



Certificate of Public Advantage

2020 Department Annual Report

Covering Fiscal Year July 1, 2018-June 30, 2019

Tennessee Department of Health | April 6, 2020



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Executive Summary

In 2018 the two largest health systems in Northeast Tennessee, Wellmont Health System and Mountain States Health Alliance, were issued a Certificate of Public Advantage (COPA) and allowed to merge under the name, Ballad Health. The Tennessee Department of Health (TDH) required the new health system to reinvest expected savings from the merger in ways that would substantially benefit residents living in the system's geographic service area.

The state required the formerly competing systems to agree to a number of terms and conditions that were set out in the Terms of Certification (TOC), a document governing the COPA. Importantly, the TOC stated that the system would be Actively Supervised by the state and subject to an annual review.

This Department Annual Report is on TDH's Annual Review of the Ballad Health COPA and includes determinations of compliance, the Sub-Index Scores, the Final Score, the Pass/Fail Grade, and other elements relevant to the Active Supervision of the COPA.

TDH identified several successes in Ballad Health's Fiscal Year 2019 that were attributable to the merger. Chief among them was that all of the system's 21 hospitals, including its many vulnerable rural hospitals, remained open.

TDH also identified opportunities upon which the success of the COPA depends. These include public communication, realignment of evaluation metrics, and the demographics in the region.

TDH confirmed that all of the Ballad Health periodic reports were submitted in compliance with the TOC. However, TDH and VDH are in discussions with Ballad Health to revise the required content of Ballad's periodic reports to improve the usefulness of the information provided.

Highlights from the Ballad Health Fiscal Year 2019 Annual Report, include:

- Ballad Health improved access to healthcare by opening a rural hospital in Unicoi County, Tennessee, in Fiscal Year 2019 and investing in an additional rural hospital, in Lee County, Virginia, scheduled to open in Fiscal Year 2021.
- Ballad Health leading the establishment of an Accountable Care Community that consists of over 250 diverse organizations that, through a collective impact process, have decided to improve community health by creating more safe, stable, and nurturing environments for children and supporting families in the region.
- Ballad Health's quality performance, by comparing the raw numbers from Ballad's Fiscal Year 2019 against their established baselines, appeared to have improved for 11 of the 16 measures, while scores slipped for two of the three patient satisfaction measures.

The State's Active Supervision structure includes the critical investigative work of the COPA Monitor and the public input facilitation of the COPA Local Advisory Council. Findings from these bodies related to Fiscal Year 2019 are shared in the [COPA Monitor Annual Report](#) and [Local Advisory Council Annual Report](#), respectively.

As part of its Active Supervision work, TDH published three Sub-Index reports with recent data on population health measures, access to health services measures, and other (quality) measures related to improvement and performance expectations for the health system, for patients, and for residents in the region. In accordance with the procedures and requirements of the TOC, data in the three Sub-Index reports and the Ballad Health Annual Report are used to determine if Public Advantage is demonstrated in each fiscal year. The data were assigned weights and calculated into Sub-Index Scores for Fiscal Year 2019.

TDH's calculation of the Sub-Index and Final Score agree with the score recommendations in the COPA Monitor's Annual Report. They are:

Economic Sub-Index : **Pass**

FINAL SCORE : **92**

Pursuant to the Terms of Certification, with a Passing score in the Economic Sub-Index and a Final Score of 92, TDH determined that the Ballad Health COPA continues to demonstrate a Public Advantage.

Note: This report covers the time period from July 1, 2018 to June 30, 2019; consequently, the report does not include the coronavirus pandemic and its impact on Ballad Health. Readers are advised to keep that in mind when reading this report.

Introduction and Background

The COPA

A **Certificate of Public Advantage (COPA)** is the written approval by the Tennessee Department of Health (TDH) that governs a Cooperative Agreement (including a merger) among two or more hospitals. A COPA provides state action immunity to the hospitals from state and federal antitrust laws by **replacing competition with state regulation and Active Supervision**.

TDH has the authority to issue a COPA if applicants pursuing a COPA demonstrate that the **likely benefits** of the proposed Cooperative Agreement **outweigh the likely disadvantages** that would result from the loss of competition. The ability to grant a COPA is authorized by Tennessee's Hospital Cooperation Act of 1993, amended in 2015. Permanent Rules 1200-38-01 implement T.C.A. § 68-11-1301 – 68-11-1309.

In February of 2016, the two largest health systems in Northeast Tennessee, Wellmont Health System and Mountain States Health Alliance, submitted an application for a COPA. The applicants explained that if allowed to merge, they would realize savings by reducing duplication and improving efficiencies that **they would reinvest in ways that would substantially benefit** those residing in their Geographic Service Area (GSA).

Their combined GSA includes 10 counties in Northeast Tennessee and 11 counties in Southwest Virginia. This part of the Appalachian Region is largely rural, and has a number of health, economic, and other challenging factors that when combined present a unique and difficult environment for improving the quality of and access to health care and health outcomes.

On January 31, 2018, in coordination with the Tennessee Attorney General's Office, TDH issued a COPA to Mountain States Health Alliance and Wellmont Health System, allowing them to merge under the name **Ballad Health**. TDH and the AG's Office developed the **Terms of Certification** (TOC) to govern the COPA. The TOC lays out Ballad's obligations and responsibilities and the regulatory role of the State. This document **details the conditions required by TDH for Ballad to demonstrate ongoing public advantage**.

Within the TOC is a description of the **Index and scoring system** that **will be used to track and evaluate** the demonstration of ongoing public advantage along four categories (sub-indices):

- Access to Health Services
- Population Health Improvement
- Economics
- Other (primarily quality of care)

Via the COPA Index, TDH will track the progress under the Cooperative Agreement and annually determine if a public advantage is maintained for the residents of the GSA. Based on the size of the region, the size of the population impacted, and the involvement of two states, this COPA is an unprecedented process.

The Department Annual Report

Pursuant to the TOC, TDH is required to prepare an Annual Report that incorporates findings from (i) Ballad Health's Periodic Reports, (ii) the COPA Compliance Office Annual Report, (iii) the Local Advisory Council Annual Report, (iv) the COPA Monitor Annual Report, (v) the Healthcare Access Report, and (vi) the Population Health Report. The Department Annual Report must also include determinations of compliance, the Index Scores, the Final Score, the Pass/Fail Grade, and trends relevant to the Active Supervision of the COPA and continued Public Advantage for each Fiscal Year when this information is available.

