

# Certificate of Public Advantage

Department Annual Report

Covering Fiscal Year 2021: July 1, 2020-June 30, 2021

Tennessee Department of Health | June 2022



# COPA: Department Annual Report on FY21

Executive Summary .....	3
Introduction and Background.....	5
The COPA.....	5
The Department Annual Report .....	6
COVID-19's impact on TDH's Annual Review of the COPA.....	7
Annual Review .....	8
Things that are working well.....	8
Resolved instances of potential non-compliance .....	9
Comments on / Summary of Public Input .....	10
Findings from Reports related to Ballad Health's Fiscal Year 2021 .....	111
Conclusion .....	166
The COPA Monitor Annual Report for year ending June 30, 2021 .....	<u>Exhibit 1</u>
The Department Population Health Report.....	<u>Exhibit 2</u>
The Department Access to Health Services Report.....	<u>Exhibit 3</u>
The Department Other (Quality) Report .....	<u>Exhibit 4</u>
Supplemental Findings .....	<u>Appendix 1</u>

## ***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. As part of the COPA, 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 contains TDH's Annual Review of the Ballad Health COPA for Fiscal Year (FY) 2021 (July 1, 2020 – June 30, 2021). Due to the COVID-19 pandemic, many provisions under the (TOC) were temporarily suspended or modified by the State, including data collection, reporting, and evaluation via an Index Score. For that reason, this year's Department Annual Report includes a review of a smaller set of inputs.

Ballad Health's handling of the pandemic and the fact that all of Ballad Health's 21 hospitals, including its many vulnerable rural hospitals, remained open through the year have been identified by TDH as two of the system's greatest successes for FY21.

Throughout FY21, TDH received a limited number of written comments and inquiries from the public on topics such as Ballad Health's relocating and furloughing of staff, nurse-staffing ratios, and the State's suspension of certain TOC provisions during the COVID-19 state of emergency.

Ballad Health did not submit quarterly reports nor an annual report in FY21. The requirement to submit such reports under Section 6.04(c) of the TOC was suspended by a letter from TDH to Ballad Health, dated March 31, 2020 (the suspension letter), which can be read [here](#). Consequently, This Department Annual Report does not provide a review of activities and progress typically included in such periodic reports.

The critical investigative work of the COPA Monitor continued throughout FY21. The COPA Monitor Annual Report for year ending June 30, 2020, [Exhibit 1](#), included no new recommendations to TDH. The COPA Monitor's report did include a recommendation that Ballad Health receive a passing score for the Economic Sub-Index.

TDH's three Sub-Index reports, with updated values on population health, access, and other (quality) measures, were drafted in accordance with the TOC and are attached to this report as Exhibits 2, 3, and 4, respectively. TDH noted the significant impact COVID-19 had on health behaviors that impact population health, access to health services, and quality improvement efforts, which likely affected the updated values. Despite these headwinds, certain measures, such as non-fatal drug overdoses and cancer screening rates, improved for Ballad Health's patients.

TDH concluded by agreeing with the COPA Monitor's Score recommendation in the COPA Monitor's Annual Report:

Economic Sub-Index: **Pass**

Therefore, with a Passing score in the Economic Sub-Index, it is the Tennessee Department of Health's determination that the Ballad Health COPA continues to provide a Public Advantage.

## ***Introduction and Background***

### **The COPA**

A COPA is a written approval by 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, Tenn. Code Ann. §§ 68-11-1301 – 1309 (amended in 2015). Permanent Rules [1200-38-01](#) implement this Act.

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' justification for the merger was realized savings by reducing duplication and improving efficiencies. These savings would then be reinvested in ways that would substantially benefit those residing in their Geographic Service Area (GSA).

The combined GSA of the two systems consists of 10 counties in Northeast Tennessee and 11 counties and two independent cities in Southwest Virginia<sup>1</sup>. 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 for improving health outcomes.

On January 31, 2018, in coordination with the Tennessee Attorney General's Office (AG'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 TOC to govern the COPA. The TOC lays out Ballad Health's obligations and responsibilities and the regulatory role of the State. The TOC details the conditions required by the State for Ballad Health to demonstrate ongoing Public Advantage.

---

<sup>1</sup> Carter, Cocke, Green, Hamblen, Hancock, Hawkins, Johnson, Sullivan, Unicoi, and Washington Counties in Tennessee; Buchanan, Dickenson, Grayson, Lee, Russell, Scott, Smyth, Tazewell, Washington, Wise and Wythe Counties in Virginia; and the independent cities of Bristol City and Norton City in Virginia.

Within the TOC is a description of the Index and scoring system that is used to track and evaluate the demonstration of ongoing Public Advantage in four categories (sub-indices):

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

Via the COPA Index, TDH tracks the system's progress under the Cooperative Agreement and annually determines if a Public Advantage is maintained for the residents of the GSA.

### **The Department Annual Report**

Pursuant to Exhibit F of 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 COPA Monitor Annual Report, (iv) the Healthcare Access Report, and (v) the Population Health Report. The Department's Annual Review 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 that such information is available.

The Department Annual Report is the last in a series of Annual Reports required by the TOC for a given Fiscal Year. Its main purpose is to report on the regulated entity's compliance with the terms and conditions under which the COPA was granted and on the Department's determination of whether or not the COPA continues to provide a Public Advantage.

## ***COVID-19's impact on TDH's Annual Review of the COPA***

In March of 2020 the Tennessee Department of Health suspended certain provisions of the TOC to better allow Ballad Health to respond to the public health and health care emergency caused by the COVID-19 pandemic. The temporary suspension began March 1, 2020 and remained in effect through all of fiscal year 2021 (FY21). Because this temporary suspension included many reporting requirements, Ballad Health was not required and therefore did not submit an Annual Report for fiscal year 2021 on activities and performance from July 1, 2020 through June 30, 2021.

Additionally, in recognition of the extraordinary burden placed on Ballad Health and all health care providers during the period of public emergency, TDH agreed not to calculate a final score for FY21, as stated in a letter dated October 27, 2021 (Pandemic Period Scoring Letter), which can be accessed here: <https://www.tn.gov/content/dam/tn/health/documents/copa/2021-10-27-TDH-letter-to-Ballad-RE-suspension-period-scoring-FY21-and-FY22.pdf>.

These temporary adjustments were made to ensure that the system was able to prioritize its response to the pandemic and focus on mitigating the effects of COVID-19 in the region.

## ***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) Terms of Certification. 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.

Because of the pandemic’s materially adverse impact on Ballad Health in FY21, certain reporting requirements and performance improvement expectations were suspended or modified. TDH determined it was not appropriate to hold Ballad Health accountable for pre-pandemic performance expectations on Access, Population Health, and Other (Quality) Sub-Index measures during this extraordinary period. In the pandemic period scoring letter, the Department stated that “TDH intends to publish its FY21 COPA Department Annual Report utilizing information available to it at the time of publication by determining a pass/fail Economic Sub-Index Score but only publishing a narrative on Ballad Health’s performance for the remaining sub-indices. A final score will not be calculated nor published.”

As in previous Department Annual Reports, this report includes, as a part of its review, comments on things that are working well and concerns regarding non-compliance 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 (FY21):

- Hospitals that were under threat of closure remained open.
- Ballad Health, as a single system with 21 hospitals, redeployed staff, beds, and personal protective equipment to ensure resources were efficiently utilized across the region during



the COVID-19 pandemic in ways that would not have been possible as two separate competing systems. Ballad Health secured necessary supplies, swiftly responded to the various challenges presented by the pandemic and served as a trusted voice in the region for COVID-19 information.

- The COPA Compliance Office responded quickly and thoroughly to inquiries from TDH.
- Ballad Health's executive staff met with the COPA Monitor nearly every month of the Fiscal Year and provided information upon request.
- Ballad Health's executive staff provided updates on its activities to TDH staff on monthly calls and met with TDH staff every quarter, either in person or virtually<sup>2</sup>, to discuss progress made in implementing the system's 3-year plans: the Behavioral Health [Plan](#), Children's Health [Plan](#), Rural Health [Plan](#), Health Research and Graduate Medical Education [Plan](#), Population Health [Plan](#), and the Health Information Exchange [Plan](#).
- TDH remains impressed by the size and range of stakeholders participating in the Accountable Care Community (ACC), which Ballad Health played a lead role in establishing in the region. TDH remains optimistic about the ACC's new Striving Toward Resilience and Opportunity for the Next Generation (STRONG) Children and Families model for change and interested in discussing how to support Ballad Health's alignment with the ACC's STRONG approach.

### **Resolved instances of potential non-compliance**

The COPA Monitor has addressed potential COPA and TOC violations in his COPA Monitor Annual Report, attached as [Exhibit 1](#). TDH is not aware of any additional potential or confirmed non-compliance events under the TOC.

---

<sup>2</sup> Quarterly meetings were held virtually when COVID-19 case rates were at high levels.

## ***Comments on / Summary of Public Input***

The annual public hearing for 2022 has not been held due to COVID-19 related delays including: 1) concerns that a safe in-person public hearing could not be held while COVID-19 case numbers remained high; and 2) the deferral of Ballad Health's Annual Report per the temporary suspension of reporting requirements.

TDH's COPA staff received comments from fewer than 20 individuals in FY21. The majority of these comments were about personal experiences or other issues, including COVID-19, that are not a result of the merger of the two hospital systems and thus, not resolvable under the COPA's TOC.

Through June 30, 2022 TDH's Division of Health Licensure and Regulation remains responsible for the licensing and regulation of hospitals in the State. That Office conducts investigations of safety concerns at all Tennessee facilities.

While it is not the role of TDH under the TOC to assist or track individual patients who have a negative experience at a Ballad Health Facility, TDH is tracking Ballad Health's performance on dozens of safety and quality measures including timely and effective care, infection rates, and patient satisfaction scores at 1) a system level, 2) a statewide level, and 3) each Ballad Health facility. Data on Ballad Health's total patient population are used to monitor trends and track the demonstration of an overall improvement or decline in care quality subsequent to the issuance of the COPA.

A summary of the complaints TDH received related to the COPA during FY21 is not included in this report as these comments are not subject to public disclosure pursuant to TCA 68-11-1310(a)(7). TDH's COPA staff reviews and responds to each comment individually.

## ***Findings from Reports related to Ballad Health's Fiscal Year 2021***

### **The COPA Compliance Office Annual Report**

**The COPA Compliance Office** did not submit an annual report for FY21 as the requirement to do so was effectively suspended along with other reporting requirements by the suspension letter.

### **Ballad Health's Periodic Reports**

**Ballad Health did not submit a FY21 Annual Report nor quarterly reports in FY21.** The requirement to submit such reports under Section 6.04(c) of the TOC was suspended by the suspension letter.

### **The COPA Monitor Annual Report**

The COPA Monitor Annual Report for FY21 is attached to this report as Exhibit 1.

TDH appreciates the diligent work of the COPA Monitor in auditing, investigating and reporting on his findings regularly to TDH and in making written recommendations to TDH.

### Findings:

The COPA Monitor Annual Report finds that Ballad Health be given a *pass score* for the Economic Sub-Index (Section III, page 6). The Annual Report further states that the total TOC monetary commitment was not reduced due to the temporary suspension of monetary commitments but that the audit of the FY21 monetary commitment spending has not been completed at this time (Section III, page 8). Finally, the Annual Report recommends that TDH follow up on recommendations that remain open as of June 30, 2021 from prior year Annual Reports but contains no new recommendations (Section VIII, page 10).

### COPA Monitor Recommendations and TDH Responses:

- **Ballad Health to review the Children's Health Plan and propose changes to the COPA Monitor as permitted by the TOC.**

As the COPA Monitor's Annual Report notes, changes to the Children's Health Plan were made by Ballad Health and accepted by TDH (May 2021) such that this recommendation was no longer open as of June 30, 2021.

- **Reduce the TOC charity care minimum requirement and base the new requirement on IRS Form 990 for tax year 2020.**

TDH agrees with the COPA Monitor's assessment that the charity care minimum of TOC Section 4.03(f)(ii) should be revised to the new base requirement of the amount reported by Ballad Health on IRS Form 990 for its tax year ending in 2020. TDH has extended that proposal to Ballad Health, but at this time, that offer has been declined by Ballad Health.

- **Virginia and Tennessee work with Ballad Health to reduce the differences in the regulations between the two states.**

TDH agrees with the COPA Monitor's assessment that differences between the statutes, regulations and Tennessee's TOC and Virginia's Order<sup>†</sup> (the documents governing the Cooperative Agreement) create extra work and expense. TDH continues to elicit comments from Ballad Health on which differences create the greatest additional effort and expense and remains in discussions with Virginia on this issue.

‡ Tennessee’s TOC and Virginia’s Order are each States’ respective documents that govern the Cooperative Agreement that created Ballad Health.

### **The Department Population Health Report**

Reference - The Department’s **Baseline** Population Health Report with baseline values on Population Health Sub-Index measures, can be found [here](#).

Current Year - The Department’s **2021** Population Health Report is attached as [Exhibit 2](#).

### COVID-19’s Impact on Population Health in the United States:

This review considers that data for this Population Health Report was collected during the COVID-19 pandemic. Hospitals have raised concerns that the pandemic has exacerbated existing disparities related to health outcomes.<sup>3</sup> According to Trust for America’s Health, “[e]merging data suggests eating habits shifted, physical activity declined, stress and anxiety increased, food insecurity worsened, and many Americans gained weight throughout the pandemic, a sharp reminder of the effects that underlying social, economic, and environmental conditions have on the health and well-being of Americans.”<sup>4</sup> Drug overdoses also increased as a result of the pandemic. While drug overdoses in the United States were increasing prior to the pandemic, in 2020 the US experienced the highest annual number of fatal drug overdoses on record.<sup>5</sup> Tennessee experienced a 45% increase in drug overdose deaths from 2019 to 2020.<sup>6</sup> The long-term health implications of the pandemic are still being understood, but it is clear the COVID-19 pandemic affected population health on a widespread level.

### Findings:

During this reporting period, the COPA region performed better, and was shown to be healthier, than peer counties in over 50% of the Population Health Sub-Index measures. Of note, drug deaths and drug overdoses (non-fatal) were considerably less in the COPA region compared to peer counties. Drug overdoses (non-fatal) have also decreased considerably in the COPA region since the merger. Additionally, the COPA region outperforms compared to peer counties on all vaccination measures. The COPA region underperformed compared to peer counties in some

---

<sup>3</sup> <https://oig.hhs.gov/oei/reports/OEI-09-21-00140.pdf>

<sup>4</sup> [https://www.tfah.org/report-details/state-of-obesity-2021/#:~:text=Trust%20for%20America's%20Health's%20\(TFAH,by%20the%20COVID%2D19%20pandemic](https://www.tfah.org/report-details/state-of-obesity-2021/#:~:text=Trust%20for%20America's%20Health's%20(TFAH,by%20the%20COVID%2D19%20pandemic)

<sup>5</sup> <https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2790177>

<sup>6</sup> [https://www.tn.gov/content/dam/tn/health/documents/pdo/2020\\_Tennessee\\_Drug\\_Overdose\\_Deaths.pdf](https://www.tn.gov/content/dam/tn/health/documents/pdo/2020_Tennessee_Drug_Overdose_Deaths.pdf)

measures including smoking and tobacco use in adults, cardiovascular deaths, and infant mortality.

### **The Department Access to Health Services Report**

Reference – The Department Annual Report covering Fiscal Year **2019**, with the most recently updated baseline values can be found [here](#).

Current Year – The Department’s **2021** Access to Health Services Report is attached as [Exhibit 3](#).

### COVID-19’s Impact on Access to Health Services in the United States:

This review considers that data for this Access to Health Services Report was collected during the COVID-19 pandemic. The COVID-19 pandemic has exacerbated existing disparities in access to care according to hospitals across the United States.<sup>7</sup> As precautions were taken to limit the spread of COVID-19, 20% of adults in the US reported putting off seeking medical care.<sup>8</sup> As a result of delaying medical care, 57% of those survey reported experiencing further negative health consequences.<sup>8</sup> An example is with cancer screenings and treatment, which were often delayed during the pandemic, risking disease progression and cancer related mortality.<sup>9</sup> The pandemic has also been associated with statistically significant decreases in preventable hospitalizations, particularly respiratory-related preventable hospitalizations such as asthma.<sup>10</sup> Despite these seemingly positive decreases in preventable hospitalizations, the pandemic impacted both patient decision making as well as hospital capacity. The decreases should be interpreted with caution.<sup>10</sup>

### Findings:

During this reporting period improvement was seen in the COPA region for most of the Access Sub-Index measures. Notable improvements were seen in preventable hospitalizations for both age groups (Seniors: 72.2% in 2017 to 37.9% in 2020; Adults: 25.6% in 2017 to 17.5% in 2020), emergency department asthma visits for both age groups (children ages 0-4: 50.4% in 2017 to 22.7% in 2020; children ages 5-14: 41.5% in 2017 to 19.4% in 2020), and prenatal care. Additionally, Ballad Health also increased breast cancer screenings (74% in 2018 to 79% in 2021), diabetes screenings (71.2% in 2017 to 82.9% in 2020) and cervical cancer screenings (64% in 2018 to 71% in 2021) for their patients. Ballad Health did experience challenges on a few measures related to behavioral health including a significant decrease in 30-day follow-up after a mental illness (58.6%

---

<sup>7</sup> <https://oig.hhs.gov/oei/reports/OEI-09-21-00140.pdf>

<sup>8</sup> <https://jamanetwork.com/journals/jama-health-forum/fullarticle/2774358>

<sup>9</sup> <https://www.sciencedirect.com/science/article/abs/pii/S1040842821000615?via%3Dihub>

<sup>10</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8931555/>

in 2017 to 46.4% in 2020) and a slight decrease in effective continuous phase treatment (180 days) for antidepressant medication management (65.3% in 2017 to 63.6% in 2020).

