladHealth™

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Introduction

- The final version of the Health Information Exchange (HIE) plan was requested by the State of Tennessee in the September 18, 2017 Terms of Certification. The Plan is due in final form by January 31, 2019.

- The content of this plan is consistent with requirements as outlined in Terms of Certification governing the Certificate of Public Advantage and represents those actions to be taken by Ballad Health deemed by the State of Tennessee to constitute public benefit.

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

Important Dates

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

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

** Consistent with The Commonwealth of Virginia Department of Health request, Ballad Health previously submitted a draft version of the HIE plan on November 30, 2018 and provided a copy to the State of Tennessee. This document presents the final version of that plan.*

Process for Plan Development

Initiate

- Engaged Resources
- Named Executive Steering Team

Plan

- Assessed Current HIE and Interoperability State and Future Vision
- Documented Future State & Develop Gap Analysis
- Developed Operational Model Framework
- Developed HIE and Interoperability Roadmap

Review

- Presented Draft Plan to Executive Steering Team
- Provide Tennessee Department of Health (TDH) with Draft Plan Submitted to Virginia Department of Health (VDH)
- Review Draft Plan 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

Process and Participation for Plan Development

In developing this plan, Ballad Health has referenced previously developed plans and analyses and solicited extensive stakeholder input including:

- Conducted approximately 50 individual interviews
- Held approximately 30 meetings with external groups, including:
  - State of Franklin Healthcare Associates
  - East Tennessee State University
  - Holston Medical Group
  - Tennessee Department of Health
  - Tennessee Department of Finance & Administration
  - Virginia Department of Health
  - etHIN
  - OnePartner
  - MedVirginia
  - Connect Virginia
  - The Sequoia Project
  - CollectiveMedical
  - Cleveland Clinic
  - Epic
  - CRISP
  - Velatura
  - The Center for Medical Interoperability
  - CareJourney

Table of Contents for HIE Plan

HIE Plan

1. Plan Overview

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Plan Overview
TN COPA HIE Plan Requirements

TN COPA Requirement
Submit a plan to (i) coordinate with the Independent Physicians and other health care providers in the Geographic Service Area and other relevant third parties to determine the optimal technology solution for expanding the scope and effectiveness of providing access to patient electronic health information to the Independent Physicians and other health care providers, and (ii) take all actions within its control to prohibit the resale or other commercial use of the HIE data

Source: Tennessee Certification of Public Advantage, Section 3.05 (c)

Plan Overview
HIE Strategies

Ballad Health will deploy foundational and tactical strategies to provide and promote interoperability in its Geographic Service Area (GSA). Many of these strategies are predicated on the successful extension of Epic system to Legacy Mountain State Health Alliance.

Strategy #1: Establish Ballad Health HIE Steering Committee

Strategy #2: Conduct Geographic Service Area Interoperability Research

Strategy #3: Identify Optimal Portfolio of Interoperability and Assemble Deployment Strategies

Strategy #4: Develop an HIE Recruitment and Support Plan

Strategy #5: Participate in ConnectVirginia's HIE and Other TN/VA Regulatory Programs

Plan Overview
Strategies Related to TN COPA HIE Plan Requirements

TN COPA Requirement	1. HIE Steering Committee	2. Inter-Operability Research	3. Optimal Portfolio and Deployment	4. HIE Recruitment & Support Plan	5. Participate in Connect-Virginia & Other TN/VA Programs
1) Coordinate with the Independent Physicians and other health care providers in the Geographic Service Area and other relevant third parties to determine the optimal technology solution for expanding the scope and effectiveness of providing access to patient electronic health information to the Independent Physicians and other health care providers		Y	Y	Y	
2) Take all actions within its control to prohibit the resale or other commercial use of the HIE data	Y		Y	Y	

Plan Overview
HIE Estimated Investment Summary

Health Information Exchange Plan	Year 1		Year 2		Year 3		Year 1-3 Total	
	Low	High	Low	High	Low	High	Low	High
Strategy #1: Establish Ballad Health HIE Steering Committee	$157,000		$157,000		$157,000		$471,000	
Strategy #2: Conduct Geographic Service Area Interoperability Research	$81,000		$0		$0		$81,000	
Strategy #3: Identify Optimal Portfolio of Interoperability and Assemble Deployment Strategies	$241,000		$187,000		$187,000		$615,000	
Strategy #5: Participate in Connect Virginia's HIE and Other TN/VA Regulatory Programs	$213,000		$249,000		$249,000		$711,000	
Sub-Total	**$692,000**		**$593,000**		**$593,000**		**$1,878,000**	
Strategy #4: Develop an HIE Recruitment and Support Plan	$308,000	$308,000	$407,000	$2,797,000	$157,000	$1,684,000	$872,000	$4,789,000
Total	**$1,000,000**	**$1,000,000**	**$1,000,000**	**$3,390,000**	**$750,000**	**$2,277,000**	**$2,750,000**	**$6,667,000**
COPA-Mandated Minimum Expenditures	*$1,000,000*		*$1,000,000*		*$750,000*		*$2,750,000*	
Potential Funding Needed in Excess of Minimum Spending Requirements	***$0***	***$0***	***$0***	***$2,390,000***	***$0***	***$1,527,000***	***$0***	***$3,917,000***

HIE Plan

2. Strategic Approach

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Strategic Approach

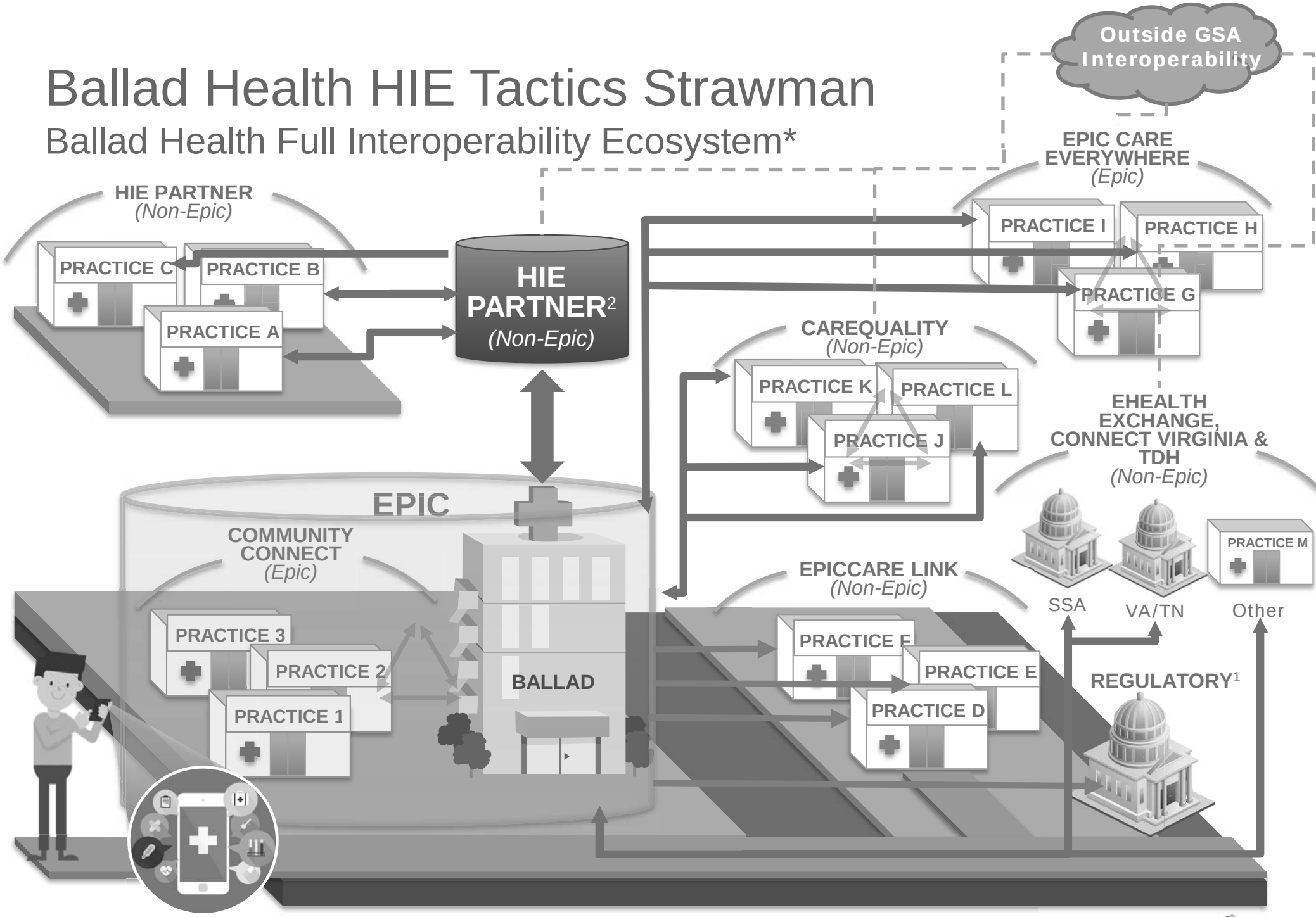
HIE Plan Guiding Principles (Key Design Requirements)

Ballad Health developed a set of Guiding Principles, reflecting management's philosophy, which helped to guide decision making for the plan. The Guiding Principles are as follows:

- Existing investment in Epic tools: Ballad Health's HIE Plan will capitalize on the existing investment in Epic tools exchanging relevant patient data as needed by providers
- OnePartner Standard Alignment: Ballad Health's endorsed HIE offerings should match or surpass the regional standards set by OnePartner or other available options
- HIE Approach: Partner with regional HIEs
- Degree of HIE Technological Innovation: Ballad Health wants to engage in visible, pioneering HIE, preferable via working with their regional HIE organizations and utilize standards-based interoperability (i.e., HL7, FHIR)
- Data Ownership Model: GSA patient information should preferably reside within a single warehouse or data repository to allow for population health analytics; protect from the resale or other commercial use of the HIE data; provide approved researchers with access
- HIE Entity Governance: A defined set of organizations participate in shared governance of the regional HIE
- Common Clinical IT Platform: Make reasonably accessible to all physicians in GSA

Ballad Health HIE Tactics Strawman

Ballad Health Full Interoperability Ecosystem*



** Information retrieval is dictated by existing patient relationship*

[1] Includes EDCC, PDMP, Immunization, etc.

[2] HIE Partner may serve as a TEFCA defined health information network (HIN) and/or Qualified Health Information Network (QHIN)

Strategy #1: Establish Ballad Health HIE Steering Committee

Why?

- Independent Providers* will benefit from a well governed steering committee that is responsive to their/ the Geographic Service Area's HIE needs
- A well-developed HIE governance structure will ensure the successful deployment and ongoing management of the organization's HIE strategies and initiatives

How?

- Establish a Ballad Health HIE Steering Committee - Establish an HIE Steering Committee to manage the deployment and ongoing maintenance of Ballad Health's HIE program, including maintaining compliance with the COPA. Participants to include senior leadership representing:
  - Operations
  - Finance
  - Information technology
  - Legal
  - Ballad Medical Group
  - Population Health
  - Quality
  - External Providers
  - Privacy & Security
  - Marketing
- Appoint an HIE Program Director - Designate an HIE Program Director responsible for the day to day management of Ballad Health's program

*'Independent Providers' will be used throughout the document having the same meaning as 'Independent Physician and Other Providers' within COPA/CA

Strategy #2: Conduct Geographic Service Area Interoperability Research

Why?

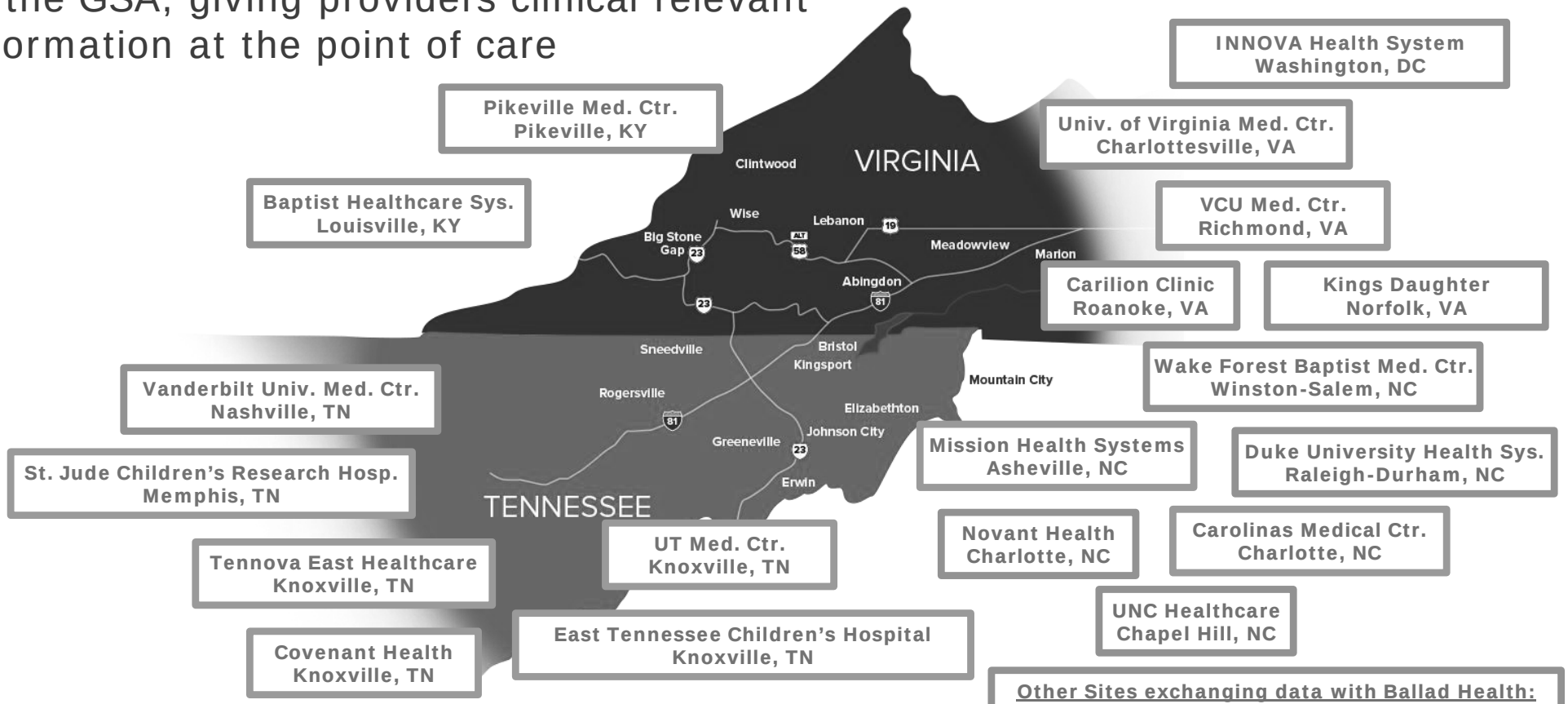
- Most HIE connectivity is voluntary and requires some level of investment by participating providers and healthcare organizations (no greater than allowed per federal anti-kickback statutes)
- Market research will allow Ballad Health to better understand the actual interest, readiness and willingness to pay of Geographic Service Area Independent Providers to engage in HIE within the region
- Independent Providers will be educated on the various offerings, including estimated costs to the provider and will be able to choose a solution that provides interoperability while fitting within the provider's budget, wants and needs

How?

- Ballad Health has already conducted an initial assessment of available interoperable options within the market place. Leveraging the initial assessment, Ballad Health will conduct research to gauge interest in menu offerings. This will allow Ballad Health to educate and survey Independent Providers within the region to understand their interest in the interoperability options. See following slides for the initial assessment. Additional information is provided in Appendix A: Environmental Scan and Appendix B: HIE Current State Analysis

Interoperability Option Assessment

Ballad Health already leverages Epic to exchange health information automatically with both Epic and non-Epic sites, inside and outside of the GSA, giving providers clinical relevant information at the point of care



Ballad Health exchanges data with major Epic referral sites via Epic-to-Epic Care Everywhere or non-Epic sites via Carequality.

Sites who use Cerner. MEDITECH, or Allscripts EMRs, may be members of the CommonWell Health Alliance Exchange which joined the Carequality network in 2018. Ballad Health will soon be able to exchange data with participating CommonWell members.

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Interoperability Option Assessment

Mutually Desired Depth of Interoperability

High → *Low*

Strategy	Epic Community Connect	Care Everywhere Epic-to-Epic	Carequality	eHealth Exchange & Connect-Virginia	HIE Partner	Portal, Messaging & Integration	Other Patient-driven HIE Tools	Regulatory
Depth of Interoperability	High	High	Medium	Medium	Medium	Low	NA	NA
Non-Ballad Health Provider Interoperability	Yes	Yes	Yes	No	Yes	No	No	No
Bi-Directional?	Yes	Yes	Yes	Yes	Yes (w/ Practice EHR Config.)	No (Limited)	No (Limited)	Varies
Effort to Implement	High	Low	Low	Medium	Medium	Low	Low	Varies
Governed By?	Shared	Ballad Health	Ballad Health	N/A	Shared	Ballad Health	Ballad Health	N/A
Cost to Ballad Health	$$$$	-	$	-	$$$	-	-	$
Cost to Independent Provider	$$$	-	$	Varies	TBD	-	N/A	N/A

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Interoperability Option Assessment

Interoperability Options

1. Epic Community Connect
   - Ballad Health would develop a program to extend its Epic instance to Independent Providers. Beyond the EHR functional benefit, Ballad Health and Independent Providers share a single patient record. Providers pay a one-time implementation fee and an ongoing maintenance fee
   - Enables seamless interoperability among Ballad Health and Independent Providers
2. Care Everywhere Epic-to-Epic
   - Ballad Health to exchange information with other Epic customers via Epic native interoperability
   - Epic users can use Happy Together, a functionality that presents all aggregated patient records in a single and user-friendly view
   - Enables interoperability among Ballad Health and other Epic facilities and providers both within and outside the Geographic Service Area

Interoperability Option Assessment

Interoperability Options (*Continued*)

3. Carequality
   - Ballad Health to exchange information with other non-Epic organizations via Carequality
   - Happy Together will present all aggregated patient records in a single and user-friendly view, within Epic. Independent Providers' views and functionality will vary by non-Epic system. Independent Providers will be responsible to pay any set up or ongoing fees charged by their vendor
   - Enables interoperability among Ballad Health and/or other Carequality participants and Independent Providers
4. eHealth Exchange & Connect-Virginia
   - Ballad Health to exchange information with large non-Epic customers, federal entities (VA, DOD,SSA), and non-Epic organizations using eHealth Exchange and Connect-Virginia when these exclusive networks are being used
   - Enables interoperability with other large non-Epic entities where patients may have been referred, outside of the region

Interoperability Option Assessment

Interoperability Options (*Continued*)

5. HIE Partner
   - Ballad Health to partner with or purchase an external HIE organization (could be national, state, regional) that supports community HIE with a centralized database and connects bi-directionally with Ballad Health. Ballad Health will provide oversight and financial support. Participating Independent Providers pay reasonable implementation and ongoing support fees
   - Enables interoperability between Ballad Health and Independent Providers. Also enables interoperability among Independent Providers
6. Portal, Messaging & Integration Services
   - Ballad Health to provide Independent Providers with free access to an Epic based portal with referral, secure messaging, and read-only access to Ballad Health's Epic system, one-way messaging services or interfaces. Ballad Health will provide resources and oversight to facilitate the setup, testing, and implementation on behalf of Independent Providers
   - Enables Independent Providers the ability to view and communicate with Ballad Health without incurring additional fees

Interoperability Option Assessment

Interoperability Options (*Continued*)

7. Other Patient-Driven HIE Tools
   - Ballad Health to provide Independent Providers and patients education around patient-driven HIE tools (such as Epic's Share Everywhere or leading retail vendor solutions such as Apple Health) by continually monitoring industry development, engaging the community, and promoting the use of these tools throughout the region
   - Enables patients to actively secure a copy of their electronic medical record and share with providers as needed
8. Comply with Regulatory Requirements
   - Ballad Health will participate in all required federal, state, or regional regulatory programs and encourages participation by other area providers (such as VA EDCC, VA PDMP, VA and TN Immunization Programs). Enables Independent Providers the ability to view and communicate with Ballad Health without incurring additional fees
   - Enables interoperability among Ballad Health, other health organizations and Independent Providers which improves patient care and reduces redundant services

Strategy #3: Identify Optimal Portfolio of Interoperability and Assemble Deployment Strategies

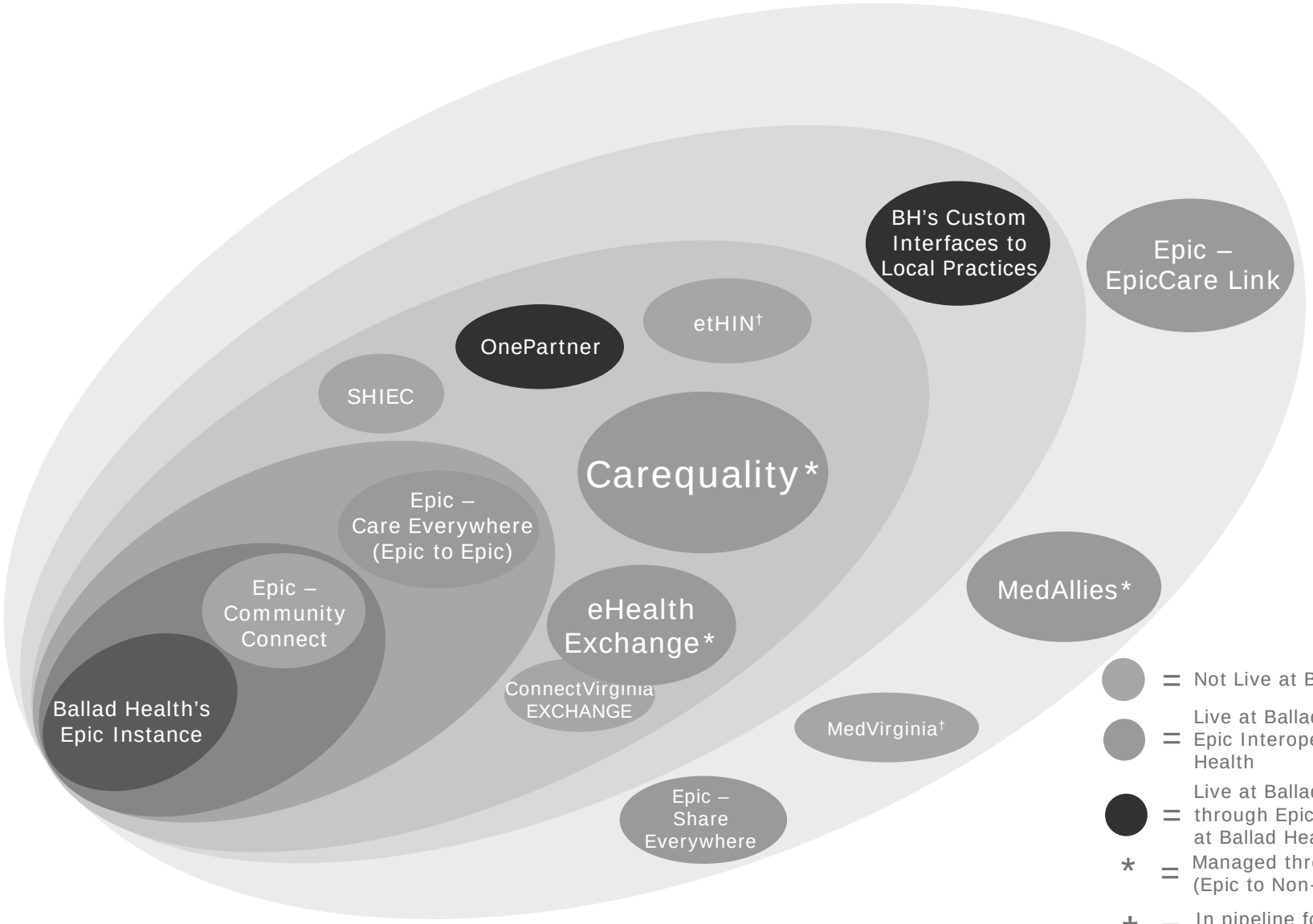
Why?

- While all the aforementioned interoperability options are available in the market, there is not a rationale plan to connect optimally with these capabilities.
- The goal is to obtain maximum concentration of patient encounters from the available funding. This will require prioritizing interoperability options in such a way that generates the maximum benefit and coverage with the least cost. The approach will be to layer the most impactful solution first, then the second most impactful solution and so forth. Resource constraints exist within Ballad Health as well as at the provider level (for example, some providers are still documenting on paper). This coupled with market choice limits the ability to obtain 100 percent of coverage and 100 percent of capabilities. The next slides are examples to illustrate the change to interoperability coverage over time based on this layering approach.

How?

- Develop an HIE plan with deployment strategies. Based on the initial assessment of the current interoperability environment in the GSA and the market survey gauging interest of area providers, Ballad Health will formulate a future state and develop an HIE plan that address gaps between where it wants to be and where it is today.

HIE Current State Analysis – HIE Capability in the Ballad Health Service Area



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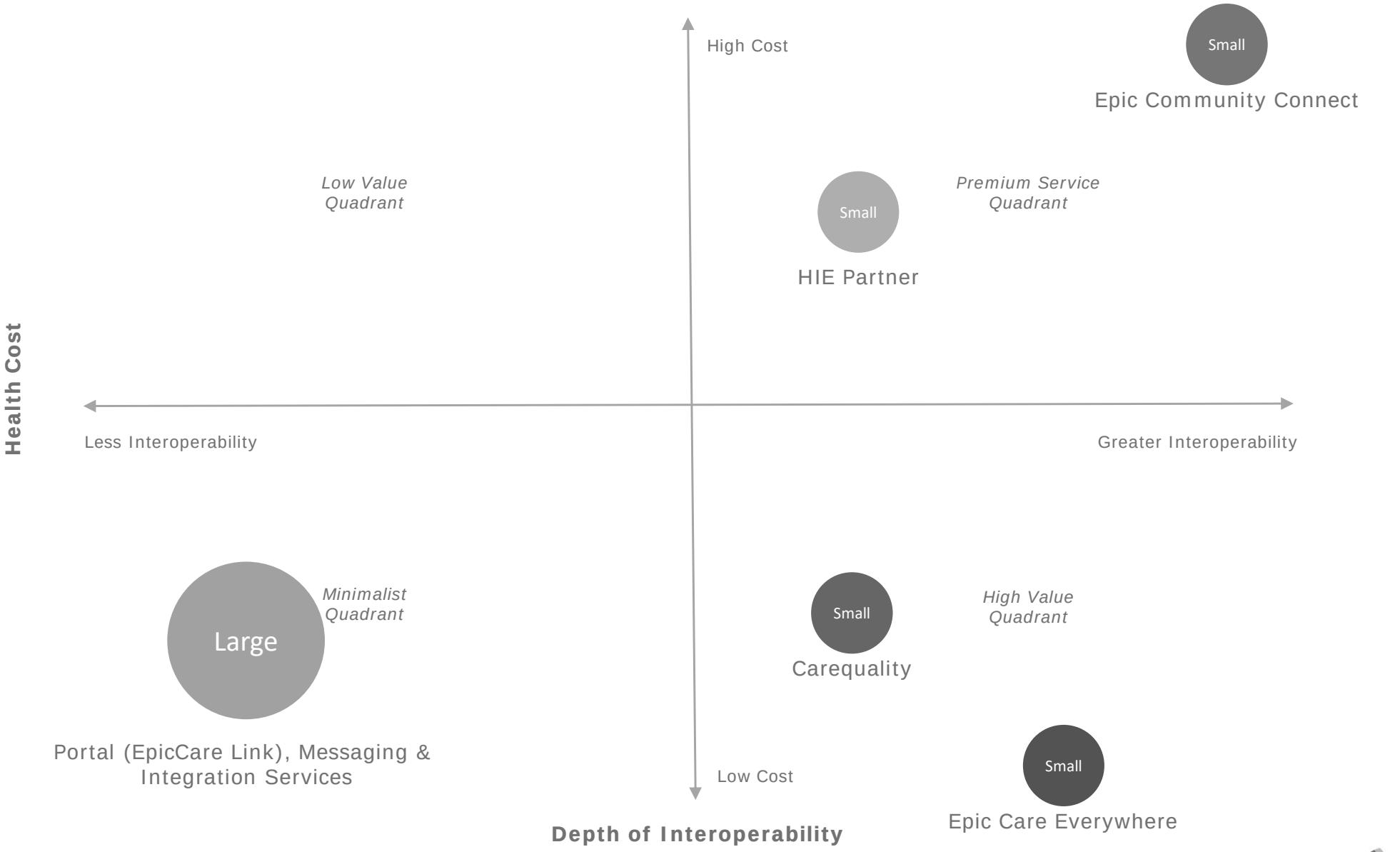
Layering Approach - Illustrative

Strategy Interoperability Projected Value & Adoption Comparison: Short-Term



Size of bubbles reflects the relative projected # of GSA providers exchanging information via Strategy

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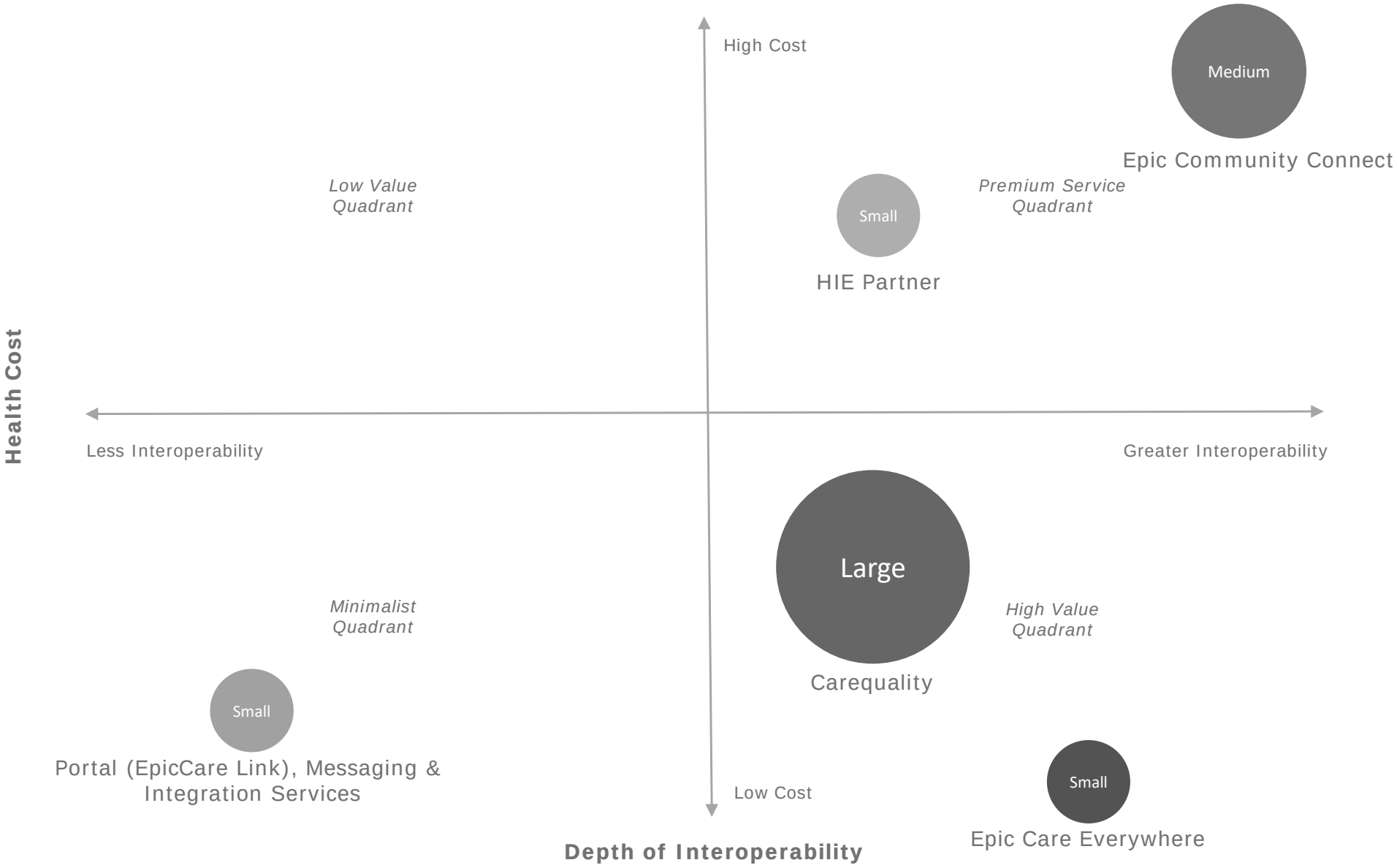
Layering Approach - Illustrative

Strategy Interoperability Projected Value & Adoption Comparison: Long-Term



Size of bubbles reflects the relative projected # of GSA providers exchanging information via Strategy

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Strategy #4: Develop an HIE Recruitment and Support Plan

Why?