The 2020 Department Annual Report is the last in a series of Annual Reports required by the TOC this Fiscal Year. The Fiscal Year 2019 Ballad Health Annual Report and COPA Compliance Office Annual Report were submitted roughly 120 days after the end of Ballad's Fiscal year. The Local Advisory Council (LAC) held a Public Hearing on January 7, 2020 to allow residents to respond to the Ballad Health Annual Report and subsequently published the Local Advisory Council Annual Report on public feedback. The LAC's report submitted February 6, 2020 included recommendations to the COPA Monitor and to TDH. The COPA Monitor Annual Report was provided to TDH on March 6, 2020, in which the COPA Monitor reported on Ballad's performance against the Index and provided recommendations to TDH as well as to Ballad Health.

Annual Review

Section 7.02 of the TOC reads:

Pursuant to Tenn. Code Ann. §68-11-1303(g), the Department shall review, on at least an annual basis, the COPA to determine Public Advantage (the “Annual Review”). The Department shall review whether Public Advantage is demonstrated or not for each Fiscal Year during the COPA Term, in accordance with the procedures and requirements of the COPA Act and (the TOC). This Annual Review shall include, without limitation, the following: (i) the determination of the Final Score and Pass/Fail Grade, ... (ii) the COPA Parties’ degree of compliance with the Terms and Conditions, ... and any and all COPA Modifications and Corrective Actions occurring prior to such review, and (iii) trends of (Ballad Health’s) performance hereunder since the Issue Date and other factors (which may or may be reflected in the Index) relevant to the Department’s determination of the likely benefits and disadvantages of the Affiliation which, as of the time of such determination, can reasonably be expected if the Affiliation is continued.

As in the first Department Annual Report, TDH will include as a part of its review comments on things that are working well, challenges, and concerns that either surfaced or persisted in the past year.

Things that are working well.

TDH has identified the following COPA-related successes of the past year:

- Hospitals that were under threat of closure remain open.
- Ballad Health submitted each of the required periodic reports and three-year plans in compliance with the TOC.
- Ballad Health promptly provided additional data and information on quality performance upon request.
- Ballad Health promptly provided additional data and information on the Accountable Care Community upon request.
- The COPA Compliance Office responds quickly and thoroughly to inquiries from TDH.
- Ballad’s Health’s executive staff meets frequently with the COPA Monitor and provides information upon request.

- Ballard Health participated meaningfully in quarterly meetings to discuss progress made in implementing each of the system's following three-year plans: Population Health [Plan](#), Children's Health [Plan](#), Behavioral Health [Plan](#), Rural Health Plan, Health Information Exchange [Plan](#), and the Health Research and Graduate Medical Education [Plan](#).
- Ballard Health's staff, along with key members of the TDH and Virginia Department of Health (VDH) participated in a robust review of each of the Sub-Index measures for availability, validity, and reliability as part of a metrics workgroup. Agreeable solutions were found on the most concerning measures for each Sub-Index. The workgroup also developed a proposed set of metrics for tracking progress on each of the system's three year plans.
- TDH remains impressed by the size and range of stakeholders participating in the Accountable Care Community (ACC), which Ballard Health played a lead role in establishing in the region. TDH is optimistic about the ACC's new Striving Toward Resilience and Opportunity for the Next Generation (STRONG) Children and Families model for change and is interested in discussing how to support Ballard's alignment with the ACC's STRONG approach.
- Ballard Health's quality performance, by comparing the raw numbers from Ballard's Fiscal Year 2019 against their established baselines, improved for 11 of the 16 measures.

Opportunities

TDH has identified the following items as COPA-related opportunities:

- **Communication.** TDH staff, the Local Advisory Council, and Ballard Health, all have opportunities for better communication with the public.
- **Terms of Certification.** TDH and the Attorney General's Office have identified opportunities for clarification and refinements to the Terms of Certification, most notably to Addendum I, which they plan to discuss with Ballard.
- **Employing physicians.** In section 5.05(e) of the TOC, a 35% cap on employing physicians in any specialty at any of Ballard's three "non-rural" facilities was established. TDH and the COPA Monitor are discussing ways to make this cap more meaningful.
- **Data difficulties.** Multiple challenges related to data and evaluation were encountered over the past year, some of which have been resolved or are in the process of being resolved such as:
 - Aligning Tennessee's Index measures (active supervision evaluation metrics) with the evaluation measures used in Virginia (partially resolved).

- Exploring ways to ensure a clear and objective evaluation system is maintained, while allowing some ability to account for unforeseen policy, economic, and environmental changes that might also impact an evaluation metric (ongoing).
- Identifying scientific approaches to determining if improvement is achieved in each Sub-Index and monitoring measure (resolved).
- Ensuring the ability to independently verify the results for measures where the health system is the data source (ongoing).
- **Economic development.** The ability of Ballard Health to maintain quality of care across its facilities and access to care across the geographic service area will become increasingly challenging in a region with a declining birth rate and an aging population.

Concerns specific to Ballard

TDH has the following concerns regarding Ballard Health's initial experience operating under a COPA which include:

- Ballard Health's ability to recruit the number of children's health specialists listed in Ballard Health's Children's Health Plan. Due to the current national physician shortage, particular recruitment challenges that traditionally face rural hospitals, and declining birth rates in the system's service area, TDH believes Ballard Health will continue to have difficulty attracting and retaining the specialists it lists. TDH would like Ballard Health to submit a revised Children's Health Plan with strategies that do not rely on recruitment of pediatric specialists or the attainment of a Comprehensive Regional Pediatric Center certification.

Resolved instances of potential non-compliance

The COPA Monitor addresses potential COPA and TOC violations in his [COPA Monitor Annual Report](#). TDH is not aware of any additional potential or confirmed non-compliance events under the Terms of Certification.