### **The Department Other (Quality) Report.**

Reference - The Department's **Baseline** Other (Quality) Report is available [here](#).

Current Year - The Department's **2021** Other (Quality) Report can be found attached as [Exhibit 4](#).

### COVID-19's Impact on Quality Improvement Efforts and Hospital-Associated Infections:

This review considers that data for this Other (Quality) Report was collected during the COVID-19 pandemic. Hospitals have described difficulty balancing the complex and resource-intensive care needed for COVID-19 patients with efforts to resume routine hospital care.<sup>11</sup> According to the Centers for Disease Control and Prevention (CDC), there were significant increases in 2020 for most hospital-associated infections in the US compared to 2019 due to the COVID-19 pandemic.<sup>12</sup> Hospitals also reported that staffing shortages have affected patient care, and that exhaustion and trauma have taken a toll on staff's mental health.<sup>11</sup> Administrators detailed challenges associated with vaccine distribution efforts and concerns about vaccine hesitancy among staff and members of their communities.<sup>11</sup> Hospitals indicated that many of the challenges were more severe for rural hospitals. The current hospital quality programs and measures were not designed to contend with pandemics or public health emergencies of the magnitude experienced.<sup>13</sup> Nor are they equipped to manage the degree of aberration now being encountered in the underlying data.<sup>13</sup> The COVID-19 pandemic has disrupted the health care system in ways that have affected patient, provider, and hospital-level decisions, behavior, and performance.<sup>13</sup>

### Findings:

Consistent with national trends related to the pandemic, Ballad Health did experience an increase in hospital-associated infections in this reporting period compared to baseline. However, during this reporting period, the Ballad Health system improved over baseline on several patient safety indicators (PSIs) including PSI 3 Pressure Ulcer Rate, PSI 11 Postoperative Respiratory failure rate, and PSI 15 Unrecognized abdominopelvic accidental puncture/laceration rate.

---

<sup>11</sup> <https://oig.hhs.gov/oei/reports/OEI-09-21-00140.pdf>

<sup>12</sup> <https://www.cdc.gov/hai/data/portal/covid-impact-hai.html>

<sup>13</sup> <https://www.healthaffairs.org/doi/10.1377/forefront.20210520.815024/full/>

## **Conclusion**

Pursuant to the Pandemic Period Scoring Letter, TDH has revised its scoring under the Certificate of Public Advantage for FY21 and FY22, which have been significantly impacted by the COVID-19 pandemic. The letter states that for FY21 TDH intends to include in the Department Annual Report its determination of a pass/fail Economic Sub-Index Score but not a Final Score. Narratives have been provided on Population Health, Access, and Other (Quality) Sub-Indices on pages 13-16 of this Report.

TDH appreciates that despite suspended reporting obligations, Ballad Health submitted values to TDH on all measures for which Ballad Health was responsible for data collection. TDH also recognizes that Ballad Health continued to invest in standing up and implementing many of its Population Health, Behavioral Health, Children's Health, Rural Health, and Health Research and Graduate Medical Education programs proposed under the system's three-year Spending Plans, even as it prioritized its response to COVID-19.

### Current (FY21) Findings:

TDH agrees with the COPA Monitor's assessment of Ballad Health's compliance with the economic provisions in the TOC as set forth in the COPA Monitor Annual Report (attached as Exhibit 1) for the year ending June 30, 2021. TDH accepts the Monitor's recommendation:

Economic Sub-Index: **Pass**

Therefore, with a Passing score in the Economic Sub-Index:

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



**Exhibit 2**



# 2021 Population Health Report

Certificate of Public Advantage Population Health Sub-Index Measures for  
Ballad Health

Tennessee Department of Health | COPA Report | June 2022



## Table of Contents

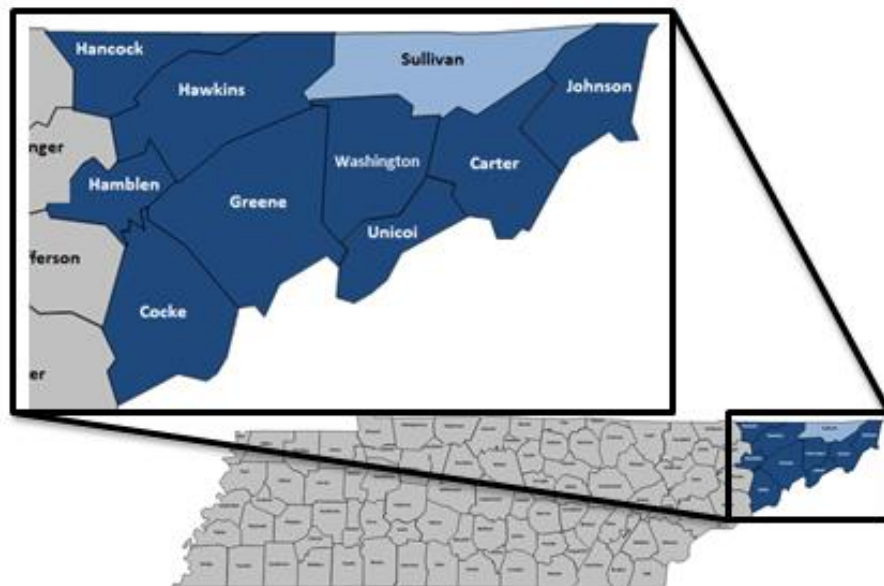
<b>Population Health Sub-Index</b> .....	<b>3</b>
Introduction.....	3
Population Health Sub-Index Design .....	4
2021 Population Health Data Table - on FY21 .....	5
<b>Appendices</b> .....	<b>8</b>
1. Population Health Sub-Index Data Source Table .....	8
2. Population Health Sub-Index Data Notes .....	13
<b>Credits</b> .....	<b>21</b>

# Population Health Sub-Index

## Introduction

Population health is commonly defined as the health outcomes of a specific group of people and the distribution of such outcomes within the group.<sup>14</sup> Population Health is linked to health behaviors and social circumstances affecting groups of people.

The Population Health Sub-Index is one set of measures that the State uses to objectively track changes and evaluate the impact of the merger. The purpose of this Population Health Sub-Index is to measure various population health outcomes for those residing in Ballad Health's Tennessee Geographic Service Area (TN GSA). The following 10 counties comprise the TN GSA: Carter, Cocke, Greene, Hamblen, Hancock, Hawkins, Johnson, Sullivan, Unicoi, and Washington.



The 10 counties highlighted above comprise the Tennessee Geographic Service Area for Ballad Health.

<sup>14</sup> Kindig, D. and G. Stoddart. 2003. What is population health? *American Journal of Public Health* 93(3):380-383 <http://ajph.aphapublications.org/doi/abs/10.2105/AJPH.93.3.380>

## ***Population Health Sub-Index Design***

The design of the Population Health Sub-Index is a blend of the State Health Plan<sup>15</sup> objectives, TDH's Vital Signs work<sup>16</sup>, the National Academy of Medicine's population health efforts<sup>17</sup>, the models of health used in United Health Foundation's America's Health Rankings<sup>18</sup> (AHR), and the Robert Wood Johnson Foundation's County Health Rankings<sup>19</sup> (CHR). AHR has been published since 1990 and CHR since 2010; both are widely recognized as providing fair assessments of the overall health of a population. Measure recommendations were also provided to the Tennessee Commissioner of Health by an Index Advisory Workgroup comprised of residents and stakeholders from the TN GSA.

Table 1 of this 2021 COPA Population Health Report displays the most recent values available to TDH, as of January 2022, on the Population Health Sub-Index measures.

Data definitions, data sources, and data collection timeframes are listed in Table 2, which is located in Appendix 1. Additional details on data sources, timeframes, and methodologies are listed in Appendix 2.

---

<sup>15</sup> State of Tennessee, 2015 Edition of the State Health Plan, Division of Health Planning, Tennessee Department of Health, 2015

<sup>16</sup> Tennessee's Vital Signs are a set of metrics meant to measure the pulse of Tennessee's population health. Inspired by the National Academies of Medicine's Vital Signs, TDH began a process in 2015 of identifying Tennessee-specific metrics to measure health and progress at the state level. Through an extensive state-wide public engagement process, 12 metrics were ultimately selected to provide an at-a-glance view of Tennessee's leading indicators of health and prosperity.

<sup>17</sup> National Academies of Sciences, Engineering, and Medicine. 2016. Metrics that matter for population health action: Workshop summary. Washington, DC: The National Academies Press. doi: 10.17226/21899.

<sup>18</sup> United Health Foundation. America's Health Rankings. <https://www.americashealthrankings.org>

<sup>19</sup> University of Wisconsin Population Health Institute. County Health Rankings & Roadmaps. [www.countyhealthrankings.org](http://www.countyhealthrankings.org).

## 2021 updated Population Health Data Table

TABLE 1

		TN COPA Counties Value	TN Peer Counties' Value	TN Value	US Value
<b>BIG FOUR / Behaviors</b>					
<b>Tobacco Use</b>		COPA	PEER	TN	US
1*	Smoking (% of adults)	21.8%	19.4%	19.5%	14.2%
2	Smoking in higher density counties (% of adults)	n/a	n/a	n/a	n/a
3	Smoking in lower density counties (% of adults)	n/a	n/a	n/a	n/a
4	Smoking among those with less than a high school education (% of adults)	n/a	n/a	35.3%	24.2%
5	Smoking among those with a high school education or more (%)	19.2%	16.4%	17.4%	12.9%
6*	Mothers who smoke during pregnancy (% of live births)	19.0%	19.5%	10.8%	6.0%
7*	Youth tobacco use (% of high school students)	6.2%	6.6%	7.1%	6.0%
8	Youth -ever tried cigarette smoking (% of high school students)	17.0%	20.6%	29.2%	24.1%
9	Youth electronic vapor product use (% of high school students)	16.0%	17.3%	50.6%	50.1%
<b>Physical Activity</b>		COPA	PEER	TN	US
10*	Physically active adults (% of adults)	75.2%	71.4%	75.5%	76.2%
11*	Physically active students (% of high school students)	42.3%	44.9%	39.9%	44.1%
<b>Obesity</b>		COPA	PEER	TN	US
12	Obesity (% of adults)	35.5%	35.0%	35.6%	31.9%
13	Obesity in higher density counties (% of adults)	n/a	n/a	n/a	n/a
14	Obesity in lower density counties (% of adults)	n/a	n/a	n/a	n/a
15	Obesity among those with less than a high school education (% of adults)	n/a	n/a	39.5%	38.6%
16	Obesity among those with a high school education or more (% of adults)	34.6%	33.9%	35.1%	31.0%
17*	Obesity counseling and education (% of physician office visits)	New	n/a	n/a	n/a
18*	Overweight and obesity among TN public school students (% of students in grades kindergarten, 2, 4, 6, 8, and one year of high school)	41.6%	40.9%	39.7%	n/a
<b>Breastfeeding Measures</b>		COPA	PEER	TN	US
19*	Average mPINC (Maternal Practices in Infant Nutrition and Care) score	79	64	70	81
20*	Breastfeeding initiation (% of live births)	74.0%	75.2%	80.9%	84.0%
21*	Infants breastfed at six (6) months (% of 6-month olds)	New	New	22.4%	25.8%
<b>High School Student Healthy Eating</b>		COPA	PEER	TN	US
22	Fruit consumption among high school students (% of high school students)	82.2%	85.7%	88.9%	93.7%
23	Vegetable consumption among high school students (% of high school students)	85.0%	84.8%	89.0%	92.1%
24	Soda consumption among high school students (% high school students)	76.4%	76.7%	76.1%	68.3%
<b>Substance Abuse</b>		COPA	PEER	TN	US
25*	NAS (Neonatal Abstinence Syndrome) births (cases per 1,000 live births)	38.4	20.7	10.2	n/a
26*	Drug deaths (deaths per 100,000 population)	33.3	48.9	44.0	n/a
27	Drug overdoses (non-fatal overdoses per 100,000 population)	293.0	376.6	477.7	n/a

28	Painkiller prescriptions (prescriptions <i>per 1,000 population</i> )	965.9	930.3	736.5	433
29	Prescription drugs among high school students (% of high school students using prescription pain relievers not prescribed by the doctor)	7.2	8.3	13.7%	14.3%
30*	MME for Pain (Total morphine milligram equivalents (MME) opioids for pain per capita)	827.2	789.4	569.1	424.6
<b>IMMUNIZATIONS</b>		<b>COPA</b>	<b>PEER</b>	<b>TN</b>	<b>US</b>
31*	On-time vaccinations – children (% of children that are up-to-date on immunizations at the time of kindergarten entry).	96.3%	95.3%	95.2%	75.4%
32*	Ballad Entity participation in TennIIS (% of active Ballad entities in Tennessee)	81%	n/a	n/a	n/a
33	Entity participation in TennIIS (# of active TennIIS entities)	375	307	3126	n/a
34	Vaccinations – HPV Females (# of HPV shots administered for females aged 11 to 17 years, either quadrivalent or bivalent)	6157	4697	58821	n/a
35	Vaccinations – HPV Males (# of HPV shots administered for males aged 11 to 17 years, either quadrivalent or bivalent)	6087	4689	58432	n/a
36*	Vaccinations – Tdap (# of Tdap shots administered for patients aged 11 to 17 years)	7203	6570	76966	n/a
37*	Vaccination - Flu, Older Adults (% adults aged 65+)	68.6%	67.1%	62.1%	67.0%
38	Vaccinations - Flu, Adults (% of adults)	47.3%	42.5%	42.3%	46.1%
<b>COMMUNITY / ENVIRONMENT</b>		<b>COPA</b>	<b>PEER</b>	<b>TN</b>	<b>US</b>
39*	Teen births (births <i>per 1,000 females aged 15-19 years</i> )	25.1	24.8	23.3	16.7
<b>Third Grade Reading</b>		<b>COPA</b>	<b>PEER</b>	<b>TN</b>	<b>US</b>
40*	Third grade reading level (% of 3rd graders who score “on-track” or “mastered” on TNReady reading assessment)	32.9%	32.1%	32.2%	n/a
41	Third grade reading level - Higher density counties (% of students)	35.7%	33.9%	n/a	n/a
42	Third grade reading level - Lower density counties (% of students)	29.0	30.1	n/a	n/a
<b>Oral Health</b>		<b>COPA</b>	<b>PEER</b>	<b>TN</b>	<b>US</b>
43	Fluoridated water (% of population on community water systems receiving fluoridated water)	92.3%	93.7%	88.8%	73.0%
44*	Dental sealants – children (% Medicaid enrollees aged 6–9 years)	8.7%	9.4%	9.9%	n/a
45	Dental sealants - adolescents (% Medicaid enrollees aged 13-15 years)	4.6%	4.7%	6.4%	n/a
<b>OUTCOMES</b>		<b>COPA</b>	<b>PEER</b>	<b>TN</b>	<b>US</b>
46*	Frequent mental distress (% of adults)	16.6%	16.7%	16.1%	13.5%
47	Frequent physical distress (% of adults)	13.7%	12.5%	10.8%	10.0%
48*	Infant mortality (deaths per 1,000 live births)	6.8	4.8	6.3	5.6
49*	Low birthweight (% of live births)	8.3%	8.2%	8.9%	8.3%
50	Child mortality (deaths per 100,000 population for children aged 1-19 years)	32.5	34.3	34.6	49.4
51	Cardiovascular deaths (deaths per 100,000 population)	364.2	315.8	260.5	265.0
52	Cancer deaths (deaths per 100,000 population)	263.1	267.1	209.6	182.7
53	Diabetes deaths (deaths per 100,000 population)	43.4	49.3	37.6	26.7
54*	Diabetes adverse events (% of adults identified with prediabetes who are referred to a qualifying diabetes prevention program)	New	n/a	n/a	n/a
55	Suicide deaths (deaths per 100,000 population)	23.7	21.3	17.7	14.5
56*	Premature death ratio (ratio of deaths before age 75 per 100,000 population for higher to lower density counties)	0.838	0.817	n/a	n/a

† Information on Peer Counties, including the methodology used to establish a peer county, can be found in TDH's COPA Sub-Index baseline report: <https://www.tn.gov/content/dam/tn/health/documents/copa/COPA-Sub-Index-Baseline-Reports-2019.11.30.pdf>

\* These measures are the Priority Population Health Measures as defined in the TOC.

*New* – Data are not yet collected at this level, but they are expected for future reports.

*n/a* – Data are not available for comparison.

---

The most recent calendar, fiscal year, seasonal, or school year data available as of January 2022 were used for this report.

General notes regarding missing data in this report:

- Ballard Health is responsible for data collection on the following measures: Physician Office Visits that include counseling or education related to weight and physical activity (measure #17), Infants Breastfed at 6 months (measure #21), and Diabetes Adverse Events (measure # 54). Conversations between TDH and Ballard Health regarding these metrics and technical definitions were halted due to COVID-19 and as a result, definitions and data collection issues were not resolved before this report was issued.