- A recruitment and support plan will identify and engage practices interested in Ballad Health's HIE program and educate them. It will identify the support necessary to ensure successful deployment.
- Independent Providers will be made aware of Ballad Health's program and have an opportunity to ask/address their questions

How?

- Based on outcomes of Strategies #2 and #3, Ballad Health will design and deploy an HIE Recruitment Plan. The plan will include communications both within Ballad Health and with the Independent Providers. It will include marketing activities and materials to approach the Independent Providers within the region regarding the menu offerings
- Ballad Health will identify a marketing staff member who will be responsible to recruit participation from the Independent Providers in the region in the various interoperability options. Staff will coordinate activities with the HIE Partner.

Strategy #5: Participate in ConnectVirginia's HIE and Other TN/VA Regulatory Programs

Why?

- Enables interoperability among Ballad Health, other health organizations and Independent Providers which improves patient care and reduces redundant services
- Enables Independent Providers the ability to view and communicate with Ballad Health without incurring additional fees

How?

- Ballad Health will continue to participate in the VA Emergency Department Care Coordination (EDCC) Program and roll out to the Tennessee facilities
- Ballad Health will continue to participate in the Commonwealth's Prescription Drug Monitoring Program (PDMP) program
- Ballad Health will continue to participate in the VA and TN Immunizations Programs
- Ballad Health will continue to participate in other VA and TN Regulatory reporting/sharing programs such as: VA State Dept. of Health Reporting - Electronic Laboratory Reporting, State Dept. of Health Reporting - Syndromic Surveillance (TN & VA), Tennessee Hospital Association TennCare

HIE Plan

3. Implementation Roadmap

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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
1. Establish Ballad Health HIE Steering Committee	• Establish a Ballad Health Interoperability Steering with Committee with internal and external representation	• *Formed HIE Steering Committee*	• Develop Interoperability Committee Charter, Roles and Responsibilities	• *Approved Charter*
2. Conduct Geographic Service Area Interoperability Research	• Initiate Market Research to Gauge Interest in Menu Offerings		• Complete Market Research to Gauge Interest in Menu Offerings	
3. Identify Optimal Portfolio of Interoperability and Assemble Deployment Strategies	• N/A - Activity initiated once Strategy #2 completed		• N/A - Activity initiated once Strategy #2 completed	

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 Ballad Health HIE Steering Committee	• Recruit an Interoperability Program Director	• *Posted Program Director Position*	• Hire an Interoperability Program Director • Identify Y2 quarterly targets and timelines	• *Filled Program Director Position* • *Y2 milestones and metrics accepted*
2. Conduct Geographic Service Area Interoperability Research	• Compile and Interpret Market Research Results		• Identify Y2 quarterly targets and timelines	• *Y2 milestones and metrics accepted*
3. Identify Optimal Portfolio of Interoperability and Assemble Deployment Strategies	• N/A - Activity initiated once Strategy #2 completed		• Utilize Market Research Result to initiate draft HIE roll-out plan • Identify Y2 quarterly targets and timelines	• *Y2 milestones and metrics accepted*

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 an HIE Recruitment and Support Plan	• N/A - Activity initiated once Strategies #2 and #3 are completed		• N/A - Activity initiated once Strategies #2 and #3 are completed	
5. Participate in ConnectVirginia's HIE and Associated Programs	• Participate in ConnectVirginia EDCC program • Participate in ConnectVirginia PDMP program • Participate in Virginia Immunization program • Participate in other Tennessee and Virginia regulatory programs	• *Ballad Health VA EDs participating* • *Ballad Health VA applicable entities participating* • *Ballad Health VA facilities participating* • *Ballad Health facilities participating as required*	• Participate in ConnectVirginia EDCC program • Participate in ConnectVirginia PDMP program • Participate in Virginia Immunization program • Participate in other Tennessee and Virginia regulatory programs	• *Ballad Health VA EDs participating* • *Ballad Health VA applicable entities participating* • *Ballad Health VA facilities participating* • *Ballad Health facilities participating as required*

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 an HIE Recruitment and Support Plan	• N/A - Activity initiated once Strategy #2 and #3 are completed		• N/A - Activity initiated once Strategies #2 and #3 completed • Identify Y2 quarterly targets and timelines	• *Y2 milestones and metrics accepted*
5. Participate in ConnectVirginia's HIE and Associated Programs	• Participate in ConnectVirginia EDCC program • Participate in ConnectVirginia PDMP program • Participate in Virginia Immunization program • Participate in other Virginia regulatory programs	• *Ballad Health VA EDs participating* • *Ballad Health VA applicable entities participating* • *Ballad Health VA facilities participating* • *Ballad Health VA facilities participating as regulated*	• Participate in ConnectVirginia EDCC program • Participate in ConnectVirginia PDMP program • Participate in Virginia Immunization program • Participate in other Virginia regulatory programs • Identify Y2 quarterly targets and timelines	• *Ballad Health VA and TN EDs participating* • *Ballad Health VA applicable entities participating* • *Ballad Health VA facilities participating* • *Ballad Health VA facilities participating as regulated* • *Y2 milestones and metrics accepted*

Implementation Roadmap

Milestones and Metrics for Measuring Strategies: FY 2021

Strategies	2021
1. Establish Ballad Health HIE Steering Committee	• Issue a Request for Proposals (RFP) to regional HIE vendors
2. Conduct Geographic Service Area Interoperability Research	• Update as new providers enter the market • Refresh to meeting changing provider needs
3. Identify Optimal Portfolio of Interoperability and Assemble Deployment Strategies	• Finalize Health Information Exchange (HIE) Plan • Develop Community Connect program business plan • Develop deployment plan to pilot Community Connect at a practice • Deploy EpicCare Link, MedAllies and Interfaces to independent providers • Initiate assistance to independent providers to implement the Carequality network
4. Develop an HIE Recruitment and Support Plan	• Develop an HIE recruitment plan • Develop an HIE communication and marketing plan • Hire marketing staff
5. Participate in ConnectVirginia's HIE and Associated Programs	• Continue to participate in ConnectVirginia EDCC program • Continue to participate in ConnectVirginia PDMP program • Continue to participate in Virginia Immunization program • Continue to participate in other Tennessee and Virginia regulatory programs

Implementation Roadmap

Milestones and Metrics for Measuring Strategies: FY 2022

Strategies	2022
1. Establish Ballad Health HIE Steering Committee	• Choose an HIE Partner
2. Conduct Geographic Service Area Interoperability Research	• Update as new providers enter the market • Refresh to meeting changing provider needs • Continue to identify, test and connect to large organizations where patients overlap outside of the GSA
3. Identify Optimal Portfolio of Interoperability and Assemble Deployment Strategies	• Continue to deploy EpicCare Link, MedAllies and Interfaces to Independent Providers • Continue assistance to independent providers to implement the Carequality network • Continue to promote and utilize Epic Care Everywhere • Deploy Community Connect to Independent Providers • Deploy Epic's Share Everywhere to patients • Deploy health apps (i.e., Apple Health, Google Health) • Deploy HIE Partner
4. Develop an HIE Recruitment and Support Plan	• Continue marketing menu offerings to Independent Providers
5. Participate in ConnectVirginia's HIE and Associated Programs	• Continue to participate in ConnectVirginia EDCC program • Continue to participate in ConnectVirginia PDMP program • Continue to participate in Virginia Immunization program • Continue to participate in other Tennessee and Virginia regulatory programs

Appendix A

Environmental Scan

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Appendix A
Environmental Scan – Overview

- Advancements in technology make it easier to share information real time, at the point of care
  - Health information exchange has historically centered around document based exchange
  - Application programming interfaces (APIs) using the Fast Healthcare Interoperability Resources (FHIR) standard allows developers to create applications that can be plugged into an EHR's operating system and feed information directly into the provider workflow
- Recently introduced laws require interoperability
  - The 21st Century Cures Act establishes penalties of up to $1M per violation for organizations that engage in information blocking
  - The Trusted Exchange Framework and Common Agreement (TEFCA) establishes a technical and governance infrastructure for the connection of health information exchange organizations
  - Laws seek to leverage shared data to promote new, innovative services

Appendix A
Environmental Scan – Overview *(Cont.)*

- Some models of sustainable HIEs have emerged
  - Chesapeake Regional Information System for our Patients ("CRISP") relies upon grants and state mandated health system participation fees to achieve economic stability
    - Has achieved almost 100% participation of Maryland hospitals and ~80% participation of ambulatory practices
- Obstacles of competing interests, costs, and perceived value still exist
  - Fee for service reimbursements models continue to incentivize competing health providers to limit vs. promote information sharing
  - Many health providers have to join multiple health information exchange networks, each with its own requirements, setup and maintenance fees
  - Many health information exchange services are costly and fail to offer a solution that integrates into a provider's workflow

Appendix A

Environmental Scan – HIE Uncertainty and Risk

- **Financial sustainability** - Creating a viable, sustainable financial model post federal, state and local grants. Many HIEs have rapidly failed once public funding was no longer provided
- **Integrating into a providers workflow** - Integrating the HIE technology solution into the workflow of the attending physician or care manager is a critical success factor but difficult to achieve
- **Achieving a critical mass of information** - Having sufficient information to provide value is a critical success factor for HIEs. Achieving this point requires time and costs
- **Privacy and security** - Ensuring health data privacy and security is maintained once information is collected and stored, particularly given increasing cyber attacks/ threats
- **Adoption** - Achieving adoption of an HIE with the smaller independent practices is a challenge due to low ROI or trust issues
- **Standards** - Many competing organizations created with the goal of becoming 'the' standard for interoperability
- **Regulatory** - Uncertainty around ONC's current TEFCA interoperability initiative and the impact on HIE's and providers, as well as future meaningful use requirements on providers

Appendix A
Environmental Scan – Regulatory

- Trusted Exchange Framework and Common Agreement (TEFCA)
  - Originates from the 21st Century Cures Act (Section 4003(b) &(c))
  - Goals of TEFCA:
    - Build on existing work already done by the industry
    - Provide a single 'on ramp' to interoperability (join any HIN)
    - Be scalable to support the entire nation
    - Build a competitive market allowing all to compete on data services
    - Achieve long-term sustainability
  - Participants will be able to join any Health Information Network (HIN) and have access to all data nationally
  - HINs will connect to Qualified Health Information Networks (QHIN) – QHIN will connect to each other to ensure national coverage
  - ONC will select Recognized Coordinating Entity (RCE) to operationalize and oversee TEFCA
  - Final rule due late 2018

Appendix A
Environmental Scan – Emerging Technology

- An application programming interface (API) is a set of standards that enable communication between multiple sources. APIs act as a software broker enabling two applications to talk to one another.
- API usage can be broken down into two categories:
  - APIs for traditional provider integration
  - Open API for patient data sharing
- Fast Healthcare Interoperability Resources (FHIR) is a standard for exchanging healthcare information electronically. APIs using FHIR allow applications to access health data at the source of truth in a standardized way.
- SMART Health IT (formally called SMART on FHIR) is an app platform for healthcare. It is an open, standards based technology platform that enables innovators to create apps that seamlessly and securely run across the healthcare system.
- There are HIE organizations (such as Chesapeake Regional Information System for our Patients – “CRISP”) starting to leverage FHIR APIs and that have realized early success by “removing the fraction in HIE”.

Appendix A

Environmental Scan – Center for Medical Interoperability

- 501(c)(3) cooperative, think tank research and development lab
- Founded by health systems to simplify and advance data and sharing among medical technologies and systems
- Are taking a centralized, vendor-neutral approach to:
  - Performing technical work that enables person-centered care
  - Testing and certifying devices and systems
  - Promoting adoption of scalable solutions
  - Turning data into meaningful information at the point of care
- Have highly ambitious, industry revolutionary goals

Appendix A
Environmental Scan – Attributes of Successful HIEs

Chesapeake Regional Information System for our Patients ("CRISP")

- Maryland's designated statewide HIE, primarily serving MD, WV, and the Washington D.C. regions. Connected to acute care facilities, LTCs, rad/lab facilities and ambulatory practices. A member of Carequality.
- A centralized and federated hybrid HIE whose services include:
  - Traditional HIE: HIE portal, Encounter Notification Services (ADT notification)
  - Analytics: CAliPHR (quality measure reporting), Data Visualization (Tableau)
  - API enabled point-of-care data access (in-house developed): "In-Context Alerts"
- Benefit from federal and state grants
- Participation fees are only charged to acute facilities
- Almost 100% coverage for Maryland's hospitals (mandated ADT data submission as a minimum)
- Connected to ~80% ambulatory practices in some fashion (the newer API-enabled services adoption still fairly low)
- Have experience working with various EHR vendors, particularly Epic and Cerner

Appendix B

HIE Current State Analysis

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Appendix B

HIE Current State Analysis – Overview

- The national state of healthcare interoperability is improving but remains immature
  - Advancement in technology make it easier to share information real time, at the point of care
  - Recently introduced laws require interoperability
  - Some models of sustainable HIEs have emerged
  - Obstacles of competing interests, costs, and perceived value still exist
- Healthcare organization interoperability within Ballad Health's market is no exception
  - Complex and confusing array of regionally aligned organizations/ services and frameworks
  - Most services/ frameworks are geared towards larger health delivery networks/ organizations
  - Options remain cost and technically prohibitive for small, independent practices, limiting value and their participation

Appendix B

HIE Current State Analysis – HIE Capability in the Ballad Health Service Area

HIE Approach	Epic – Community Connect	Epic – Care Everywhere (Epic-to-Epic)*	Epic – EpicCare Link	Epic – Share Everywhere
Overview	Epic system extension with a **shared community record**. Deepest degree of interoperability, but external providers need **to install Ballad Health's Epic instance** and pay ongoing maintenance fees	**Epic's interoperability application** that can be used to exchange patient data **with other healthcare organizations using Epic**.	Provides **read-only access** to approved providers via portal. **Can support referral, secure messages. Free** to external providers of interest.	Allows **patients to grant view-only access** to any providers who have internet access. The provider granted access can send a progress note back.
Exchange Approach	• Centralized • Same Platform	• Federated • Bi-directional	• Centralized • Outgoing Only	• Centralized • Outgoing Only
Degree of Workflow Integration	5 - Same Platform	4 - Push/Auto Query	1 - Portal/Mail Box	2 - Pull
Degree of Data Exchange	5 - Very High	4 - High	5 - Very High	2 - Moderate

** Data exchange via Carequality, eHealth Exchange and MedAllies that enables Epic to non-Epic exchange is managed through Care Everywhere platform at Ballad Health. However, these HIE approaches are listed separately in later slides.*

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Appendix B
HIE Current State Analysis – HIE Capability in the Ballad Health Service Area *(Cont.)*

HIE Approach	Carequality*	eHealth Exchange*	ConnectVirginia ("EXCHANGE")	MedVirginia
Overview	A **network-to-network trust framework** with participants such as EHR vendor networks, payer networks, lab networks, etc. An organization needs to "opt-in" for Carequality before data exchange. **Epic network is in Carequality**.	A network with federal (incl. VA, DOD, SSA) and non-federal (e.g. health system) participants. Mainly meant **for larger orgs**. Commonly used to **connect with federal entities**. One-to-one set up and testing is required between two participants that wish to exchange data.	ConnectVirginia's **service** to provide the trust and legal framework for organizations to **join the eHealth Exchange network**.	Primarily enabled **thru eHealth Exchange**. Special interests in life insurance. **Independent Providers** only have **portal access** and **don't contribute data. No member in Ballad Health GSA**. In network for Carequality.
Exchange Approach	• Federated • Bi-directional	• Federated • Bi-directional	• Federated • Bi-directional	• Federated • Bi-directional (Health Systems) / View Only (Providers)
Degree of Workflow Integration	4 - Push/Auto Query	4 - Push/Auto Query	4 - Push/Auto Query	2 - Pull
Degree of Data Exchange	2 - Moderate	2 - Moderate	2 - Moderate	2 - Moderate

** Not an Epic product, but managed through Care Everywhere platform at Ballad Health.*

Appendix B
HIE Current State Analysis – HIE Capability in the Ballad Health Service Area *(Cont.)*

HIE Approach	etHIN	OnePartner	SHIEC Patient Centered Data Home	MedAllies*
Overview	East TN HIE. **Can provide auto-query,** longitudinal medical record and ADT alerting service. Likely **low coverage** (~5%) **within Ballad Health GSA** currently. In network for SHIEC PCDH and eHealth Exchange.	**Tri-cities local HIE.** Ballad Health has an outgoing interface to this HIE. **Can provide point-of-care alert**. In network for SHIEC PCDH and joining eHealth Exchange.	A method of data exchange **among HIEs.** Alert-initiated. Longitudinal patient record in "home" HIE. **Break the walls among states**. Members in TN include etHIN & OnePartner, none for VA.	A secure mailbox service. Use **Direct messaging**. Currently used at Ballad Health to send patient's CCD to patient's PCP after discharge.
Exchange Approach	• Centralized • Bi-directional	• Centralized • Bi-directional	• Federated • Bi-directional	• Federated • Bi-directional
Degree of Workflow Integration	4 - Push/Auto Query	3 - Auto Alert, then Pull	3 - Auto Alert, then Pull	1 - Portal/Mail Box
Degree of Data Exchange	3 - Fairly High	3 - Fairly High	3 - Fairly High	2 - Moderate

** Not an Epic product, but managed through Care Everywhere platform at Ballad Health.*

Appendix B
HIE Current State Analysis – HIE Capability in the Ballad Health Service Area *(Cont.)*

Regulatory Initiative	General Information	Information Exchanged
Commonwealth's Prescription Drug Monitoring Program	• Collects prescription data into a central database which can then be used by limited authorized users to assist in deterring the illegitimate use of prescription drugs.	• Prescription
State Dept of Health Reporting - Electronic Laboratory Reporting (VA)	• Provides VA automated transmission of reportable laboratory findings to state and local public health departments.	• Lab results
State Dept of Health Reporting - Immunization (TN & VA)	• Provides TN and VA state registries with documented vaccinations.	• Immunization
State Department of Health Reporting - Syndromic Surveillance (TN & VA)	• Provides TN and VA a review of patient demographic data (names, diagnoses, medications, etc.) from Emergency Department and Inpatient encounters.	• Patient Demographics
Tennessee Hospital Association	• Health Information Exchange for TennCare. THA coordinates its members feeds then deliver to TennCare. Enabled through custom interface. Required for membership in THA.	• ADT
ConnectVirginia's Emergency Department Care Coordination Program	• Virginia Emergency Department Care Coordination Program. Enabled through custom interface with Collective Medical.	• Outgoing ADT • Incoming documentation

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

January 29, 2019

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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.

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.

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.

Definition of Terms

- Undergraduate Medical Education (UME)
  - 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)
  - 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.

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

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

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.*

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

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*

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

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.

Table of Contents for HR/GME Plan

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

1. Plan Overview

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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

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.

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

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

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.

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

2. Strategic Approach

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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

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

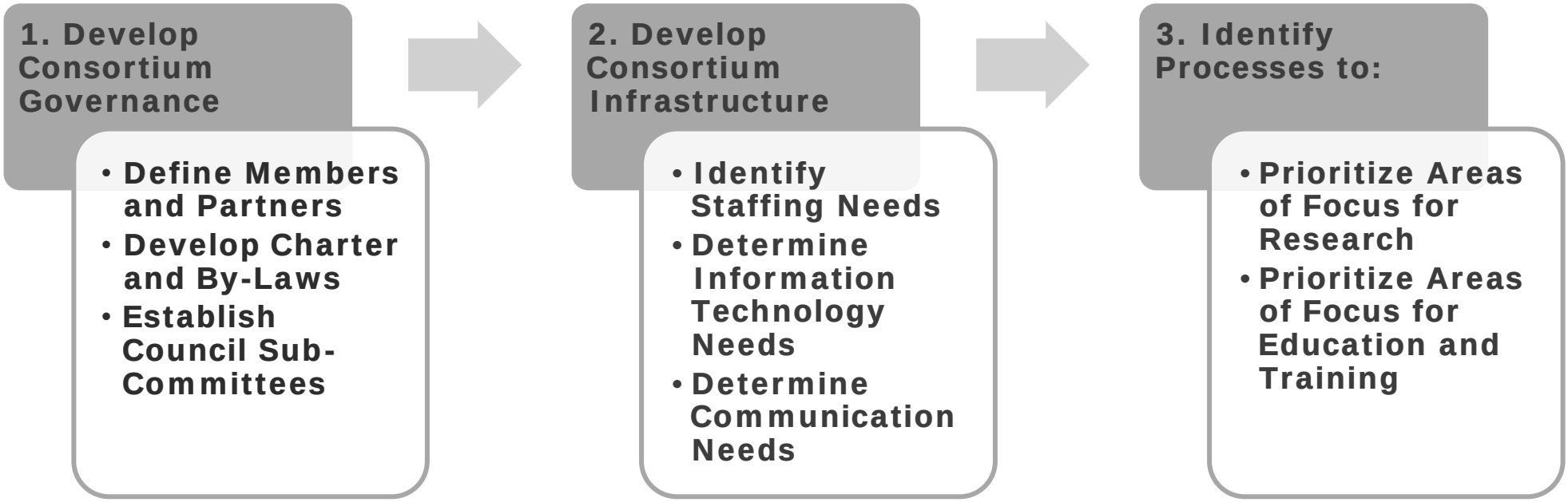
As a rural area where research and health academic capacity is dispersed across a large geography and number of competitive institutions, a consortium would:

- ***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

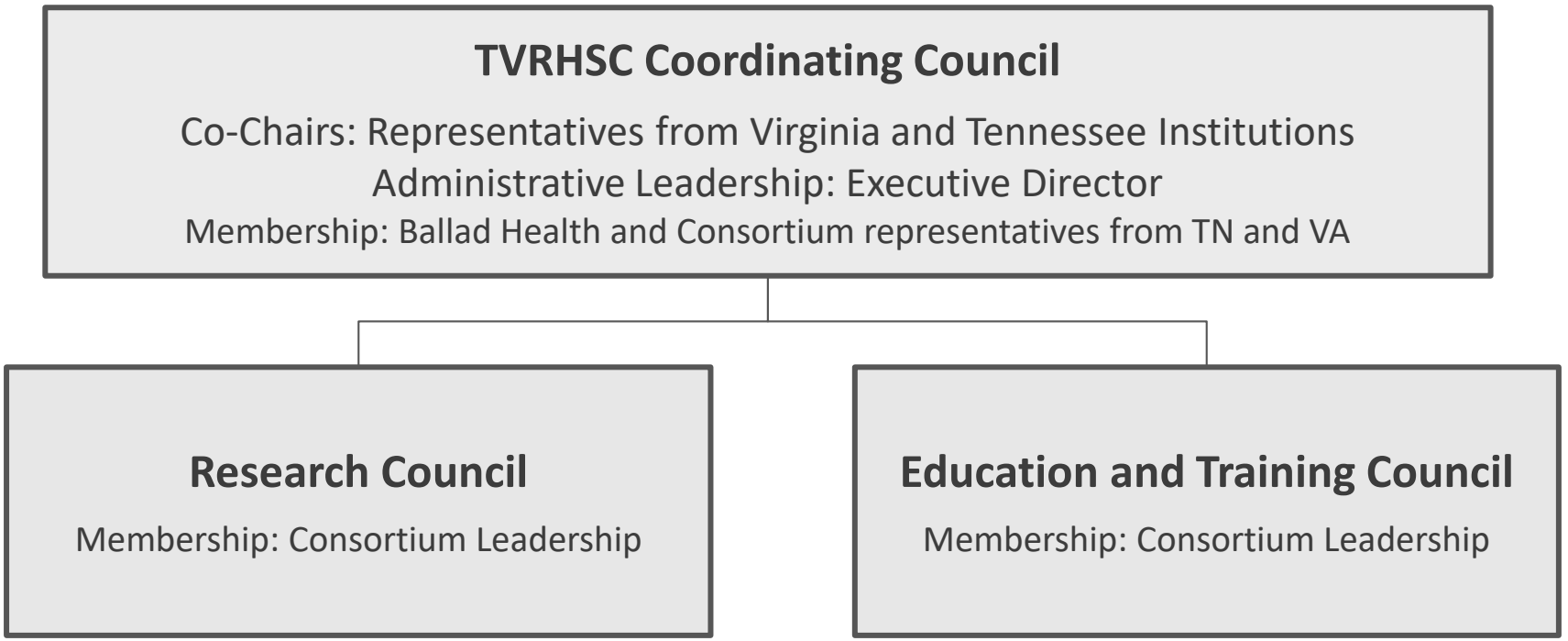
Strategy #1: Establish the Tennessee Virginia Regional Health Sciences Consortium (TVRHSC)



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.



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.