Findings from Reports

The COPA Compliance Office Annual Report

The COPA Compliance Office Annual Report is available [here](#)

Findings:

- The COPA Compliance Office Annual Report was filed in compliance with the Terms of Certification and included required information.
- A chart summarizing the complaints received by the COPA Compliance Office throughout the year by type was provided. (Details of each complaint were listed in the COPA Compliance Office Quarterly Reports.)
- TDH engaged in lengthy follow up discussions with Ballad Health regarding the Exemption for Payment Indices on Ambulatory Surgery Centers/Ambulatory Surgery Treatment Centers (ASC/ASTC) due to the sale of interest in the ASC/ASTC that reduce the ownership interest held by Ballad Health such that the system is no longer a majority owner;
- TDH initiated discussions that are ongoing with Ballad Health regarding the following Requests for Modifications/Extensions listed in the report:
 - Proposed Base Charity Care provisions in the Terms of Certification; and
 - Request for changes to Population Health Measures.
- The Report on Potential Violations of the TOC was complete for Fiscal Year 2019. All issues have been resolved except for the following:
 - Out of concern that collection efforts for services to patients insured by an out-of-network Payor had not been compliant with Addendum 1 of the TOC, collection efforts for these patients were suspended. TDH, in coordination with the Office of the Attorney General and the COPA Monitor, is considering clarifying and revising formulas that apply to out-of-network payors and patients, which would impact the collection practices of Ballad Health with affected patients.

- Spending commitment made by Ballad Health for Fiscal Year 2019 are under review by the COPA Monitor for their compliance with the TOC.
- The COPA Compliance Department projected spending \$2.32 million in Fiscal Year 2020 on COPA Compliance, which was far below the Fiscal Year 2019 projection of \$4.77 million. (A revised projection of \$4.2 M was later communicated to TDH.)

Ballad's Periodic Reports

Ballad Health Quarterly Reports are available at the following links:

- Fiscal Year 2019 Q1 Report (reporting period: July 1, 2018-September 30, 2018) can be read [here](#).
- Fiscal Year 2019 Q2 Report (reporting period: October 1, 2018-December 31, 2018) can be read [here](#).
- Fiscal Year 2019 Q3 Report (reporting period: January 2019-March 2019) can be read [here](#).
- Fiscal Year 2019 Q4 Report (reporting period: April 2018-June 2018) can be read [here](#).

Findings:

- Ballad Health's four quarterly reports were submitted in compliance with the Terms of Certification and included all required information.

The Ballad Health Annual Report is available [here](#).

Findings:

- The 278 page Ballad Health Annual Report was submitted by October 28, 2019, in compliance with the TOC.
- Ballad Health provided the data sets that were required. TDH is working with VDH on providing advice to Ballad Health on how to best revise the material provided for the system's future annual reports.
- Qualitative data, and narratives about the progress of certain undertakings and the challenges associated with them, were particularly helpful and meaningful. The

Department would like to see narratives providing context added to the sections of future reports that currently only have data.

- An Executive Summary was prepared this year, at the request of the COPA Local Advisory Council. The Summary provided context and meaning in a condensed report that was more appropriate for general consumption.

- Related to Access:
 - Baseline and Year 1 Access to Health Services Sub-Index data were reported in this Fiscal Year 2019 Ballad Health Annual Report for 25 of the 28 measures. Ballad provided separately an Access Data Dictionary that detailed the methodology and definitions on each measure for which they provided data. Data submitted align with sources, definitions, and goals that were agreed to as a result of a comprehensive data review process that TDH, VDH, and Ballad Health jointly engaged in.
 - TDH appreciated the summary on Access that noted 1) Ballad had improved access by increasing the eligibility threshold for patients who are eligible for charity care for 200% to 225% of the federal poverty level; 2) Ballad's efforts to create and expand programs for oral health care; and 3) Ballad's addiction medicine partnerships.
 - TDH was pleased that Ballad Health opened a new rural hospital in Fiscal Year 2019 in Unicoi County, Tennessee, and that significant progress has been made on a new facility scheduled to open in Lee County, Virginia, in Fiscal Year 2021.
 - Last year, Ballad reported the inpatient nursing ratio was 10.40. For Fiscal Year 2019, it reported the ratio was 9.817. While this would indicate an improvement, TDH would like additional information to understand if this ratio is high or low or normal. TDH has requested that Ballad Health provide comparison numbers (e.g. the staffing ratio of peer systems, national averages, or another benchmark). TDH has also requested the ratio broken down of by acuity, inpatient, and outpatient.

- Related to Population Health:

- Ballard Health provided information on each of the three components of the Year 1 Population Health Sub-Index scoring.
 1. Regarding investment in Population Health: Ballard exceeded its Year 1 spending commitment of \$1,000,000.
 2. Regarding the system's first Population Health Plan: Ballard submitted its plan to TDH, and it was approved by the Department.
 3. Regarding the Achievement of Process Measures identified in the system's Population Health Plan: Ballard achieved 63 of the 65 Process Measures (listed as Metrics in Ballard's Population Health Implementation Roadmap).
- Striving Toward Resilience and Opportunity for the Next Generation (STRONG) Children and Families model
 - In Attachment 15 of its Annual Report, Ballard Health presents a proposal on a Population Health model recently adopted by the Accountable Care Community: Striving Toward Resilience and Opportunity for the Next Generation (STRONG) Children and Families model. The proposal describes a population health improvement approach that focuses on generational change and aligns the efforts of hundreds of unique community organizations. The ACC's STRONG model emphasizes the interconnected relationship between educational success, economic vitality, and healthy lives and aims to impact all three by addressing root causes, largely by reducing Adverse Childhood Experiences (ACEs) and building resilience, supporting families, and creating safe, stable, and nurturing environments for children. In this proposal, Ballard Health seeks to better align the COPA Population Health requirements with the goals of the ACC to better achieve fundamental change in the region.
 - TDH agrees that there is significant power in coordinated action to produce tangible improvement in population health that goes beyond what a single organization can produce working alone. Organizing and aligning community improvement efforts for a collective impact may in fact be the only way to address the unique and persistent challenges of the 21 county COPA region.