# Appendix 1:

## Population Health Sub-Index Data Source Table

TABLE 2

	Measure Definition	TN Data Source	US Data Source
<b>BEHAVIORS</b>			
<b>Tobacco Use</b>			
1*	Smoking ( <i>Percentage of adults who are self-reported smokers (smoked at least 100 cigarettes in their lifetime and currently smoke.)</i> )	Tennessee Behavioral Risk Factor Surveillance System (BRFSS). Tennessee Department of Health (TDH), Office of Population Health Surveillance, 2020	Centers for Disease Control (CDC), Behavioral Risk Factor Surveillance System (BRFSS), 2020
2	Smoking in higher density counties ( <i>TN COPA Value: Percentage of adults in Hamblen, Sullivan, and Washington counties who are self-reported smokers (smoked at least 100 cigarettes in their lifetime and currently smoke); TN &amp; US Values: Not stratified by population density.</i> )	n/a	n/a
3	Smoking in lower density counties ( <i>TN COPA Value: Percentage of adults in Carter, Cocke, Greene, Hancock, Hawkins, Johnson, and Unicoi counties who are self-reported smokers (smoked at least 100 cigarettes in their lifetime and currently smoke); TN &amp; US Values: Not stratified by population density.</i> )	n/a	n/a
4	Smoking among those with less than a high school education ( <i>Percentage of adults with less than a high school education who are self-reported smokers (smoked at least 100 cigarettes in their lifetime and currently smoke.)</i> )	n/a	CDC, BRFSS, 2020
5	Smoking among those with a high school education or more ( <i>Percentage of adults with high school education or more who are self-reported smokers (smoked at least 100 cigarettes in their lifetime and currently smoke.)</i> )	Tennessee BRFSS. TDH, Office of Population Health Surveillance, 2020	n/a
6*	Mothers who smoke during pregnancy ( <i>Percentage of mothers with live birth who report smoking during pregnancy.</i> )	TDH, Division of Vital Records, Office of Vital Statistics, Birth Statistical System, 2020	CDC WONDER, 2019
7*	Youth tobacco use ( <i>Percentage of high school students who self-reported having smoked cigarettes during the 30 days before the survey.</i> )	Tennessee Department of Education (TDOE), Office of Coordinated School Health, Youth Wellness Survey, 2020-21 / YRBS, 2019	CDC, Youth Risk Behavior Survey (YRBS), 2019
8	Youth ever tried cigarette smoking ( <i>Percentage of high school students who self-reported ever trying cigarette smoking, even one or two puffs.</i> )	TDOE, Office of Coordinated School Health, Youth Wellness Survey, 2020-21 / YRBS, 2019	CDC, YRBS, 2019
9	Youth electronic vapor product use ( <i>Percentage of high school students who self-reported using an electronic vapor product within the 30 days before the survey.</i> )	TDOE, Office of Coordinated School Health, Youth Wellness Survey, 2020-21 / YRBS, 2019	CDC, YRBS, 2019
<b>Physical Activity</b>			
10*	Physically active adults ( <i>Percentage of adults who reported participating in physical activity such as running, calisthenics, golf, gardening, or walking for exercise over the past month.</i> )	Tennessee BRFSS. TDH, Office of Population Health Surveillance, 2020	CDC, BRFSS, 2020



11*	Physically active students ( <i>Percentage of high school students who were physically active 60+ minutes per day for 5 or more days in last 7 days.</i> )	TDOE, Office of Coordinated School Health, Youth Wellness Survey, 2020-21 / YRBS, 2019	CDC, YRBS, 2019
-----	--	--	-----------------

**Obesity**

12	Obesity ( <i>Percentage of adults with a body mass index of 30.0 or higher based on reported height and weight.</i> )	Tennessee BRFSS. TDH, Office of Population Health Surveillance, 2020	CDC, BRFSS, 2020
13	Obesity in higher density counties ( <i>TN COPA Value: Percentage of adults in Hamblen, Sullivan, and Washington counties with a body mass index of 30.0 or higher based on reported height and weight; TN &amp; US Values: Not stratified by population density.</i> )	n/a	n/a
14	Obesity in lower density counties ( <i>TN COPA Value: Percentage of adults in Carter, Cocke, Greene, Hancock, Hawkins, Johnson, and Unicoi counties with a body mass index of 30.0 or higher based on reported height and weight; TN &amp; US Values: Not stratified by population density.</i> )	n/a	n/a
15	Obesity among those with less than a high school education ( <i>Percentage of adults with less than a high school education with a body mass index of 30.0 or higher based on reported height and weight.</i> )	n/a	CDC, BRFSS, 2020
16	Obesity among those with a high school education or more ( <i>Percentage of adults with a high school education or more with a body mass index of 30.0 or higher based on reported height and weight.</i> )	Tennessee BRFSS. TDH, Office of Population Health Surveillance, 2020	CDC, BRFSS, 2020
17*	Obesity counseling and education ( <i>Percentage of physician office visits that include counseling or education related to weight and physical activity.</i> )	(Data collection to be led by Ballad Health)	n/a
18*	Overweight and obesity among TN public school students ( <i>Percentage of public school students in grades kindergarten, 2, 4, 6, 8, and one year of high school found to be overweight or obese during the school year.</i> )	TDOE, Office of Coordinated School Health, 2019-20	n/a

**Breastfeeding Measures**

19*	Average mPINC score ( <i>Maternity Practices in Infant and Nutrition Care survey score based on seven birth facility policies and practices with higher scores denoting better maternity care practices and policies.</i> )	CDC Survey of Maternal Practices in Infant & Nutrition & Care (mPINC), 2020	CDC Survey of Maternal Practices in Infant & Nutrition & Care (mPINC), 2020
20*	Breastfeeding Initiation ( <i>TN COPA, Peer, and TN Values: Percentage of live births whose birth certificates report that baby is breastfed. US Value: Proportion of infants who are ever breastfed.</i> )	TDH, Division of Vital Records, Office of Vital Statistics, Birth Statistical System, 2020	CDC Wonder, Natality Public Use Files, 2019
21*	Infants breastfed at six (6) months ( <i>Percentage of infants aged six (6) months who were exclusively breastfed as reported by their guardians.</i> )	(Data collection to be led by Ballad Health) / CDC, National Immunization Survey, among 2018 births	CDC, National Immunization Survey, among 2018 births

**High School Student Healthy Eating**

22	Fruit consumption among high school students - ( <i>Percentage of high school students who reported eating fruit during the past 7 days.</i> )	TDOE, Office of Coordinated School Health, Youth Wellness Survey, 2020-21 / YRBS, 2019	CDC, YRBS, 2019
----	--	--	-----------------

23	Vegetable consumption among high school students - <i>(Percentage of high school students who reported eating vegetables during the past 7 days.)</i>	TDOE, Office of Coordinated School Health, Youth Wellness Survey, 2020-21 / YRBS, 2019	CDC, YRBS, 2019
24	Soda consumption among high school students - <i>(Percentage of high school students who reported drinking soda or pop during the past 7 days.)</i>	TDOE, Office of Coordinated School Health, Youth Wellness Survey, 2020-21 / YRBS, 2019	CDC, YRBS, 2019

**Substance Abuse**

25*	NAS (Neonatal Abstinence Syndrome) Births <i>(Number of reported cases with clinical signs of withdrawal per 1,000 live births.)</i>	TDH, Neonatal Abstinence Syndrome Surveillance, 2020	n/a
26*	Drug deaths <i>(All drug overdose deaths caused by acute poisonings, regardless of intent per 100,000 population.)</i>	TDH, Division of Vital Records, Office of Vital Statistics, Death Statistical System, 2020	n/a
27	Drug overdoses <i>(Non-fatal overdoses caused by acute poisonings, regardless of intent per 100,000 population.)</i>	TDH, Division of Population Health Assessment, Office of Health Statistics, Hospital Discharge Data System, 2020	n/a
28	Painkiller prescriptions <i>(Number of opioid prescriptions for pain per 1,000 population)</i>	TDH, Office of Informatics and Analytics, Controlled Substance Monitoring Database (CSMD), 2020	CDC, National Center for Injury Prevention and Control, 2020
29	Prescription drugs among high school students <i>(Percent of high school students who report ever taking prescription drugs without a doctor's prescription (such as codeine, Vicodin, OxyContin, Hydrocodone, and Percocet one or more times during their life.)</i>	TDOE, Office of Coordinated School Health, Youth Wellness Survey, 2020-21 / YRBS, 2019	CDC, YRBS, 2019
30*	MME for Pain <i>(Total morphine milligram equivalents (MME) opioids for pain per capita)</i>	TDH, Office of Informatics and Analytics, CSMD, 2020	CDC Annual Surveillance Report of Drug-Related Risks and Outcomes, 2018

**IMMUNIZATIONS**

31*	On-time vaccinations - children <i>(Percentage of children that are up to date on state-required vaccines at the time of kindergarten entry.)</i>	Kindergarten Immunization Compliance Assessment, 2020	CDC, National Center for Immunization and Respiratory Diseases, 2018
32*	Ballad entity participation in TennIIS <i>(Percentage of Ballad Health entities in Tennessee participating in TennIIS.)</i>	Ballad Health / Tennessee Immunization Information System (TennIIS), 2020	n/a
33	Entity participation in TennIIS <i>(Number of entities in Tennessee participating in TennIIS.)</i>	TennIIS, 2020	n/a
34	Vaccinations - HPV females <i>(Number of human papillomavirus (HPV) vaccine shots administered to females aged 11 to 17 years, either quadrivalent or bivalent.)</i>	TennIIS, 2020	n/a
35	Vaccinations - HPV males <i>(Number of human papillomavirus (HPV) vaccine shots administered to males aged 11 to 17 years, either quadrivalent or bivalent.)</i>	TennIIS, 2020	n/a

36*	Vaccinations - Tdap ( <i>Number of tetanus-diphtheria-acellular pertussis (Tdap) vaccine shots administered to males aged 11 to 17 years.</i> )	TennHIS, 2020	n/a
37*	Vaccination Rate - Flu, Older ( <i>Percent of adults aged 65 and over who self-reported receiving a flu shot or flu vaccine sprayed in nose in the past 12 months.</i> )	Tennessee BRFSS. TDH, Office of Population Health Surveillance, 2020	CDC, BRFSS, 2020
38	Vaccinations - Flu, Adults ( <i>Percent of adults aged 18 and over who self-reported receiving a flu shot or flu vaccine sprayed in nose in the past 12 months.</i> )	Tennessee BRFSS. TDH, Office of Population Health Surveillance, 2020	CDC, BRFSS, 2020

**COMMUNITY / ENVIRONMENT**

39*	Teen births ( <i>Rate of births per 1,000 females aged 15-19 years.</i> )	TDH, Division of Vital Records, Office of Vital Statistics, Birth Statistical System, 2020	CDC Wonder, Natality Public Use Files, 2019 data
-----	---	--	--

**Third Grade Reading**

40*	Third grade reading level ( <i>Percentage of 3rd graders scoring "on-track" or "mastered" on TNReady reading assessment.</i> )	TDOE, 2021	n/a
41	Third grade reading level - Higher density counties ( <i>TN COPA Value: Percentage of 3rd graders in Hamblen, Sullivan, and Washington counties scoring "on-track" or "mastered" on TNReady reading assessment; TN &amp; US Values: Not stratified by population density.</i> )	TDOE, 2021	n/a
42	Third grade reading level - Lower density counties ( <i>TN COPA Value: Percentage of 3rd graders in Carter, Cocke, Greene, Hancock, Hawkins, Johnson, and Unicoi counties scoring "on-track" or "mastered" on TNReady reading assessment; TN &amp; US Values: Not stratified by population density.</i> )	TDOE, 2021	n/a

**Oral Health**

43	Fluoridated water ( <i>Percent of population on community water systems receiving fluoridated water.</i> )	CDC, My Water's Fluoride, 2020	CDC, My Water's Fluoride, 2020
44*	Children receiving dental sealants ( <i>Percentage of Medicaid enrollees aged 6-9 years receiving dental sealants on permanent first molar teeth.</i> )	TennCare/DentaQuest, 2019-2020	n/a
45	Adolescents receiving dental sealants ( <i>Percentage of Medicaid enrollees aged 13-15 years receiving dental sealants on their first and second molar teeth.</i> )	TennCare/DentaQuest, 2019-2020	n/a

**OUTCOMES**

46*	Frequent mental distress ( <i>Percentage of adults who reported their mental health was not good 14 or more days in the past 30 days.</i> )	Tennessee BRFSS. TDH, Office of Population Health Surveillance, 2020.	CDC, BRFSS, 2020
47	Frequent physical distress ( <i>Percentage of adults who reported their physical health was not good 14 or more days in the past 30 days.</i> )	Tennessee BRFSS. TDH, Office of Population Health Surveillance, 2020	CDC, BRFSS, 2020

<b>48*</b>	Infant mortality ( <i>Number of infant deaths (before age 1) per 1,000 live births.</i> )	TDH, Division of Vital Records, Office of Vital Statistics, Death Statistical System, 2020	CDC WONDER, 2019
<b>49*</b>	Low birthweight ( <i>Percentage of infants weighing less than 2,500 grams (5 pounds, 8 ounces) at birth.</i> )	TDH, Division of Vital Records, Office of Vital Statistics, Birth Statistical System, 2020	CDC WONDER, 2019
<b>50</b>	Child mortality ( <i>Number of deaths per 100,000 children aged 1 to 18 years.</i> )	TDH, Division of Vital Records, Office of Vital Statistics, Death Statistical System, 2020	CDC WONDER, 2019
<b>51</b>	Cardiovascular deaths ( <i>Number of deaths due to diseases of the heart per 100,000 population.</i> )	TDH, Division of Vital Records, Office of Vital Statistics, Death Statistical System, 2020	CDC WONDER, 2019
<b>52</b>	Cancer deaths ( <i>Number of deaths due to all causes of cancer per 100,000 population.</i> )	TDH, Division of Vital Records, Office of Vital Statistics, Death Statistical System, 2020	CDC WONDER, 2019
<b>53</b>	Diabetes deaths ( <i>Number of deaths due to diabetes per 100,000 population.</i> )	TDH, Division of Vital Records, Office of Vital Statistics, Death Statistical System, 2020	CDC WONDER, 2019
<b>54*</b>	Diabetes adverse events ( <i>Percentage of adults identified with prediabetes who are referred to a qualifying diabetes prevention program.</i> )	(Data collection to be led by Ballad Health)	n/a
<b>55</b>	Suicide deaths ( <i>Number of deaths due to intentional self-harm per 100,000 population.</i> )	TDH, Division of Vital Records, Office of Vital Statistics, Death Statistical System, 2020	CDC WONDER, 2019
<b>56*</b>	Premature death ratio ( <i>Ratio of deaths before age 75 per 100,000 population for higher density counties to lower density counties.</i> )	TDH, Division of Vital Records, Office of Vital Statistics, Death Statistical System, 2020	n/a

\* These measures are the Priority Population Health Measures as defined in the TOC.

n/a – Data will not be compared at this level.

# Appendix 2:

## ***Population Health Sub-Index Data Notes***

Notes on Tennessee-sourced values:

### **DentaQuest data:**

Dental sealant 2019-2020 data were collected from 10/1/2019 - 9/30/2020.

### **Hospital Discharge Data System data:**

Crude rates were used for the TN COPA Region, TN Peer Counties region, and the state of Tennessee.

Hospital discharge data acknowledgement: Hospital discharge data were provided by the TDH, Division of Population Health Assessment, Office of Health Statistics.

### **Tennessee Immunization Information System data:**

- A participating facility is an entity in TennIIS production that has submitted or entered an administered and/or historical vaccination during the year of evaluation.
- Vaccinations are evaluated as being administered by the entities in each county group (the TN COPA Region, TN Peer Counties region, and the state of Tennessee) during the year of evaluation.
- The entity can report administered and/or historical vaccinations and the entity can submit these vaccines manually or electronically. The number of participating entities were summed for: 1) Ballad Health, 2) the TN COPA Region, 3) TN Peer Counties region, and 4) the state of Tennessee.
- Vaccination CVX codes (codes developed and maintained by the CDC's National Center of Immunization and Respiratory Diseases for administered vaccine) were pulled for each county group; these may not include all CVX codes associated with those vaccination families as some CVX codes are not relevant.
- Population data source: 2020 Population Data Files, Division of Population Health Assessment, TDH.

<b>IMMUNIZATION</b>	<b>VACCINATION CVX CODES EVALUATED</b>
HPV	HPV, quadrivalent - CVX CODE 62; HPV, bivalent - CVX CODE 118; Human Papillomavirus 9-valent vaccine - CVX CODE 165; HPV, uncertain formulation - CVX CODE 137
TDAP	Tdap - CVX CODE 115

**Vital Statistics – Death data:**

Crude rates were used for the TN COPA Region, TN Peer Counties region, and the state of Tennessee.

Rates calculated based on total population counts from the Tennessee Population Estimates Program, 2020, TDH, Division of Population Health Assessment.

**ICD-10 Coding for Tennessee Mortality Data, 2020**

<b>Underlying Cause of Death</b>	<b>ICD-10 Codes or UCD Group Codes Used</b>
Diseases of the Heart	UCD Group Codes 049-059
Cancer	UCD Group Codes 018-040
Diabetes	UCD Group Code 043
Suicide	UCD Group Codes 105 and 106
All Drug Overdoses	ICD-10 codes for underlying cause of death: X40-X44, X60-X64, X85, Y10-Y14

Premature deaths are deaths occurring before age 75. Rate is the death rate per 100,000 people for the population age 0 to 74 years old.

Death Data acknowledgment: Death data were provided by TDH, Division of Vital Records, Office of Vital Statistics.