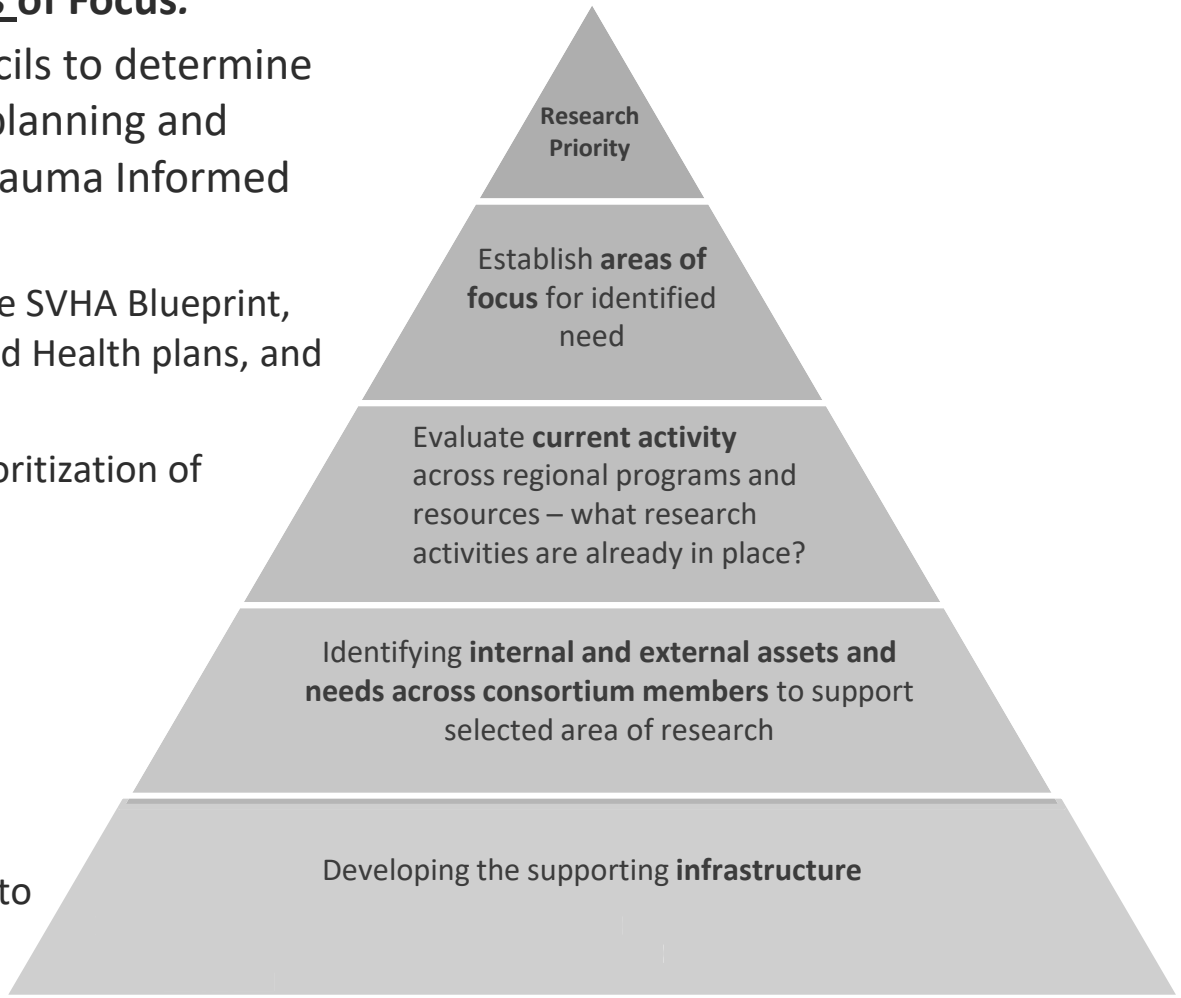
2. Develop Consortium Infrastructure*:*

- 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

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

3. Identify Process to Prioritize *Research Areas* of Focus*:*

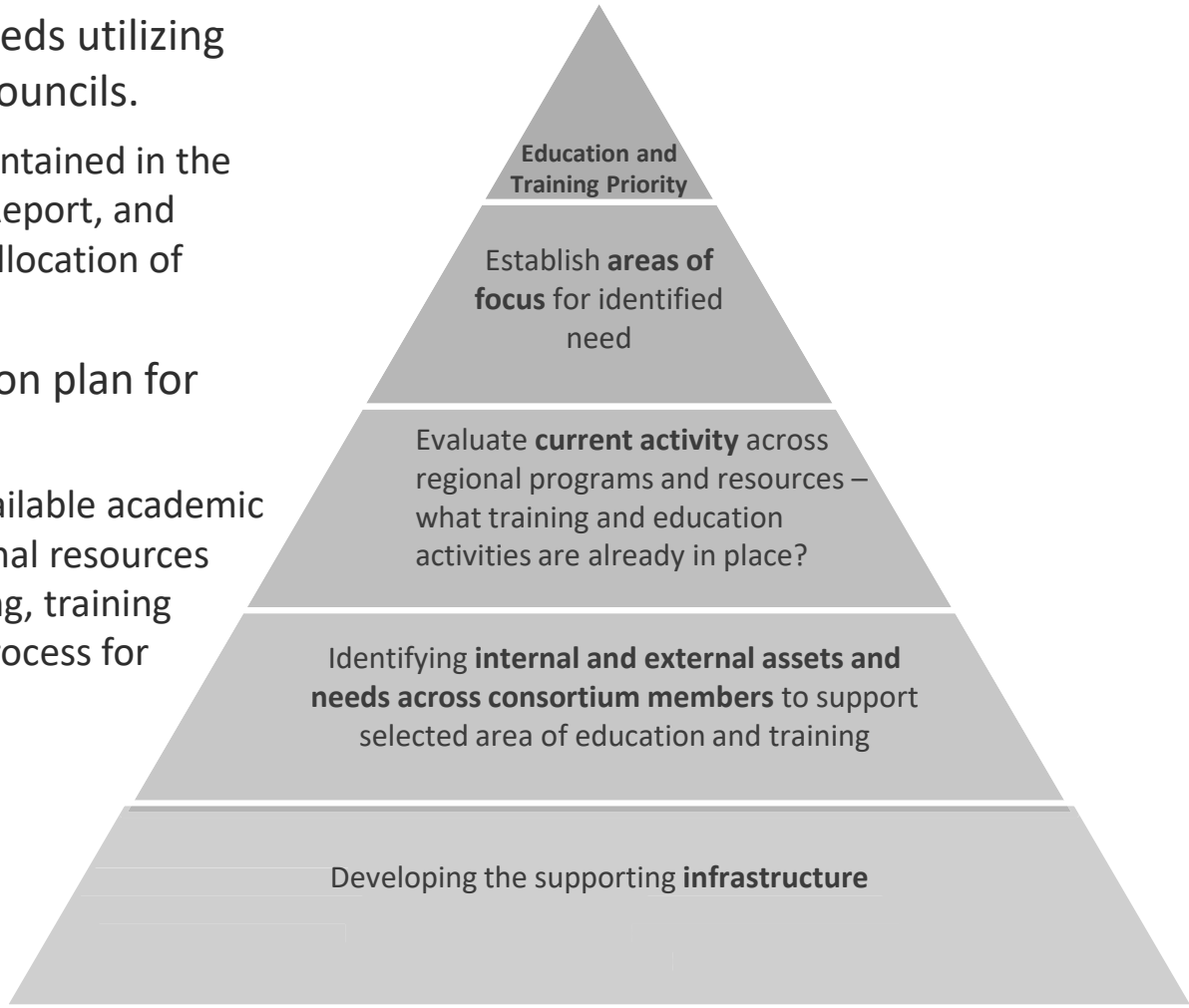
- Utilize the Coordinating and Research Councils to determine priority research areas of focus for further planning and consideration in the region (For example: Trauma Informed Care; Addiction)
  - Leveraging the regional priorities outlined in the SVHA Blueprint, Comprehensive Community Report, other 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



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.



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

Potential 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

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

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

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**
   - Identify mechanisms for targeted faculty hires to hold joint appointments across academic programs
   - Establish infrastructure to support interdisciplinary collaboration for these hires

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

Plan Overview

Strategies for the 3-Year HR/GME

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Strategies that Serve Health Professions Education

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

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*

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.

[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.

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

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

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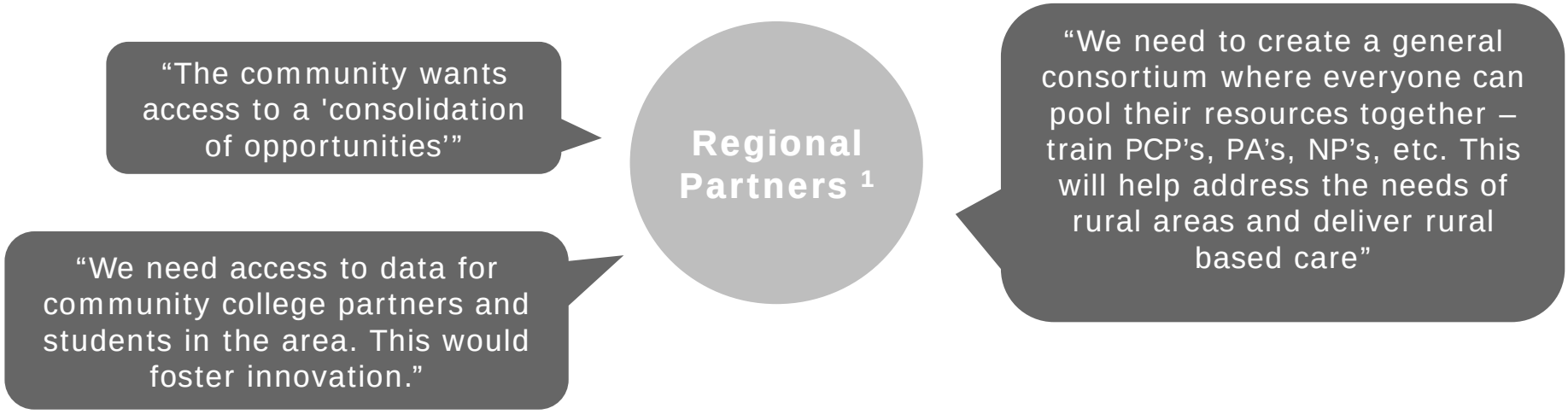
Strategy #4: Develop and Operationalize an Education and Training Infrastructure to Support the Region

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.***

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.



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

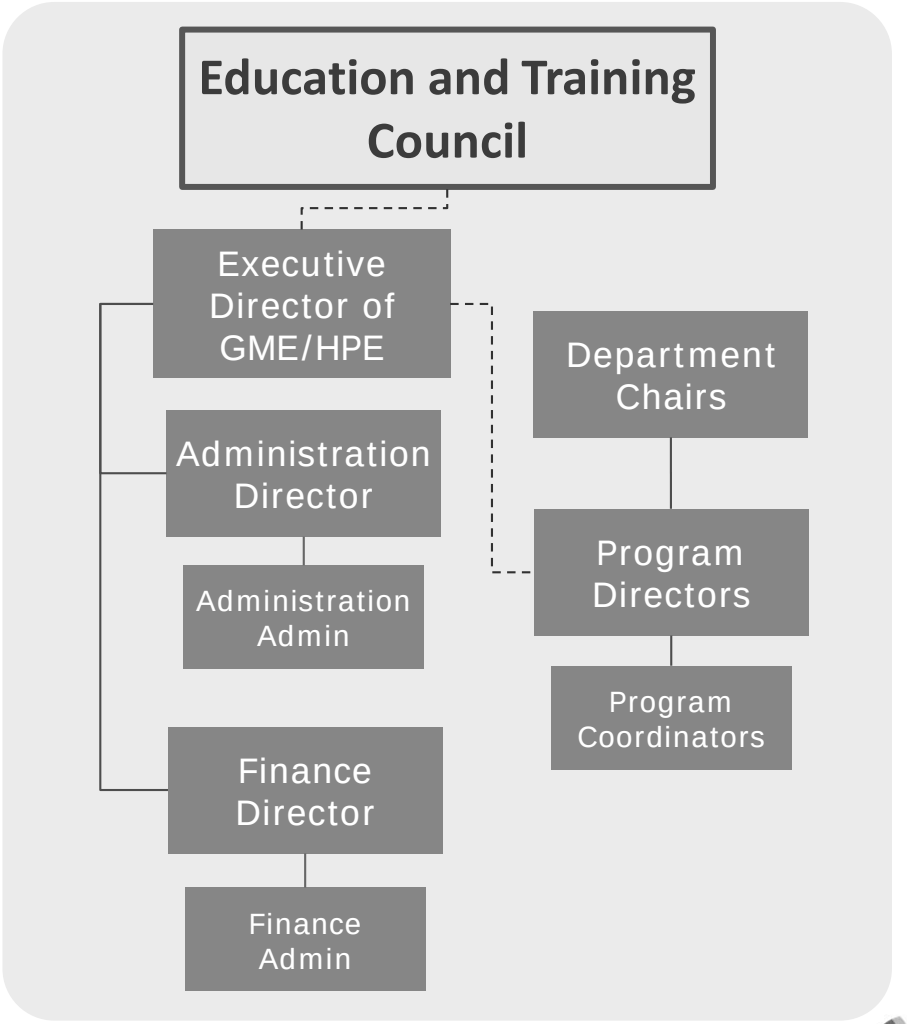
Strategy #4: Develop and Operationalize an Education and Training Infrastructure to Support the Region

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

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

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



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

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

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**

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

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

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.

3. Implementation Roadmap

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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
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* • *Finalized Governance Charter and By-laws*	• Coordinating Council has convened at least once in Q2 • Council Sub-Committees & membership established • Identify staffing needs • Explore technology needs	• *Coordinating Council Meeting minutes* • *Evidence of Roster of Council Sub-Committee Chairs and members* • *Evidence of Draft Job Descriptions* • *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 • Finalize research infrastructure plan	• *Draft Regional Research Priorities plan submitted* • *Finalized Research Infrastructure Plan Submitted*

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

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

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 • Develop & Finalize Research Infrastructure Implementation Plan • Interviews conducted w/leading researcher(s) • Begin process of evaluation within Ballad COPA/CA plans	• *Final Regional Research Priorities plan submitted and approved* • *Finalized Research Infrastructure plan submitted* • *Evidence of recruitment progress* • *Minutes of meetings with leadership of other plans*	• Research Infrastructure Implementation begins • Offers made to leading researcher(s) • Initiate COPA/CA plan evaluation	• *Research Infrastructure Kickoff meeting held and working groups established* • *Evidence of recruitment progress* • *Report of metrics and outcomes from plan activities*

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

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 • Evaluate management and support positions added in FY 1 and adjust as necessary • Review/evaluate further infrastructure needs and implement as needed • Ensure ongoing engagement of regional partners. Academic and non-academic • Phase 1 and 2 Support Staffing complete
2. Identify Targeted Hiring Needs to Build Research Capacity and Academic Program Growth	Milestones • Complete recruitment of target hires • Evaluate positions added in FY2020 and adjust as necessary
3. Develop & Operationalize Consortium Research Infrastructure to Support Health Research in the Region	Milestones • Research Infrastructure Implementation initial milestones complete • Seek additional funding sources for research activities *Metrics* • *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* • *Matching funds* • *Anticipated expenditures* • *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 • Manage resident recruitment process • Manage accreditation status of new programs developed • Monitor effectiveness of new rotations and adjust as needed • Evaluate effectiveness of career progression incentives • Selection and Implementation of a Technology vendor *Metrics* • *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*

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 • Evaluate functional success of the consortium and adjust as needed • Review/evaluate further infrastructure needs and implement as needed • Expand engagement of regional partners. Academic and non-academic
2. Identify Targeted Hiring Needs to Build Research Capacity and Academic Program Growth	Milestones • 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 • Evaluate how will new research initiatives align with regional priorities and adjust as needed • Seek additional funding sources for research activities • Assess additional infrastructure and resource needs *Metrics* • *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* • *Matching funds* • *Anticipated expenditures* • *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 • Manage accreditation status of new programs developed • Monitor effectiveness of new rotations and adjust as needed • Evaluate effectiveness of career progression incentives • Evaluate alignment of new educational programs with workforce needs *Metrics* • *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*

Appendix A

Current Programming and Expenditures for Education and Training in the Region

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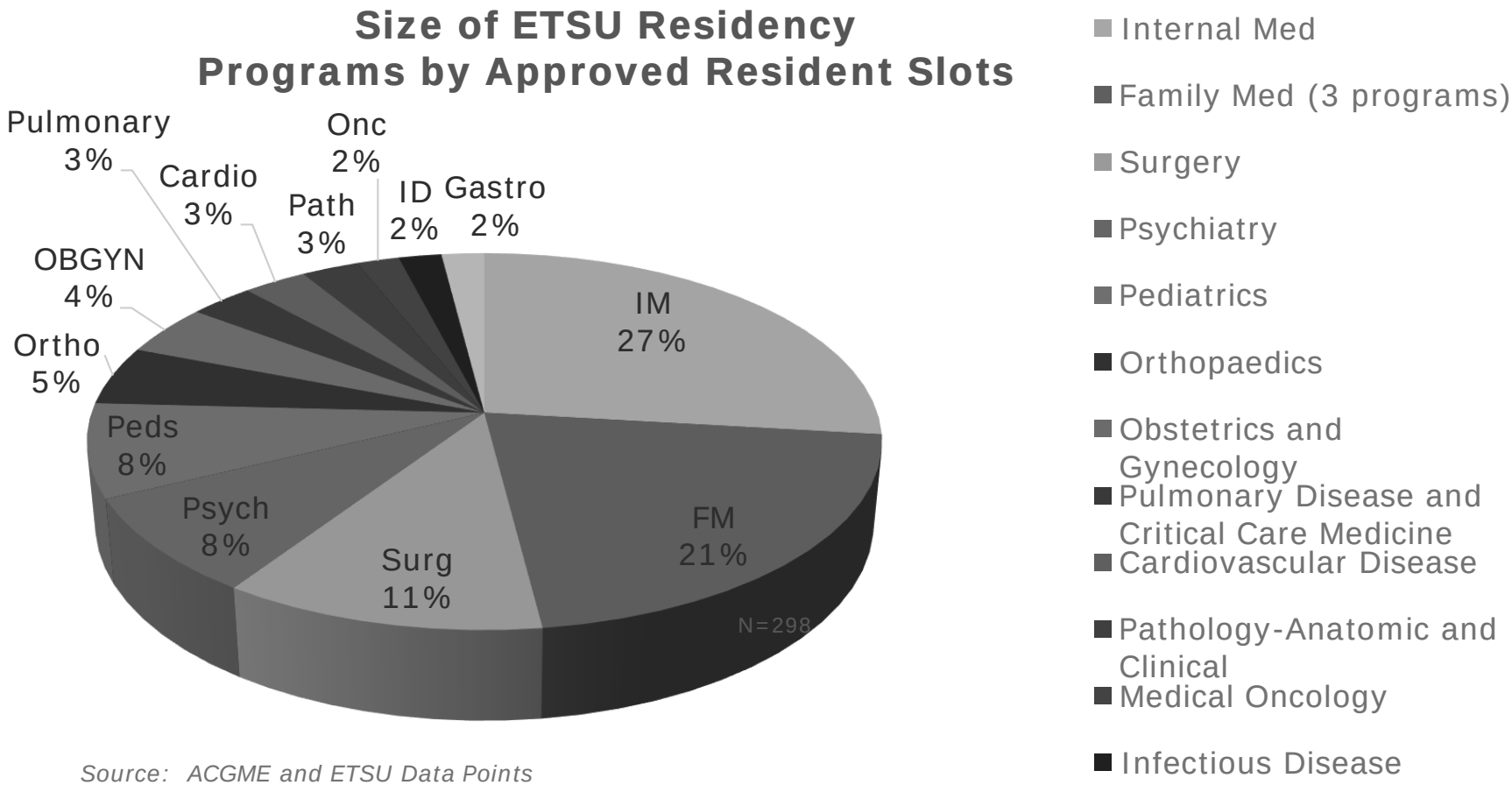
Ballad Health partners with ETSU to sponsor 15 GME programs

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



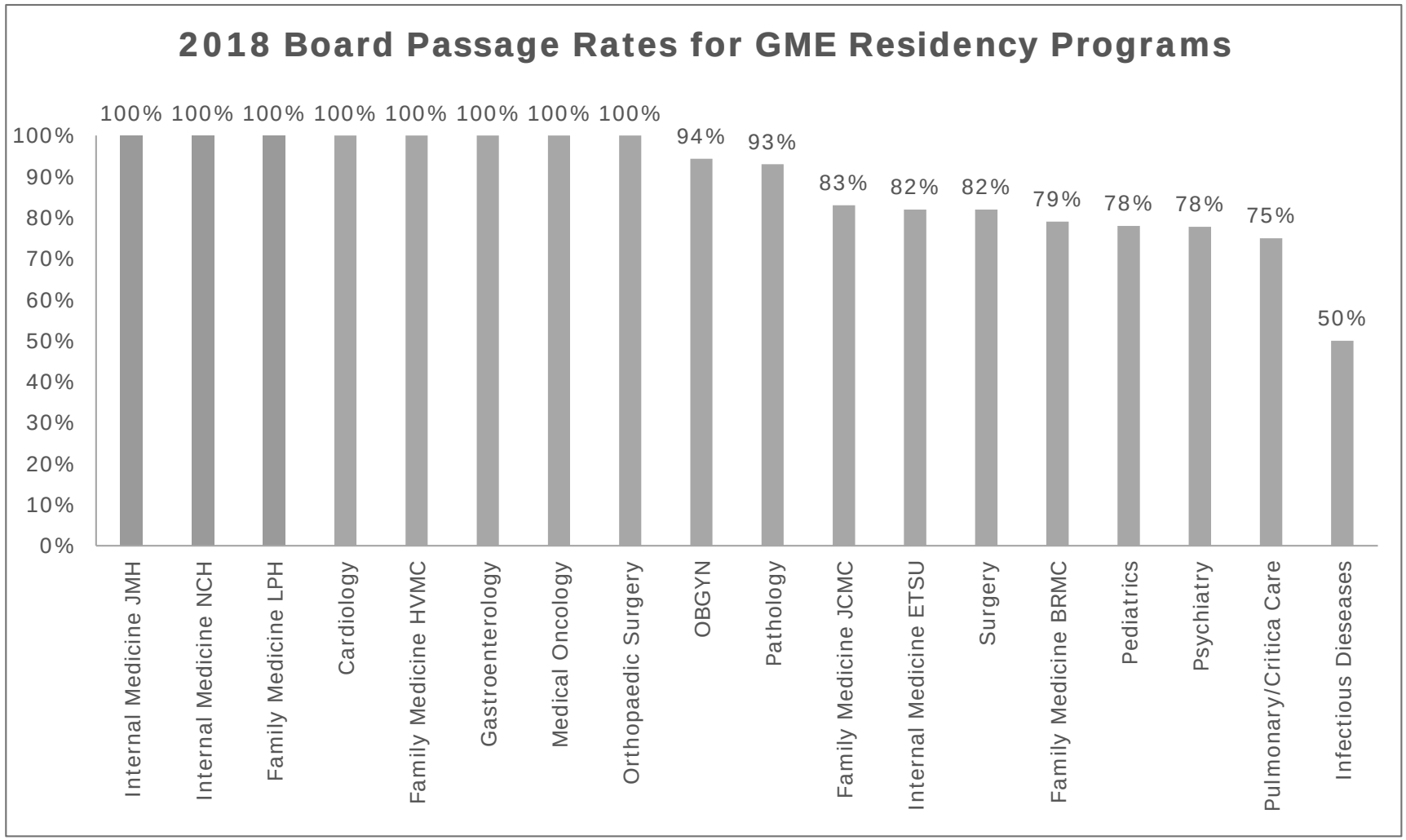
Source: ACGME and ETSU Data Points

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



Source: ETSU Data Point

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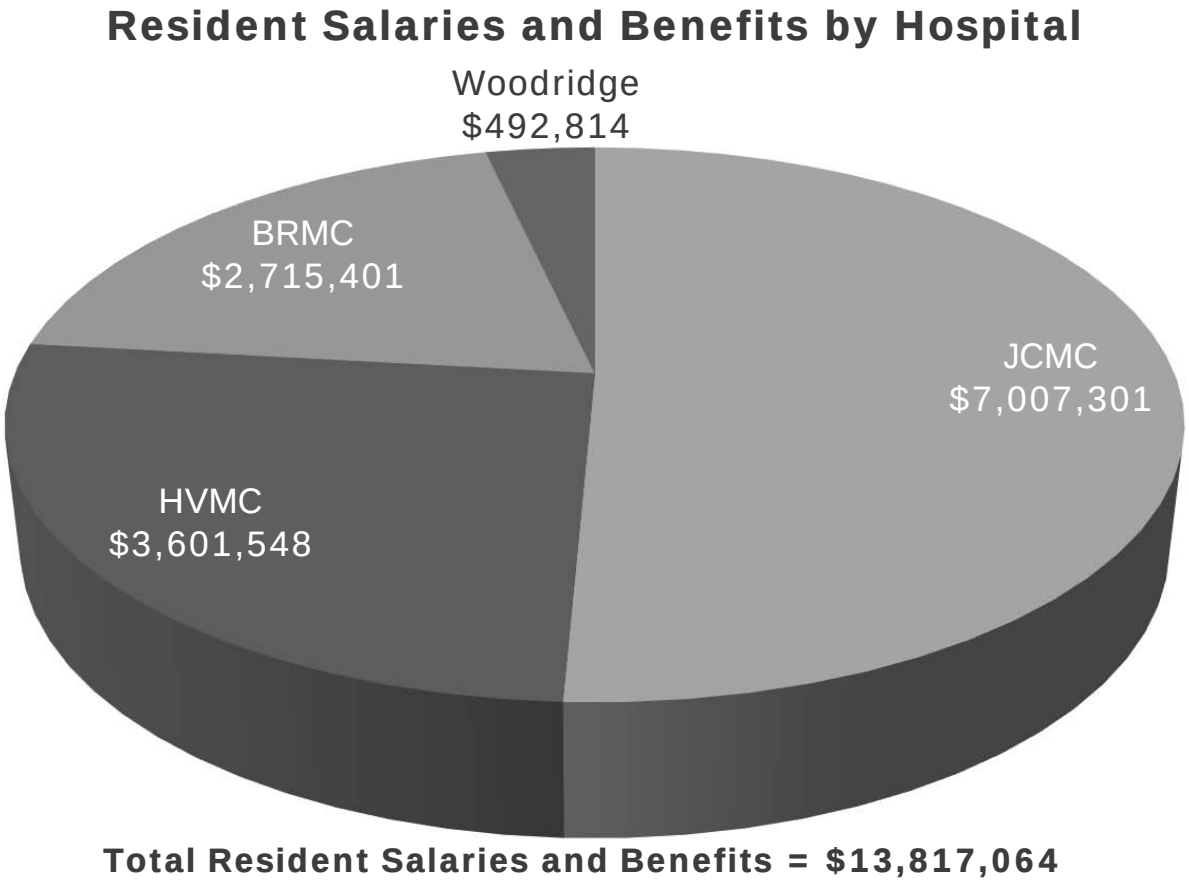
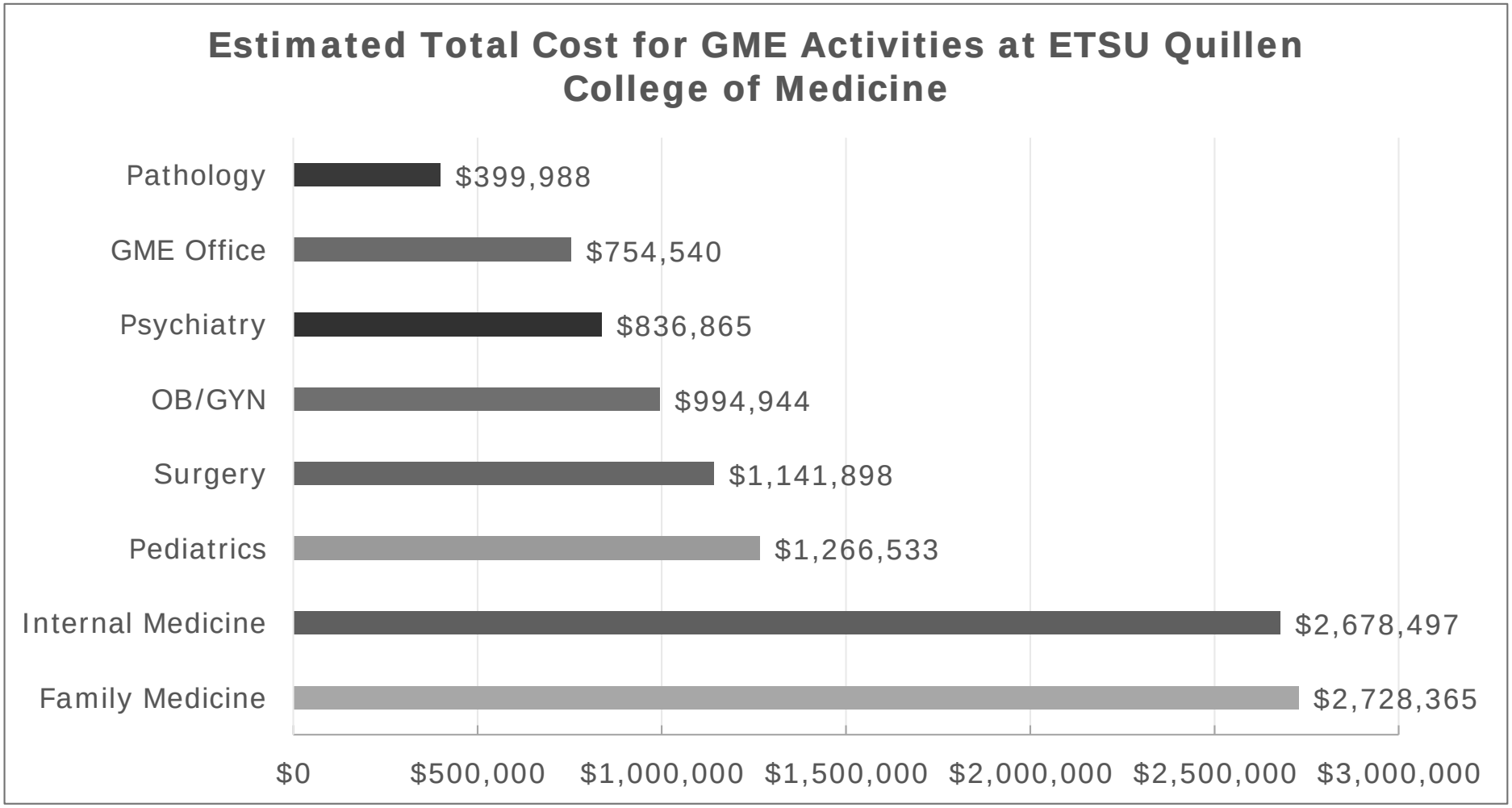
The total DGME expenses for the Academic track total $13 million



Source: ETSU Data Point

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



Source: ETSU Data Point

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

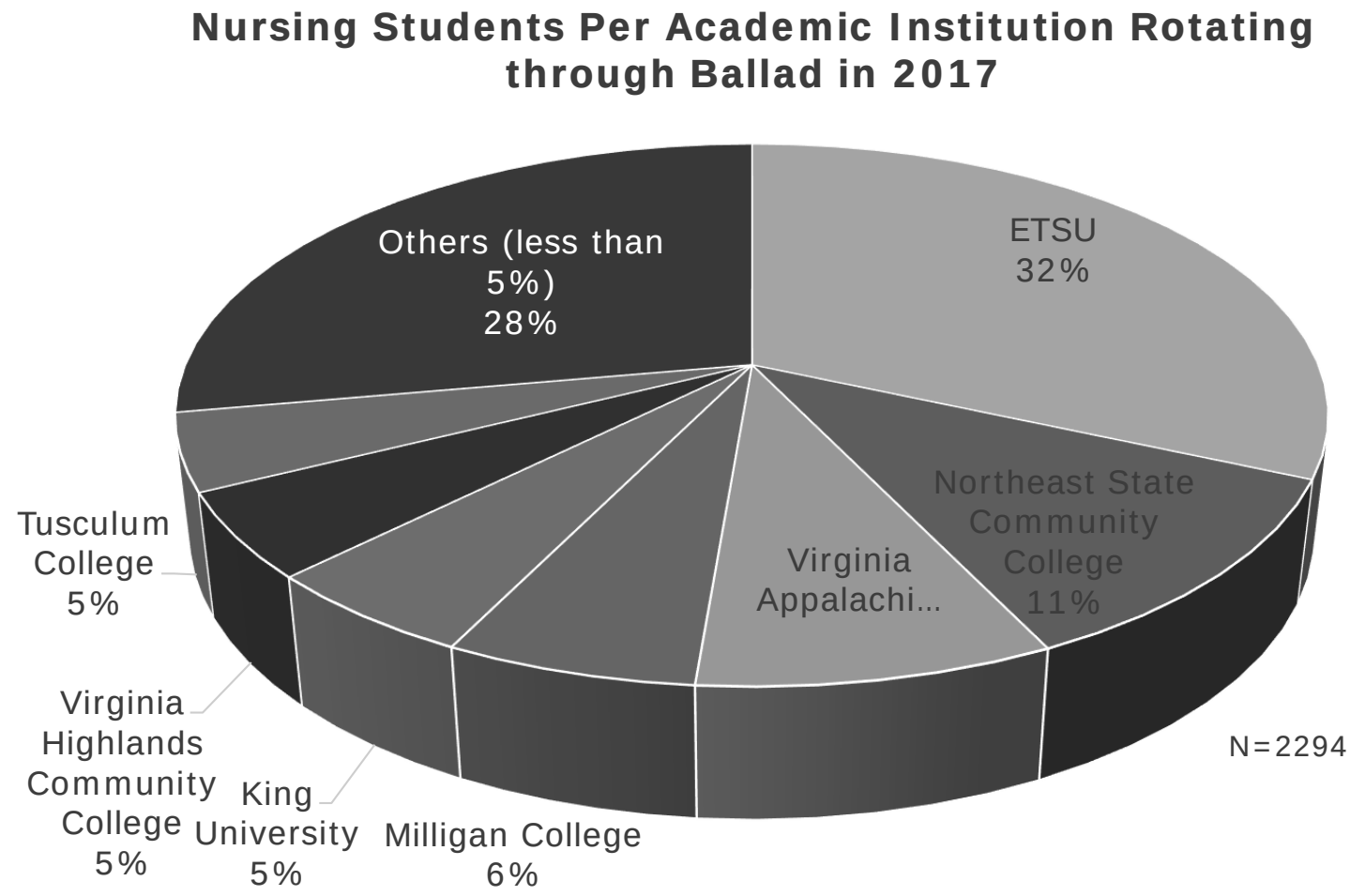
Overview of residency programs

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%

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%

Ballad had 2294 nursing students rotate at their sites in 2017



Source: ETSU Data Point

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

January 29, 2019

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Three-Year Plans for the Commonwealth of Virginia

September 28, 2018

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Introduction

- Final versions of the following plans were requested by the Commonwealth of Virginia Department of Health in a January 12, 2018 letter regarding "Final Cooperative Agreement Measures." These plans are due in final form by July 31, 2018.
  - Behavioral Health Services Plan
  - Children's Health Services Plan
  - Rural Health Services Plan
  - Population Health Plan
- The content of these Plans is consistent with requirements as outlines in the Cooperative Agreement and represent those actions to be taken by Ballad Health deemed by the Commonwealth to constitute public benefit.