- TDH is interested in supporting Ballard Health as it seeks to align its population health improvement work with the ACC's STRONG approach. TDH would like to discuss how to best measure the long-term outcomes and impacts of this innovative approach as well as how to appropriately account for Ballard's specific role in the collective's efforts in order to evaluate population health improvement and determine if it is attributable to the COPA.
 - TDH is pleased with the following accomplishments that were reported:
 - High employee participation in Ballard's diabetes management program, tobacco cessation programs, and flu vaccination campaigns.
 - Growth in the number of regional employers, from 70 to 78, to which Ballard Health provided health outreach programs.
 - Development of Ballard Health's employee wellness program, "Ballad as an Example." Key elements of the program include 1) "B Well" teams and champions, who promote supportive environments, 2) "B Informed," an initiative to promote connections with primary care physicians, 3) "B Well-Fueled," to promote healthy eating, 4) "B Active," to promote active living, and 5) "B Mentally Well," to promote behavioral health. TDH looks forward to learning about the system's research plans and process for measuring outcomes.
- Related to Economic factors:
 - In Fiscal Year 2019 Ballard reported that the Ballard board had approved an increase in pay for nurses and supporting staff that would cost Ballard Health more than \$100 million over 10 years.
 - Ballard Health realized over \$11 million in savings through supply chain standardization and \$10 million in savings through the elimination of duplicate corporate overhead.
 - \$2.4 million in operating cost savings were achieved by the consolidation of urgent care facilities.
 - FTE personnel decreased between July 2018 to June 2019 from 13,970 to 13,414.

- Ballad Health's turnover rate for the organization in Fiscal Year 2019 was 21%, while the rate from 2/1/18-12/31/18 (which was previously submitted pursuant to a separate request from the states) was 14%. While it appears the rate went up, the actual rate change is impossible to determine because of the overlap in the time periods.
- Related to Quality:
 - In its annual report, Ballad Health provides data on its system-wide quality performance alongside two types of comparison data. In Attachment 9, Ballad Health's Fiscal Year 2019 performance on multiple quality indicators are compared to its performance during the prior two fiscal years. In Attachment 11, the data are compared to similarly sized systems.
 - The quality data provided in Attachment 9, on quality indicators, were presented in a straightforward format. While presenting the values for each time period (baseline, Fiscal Year 2018, and Fiscal Year 2019) side by side was visually clear, the important detail that these values were based on different groups was not clearly indicated. The previously established baselines use Hospital Compare values, which consist only of *Medicare patients who are not enrolled in a Medicare Advantage Plan*, while the two subsequent years' values were on *all patients*. Any comparison readers make between these values must take such significant factors into account. Ballad and TDH are in the process of establishing new baselines that will be used for future comparisons
 - By strictly comparing the raw numbers, TDH observes that 11 of the 16 measures appear to have improved over the baselines (Ballad's 2017 hospital compare data). Analysis to determine statistically significant or meaningful change has not yet been conducted.
 - Two of the three Access Patient Satisfaction Surveys administered in Fiscal Year 2019 resulted in lower scores than the prior year. While an impressive 93.3% of patients reported being satisfied with access to care in owned medical practices, up from 68.4% in 2017, outpatient and Emergency Department Access scores dropped slightly.
- Related to Health Research and Graduate Medical Education:
 - TDH was interested in the tables provided on residency programs in

Ballad's Virginia Geographic Service Area and the region's programs by academic track. However, this is another area where TDH had more questions. TDH has requested the following additional information:

- Data broken out by state or by residency program and medical school affiliation. (TDH is specifically interested in seeing a chart on the Tennessee Geographic Service Area that is similar to the one on page 194 for the Virginia Geographic Service Area.)
 - National averages (or averages from a peer region) by which Ballad's GSA residency program data can be compared (i.e. The state would like to answer questions such as: How do the board passage rates in Ballad's residency programs compare to other programs?).
 - A narrative that provides additional context for the data provided and clearly states Ballad's goal(s) (i.e. Is Ballad's primary goal to increase the number of medical residents hired in the region or to increase the number of positions filled?).
- TDH would like to see data broken out by state or by residency program and medical school affiliation.
 - Regarding research studies, TDH has requested that a summary and narrative be provided in future reports in place of the study details to include the following information:
 - Ballad's research goals
 - Ballad's research activities/ progress
 - Involvement of academic and community partners
 - Money spent funding grants (if any)
 - Money brought into the region via non-Ballad funded grants

The Local Advisory Council Annual Report

The Local Advisory Council Annual Report is available [here](#).

Findings:

The Local Advisory Council Annual Report included recommendations to TDH. These recommendations and the Department's responses are on page 20.

The COPA Monitor Annual Report

The COPA Monitor Annual Report is available [here](#).

Findings:

The COPA Monitor Annual Report included recommendations to TDH. These recommendations and the Department's responses are on page 25.

The Population Health Report

The Department's 2019 Population Health Report can be found [here](#).

- There are currently 56 population health measures being monitored by TDH, 25 of which will be calculated into a Population Health Sub-Index score. In Fiscal Year 2019, extensive work continued by Ballad Health and TDH to agree upon and document the exact source and methodologies for each measure. This effort has resulted in several measures being changed and/or refined while maintaining the intent of the measure.
- Despite the productive discussions on metrics, there remained 13 population health measures for which data were not available for inclusion in the Department's 2019 Population Health Report. They include:
 - Three measures for which Ballad Health is responsible for data collection (Physician Office Visits that include counseling or education related to weight and physical activity, Infants Breastfed at 6 months, and Diabetes Adverse Events),
 - Three data points that are still in process and will be published in an updated report (overweight and obesity in public school students, flu vaccination rates among older adults, and community water fluoridation),

- Six measures from the Behavioral Risk Factor Surveillance System for which survey response levels did not meet the minimum that was required for reporting, and
- One measure on Maternity Practices in Infant Nutrition and Care (mPINC) for which the Centers for Disease Control and Prevention typically collect data, but for which the CDC has not collected data in the last three years.

Findings:

- Because of the brief time period that the COPA has been in effect, the following comments on population health data are largely observations of the landscape that Ballad is operating within and not considered attributable to Ballad Health or the COPA. For reasons stated above, the 2019 Department Population Health Report included data on 43 of the 56 measures for the COPA region, of which 41 have peer county, comparative data.
- Compared to peer counties, the COPA region is less healthy in 19 measures and healthier in 20 measures. All differences may not be significant.
- The COPA region underperforms compared to peer counties in two critical outcome measures, infant mortality (8.4 deaths versus 6.5 deaths per 1,000 live births) and child death (37.6 deaths versus 30.6 deaths per 100,000 aged 1-19).
- Furthermore, many smoking and tobacco use measures are higher in the COPA region than peer counties.
- Neonatal abstinence syndrome is significantly higher in the COPA region compared to the peer counties.
- Fortunately, third grade reading levels are substantially higher in the COPA region compared to peer counties - a strong indicator of future health improvement.