**Vital Statistics – Birth data:**

Birth Data acknowledgement: Birth data were provided by TDH, Division of Vital Records, Office of Vital Statistics.

**Youth Wellness Survey data:**

- The Youth Wellness Survey is an online survey on health behaviors administered annually in Tennessee’s public high schools.

- Schools are selected with probability proportional to the size of student enrollment in grades 9-12 and then a specific period of the school day (e.g., 2nd period) is randomly selected to participate. Within selected classes, all students are eligible to participate.
- The Youth Wellness Survey consists of a limited number of Youth Risk Behavior Survey (YRBS) questions and follows the same sampling methodology used for the YRBS.
- Per YRBS guidelines, no weighting was performed on this year's survey as overall participation levels were less than 60%.
- Only respondents with a valid grade level (9, 10, 11 or 12) were used in the analysis.
- Participation level:
  - COPA: 9/10 counties participated = 90%; remaining students: 833/1252\* = 66.5%; Overall participation = 59.9%
  - Peer: 11/12 counties = 91.7%; remaining students: 844/1320\*\* = 63.9 percent; Overall participation = 58.6%

\*Sample size necessary for 100% participation for remaining COPA counties

\*\*Sample size necessary for 100% participation for remaining Peer counties

### **Overweight and obesity prevalence among students:**

- Body Mass Index (BMI) is calculated based on the height and weight measurements collected during screening in the current school year. BMI measurements are age and sex specific for children and teens. Some counties and school districts require an active opt-in informed consent for BMI student data collection. This requirement can have a significant impact on the number of students screened.
- Overweight/obese was defined as body mass index greater than or equal to the 85th percentile for children of the same age and sex. Data were collected by the Tennessee Department of Education's Office of Coordinated School Health in partnership with TDH.
- Children screened were selected from grades Kindergarten, 2, 4, 6, 8, and any one year of high school throughout the 2019-2020 school year.

### **Neonatal Abstinence Syndrome:**

Rates are expressed as numbers of Neonatal Abstinence Syndrome (NAS) cases divided by Live Births in COPA, PEER Counties, or Tennessee statewide counts.

NAS Data acknowledgment: Neonatal Abstinence Syndrome Surveillance System, Division of Family Health and Wellness, TDH.

## Non-Fatal Drug Overdose:

- All drug overdose *inpatient* hospitalizations of Tennessee residents caused by non-fatal acute poisonings due to the effects of drugs, regardless of intent.
- All drug overdose *outpatient* visits by Tennessee residents caused by non-fatal acute poisonings due to the effects of drugs, regardless of intent.
- Count/rate suppressed in accordance with TDH Data Suppression Guidelines.
- Additional Notes, inclusions, and exclusion:
  - Counties determined by numeric county of residence code in HDDS data (tn\_co\_res).
  - Rates are calculated using the county population for a given year per 100,000 residents. [i.e., (count/population)\*100,000] For county populations by year. Population data is obtained from CDC WONDER bridged race populations estimates. The vintage year of the populations corresponds to the year of the indicator. Additional details can be accessed [here](#).
  - Primary Inclusion/Exclusion Criteria: Only Tennessee Residents; Excludes patients discharged as dead/deceased; Limited to non-federal acute care-affiliated facilities. Excludes VA and other federal hospitals, rehabilitation centers, and psychiatric hospitals.
  - Outpatient Visit Inclusion Criteria: Flagged as an outpatient record by THA.
  - Inpatient Hospitalization Inclusion Criteria: Flagged as an inpatient record by THA.
  - All Drug Overdose Inclusion Criteria: First 3 characters of Principal Diagnosis ICD-10 code falls in the range T36-T50 (Poisoning by drugs, medicaments, and biological substances); AND the intent is accidental/unintentional, intentional self-harm, assault, or undetermined intent (not adverse effects or underdosing) ; AND it is the initial or a subsequent encounter (not sequela).

## MME opioids for pain:

Morphine milligram equivalents or MME are calculated as the quantity multiplied by the strength of the drug per unit multiplied by a conversion factor provided to TDH by the CDC.

Additional notes and exclusions:

- Rates are calculated using 2019 county population as 2020 population file was not yet finalized. Population data is obtained from vintage year CDC WONDER database bridged race populations estimates.
- Only Tennessee residents were considered. Counties determined by patient county of residence. Counties are assigned to patients after geocoding based on street address. Where street address is not available, counties are assigned based on patient's reported zip code.



- Only drug schedules II, III and IV were included.
- Prescriptions with implausible days supply (<1 or greater than 180) are excluded.
- Prescriptions with implausible quantities (<1 or greater than 100,000 doses) are excluded.
- Controlled Substance Monitoring Database Data acknowledgment: Controlled Substance Monitoring Database, Office of Informatics and Analytics, TDH.

### **Third Grade Reading Level:**

- Reflects proficiency TNReady ELA, English I, English II and English III.
- Results are suppressed where the number of valid test scores is less than 10. In these files, suppression also occurs where any individual proficiency level is less than 1% or greater than 99% at the state and district level, or less than 5% or greater than 95% at the school level.

Notes on values from Tennessee and US joint source:

### **Fluoridated Water data:**

Values on each of the four geographies: 1) The TN COPA Region; 2) TN Peer Counties region; 2) the state of Tennessee; and 4) the US were based on TDH's analysis of CDC's My Water's Fluoride online data, accessed via [https://nccd.cdc.gov/DOH\\_MWF/Reports/FIStatus\\_Rpt.aspx](https://nccd.cdc.gov/DOH_MWF/Reports/FIStatus_Rpt.aspx)

### **Vaccination Rate - Flu, Older Adults**

This measure was originally defined as "Percent of adults aged 65 and over who self-reported receiving a flu shot or flu vaccine sprayed in nose in the past 12 months;" however, as a result of discussion with Ballad Health and an agreed preference for Medicare Claims data over survey data, TDH agreed to a definition change of "Percent of Medicare fee-for-service beneficiaries aged 65 and over with a flu vaccine claim." TDH reverted to the original definition when the Centers for Medicare and Medicaid Services stopped reporting updates on flu vaccine claims.

### **Behavioral Risk Factor Surveillance System data:**

- All estimates are weighted using demographic information from each of the four geographies: 1) The TN COPA Region; 2) TN Peer Counties region; 2) the state of Tennessee; and 4) the US.
- Prevalence estimates with a numerator or denominator less than 50 were suppressed.

- Sampling frame deviations and anomalies in the BRFSS 2020 US data are detailed in a CDC BRFSS report that can be accessed here:  
[https://www.cdc.gov/brfss/annual\\_data/2020/pdf/compare-2020-508.pdf](https://www.cdc.gov/brfss/annual_data/2020/pdf/compare-2020-508.pdf).

Notes on US values:

### **Mothers who smoke during pregnancy:**

US values on Mothers who smoke during pregnancy were based on America's Health Ranking's analysis of CDC's WONDER online database. United Health Foundation, AmericasHealthRankings.org, accessed via [http://www.americashealthrankings.org/explore/health-of-women-and-children/measure/Smoking\\_pregnancy/](http://www.americashealthrankings.org/explore/health-of-women-and-children/measure/Smoking_pregnancy/)

### **Breastfeeding initiation:**

The US *Breastfeeding initiation* data source has changed for this report to CDC WONDER, Natality Public Use Files, 2019.

In prior reports the data source was, CDC National Immunization Survey (NIS).

### **Breastfeeding at six months:**

The US and TN *Breastfeeding at Six Months* values come from the annual National Immunization Survey (NIS). The NIS uses random-digit dialing to survey households with children and teens.

- The Council of American Survey and Research Organizations response rates for landline sample of NIS years 2001–2017 ranged from 51.9% to 76.1%. Response rates for the cellular telephone sample of NIS years 2011–2020 ranged from 21.1% to 33.5%. A more detailed description of the methods can be found at the National Immunization Survey Website that can be accessed here: <https://www.cdc.gov/vaccines/imz-managers/nis/index.html>
- Survey results are based on cellular telephone sampling only.
- The telephone survey asks questions to respondents with children aged 19 to 35 months to determine whether at six months old their child was exclusively breastfed.

### **MME opioids for pain:**

The US Morphine milligram equivalents or MME for Pain data are on 2018 prescriptions, as reported in a 2019 CDC, National Center for Injury Prevention and Control report that can be accessed here: <https://www.cdc.gov/drugoverdose/pdf/pubs/2019-cdc-drug-surveillance-report.pdf>

### **Painkiller Prescription:**

The US Painkiller prescription data were accessed via <https://www.cdc.gov/drugoverdose/rxrate-maps/index.html>.

### **On-time vaccinations for children:**

The US on-time vaccination value is an estimate of the percentage of children born in 2018 who had completed their combined 7 series immunizations by 35 months. While comparisons between the national value and TN values should not be made, comparisons of trends may be useful.

- US Vaccination coverage estimates for children born in 2018 are considered preliminary and will be finalized after the data for survey year 2021 are available.
- Areas included in the NIS-Child varied by survey year. Data from US territories were not included in estimates for the US.
- US Vaccination coverage estimates included only children with adequate provider-reported immunization records.
- US Vaccination coverage estimate is presented by birth year (birth cohort) rather than survey year. Because of the survey age eligibility range of 19 to 35 months, children born in three different calendar years appear in the data. To estimate vaccination coverage among children born in a particular year, multiple survey years of data were combined and then stratified by birth year (birth cohort). US vaccination coverage was estimated using Kaplan- Meier (time to event) analysis among children in the indicated birth year groups.
- The Hib primary series includes receipt of 2 or 3 doses, depending on product type received. The Hib full series is the primary series and booster dose, and includes receipt of >3 or >4 doses, depending on product type received.
- Rotavirus includes >2 doses of Rotarix monovalent rotavirus vaccine or >3 doses of RotaTeq pentavalent rotavirus vaccine. If any dose in the series is either RotaTeq or unknown, the 3-dose series is assumed. The maximum age for the final rotavirus dose is 8 months, 0 days.

- The combined 7-vaccine series (4:3:1:3\*:3:1:4) includes  $\geq 4$  doses of DTaP,  $\geq 3$  doses of poliovirus vaccine,  $\geq 1$  dose of measles-containing vaccine, the full series of Hib ( $\geq 3$  or  $\geq 4$  doses, depending on product type),  $\geq 3$  doses of HepB,  $\geq 1$  dose of VAR, and  $\geq 4$  doses of PCV.
- A 2019 CDC Morbidity and Mortality Weekly Report contains additional information about US Vaccination survey methodology and limitations. That report can be accessed here: <https://www.cdc.gov/mmwr/volumes/68/wr/mm6841e2.htm>
- Data for this measure were accessed via <https://www.cdc.gov/vaccines/imz-managers/coverage/childvaxview/interactive-reports/index.html>

*\*\*All data are subject to limitations as explained in the data source.*

# Credits

**Commissioner Morgan McDonald, MD, FACP, FAAP.**

**TDH Division of Health Planning**

- Elizabeth Jones
- Jim Mathis
- Judi Knecht
- M Sarah Elliott

**Arundel Metrics**

- Tom Eckstein
- Sarah Milder

**TDH Division of Population Health Assessment**

- Shalini Parekh
- Fred Croom
- Abhilasha Saxena
- Generosa Kakoti
- Angela Miller
- Benjamin Crumpler

**TDH Office of Informatics and Analytics**

- Nagesh Aragam
- Ben Tyndall
- Fenggang Peng

**Tennessee Department of Education**

- Mark Bloodworth
- Melisa Fuhrmeister
- Lori Paisley

**TDH Division of Vital Records and Statistics**

- Yuanchun Wang
- Alyson Holland
- Vanessa Lefler
- Jane Brittingham

**TDH Office of Primary Prevention**

- John Vick

**TDH Office of Communication & Media Relations**

- Sarah Tanksley

**Exhibit 3**



## 2021 Access to Health Services Report

Certificate of Public Advantage Access Sub-Index Measures for Ballad Health

Tennessee Department of Health | COPA Report | June 2022



## Table of Contents

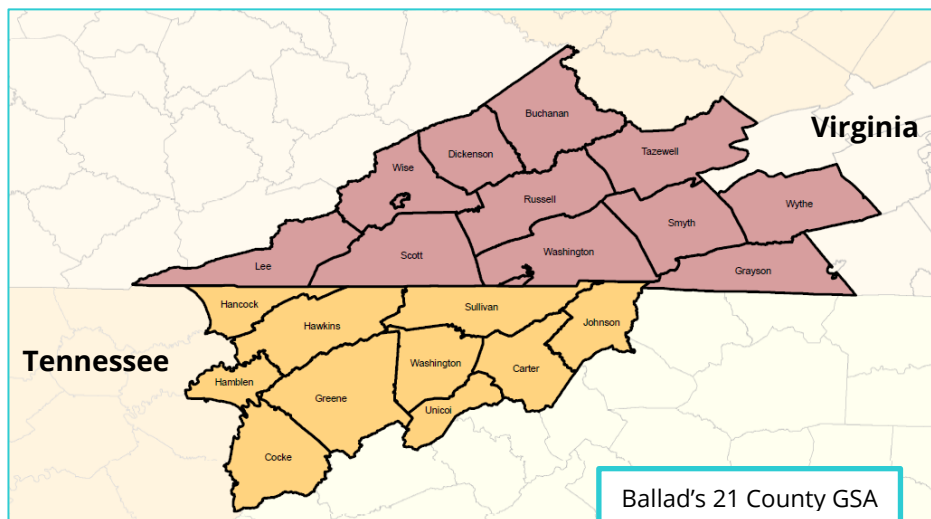
<b>Access to Health Services Sub-Index</b> .....	<b>3</b>
Introduction.....	3
Access Sub-Index Design.....	4
2021 Access Sub-Index Data Table .....	5
<b>Appendices</b> .....	<b>7</b>
1. Access Sub-Index Data Source Table .....	7
2. Access Sub-Index Data Notes .....	11
<b>Credits</b> .....	<b>13</b>

# Access Sub-Index

## Introduction

According to the Institute of Medicine, access to health care means “the timely use of personal health services to achieve the best health outcomes.”<sup>20</sup>

The Access Sub-Index is one set of measures that the State uses to objectively track changes and evaluate the impact of the merger. The Access Sub-Index monitors changes in access to and utilization of health services by tracking several measures throughout Ballad Health’s 21 county Geographic Service Area (GSA). The following 21 counties comprise Ballad Health’s GSA: Carter, Cocke, Greene, Hamblen, Hancock, Hawkins, Johnson, Sullivan, Unicoi, and Washington County, Tennessee and Buchanan, Dickenson, Grayson, Lee, Russell, Scott, Smyth, Tazewell, Washington, Wise, Wythe County, Virginia. For measures where only data on the Tennessee Counties are available, TN GSA (the 10 counties in the Tennessee portion of Ballad’s GSA) values are provided.



<sup>20</sup> Institute of Medicine, Committee on Monitoring Access to Personal Health Care Services. Access to Health Care in America. Millman M, editor. Washington, DC: National Academies Press; 1993.



## ***Access Sub-Index Design***

The Access Sub-Index was designed to measure health care access within three domains:

- Characteristics of Health Delivery System,
- Utilization of Health Services, and
- Consumer Satisfaction.

These domains each address a different question. The Characteristics of Health Delivery System domain seeks to address the question, “Is care available?” Measures for urgent care hours, the distance to urgent care, emergency departments, and hospitals, as well as specialist recruitment and retention are within this domain.

Utilization of Health Services measures aim to answer, “Is the right care being delivered at the right time and in the right place?” Within the utilization of health services domain, six priority areas were identified. Those priority areas are: primary care; appropriate use of care; secondary prevention (screenings); infants and children; mental health and substance abuse; and antidepressant medication management.

The Consumer Satisfaction domain addresses the question, “Are people satisfied with the availability of care?” The measures within this domain require Ballad Health to administer patient satisfaction and access surveys and create and implement plans to address identified deficiencies.

By measuring access in these three ways, we gain a broad understanding of the current level of access gained and future changes in the region’s access to care are tracked without stifling innovation.

Table 1 of this 2021 COPA Access to Health Services Report displays the most recent values available to TDH, as of January 2022, on the Population Health Sub-Index measures.

Appendix 1 contains Table 2, which lists data definitions, data sources, and data collection timeframes. Additional details on data sources and methodologies are listed in Appendix 2.