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 Commonwealth requested information regarding the "methodology for allocation of funds between Tennessee and Virginia" for the Behavioral, Children's and Rural Health Services Plans
  - Investments and expenditures specific and unique to Virginia geographies or Virginia residents will be allocated 100% as a "Virginia Expenditure"
  - For investments and expenditures that are not specific or unique to Virginia (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 "Virginia Expenditure"
    - Demographic allocation – Virginia population served (or total Virginia service area population) as a percentage of the total population served (or total service area population served)
    - Utilization allocation – Utilization of defined service (or services) by Virginia residents as a percentage of the total utilization
    - Ad Hoc/Judgment – When neither of the allocation methodologies described above are applicable, Ballad will devise an appropriate ad hoc methodology, or use professional judgment to allocate funding

Important Dates

Plans Due in First Six Months (July 31, 2018)

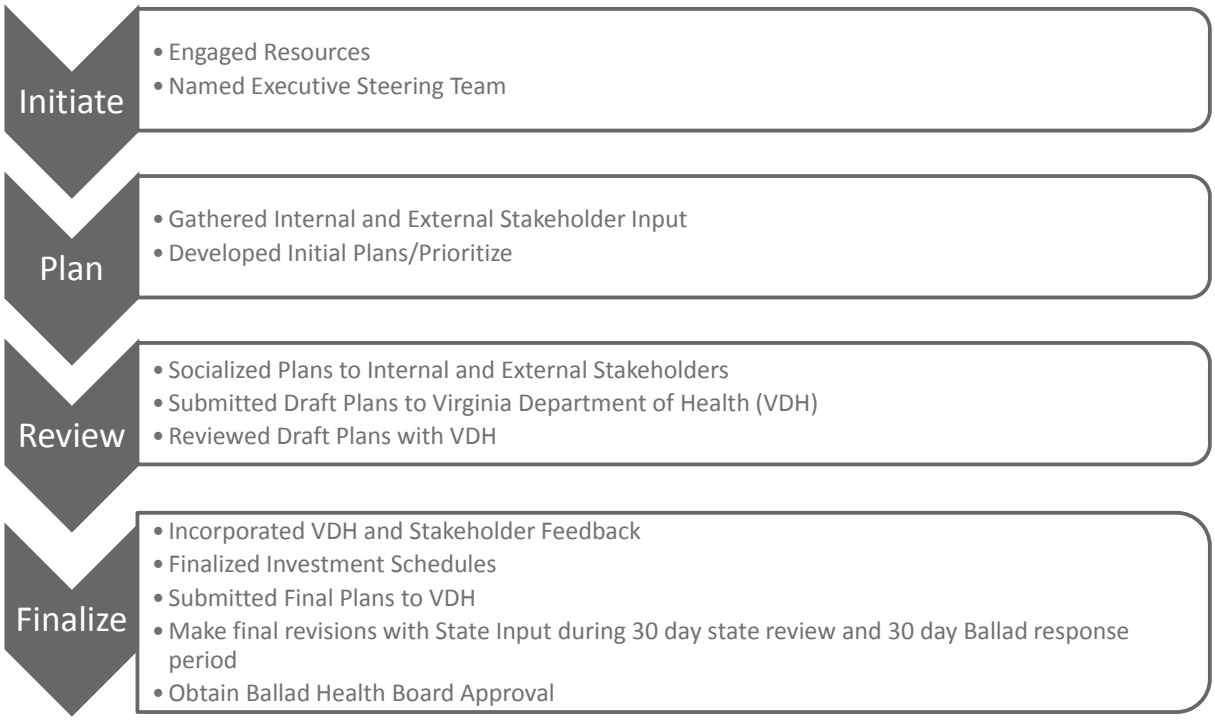
- Behavioral Health Services*
- Children's Health Services*
- Rural Health Services*
- Population Health*
- Capital
- Quality Improvement (VA)

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

- HIE
- Health Research/Graduate Medical Education

** Consistent with the The Commonwealth of Virginia Department of Health request, Ballad previously submitted final versions of these Plans prior to the July 31, 2018 deadline. This document presents the updated versions of those plans, incorporating feedback received from the Commonwealth on August 30, 2018, following review of the final submissions.*

Process for Plan Development



Process and Participation for Plan Development

In developing these plans, Ballad has referenced previously developed plans and analyses and solicited extensive stakeholder input including:

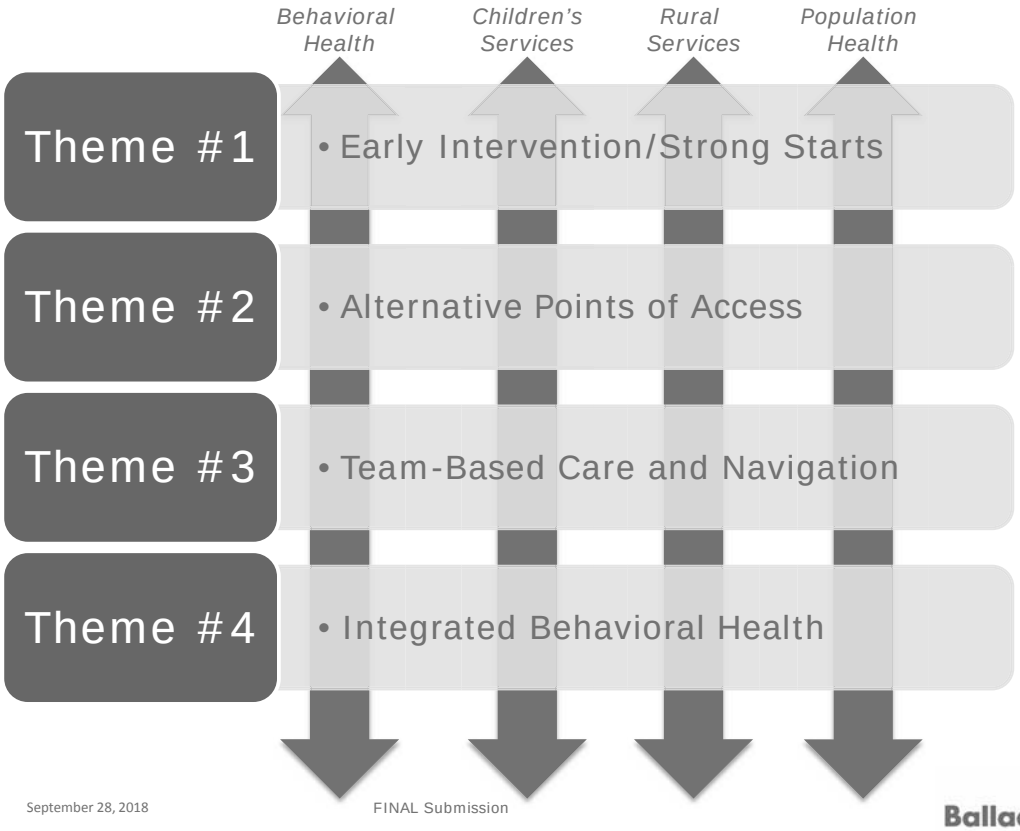
- Reviewing the following documents and plans:
  - Authority's Blueprint for Health Improvement & Health-Enabled Prosperity
  - Virginia Plan for Well-Being
  - Key Priorities for Improving Health in Northeast Tennessee and Southwest Virginia: A Comprehensive Community Report [1]
  - Legacy WHS and MSHA Community Health Needs Assessments
- Conducting approximately individual 150 interviews
- Holding approximately 40 meetings with external groups

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

Process and Participation for Plan Development (continued)

- Convening the Population Health Clinical Committee
- Presenting the plan overview to the Southwest Virginia Health Authority and a number of Ballad community boards in Virginia and in an open meeting in Abingdon
- Convening the Accountable Care Community Steering Committee
  - Healthy Kingsport and United Way SWVA were selected through an RFP process to co-manage this effort for both TN and VA
  - Obtained cross-state participation in initial meeting with discussion of metrics with special focus on those most amendable to community intervention
  - Conducting bi-weekly calls with lead organizations
- Submitted draft plans to the State for review and feedback on June 30, 2018. Additionally, Ballad representatives and representatives from the Commonwealth met on July 10, 2018 to review and discuss the draft plans. Feedback from that meeting and subsequent communications have been incorporated into the final document submitted July 31, 2018. The Commonwealth provided feedback to those plans in a letter to Ballad, dated August 30, 2018. Feedback from that letter is included in these updated plans.

Strategic Themes Across All Plans



Strategic Themes Across All Plans (continued)

1. **Early intervention and strong starts**
   - Efforts will be designed around the concept of primary, secondary and tertiary prevention, with a special population focus on children.
   - Example: Prevent cervical cancer through HPV vaccinations AND detect in early stages through effective screening.
2. **Alternative Points of Access**
   - Preventive and acute services must be easily accessible by the population and designed with their preferences and limitations in mind.
   - Example: Mobile blood pressure and diabetes screening co-located at food assistance delivery sites.

Strategic Themes Across All Plans (continued)

3. **Team Based Care and Navigation**
   - Care teams will be designed around the needs of the whole person and include perspectives and skills from pharmacists, social workers, community health workers, navigators and case managers.
   - Example: Embed behavioral health navigators in primary care practices to link patients with necessary behavioral health services at Ballad Health and our CSB partners.
4. **Integrated Behavioral Health**
   - A behavioral health perspective will be designed into all care processes and systems.
   - Example: Perform Screening, Brief Intervention and Referral to Treatment on ED and Inpatient admits to identify behavioral health risk and initiate treatment in patients regardless of their presenting problem.

Table of Contents for Each Plan

- Plan Overview
  - VA Cooperative Agreement Requirements
  - Key Metrics Assessed
  - Key Strategies
  - Crosswalk to Conditions
  - Investment Plan
- Strategic Approach
- Implementation Roadmap

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Behavioral Health Services Plan for the Commonwealth of Virginia

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Behavioral Health Services Plan

1. Plan Overview

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Plan Overview
VA Cooperative Agreement Behavioral Health Services Plan Requirements

VA Cooperative Agreement Requirement
1. Detail how new capacity for residential addiction recovery services will be created to meet the current and expected future needs of southwest Virginia.
2. Detail how community-based mental health resources, such as mobile health crisis management teams and intensive outpatient treatment and addiction resources for adults, children, and adolescents designed to minimize inpatient psychiatric admissions, incarceration, and other out-of-home placements, will be developed throughout the Virginia service area.
3. Appropriately and adequately consider the goals set forth in the Virginia DMAS ARTS (Addiction and Recovery Treatment Program) Program and by the community services boards in the Virginia service area.
4. Include a methodology for allocation of funds between VA and TN.

Sources: Virginia Cooperative Agreement, Section 33; Virginia Cooperative Agreement, Amendment 1, January 12, 2018.

Plan Overview
Behavioral Health Services Plan Key Metrics

A5: NAS (Neonatal Abstinence Syndrome) Births

A12: Frequent Mental Distress

B20: Follow-Up After Hospitalization for Mental Illness (within 7 days)

B21: Follow-Up After Hospitalization for Mental Illness (within 30 days)

B22: Anti-depression Medication Management – Effective Acute Phase Treatment

B23: Antidrepression Medication Management – Effective Continuation Phase Treatment

B24: Engagement of Alcohol or Drug Treatment

B25: SBIRT Administration – Hospital Admission

B26: Rate of SBIRT Administration – ED Visits

SBIRT = Screening, Brief Intervention, and Referral to Treatment
ED = Emergency Department

Plan Overview
Strategies for the 3-Year Behavioral Health Services Plan

Strategy #1: Develop the Ballad Health Behavioral Services Infrastructure

Strategy #2: Develop a Comprehensive Approach to the Integration of Behavioral Health and Primary Care

Strategy #3: Supplement Existing Regional Crisis System – For Youth and Adults

Strategy #4: Develop Enhanced and Expanded Resources For Addiction Treatment

Behavioral

Plan Overview
Strategies Related to VA Cooperative Agreement Behavioral Health Services Plan Requirements

VA Cooperative Agreement Requirement	1. Behavioral Health Infrastructure	2. Primary Care / Behavioral Health Integration	3. Regional Crisis System	4. Addiction Treatment Resources
1. New capacity for residential addiction recovery services				Y
2. Community-based mental health resources to minimize out-of-home placements		Y	Y	Y
3. Appropriately and adequately consider the goals set forth in the Virginia DMAS ARTS (Addiction and Recovery Treatment) Program and by the community services boards in the Virginia service area			Y	Y

Plan Overview
Behavioral Health Services Plan Estimated Investment Summary

Behavioral Health Services Plan	Year 1	Year 2	Year 3	Year 1-3 Total
#1 - Infrastructure Development	$340,000	$680,000	$710,000	$1,730,000
#2 - Behavioral Health and Primary Care Integration	$200,000	$690,000	$1,360,000	$2,250,000
#3 - Regional Crisis System for Youth and Adults	$472,750	$1,406,759	$3,320,348	$5,199,857
#4 - Expanded Resources for Addiction Treatment	$750,000	$1,223,241	$4,609,652	$6,582,893
Total	**$1,762,750**	**$4,000,000**	**$10,000,000**	**$15,762,750**
CA-Mandated Minimum Expenditures	*$1,000,000*	*$4,000,000*	*$10,000,000*	*$15,000,000*
Potential Funding Needed in Excess of Minimum Spending Requirements	***$762,750***	***$0***	***$0***	***$762,750***

Behavioral

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Behavioral Health Services Plan

2. Strategic Approach

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Strategic Approach
Strategy #1: Develop the Ballad Health Behavioral Services Infrastructure

Why?

- Developing comprehensive and proactive behavioral health service offerings across Ballad Health's broad geographic region requires a leadership and support structure to develop consistent, high-quality systems of care and to integrate activities with other service lines.

How?

- Hire a dedicated Chief Medical Officer for behavioral health to oversee and take clinical responsibility for fully developing a regional service line.
- Hire two new Operational Market Leaders (one for TN and one for VA) to provide direction and support for market-specific operational implementation.
- Hire Financial Analyst for behavioral health operations.

Strategic Approach
Strategy #2: Develop a Comprehensive Approach to the Integration of Behavioral Health and Primary Care

Why?

- Primary Care practices in the region have piloted Navigation-based Primary Care/Behavioral Health Integration (PCBHI) programs. This model is proving effective and Ballad Health believes broader implementation of navigators and embedded behavioral health professionals will greatly improve early identification and treatment of behavioral health issues.

How?

- Build out current PCBHI models within the Ballad Health service area to include approximately 17 FTE's within the first three years:
  - Behavioral Health Navigators
  - Pediatric Psychologists
  - Primary Care Psychologists
  - Social Workers
  - Psychiatric Nurse Practitioners
  - Adult Psychologists
- Final site selection will be completed during FY2019 for placement of these resources. Preliminary plans include locating 8 of the incremental FTE's described above into practices serving Virginia residents.

Strategic Approach
Strategy #2: Develop a Comprehensive Approach to the Integration of Behavioral Health and Primary Care

Metrics Addressed

- B20: Follow-Up After Hospitalization for Mental Illness (within 7 days)
- B21: Follow-Up After Hospitalization for Mental Illness (within 30 days)
- B22: Antidepression Medication Management – Effective Acute Phase Treatment
- B23: Antidrepression Medication Management – Effective Continuation Phase Treatment

Potential Barriers to Success

- Successful recruitment of behavioral health clinicians

Potential Mitigation Tactics

- Partner with existing providers
- Utilize behavioral telehealth to expand access to limited resources
- Utilize telemedicine to enhance the accessibility of services and assist in recruitment of practitioners
- Incorporate training programs as an initiative in the Health Research and Graduate Medical Education plan

Strategic Approach
Strategy #3: Supplement Existing Regional Crisis System

Why?

- Many behavioral health issues reach a crisis phase that demands an organized, integrated approach to addressing crisis. Traditional crisis and emergency management systems have not been well designed to focus on or coordinate resources for behavioral health crises.

How?

Prevention

- Expand SBIRT to identify individuals at risk of behavioral health crises:
  - Hospital Emergency Departments
  - Hospital Admissions
- The data collected with SBIRT will help inform future initiatives including identifying additional locations for PCBHI.
- Supplement trauma-informed care initiatives throughout the region

SBIRT=Screening, Brief Intervention, and Referral to Treatment
PCBHI=Primary Care Behavioral Health Integration

Strategic Approach
Strategy #3: Supplement Existing Regional Crisis System

How?

Intervention

- Expand the Respond program to *all* TN and VA hospitals. Current Respond services include:
  - 24/7 Crisis line
  - Crisis assessment team for evaluating patients face-to-face and via telehealth in EDs, inpatient settings, and walk-ins to Woodridge Hospital
  - Recommendation and facilitation of safe dispositions for behavioral health patients
  - Assists with scheduling bridge appointments for patients discharging from an inpatient setting.
- Increase efficiency of transportation services by deploying 4 vehicles, serving Virginia and Tennessee patients throughout the Ballad service area:
  - 2 vehicles operating 24-hours per day
  - 2 vehicles operating 12-hours per day
  - These services will provided needed inter-facility transportation for patients traveling between behavioral sites of care. Currently, Ballad utilizes third party transportation (i.e. cabs), and local law enforcement to meet patient needs. The ability to provide reliable, timely, and secure transportation services will enhance the experience and outcomes of Ballad Health behavioral patients.
- Working to implement a Zero Suicide initiative which focuses on creating a high-reliability zero-harm approach to prevent suicide within healthcare and behavioral health systems.

Strategic Approach
Strategy #3: Supplement Existing Regional Crisis System

How?

Intervention

- Conduct region-specific Crisis Services Planning for youth and adults to identify specific gaps
- Develop an Crisis Stabilization Unit in Wise County
  - Will address mental health, substance abuse disorder, and co-occurring disorder needs
  - Initially opening 8 beds, with expansion of unit to 16 beds based on volume demands
  - Include 2-3 bed unit crisis unit and secure observation area for children and adolescents
  - Due to restrictions in the Cooperative Agreement, necessary conversions in Wise County will be delayed until at least FY 2021
- Enhance Regional Mobile Crisis and Stabilization Programs for youth
  - Pilot program consisting of one team with approximately 4 FTEs
    - Team Lead/Crisis Worker
    - 2 additional Crisis Workers
    - Psychiatric NP
  - Program protocols to be developed consistent with current best practices

Strategic Approach
Strategy #3: Supplement Existing Regional Crisis System

Metrics Addressed

- A12: Frequent Mental Distress
- B20: Follow-Up After Hospitalization for Mental Illness (within 7 days)
- B21: Follow-Up After Hospitalization for Mental Illness (within 30 days)
- B24: Engagement of Alcohol or Drug Treatment
- B25: SBIRT Administration – Hospital Admission
- B26: Rate of SBIRT Administration – ED Visits

Behavioral

SBIRT=Screening, Brief Intervention, and Referral to Treatment
ED=Emergency Department

Strategic Approach
Strategy #3: Supplement Existing Regional Crisis System

Potential Barriers to Success

- Recruitment of behavioral health professionals
- Coordinating collective efforts of local resources/agencies/authorities
- Timeliness and ease of access to supportive clinical and social resources post-crisis

Potential Mitigation Tactics

- Partner with existing providers
- Utilize behavioral telehealth to expand access to limited resources
- Incorporate training programs as an initiative in the Health Research and Graduate Medical Education plan

Strategic Approach
Strategy #4: Develop Enhanced and Expanded Resources for Addiction Treatment

Why

- The Ballad Health region is one of the regions in the U.S. most highly affected by the opioid epidemic, along with a significant impact of methamphetamine and alcohol use disorders. Residential addiction treatment resources, sober housing, and recovery community support are limited compared to need, not just for the uninsured, but for all populations.

How

- Expand addiction recovery services consistent with the goals and programs as outlined within the DMAS ARTS program:
  - Evaluate the feasibility for a new Dickenson County Residential Addiction Treatment Center for select populations.
  - Evaluate the ability to expand residential addiction treatment capacity with a current provider in TN or VA. Partnering with a current residential addiction treatment provider allows for a more rapid implementation of expanded services.
  - Conduct study on resources needs and federal waiver requirements for pregnant women with substance abuse disorders in Tennessee and Virginia

ARTS=Addiction and Recovery Treatment

Strategic Approach
Strategy #4: Develop Enhanced and Expanded Resources for Addiction Treatment

How

- Expand addiction recovery services consistent with the goals and programs as outlined within the DMAS ARTS program (continued):
  - Enhance outpatient services:
    - Further develop Overmountain Recovery's services and capabilities, focusing on expansion of medication assisted therapies (i.e., buprenorphine), and obtaining preferred OBOT designation from DMAS
    - Focus on expanded addiction treatment resources within primary care offices throughout the region – obtaining preferred OBOT designation from DMAS at three Virginia locations
    - Utilize behavioral telehealth to expand access to limited resources
- Integrate peer counselors into various behavioral health settings such as primary care, emergency departments, and outpatient treatment centers.
- Partner with DMAS and VDH to educate and train the Ballad provider community on the evidence-based use of buprenorphine and other medication assisted treatment options

Behavioral

OBOT=Office-Based Opioid Treatment, ARTS=Addiction and Recovery Treatment

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Strategic Approach
Strategy #4: Develop Enhanced and Expanded Resources for Addiction Treatment

Metrics Addressed

- A5: NAS (Neonatal Abstinence Syndrome) Births
- A12: Frequent Mental Distress
- B20: Follow-Up After Hospitalization for Mental Illness (within 7 days)
- B21: Follow-Up After Hospitalization for Mental Illness (within 30 days)
- B24: Engagement of Alcohol or Drug Treatment

Behavioral

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Strategic Approach
Strategy #4: Develop Enhanced and Expanded Resources for Addiction Treatment

Potential Barriers to Success

- Effective recruiting and retention of qualified behavioral health professionals
- Economic support of peer counselors seeking certification

Potential Mitigation Tactics

- Partner with existing providers
- Utilize behavioral telehealth to expand access to limited resources
- Incorporate peer counselor certification programs as an initiative in the Health Research and Graduate Medical Education plan

Behavioral Health Services Plan

3. Implementation Roadmap

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Implementation Roadmap
Milestones and Metrics for Measuring Strategies: 2019

Implementation Milestones and Metrics: Q1 and Q2

Strategies	Q1 Milestones	Q1 Metrics	Q2 Milestones	Q2 Metrics
1. Develop Supporting Infrastructure	• Identify priorities for new positions • Develop job descriptions	• *Priorities for new positions established* • *Job descriptions completed*	• Begin recruiting	• *Evidence of active recruiting*
2. Primary Care/ Behavioral Health Integration (PCBHI)	• Establish best practices from existing programs • Coordinate with PCP practices to prepare for behavioral health integration	• *Summary of best practices from existing programs* • *Listing of contacted PCP practices*	• Gain final approval of new PCBHI sites and implementation needs • Begin recruiting	• *Approved implementation plans* • *Evidence of active recruiting*
3. Supplement Existing Regional Crisis System	• Plan SBIRT Pilot Programs for VA and TN	• *Mobile Crisis study completed* • *Initiate plan for SBIRT pilot program*	• Conduct regional crisis planning study – including a component focusing on mobile crisis for youth • Plan Respond expansion in VA and TN • Begin gap analysis of current care management plans with respect to Zero Suicide • Continue planning SBIRT Pilot Programs for VA and TN, including selection of SBIRT screening tool	• *Regional crisis planning study initiated* • *Respond expansion plan complete* • *Zero Suicide Gap analysis initiated* • *SBIRT Pilot Program plan complete for VA and TN*
4. Enhanced and Expanded Resources for Addiction Treatment	• Residential expansion: Conceptual planning • Research Overmountain service expansion opportunities to be provided at current location (i.e., buprenorphine) including analysis for preferred OBOT designation • Initiate evaluation of opportunity for RATC in Dickenson County	• *Residential expansion: Conceptual plan completed* • *Overmountain expansion findings complete*	• Residential Expansion: operations planning • Complete consultant study in TN and VA of resource needs for pregnant women with substance abuse disorders • Identify three primary care practices in VA with providers who will seek preferred OBOT designation • Overmountain - Apply for Preferred OBOT status	• *Residential expansion: operations plan and site selection complete* • *Consultant report/recommendations* • *Providers and practices identified* • *Preferred OBOT application for Overmountain completed*

Implementation Roadmap
Milestones and Metrics for Measuring Strategies: 2019

Implementation Milestones and Metrics: Q3 and Q4

Strategies	Q3 Milestones	Q3 Metrics	Q4 Milestones	Q4 Metrics
1. Develop Supporting Infrastructure	• Hire new positions: o Medical Director o Market Leaders – One in TN and one in VA o Financial Analyst	• *New positions hired*	• Identify Y2 quarterly targets and timelines	• *Y2 milestones and metrics accepted*
2. Primary Care/ Behavioral Health Integration (PCBHI)	• Hire Initial 4.4 FTEs, supporting a minimum three primary care practices, two of which will serve VA residents • Begin gap analysis for preferred OBOT designation at selected PCBHI sites	• *Initial 4.4 FTEs hired* • *OBOT gap analysis at selected sites initiated*	• Continue hiring as necessary • Establish new PCBHI programs • Complete gap analysis for preferred OBOT designation – make application	• *New PCBHI programs established* • *Application for preferred OBOT status* • *Y2 milestones and metrics accepted*
3. Supplement Existing Regional Crisis System	• Finalize site selection and screening tool for SBIRT pilot and Respond expansion programs • Initiate study related to trauma-informed care initiatives (i.e. ACE)	• *Sites and screening tool selected for SBIRT pilot and Respond expansion* • *Study initiated*	• Complete regional crisis planning study – including a component focusing on mobile crisis for youth • Begin implementation planning for regional crisis plan • Establish SBIRT Pilot Program in VA and TN • Expand Respond to additional hospitals • Complete study/approve recommendations from Zero Suicide evaluation • Complete study related to trauma-informed care initiatives	• *Completed Study* • *Implementation plan initiated* • *SBIRT Pilot Program established in VA and TN* • *Respond expanded to Pilot hospital in VA* • *Recommendations for Zero Suicide initiative* • *Study completed* • *Y2 milestones and metrics accepted*
4. Enhanced and Expanded Resources for Addiction Treatment	• Residential expansion: Finalize budget and complete implementation plan • Hire resources for Overmountain expansion • Complete evaluation of RATC in Dickenson County • Develop comprehensive education program for providers, utilizing DMAS and VDH resources	• *Residential expansion: approved budget and implementation plan* • *Overmountain expansion: resources hired* • *Completed study*	• Begin Overmountain service expansion • Complete plan for initiation of Peer counseling support across the region • Selected providers at three identified primary care sites complete preferred OBOT application	• *Overmountain service expansion underway* • *Recommendations for Peer Counseling support* • *OBOT application completed* • *Y2 milestones and metrics accepted*

Behavioral

Implementation Roadmap
Milestones and Metrics for Measuring Strategies: 2020

Strategies	2020 Milestones and Metrics
1. Develop Supporting Infrastructure	• Evaluate new positions added in 2019 and adjust as necessary • Review/evaluate further infrastructure needs and implement if necessary
2. Primary Care/ Behavioral Health Integration (PCBHI)	• Evaluate operations initiated in 2019 and refine • Hire additional resources per 2020 plan • Initiate approved Preferred OBOT services • *Number of referrals from a Ballad PCBHI model to a behavioral health specialist* • *Percent satisfied with service as indicated on their patient satisfaction survey*
3. Supplement Existing Regional Crisis System	• Expand SBIRT to additional facilities • Expand Respond to all hospitals • Establish transportation services • Implement regional crisis plan – including mobile youth services • Implement initial Zero Suicide initiatives across select Ballad locations • Implement select trauma-informed care initiatives • *Number of SBIRTs performed*
4. Enhanced and Expanded Resources for Addiction Treatment	• Implement economic support for Peer Counseling across the region • Complete planning, site selection, and timeline for RATC • Initiate comprehensive education plan for providers, utilizing DMAS and VDH resources • *Number of patients receiving treatment from Preferred OBOT Ballad providers*

Implementation Roadmap
Milestones and Metrics for Measuring Strategies: 2021

Strategies	2021 Milestones and Metrics
1. Develop Supporting Infrastructure	• Review/evaluate further infrastructure needs and implement if necessary
2. Primary Care/ Behavioral Health Integration (PCBHI)	• Evaluate operations initiated in 2020 and refine • Hire additional resources per 2021 plan • *Number of referrals from a Ballad PCBHI model to a behavioral health specialist* • *Percent satisfied with service as indicated on their patient satisfaction survey*
3. Supplement Existing Regional Crisis System	• Research SBIRT registry findings and refine – utilize data to inform additional PCBHI locations • Develop Wise County Crisis Unit • Expand transportation SBIRT expanded to all Ballad hospitals (EDs and IP admissions) • Implement Zero Suicide initiatives across additional Ballad locations • Implement select trauma-informed care initiatives • *Number of SBIRTs performed* • *Number of patients benefitting from enhanced transportation services*
4. Enhanced and Expanded Resources for Addiction Treatment	• Implementation of RATC plan • Evaluate potential to prescribe buprenorphine in the Ballad Emergency Departments in Virginia • *Number of patients receiving treatment from Preferred OBOT Ballad providers*

Children's Health Services Plan for the Commonwealth of Virginia

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Children's Health Services Plan

1. Plan Overview

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Plan Overview
VA Cooperative Agreement Children's Health Services Plan Requirements

VA Cooperative Agreement Requirement
1. Detail how pediatric specialty centers and Emergency Rooms in Kingsport and Bristol will be developed to meet the current and expected future needs of the people in the geographic service area.
2. Detail how pediatric telemedicine and rotating specialty clinics in rural hospitals will be staffed and utilized to ensure quick diagnosis and treatment in the right setting in close proximity to patients' homes.
3. Include a methodology for allocation of funds between Virginia and Tennessee. The plan shall include milestones and outcomes metrics.