Year 1 Population Health Sub-Index scoring:

- According to the Terms of Certification, “data reported in the Department Population Health Reports and Ballad Health Annual Reports and other sources as deemed appropriate by the Department will be used to calculate the Sub-Index Score, Index Score ... and trends that will be” a part of TDH’s Annual Review and determination of continuing Public Advantage. However, trends take multiple years to establish and trend lines for persistent population health challenges may take many years to improve.

- The Population Health Sub-Index scoring schedule, as laid out in the TOC, allows a few years for those post-merger trends to be established. For the first three years, the Population Health Sub-Index score is based on investments, planning, and infrastructure building.

The following table (Table 1) shows the Year 1 calculation for the Population Health Sub-Index Score for the Ballad Health COPA:

Population Health Sub-Index Data Table – for Year 1

TABLE 1

Year 1 Requirement	Year 1 Goal	Status	Percentage weight
Investment in Population Health (incremental spending commitment)	\$1,000,000 Commitment	Ballad exceeded the \$1,000,000 incremental spending commitment for Year 1	25 (out of 25)
Approved Population Health Plan	Submit Plan to TDH for approval	The Ballad Health Population Health Plan was submitted and approved by TDH.	35 (out of 35)
Achievement of Process Measures Identified in the Population Health Plan	Achieve 65 of the Process Measures identified in the Fiscal Year 2019 Implementation Roadmap	63 of the 65 process measures were achieved	39 (out of 40)
Year 1 Population Health Sub-Index score			99 (out of 100)

The Access to Health Services Report

The Department’s 2019 Access to Health Services Report can be found [here](#).

- The 28 Access Sub-Index measures include those related to geographic proximity, emergency department response, personnel requirements and recruitment, and behavioral care access. Data sources include health system records, Behavioral Risk Factor Surveillance System (BRFSS), and Tennessee Discharge Data System. Success is measured by maintaining and/or improving the values, depending upon the measure.

- 27 of the 28 measures have a defined source and methodology that are detailed in an Access Measures Data Dictionary created by Ballad Health. (Note: The definition and methodology for the two measures on Preventable Hospitalizations were revised subsequent to the Data Dictionary's creation.)
- Discussion is still underway about how to best measure Specialist Recruitment and Retention while acknowledging the importance of both in-person and tele-presence availability. Baseline values for all remaining defined measures are presented in the table below.

Findings:

- Improvement was seen in most of the Access measures. Notable improvements in the last year appeared to have been achieved for preventable hospitalizations (for both age groups), emergency department asthma visits (for both age groups), and prenatal care.
- Unfortunately, several measures related to mental health and substance abuse appeared to have declined including the rate of follow up after hospitalization for a mental illness for both time periods. The rate of Screening, Brief Intervention, and Referral to Treatment (SBIRT) administration, though it increased over the baseline number of "0", was much lower than the state had expected, even in its first year. However, the three fold increase in the percent of qualifying patients engaged in AOD (Alcohol or Drug) Treatment was positive.
- Analysis to determine statistically significant or meaningful change has not yet been conducted. Discussions are ongoing as to the best statistical approach to determining significant or meaningful differences, whether they be positive (indicating improved access) or negative (indicating reduced access).

Year 1 Access Sub-Index scoring:

- As no analyses on statistically significant or meaningful differences were conducted, the Year 1 scoring will be based on the differences in raw baseline values compared to the raw Fiscal Year 2019 values.
- According to the TOC, "data reported in the Department Access to Health Services Report and the New Health System Annual Report and other sources as deemed appropriate by the Department will be used to calculate the Sub-Index Score ... and trends that will be reported in the Department Annual Report."

- For the first year of the Ten-Year Period, the New Health System will is required to maintain (or improve upon) baseline performance on the Access Measures

The following table (Table 2) shows the year 1 calculation of the Access Sub-Index for the Ballad Health COPA:

Access Sub-Index Data Table – for Year 1

TABLE 2

	Measure	Baseline GSA Value	Year 1 GSA Value	Achieved (Weight)
CHARACTERISTICS OF HEALTH DELIVERY SYSTEM				
1	Population within 10 miles of an urgent care center	80.5%	80.1%	N (4.0%)
2	Population within 10 miles of an urgent care center open nights & weekends	70.3%	70.3%	Y (4.0%)
3	Population within 10 miles of Urgent Care Facility or Emergency Department	98.9%	98.8%	N (4.0%)
4	Population within 15 miles of an Emergency Department	97.3%	97.3%	Y (4.0%)
5	Population within 15 miles of an acute care hospital	97.3%	97.3%	Y (4.0%)
6	Pediatric Readiness of Emergency Department	67.0%	68.2%	Y (4.0%)
7	Appropriate Emergency Department Wait Times	40.7%	42.1%	Y (3.0%)
8	Specialist Recruitment and Retention †	n/a	n/a	n/a
UTILIZATION OF HEALTH SERVICES				
Primary Care				
9	Personal Care Provider	80.5%	78.6%	N (3.5%)
Appropriate Use of Care				
10	Preventable Hospitalizations- Older Adults (discharges per 1,000 people 65+)	72.2*	63.8	Y (2.5%)
11	Preventable Hospitalizations-Adults (discharges per 1,000 people 18+)	25.6*	22.9	Y (3.5%)
Secondary Prevention (Screenings)				
12	Screening - Breast Cancer	74.1%*	76.0%	Y (2.0%)
13	Screening - Cervical Cancer	63.8%*	64.3%	Y (2.0%)
14	Screening - Colorectal Cancer	46.4%*	47.2%	Y (2.0%)
15	Screening - Diabetes	71.2%	71.3%	Y (3.0%)
16	Screening - Hypertension	97.6%	98.9%	Y (4.0%)
Infant and Children				
17	Asthma Emergency Department Visits Per 10,000 (Age 0-4)**	60.4*	49.0	Y (2.5%)
18	Asthma Emergency Department Visits Per 10,000 (Age 5-14)**	41.5*	37.1	Y (2.5%)
19	Prenatal care in the first trimester	66.8	70.5%	Y (2.0%)
Mental Health & Substance Abuse				
20	Follow-Up After Hospitalization for Mental Illness	33.3%	24.1%	N (3.5%)