## 2021 Access Sub-Index Data Table

TABLE 1

	Measure	GSA Value
<b>CHARACTERISTICS OF HEALTH DELIVERY SYSTEM</b>		
1	Population within 10 miles of an urgent care center (%)	82.3%
2	Population within 10 miles of an urgent care center open nights and weekends (%)	71.5%
3	Population within 10 miles of Urgent Care Facility or Emergency Department (%)	99.7%
4	Population within 15 miles of an Emergency Department (%)	97.3%
5	Population within 15 miles of an acute care hospital (%)	97.3%
6	Pediatric Readiness of Emergency Department	75.0%
7	Appropriate Emergency Department Wait Times (%)	47.5%
8	Specialist Recruitment and Retention	*
<b>UTILIZATION OF HEALTH SERVICES</b>		
<b>Primary Care</b>		
9	Personal Care Provider	80.6%
<b>Appropriate Use of Care</b>		
10	Preventable Hospitalizations – Older Adults (discharges per 1,000 people 65+)	37.9
11	Preventable Hospitalizations - Adults (discharges per 1,000 people 18+)	17.5
<b>Secondary Prevention (Screenings)</b>		
12	Screening - Breast Cancer	79.3%
13	Screening - Cervical Cancer	71.0%
14	Screening - Colorectal Cancer	66.9%
15	Screening - Diabetes	82.9%
16	Screening - Hypertension	98.5%
<b>Infant and Children</b>		
17	Asthma Emergency Department Visits Per 10,000 (Age 0-4)	22.7
18	Asthma Emergency Department Visits Per 10,000 (Age 5-14)	19.4
19	Prenatal care in the first trimester	77.5%
<b>Mental Health &amp; Substance Abuse</b>		
20	Follow-Up After Hospitalization for Mental Illness (% Within 7 Days Post-Discharge)	29.8%
21	Follow-Up After Hospitalization for Mental Illness (% Within 30 Days Post-Discharge)	46.4%
<b>Antidepressant Medication Management</b>		
22	Effective Acute Phase Treatment (84 days)	81.6%
23	Effective Continuation Phase Treatment (180 days)	63.6%

<b>24</b>	Engagement of AOD (Alcohol or Drug) Treatment	6.8%
<b>25</b>	Rate of SBIRT administration - hospital admissions	0.001%
<b>26</b>	Rate of SBIRT administration - ED visits	9.77%
<b>CONSUMER SATISFACTION</b>		
<b>27</b>	Patient Satisfaction and Access Surveys	<i>complete</i>
<b>28</b>	Patient Satisfaction and Access Survey - Response Report	<i>complete</i>

\* = No mutual agreed upon definition by Ballad Health and TDH.

# Appendix 1:

## Access Sub-Index Data Source Table

TABLE 2 (Data descriptions and data sources were updated for clarification and consistency, December 2019.)

	Measure	Description	Source <sup>†</sup>
1	Population within 10 miles of an urgent care center (%)	Population within 10 miles of any urgent care center; urgent care centers may be owned by the Ballard Health or a competitor and may or may not be located in the geographic service area	Ballad Health analysis of US Census Bureau American Fact Finder; Urgent Care Facility List, 2021
2	Population within 10 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 Ballard Health or a competitor and may or may not be located in the geographic service area	Ballad Health analysis of US Census Bureau American Fact Finder; Urgent Care Facility List, 2021
3	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 Ballard Health or a competitor and may or may not be located in the geographic service area	Ballad Health analysis of US Census Bureau American Fact Finder; Emergency Department Facility List, 2021
4	Population within 15 miles of an emergency department (%)	Population within 15 miles of any emergency room; emergency rooms may be owned by the Ballard Health or a competitor and may or may not be located in the geographic service area	Ballad Health analysis of US Census Bureau American Fact Finder; Emergency Department Facility List, 2021
5	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 Ballard Health or a competitor and may or may not be located in the geographic service area	Ballad Health analysis of US Census Bureau American Fact Finder; Acute Care Facility List, 2021
6	Pediatric Readiness of Emergency Department	Average score of Ballard Health Emergency Departments on the National Pediatric Readiness Project Survey from the National EMSC Data Analysis Resource Center	Ballad Health analysis of a survey tool created by NEDARC, 2021 <sup>F</sup>

7	Appropriate Emergency Department Wait Times	Percentage of all Ballad Health hospital emergency department visits in which the wait time to see an emergency department clinician within the recommended timeframe as reported in the National Hospital Ambulatory Care Survey from the CDC National Center for Health Statistics. <sup>††</sup>	Ballad Health analysis of National Hospital Ambulatory Care Survey from the CDC National Center for Health Statistics, 2021 <sup>F</sup>
8	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	N/A
9	Personal Care Provider	Percentage of adults who reported having one or more person they think of as a personal doctor or health care provider	Behavioral Risk Factor Surveillance System, 2020
10	Preventable Hospitalizations – Older Adults	Number of discharges for ambulatory care-sensitive conditions per 1,000 Medicare enrollees aged 65 years and older	Ballad Health analysis of Hospital Discharge Data System, Tennessee Hospital Association and Virginia Hospital and Healthcare Association Inpatient Dataset and US Census Bureau Fact Finder, 2020
11	Preventable Hospitalizations – Adults	Number of discharges for ambulatory care-sensitive conditions per 1,000 adults aged 18 years and older	Ballad Health analysis of Hospital Discharge Data System, Tennessee Hospital Association and Virginia Hospital and Healthcare Association Inpatient Dataset and US Census Bureau Fact Finder, 2020
12	Screening – Breast Cancer	Percentage of women Ballad Health Medical Associate patient residents aged 50-74 who reported having a mammogram within the past two years	Ballad Health analysis of Ballad Health Medical Associates data <sup>†††</sup> , 2021 <sup>F</sup>
13	Screening – Cervical Cancer	Percentage of women Ballad Health Medical Associate patient residents aged 21-65 who had a pap test at a Ballad facility or reported having had a pap test in the past three years	Ballad Health analysis of Ballad Health Medical Associates data <sup>†††</sup> , 2021 <sup>F</sup>
14	Screening - Colorectal Cancer	Percentage of adult Ballad Health Medical Associate patient residents who meet U.S. Preventive Services Task Force recommendations for colorectal cancer screening	Ballad Health analysis of Ballad Health Medical Associates data <sup>†††</sup> , 2021 <sup>F</sup>
15	Screening – Diabetes	Percentage of overweight or obese Ballad Health Medical Associate patient residents aged 40-70 who are screened for prediabetes and diabetes.	Ballad Health analysis of Ballad Health Medical Associates data, 2021 <sup>F</sup>
16	Screening – Hypertension	Percentage of Ballad Health Medical Associate patient residents aged 18+ screened for hypertension by Ballad Health.	Ballad Health analysis of Ballad Health Medical Associates data, 2021 <sup>F</sup>

17	Asthma ED Visits – Age 0-4	Number of Asthma Emergency Department Visits Per 10,000 of those aged 0-4	Ballad Health analysis of Hospital Discharge Data System, Tennessee Hospital Association and US Census Bureau Fact Finder, 2020**
18	Asthma ED Visits – Age 5-14	Asthma Emergency Department Visits Per 10,000 of those aged 5-14	Ballad Health analysis of Hospital Discharge Data System, Tennessee Hospital Association and US Census Bureau Fact Finder, 2020**
19	Prenatal care in the first trimester	Percentage of live births in which the mother received prenatal care in the first trimester	Tennessee Department of Health, Division of Vital Records and Statistics, 2020
20	Follow-Up After Hospitalization for Mental Illness - 7 days	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 as reported in the State of Health Care Quality Report from the National Committee for Quality Assurance (NCQA).	Ballad Health analysis of MSSP and Team Member Claims data, 2020
21	Follow-Up After Hospitalization for Mental Illness – 30 days	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 as reported in the State of Health Care Quality Report from the NCQA.	Ballad Health analysis of MSSP and Team Member Claims data, 2020
22	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) as reported in the State of Health Care Quality Report from the NCQA.	Ballad Health analysis of MSSP and Team Member Claims data, 2020
23	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) as reported in the State of Health Care Quality Report from the NCQA.	Ballad Health analysis of MSSP and Team Member Claims data, 2020

24	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 as reported in the State of Health Care Quality Report from the NCQA.	Ballad Health analysis of Team Member Claims data, 2020
25	SBIRT administration - hospital admissions	Percentage of patients admitted to a Ballad Health hospital who are screened for alcohol and substance abuse, provided a brief intervention, and referred to treatment (SBIRT)	Ballad Health analysis of Ballad Health Social Needs Screening Tool database, 2021 <sup>F</sup>
26	Rate of SBIRT administration - ED visits	Percentage of patients admitted to a Ballad Health emergency department who are screened for alcohol and substance abuse, provided a brief intervention, and referred to treatment (SBIRT)	Ballad Health analysis of Ballad Health Social Needs Screening Tool database, 2021 <sup>F</sup>
27	Patient Satisfaction and Access Surveys	Successful completion of patient satisfaction and access surveys, according to Section 4.02(c)(iii)	Ballad Health analysis of Press Ganey Patient Satisfaction Surveys, 2020
28	Patient Satisfaction and Access Survey – Response Report	Report documents a satisfactory plan for the Ballad Health to address deficiencies and opportunities for improvement related to perceived access to care services and documents satisfactory progress towards the plan.	Ballad Health Report, 2020

† = Data provided by Ballad Health will be verified by TDH as source data are available to the State. Methodologies for calculating values for each measure are described in Ballad Health’s Access Measure Data Dictionary, which was submitted to TDH 3/22/2022.

F = Values reported on these measures are based on Fiscal Year data (July 1, 2020-June 30, 2021). For all other measures, the values reported are on Calendar Year data.

†† = TDH approved a change from “excessive” emergency department wait times, to “appropriate” emergency department wait times (February 2020).

††† = TDH approved a data source change for measures related to health screenings (measures 12-14) from the Behavioral Risk Factor Surveillance System (BRFSS) to Ballad Health Medical Associates data (February 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 values reported for these two measures.

# Appendix 2:

## ***Access Sub-Index Data Notes***

### **Preventable Hospitalizations:**

The Prevention Quality Overall Composite is an aggregate measure of Prevention Quality Indicators (PQIs) described by the Agency for Healthcare Research and Quality (AHRQ). The composite score (rate) is used to identify quality of care for "ambulatory care-sensitive conditions." These are conditions for which early intervention and good outpatient care can potentially prevent complications and severity of disease resulting in hospitalizations. For example, patients with diabetes may be hospitalized for diabetic complications if their conditions are not adequately monitored or if they do not receive the patient education needed for appropriate self-management.

The preventable Hospitalization data in this report are based on AHRQ v2018 definition of Prevention Quality Index - 90. The methodology for calculating this measure is defined in the 2020 Access Measures Data Dictionary developed by Ballad Health. TDH and Ballad Health agreed this measure would exclude those on Medicare who are under 65 years of age.

### **Asthma**

Asthma was identified as a primary diagnosis of ICD-10 J4521, J4522, J4531, J4532, J4541, J4542, J4551, J4552, J45901, J45902, J45990, J45991 or J45998.

### **Prenatal Care in the First Trimester**

The 2020 Birth Statistical File follows NCHS guidelines in using the obstetric estimate of gestational age as the primary source of gestational age rather than the date of last normal menses as in previous files. Therefore, the 2020 data on trimester that prenatal care began are not directly comparable to data from previous years.

### **Behavioral Risk Factor Surveillance System**

All estimates are weighted using demographic information from the 10 Tennessee counties that comprise the TN Geographic Service Area.



Data Note 1) *All data are subject to limitations as explained in the data source.*

Data Note 2) *Data notes for the measures where Ballad Health is listed as the data source are detailed in the 2021 Access Measures Data Dictionary, developed by Ballad Health for TDH's understanding and review of the methodology used in calculating the values.*

# Credits

**Commissioner Morgan McDonald, MD, FACP, FAAP.**

**TDH Division of Health Planning**

- Elizabeth Jones
- Jim Mathis
- Judi Knecht
- M Sarah Elliot

**TDH Office of Informatics and Analytics**

- Nagesh Aragam
- Ben Tyndall
- Fenggang Peng

**TDH Office of Population Health Surveillance**

- Shalini Parekh
- Abhilasha Saxena
- Generosa Kakoti
- Fred Croom
- Angela Miller
- Benjamin Crumpler

**TDH Office of Vital Records and Statistics**

- Yuanchun Wang
- Alyson Holland
- Vanessa Lefler
- Jane Brittingham

**TDH Office of Communication & Media Relations**

- Sarah Tanksley

**TDH Office of Primary Prevention**

- John Vick

**Exhibit 4**



## 2021 Other (Quality) Report

Certificate of Public Advantage Other (Quality) Sub-Index Measures for Ballad Health

Tennessee Department of Health | COPA Report | June 2022



## Table of Contents

<b>Other (Quality) Sub-Index</b> .....	<b>3</b>
Introduction.....	3
Other (Quality) Sub-Index Design.....	4
Other (Quality) Data Tables for Fiscal Year 2021 .....	5
Table 1. Target Quality Measures (system- and state-level values).....	5
Table 2. Quality Monitoring Measures (system- and state-level values).....	6
Table 3. All Other (Quality) Measures (facility-level values).....	10
Table 4. Target Quality Measures with new baselines (system-level values).....	28
<b>Other (Quality) Appendices</b> .....	<b>29</b>
1. Other (Quality) <i>Data Notes</i> .....	29
<b>Credits</b> .....	<b>30</b>

# Other (Quality) Sub-Index

## ***Introduction***

The Other Sub-Index is comprised of measures to evaluate the quality of hospital and hospital-related care provided to residents at three levels: throughout Ballad Health's entire system, throughout Ballad Health's TN Geographic Service Area, and at the individual facility level.

The Institute of Medicine has defined the quality of healthcare as 'the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge'.<sup>21</sup>

Hospital quality is important for:

- Individual and population health: Measuring and monitoring hospital quality is essential to improving health outcomes and service delivery;<sup>22</sup>
- Business: Positive feedback from consumers leads to the goodwill of service providers in the market, which indirectly expands their business;<sup>23</sup>
- Cost-effectiveness: Poor quality of care, measured by medical errors in the hospital setting, account for approximately \$17B each year.<sup>24</sup>

---

<sup>21</sup> Institute of Medicine. Medicare: a strategy for quality assurance. 1. Washington, DC: National Academy Press; 1990.

<sup>22</sup> Lieberthal RD, Comer DM. What are the characteristics that explain hospital quality? A longitudinal prdit approach. *Risk Manag Insur Rev*. 2013;17(1):17-35.

<sup>23</sup> Gupta KS, Rokade V. Importance of quality in health care sector: A review. *J Health Manag*. 2016;18(1):84-94.

<sup>24</sup> Van Den Bos J, Rustagi K, Gray T, Malford M, Ziemkiewicz E, Shreve J. The \$17.1 billion problem: the annual cost of measurable medical errors. *Health Aff*. 2011; 30(4):596-603.

## ***Other (Quality) Sub-Index Design***

The purpose of the Other (Quality) Sub-Index is to evaluate the quality of hospital and hospital-related care provided to patients. The first Department Other (Quality) Report established the baseline values for the Sub-Index measures by reporting data available in 2018. Each subsequent annual reports contains updated values on each measure to track on-going changes in healthcare quality at Ballad Health facilities.

The Other (Quality) measures include quality and consumer satisfaction metrics around the following domains:

- Performance of Key Health System Divisions,
- Payer Performance,
- Employer Performance, and
- Scale, Spread, and Sustainability.

There are two sets of Quality Measures in the Other (Quality) Sub-Index. They are Target Quality Measures and Quality Monitoring Measures.

Target Quality Measures are those for which Ballad Health was expected to show improvement in quality outcomes. Table 1 of this Other (Quality) Sub-Index Report displays the Target Quality Measures at the System- and State-level for FY21.

The Quality Monitoring Measures provide a broad overview of system quality. The goal of these measures is to continually monitor Ballad Health's performance with regard to quality. The Quality Monitoring Measures at the System- and State-level for FY21 are shown on Table 2.

Details on the methodology used for calculating the values shown in this Other (Quality) Sub-Index Report are provided in Appendix 1.

## Fiscal Year 2021 Other (Quality) Sub-Index Data Tables

Ballad Health submitted FY21 values for the Other (Quality) Sub-Index to TDH in May of 2022.

The values are presented in the first three tables below at the system-, state-, and individual facility-level. These three tables display most recent fiscal year values (based on FY21 all patient data) and baseline values (based on FY17 Medicare patient data). System-level values, labeled as Ballad Health in the tables below, include data on patients served at all Ballad Health facilities. State-level values, labeled as TN Ballad Health, are on patients served at Ballad Health's Tennessee facilities.

Note: A revised set of baseline values for the 17 Target Quality Measures, that include data on all patients for Calendar Year 2017, were submitted by Ballad Health in June of 2021 and accepted by TDH in August of 2021. Because the updated baseline values provided are only at the system-level, they are reported separately, in Table 4.