Sources: Virginia Cooperative Agreement, Section 35; Virginia Cooperative Agreement, Amendment 1, January 12, 2018.

Plan Overview
Children's Health Services Plan Key Metrics

B6: Pediatric Readiness of Emergency Department

B8: Specialist Recruitment and Retention

B17: Asthma ED Visits - Age 0-4

B18: Asthma ED Visits - Age 5-14

ED = Emergency Department.

Children's

Plan Overview
Strategies for the 3-Year Children's Health Services Plan

Strategy #1: Develop Necessary Ballad Children's Health Services Infrastructure

Strategy #2: Establish ED Capabilities and Pediatric Specialty Centers in Kingsport and Bristol

Strategy #3: Develop Telemedicine and Rotating Specialty Clinics In Rural Hospitals

Strategy #4: Recruit and Retain Subspecialists

Strategy #5: Develop CRPC Designation at Niswonger Children's Hospital

Plan Overview
Strategies Related to VA Cooperative Agreement Children's Health Services Plan Requirements

VA Cooperative Agreement Requirement	1. Children's Health Infrastructure	2. ED Capabilities: Kingsport/ Bristol	3. Telemedicine and Specialty Clinics	4. Recruit/ Retain Subspecialists	5. Develop CRPC Designation
1. Pediatric Emergency Rooms in Kingsport and Bristol		Y	Y	Y	
2. Pediatric telemedicine and rotating specialty clinics in rural hospitals			Y	Y	

Children's Health Services Plan Estimated Investment Summary

Children's Health Services Plan	Year 1		Year 2		Year 3		Year 1-3 Total	
	Low	High	Low	High	Low	High	Low	High
#1 - Develop Necessary Infrastructure	$130,000		$270,000		$280,000		$680,000	
#3 - Develop Telemedicine and/or Rotating Specialty Clinics in Rural Hospitals	See Rural Health ServicsPlan		See Rural Health ServicsPlan		See Rural Health ServicsPlan		See Rural Health ServicsPlan	
#4 - Establish ED Capabilities and Pediatric Specialty Centers in Kingsport and Bristol	$410,000		$130,000		$270,000		$810,000	
#5 - Develop CRPC Designation	$410,000		$650,000		$660,000		$1,720,000	
Sub-Total	**$950,000**		**$1,050,000**		**$1,210,000**		**$3,210,000**	
#2 - Recruit and Retain Subspecialists	$50,000	$1,400,000	$950,000	$3,880,000	$1,790,000	$6,650,000	$2,790,000	$11,930,000
Total	**$1,000,000**	**$2,350,000**	**$2,000,000**	**$4,930,000**	**$3,000,000**	**$7,860,000**	**$6,000,000**	**$15,140,000**
CA-Mandated Minimum Expenditures	*$1,000,000*		*$2,000,000*		*$3,000,000*		*$6,000,000*	
Potential Funding Needed in Excess of Minimum Spending Requirements	***$0***	***$1,350,000***	***$0***	***$2,930,000***	***$0***	***$4,860,000***	***$0***	***$9,140,000***

Specialist recruiting (see Strategy #4) expenditures are presented as a range, due the following uncertainties, which can have significant impacts on the actual annual investment expenditures:

- Timing – Due to the demand for pediatric sub-specialists, the amount of time necessary to successfully recruit a sub-specialist can vary dramatically.
- Economic considerations – Ballad has a robust compliance function that monitors matters pertaining to physician compensation and other economic relationships between the system and its medical staff. However, the limited number of pediatric sub-specialists completing residencies annually often results in rapidly changing economic demands among potential recruits.
- Possible partnership opportunities – As described in Strategies #3 and #4, Ballad is actively discussing partnership and joint venture opportunities with multiple other pediatric providers and medical schools. The partnerships and/or joint venture relationships that may emerge from those discussions may result in economic support for the sub-specialists currently included in the Ballad recruiting plan.

Children's Health Services Plan

2. Strategic Approach

Strategic Approach
Strategy #1: Develop Necessary Children's Health Infrastructure

Why

- Building a coordinated children's health program across Ballad Health's service area and expanding Ballad's pediatric clinical capabilities will require a core support infrastructure, including additional leadership and partnerships.

How

- Internal/Management
  - Effective with the merger, Ballad Health appointed an Assistant Vice President for Pediatric Services
  - Additionally, Ballad Health will be recruiting additional resources, including:
    - Pediatric Chief Medical Officer
    - Project Administrator
    - Clinical Data Analyst
- Community and Other Resources
  - Ballad Health will continue to build on existing relationships with other Children's Hospitals.

Strategic Approach
Strategy #1: Develop Necessary Children's Health Infrastructure

How (continued)

- **Community and Other Resources (continued)**
  - Ballad Health will continue to build relationships with community resources focused on pediatric health, including private practitioners, community organizations, and local and state governments. One such relationship effort will include the establishment of a Pediatric Advisory Council with Ballad and pediatricians to establish clinical protocols for inpatient, emergency department, urgent care and outpatient initiatives. The council's initial priority will be the implementation of standardized clinical care protocols for children with asthma.

Metrics Addressed

- B17: Asthma ED Visits - Age 0-4
- B18: Asthma ED Visits - Age 5-14

Strategic Approach
Strategy #2: Establish ED Capabilities and Pediatric Specialty Centers in Kingsport and Bristol

Why

- Establishing pediatric specialty centers and ED capabilities in Kingsport and Bristol will allow pediatric patients to receive care closer to home.

How

- Complete necessary renovations to one of Ballad Health's Kingsport hospitals and to Bristol Regional Medical Center in order to better accommodate pediatric patients and their families.
  - Ballad Health is currently studying the region's trauma needs and anticipates completion of this engagement by July 31, 2018.
  - Once complete, Ballad Health will be able to designate which emergency room in Kingsport will include the pediatric capabilities.
  - Ballad Health anticipates completing necessary facility renovations in Kingsport and Bristol within the 2019 fiscal year.
- Expand dedicated emergency medicine provider coverage for pediatrics to ensure 24/7 coverage.
- Implement operational changes including the development of a dedicated pediatric triage line, urgent care triage protocols, and transfer protocols to Niswonger ED.

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Strategic Approach
Strategy #2: Establish ED Capabilities and Pediatric Specialty Centers in Kingsport and Bristol

Metrics Addressed

- B6: Pediatric Readiness of Emergency Department
- B8: Specialist Recruitment and Retention

Potential Barriers to Success

- The primary barrier to establishing expanded pediatric ED capabilities will be the availability of pediatric specialists for coverage.

Potential Mitigation Tactics

- Identify new opportunities to partner with other Children's Hospitals through coverage agreements, co-recruiting of telemedicine and other options
- Utilize pediatric telehealth to expand access to limited resources
- Utilize pediatric readiness assessment data to ensure that all Ballad ED's are equipped to provide emergency care for the children of the region

Children's

Strategic Approach
Strategy #3: Develop Telehealth and Rotating Specialty Clinics In Rural Hospitals

Why

- Access to Pediatric care through telemedicine and/or rotating clinics allows Niswonger specialty capabilities to expand to serve the pediatric populations in more rural areas of the region.

How

- Pediatric telehealth gaps will be addressed through the installation of comprehensive telehealth equipment at all Ballad Health EDs (see Rural Health Services Plan). This will allow connectivity to Niswonger Children's Hospital from all Ballad Hospital EDs.
- In addition to the expansion of telehealth to all Ballad Health EDs, Ballad will also expand pediatric access to telehealth services for those in the service area unable to travel to a Niswonger pediatric specialty location. Such access will be provided through locations established at rural hospitals and Ballad Medical Associates locations.

Strategic Approach
Strategy #3: Develop Telemedicine and Rotating Specialty Clinics In Rural Hospitals

How (continued)

- Additionally, Ballad Health is committed to participating in other provider/academic partnership agreements as necessary to achieve this Plan. Ballad Health currently enjoys partnership with both East Tennessee State University ("ETSU") and East Tennessee Children's Hospital ("ETCH"), among others, and is committed to exploring similar affiliation opportunities with institutions in Virginia, such as the University of Virginia Health System ("UVA") and Virginia Commonwealth University ("VCU").

Potential Barriers to Success

- Development of telemedicine and/or rotating specialty clinics is dependent on access to needed pediatric subspecialists.

Potential Mitigation Tactics

- Identify new opportunities to partner with other Children's Hospitals through coverage agreements, co-recruiting of telemedicine and other options

Strategic Approach
Strategy #3: Develop Telemedicine and Rotating Specialty Clinics In Rural Hospitals

Other Considerations

- The Rural Health Services Plan includes incremental investments into telehealth services. See additional details in Rural Health Services Plan
- Ballad Health continues to explore opportunities to partner with other providers to provide additional access points through the use of telehealth services

Metrics Addressed

- B6: Pediatric Readiness of Emergency Department
- B8: Specialist Recruitment and Retention

Children's

Strategic Approach
Strategy #4: Recruit and Retain Subspecialists

Why

- Access to pediatric subspecialists meets community need and supports CRPC certification.

How

- Recruit or partner for access to pediatric subspecialists, guided by Niswonger provider workforce needs assessment, established referral patterns, coverage requirements necessary for CRPC designation, and other market conditions.
- Survey employed pediatric subspecialists to understand perception of workload, satisfaction, and perceived needs to help retention and support recruiting efforts.
- Reassess (at least every three years) workforce analyses to ensure recruiting and retention remain focused on community need areas.
- Explore relationship with East Tennessee State University ("ETSU") and East Tennessee Children's Hospital ("ETCH") to support Niswonger pediatric subspecialty coverage.
- Explore relationships with the University of Virginia ("UVA") and Virginia Commonwealth University ("VCU") to develop pediatric subspecialty access points in Virginia.
- Work with State of TN on CRPC guidelines for rural geographies.

Children's

Strategic Approach
Strategy #4: Recruit and Retain Subspecialists

Metrics Addressed

- B8: Specialist Recruitment and Retention

Potential Barriers to Success

- Timing and complexity of negotiating affiliation coverage agreements with external entities
- The primary barrier to implementation of this strategy is the ability to recruit pediatric subspecialists - who are in high-demand nationally
- CRPC designation constraints in rural geographies

Potential Mitigation Tactics

- Identify new opportunities to partner with other Children's Hospitals through coverage agreements, co-recruiting of telemedicine and other options
- The Behavioral Health Services Plan will include focus on team-based care models in pediatric practices and on recruiting behavioral health specialists, including psychiatrists

Strategic Approach
Strategy #4: Recruit and Retain Subspecialists

Specialties Required for CRPC

Specialty	Incremental FTEs
Pediatric Surgery	2.0
Pediatric Gastroenterology	1.0
Pediatric Pulmonology	2.0
Pediatric Neurology	1.0
Pediatric ENT	1.0
Pediatric Urology	1.0
Pediatric Critical Care/Intensivist	1.0
Pediatric Neurosurgery	1.0
Pediatric Ophthalmology	1.0
Child Abuse	0.5
Total	**11.5**

- Ballad Health's focus for specialist recruitment will be on specialists required to meet CRPC requirements.
- Ballad Health will commit to increasing access to necessary specialties to build it's CRPC program over the next three to five years.
- There is a shortage for many of these specialties, so the exact timing of recruitment will vary.

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Strategic Approach
Strategy #5: Develop CRPC Designation at Niswonger Children's Hospital

Why

- CRPC designation establishes the Niswonger ED as the regional hub for treating pediatric trauma patients without the need to transfer out of the area

How

- Recruit and retain pediatric subspecialists per Strategy #4
- Address additional operational and service needs as detailed in CRPC gap assessment (e.g., transfer agreements, data tracking, transport team)
- Hire additional administrative and clinical personnel as necessary per CRPC gap analysis

Strategic Approach
Strategy #5: Develop CRPC Designation at Niswonger Children's Hospital

Metrics Addressed

- B6: Pediatric Readiness of Emergency Department
- B8: Specialist Recruitment and Retention

Potential Barriers to Success

- Availability of pediatric specialists for coverage
- Ability to partner with other children's hospitals for coverage
- CRPC designation constraints for rural geographies

Potential Mitigation Tactics

- Identify new opportunities to partner with other Children's Hospitals through coverage agreements, co-recruiting of telemedicine and other options
- Utilize pediatric telehealth to expand access to limited resources

Children's Health Services Plan

3. Implementation Roadmap

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Implementation Roadmap

Milestones and Metrics for Measuring Strategies: 2019

Implementation Milestones and Metrics: Q1 and Q2

Strategies	Q1 Milestones	Q1 Metrics	Q2 Milestones	Q2 Metrics
1. **Develop Infrastructure**	• Finalize evaluation of infrastructure needs and staff capabilities to clarify gaps	• *Summary gap analysis including infrastructure needs and staff capabilities*	• Develop job descriptions • Begin recruiting	• *List of positions to add and budget* • *Evidence of active recruiting*
2. **Establish Ped ED in Kingsport & Bristol**	• ID Kingsport pediatric ED location • Begin facility planning	• *Kingsport location identified* • *Facility planning begun*	• Finalize facility planning • Approve final plans/budgets • Develop operational plan and budget	• *Final facility plans* • *Approved budgets* • *Operational plans*
3. **Develop Telemedicine / Specialty Clinics in Rural Hospitals**	• Initiate development of a plan to expand rural hospital ED telehealth capabilities for pediatric specialties	• *Summary results of gap analysis and telemedicine plan*	• Complete plan to expand rural hospital ED telehealth capabilities for pediatric specialties	• *Priority listing of sites for installation of telehealth equipment*
4. **Recruit and Retain Subspecialists**	• Initiate recruiting of year 1 subspecialists • Begin relationship discussions with ETSU, ETCH, UVA, and VCU	• *Annual recruitment priorities/plan* • *Report on status of partnerships discussions with other pediatric hospitals*	• Finalize support staff needs	• *Physician recruitment status - % of plan achieved* • *Support staff recruitment status* • *Report on status of partnerships discussions with other pediatric hospitals*
5. **Develop CRPC Designation at Niswonger Children's Hospital**	• Review quality indicators/gaps • Identify support staffing needs	• *Assessment summary: quality indicators, staff needs, gaps*	• Develop comprehensive CRPC plan	• *Comprehensive CRPC plan completed*

Implementation Roadmap
Milestones and Metrics for Measuring Strategies: 2019

Implementation Milestones and Metrics: Q3 and Q4

Strategies	Q3 Milestones	Q3 Metrics	Q4 Milestones	Q4 Metrics
1. Develop Infrastructure	• Continue recruiting / hire new staff • Establish Pediatric Advisory Council	• *Evidence of recruiting / staff hired* • *Report on membership of Pediatric Advisory Council*	• Continue hiring as necessary • Pediatric Advisory Council to identify any additional priorities other than children's asthma	• *Evidence of staff hired* • *Pediatric Advisory Council priorities* • *Y2 milestones and metrics accepted*
2. Establish Ped ED in Kingsport & Bristol	• Begin construction • Develop pediatric ED program protocols	• *Begin construction* • *Initiate protocol development*	• Finalize construction • Complete remediation of all identified pediatric ED gaps at Kingsport and Bristol sites, including telehealth capabilities	• *Construction complete* • *Y2 milestones and metrics accepted*
3. Develop Telemedicine/ Specialty Clinics in Rural Hospitals	• Begin implementation of plan to expand rural hospital ED telehealth capabilities for pediatric specialties	• *Initiate implementation plan*	• Complete implementation for rural hospital ED telehealth capabilities for pediatric specialties	• *Services initiated* • *Y2 milestones and metrics accepted*
4. Recruit and Retain Subspecialists	• Hire subspecialists as identified and available • Continue affiliation conversations	• *Physician recruitment status* • *Report on status of partnerships discussions*	• Hire subspecialists as identified and available • Continue affiliation conversations	• *Recruitment status update* • *Report on status of partnerships discussions* • *Y2 milestones and metrics accepted*
5. Develop CRPC Designation at Niswonger Children's Hospital	• Hire according to CRPC plan	• *Evidence of recruitment and hiring according to CRPC plan*	• Hire according to CRPC plan	• *Evidence of recruitment and hiring according to CRPC plan* • *Y2 milestones and metrics accepted*

Implementation Roadmap
Milestones and Metrics for Measuring Strategies: 2020

Strategies	2020 Milestones and Metrics
1. Develop Infrastructure	• Review/evaluate further infrastructure needs and implement if necessary • Pediatric Advisory Council plans to address priorities
2. Establish Ped ED in Kingsport & Bristol	• Evaluate operations initiated in 2019 and refine • *Number of pediatric ED visits in Kingsport* • *Number of pediatric ED visits in Bristol*
3. Develop Telemedicine / Specialty Clinics in Rural Hospitals	• Initiate specialty telemedicine program(s) • Study feasibility of specialty clinic rotations and other e-visit strategies based on currently available physicians • *Number of pediatric telemedicine visits*
4. Recruit and Retain Subspecialists	• Continue to recruit and hire candidates as available • Establish formal relationships as applicable with partners • *Number of specialists accessible through new partnerships*
5. Develop CRPC Designation at Niswonger Children's Hospital	• Plan and initiate Child Abuse Program • Continue to address ongoing CRPC needs

Children's

Implementation Roadmap
Milestones and Metrics for Measuring Strategies: 2021

Strategies	2021 Milestones and Metrics
1. **Develop Infrastructure**	• Review/evaluate further infrastructure needs and implement if necessary • Pediatric Advisory Council continues to implement, refine and track plans to address priorities
2. **Establish Ped ED in Kingsport & Bristol**	• Evaluate operations initiated in 2020 and refine • *Number of pediatric ED visits in Kingsport* • *Number of pediatric ED visits in Bristol*
3. **Develop Telemedicine/Specialty Clinics in Rural Hospitals**	• Continue to expand pediatric specialty telemedicine program • Implement specialty clinic rotations as feasible based on currently available physicians • *Number of pediatric telemedicine visits*
4. **Recruit and Retain Subspecialists**	• Continue to recruit and hire candidates as available • Establish formal relationships as applicable with partners • *Number of specialists accessible through new partnerships*
5. **Develop CRPC Designation at Niswonger Children's Hospital**	• Continue to address ongoing CRPC needs

Rural Health Services Plan for the Commonwealth of Virginia

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Rural Health Services Plan

1. Plan Overview

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Plan Overview
VA Cooperative Agreement Rural Health Services Plan Requirements

VA Cooperative Agreement Requirement
1. Effectively address and detail how meaningful and measurable improvements and enhancement in the Virginia service area to same-day access for primary care services, access to specialty care within five days, access to maternal and prenatal health services, access to pediatric and pediatric specialty services, access to "essential services" as defined in condition 27, preventive and restorative dental services, corrective vision services, and access to emergency services will be achieved
2. Detail how active and effective collaboration with local businesses, school divisions, and industry on community development necessary to attract and retain providers in the Virginia service area will be achieved
3. Have an active and effective focus on managing the burden of disease and breaking the cycle of disease
4. Detail how the New Health System will actively and effectively consult with the Southwest Area Health Education Center and regional educational institutions on the development of workforce development strategies
5. Detail how effective development of health professions education needed to help the New Health System's workforce and the regional pipeline of allied health professionals adapt to new opportunities created as the New Health System evolves and develops will be achieved
6. Include a methodology for allocation of funds between Virginia and Tennessee. The plan shall include milestones and outcome metrics consistent with those approved by the Commissioner after receipt of the recommendations from the Technical Advisory Panel

Sources: Virginia Cooperative Agreement, Section 33; Virginia Cooperative Agreement, Amendment 1, January 12, 2018.

Plan Overview
Rural Health Services Plan Key Metrics

- B8: Specialist Recruitment and Retention
- B9: Personal Care Provider
- B10: Preventable Hospitalizations - Medicare
- B11: Preventable Hospitalizations - Adults
- B12: Screening – Breast Cancer
- B13: Screening – Cervical Cancer
- B14: Screening – Colorectal Cancer
- B15: Screening – Diabetes
- B16: Screening – Hypertension
- B17: Asthma ED Visits – Age 0-4
- B18: Asthma ED Visits – Age 5-14
- B19: Prenatal Care in the First Trimester
- B22: Antidepressant Medication Management – Effective Acute Phase Treatment
- B23: Antidepressant Medication Management – Effective Continuation Phase Treatment
- B29: Screening For Lung Cancer

ED = emergency department

Plan Overview
Strategies for the 3-Year Rural Health Services Plan

Strategy #1: Expand Access to Primary Care Practices Through Additions of Primary Care Physicians and Mid-Levels to Practices in Counties of Greatest Need

Strategy #2: Recruitment of Physician Specialists to Meet Rural Access Needs

Strategy #3: Implement Team-Based Care Models to Support Primary Care Providers, Beginning with Pilots in High Need Counties

Strategy #4: Develop and Deploy Virtual Care Services

Strategy #5: Coordinate Preventive Health Care Services

Rural

Plan Overview

Strategies Related to VA Cooperative Agreement Rural Health Services Plan Requirements

VA Cooperative Agreement Requirement	1. Additions of Primary Care Physicians and Mid-Levels	2: Recruitment of Physician Specialists	3:Team-Based Care Models	4: Deploy Virtual Care Services	5: Coordinate Preventive Services
1.a. Same-day access for primary care services	Y		Y	Y	
1.b. Access to specialty care within five days		Y	Y	Y	
1.c. Access to maternal and prenatal health services	Y	Y	Y	Y	Y
1.d. Access to pediatric and pediatric specialty services	Y		Y	Y	
1.e. Preventive and restorative dental services					Y
1.f. Corrective vision services					Y
1.g. Access to emergency services				Y	
2. Collaboration with local organization on community development to attract and retain providers	See Health Research and GME Plan				
3. Managing the burden of disease and breaking the cycle of disease	Y	Y	Y	Y	Y
4. Consult with the SAHEC and regional educational institutions on the development of workforce development strategies	See Health Research and GME Plan				
5. Development of health professions education	See Health Research and GME Plan				

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Plan Overview

Rural Health Services Estimated Investment Summary

Rural Health Services Plan	Year 1		Year 2		Year 3		Year 1-3 Total	
	Low	High	Low	High	Low	High	Low	High
#1 - Expand Access to PCPs - Add Primary Care Physicians and Mid-levels	$280,000		$770,000		$1,130,000		$2,180,000	
#3 - Team-Based Care Models to Support PCPs	$150,000		$590,000		$890,000		$1,630,000	
#4 - Deploy Virtual Care Services	$140,000		$660,000		$50,000		$850,000	
#5 - Coordinate Preventive Care	$50,000		$50,000		$50,000		$150,000	
Sub-Total	**$620,000**		**$2,070,000**		**$2,120,000**		**$4,810,000**	
#2 - Recruitment of Physician Specialists	$380,000	$570,000	$930,000	$1,550,000	$880,000	$1,960,000	$2,190,000	$4,080,000
Total	**$1,000,000**	**$1,190,000**	**$3,000,000**	**$3,620,000**	**$3,000,000**	**$4,080,000**	**$7,000,000**	**$8,890,000**
CA-Mandated Minimum Expenditures	*$1,000,000*		*$3,000,000*		*$3,000,000*		*$7,000,000*	
Potential Funding Needed in Excess of Minimum Spending Requirements	***$0***	***$190,000***	***$0***	***$620,000***	***$0***	***$1,080,000***	***$0***	***$1,890,000***

Specialist recruiting (see Strategy #2) expenditures are presented as a range, due the following uncertainties, which can have significant impacts on the actual annual investment expenditures:

- Timing – Due to the challenges of recruiting specialists to rural environments, the amount of time necessary to successfully recruit a specialist can vary dramatically.
- Economic considerations – Ballad has a robust compliance function that monitors matters pertaining to physician compensation and other economic relationships between the system and its medical staff. However, the challenges of recruiting to a rural environment often results in rapidly changing economic demands among potential recruits.
- Possible partnership opportunities –Ballad supports private practitioner employment, and will always work with private practices to provide recruitment assistance when appropriate. Such recruitment assistance often results in economic investments by Ballad less than the investments required to employ a specialist.

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Rural Health Services Plan

2. Strategic Approach

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Strategic Approach
Strategy #1: Add Primary Care Physicians and Mid-Level Providers to Practices in Counties of Greatest Need

Why?

- Adding primary care physicians ("PCP"s) and mid-level providers (Physician Assistants and Nurse Practitioners) is important to expanding access in rural areas.
- Staffing practices with mid-level practitioners allows existing physicians to work at the top of their license and reduce overall cost of care.

How?

- Continuously evaluate needs of the Ballad service area. To identify the areas of highest need, Ballad will monitor and maintain the following information and research:
  - Monitoring and maintaining of provider needs assessment results
  - Evaluation of community needs assessments
  - Evaluate appointment availability and target counties with low appointment availability and limited PCP or urgent care infrastructure relative to the county population.
  - Within high-needs counties, evaluate specific practices that have a high proportion of attributed lives, space capacity, and support staff to prioritize order of deployment.
- Hire at least one additional primary care physician in 2019 in Russell County, and one Pediatrician in Wise County during 2020. Continue evaluation of primary care needs in rural counties and respond with updated recruitment plans as needed.
- Develop recruitment plan and hire two mid-levels in 2019, one in 2020, and two in 2021. When adding mid-level practitioners, ensure they have availability to support walk-in appointments, and in select practices, expand evening/ weekend hours, thereby more effectively supporting current physicians on staff.

Strategic Approach
Strategy #1: Add Primary Care Physicians and Mid-Level Providers to Practices in Counties of Greatest Need

Metrics Addressed

- Additional primary care resources help to address all of the access metrics listed previously in the Plan Overview – Key Metrics slide and increase percentage of the rural population with same day primary care access.

Potential Barriers to Success

- The implementation plan is dependent on the recruitment of primary care physicians and mid-level providers to rural communities. To the extent that these professionals can not be recruited in the timeframe indicated, certain aspects of the plan may be delayed.

Potential Mitigation Tactics

- Identify opportunities to increase access with e-visits
- Increase provider capacity through process reengineering and improved scheduling of expanded care teams
- Provide recruiting assistance to community providers

Rural

Strategic Approach
Strategy #2: Recruit Physician Specialists to Meet Rural Access Needs

Why?

- A core group of local and regional specialists is essential to creating a system of local access in rural communities and minimizing the need for residents to travel for care. Specialists are particularly difficult to recruit to rural areas, resulting in the need to (1) commit significant focus and resources to attract and retain them, and (2) thoughtfully develop regional approaches to specialty access for rural residents.

How?