	(% Within 7 Days Post-Discharge)			
21	Follow-Up After Hospitalization for Mental Illness (% Within 30 Days Post-Discharge)	58.6%	48.0%	N (3.5%)
Antidepressant Medication Management				
22	Effective Acute Phase Treatment (84 days)	75.5%	76.8%	Y (1.5%)
23	Effective Continuation Phase Treatment (180 days)	65.3%	62.1%	N (1.5%)
24	Engagement of AOD (Alcohol or Drug) Treatment	1.9%	6.6%	Y (3.5%)
25	Rate of SBIRT administration - hospital admissions	0.0%	0.1%	Y (3.5%)
26	Rate of SBIRT administration - ED visits	0.0%	2.8%	Y (3.5%)
CONSUMER SATISFACTION				
27	Patient Satisfaction and Access Surveys	n/a	100%	Y (10.0%)
28	Patient Satisfaction and Access Survey - Response Report	n/a	100%	Y (10.0%)
<i>The raw sum of achieved weights before adjusting for the removal of measure #8:</i>				77%
Adjusted Year 1 Access Sub-Index Score (77 ÷ 97 = 79%)				79%

† = There was no agreed upon definition by Ballad Health and TDH for Access measure 8, Specialist Recruitment and Retention. Therefore, this measure will not be included in the Year 1 Access Sub-Index Score calculation. The 3.0% weight originally assigned to this measure is being removed from both the numerator and denominator to proportionately distribute the missing 3.0% across the remaining measures.

* = Revised baseline data were submitted by Ballad Health and approved by TDH on 2/14/2020.

** = Measures 17 and 18, on Asthma Emergency Department Visits, utilize data from the state discharge databases. Because the Virginia hospital discharge database does not currently provide emergency department discharge activity, only TN GSA patients are included in vales reported for these two measures.

The Other (Quality) Report.

The Other (Quality) Report is available [here](#).

- The Other Sub-Index is undergoing significant changes to improve the usability and consistency of the reported data. By shifting data flows from being dependent upon the Centers for Medicare and Medicaid Services (CMS) data and methodologies to a flow that incorporates a private data aggregator using widely-accepted, stable and consistent methodologies and definitions, the Department will be able to better compare measures over time and across systems.
- Quality data for Fiscal Years 2018 and 2019 were submitted using the new aggregated data flow (using Ballad Health's quality data vendors, Premier, Inc. and Press Ganey for risk-adjusting and aggregating Ballad's quality data). Original baselines (on Fiscal Year 2017)

used only Medicare patient data. Improved baselines are in the process of being established.

- While the data flow has changed significantly, the original 16 Target Quality Measures (measures that focus on items that can cause harm, such as hospital infection and adverse event rates) and the 83 Quality Monitoring Measures (which focus on processes, communications, and other quality-related operational methods) have undergone only minor changes:
 - Central Venous Catheter-Related Blood Stream Infection Rate, formerly Target Quality Measure #3, was removed, due to CMS having retired the measure. Its replacement measure, Sepsis Bundle, was approved by TDH in 2019.
 - The original Surgical Site Infection (SSI) measure combined the rates for both Colon and Hysterectomy SSIs. In 2019 TDH agreed to separate these measures raising the number of Target Quality Measures from 16 to 17.

Findings:

- Improvement in the system's performance was indicated for a majority of the Target Quality Measures over baselines, however, there were a few quality measures for which individual facilities showed a potential quality concern. Analyses to determine statistically significant or meaningful differences have not yet been conducted.
- As a part of a metrics review process that TDH, VDH, and Ballad Health engaged in throughout 2019, quality data guidelines and standards not present in the original COPA agreement were developed. The parties agreed to the following in order to ensure the states have data details sufficient for statistically sound analysis:
 - Going forward, Ballad Health's quality data will be provided in control charts. Control charts are the standard tool in healthcare for monitoring change over time and will allow the state to appropriately determine if a change in a recently reported value is a demonstration of improved or declining performance. TDH believes that these data without control charts or indication of statistical significance are of limited value. TDH cannot determine whether or not numerical changes (up or down) represent statistically significant improvement or decline in quality. Control charts will allow the states to determine whether quality on any metric is either "in control" or if a "special cause" or "common cause event" has occurred. TDH believe that Ballad's Target Quality Measures have remained stable subsequent to the merger, which would be a tremendous accomplishment for a system undergoing the kind of

change and disruption that Ballad has contended with as it merged facilities, policies, and workforce cultures.

- TDH is pleased that Ballad Health has agreed to post updated quality data in control charts on its website so that the public may easily access the system's performance data.
- Going forward, Ballad Health will continue to submit risk-adjusted results from Premier and Press Ganey on all patients. Data from Premier and Press Ganey are more timely than Hospital Compare. There is a significant delay with Hospital Compare data and the Department would like to see quality changes as close to real time as possible. Additionally, with Hospital Compare only Medicare patients are included in the data. TDH would like to track Ballad's performance on quality and patient satisfaction metrics for all patients, regardless of their payor, which can be done by switching from Hospital Compare to Premier and Press Ganey.
- Importantly, Ballad Health will submit risk-adjusted baseline data on all patients for Fiscal Year 2017, from Premier, Inc., and Press Ganey for all Other Sub-index measures as quickly as practicable.