**Table 1** FY21 data for Target Quality Measures at System- and State-level

Desired Performance	Measures	Ballad Health		TN Ballad Health	
		Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)
	<i>Target Quality Measures</i>				
↓	<b>PSI 3 Pressure Ulcer Rate</b>	0.29	0.24	0.21	0.26
↓	<b>PSI 6 Iatrogenic Pneumothorax Rate</b>	0.38	0.21	0.38	0.23
↓	<b>PSI 8 In Hospital Fall with Hip Fracture Rate</b>	0.10	0.08	0.10	0.06
↓	<b>PSI 9 Perioperative Hemorrhage or Hematoma Rate</b>	4.20	2.24	4.14	2.35
↓	<b>PSI 10 Postoperative Acute Kidney Injury Requiring Dialysis</b>	1.02	2.23	1.00	2.12
↓	<b>PSI 11 Postoperative Respiratory Failure Rate</b>	14.40	7.86	14.31	7.72
↓	<b>PSI 12 Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate</b>	5.35	4.18	5.42	4.31
↓	<b>PSI 13 Postoperative Sepsis Rate</b>	6.16	6.57	6.15	6.39
↓	<b>PSI 14 Postoperative Wound Dehiscence Rate</b>	2.20	1.14	2.21	1.27
↓	<b>PSI 15 Unrecognized Abdominopelvic Accidental Puncture/Laceration Rate</b>	0.90	0.45	0.91	0.51
↓	<b>CLABSI</b>	0.774	1.058	0.822	1.094
↓	<b>CAUTI</b>	0.613	0.785	0.684	0.919
↓	<b>SSI COLON Surgical Site Infection</b>	1.17	2.21	1.12	2.26
↓	<b>SSI HYST Surgical Site Infection</b>	1.00	0.73	0.87	0.80
↓	<b>MRSA</b>	0.040	0.096	0.043	0.102
↓	<b>CDIFF</b>	0.585	0.182	0.594	0.201
↑	<b>SMB: Sepsis Management Bundle</b>	56.9%	52.9%		

Table 2 FY21 data for Quality Monitoring Measures at System- and State-level

Desired Performance	Measures	Ballad Health		TN Ballad Health	
		Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)
	<b>General Information-Structural Measures</b>				
YES	ACS REGISTRY - Retired	Yes	--	Yes	--
YES	SMPART GENSURG General Surgery Registry - Retired	Yes	--	Yes	--
YES	SMPART NURSE Nursing Care Registry - Retired	Yes	--	Yes	--
YES	<b>SMSSCHECK Safe Surgery Checklist</b>	Yes	Yes	Yes	Yes
YES	<b>OP12 HIT Ability electronically receive lab results</b>	Yes	Yes	Yes	Yes
YES	<b>OP17 Tracking Clinical Results Between Visits</b>	Yes	Yes	Yes	Yes
YES	<b>OP25 Outpatient Safe Surgery Checklist</b>	Yes	Yes	Yes	Yes
	<b>Survey of Patient's Experience*</b> <i>Data had adjustments enabled, phone calibration, and skip logic applied</i>				
↑	<b>HCOMP1A P Patients who reported that their nurses "Always" communicated well</b>	82.8%	79.1%	82.8%	80.0%
↓	<b>HCOMP1U P Patients who reported that their nurses "Usually" communicated well</b>	13.6%	14.0%	13.9%	12.5%
↓	<b>HCOMP1 SNP Patients who reported that their nurses "Sometimes" or "Never" communicated well</b>	3.6%	6.9%	3.3%	7.5%
↑	<b>HCOMP2A P Patients who reported that their doctors "Always" communicated well</b>	84.1%	80.1%	83.8%	81.1%
↓	<b>HCOMP2U P Patients who reported that their doctors "Usually" communicated well</b>	11.9%	11.0%	12.4%	11.1%
↓	<b>HCOMP2 SNP Patients who reported that their doctors "Sometimes" or "Never" communicated well</b>	3.9%	8.9%	3.8%	7.8%
↑	<b>HCOMP3A P Patients who reported that they "Always" received help as soon as they wanted</b>	72.8%	66.9%	73.5%	72.1%
↓	<b>HCOMP3U P Patients who reported that they "Usually" received help as soon as they wanted</b>	20.6%	19.0%	20.6%	18.0%
↓	<b>HCOMP3 SNP Patients who reported that they "Sometimes" or "Never" received help as soon as they wanted</b>	6.6%	14.1%	6.0%	9.9%
↑	<b>HCOMP4A P Patients who reported that their pain was "Always" well controlled - Suspended</b>	74.1%	--	74.6%	--
↓	<b>HCOMP4U P Patients who reported that their pain was "Usually" well controlled - Suspended</b>	19.6%	--	19.3%	--
↓	<b>HCOMP4 SNP Patients who reported that their pain was "Sometimes" or "Never" well controlled - Suspended</b>	6.3%	--	6.2%	--
↑	<b>HCOMP5A P Patients who reported that staff "Always" explained about medicines before giving it to them</b>	68.1%	67.7%	67.8%	66.0%
↓	<b>HCOMP5U P Patients who reported that staff "Usually" explained about medicines before giving it to them</b>	15.9%	14.6%	16.5%	16.2%



Desired Performance	Measures	Ballad Health		TN Ballad Health	
		Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)
↓	HCOMP5 SNP Patients who reported that staff "Sometimes" or "Never" explained about medicines before giving it to them	16.0%	17.6%	15.7%	17.8%
↑	HCOMP6Y P Patients who reported that YES, they were given information about what to do during their recovery at home	87.2%	85.6%	87.1%	85.4%
↓	HCOMP6N P Patients who reported that NO, they were not given information about what to do during their recovery at home	12.8%	14.4%	12.9%	14.6%
↑	HCOMP7SA Patients who "Strongly Agree" they understood their care when they left the hospital	54.5%	49.0%	55.3%	52.3%
↓	HCOMP7A Patients who "Agree" they understood their care when they left the hospital	40.8%	43.5%	39.7%	39.9%
↓	HCOMP7D SD Patients who "Disagree" or "Strongly Disagree" they understood their care when they left the hospital	4.8%	7.5%	5.0%	7.8%
↑	HCLEAN HSPAP Patients who reported that their room and bathroom were "Always" clean	73.9%	75.3%	74.6%	74.2%
↓	HCLEAN HSPUP Patients who reported that their room and bathroom were "Usually" clean	17.2%	13.8%	17.0%	13.6%
↓	HCLEAN HSPSNP Patients who reported that their room and bathroom were "Sometimes" or "Never" clean	8.9%	10.8%	8.5%	12.2%
↑	HQUIETHSP AP Patients who reported that the area around their room was "Always" quiet at night	66.5%	63.5%	67.4%	63.6%
↓	HQUIETHSP UP Patients who reported that the area around their room was "Usually" quiet at night	26.9%	23.6%	26.3%	24.2%
↓	HQUIETHSP SNP Patients who reported that the area around their room was "Sometimes" or "Never" quiet at night	6.6%	12.9%	6.4%	12.2%
↓	HHSP RATING06 Patients who gave their hospital a rating of 6 or lower on a scale from 0 (lowest) to 10 (highest)	7.8%	13.4%	7.6%	12.0%
↓	HHSP RATING78 Patients who gave their hospital a rating of 7 or 8 on a scale from 0 (lowest) to 10 (highest)	18.9%	16.9%	17.4%	17.1%
↑	HHSP RATING910 Patients who gave their hospital a rating of 9 or 10 on a scale from 0 (lowest) to 10 (highest)	73.3%	69.7%	75.1%	70.9%
↑	HRECMND DY Patients who reported YES, they would definitely recommend the hospital	73.7%	66.4%	75.9%	66.6%
↓	HRECMND PY Patients who reported YES, they would probably recommend the hospital	21.5%	22.9%	19.5%	23.1%
↓	HRECMND DN Patients who reported NO, they would probably not or definitely not recommend the hospital	4.8%	10.7%	4.6%	10.3%

Desired Performance	Measures	Ballad Health		TN Ballad Health	
		Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)
	<b>Cataract Surgery Outcome %</b>				
	OP31 Cataracts Improvement- Voluntary Reporting	--	--	--	--
	<b>Colonoscopy Followup%</b>				
↑	<b>OP29 Avg Risk Polyp Surveillance</b>	76.1%	96.9%	80.8%	96.7%
↑	OP30 High risk Polyp Surveillance - Retired	77.7%	--	71.8%	--
	<b>Heart Attack</b>				
↑	OP4 Aspirin at Arrival AMI Chest Pain - Retired	0.97	--	0.98	--
↓	OP3b Median Time to Transfer AMI - Retired	47.50	--	65.00	--
↓	OP5 Median Time to ECG AMI and Chest Pain - Retired	5.22	--	7.10	--
↑	OP2 Fibrinolytic Therapy 30 minutes - Retired	0.00	--	--	--
	<b>Stroke Care %</b>				
↑	STK4 Thrombolytic Therapy - Retired	83.0%	--	83.0%	--
	<b>Emergency Department Throughput</b>				
	<b>EDV Emergency Department Volume</b>	--	--	--	--
↓	<b>Median Time from ED Arrival to Transport for Admitted Patients (ED1)</b>	227.3	365.9	231.5	411.2
↓	<b>ED2b ED Decision to Transport</b>	69.0	161.3	90.0	191.8
↓	<b>Median Time from ED Arrival to Departure for Outpatients (18b)</b>	124.5	151.9	124.0	155.2
↓	OP20 Door to Diagnostic Evaluation - Retired	15.09	--	--	--
↓	OP21 Time to pain medication for long bone fractures - Retired	37.84	--	--	--
↓	<b>OP22 Left without being seen</b>	0.9%	1.6%	0.9%	1.6%
↑	<b>OP23 Head CT stroke patients</b>	84.7%	69.6%	89.5%	61.0%
	<b>Preventive Care %</b>				
↑	<b>IMM3OP27 FACADHPCT HCW Influenza Vaccination - Seasonal</b>	97.0%	98.0%	97.0%	98.0%
↑	IMM2 Immunization for Influenza - Retired	97.4%	--	96.9%	--
	<b>Blood Clot Prevention/Treatment</b>				
	VTE5 Warfarin Therapy at Discharge - Voluntary Reporting	--	--	--	--
↓	VTE6 HAC VTE - Retired	0.02	--	0.02	--
	<b>Pregnancy and Delivery Care %</b>				
↓	<b>PC01 Elective Delivery</b>	0.56%	2.17%	0.00%	1.54%
	<b>Surgical Complications Rate</b>				
↓	<b>Hip and Knee Complications</b>	0.03	0.00	0.03	0.00
↓	<b>PSI4SURG COMP Death rate among surgical patients with serious treatable complications</b>	140.60	182.33	135.72	189.53
↓	<b>PSI90 Complications / patient safety for selected indicators</b>	0.83	0.95	0.92	0.96

Desired Performance	Measures	Ballad Health		TN Ballad Health	
		Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)
	<b>Readmissions 30 Days Rate%</b>				
↓	READM30 AMI Acute myocardial infarction (AMI) 30day readmission rate	12.9%	13.6%	12.6%	13.2%
↓	READM30 CABG Coronary artery bypass graft (CABG) surgery 30day readmission rate	8.9%	10.6%	8.9%	10.6%
↓	READM30 COPD Chronic obstructive pulmonary disease 30day readmission rate	18.2%	21.2%	17.8%	21.4%
↓	READM30HF Heart Failure 30Day readmissions rate	20.5%	24.5%	19.7%	24.2%
↓	READM30 HIPKNEE 30day readmission rate following elective THA / TKA	3.8%	4.9%	3.4%	4.5%
↓	READM30 HOSPWIDE 30day hospitalwide allcause unplanned readmission	12.0%	14.7%	12.3%	14.5%
↓	READM30PN Pneumonia 30day readmission rate	17.7%	18.5%	17.0%	18.4%
↓	READM30 STK Stroke 30day readmission rate	9.0%	11.5%	9.4%	11.4%
	<b>Mortality 30 Days Death Rate %</b>				
↓	MORT30AMI Acute myocardial infarction (AMI) 30day mortality rate	4.7%	6.2%	7.1%	6.6%
↓	MORT30 CABG Coronary artery bypass graft surgery 30day mortality rate	2.0%	2.9%	2.0%	2.9%
↓	MORT30 COPD 30day mortality rate COPD patients	1.8%	3.3%	2.8%	3.5%
↓	MORT30HF Heart failure 30day mortality rate	3.9%	4.1%	5.3%	4.3%
↓	MORT30PN Pneumonia 30day mortality rate	4.7%	8.0%	7.2%	8.6%
↓	MORT30STK Stroke 30day mortality rate	8.2%	6.9%	10.4%	7.3%
	<b>Use of Medical Imaging Outpatient</b>				
	OP8 MRI Lumbar Spine for Low Back Pain - Annual	0.41	0.39	0.41	0.41
	OP10 Abdomen CT Use of Contrast Material - Annual	0.06	0.03	0.07	0.04
	OP13 Outpatients who got cardiac imaging stress tests before lowrisk outpatient surgery - Annual	0.04	0.14	0.04	0.17
	OP9 Mammography Followup Rates - Retired	0.07	--	0.08	--
	OP11 Thorax CT Use of Contrast Material - Retired	0.01	--	0.01	--
	OP14 Outpatients with brain CT scans who got a sinus CT scan at the same time - Retired	0.02	--	0.01	--

Table 2 FY21 data for the Other (Quality) Sub-Index by individual facility

Desired Performance	Measures	Holston Valley Medical Center		Johnson City Medical Center*		Bristol Regional Medical Center		Indian Path Community Hospital		Greenville Community Hospital <sup>+</sup>		Franklin Woods Community Hospital	
		Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)
	<b>Target Quality Measures</b>												
↓	PSI 3 Pressure Ulcer Rate	0.36	0.00	0.07	0.53	0.35	0.33	0.16	0.00	0.18	0.00	0.20	0.00
↓	PSI 6 Iatrogenic Pneumothorax Rate	0.51	0.38	0.33	0.19	0.32	0.08	0.41	0.00	0.38	0.28	0.38	0.52
↓	PSI 7 Central Venous Catheter-Related Blood Stream Infection Rate - Retired	0.16	--	0.00	--	0.09	--	0.14	--	0.15	--	0.15	--
↓	PSI 8 In Hospital Fall with Hip Fracture Rate	0.10	0.07	0.09	0.00	0.09	0.00	0.10	0.00	0.10	0.62	0.10	0.00
↓	PSI 9 Perioperative Hemorrhage or Hematoma Rate	4.04	1.31	3.60	1.32	4.72	3.96	4.78	9.13	4.52	8.39	4.37	0.00
↓	PSI 10 Postoperative Acute Kidney Injury Requiring Dialysis	0.87	1.67	1.08	1.99	0.97	4.66	1.10	0.00	1.10	0.00	1.09	0.00
↓	PSI 11 Postoperative Respiratory Failure Rate	16.84	12.12	11.98	6.52	16.50	3.59	12.36	0.00	8.98	0.00	12.09	15.82
↓	PSI 12 Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate	5.78	3.12	5.90	5.81	4.59	2.97	5.75	4.41	5.06	4.81	3.72	8.17
↓	PSI 13 Postoperative Sepsis Rate	5.97	5.87	8.30	6.17	3.65	8.24	5.90	0.00	5.43	7.63	6.54	10.00
↓	PSI 14 Postoperative Wound Dehiscence Rate	2.56	0.96	2.01	1.90	2.03	0.00	2.21	0.00	2.21	3.56	2.16	2.31
↓	PSI 15 Unrecognized Abdominopelvic Accidental Puncture/Laceration Rate	0.80	0.82	0.79	0.00	1.22	0.43	0.86	0.00	0.86	1.32	0.85	0.00
↓	CLABSI	0.682	0.584	1.080	2.053	1.202	1.303	0.000	0.000	0.000	0.000	0.000	0.000
↓	CAUTI	0.938	0.777	0.997	1.393	0.824	1.282	0.000	0.000	0.000	0.197	0.428	0.000
↓	SSI COLON Surgical Site Infection	1.36	2.00	1.91	1.23	0.00	1.30	0.00	3.23	1.16	0.00	1.50	4.46
↓	SSI HYST Surgical Site Infection	0.64	1.31	2.50	0.00	0.00	0.00	7.14	0.00	--	--	0.00	0.00
↓	MRSA	0.012	0.091	0.055	0.135	0.056	0.153	0.080	0.000	0.000	0.000	0.039	0.000
↓	CDIFF	0.741	0.216	0.531	0.280	0.719	0.083	0.813	0.602	0.280	0.111	0.259	0.136
↑	SMB: Sepsis Management Bundle	50.0%	53.3%	62.0%	40.0%	58.1%	49.6%	79.6%	65.5%	52.8%	29.2%	78.8%	56.5%

\* includes Woodridge Psychiatric Hospital & Niswonger Children's Hospital

<sup>+</sup> includes Greenville Community Hospital East & Greenville Community Hospital West

Desired Performance	Measures	Holston Valley Medical Center		Johnson City Medical Center*		Bristol Regional Medical Center		Indian Path Community Hospital		Greeneville Community Hospital <sup>†</sup>		Franklin Woods Community Hospital	
		Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)
	<b>General Information-Structural Measures</b>												
YES	ACS REGISTRY - Retired	Yes	--	Yes	--	Yes	--	Yes	--	No	--	Yes	--
YES	SMPART GENSURG General Surgery Registry - Retired	Yes	--	Yes	--	Yes	--	Yes	--	Yes	--	Yes	--
YES	SMPART NURSE Nursing Care Registry - Retired	No	--	Yes	--	No	--	Yes	--	Yes	--	Yes	--
YES	<b>SMSSCHECK Safe Surgery Checklist</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
YES	<b>OP12 HIT Ability electronically receive lab results</b>	No	No	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes
YES	<b>OP17 Tracking Clinical Results Between Visits</b>	No	No	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes
YES	<b>OP25 Outpatient Safe Surgery Checklist</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	<i>Survey of Patient's Experience* Data had adjustments enabled, phone calibration, and skip logic applied</i>												
↑	<b>HCOMP1A P Patients who reported that their nurses "Always" communicated well</b>	81.0%	72.0%	77.0%	73.8%	82.0%	71.9%	82.0%	81.7%	81.0%	73.9%	84.0%	82.5%
↓	<b>HCOMP1U P Patients who reported that their nurses "Usually" communicated well</b>	16.0%	13.6%	17.0%	18.1%	14.0%	13.9%	14.0%	14.9%	16.0%	12.2%	13.0%	14.8%
↓	<b>HCOMP1 SNP Patients who reported that their nurses "Sometimes" or "Never" communicated well</b>	3.0%	14.5%	6.0%	8.1%	4.0%	14.2%	4.0%	3.4%	3.0%	13.9%	3.0%	2.7%
↑	<b>HCOMP2A P Patients who reported that their doctors "Always" communicated well</b>	82.0%	76.0%	77.0%	73.8%	84.0%	73.7%	85.0%	86.4%	85.0%	76.7%	84.0%	81.7%
↓	<b>HCOMP2U P Patients who reported that their doctors "Usually" communicated well</b>	15.0%	12.8%	18.0%	17.8%	14.0%	14.1%	10.0%	9.9%	13.0%	12.3%	15.0%	14.5%
↓	<b>HCOMP2 SNP Patients who reported that their doctors "Sometimes" or "Never" communicated well</b>	3.0%	11.3%	5.0%	8.4%	2.0%	12.2%	5.0%	3.7%	2.0%	11.0%	4.0%	3.8%
↑	<b>HCOMP3A P Patients who reported that they "Always" received help as soon as they wanted</b>	66.0%	55.2%	66.0%	58.0%	69.0%	60.4%	65.0%	67.4%	73.0%	63.5%	72.0%	67.1%
↓	<b>HCOMP3U P Patients who reported that they "Usually" received help as soon as they wanted</b>	26.0%	25.1%	25.0%	26.8%	23.0%	22.9%	25.0%	23.1%	22.0%	19.5%	21.0%	23.3%
↓	<b>HCOMP3 SNP Patients who reported that they "Sometimes" or "Never" received help as soon as they wanted</b>	8.0%	19.7%	9.0%	15.1%	8.0%	16.7%	10.0%	9.5%	5.0%	17.1%	7.0%	9.6%
↑	<b>HCOMP4A P Patients who reported that their pain was "Always" well controlled - Suspended</b>	73.0%	--	66.0%	--	74.0%	--	72.0%	--	70.0%	--	76.0%	--
↓	<b>HCOMP4U P Patients who reported that their pain was "Usually" well controlled - Suspended</b>	21.0%	--	25.0%	--	21.0%	--	22.0%	--	22.0%	--	19.0%	--
↓	<b>HCOMP4 SNP Patients who reported that their pain was "Sometimes" or "Never" well controlled - Suspended</b>	6.0%	--	9.0%	--	5.0%	--	6.0%	--	8.0%	--	5.0%	--