- Review and revise system-wide recruitment plan for rural counties, taking into consideration community-based need, rural hospital medical staff needs, and growing telehealth capabilities. It is important to note that there is often insufficient population in rural counties to support specialists so they are often recruited to the tertiary hubs, located in urban areas. Specialists recruited to Holston Valley Medical Center and Bristol Regional Medical Center will still treat a number of patients from rural counties and that has been accounted for in this list of priorities.
- Execute on Ballad recruitment plan, based on priorities by specialty and location. Access to specialty care provided through:
  - Locating specialty practice full-time in rural communities
  - Providing rotating specialty clinics in rural communities
  - Providing rural residents with telehealth access to specialists located in urban areas
  - Providing preferred/reserved appointment scheduling for rural residents traveling to urban areas for specialist care
- Coordinate with Ballad's ongoing Health Research and GME Plan workgroup to leverage opportunities for recruitment and development from regional medical schools and networks.
- Review needs and progress annually and update as necessary.

Current Rural Specialist Priorities

Specialty	Practice Location (County)
Cardiology	Wise, VA
Orthopedics	Wise, VA
Pulmonary	Wise, VA
Psychiatry	Russell, VA
Psychiatry NP	Russell, VA
Nephrology	Washington, VA
CardioThoracic	Sullivan, TN
Neurosurgery	Sullivan, TN
General Surgery, Colorectal	Sullivan, TN

Rural

Strategic Approach
Strategy #2: Recruit Physician Specialists to Meet Rural Access Needs

Metrics Addressed

- B8: Specialist Recruitment and Retention
- B10: Preventable Hospitalizations - Medicare
- B11: Preventable Hospitalizations – Adults
- This strategy will also increase the percentage of the rural population with access to specialty care within five days

Potential Barriers to Success

- The implementation plan is dependent on the recruitment of specialist providers. To the extent that these professionals can not be recruited in the timeframe indicated, certain aspects of the plan may be delayed.

Potential Mitigation Tactics

- Identify opportunities to increase access with e-visits
- Increase provider capacity through process reengineering
- Provide recruiting assistance to community providers

Rural

Strategic Approach
Strategy #3: Develop and Deploy Team-based Care Models

Why

- PCPs in Ballad Health's service area often lack resources to address challenging populations such as patients with chronic diseases or behavioral health needs. Team-based care models offer screening and care coordination services which improve outcomes and overall healthcare costs.

How

- Evaluate existing Ballad and private practitioner care coordination resources to ensure effective resourcing within each region, and maximum impact for patients.
- Evaluate and determine appropriate team-based model for rural populations and implement one pilot each year, beginning in 2019.
- Focus on team-based care models that address chronic care needs outside of behavioral health (note: Integration of primary care and behavioral health addressed in Behavioral Health Plan).
- Recruit positions to support regional programs - outlining a schedule of rotation for the teams. Teams to include:
  - Care Coordinator
  - Community Health Worker
  - Health Coach
  - Pharmacist
- Leverage virtual health as available to extend access to specialty care within the system. (see Strategy #4 below).

PCP = Primary Care Provider

Rural

Strategic Approach
Strategy #3: Develop and Deploy Team-based Care Models

Metrics Addressed

- Additional team-based care models help to address all of the access metrics listed previously in the Plan Overview – Key Metrics slide.

Potential Barriers to Success

- The implementation plan is dependent on the recruitment and training of health care professionals, including relatively new functions like community health workers. To the extent that these professionals can not be recruited in the timeframe indicated, certain aspects of the plan may be delayed.

Potential Mitigation Tactics

- Incorporate training programs as an initiative in the Health Research and Graduate Medical Education plan

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Strategic Approach
Strategy #4: Develop and Deploy Virtual Care Services

Why?

- **Infrastructure:** Ballad Health's existing virtual programs lack common platforms or workflows and are disconnected from enterprise-level goals for access. A core infrastructure is needed to support virtual care services, including the following priorities:
  - **Tele-Stroke:** With five existing sites among Ballad Health hospitals, tele-stroke provides a strategic opportunity to scale existing virtual health initiatives with relatively limited investment. Early success here will build traction and facilitate the development of the virtual health infrastructure within the system.
  - **Behavioral Health:** The region is experiencing significant unmet need for behavioral services. However, a significant percentage of patients are diagnosed with lower acuity conditions that do not require face-to-face visits. Shifting lower acuity patients to virtual settings will reinforce broader strategies to extend the capacity of highly skilled BH providers (e.g., psychiatrists). Behavioral telehealth offers virtual face-to-face counseling and improves consistency of coordination with primary care providers.
  - **Pediatric Emergency and Specialty Services:** As discussed in the Children's Health Services Plan, Ballad is committed to providing telehealth services to Niswonger Children's Hospital Emergency Room Physicians and Specialists to all Ballad hospital emergency departments during 2019. The availability of telehealth resources in the Ballad hospitals will also be evaluated for use as outpatient access points for specialist consults.

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Strategic Approach
Strategy #4: Develop and Deploy Virtual Care Services

How?

- Create a centralized virtual health team (leadership and support staff) that is resourced to support deployment of virtual health strategies and assess gaps. Deploy and/or realign necessary infrastructure, including staff and technology, to support the envisioned virtual care network.
- Add telehealth equipment to ensure all Ballad hospitals have at least one comprehensive cart for high-acuity episodes (e.g., tele-stroke) and one secondary cart for lower-acuity episodes (e.g., consults).
- Expand tele-stroke services to a broader geography, providing enhanced access to this critical service.
- Expand behavioral health telemedicine services by adding 10 outpatient sites for low acuity patients. This capability will support a "hub and spoke" model for behavioral telehealth with Ballad hospital-based services.
- Build on Ballad Health's EPIC roll-out and plan for the deployment of E-visits (email) as an additional means of access to care.
- Collectively, these telehealth resources in Ballad's rural communities will provide additional access to both adult and pediatric specialists.

Rural

Strategic Approach
Strategy #4: Develop and Deploy Virtual Care Services

Metrics Addressed

- B8: Specialist Recruitment and Retention
- B10: Preventable Hospitalizations - Medicare
- B11: Preventable Hospitalizations – Adults
- B22: Antidepressant Medication Management – Effective Acute Phase Treatment
- B23: Antidepressant Medication Management – Effective Continuation Phase Treatment

Potential Barriers to Success

- The implementation plan is dependent on the availability health care professionals to provide telehealth services. To the extent that these professionals can not be recruited in the timeframe indicated, certain aspects of the plan may be delayed.
- Legislative and payor policy may hinder full adoption of various virtual care services like telehealth and E-visits.

Potential Mitigation Tactics

- Collaborate with state resources to advocate for legislative policy support

Rural

Strategic Approach
Strategy #5: Coordinate Preventive Health Care Services

Why?

- While increasing access to effective primary care and behavioral health is addressed in other strategies and plans, access to more specialized preventive health care services in rural areas is important to overall health and well-being. These services include maternal and prenatal health, preventive dental, and corrective vision services.

How?

- **Maternal and Prenatal Health**: Access to obstetrical care in rural areas is a nation-wide problem. A multi-stakeholder approach to infant and maternal mortality, pre-term birth, low birthweight, and neonatal abstinence syndrome is required. This includes establishing relationships with a personal care provider and public health communication campaigns to allow for early identification of pregnancy; programs to support primary care providers delivery of pre-natal care such as early identification and triage protocols for high-risk pregnancies; virtual hospital consults with MFM providers; centering pregnancy programs, and post-partum VLARC insertion. Successful models of collaborative action such as the South Carolina Birth Outcome Initiative exist and have shown success in rural geographies. A Maternal and Prenatal Health plan will be developed as part of the population health planning process, and potentially may be a specific area of focus for the Accountable Care Community.

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Strategic Approach
Strategy #5: Coordinate Preventive Health Care Services

How?

- **Dental Services:** Ballad will propose an initiative to increase the current reach of dental sealant programming in schools be included as part of the community partnership activities designed to strengthen community action (see the Strengthen Community Action process outlined in the Population Health Plan under Focus Area Three)
- To increase the availability of additional preventive and restorative dentistry in the region, Ballad is an exploring the opportunity to create a hospital sponsored rural dental residency program that would draw dental students from regional schools of dentistry, and provide additional capacity to treat individuals who cannot afford dental care. It is recommend that this initiative be evaluated as part of the Academics and Research plan.
- **Vision Services:** Ballad will proposing that an initiative to increase the reach of current community based vison screening and corrective services be included as part of the community partnership activities designed to strengthen community action (see the Strengthen Community Action process outlined in the Population Health Plan under Focus Area Three)

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Metrics Addressed

- B19:Prenatal Care in the First Trimester

Potential Barriers to Success

- The implementation plan is dependent on the collaboration of community partners. To the extent that these partnerships take longer to develop than expected, certain aspects of the plan may be delayed.

Potential Mitigation Tactics

- Per the population health plan, leverage the Accountable Care Community to engage in these initiatives

Rural Health Services Plan

3. Implementation Roadmap

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Implementation Roadmap
Milestones and Metrics for Measuring Strategies: 2019

Implementation Milestones and Metrics: Q1 and Q2

Strategies	Q1 Milestones	Q1 Metrics	Q2 Milestones	Q2 Metrics
1. Expand Access to PCPs Through Additions of Mid-levels	• Begin process for determining priority locations for mid-levels in Virginia • Begin recruiting PCP for Virginia location	• *Process initiated* • *Recruitment progress*	• Determine priority locations for mid-levels and begin recruitment	• *Priority locations determined and recruitment initiated*
2. Recruit Physician Specialists	• Begin process for determining locations/specialties	• *Process initiated*	• Finalize priority locations for specialists and begin recruiting	• *Priority locations determined and recruitment initiated*
3. Implement Team-Based Care Models to Support PCPs	• Initiate development of operational plan and metrics for regional deployment of an enhanced team-based care model	• *Operational plan initiated*	• Complete operational plan and metrics for regional deployment of an enhanced team-based care model • Recruit staff for initial regional pilot site	• *Operational plan complete* • *Begin staff recruitment*
4. Deploy Virtual Care Services	• Develop plan for deployment of comprehensive telehealth equipment to nine (9) Ballad EDs	• *Deployment plan completed*	• Begin deployment of comprehensive telehealth equipment to nine (9) Ballad EDs • Begin service plan for addition of telehealth service programs to Ballad EDs – focusing first on tele-stroke, tele-peds, and tele-behavioral	• *Equipment deployed consistent with deployment plan* • *Initiate service planning*
5. Coordinate Preventive Services	• Refer to other plans		• Refer to other plans	

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Implementation Roadmap
Milestones and Metrics for Measuring Strategies: 2019

Implementation Milestones and Metrics: Q3 and Q4

Strategies	Q3 Milestones	Q3 Metrics	Q4 Milestones	Q4 Metrics
1. Expand Access to PCPs Through Additions of Mid-levels	• Hire providers for initial sites	• *Providers hired for initial sites*	• Evaluate and refine operations in first sites • Continue hiring per plan	• *New providers hired* • *New provider pipeline* • *Y2 milestones and metrics accepted* • *# of patients treated by additional PC providers*
2. Expand Access to PCPs Through Continuity Clinics	• Hire providers for initial sites	• *Providers hired for initial sites*	• Evaluate and refine operations in first sites • Continue hiring per plan	• *New providers hired* • *New provider pipeline* • *Y2 milestones and metrics accepted* • *# of patients treated by additional specialists*
3. Implement Team-Based Care Models to Support PCPs	• Hire staff and begin operations for regional pilot site • Begin planning for second and third rural expansion sites	• *Staff hired for pilot site* • *Second and third rural expansion sites initiated*	• Evaluate and refine operations in first regional pilot site • Complete planning for second and third rural expansion sites	• *Evaluation report and future recommendations* • *Second and third rural expansion site plans complete* • *Y2 milestones and metrics accepted* • *# of patient lives under management of a team based care model*
4. Deploy Virtual Care Services	• Continue deployment of comprehensive telehealth equipment to nine (9) Ballad EDs • Continue service plan for addition of telehealth service programs to Ballad EDs – focusing first on tele-stroke, tele-peds, and tele-behavioral	• *Equipment deployed consistent with deployment plan* • *Plan continuation*	• Complete deployment of comprehensive telehealth equipment to nine (9) Ballad EDs • Complete service plan for addition of telehealth service programs to Ballad EDs – focusing first on tele-stroke, tele-peds, and tele-behavioral	• *All Ballad EDs have comprehensive telehealth equipment* • *Plan for service deployment approved* • *Y2 milestones and metrics accepted*
5. Coordinate Preventive Services	• Refer to other plans		• Refer to other plans	

R u r a l

Implementation Roadmap
Milestones and Metrics for Measuring Strategies: 2020

Strategies	2020 Milestones and Metrics
1. Expand Access to PCPs Through Additions PCPs and Mid-levels	• Evaluate mid-level performance in 2019 to identify impact and opportunities for improvement • Add at least one (1) additional mid-level provider to a PCP practice in 2020 • *Number of patients treated by additional primary care providers*
2. Recruit Physician Specialists	• Evaluate operations initiated in 2019 to identify impact and opportunities for improvement • *Number of patients treated by additional specialist providers*
3. Implement Team-Based Care Models to Support PCPs	• Evaluate operations initiated in 2019 to identify impact and opportunities for improvement • Initiate operations for second and third rural expansion sites for team-based care • *# of patient lives under management of a team based care model*
4. Deploy Virtual Care Services	• Add secondary carts ensuring all Ballad hospitals have primary and secondary telehealth equipment • Add tele-stroke hospital locations consistent with service deployment plan • Continue tele-peds specialty deployment consistent with plans (see Children's Health Services Plan) • Expand E-visit program • Add tele-behavioral health outpatient sites • *Number of patients treated through new tele-stroke services* • *Number of patients treated through new tele-behavioral services* • *Number of patients treated through new tele-pediatric services*
5. Coordinate Preventive Services	• *Refer to other plans*

R u r a l

Implementation Roadmap
Milestones and Metrics for Measuring Strategies: 2021

Strategies	2021 Milestones and Metrics
1. Expand Access to PCPs Through Additions PCPs and Mid-levels	• Evaluate mid-level performance in 2020 to identify impact and opportunities for improvement • Add at least one (1) additional mid-level provider to a PCP practice in 2021 • *Number of patients treated by additional primary care providers*
2. Recruit Physician Specialists	• Evaluate operations initiated in 2020 to identify impact and opportunities for improvement • *Number of patients treated by additional specialist providers*
3. Implement Team-Based Care Models to Support PCPs	• Evaluate operations initiated in 2020 to identify impact and opportunities for improvement • *# of patient lives under management of a team based care model*
4. Deploy Virtual Care Services	• Continue adding tele-stroke hospital locations consistent with service deployment plan • Continue tele-peds specialty deployment consistent with plans (see Children's Health Services Plan) • Add tele-behavioral health outpatient sites • *Number of patients treated through new tele-stroke services* • *Number of patients treated through new tele-behavioral services* • *Number of patients treated through new tele-pediatric services*
5. Coordinate Preventive Services	• *Refer to other plans*

R u r a l

Population Health Plan for the Commonwealth of Virginia

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Population Health Plan

1. Plan Overview

BalladHealth
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Plan Overview
VA Cooperative Agreement Population Health Plan Requirements

VA Cooperative Agreement Requirement
1. Plan must address the 13 Virginia measures with one focused measure annually.
2. Plan must be consistent with the Southwest Virginia Health Authority's Blueprint for A Healthy Appalachia and the Virginia Plan for Well Being.
3. Plan must demonstrate provisions that address total cost of care, employee health outcomes, and use of IT and analytics to meet goals and objectives.
4. The spending requirements set forth must be incremental and funding distributions must consider the relative population size, the relative per capita cost of interventions, the relative value of interventions, and the spending needed to support a Virginia Accountable Care Community.

Plan Overview
Population Health Key Metrics

Category	Measure
Breastfeeding	•Breastfeeding Initiation
Child Health	•3rd grade reading level •Dental sealants (adolescents 13-15 •Dental sealants (children 6-9) •Infant Mortality •Teen Pregnancy
Mental Health	•Frequent mental distress
Obesity	•Obesity-counseling and education
Smoking	•Mothers who smoke during pregnancy •Youth tobacco use
Substance Abuse	•NAS births
Vaccinations	•Children on-time vaccinations •HPV females •HPV males

Plan Overview
Access Key Metrics

Category	Measure
ED	• Asthma ED visits - age 0-4 • Asthma ED visits - age 5-14 • Excessive ED wait times • Pediatric readiness of ED
Mental health	• Antidepressant medication management - effective acute phase treatment • Antidepressant medication management - effective continuation phase treatment • Follow-up after hospitalization for mental illness (adults 18+) • Follow-up after hospitalization for mental illness (children 6-17)
Patient access	• Personal care provider • Specialist recruitment and retention
Patient experience	• Patient satisfaction and access surveys • Patient satisfaction and access surveys - response report
Perinatal	• Prenatal care in the first trimester
Screenings	• Screening - breast cancer • Screening - cervical cancer • Screening - colorectal cancer • Screening - diabetes • Screening - hypertension • Screening – lung cancer
Substance abuse	• Engagement of alcohol or drug treatment • Rate of SBIRT administration - ED visits • SBIRT administration - hospital admissions
Utilization	• Preventable hospitalizations - adults • Preventable hospitalizations - Medicare

Geographic Access
• Population within 25 miles of an urgent care center • Population within 25 miles of an urgent care center open nights and weekends • Population within 10 miles of an urgent care or emergency department • Population within 15 miles of an emergency department • Population within 15 miles of an acute care hospital

Plan Overview
Population Health Services Estimated Investment Summary

Population Health Services Plan	Year 1	Year 2	Year 3	Year 1-3 Total
Community Health Department	$1,250,000	$1,250,000	$1,250,000	$3,750,000
Accountable Care Community	$250,000	$250,000	$250,000	$750,000
Awareness Campaigns	$550,000	$550,000	$550,000	$1,650,000
Programs	$0	$500,000	$2,950,000	$3,450,000
Total	**$2,050,000**	**$2,550,000**	**$5,000,000**	**$9,600,000**
CA-Mandated Minimum Expenditures	*$1,000,000*	*$2,000,000*	*$5,000,000*	*$8,000,000*
Potential Funding Needed in Excess of Minimum Spending Requirements	***$1,050,000***	***$550,000***	***$0***	***$1,600,000***

Population Health Plan

2. Strategic Approach

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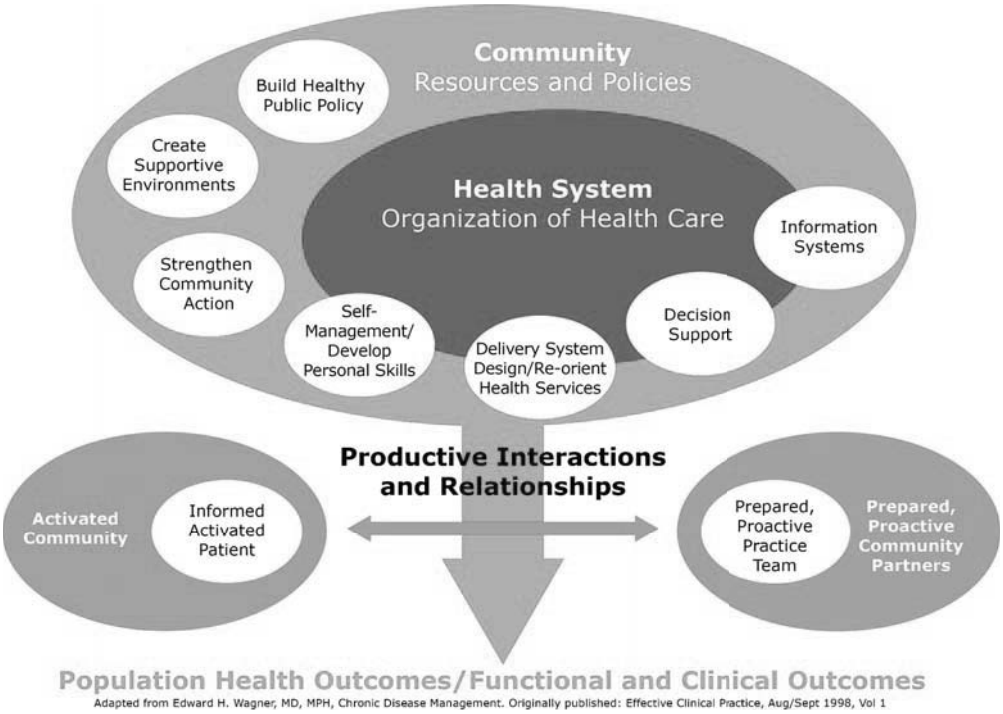
Population Health Model of Design: Expanded Chronic Care Model



Adapted from Edward H. Wagner, MD, MPH, Chronic Disease Management. Originally published: Effective Clinical Practice, Aug/Sept 1998, Vol 1

Strategic Approach
Population Health Plan: Ballad Focus and Strategies

1. **Develop population health infrastructure within the health system and the community**
   - Ballad Health Department of Population Health
   - Accountable Care Community
2. **Redesign Ballad Health as a community health improvement organization**
   - Delivery system improvement and redesign
   - Information systems and decision support and information exchange
   - Improved self-management and personal skill development with supportive health resources and services
3. **Enable community resources and sound health policy**
   - Strengthen community action
   - Advocate for sound health policy
   - Create supportive environments

Population Health

Strategic Approach
Focus 1: Develop Population Health Infrastructure Within the Health System and the Community

Strategic Approaches:

- Ballad Health Department of Population Health
  - Ballad Health will construct a team of competent community health and value based services staff who will engage both internally and externally on strategies to improve population health and address the metrics. This will be supplemented by a newly convened Population Health Clinical Committee.
- Accountable Care Communities
  - Ballad will fund and take a lead role in the governance of a multi-stakeholder Accountable Care Community (ACC) in Virginia which will organize itself around the pursuit of a limited number of complex population health challenges such as third-grade reading improvement, reduction in teen pregnancy, tobacco use, reduction in obesity, reduction in HPV through vaccinations, better dental health, decrease in frequent mental distress, and/or other population health challenges as identified by the members of the ACC.

Population Health

Strategic Approach
Focus 2: Ballad as a Community Health Improvement Organization

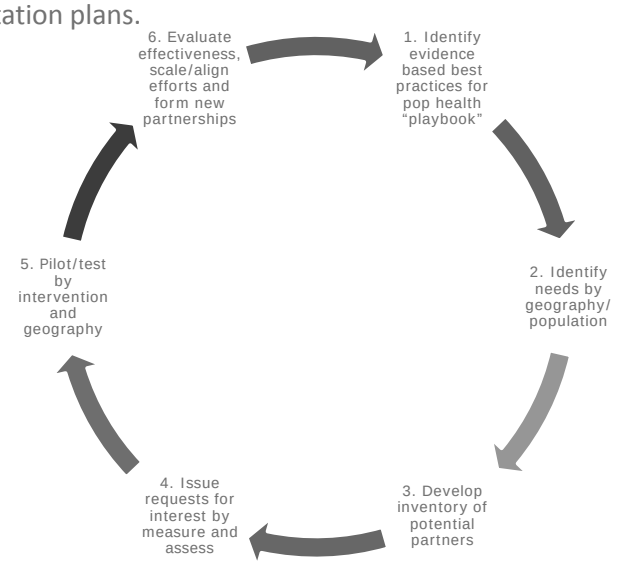
Strategic Approaches:

- Delivery System Improvement and Re-Design
  - Ballad will align operational excellence efforts and incentive programs to improve population health and access metrics amenable to health care in populations managed under Ballad Medical Group and other physician groups through mechanisms such as a Clinically Integrated Networks and Hospital Quality and Efficiency Programs. Initial focus populations will include Ballad's team members, ACO and other full risk contracts. Ballad will expand the total number of lives under management.
- Information Systems, Decision Support and Information Exchange
  - Ballad will move to a common Epic platform region-wide which will enable community clinical and social registries for population health improvement, improve clinical flow and gap closure and allow patients more engagement with their own health and health information.
- Self Management & Development of Personal Skills
  - Ballad will invest in internal and external programs, people, and technologies which enable patients to better manage their health and health care services and prevent disease.

Strategic Approach
Focus 3: Enable Community Resources & Sound Health Policy

Strategic Approaches:

- Strengthen Community Action
  - Ballad will fund and manage community efforts to implement evidence based and promising public health programs and practices throughout the region. The process below will generate specific implementation plans.



Population Health

Focus 3: Enable Community Resources & Sound Health Policy

Strategic Approaches (continued):

- Build Healthy Public Policy
  - Ballad will engage in research and advocacy at the local, state and federal level to promote the population health and access goals included in the Virginia Cooperative Agreement.
- Create Supportive Environments
  - Ballad will implement broad based communication strategies to promote a culture of health in the region and to communicate specific health messages. Ballad will also invest in the built environment and other infrastructure necessary to make healthier choices easier choices by providing enhanced opportunities and access for community members to healthier choices. The community process described previously to identify and implement specific implementation plans will inform these strategies.

Population Health Plan

3. Implementation Roadmap

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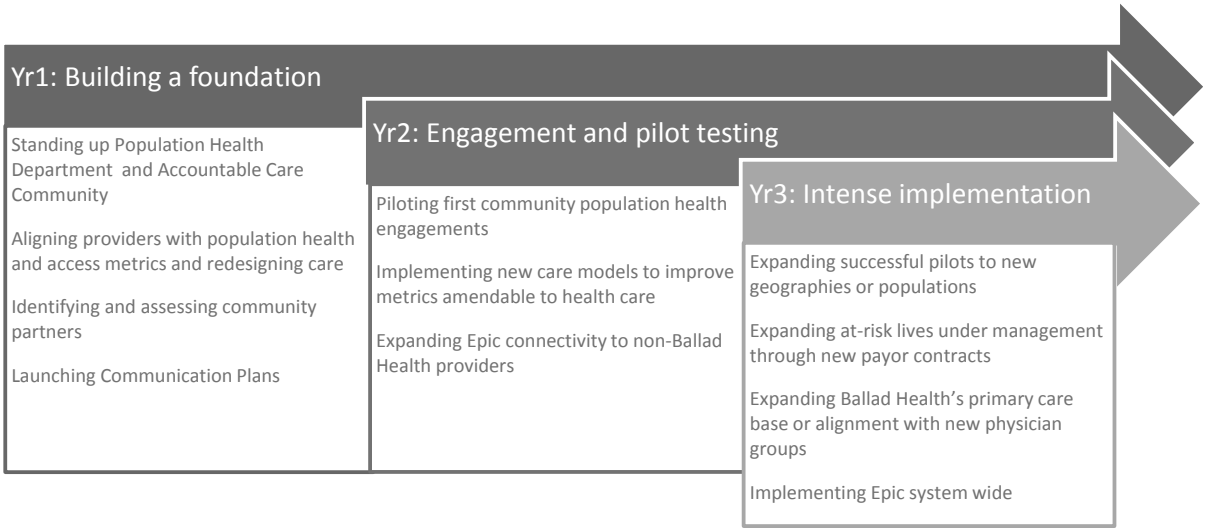
Overview of 3-Year Phasing



Implementation Roadmap – Population Health Plan
Focus Area One 2019 Quarterly Milestones and Metrics
Develop Population Health Infrastructure

Implementation Milestones and Metrics: Q1 and Q2

Strategies	Q1 Milestones	Q1 Metrics	Q2 Milestones	Q2 Metrics
1. **Develop the Ballad Health Population Health Department**	• Select candidates to hire • Form Clinical Committee with internal and external representation • Develop Clinical Committee charter, roles & responsibilities	• *Hires vs. Staffing Plan* • *Completed committee membership list* • *Charter completed* • *Fill 100% of 10 Full-time Positions*	• Develop relationship tracking and management systems	• *System developed* • *Establish and complete training with 10 end users*
2. **Create and activate an Accountable Care Community (ACC)**	• Recruit TN and VA leadership for the ACC • Begin ACC membership recruitment	• *Completed steering team list* • *List of members by region*	• Identify 3-5 areas of ACC focus • Develop ACC charter, roles & responsibilities	• *Focus areas selected* • *Charter completed*

Population Health

Implementation Roadmap – Population Health Plan
Focus Area One 2019 Quarterly Milestones and Metrics
Develop Population Health Infrastructure

Implementation Milestones and Metrics: Q3 and Q4

Strategies	Q3 Milestones	Q3 Metrics	Q4 Milestones	Q4 Metrics
1. **Develop the Ballad Health Population Health Department**	• Extend reach of the department by establishing population health leadership teams at each Ballad facility and practice division to promote local population health initiatives	• *Accomplished in all Ballad hospitals and practice divisions*	• Evaluate department personnel • Identify Y2 quarterly targets and timelines	• *Y2 milestones and metrics accepted*
2. **Create and activate an Accountable Care Community (ACC)**	• Members to elect TN and VA leadership councils • Leadership councils to develop strategic plan for focus areas	• *Leadership councils selected (list)* • *Strategic plan developed*	• Identify ACC Y2 quarterly targets and timelines	• *Y2 milestones and metrics accepted*

Population Health

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Implementation Roadmap – Population Health Plan
Focus Area Two 2019 Quarterly Milestones and Metrics
Ballad Health as a Community Health Improvement Organization