Year 1 Other (Quality) Sub-Index scoring:

- Despite the limitations identified above, for Year 1 scoring the current baseline data (on CMS patients who are not enrolled in Medicare Advantage) will be compared to the Fiscal Year 2019 data (on all-patients). While the populations are different, both data sets have been risk-adjusted using the same CMS protocols. All-payer claims data for Fiscal Year 2019 has been requested and will be used as the new baseline going forward.
- There are two components of the Other Sub-Index Score:
 1. Data on **Target Quality Measures** at the system level, state level, and facility level were provided in the [Fiscal Year 2019 Ballad Health Annual Report](#) and in the [Department's 2019 Other \(Quality\) Report](#). For scoring purposes, Ballad Health was required to maintain (or improve) performance on the Target Quality Measures at the system level the first fiscal year. Table 3 below shows the year 1 determination of achievement for each Target Quality Measure.
 2. Data on **Quality Monitoring Measures** at the system level, state level, and facility level were provided in the [Fiscal Year 2019 Ballad Health Annual Report](#) and in the

[Department's 2019 Other \(Quality\) Report](#). For scoring purposes, Ballard Health was only required to timely submit data on the Quality Monitoring Measures.

Target Quality Measures Table – for Year 1

TABLE 3

	Ballad Health	Ballad Health	
Target Quality Measures	Baseline¹ (CMS patients)	2019² (All patients)	
PSI 3 Pressure Ulcer Rate	0.29	0.53	Not achieved
PSI 6 Iatrogenic Pneumothorax Rate	0.38	0.13	Achieved
PSI 7 Central Venous Catheter-Related Blood Stream Infection Rate	0.15	0.05	Achieved
PSI 8 In Hospital Fall with Hip Fracture Rate	0.10	0.08	Achieved
PSI 9 Perioperative Hemorrhage or Hematoma Rate	4.20	1.41	Achieved
PSI 10 Postoperative Acute Kidney Injury Requiring Dialysis	1.02	1.28	Not achieved
PSI 11 Postoperative Respiratory Failure Rate	14.40	7.56	Achieved
PSI 12 Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate	5.35	3.16	Achieved
PSI 13 Postoperative Sepsis Rate	6.16	4.03	Achieved
PSI 14 Postoperative Wound Dehiscence Rate	2.20	1.48	Achieved
PSI 15 Unrecognized Abdominopelvic Accidental Puncture/Laceration Rate	0.90	0.27	Achieved
CLABSI	0.774	0.616	Achieved
CAUTI	0.613	0.895	Not achieved
SSI COLON Surgical Site Infection	1.166	2.285	Not achieved
SSI HYST Surgical Site Infection	0.996	0.000	Achieved
MRSA	0.040	0.090	Not achieved
CDIFF	0.585	0.352	Achieved

¹Baseline data for the Target Quality Measures at the system were first published in the [Department's Updated Other \(Quality\) Report](#), updated November 2019.

²Year 1 data for the Other (Quality) Sub-Index at the system were first published in the [2019 Ballard Health Annual Report](#).

The following table (Table 4) shows the Year 1 calculation of the Other Sub-Index for the Ballard Health COPA:

Other Sub-Index Score Table – for Year 1

TABLE 4

	Determination	Status	Maximum possible	Year 1 Percentage

			Percentage weight	weight (calculation)
Target Quality Measures Achieved	12 out of 17 likely improved	71% achieved	25	18 (71 x .25)
Quality Monitoring Measures Achieved	Data submitted timely	100% achieved	75	75 (100 x .75)
Year 1 Other Sub-Index score				93 (18+75)

Response to Local Advisory Council (LAC) recommendations

The Department of Health appreciates the LAC's commitment and dedication to its active supervision role throughout the past year. It has formed a subcommittee that developed recommendations on a revised public input process; held a series of working meetings; reviewed and provided feedback to the commissioner on Population Health Sub-Index measures; conducted a review of the Ballad Health Annual Report; held its second Public Hearing; and published its second LAC Annual Report with recommendations for the COPA Monitor and TDH. Below are the recommendations for TDH and the Department's responses:

Recommendation 1: Consider assisting the LAC in better defining the role of the LAC to the public, media, etc. making it clear that the LAC is not charged with overseeing the merger, which has been a common misconception.

The Terms of Certification state that the role of the LAC is to facilitate public input. The TOC outlines three specific responsibilities of the LAC:

- 1) Host an annual public hearing;
- 2) Publish a Local Advisory Council Annual Report; and
- 3) Recommend to the Department how population health funds should be spent.

TDH acknowledges the need to continue to clarify the LAC's role to the public.

Recommendation 2: Consider reducing the number of Population Health Measures to 13 at the most, to better align with Virginia's evaluation of Public Advantage in this focus area.

TDH agrees that there should be more alignment between the Tennessee and Virginia Population Health measures that Ballad is held accountable for. As a condition of its approval of the Cooperative Agreement, the Commonwealth required Ballad Health to report on the following 13 measures:

1. Smoking
2. Youth Tobacco Use
3. Obesity – Counseling & Education

4. Infants Breastfed at Six (6) Months
5. NAS Births
6. Children - On-time vaccinations
7. Vaccinations - HPV Females
8. Vaccinations - HPV Males
9. Teen Pregnancy Rate
10. Third Grade Reading Level
11. Dental Sealants
12. Frequent Mental Distress
13. Infant Mortality

Tennessee's Terms of Certification, on the other hand, listed 56 population health measures that TDH will be monitoring annually. The TOC stated that Ballad Health would be held accountable for outcomes in 25 of those measures annually.

In a letter dated September 30, 2019, Ballad Health submitted to the Department information on a population health model that the region's new Accountable Care Community had adopted, called the Striving Toward Resilience and Opportunity for the Next Generation (STRONG) Children and Families model for change. The STRONG Children and Families model is focused on reducing Adverse Childhood Experiences (ACEs) and minimizing their negative impacts on individuals by building resilience, supporting families, and creating more safe, stable, and nurturing environments for children. The model recognizes the important interconnected relationships between education, income, and health, and seeks to impact all three for lasting generational change.

Ballad's CEO expressed interest in aligning the health system's population health improvement work with the ACC's STRONG approach. Over several months, TDH and VDH staff members as well as Ballad's Community Health team members discussed the model and explored how the states' evaluation systems might be modified to support Ballad's alignment with the STRONG Children and Families model.

As a result of these group discussions, VDH developed a revised set of Population Health process, outcome, and impact measures. VDH's revised metrics were made official by a letter from Virginia Health Commissioner, M. Norman Oliver, to Alan Levin, Ballad's Executive Chairman, President, and CEO on February 7, 2020.