\* includes Woodridge Psychiatric Hospital & Niswonger Children's Hospital

† includes Greeneville Community Hospital East & Greeneville Community Hospital West

Desired Performance	Measures	Holston Valley Medical Center		Johnson City Medical Center*		Bristol Regional Medical Center		Indian Path Community Hospital		Greenville Community Hospital <sup>†</sup>		Franklin Woods Community Hospital	
		Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)
↑	HCOMP5A P Patients who reported that staff "Always" explained about medicines before giving it to them	63.0%	60.0%	60.0%	55.2%	67.0%	58.3%	63.0%	64.8%	61.0%	61.3%	68.0%	63.3%
↓	HCOMP5U P Patients who reported that staff "Usually" explained about medicines before giving it to them	17.0%	15.2%	18.0%	19.2%	17.0%	16.3%	18.0%	13.0%	20.0%	15.0%	16.0%	18.5%
↓	HCOMP5 SNP Patients who reported that staff "Sometimes" or "Never" explained about medicines before giving it to them	20.0%	24.9%	22.0%	25.6%	16.0%	25.5%	19.0%	22.2%	19.0%	23.7%	16.0%	18.2%
↑	HCOMP6Y P Patients who reported that YES, they were given information about what to do during their recovery at home	87.0%	84.2%	84.0%	84.3%	88.0%	84.4%	86.0%	83.8%	88.0%	83.2%	88.0%	86.7%
↓	HCOMP6N P Patients who reported that NO, they were not given information about what to do during their recovery at home	13.0%	15.8%	16.0%	15.7%	12.0%	15.6%	14.0%	16.2%	12.0%	16.8%	12.0%	13.3%
↑	HCOMP7SA Patients who "Strongly Agree" they understood their care when they left the hospital	54.0%	46.6%	48.0%	45.9%	53.0%	44.9%	55.0%	52.7%	50.0%	45.3%	61.0%	56.4%
↓	HCOMP7A Patients who "Agree" they understood their care when they left the hospital	40.0%	46.9%	47.0%	44.8%	42.0%	48.0%	40.0%	41.4%	45.0%	46.3%	34.0%	40.2%
↓	HCOMP7D SD Patients who "Disagree" or "Strongly Disagree" they understood their care when they left the hospital	6.0%	6.5%	5.0%	9.3%	5.0%	7.1%	5.0%	5.9%	5.0%	8.4%	5.0%	3.4%
↑	HCLEAN HSPAP Patients who reported that their room and bathroom were "Always" clean	66.0%	56.3%	62.0%	63.2%	62.0%	53.3%	74.0%	78.7%	70.0%	52.7%	83.0%	73.9%
↓	HCLEAN HSPUP Patients who reported that their room and bathroom were "Usually" clean	21.0%	18.0%	24.0%	20.8%	22.0%	20.6%	16.0%	13.3%	18.0%	20.0%	13.0%	17.8%
↓	HCLEAN HSPSNP Patients who reported that their room and bathroom were "Sometimes" or "Never" clean	13.0%	25.7%	14.0%	16.0%	16.0%	26.1%	10.0%	8.0%	12.0%	27.3%	4.0%	8.3%
↑	HQUIETHSP AP Patients who reported that the area around their room was "Always" quiet at night	63.0%	49.9%	52.0%	47.1%	65.0%	54.6%	66.0%	68.1%	61.0%	52.2%	74.0%	73.8%
↓	HQUIETHSP UP Patients who reported that the area around their room was "Usually" quiet at night	29.0%	26.4%	37.0%	35.5%	28.0%	24.6%	28.0%	25.0%	30.0%	21.8%	22.0%	21.5%
↓	HQUIETHSP SNP Patients who reported that the area around their room was "Sometimes" or "Never" quiet at night	8.0%	23.7%	11.0%	17.4%	7.0%	20.8%	6.0%	6.9%	9.0%	26.0%	4.0%	4.7%
↓	HHSP RATING06 Patients who gave their hospital a rating of 6 or lower on a scale from 0 (lowest) to 10 (highest)	7.0%	15.7%	10.0%	18.0%	7.0%	16.6%	8.0%	9.5%	6.0%	18.2%	4.0%	5.7%

\* includes Woodridge Psychiatric Hospital & Niswonger Children's Hospital

† includes Greenville Community Hospital East & Greenville Community Hospital West

Desired Performance	Measures	Holston Valley Medical Center		Johnson City Medical Center*		Bristol Regional Medical Center		Indian Path Community Hospital		Greenville Community Hospital <sup>†</sup>		Franklin Woods Community Hospital	
		Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)
↓	HHSP RATING78 Patients who gave their hospital a rating of 7 or 8 on a scale from 0 (lowest) to 10 (highest)	19.0%	25.1%	24.0%	24.2%	16.0%	22.6%	19.0%	22.1%	17.0%	22.6%	14.0%	16.9%
↑	HHSP RATING910 Patients who gave their hospital a rating of 9 or 10 on a scale from 0 (lowest) to 10 (highest)	74.0%	59.1%	66.0%	57.8%	77.0%	60.8%	73.0%	68.4%	77.0%	59.2%	82.0%	77.4%
↑	HRECMND DY Patients who reported YES, they would definitely recommend the hospital	78.0%	61.1%	65.0%	57.8%	78.0%	60.1%	78.0%	69.7%	76.0%	55.3%	85.0%	80.3%
↓	HRECMND PY Patients who reported YES, they would probably recommend the hospital	19.0%	25.8%	29.0%	29.6%	19.0%	25.6%	17.0%	22.2%	22.0%	29.5%	13.0%	16.3%
↓	HRECMND DN Patients who reported NO, they would probably not or definitely not recommend the hospital	3.0%	13.1%	6.0%	12.6%	3.0%	14.4%	5.0%	8.1%	2.0%	15.2%	2.0%	3.4%
	<b>▣ Cataract Surgery Outcome %</b>												
	OP31 Cataracts Improvement- Voluntary Reporting	--	--	--	--	--	--	--	--	--	--	--	--
	<b>▣ Colonoscopy Followup%</b>												
↑	OP29 Avg Risk Polyp Surveillance	--	100.0%	67.0%	100.0%	57.0%	80.0%	--	66.7%	86.0%	100.0%	78.0%	100.0%
↑	OP30 High risk Polyp Surveillance - Retired	62.0%	--	68.0%	--	46.0%	--	73.0%	--	89.0%	--	100.0%	--
	<b>▣ Heart Attack</b>												
↑	OP4 Aspirin at Arrival AMI Chest Pain - Retired	--	--	--	--	--	--	--	--	--	--	--	--
↓	OP3b Median Time to Transfer AMI - Retired	--	--	--	--	--	--	--	--	--	--	--	--
↓	OP5 Median Time to ECG AMI and Chest Pain - Retired	--	--	--	--	--	--	--	--	--	--	--	--
↑	OP2 Fibrinolytic Therapy 30 minutes - Retired	--	--	--	--	--	--	--	--	--	--	--	--
	<b>▣ Stroke Care %</b>												
↑	STK4 Thrombolytic Therapy - Retired	--	--	--	--	--	--	--	--	--	--	--	--
	<b>▣ Emergency Department Throughput</b>												
	<b>EDV Emergency Department Volume</b>	Very High	Very High	Very High	Very High	High	High	Medium	Medium	Medium	Medium	Medium	Medium
↓	Median Time from ED Arrival to Transport for Admitted Patients (ED1)	340.0	794.7	245.0	359.0	255.0	390.9	220.0	468.7	206.0	431.5	234.0	378.8
↓	ED2b ED Decision to Transport	186.0	509.6	95.0	144.1	96.0	187.4	78.0	223.0	48.9	207.4	70.0	173.8
↓	Median Time from ED Arrival to Departure for Outpatients (18b)	153.0	212.0	152.0	186.3	147.0	183.8	121.0	147.3	124.0	191.9	130.0	182.2
↓	OP20 Door to Diagnostic Evaluation - Retired	--	--	--	--	--	--	--	--	--	--	--	--
↓	OP21 Time to pain medication for long bone fractures - Retired	--	--	--	--	--	--	--	--	--	--	--	--
↓	OP22 Left without being seen	1.0%	1.3%	1.0%	1.1%	1.0%	2.3%	1.0%	1.9%	1.0%	3.1%	1.0%	3.0%
↑	OP23 Head CT stroke patients	79.0%	84.2%	--	0.0%	--	75.0%	--	0.0%	100.0%	7.1%	--	100.0%

\* includes Woodridge Psychiatric Hospital & Niswonger Children's Hospital

† includes Greenville Community Hospital East & Greenville Community Hospital West

Desired Performance	Measures	Holston Valley Medical Center		Johnson City Medical Center*		Bristol Regional Medical Center		Indian Path Community Hospital		Greeneville Community Hospital <sup>†</sup>		Franklin Woods Community Hospital	
		Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)
	<b>Preventive Care %</b>												
↑	IMM3OP27 FACADHPCT HCW Influenza Vaccination - Seasonal	92.0%	98.0%	100.0%	99.0%	99.0%	99.0%	98.0%	98.0%	99.0%	98.0%	98.0%	98.0%
↑	IMM2 Immunization for Influenza - Retired	95.0%	--	98.0%	--	96.0%	--	99.0%	--	96.0%	--	99.0%	--
	<b>Blood Clot Prevention/Treatment</b>												
	VTE5 Warfarin Therapy at Discharge - Voluntary Reporting	--	--	--	--	--	--	--	--	--	--	--	--
↓	VTE6 HAC VTE - Retired	0.03	--	0.00	--	0.03	--	--	--	--	--	--	--
	<b>Pregnancy and Delivery Care %</b>												
↓	PC01 Elective Delivery	0.00%	--	0.00%	0.00%	0.00%	3.45%	0.00%	3.57%	0.00%	0.00%	0.00%	0.00%
	<b>Surgical Complications Rate</b>												
↓	Hip and Knee Complications	0.03	0.00	0.03	0.00	0.03	0.00	0.04	--	0.03	0.00	--	--
↓	PSI4SURG COMP Death rate among surgical patients with serious treatable complications	130.24	212.96	153.53	213.21	123.34	162.34	135.61	0.00	135.88	175.00	154.45	45.45
↓	PSI90 Complications / patient safety for selected indicators	1.07	1.03	0.89	1.10	0.81	1.00	0.87	0.82	1.09	0.81	0.82	0.98
	<b>Readmissions 30 Days Rate%</b>												
↓	READM30 AMI Acute myocardial infarction (AMI) 30day readmission rate	8.5%	10.9%	13.5%	14.3%	8.9%	14.1%	10.4%	0.0%	16.6%	0.0%	3.6%	41.7%
↓	READM30 CABG Coronary artery bypass graft (CABG) surgery 30day readmission rate	8.0%	11.0%	8.7%	8.5%	10.0%	11.9%	--	--	--	--	--	--
↓	READM30 COPD Chronic obstructive pulmonary disease 30day readmission rate	19.7%	21.5%	20.1%	22.6%	20.1%	22.3%	18.4%	24.4%	19.8%	19.8%	10.1%	20.4%
↓	READM30HF Heart Failure 30Day readmissions rate	21.6%	20.5%	22.6%	26.4%	22.6%	26.7%	18.1%	18.8%	24.2%	21.9%	9.7%	25.3%
↓	READM30 HIPKNEE 30day readmission rate following elective THA / TKA	4.2%	2.9%	3.0%	6.2%	1.8%	4.9%	3.4%	--	3.8%	0.0%	--	--
↓	READM30 HOSPWIDE 30day hospitalwide allcause unplanned readmission rate	12.7%	14.8%	10.6%	14.5%	13.1%	15.5%	9.5%	8.8%	16.3%	15.1%	4.6%	11.2%
↓	READM30PN Pneumonia 30day readmission rate	16.4%	16.5%	16.0%	21.0%	14.7%	16.7%	14.0%	25.0%	18.0%	14.7%	16.3%	13.7%
↓	READM30 STK Stroke 30day readmission rate	14.6%	9.7%	9.4%	13.6%	13.4%	9.3%	6.2%	10.0%	12.1%	5.0%	0.0%	0.0%

\* includes Woodridge Psychiatric Hospital & Niswonger Children's Hospital

<sup>†</sup> includes Greeneville Community Hospital East & Greeneville Community Hospital West



Desired Performance	Measures	Holston Valley Medical Center		Johnson City Medical Center*		Bristol Regional Medical Center		Indian Path Community Hospital		Greeneville Community Hospital <sup>+</sup>		Franklin Woods Community Hospital	
		Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)
	<b>Mortality 30 Days Death Rate %</b>												
↓	MORT30AMI Acute myocardial infarction (AMI) 30day mortality rate	4.5%	5.4%	4.8%	7.3%	3.8%	6.7%	4.5%	0.0%	14.7%	20.0%	--	0.0%
↓	MORT30 CABG Coronary artery bypass graft surgery 30day mortality rate	1.4%	5.0%	1.2%	2.5%	3.3%	1.1%	--	--	--	--	--	--
↓	MORT30 COPD 30day mortality rate COPD patients	1.4%	4.7%	2.3%	5.5%	0.0%	3.0%	2.0%	2.4%	6.9%	2.2%	2.6%	0.0%
↓	MORT30HF Heart failure 30day mortality rate	3.8%	4.3%	4.2%	3.3%	3.7%	5.0%	2.2%	6.1%	15.4%	6.4%	2.1%	3.9%
↓	MORT30PN Pneumonia 30day mortality rate	2.6%	8.4%	5.1%	10.3%	3.4%	10.5%	2.0%	1.0%	19.9%	6.5%	2.0%	8.9%
↓	MORT30STK Stroke 30day mortality rate	17.4%	5.0%	7.7%	11.1%	15.0%	3.1%	3.3%	0.0%	14.1%	0.0%	--	0.0%
	<b>Use of Medical Imaging Outpatient</b>												
	OP8 MRI Lumbar Spine for Low Back Pain - Annual	0.43	0.42	0.35	--	0.43	0.41	--	--	0.48	--	0.34	--
	OP10 Abdomen CT Use of Contrast Material - Annual	0.14	0.03	0.05	0.02	0.04	0.01	0.08	0.01	0.07	0.02	0.13	0.03
	OP13 Outpatients who got cardiac imaging stress tests before lowrisk outpatient surgery - Annual	0.04	0.04	0.03	0.05	0.04	0.55	0.02	--	0.04	0.03	0.02	0.00
	OP9 Mammography Followup Rates - Retired	0.03	--	0.06	--	0.09	--	0.06	--	0.18	--	--	--
	OP11 Thorax CT Use of Contrast Material - Retired	0.00	--	0.00	--	0.00	--	0.00	--	0.03	--	0.00	--
	OP14 Outpatients with brain CT scans who got a sinus CT scan at the same time - Retired	0.01	--	0.03	--	0.01	--	--	--	0.02	--	--	--

\* includes Woodridge Psychiatric Hospital & Niswonger Children's Hospital

<sup>+</sup> includes Greeneville Community Hospital East & Greeneville Community Hospital West