Implementation Milestones and Metrics: Q1 and Q2

Strategies	Q1 Milestones	Q1 Metrics	Q2 Milestones	Q2 Metrics
1. **Delivery system improvement and re-design**	• Initiate alignment of Ballad Medical Associates (BMA) & COPA/CA metrics	• *List of initial priority metrics provided* • *Identify top 3 priorities applicable to practices*	• Secure initial provider participants in CIN/HQEP • Develop BMA & COPA/CA priority metric workplan • Determine external CIN/HQEP structure	• *Participant Agreement(s) signed* • *Completed workplan* • *Plan structure outlined*
2. **Information systems, decision support and information exchange**	• Configure Epic for Unicoi and Laughlin • Applied Health Analytics deployed for Ballad Health Team Members	• *Epic configuration completed* • *Deadline met* • *Utilize AHA for 100% of Ballad team member health risk assessments*	• Epic Go-Live Unicoi • Epic Go-Live Laughlin • Deliver Draft HIE Report to VA	• *Deadline met* • *EPIC LMH Go-Live complete* • *Draft completed*
3. **Self management and development of personal skills**	• Expand Health Risk Assessment and coaching to Ballad Health Team Members (TM) • Assess team members for launch TM diabetes management program	• *Program Launched* • *Coaches assigned to qualifying participants* • *Conduct biometric testing on 100% of Ballad team members participating in employee wellness program*	• Develop Ballad Health TM Stress Reduction Pilot Plan • Develop "*Ballad Health as an Example*" charter, roles & responsibilities	• *Program developed* • *Charter completed*

Population Health

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Implementation Roadmap – Population Health Plan
Focus Area Two 2019 Quarterly Milestones and Metrics
Ballad Health as a Community Health Improvement Organization

Implementation Milestones and Metrics: Q3 and Q4

Strategies	Q3 Milestones	Q3 Metrics	Q4 Milestones	Q4 Metrics
1. Delivery system improvement and re-design	• Implement BMG & COPA/CA priority metric workplan • Submit New Ballad Health MSSP ACO application (subject to CMS timeline)	• *Workplan milestones met* • *MSSP Deadline met (subject to CMS timeline)*	• Sign Ballad Health MSSP ACO Contract (subject to CMS timeline) • Launch CIN/HQEP • Identify Y2 quarterly targets and timelines	• *Contract signed (subject to CMS timeline)* • *Program launched* • *Y2 milestones and metrics accepted*
2. Information systems, decision support and information exchange	• Epic configured for SBIRT pilot • Deliver Final HIE Report to VA and TN	• *Epic configured* • *Deadline met*	• Identify Y2 quarterly targets and timelines	• *Y2 milestones and metrics accepted*
3. Self management and development of personal skills	• Develop "*Ballad Health as an Example*" strategic plan	• *Plan completed* • *Establish 4 action teams to develop strategies in the areas of healthy eating/food policies; physical activities; healthy plan design; and health education and resources*	• Pilot first "*Ballad Health as an Example*" effort • Identify Y2 quarterly targets and timelines	• *Pilot(s) launched* • *Y2 milestones and metrics accepted*

Implementation Roadmap – Population Health Plan
Focus Area Three 2019 Quarterly Milestones and Metrics
Enabling Community Resources and Sound Health Policy

Implementation Milestones and Metrics: Q1 and Q2

Strategies	Q1 Milestones	Q1 Metrics	Q2 Milestones	Q2 Metrics
1. Strengthen community action	• Work with internal and external Subject Matter Experts to complete first round research of interventions and programs found to be best or promising clinical and community practices • Complete inventory of potential community partners to engage with in order to address population health metrics	• *Completed document* • *Completed inventory*	• Using inventory created in Q1, distribute RFI to identify local capabilities and receive feedback on first round of research	• *RFI distributed*
2. Create supportive environments	• Develop framework to leverage Ballad Health Business Health service offerings • Develop regional awareness campaigns with Marketing Department	• *Frameworks completed* • *Campaign plan completed* • *Develop at least one regional awareness campaign and establish projected reach and impressions targets*	• Activate Business Health Collaborative with Chambers of Commerce • Begin regional ad campaigns • Create customizable package of Business Health offerings for employers	• *Collaborative activated* • *Campaign launched* • *Package completed* • *Host 1 regional chamber of commerce forum to review needs, current solutions and strategies* • *Regional awareness campaign projected reach and impressions*
3. Build Healthy Public Policy	• Identify best practice approaches to legislation that supports healthy choices	• *Begin development of legislative playbook to support intervention playbook*	• Identify gaps in current laws and policies that support regional health	• *Gap analysis*

Implementation Roadmap – Population Health Plan
Focus Area Three 2019 Quarterly Milestones and Metrics
Enabling Community Resources and Sound Health Policy

Implementation Milestones and Metrics: Q3 and Q4

Strategies	Q3 Milestones	Q3 Metrics	Q4 Milestones	Q4 Metrics
1. Strengthen community action	• Evaluate RFIs received • Incorporate feedback received into best or promising clinical and community practices	• *Evaluations completed* • *Feedback incorporated*	• Distribute RFPs for pilot interventions and programs to selected community partners • Identify Y2 quarterly targets and timelines	• *RFPs distributed* • *Y2 milestones and metrics accepted*
2. Create supportive environments	• Develop strategic plan for the Collaborative with Chambers of Commerce • Identify pilot program opportunities in collaboration with Chambers of Commerce	• *Plan completed* • *Pilots identified*	• Identify Y2 quarterly targets and timelines	• *Y2 milestones and metrics accepted*
3. Build Healthy Public Policy	• Develop legislative advocacy plan	• *Plan developed*	• Develop strategic approach for advocacy together with each regional legislator and their staff	• *Number of meetings with each legislative office*

Implementation Roadmap
Focus Area One 2020 Milestones and Metrics
Develop Population Health Infrastructure

Strategies	2020
1. Develop the Population Health Department	• *Review and revise budget* • *Evaluate staff* • *Evaluate tracking systems* • *Population Health Clinical Committee to evaluate and revise, if needed, clinical systems and protocols* • *Evaluate and expand, if needed, Population Health Clinical Committee membership*
2. Create and activate an Accountable Care Community	• *Begin rollout of ACC strategic plan pilots* • *Develop partnership arrangements in any remaining counties* • *Conduct leadership development with ACC and county partners*

Implementation Roadmap
Focus Area Two 2020 Milestones and Metrics
Ballad Health as a Community Health Improvement Organization

Strategies	2020
1. Delivery system design	• *Evaluate BMG performance on key metrics* • *Evaluate CIN/HQEP performance on key metrics* • *Identify opportunities to expand covered lives through new payor contracts or provider partners*
2. Information System and Decision Support	• *Launch Ballad Health MSSP ACO* • *Begin implementation of HIE report recommendations* • *Epic ambulatory Go-Live at legacy MSHA* • *Epic acute Go-Live at legacy MSHA*
3. Self Management/ Develop Personal Skills	• *Evaluate Ballad Health Team Member coaching, stress reduction and diabetes management performance and revise as appropriate.* • *Expand additional Ballad Health Team Member wellness initiatives* • *Evaluate "Ballad Health as an Example" performance and revise as appropriate* • *Expand "Ballad Health as an Example" initiatives according to strategic plan* • *Identify opportunities to expand "Ballad Health as an Example" and Team Member wellness initiatives to community and Chamber of Commerce partners*

Implementation Roadmap
Focus Area Three 2020 Milestones and Metrics
Enabling Community Resources and Sound Health Policy

Strategies	2020
1. Strengthen community action	• *Negotiate contracts with partners* • *Implement interventions* • *Evaluate intervention effectiveness*
2. Create supportive environments	• *Launch Business Collaborative pilot interventions* • *Launch customized Business Health offerings* • *Evaluate regional awareness campaign* • *Develop and implement thematic campaigns to build awareness around key pop health metrics and community initiatives*
3. Build Healthy Public Policy	• *Meet with each regional legislator in VA and TN Geographic Service Area to review legislative agenda and seek advocacy support*

Implementation Roadmap
Focus Area One 2021 Milestones
Develop Population Health Infrastructure

Strategies	2021
1. Develop the Population Health Department	• *Review and revise budget* • *Evaluate staff* • *Evaluate tracking systems* • *Population Health Clinical Committee to continue to evaluate and revise, if needed, clinical systems and protocols* • *Continue to evaluate and expand, if needed, Population Health Clinical Committee membership*
2. Create and activate an Accountable Care Community	• *Review and revise, if needed, strategic plan* • *Provide ongoing leadership training* • *Develop partnership arrangements/community action committees in all counties*

Population Health

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Implementation Roadmap
Focus Area Two 2021 Milestones
Ballad Health as a Community Health Improvement Organization

Strategies	2021
1. Delivery system design	• *Evaluate current contracts and strategies* • *Expand sites and contracts* • *Evaluate clinical systems and protocols* • *Evaluate CIN/HQEP performance on key metrics* • *Review and revise, if needed, CIN/HQEP metrics* • *Identify opportunities to expand covered lives through new payor contracts or provider partners*
2. Information System and Decision Support	• *Evaluate system effectiveness* • *Construct progress reports and communicate internally and externally* • *Continued implementation of HIE report/recommendations*
3. Self Management/ Develop Personal Skills	• *Expand "Ballad Health as an Example" to address more focus areas and to more team members* • *Engage communities in "Ballad Health as an Example"*

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Implementation Roadmap
Focus Area Three 2021 Milestones
Enabling Community Resources and Sound Health Policy

Strategies	2021
1. Strengthen community action	• *Evaluate contracted partners for accomplishment of agreed upon intervention targets* • *Implement interventions* • *Evaluate intervention effectiveness*
2. Create supportive environments	• *Evaluate current business health contracts* • *Identify new engagement targets and approaches for business health* • *Develop and implement thematic campaigns to build awareness around pop health metrics and community initiatives*
3. Build Healthy Public Policy	• *Review and refine approaches* • *Track agenda elements*

Quality Program Monitoring and Reporting Recommendation

Strategy to keep COPA measures up-to-date and streamline report production:

- Recommend annual meeting to update measures using Hospital Compare as the benchmark for retiring and adding measures
- Establish June 30 as the year end for purposes of scoring
- Freeze the June 30 FYE results with the annual report submission in November each year.
    - Rationale: data can still be updating with additional/updated claims and patient survey submission
- Report Target and Priority Measures quarterly to both states.
- Report monitoring measures annually with the annual report. This will be accomplished with the requirement to compare Ballad Health against similarly sized systems
    - Source: Hospital Compare July available data

Target Quality Measures (All Harm/Safety Measures):

- Continue with 16 – 18 Target measures
    - Split SSI by Colon and Hysterectomy
    - Replace retired measure PSI 7 (Central Venous related blood stream infection) with Sepsis 1

Priority Measures:

- Measures are selected by the Clinical Council and the Quality Service and Safety Board based on national trends and up to date clinical practice guidelines. These measures are submitted to the states for feedback and recommendations.
- Prioritize selection of Priority measures from the monitoring measures indicating an opportunity for improvement and from different categories. For example: readmissions, mortality, and patient experience
- The number is negotiable
    - We are currently monitoring 13 measures aligned with the below priority topics:
        - Antibiotic Stewardship
        - Sepsis Care
        - Opioid Prescribing
        - ED Access
        - Patient Experience – Communication

Monitoring Measures:

- Report only Patient Experience top box (Always)
- Remove Structural Measures
- Remove retired measure and update with current measures

Public Reporting / Website

- Post only the Target Quality Measures and publicly reported Priority Measures to the external website quarterly
    1) Improve clarity by posting a facility report linked to facility name
    2) Color code and benchmark against Hospital Compare performance category
    3) Source Data: Hospital Compare preview report
- Maintain link to hospital compare for most up to date information
    - Action:
        1) Link directly to each hospital
           Rationale: This will give enhanced access to all the public for all target and monitoring measure quarterly.
- Source data will be the Hospital Compare (HC) Preview Report – Posting could be variable based on when HC releases the report

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March 18, 2019

Via: FedEx & Email

Jeff Ockerman
Tennessee Department of Health
5th Floor Andrew Johnson Tower
710 James Robertson Parkway
Nashville, Tennessee 37243

Re: Line of Sight Metrics

Dear Mr. Ockerman:

In response to several conversations regarding metrics impacted by the various 3-year plans, Ballad Health proposes the following line of sight metrics.

For Behavioral Services, we propose to provide the following line of sight metrics to serve as baselines to measure the progress of the 3-year strategic plan.

Strategy 2: Primary Care/Behavioral Health Integration (PCBHI)

- Number of existing Ballad PCBHI programs in TN, VA and total
- Percent satisfied with Ballad PCBHI program as indicated on their patient satisfaction survey for the practice (metric previously identified in plan)
- Number patients treated by a Ballad PCBHI program

Strategy 3: Supplement Existing Regional Crisis System

- Current Respond volumes
- Current number of SBIRTs performed (metric previously identified in plan)
- Current number of transportation vehicles

Strategy 4: Enhanced and Expanded Resources for Addiction Treatment

- Current number of counseling FTEs focused on substance use, including peer counselors
- Current number of patients receiving medication-assisted treatment (metric previously identified in plan)
- Current number of providers receiving medication-assisted treatment education (metric previously identified in plan)

For Children's Services, we propose to provide the following line of sight metrics to serve as baselines to measure the progress of the 3-year strategic plan.

Strategy 2: Establish Pediatric ED in Kingsport and Bristol

- Current number of pediatric ED visits in Kingsport and in Bristol (metric previously identified in plan)
- Current number of ED visits (0-4) and (5-14) for asthma

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Strategy 3: Develop Telemedicine/Specialty Clinics in Rural Hospitals

- Current number of pediatric telemedicine visits (metric previously identified in plan)
- Current number of children treated through school-based behavioral health telemedicine

Strategy 4: Recruit and Retain Subspecialists

- Current number of existing partnerships to access specialists (metric previously identified in plan)

For Rural Services, we propose to provide the following line of sight metrics to serve as baselines to measure the progress of the 3-year strategic plan.

Strategy 1: Expand Access to PCPs Through Additional PCPs and Mid-Levels

- Number of patients treated by additional primary care providers (metric previously identified in plan)

Strategy 2: Recruit Physician Specialists

- Number of patients treated by additional specialist providers (metric previously identified in plan)

Strategy 3: Implement Team-Based Care Models to Support PCPs

- Current number of patient lives impacted by a team-based care model (metric previously identified in plan)

Strategy 4: Deploy Virtual Care Services

- Number of Ballad hospitals with at least one comprehensive care for high-acuity episodes (i.e., tele-stroke) and one secondary cart for lower-acuity episodes (i.e., consults)
- Number of current tele-stroke patients (metric previously identified in plan)
- Number of current tele-behavioral health patients (metric previously identified in plan)
- Number of current tele-behavioral health outpatient sites for low acuity patients
- Number of current tele-pediatric patients (metric previously identified in plan)
- Number of current Ballad Health e-visits

For Population Health Services, we propose to provide the following line of sight metrics to serve as baselines to measure the progress of the 3-year strategic plan.

Focus Area Two: Ballad Health as a Community Improvement Organization; Strategy 1: Delivery System Design

- Number of current lives under CIN/HQEP management
- Number of attributed lives under a Value Based Contract

Focus Area Two: Ballad Health as a Community Improvement Organization; Strategy 2: Information System and Decision Support

- Number of Ballad Health Sites on EPIC

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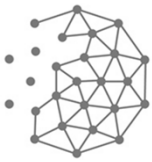
We look forward to discussions on these proposed metrics.

Sincerely,

Allison Rogers
Senior VP, Strategy and Value-Based Services

Cc via email: Erik Bodin, Director, Office of Licensure and Certification, VA Department of Health
Judi Knecht, Population Health Program Manager, TN Department of Health



Arundel Metrics

Quality Metrics

Presentation Title

Quality Metrics

- Collected continuously, reported monthly/quarterly
  - Data collection lags incidence
  - Report dated Feb 27, 2019 is through Dec 2018 (Q2 of FY 2019)
- Two groups
  - Quality Target Measures (17 items)
  - Quality Priority Metrics (13 items)
- Various levels
  - System
  - State
  - Hospital
- Criteria
  - Comparison to baseline
  - Improvement over time
- Items in discussion
  - Baseline compared to national norms
  - Limitations to improvement
  - "Freeze" data dates
  - Retirement of measures
  - Efficient data transfer
  - Indications of statistical significance
  - Need for monthly data

Arundel Metrics

Quality Metrics

Priority Metrics

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Ballad Health

Desired Performance	Quality Target Measures	Baseline	FY18	Jul-18	Aug-18	Sep-18	Q1FY19	Oct-18	Nov-18	Dec-18	Q2FY19	FYTD19
⬇ lower is better	PSI 3 Pressure Ulcer Rate	0.71	1.12	1.13	0.23	0.72	0.69	0.66	0.23	0.23	0.38	0.54
⬇ lower is better	PSI 6 Iatrogenic Pneumothorax Rate	0.38	0.23	0.31	0.15	0.16	0.21	0.16	0.00	0.00	0.05	0.13
⬇ lower is better	PSI 7 Central Venous Catheter-Related Blood Stream Infection Rate	0.15	0.05	0.00	0.00	0.21	0.07	0.00	0.23	0.00	0.08	0.07
⬇ lower is better	PSI 8 In Hospital Fall with Hip Fracture Rate	0.06	0.07	0.18	0.00	0.00	0.06	0.00	0.19	0.00	0.06	0.06
⬇ lower is better	PSI 9 Perioperative Hemorrhage or Hematoma Rate	4.15	1.67	2.00	2.53	0.69	1.77	0.66	1.28	2.01	1.32	1.54
⬇ lower is better	PSI 10 Postoperative Acute Kidney Injury Requiring Dialysis	1.00	0.11	0.00	0.00	0.00	0.00	0.00	2.36	2.43	1.64	0.84
⬇ lower is better	PSI 11 Postoperative Respiratory Failure Rate	14.79	8.34	10.38	9.08	6.83	8.77	8.17	7.16	6.09	7.12	7.91
⬇ lower is better	PSI 12 Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate	5.42	3.51	4.97	3.54	2.57	3.70	3.14	3.62	3.77	3.51	3.61
⬇ lower is better	PSI 13 Postoperative Sepsis Rate	8.81	3.88	1.44	3.88	5.54	3.65	1.36	1.23	6.36	3.00	3.32
⬇ lower is better	PSI 14 Postoperative Wound Dehiscence Rate	2.22	0.99	0.00	0.00	0.00	0.00	0.00	2.57	2.42	1.65	0.83

- Reports submitted easy to read
  - Baseline in first data column
  - Last FY in second column
  - Current activity in subsequent columns
    - Month and Quarter
  - Color code for change
    - Green is improvement from baseline

Arundel Metrics

Summary Review

- What to watch for
  - Trends that last for multiple quarters
  - Hospitals that are consistently different than others
    - Better → set goals for others
    - Worse → need more information to understand why

Arundel Metrics

Summary Review – Ballad System

- Quality Target Measures (page 1 of 19, document dated Feb 27, 2019)
  - Strengths:
    - Continuing improvement baseline to FY18 to each quarter
      - PSI 6 Iatrogenic Pneumothorax Rate
      - PSI 13 Postoperative Sepsis Rate
      - SSI-Hysterectomy Surgical Site Infection
    - Improvement, though with bumps or stagnation
      - PSI 9 Perioperative Hemorrhage or Hematoma Rate
      - PSI 11 Postoperative Respiratory Failure Rate
      - PSI 12 Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate
      - PSI 15 Unrecognized Abdominopelvic Accidental Puncture/Laceration Rate
      - CDIFF: *Clostridioides difficile*
  - Challenges
    - Decline each period (FY18, Q1FY19, Q2FY19)
      - CAUTI: Catheter-associated Urinary Tract Infections
    - Decline with bumps and stagnation
      - MRSA: Methicillin-resistant Staphylococcus aureus
      - CLABSI: central line associated blood infections
      - SSI Colon Surgical Site Infection

Arundel Metrics

Summary Review – Ballad System

- Balld System – Quality Priority Metrics (page 1 of 19, document dated Feb 27, 2019)
  - Strengths:
    - Communications (nurses and doctors)
    - Median times in ED
  - Challenges:
    - Left without being seen
    - Sepsis in-house mortality
    - Levofloxacin Days Of Therapy per 1000 patient days (Antibacterial Stewardship Program)
    - Sepsis Management Bundle

Arundel Metrics

Summary Review – Hospitals

- Virginia Hospitals
  - Dickenson County Hospital – page 5
  - Johnston Memorial Hospital – page 3
  - Lonesome Pine Hospital – page 9
  - Norton Community Hospital – Page 10
  - Russell County Hospital – page 18
  - Smyth County Community Hospital – page 4
- Variation may be due to differences in the mixes of patients (demographics, health status, underlying conditions, etc.)

Arundel Metrics

Summary Review – FY18

FY18	Ballad	Dickenson County Hospital	Johnston Memorial Hospital	Lonesome Pine Hospital	Norton Community Hospital	Russell County Hospital	Smyth County Community Hospital
PSI 3 Pressure Ulcer Rate	1.12		0	0	0	0	0
PSI 6 Iatrogenic Pneumothorax Rate	0.23		0.14	0	0.39	0	0
PSI 7 Central Venous Catheter-Related Blood Stream Infection Rat	0.05		0	0	0	0	0
PSI 8 In Hospital Fall with Hip Fracture Rate	0.07		0.16	0	0	0	0
PSI 9 Perioperative Hemorrhage or Hematoma Rate	1.67		0.85	0	0	0	0
PSI 10 Postoperative Acute Kidney Injury Requiring Dialysis	0.11		0	0	0	0	0
PSI 11 Postoperative Respiratory Failure Rate	8.34		14.28	0	0	0	0
PSI 12 Perioperative Pulmonary Embolism or Deep Vein Thrombos	3.51		5.79	0	0	0	5.98
PSI 13 Postoperative Sepsis Rate	3.88	0	0	0	0	250	0
PSI 14 Postoperative Wound Dehiscence Rate	0.99		0	0	0	0	0
PSI 15 Unrecognized Abdominopelvic Accidental Puncture/Lacerat	0.98		0	0	0	0	0
CLABSI	0.652		0	0	0	4.785	0
CAUTI	0.64		0	1.21	0	0	0
SSI COLON Surgical Site Infection	1.899		0		0		0
SSI HYST Surgical Site Infection	0.61		0	0	0		0
MRSA	0.054	0	0	0	0	0.31	0
CDIFF	0.623	0.386	0.55	0.37	0.3	0.62	0.331

Red color indicates decline, green color indicates improvement. Lighter green indicates a reported value of zero for that indicator.

Arundel Metrics

Summary Review – Q2FY19

FYTD19	Ballad	Dickenson County Hospital	Johnston Memorial Hospital	Lonesome Pine Hospital	Norton Community Hospital	Russell County Hospital	Smyth County Community Hospital
PSI 3 Pressure Ulcer Rate	0.54	0	0	0	0	0	0
PSI 6 Iatrogenic Pneumothorax Rate	0.13	0	0.34	0	0	0	0
PSI 7 Central Venous Catheter-Related Blood Stream Infection Rat	0.07	0	0.53	0	0	0	0
PSI 8 In Hospital Fall with Hip Fracture Rate	0.06	0	0.37	0	0	0	0
PSI 9 Perioperative Hemorrhage or Hematoma Rate	1.54		0	0	0	0	0
PSI 10 Postoperative Acute Kidney Injury Requiring Dialysis	0.84		5.62	0	0		0
PSI 11 Postoperative Respiratory Failure Rate	7.91		6.13	0	0		0
PSI 12 Perioperative Pulmonary Embolism or Deep Vein Thrombos	3.61		3.28	0	0	0	0
PSI 13 Postoperative Sepsis Rate	3.32		0	29.41	0		0
PSI 14 Postoperative Wound Dehiscence Rate	0.83		0	0	0	0	0
PSI 15 Unrecognized Abdominopelvic Accidental Puncture/Lacerat	0.73		1.96	0	0	0	0
CLABSI	0.56		0.77	0	0	0	0
CAUTI	1.01		0.81	0	0.84	0	0
SSI COLON Surgical Site Infection	2.62		0	0	0		0
SSI HYST Surgical Site Infection	0		0	0	0		
MRSA	0.13		0.07	0	0.21	0	0
CDIFF	0.36		0	0.71	0	0.75	0

Red color indicates decline, green color indicates improvement. Lighter green indicates a reported value of zero for that indicator.

Arundel Metrics

Summary Review – FY18

FY18	Ballad	Dickenson County Hospital	Johnston Memorial Hospital	Lonesome Pine Hospital	Norton Community Hospital	Russell County Hospital	Smyth County Community Hospital
Meropenem Days Of Therapy per 1000 patient days	42.94		41.69	63.6	53.34	2.48	10.1
Inpatient Opioid Administration Rate by Patient Days	1.26		0.87	1.4	0.61	0.3	0.78
Emergency Department Opioid Administration Rate by ED Visits	0.12		0.15	0.12	0.11	0.14	0.14
Left Without Being Seen	0.71%	0.81%	0.20%	0.31%	0.19%	0.26%	0.33%
HCOMP1A P Patients who reported that their nurses "Always" con	78.0%	57.0%	77.0%	83.0%	83.0%	90.0%	86.0%
HCOMP2A P Patients who reported that their doctors "Always" co	80.0%	100.0%	79.0%	83.0%	82.0%	88.0%	83.0%
HCOMP5A P Patients who reported that staff "Always" explained	64.0%	100.0%	60.0%	76.0%	65.0%	64.0%	75.0%
HCOMP6Y P Patients who reported that YES, they were given infor	86.0%	100.0%	87.0%	86.0%	80.0%	82.0%	87.0%
Sepsis In House Mortality	7.5%		10.5%	4.4%	3.9%	7.4%	2.9%
SMB: Sepsis Management Bundle**	56.6%		54.8%	44.8%	77.6%	76.7%	81.1%
Median Time from ED Arrival to Departure for Outpatients (18b)**	148	103	137.5	117	138.75	106	106.75
Median Time from ED Arrival to Transport for Admitted Patients (E	316	136	259	244	225	189.25	175

Red color indicates decline, green color indicates improvement. Lighter green indicates a reported value of zero for that indicator.

Arundel Metrics

Summary Review – Q2FY19

FYTD19	Ballad	Dickenson County Hospital	Johnston Memorial Hospital	Lonesome Pine Hospital	Norton Community Hospital	Russell County Hospital	Smyth County Community Hospital
Meropenem Days Of Therapy per 1000 patient days	39.6		32.3	54.9	29.9	3.4	9.3
Inpatient Opioid Administration Rate by Patient Days	0.81		0.95	0.89	0.75	0.28	0.8
Emergency Department Opioid Administration Rate by ED Visits	0.12		0.14	0.12	0.14	0.13	0.15
Left Without Being Seen	0.96%	0.60%	0.97%	0.20%	0.34%	0.75%	0.54%
HCOMP1A P Patients who reported that their nurses "Always" con	84.0%	89.0%	78.0%	85.0%	85.0%	88.0%	83.0%
HCOMP2A P Patients who reported that their doctors "Always" co	83.0%	89.0%	81.0%	85.0%	82.0%	81.0%	84.0%
HCOMP5A P Patients who reported that staff "Always" explained	68.0%	50.0%	61.0%	74.0%	67.0%	76.0%	68.0%
HCOMP6Y P Patients who reported that YES, they were given infor	86.4%	83.0%	86.0%	86.0%	84.0%	89.0%	88.0%
Sepsis In House Mortality	8.6%	0.0%	8.0%	4.1%	4.6%	6.0%	2.1%
SMB: Sepsis Management Bundle**	54.6%		55.4%	52.6%	85.7%	76.1%	89.3%
Median Time from ED Arrival to Departure for Outpatients (18b)**	124.5	105	135.25	117.125	140.25	99.75	103.5
Median Time from ED Arrival to Transport for Admitted Patients (E	224	197.75	237.5	246.875	228.25	172	181.5

Red color indicates decline, green color indicates improvement. Lighter green indicates a reported value of zero for that indicator.

Arundel Metrics

Active Supervision of the Cooperative Agreement between Mountain States Health Alliance and Wellmont Health Systems: Measures and Performance Indicators

Performance Indicators

1. The New Health System shall comply with all of the Conditions in the Virginia State Health Commissioner's Order and Letter Authorizing a Cooperative Agreement, dated October 30, 2017.
2. The New Health System shall report the following measures to the Commissioner in the annual report:
   a. The number of validated and unresolved complaints from payers (self-reporting with verification from payers and department and review by department), the number of contracts retained or added with payment for value elements, and the number of lives covered in risk-based contracts
   b. Information to demonstrate fulfillment of each component of condition 10.
   c. The rate of increase of the total cost of care measured by per member per year for all risk based contracts demonstrating that the rate of increase is below the regional trend for similar payer populations on an annual basis calculated on a rolling three-year average.
      i. Within 12 months of closing of the merger, the New Health System will compile and submit to the VDH Office of Licensure and Certification baseline data on cost, quality, and customer experience for all current risk-based or value-based payer contracts.
      ii. Within 12 months of closing of the merger, the New Health System will compile and submit to the VDH Office of Licensure and Certification baseline data on cost, quality, and customer experience for the New Health System's employees and their family members who are provided health insurance through the New Health System.
   d. The results of the Anthem Q-HIP. These results shall include comparisons to the other Anthem Virginia network providers and percentiles where available.
   e. The percentage of independent physicians participating in the clinical services network. This percentage should increase each year for the first five years. The baseline percentage shall be provided to the VDH Office of Licensure and Certification within 12 months of closing of the merger.
   f. The percentage of independent physicians on the Common Clinical IT Platform. This percentage should increase each year for the first five years. The baseline percentage shall be provided to the VDH Office of Licensure and Certification within 12 months of closing of the merger.
   g. The number of employers with whom the New Health System has health outreach programs. This number should increase each year. The baseline number of employers shall be provided to the VDH Office of Licensure and Certification within 12 months of closing of the merger.
      i. Participant outcomes where health outreach programs are being provided to employers. Improvement in participant outcomes should be shown on an annual basis.
3. The Population Health Plan required by Condition 36 will include, but not be limited to, provisions that address how the following measures will be improved:
   a. total cost of care,
   b. health outcomes of the New Health System's employees, and
   c. the use of information technology and analytics in meeting the New Health System's population health goals and objectives.
      i. The Population Health Plan will address and seek to improve the scores of the southwest Virginia population on the measures contained in Table A. The Plan will include targets for each measure and timelines within which the New Health System expects to reach the applicable target. Each year, the New Health System will select at least one measure from Table A for focused improvement on which it will be evaluated. The measure(s) selected in any given year shall not be the same as the ones selected in any of the preceding three years. Measures selected for focused improvement by the New Health System should maintain the improved performance level or continue to demonstrate improvement in subsequent years.

ii. Within 12 months of the closing of the merger, the New Health System will provide the VDH Office of Licensure and Certification with baseline data for the measures contained in Table A for the southwest Virginia population and socioeconomic peer counties selected by the New Health System and approved by the Commissioner.

iii. The New Health System will monitor all of the measures in Table A and report on each measure for the southwest Virginia population in the annual report. The annual report should show that 90% of the targets established in the Population Health Plan are on track to be or were achieved in accordance with the timelines set in the Plan.