The following twelve outcome measures were listed:

1. Maternity Practices in Infant Nutrition and Care

2. Breastfed Initiation
3. Mothers who Smoke During Pregnancy
4. Neonatal Abstinence Syndrome
5. Overweight and Obese Children
6. Kindergarten Readiness
7. Third Grade Reading Level
8. 8th grade Math and English
9. Teen Births Rate
10. Drug Deaths
11. Youth Tobacco
12. Prenatal Care

TDH also recognizes the significant opportunity Ballard has to collaborate with the ACC's 250+ diverse stakeholders in the region to achieve fundamental change in the community. Discussions on how to appropriately measure Ballard Health's efforts, investments, and progress are ongoing as well as how to leverage a proposed longitudinal study on population health impact of the STRONG Children and Families model for change.

TDH is looking into how best to achieve greater alignment with VDH.

Response to the COPA Monitor recommendations

TDH appreciates the excellent work of the COPA Monitor in auditing, investigating, and reporting on his findings regularly to TDH. TDH is in receipt of the COPA Monitor Annual Report for year ended June 30, 2019, which includes two recommendations to the department. Below are TDH's responses:

COPA Monitor Recommendations to TDH:

- **... the state and Ballad Health (should) collaborate to make the 2020 report more understandable for citizens.**

TDH agrees that while the content of Ballad Health Annual Report for Fiscal Year 2020 met the TOC requirements, not all of the information provided was found to be useful to the Department or the public. TDH commits to reviewing the required form and contents of the health system's annual report with Ballad Health and discussing possible modifications that would make the report more meaningful and better support the state in actively supervising the system.

- **... (consider) reduc(ing) the TOC charity care minimum requirement that reflects the permanent changes made by the Commonwealth of Virginia.**

TDH agrees that the expansion of Medicaid in the Commonwealth of Virginia was an unforeseen development subsequent to the issuance of the COPA that has had a significant impact on Ballad's charity care. TDH commits to reviewing the charity care minimum requirement and considering possible modifications that would take the insurance expansion made by the Commonwealth into account.

Department's Recommendations to Ballard

- **Cultivate mutually beneficial partnerships.** While TDH believes that Ballard Health has improved its communication with the general public, the Department encourages Ballard to similarly engage in deliberate efforts to continuously improve interactions with independent primary care and behavioral health physician groups, academic Institutions, and data providers.
- **Revise the Children's Health Plan.** TDH advises Ballard Health to submit a revised Children's Health Plan. Ballard Health's spending commitments, as set out in the original Children's Health Plan, are in jeopardy of not being met largely due to recruitment expectations not being able to be realized.
- **Provide updates on subsidized and other non-employed providers.** TDH would like updates in each of the Ballard Health Annual Reports on the number of non-employed providers who are subsidized by Ballard Health as well as the number of locum tenants, or short-term providers, with whom Ballard has contracted each fiscal year. TDH noted in last year's report that, "in addition to recruiting to its own staff of employed physicians, Ballard Health has assisted in recruiting physicians to independent physician groups to improve access and to work to maintain pre-merger levels of competition in the region." TDH would like updates on Ballard's support of these providers.

Department's Recommendations to the COPA Monitor

- **TDH requests that the COPA Monitor review pre- and post-consolidation pricing.** According to Ballad's Annual Report, urgent care facilities were consolidated such that services were moved to the urgent care facility "that had lower pricing and thus saved consumers significant dollars." This is a positive outcome that TDH would like the COPA Monitor to verify.

Conclusion

Prior Findings

In considering whether to grant the COPA, TDH did a thorough review and assessment of the economic conditions and of the population in Northeast Tennessee. It ultimately decided that with a focus on improving health outcomes for the region and maintaining access for residents in rural communities, a COPA would provide a clear and convincing public benefit. This assessment is set out in this September 19, 2017 letter that can be read [here](#).

Because there was not yet a full year of data to analyze at the time of the Department's 2019 Annual Report, last year's Annual Review included a broad review of the challenges, concerns, and successes of the COPA's first few months and confirmed that the Department's initial finding of public advantage continued.

Current (Year 1) Findings

This 2020 Department Annual Report includes an updated review of the challenges, concerns, and successes of the COPA. With initial data available on each of the Sub-Indices, TDH is also able to calculate its first Final Score.

TDH calculations of the Sub-Index and Final Score agree with the COPA Monitor's recommendations. The recommendations set forth in the COPA Monitor Annual Report for the Index score for Fiscal Year 2019, which match TDH's calculations, are as follows:

Economic Sub-Index: **Pass**

Sub-Index	Sub-Index Score	Percentage Weight For each Sub-Index	Weighted scores
Population Health	99	50%	49
Access to Care	79	30%	24
Other	93	20%	<u>19</u>
TOTAL			92

Therefore, pursuant to the Terms of Certification, with a Passing score in the Economic Sub-Index and a Final Score of 92:

It is the Tennessee Department of Health's determination that the Ballad Health COPA continues to provide a Public Advantage.

Future Findings

Ballad Health, while a uniquely formed and regulated entity, operates, as all health systems do, in a dynamic environment. As this report is being drafted, our nation is in the midst of responding to a new public health threat. The COVID-19 Pandemic and the country's attempts to mitigate its spread are causing severe social and economic disruption across the nation. These unforeseen events will have significant implications for the region and the system and Ballad Health must contend with them.

This health and economic crisis will undoubtedly impact multiple measures in the COPA Index, including, the population health measures (such as frequent mental distress, premature death ratio, and 3rd grade reading), access to health services measures (such as asthma ED visits, time to an appointment for a primary care provider, and distance to a facility), and quality measures (such as respiratory failure rate and ED wait times), upon which the Department makes its annual determination of ongoing public advantage.

Ballad Health will need to be able to focus all of its organizational energy on serving the medical needs of the community during this unprecedented time. While TDH's COPA scoring system is not designed to adapt to unexpected crises, TDH recognizes the need for flexibility at this extraordinary time and intends to make appropriate accommodations with respect to next years' scoring as Ballad rightly prioritizes its response to COVID-19.

We seek to support Ballad as it responds to the novel coronavirus and provides critical care to the resident of its 21-county region. We appreciate, perhaps at this time more than ever, the important role Ballad Health plays in helping TDH fulfill its mission: to protect, promote, and improve the health and prosperity of people in Tennessee.