Table A. Measures, Descriptions, and Sources

Item	Measure	Description	Source
A1	Mothers who smoke during pregnancy	Percentage of mothers who report smoking during pregnancy (%).	VDH Division of Health Stats – Birth Certificate Data
A2	Youth Tobacco Use	Percentage of High School Students who self-reported currently using tobacco (used cigarettes, cigars, chewing tobacco, snuff, or pipe tobacco within the 30 days before the survey).	National Survey on Drug Use and Health, Virginia Youth Survey
A3	Obesity Subpopulation Measure	Increase the proportion of physician office visits that include counseling or education related to weight and physical activity.	Data Collection to be led by the New Health System
A4	Breastfeeding Initiation	Percent of live births whose birth certificates report that baby is breastfed. US Value: Proportion of infants who are ever breastfed.	VDH Division of Health Stats – Birth Certificate Data CDC National Immunization Survey
A5	NAS (Neonatal Abstinence Syndrome) Births	Number of reported cases with clinical signs of withdrawal per 1,000 Virginia resident live births.	Active case reports submitted by clinicians OR through VDH's inpatient hospitalization database (VHI data)
A6	Children – On-time Vaccinations	Children receiving on-time vaccinations (% of children aged 24 months receiving 4:3:1:FS:3:1:4 series).	Virginia Immunization Information System and Tennessee Immunization Registry
A7	Vaccinations – HPV Females	Percentage of females aged 13 to 17 years who received adequate doses of human papillomavirus (HPV) vaccine, either quadrivalent or bivalent.	Data Collection to be led by the New Health System
A8	Vaccinations – HPV Males	Percentage of males aged 13 to 17 years who received adequate doses of human papillomavirus (HPV) vaccine, either quadrivalent or bivalent.	Data Collection to be led by the New Health System
A9	Teen Pregnancy Rate	Rate of pregnancies per 1,000 females aged 15-19 years.	VDH Division of Health Stats – Birth Certificate Data
A10	Third Grade Reading Level	3rd graders scoring "proficient" or "advanced" on reading assessment (%).	Fourth grade reading level is available through KIDS COUNT data center

Table A. Measures, Descriptions, and Sources (continued)

Item	Measure	Description	Source
A11	Children receiving dental sealants	Children receiving dental sealants on permanent first molar teeth (%, 6–9 years).	Data Collection to be led by the New Health System
A12	Frequent Mental Distress	Percentage of adults who reported their mental health was not good 14 or more days in the past 30 days.	Behavioral Risk Factor Surveillance System
A13	Infant Mortality	Number of infant deaths (before age 1) per 1,000 live births.	VDH Division of Health Stats – Birth Certificate Data

4. The Plans required by Conditions 33, 34, and 35 will include, but not be limited to, provisions that address how the following measures will be improved:
   - spending rates on the key services identified in the plans
   - quality and experience on key services,
   - length and quality of life, and
   - primary and specialty care access. (Specialty care access includes the following services: mental health, including addiction; heart and vascular; gastrointestinal; cancer, including medical and surgical oncology; obstetrics; and endocrinology.)

   a. The Rural Health Services Plan, the Behavioral Health Services Plan, and the Children's Health Services Plan, as applicable, will address and seek to improve the scores of the southwest Virginia population on the measures contained in Table B. The Plans will include targets for each measure and timelines within which the New Health System expects to reach the applicable target. Each year, the New Health System will select at least one measure from Table B for focused improvement on which it will be evaluated. The measure(s) selected in any given year shall not the same as the ones selected in any of the preceding three years. Measures selected for focused improvement by the New Health System should maintain the improved performance level or continue to demonstrate improvement in subsequent years.

   b. Within 12 months of the closing of the merger, the New Health System will provide the VDH Office of Licensure and Certification with baseline data for the measures contained in Table B for the southwest Virginia population.

   c. The New Health System will monitor all of the measures in Table B and report on each measure for the southwest Virginia population in the annual report. The annual report should show that 80% of the targets established in the Plans are on track to be or were achieved in accordance with the timelines set in the Plans.

Table B. Measures, Descriptions, and Sources

Item	Measure	Description	Source
B1	Population within 25 miles of an urgent care center (%)	Population within 10 miles of any urgent care center; urgent care centers may be owned by the New Health System or a competitor and may or may not be located in the geographic service area	U.S. Census Population Data 2010; Facility Addresses
B2	Population within 25 miles of an urgent care center open nights and weekends (%)	Population within ten (10) miles of any urgent care center open at least three (3) hours after 5pm Monday to Friday and open at least five (5) hours on Saturday and Sunday; urgent care center may be owned by the New Health System or a competitor and may or may not be located in the geographic service area	U.S. Census Population Data 2010; Facility Addresses
B3	Population within 10 miles of an urgent care facility or emergency department (%)	Population within 10 miles of any urgent care center or emergency room; urgent care centers and emergency rooms may be owned by the New Health System or a competitor and may or may not be located in the geographic service area	U.S. Census Population Data 2010; Facility Addresses
B4	Population within 15 miles of an emergency department (%)	Population within 15 miles of any emergency room; emergency rooms may be owned by the New Health System or a competitor and may or may not be located in the geographic service area	U.S. Census Population Data 2010; Facility Addresses
B5	Population within 15 miles of an acute care hospital (%)	Population within 15 miles of any acute care hospital; acute care hospital may be owned by the New Health System or a competitor and may or may not be located in the geographic service area	U.S. Census Population Data 2010; Facility Addresses
B6	Pediatric Readiness of Emergency Department	Average score of New Health System Emergency Departments on the National Pediatric Readiness Project Survey from the National EMSC Data Analysis Resource Center	Self-assessment performed by New Health System
B7	Excessive Emergency Department Wait Times	Percentage of all hospital emergency department visits in which the wait time to see an emergency department clinician exceeds the recommended timeframe.	New Health System Records; CDC National Center for Health Statistics National Hospital Ambulatory Care Survey
B8	Specialist Recruitment and Retention	Percentage of recruitment and retention targets set in the Physician Needs Assessment for specialists and subspecialists to address identified regional shortages	New Health System Records

Table B. Measures, Descriptions, and Sources

Item	Measure	Description	Source
B9	Personal Care Provider	Percentage of adults who reported having one person they think of as a personal doctor or health care provider	Behavioral Risk Factor Surveillance System
B10	Preventable Hospitalizations – Medicare	Number of discharges for ambulatory care-sensitive conditions per 1,000 Medicare enrollees	Hospital Discharge Data
B11	Preventable Hospitalizations – Adults	Number of discharges for ambulatory care-sensitive conditions per 1,000 adults aged 18 years and older	Hospital Discharge Data
B12	Screening – Breast Cancer	Percentage of women aged 50-74 who reported having a mammogram within the past two years	Behavioral Risk Factor Surveillance System and the All Payers Claim Database
B13	Screening – Cervical Cancer	Percentage of women aged 21-65 who reported having had a pap test in the past three years	Behavioral Risk Factor Surveillance System
B14	Screening – Colorectal Cancer	Percentage of adults who meet U.S. Preventive Services Task Force recommendations for colorectal cancer screening	Behavioral Risk Factor Surveillance System and the All Payers Claim Database
B15	Screening – Diabetes	Percentage of diabetes screenings performed by the New Health System for residents aged 40 to 70 who are overweight or obese; Clinicians should offer or refer patients with abnormal blood glucose to intensive behavioral counseling interventions to promote a healthful diet and physical activity.	New Health System Records
B16	Screening – Hypertension	Percentage of hypertension screenings performed by the New Health System for residents aged 18 or older	New Health System Records
B17	Asthma ED Visits – Age 0-4	Asthma Emergency Department Visits Per 10,000 (Age 0-4)	Hospital Discharge Data
B18	Asthma ED Visits – Age 5-14	Asthma Emergency Department Visits Per 10,000 (Age 5-14)	Hospital Discharge Data
B19	Prenatal care in the first trimester	Percentage of live births in which the mother received prenatal care in the first trimester	
B20	Follow-Up After Hospitalization for Mental Illness	Percentage of adults and children aged 6 years and older who are hospitalized for treatment of selected mental health disorders and had an outpatient visit, and intensive outpatient encounter or a partial hospitalization with a mental health practitioner within seven (7) days post-discharge	New Health System Records; NCQA *The State of Health Care Quality Report*

Table B. Measures, Descriptions, and Sources (continued)

Item	Measure	Description	Source
B21	Follow-Up After Hospitalization for Mental Illness	Percentage of adults and children aged 6 years and older who are hospitalized for treatment of selected mental health disorders and had an outpatient visit, and intensive outpatient encounter or a partial hospitalization with a mental health practitioner within thirty (30) days post-discharge	New Health System Records; NCQA *The State of Health Care Quality Report*
B22	Antidepressant Medication Management – Effective Acute Phase Treatment	Percentage of adults aged 18 years and older with a diagnosis of major depression, who were newly treated with antidepressant medication and remained on an antidepressant medication for at least 84 days (12 weeks)	New Health System Records; NCQA *The State of Health Care Quality Report*
B23	Antidepressant Medication Management – Effective Continuation Phase Treatment	Percentage of adults aged 18 years and older with a diagnosis of major depression, who were newly treated with antidepressant medication and remained on an antidepressant medication for at least 180 days (6 months)	New Health System Records; NCQA *The State of Health Care Quality Report*
B24	Engagement of Alcohol or Drug Treatment	Adolescents and adults who initiated treatment and who had two or more additional services with a diagnosis of alcohol or other drug dependence within 30 days of the initiation visit.	New Health System Records; NCQA *The State of Health Care Quality Report*
B25	SBIRT administration – hospital admissions	Percentage of patients admitted to a New Health System hospital who are screened for alcohol and substance abuse, provided a brief intervention, and referred to treatment (SBIRT)	New Health System Records
B26	Rate of SBIRT administration – ED visits	Percentage of patients admitted to a New Health System emergency department who are screened for alcohol and substance abuse, provided a brief intervention, and referred to treatment (SBIRT)	New Health System Records
B27	Patient Satisfaction and Access Surveys	Successful completion of patient satisfaction and access surveys, according to Section 4.02©(iii)	New Health System Records

Table B. Measures, Descriptions, and Sources (continued)

Item	Measure	Description	Source
B28	Patient Satisfaction and Access Survey – Response Report	Report documents a satisfactory plan for the New Health System to address deficiencies and opportunities for improvement related to perceived access to care services and documents satisfactory progress towards the plan.	New Health System Records
B29	Screening for lung cancer	Percentage of people age 55-80 who have a 30-pack year smoking history and currently smoke or have quit within the past 15 years who have a low dose CT in the past 15 months.	All Payers Claim Database, Relevant regional data that includes uninsured populations

5. The comprehensive physician/physician extender needs assessment and recruitment plan required by Condition 32 will identify clinical staff gaps and will include targets and their associated measures to close identified gaps and timelines within which the New Health System expects to reach the applicable target. The annual report should show that the targets established in the plan are on track to be or were achieved in accordance with the timelines set in the plan.
   a. Within 12 months of closing of the merger, the New Health System will provide the VDH Office of Licensure and Certification with baseline data concerning physician/physician extenders in southwest Virginia.

6. The New Health System will comply with the reporting requirements of Condition 12.
   a. Through its quality improvement program, the CMS safety domain measures listed below will be monitored. Within 12 months of closing of the merger, the New Health System will provide the VDH Office of Licensure and Certification with baseline data for the measures listed below. The New Health System's quality improvement program should establish targets for improvement of each measure and timelines within which the New Health System expects to reach the applicable target. The annual report should contain data on each measure and show that 80% of the targets established by the New Health System are on track to be or were achieved in accordance with the timelines set in the quality improvement program.

      - Pressure ulcer rate
      - Iatrogenic pneumothorax rate
      - Central venous catheter-related blood stream infection rate
      - Central venous catheter-related blood stream infection rate
      - Postoperative Hip Fracture Rate
      - PSI 09 Perioperative Hemorrhage or Hematoma Rate
      - PSI 10 Postoperative Physiologic and Metabolic Derangement Rate
      - PSI 11 Postoperative Respiratory Failure Rate
      - PSI 12 Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate
      - PSI 13 Postoperative Sepsis Rate
      - PSI 14 Postoperative Wound Dehiscence Rate

- PSI 15 Accidental Puncture or Laceration Rate
- Central Line-Associated Bloodstream Infection (CLABSI Rate)
- Catheter-Associated Urinary Tract Infection (CAUTI Rate)
- Surgical Site Infection (SSI) Rate
- Methicillin-Resistant Staphylococcus Aureus (MRSA) Rate
- Clostridium Difficile Infection (CDI or C-Diff) Rate

b. Through its quality improvement program, the measures in Table C will be monitored. Within 12 months of closing of the merger, the New Health System will provide the VDH Office of Licensure and Certification with baseline data for the measures in Table C.

Table C. Quality Monitoring Measures

Item	Measure Identifier	Technical Measure Title	Measure as Posted on Hospital Compare
General information- Structural measures			
C1	SM-PART-NURSE	Participation in a systematic database for nursing sensitive care	Nursing Care Registry
C2	ACS-REGISTRY	Participation in a multispecialty surgical registry	Multispecialty Surgical Registry
C3	SM-PART-GEN-SURG	Participation in general surgery registry	General Surgery Registry
C4	OP-12	The Ability for Providers with HIT to Receive Laboratory Data Electronically Directly into their ONC-Certified EHR System as Discrete Searchable Data	Able to receive lab results electronically
C5	OP-17	Tracking Clinical Results between Visits	Able to track patients' lab results, tests, and referrals electronically between visits
C6	OP-25	Safe surgery checklist use (outpatient)	Uses outpatient safe surgery checklist
C7	SM-SS-CHECK	Safe surgery checklist use (inpatient)	Uses inpatient safe surgery checklist
	Survey of patient's experiences- Hospital Consumer Assessment of Healthcare Providers and Systems Survey (HCAHPS)		
C8	H-COMP-1-A-P	Communication with nurses (composite measure)	Patients who reported that their nurses "Always" communicated well
C9	H-COMP-1-U-P	Communication with nurses (composite measure)	Patients who reported that their nurses "Usually" communicated well

Table C. Quality Monitoring Measures (continued)

Item	Measure Identifier	Technical Measure Title	Measure as Posted on Hospital Compare
C10	H-COMP-1-SN-P	Communication with nurses (composite measure)	Patients who reported that their nurses "Sometimes" or "Never" communicated well
C11	H-COMP-2-A-P	Communication with doctors (composite measure)	Patients who reported that their doctors "Always" communicated well
C12	H-COMP-2-U-P	Communication with doctors (composite measure)	Patients who reported that their doctors "Usually" communicated well
C13	H-COMP-2-SN-P	Communication with doctors (composite measure)	Patients who reported that their doctors "Sometimes" or "Never" communicated well
C14	H-COMP-3-A-P	Responsiveness of hospital staff (composite measure)	Patients who reported that they "Always" received help as soon as they wanted
C15	H-COMP-3-U-P	Responsiveness of hospital staff (composite measure)	Patients who reported that they "Usually" received help as soon as they wanted
C16	H-COMP-3-SN-P	Responsiveness of hospital staff (composite measure)	Patients who reported that they "Sometimes" or "Never" received help as soon as they wanted
C17	H-COMP-4-A-P	Pain management (composite measure)	Patients who reported that their pain was "Always" well controlled
C18	H-COMP-4-U-P	Pain management (composite measure)	Patients who reported that their pain was "Usually" well controlled
C19	H-COMP-4-SN-P	Pain management (composite measure)	Patients who reported that their pain was "Sometimes" or "Never" well controlled
C20	H-COMP-5-A-P	Communication about medicines (composite measure)	Patients who reported that staff "Always" explained about medicines before giving it to them
C21	H-COMP-5-U-P	Communication about medicines (composite measure)	Patients who reported that staff "Usually" explained about medicines before giving it to them

Table C. Quality Monitoring Measures (continued)

Item	Measure Identifier	Technical Measure Title	Measure as Posted on Hospital Compare
C22	H-COMP-5-SN-P	Communication about medicines (composite measure)	Patients who reported that staff "Sometimes" or "Never" explained about medicines before giving it to them
C23	H-CLEAN-HSP-A-P	Cleanliness of hospital environment (individual measure)	Patients who reported that their room and bathroom were "Always" clean
C24	H-CLEAN-HSP-U-P	Cleanliness of hospital environment (individual measure)	Patients who reported that their room and bathroom were "Usually" clean
C25	H-CLEAN-HSP-SN-P	Cleanliness of hospital environment (individual measure)	Patients who reported that their room and bathroom were "Sometimes" or "Never" clean
C26	H-QUIET-HSP-A-P	Quietness of hospital environment (individual measure)	Patients who reported that the area around their room was "Always" quiet at night
C27	H-QUIET-HSP-U-P	Quietness of hospital environment (individual measure)	Patients who reported that the area around their room was "Usually" quiet at night
C28	H-QUIET-HSP-SN-P	Quietness of hospital environment (individual measure)	Patients who reported that the area around their room was "Sometimes" or "Never" quiet at night
C29	H-COMP-6-Y-P	Discharge information (composite measure)	Patients who reported that YES, they were given information about what to do during their recovery at home
C30	H-COMP-6-N-P	Discharge information (composite measure)	Patients who reported that NO, they were not given information about what to do during their recovery at home
C31	H-COMP-7-SA	Care Transition (composite measure)	Patients who "Strongly Agree" they understood their care when they left the hospital
C32	H-COMP-7-A	Care Transition (composite measure)	Patients who "Agree" they understood their care when they left the hospital
C33	H-COMP-7-D-SD	Care Transition (composite measure)	Patients who "Disagree" or "Strongly Disagree" they understood their care when they left the hospital

Table C. Quality Monitoring Measures (continued)			
Item	**Measure Identifier**	**Technical Measure Title**	**Measure as Posted on Hospital Compare**
C34	H-HSP-RATING-9-10	Overall rating of hospital (global measure)	Patients who gave their hospital a rating of 9 or 10 on a scale from 0 (lowest) to 10 (highest)
C35	H-HSP-RATING-7-8	Overall rating of hospital (global measure)	Patients who gave their hospital a rating of 7 or 8 on a scale from 0 (lowest) to 10 (highest)
C36	H-HSP-RATING-0-6	Overall rating of hospital (global measure)	Patients who gave their hospital a rating of 6 or lower on a scale from 0 (lowest) to 10 (highest)
C37	H-RECMND-DY	Willingness to recommend the hospital (global measure)	Patients who reported YES, they would definitely recommend the hospital
C38	H-RECMND-PY	Willingness to recommend the hospital (global measure)	Patients who reported YES, they would probably recommend the hospital
C39	H-RECMND-DN	Willingness to recommend the hospital (global measure)	Patients who reported NO, they would probably not or definitely not recommend the hospital
Timely & effective care- Colonoscopy follow-up			
C40	OP-29	Endoscopy/polyp surveillance: appropriate follow-up interval for normal colonoscopy in average risk patients	Percentage of patients receiving appropriate recommendation for follow-up screening colonoscopy
C41	OP-30	Endoscopy/polyp surveillance: colonoscopy interval for patients with a history of adenomatous polyps - avoidance of inappropriate use	Percentage of patients with history of polyps receiving follow-up colonoscopy in the appropriate timeframe
Timely & effective care- Heart attack			
C42	OP-3b	Median time to transfer to another facility for acute coronary intervention	Average (median) number of minutes before outpatients with chest pain or possible heart attack who needed specialized care were transferred to another hospital
C43	OP-5	Median time to ECG	Average (median) number of minutes before outpatients with chest pain or possible heart attack got an ECG

Table C. Quality Monitoring Measures (continued)			
Item	**Measure Identifier**	**Technical Measure Title**	**Measure as Posted on Hospital Compare**
C44	OP-2	Fibrinolytic therapy received within 30 minutes of emergency department arrival	Outpatients with chest pain or possible heart attack who got drugs to break up blood clots within 30 minutes of arrival
C45	OP-4	Aspirin at arrival	Outpatients with chest pain or possible heart attack who received aspirin within 24 hours of arrival or before transferring from the emergency department
Timely & effective care- Emergency department (ED) throughput			
C46	EDV	Emergency department volume	Emergency department volume
C47	ED-1b	Median time from emergency department arrival to emergency department departure for admitted emergency department patients	Average (median) time patients spent in the emergency department, before they were admitted to the hospital as an inpatient
C48	ED-2b	Admit decision time to emergency department departure time for admitted patient	Average (median) time patients spent in the emergency department, after the doctor decided to admit them as an inpatient before leaving the emergency department for their inpatient room
C49	OP-18b	Median time from emergency department arrival to emergency department departure for discharged emergency department patients	Average (median) time patients spent in the emergency department before leaving from the visit
C50	OP-20	Door to diagnostic evaluation by a qualified medical professional	Average (median) time patients spent in the emergency department before they were seen by a healthcare professional
C51	OP-21	Median time to pain medication for long bone fractures	Average (median) time patients who came to the emergency department with broken bones had to wait before getting pain medication
C52	OP-22	Patient left without being seen	Percentage of patients who left the emergency department before being seen

Table C. Quality Monitoring Measures (continued)			
Item	**Measure Identifier**	**Technical Measure Title**	**Measure as Posted on Hospital Compare**
C53	OP-23	Head CT scan results for acute ischemic stroke or hemorrhagic stroke who received head CT scan interpretation within 45 minutes of arrival	Percentage of patients who came to the emergency department with stroke symptoms who received brain scan results within 45 minutes of arrival
Timely & effective care- Preventive care			
C54	IMM-2	Immunization for influenza	Patients assessed and given influenza vaccination
C55	IMM-3-OP-27-FAC-ADHPCT	Influenza Vaccination Coverage among Healthcare Personnel	Healthcare workers given influenza vaccination
Timely & effective care- Stroke care			
C56	STK-4	Thrombolytic Therapy	Ischemic stroke patients who got medicine to break up a blood clot within 3 hours after symptoms started
Timely & effective care- Blood clot prevention & treatment			
C57	VTE-6	Hospital acquired potentially preventable venous thromboembolism	Patients who developed a blood clot while in the hospital who *did not* get treatment that could have prevented it
C58	VTE-5	Warfarin therapy discharge instructions	Patients with blood clots who were discharged on a blood thinner medicine and received written instructions about that medicine
Timely & effective care- Pregnancy & delivery care			
C59	PC-01	Elective delivery	Percent of mothers whose deliveries were scheduled too early (1-2 weeks early), when a scheduled delivery was not medically necessary

Table C. Quality Monitoring Measures (continued)			
Item	**Measure Identifier**	**Technical Measure Title**	**Measure as Posted on Hospital Compare**
Complications- Surgical complications			
C60	COMP-HIP-KNEE	Hospital level risk-standardized complication rate (RSCR) following elective primary total hip arthroplasty (THA) and total knee arthroplasty (TKA)	Rate of complications for hip/knee replacement patients
C61	PSI-90-SAFETY	Complication/patient safety for selected indicators (composite)	Serious complications
C62	PSI-4-SURG-COMP	Death rate among surgical inpatients with serious treatable complications	Deaths among patients with serious treatable complications after surgery
Complications- Healthcare-associated infections (HAI)			
Readmissions & deaths- 30 day rates of readmission			
C63	READM-30-COPD	Chronic obstructive pulmonary disease (COPD) 30-day readmission rate	Rate of readmission for chronic obstructive pulmonary disease (COPD) patients
C64	READM-30-AMI	Acute myocardial infarction (AMI) 30-day readmission rate	Rate of readmission for heart attack patients
C65	READM-30-HF	Heart failure (HF) 30-day readmission rate	Rate of readmission for heart failure patients
C66	READM-30-PN	Pneumonia (PN) 30-day readmission rate	Rate of readmission for pneumonia patients
C67	READM-30-STK	Stroke 30-day readmission rate	Rate of readmission for stroke patients
C68	READM-30-CABG	Coronary artery bypass graft (CABG) surgery 30-day readmission rate	Rate of readmission for coronary artery bypass graft (CABG) surgery patients
C69	READM-30-HIP-KNEE	30-day readmission rate following elective primary total hip arthroplasty (THA) and/or total knee arthroplasty (TKA)	Rate of readmission after hip/knee replacement
C70	READM-30-HOSP-WIDE	30-day hospital-wide all- cause unplanned readmission (HWR)	Rate of readmission after discharge from hospital (hospital-wide)
Readmissions & deaths- 30-day death (mortality) rates			
C71	MORT-30-COPD	COPD 30-day mortality rate	Death rate for COPD patients

Table C. Quality Monitoring Measures (continued)			
Item	**Measure Identifier**	**Technical Measure Title**	**Measure as Posted on Hospital Compare**
C72	MORT-30-AMI	Acute myocardial infarction (AMI) 30-day mortality rate	Death rate for heart attack patients
C73	MORT-30-HF	Heart failure (HF) 30-day mortality rate	Death rate for heart failure patients
C74	MORT-30-PN	Pneumonia (PN) 30-day mortality rate	Death rate for pneumonia patients
C75	MORT-30-STK	Stroke 30-day mortality rate	Death rate for stroke patients
C76	MORT-30-CABG	Coronary artery bypass graft (CABG) surgery 30-day mortality rate	Death rate for CABG surgery patients
Use of medical imaging- Outpatient imaging efficiency			
C77	OP-8	MRI Lumbar Spine for Low Back Pain	Outpatients with low-back pain who had an MRI without trying recommended treatments (such as physical therapy) first. If a number is high, it may mean the facility is doing too many unnecessary MRIs for low-back pain.
C78	OP-9	Mammography Follow-Up Rates	Outpatients who had a follow-up mammogram, ultrasound, or MRI within the 45 days after a screening mammogram
C79	OP-10	Abdomen CT - Use of Contrast Material	Outpatient CT scans of the abdomen that were "combination" (double) scans (If a number is high, it may mean that too many patients have a double scan when a single scan is all they need).
C80	OP-11	Thorax CT - Use of Contrast Material	Outpatient CT scans of the chest that were "combination" (double) scans (If a number is high, it may mean that too many patients have a double scan when a single scan is all they need).

Table C. Quality Monitoring Measures (continued)

Item	Measure Identifier	Technical Measure Title	Measure as Posted on Hospital Compare
C81	OP-13	Cardiac Imaging for Preoperative Risk Assessment for Non-Cardiac Low-Risk Surgery	Outpatients who got cardiac imaging stress tests before low-risk outpatient surgery (If a number is high, it may mean that too many cardiac scans were done prior to low-risk surgeries).
C82	OP-14	Simultaneous Use of Brain Computed Tomography (CT) and Sinus CT	Outpatients with brain CT scans who got a sinus CT scan at the same time (If a number is high, it may mean that too many patients have both a brain and sinus scan, when a single scan is all they need).

7. The New Health System will report its health system and Virginia employee turnover rates in the annual report.
   a. Within 12 months of closing of the merger, the New Health System will provide the VDH Office of Licensure and Certification with baseline data on health system and Virginia employee turnover.

8. The New Health System will report the number of Board development activities, including a description of each activity, conducted each year in the annual report. The New Health System will also identify in the annual report the Board development activities that will be undertaken in the upcoming year.

Process & Output Measures

April 2, 2019

Background: Ballad's 3-Year Plans

- Each of Ballad's six plans contain strategies intended to achieve long-term outcomes
  - Ballad identified **31 strategies** across their six plans

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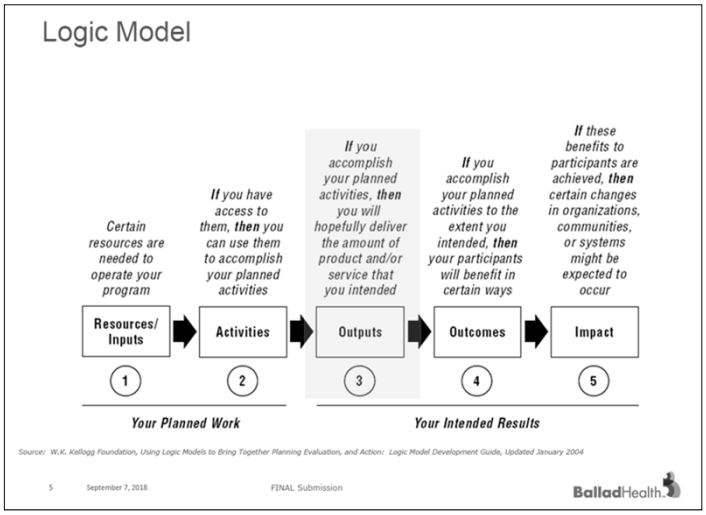
Output vs. Outcome Measures



3

Ballad's 3/18/2019 Letter with Proposed "Line of Sight" Metrics

- Ballad's 3/18/2019 letter to Mr. Ockerman proposed "line of sight" metrics for the following plans/strategies:
  - Behavioral Services Plan
    - Strategies 2, 3, & 4
  - Children's Services Plan
    - Strategies 2, 3, & 4
  - Rural Services Plan
    - Strategies 1, 2, 3, & 4
  - Population Health Services Plan
    - Focus Area Two, Strategy 1 & Focus Area 2, Strategy 2
- Not all plans/strategies were included in Ballad's letter

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Purpose of Process & Output Measures

- The States' believe additional process & output measures pertaining to all of Ballad's 31 strategies are *necessary to assess the extent to which and likelihood that Ballad's strategies will achieve the intended long-term outcomes*

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