Desired Performance	Measures	Sycamore Shoals Hospital		Unicoi County Hospital		Hawkins County Memorial Hospital		Johnston Memorial Hospital		Lonesome Pine Hospital**	
		Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)
	<b>Target Quality Measures</b>										
↓	PSI 3 Pressure Ulcer Rate	0.19	0.00	0.24	0.00	0.23	0.00	0.97	0.32	0.21	0.00
↓	PSI 6 Iatrogenic Pneumothorax Rate	0.38	0.00	0.39	0.00	0.39	0.00	0.34	0.00	0.44	0.00
↓	PSI 7 Central Venous Catheter-Related Blood Stream Infection Rate - Retired	0.00	--	--	--	--	--	0.13	--	0.16	--
↓	PSI 8 In Hospital Fall with Hip Fracture Rate	0.10	0.00	0.10	0.00	0.10	0.00	0.10	0.00	0.10	2.74
↓	PSI 9 Perioperative Hemorrhage or Hematoma Rate	4.66	4.99	4.75	--	0.00	--	4.50	1.38	4.69	0.00
↓	PSI 10 Postoperative Acute Kidney Injury Requiring Dialysis	1.11	0.00	--	--	--	--	1.29	8.93	1.12	--
↓	PSI 11 Postoperative Respiratory Failure Rate	13.37	0.00	--	--	--	--	16.39	10.00	10.64	--
↓	PSI 12 Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate	3.98	0.00	4.26	--	--	--	4.96	2.50	4.14	0.00
↓	PSI 13 Postoperative Sepsis Rate	6.67	0.00	--	--	--	--	6.59	20.20	5.82	--
↓	PSI 14 Postoperative Wound Dehiscence Rate	--	0.00	--	0.00	--	0.00	2.10	0.00	2.23	--
↓	PSI 15 Unrecognized Abdominopelvic Accidental Puncture/Laceration Rate	--	3.19	--	0.00	--	0.00	0.83	0.00	0.87	0.00
↓	CLABSI	0.900	0.000	0.000	0.000	0.000	0.000	0.008	1.416	0.000	0.000
↓	CAUTI	0.000	0.607	0.000	0.000	0.000	0.000	0.000	0.217	0.000	0.000
↓	SSI COLON Surgical Site Infection	3.23	3.23	--	--	0.00	--	0.00	2.90	0.00	--
↓	SSI HYST Surgical Site Infection	0.00	0.00	--	--	--	--	0.00	0.00	5.56	--
↓	MRSA	0.067	0.000	0.000	0.000	0.000	0.000	0.000	0.071	0.000	0.000
↓	CDIFF	0.604	0.139	0.000	0.000	0.000	0.000	1.052	0.074	0.315	0.287
↑	SMB: Sepsis Management Bundle	72.0%	67.5%	61.8%	73.3%	62.0%	72.2%	54.8%	56.0%	57.5%	51.1%

\*\* includes Mountain View Regional Hospital

Desired Performance	Measures	Sycamore Shoals Hospital		Unicoi County Hospital		Hawkins County Memorial Hospital		Johnston Memorial Hospital		Lonesome Pine Hospital**	
		Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)
	<b>General Information-Structural Measures</b>										
YES	ACS REGISTRY - Retired	Yes	--	No	--	No	--	Yes	--	No	--
YES	SMPART GENSURG General Surgery Registry - Retired	Yes	--	Yes	--	Yes	--	Yes	--	Yes	--
YES	SMPART NURSE Nursing Care Registry - Retired	Yes	--	No	--	No	--	No	--	No	--
YES	<b>SMSSCHECK Safe Surgery Checklist</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
YES	<b>OP12 HIT Ability electronically receive lab results</b>	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	No
YES	<b>OP17 Tracking Clinical Results Between Visits</b>	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes
YES	<b>OP25 Outpatient Safe Surgery Checklist</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No
	<b>Survey of Patient's Experience*</b> <i>Data had adjustments enabled, phone calibration, and skip logic applied</i>										
↑	<b>HCOMP1A P Patients who reported that their nurses "Always" communicated well</b>	85.0%	78.8%	79.0%	80.9%	87.0%	81.3%	77.0%	77.2%	83.0%	75.7%
↓	<b>HCOMP1U P Patients who reported that their nurses "Usually" communicated well</b>	12.0%	15.1%	18.0%	16.8%	11.0%	7.7%	17.0%	16.5%	12.0%	13.4%
↓	<b>HCOMP1 SNP Patients who reported that their nurses "Sometimes" or "Never" communicated well</b>	3.0%	6.1%	3.0%	2.4%	2.0%	10.9%	6.0%	6.3%	5.0%	10.8%
↑	<b>HCOMP2A P Patients who reported that their doctors "Always" communicated well</b>	86.0%	75.7%	80.0%	81.6%	92.0%	82.3%	80.0%	76.2%	82.0%	75.2%
↓	<b>HCOMP2U P Patients who reported that their doctors "Usually" communicated well</b>	11.0%	17.6%	12.0%	15.8%	7.0%	5.3%	14.0%	16.8%	13.0%	10.0%
↓	<b>HCOMP2 SNP Patients who reported that their doctors "Sometimes" or "Never" communicated well</b>	3.0%	6.7%	8.0%	2.6%	1.0%	12.4%	6.0%	7.1%	5.0%	14.9%
↑	<b>HCOMP3A P Patients who reported that they "Always" received help as soon as they wanted</b>	82.0%	63.6%	71.0%	85.3%	78.0%	77.8%	60.0%	59.2%	72.0%	64.4%
↓	<b>HCOMP3U P Patients who reported that they "Usually" received help as soon as they wanted</b>	13.0%	24.9%	23.0%	14.4%	20.0%	17.0%	27.0%	25.8%	20.0%	15.2%
↓	<b>HCOMP3 SNP Patients who reported that they "Sometimes" or "Never" received help as soon as they wanted</b>	5.0%	11.5%	6.0%	0.2%	2.0%	5.2%	13.0%	15.1%	8.0%	20.3%
↑	<b>HCOMP4A P Patients who reported that their pain was "Always" well controlled - Suspended</b>	75.0%	--	71.0%	--	81.0%	--	68.0%	--	75.0%	--
↓	<b>HCOMP4U P Patients who reported that their pain was "Usually" well controlled - Suspended</b>	19.0%	--	25.0%	--	13.0%	--	23.0%	--	18.0%	--
↓	<b>HCOMP4 SNP Patients who reported that their pain was "Sometimes" or "Never" well controlled - Suspended</b>	6.0%	--	4.0%	--	6.0%	--	9.0%	--	7.0%	--

\*\* includes Mountain View Regional Hospital

Desired Performance	Measures	Sycamore Shoals Hospital		Unicoi County Hospital		Hawkins County Memorial Hospital		Johnston Memorial Hospital		Lonesome Pine Hospital**	
		Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)
↑	HCOMP5A P Patients who reported that staff "Always" explained about medicines before giving it to them	73.0%	60.2%	68.0%	76.8%	83.0%	48.3%	61.0%	57.3%	71.0%	64.1%
↓	HCOMP5U P Patients who reported that staff "Usually" explained about medicines before giving it to them	14.0%	15.8%	12.0%	9.6%	10.0%	35.3%	16.0%	17.7%	13.0%	16.1%
↓	HCOMP5 SNP Patients who reported that staff "Sometimes" or "Never" explained about medicines before giving it to them	13.0%	24.0%	20.0%	13.6%	7.0%	16.4%	23.0%	25.0%	16.0%	19.8%
↑	HCOMP6Y P Patients who reported that YES, they were given information about what to do during their recovery at home	86.0%	84.9%	76.0%	74.6%	92.0%	88.3%	86.0%	86.6%	86.0%	82.3%
↓	HCOMP6N P Patients who reported that NO, they were not given information about what to do during their recovery at home	14.0%	15.1%	24.0%	25.4%	8.0%	11.7%	14.0%	13.4%	14.0%	17.7%
↑	HCOMP7SA Patients who "Strongly Agree" they understood their care when they left the hospital	59.0%	47.2%	47.0%	46.9%	55.0%	49.5%	49.0%	46.6%	51.0%	47.3%
↓	HCOMP7A Patients who "Agree" they understood their care when they left the hospital	38.0%	46.0%	48.0%	49.5%	41.0%	29.6%	45.0%	46.8%	44.0%	42.1%
↓	HCOMP7D SD Patients who "Disagree" or "Strongly Disagree" they understood their care when they left the hospital	3.0%	6.8%	5.0%	3.6%	4.0%	20.9%	6.0%	6.6%	5.0%	10.6%
↑	HCLEAN HSPAP Patients who reported that their room and bathroom were "Always" clean	82.0%	73.1%	72.0%	90.1%	86.0%	83.3%	68.0%	79.2%	72.0%	70.9%
↓	HCLEAN HSPUP Patients who reported that their room and bathroom were "Usually" clean	13.0%	15.3%	23.0%	9.9%	9.0%	5.0%	20.0%	15.2%	17.0%	14.0%
↓	HCLEAN HSPSNP Patients who reported that their room and bathroom were "Sometimes" or "Never" clean	5.0%	11.6%	5.0%	0.0%	5.0%	11.7%	12.0%	5.6%	11.0%	15.1%
↑	HQUIETHSP AP Patients who reported that the area around their room was "Always" quiet at night	73.0%	67.0%	68.0%	63.7%	74.0%	65.2%	60.0%	62.7%	66.0%	66.8%
↓	HQUIETHSP UP Patients who reported that the area around their room was "Usually" quiet at night	23.0%	25.8%	23.0%	32.0%	21.0%	20.0%	32.0%	29.1%	27.0%	16.8%
↓	HQUIETHSP SNP Patients who reported that the area around their room was "Sometimes" or "Never" quiet at night	4.0%	7.2%	9.0%	4.3%	5.0%	14.8%	8.0%	8.2%	7.0%	16.3%
↓	HHSP RATING06 Patients who gave their hospital a rating of 6 or lower on a scale from 0 (lowest) to 10 (highest)	4.0%	10.5%	12.0%	13.6%	5.0%	22.4%	12.0%	13.2%	7.0%	17.1%

\*\* includes Mountain View Regional Hospital

Desired Performance	Measures	Sycamore Shoals Hospital		Unicoi County Hospital		Hawkins County Memorial Hospital		Johnston Memorial Hospital		Lonesome Pine Hospital**	
		Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)
↓	HHSP RATING78 Patients who gave their hospital a rating of 7 or 8 on a scale from 0 (lowest) to 10 (highest)	17.0%	17.9%	21.0%	21.4%	21.0%	15.0%	20.0%	21.9%	23.0%	20.4%
↑	HHSP RATING910 Patients who gave their hospital a rating of 9 or 10 on a scale from 0 (lowest) to 10 (highest)	79.0%	71.6%	67.0%	64.9%	74.0%	62.6%	68.0%	65.0%	70.0%	62.4%
↑	HRECMND DY Patients who reported YES, they would definitely recommend the hospital	78.0%	69.5%	62.0%	75.8%	76.0%	54.1%	65.0%	61.0%	70.0%	63.8%
↓	HRECMND PY Patients who reported YES, they would probably recommend the hospital	18.0%	22.7%	28.0%	11.5%	21.0%	20.0%	28.0%	31.3%	24.0%	22.8%
↓	HRECMND DN Patients who reported NO, they would probably not or definitely not recommend the hospital	4.0%	7.9%	10.0%	12.6%	3.0%	25.9%	7.0%	7.6%	6.0%	13.3%
<b>▣ Cataract Surgery Outcome %</b>											
	OP31 Cataracts Improvement- Voluntary Reporting	--	--	--	--	--	--	--	--	--	--
<b>▣ Colonoscopy Followup%</b>											
↑	OP29 Avg Risk Polyp Surveillance	100.0%	94.0%	0.0%	--	97.0%	100.0%	100.0%	100.0%	31.0%	100.0%
↑	OP30 High risk Polyp Surveillance - Retired	75.0%	--	27.0%	--	95.0%	--	100.0%	--	70.0%	--
<b>▣ Heart Attack</b>											
↑	OP4 Aspirin at Arrival AMI Chest Pain - Retired	--	--	--	--	--	--	1.00	--	0.95	--
↓	OP3b Median Time to Transfer AMI - Retired	--	--	--	--	--	--	--	--	--	--
↓	OP5 Median Time to ECG AMI and Chest Pain - Retired	--	--	--	--	--	--	--	--	--	--
↑	OP2 Fibrinolytic Therapy 30 minutes - Retired	--	--	--	--	--	--	--	--	--	--
<b>▣ Stroke Care %</b>											
↑	STK4 Thrombolytic Therapy - Retired	--	--	--	--	--	--	--	--	--	--
<b>▣ Emergency Department Throughput</b>											
	EDV Emergency Department Volume	Medium	Medium	Low	Low	Low	Low	High	High	Medium	Medium
↓	Median Time from ED Arrival to Transport for Admitted Patients (ED1)	210.0	342.3	209.0	275.0	175.0	195.6	272.0	444.1	213.0	295.3
↓	ED2b ED Decision to Transport	69.0	146.9	42.9	98.3	49.0	47.9	112.0	241.3	53.0	69.1
↓	Median Time from ED Arrival to Departure for Outpatients (18b)	124.0	160.5	119.0	126.4	80.0	97.3	143.0	212.2	120.0	134.5
↓	OP20 Door to Diagnostic Evaluation - Retired	--	--	--	--	--	--	11.00	--	23.00	--
↓	OP21 Time to pain medication for long bone fractures - Retired	--	--	--	--	--	--	28.00	--	64.00	--
↓	OP22 Left without being seen	1.0%	1.2%	1.0%	0.5%	0.0%	0.2%	1.0%	3.0%	0.0%	0.8%
↑	OP23 Head CT stroke patients	--	77.8%	--	--	--	60.0%	75.0%	88.9%	--	87.5%

\*\* includes Mountain View Regional Hospital

Desired Performance	Measures	Sycamore Shoals Hospital		Unicoi County Hospital		Hawkins County Memorial Hospital		Johnston Memorial Hospital		Lonesome Pine Hospital**	
		Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)
	<b>Preventive Care %</b>										
↑	<b>IMM3OP27 FACADHPCT HCW Influenza Vaccination - Seasonal</b>	98.0%	99.0%	98.0%	97.0%	98.0%	98.0%	99.0%	98.0%	99.0%	99.0%
↑	IMM2 Immunization for Influenza - Retired	98.0%	--	93.0%	--	97.0%	--	97.0%	--	96.0%	--
	<b>Blood Clot Prevention/Treatment</b>										
	VTE5 Warfarin Therapy at Discharge - Voluntary Reporting	--	--	--	--	--	--	--	--	--	--
↓	VTE6 HAC VTE - Retired	--	--	--	--	--	--	0.00	--	--	--
	<b>Pregnancy and Delivery Care %</b>										
↓	<b>PC01 Elective Delivery</b>	--	--	--	--	--	--	0.00%	4.76%	5.00%	--
	<b>Surgical Complications Rate</b>										
↓	<b>Hip and Knee Complications</b>	0.04	0.00	--	--	--	--	0.03	0.00	0.00	--
↓	<b>PSI4SURG COMP Death rate among surgical patients with serious treatable complications</b>	125.00	100.00	--	--	--	--	147.36	157.14	--	--
↓	<b>PSI90 Complications / patient safety for selected indicators</b>	0.87	0.85	0.82	0.98	0.88	0.99	0.75	0.95	0.89	0.94
	<b>Readmissions 30 Days Rate%</b>										
↓	<b>READM30 AMI Acute myocardial infarction (AMI) 30day readmission rate</b>	17.9%	21.4%	--	--	--	--	12.1%	14.3%	17.2%	83.3%
↓	<b>READM30 CABG Coronary artery bypass graft (CABG) surgery 30day readmission rate</b>	--	--	--	--	--	--	16.6%	--	--	--
↓	<b>READM30 COPD Chronic obstructive pulmonary disease 30day readmission rate</b>	14.6%	19.3%	--	20.0%	18.6%	0.0%	16.6%	22.5%	28.4%	25.6%
↓	<b>READM30HF Heart Failure 30Day readmissions rate</b>	7.2%	27.8%	--	0.0%	21.1%	45.5%	16.6%	27.7%	32.5%	11.1%
↓	<b>READM30 HIPKNEE 30day readmission rate following elective THA / TKA</b>	3.3%	4.9%	--	--	--	--	7.3%	0.0%	--	--
↓	<b>READM30 HOSPWIDE 30day hospitalwide allcause unplanned readmission</b>	10.4%	15.7%	--	18.7%	14.6%	12.9%	11.5%	15.9%	16.5%	18.7%
↓	<b>READM30PN Pneumonia 30day readmission rate</b>	--	18.1%	--	13.8%	16.8%	9.1%	18.9%	18.2%	24.8%	14.9%
↓	<b>READM30 STK Stroke 30day readmission rate</b>	7.2%	16.7%	--	--	--	0.0%	9.9%	13.0%	--	20.0%

\*\* includes Mountain View Regional Hospital

Desired Performance	Measures	Sycamore Shoals Hospital		Unicoi County Hospital		Hawkins County Memorial Hospital		Johnston Memorial Hospital		Lonesome Pine Hospital**	
		Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)
	<b>Mortality 30 Days Death Rate %</b>										
↓	MORT30AMI Acute myocardial infarction (AMI) 30day mortality rate	10.0%	6.7%	--	--	--	--	0.6%	3.4%	2.8%	14.3%
↓	MORT30 CABG Coronary artery bypass graft surgery 30day mortality rate	--	--	--	--	--	--	--	--	--	--
↓	MORT30 COPD 30day mortality rate COPD patients	0.7%	0.9%	--	0.0%	0.0%	0.0%	0.7%	2.3%	1.2%	2.3%
↓	MORT30HF Heart failure 30day mortality rate	3.5%	5.0%	--	0.0%	0.0%	0.0%	2.3%	2.4%	6.1%	2.7%
↓	MORT30PN Pneumonia 30day mortality rate	3.8%	5.2%	15.2%	0.0%	2.6%	0.0%	4.2%	9.5%	2.1%	2.6%
↓	MORT30STK Stroke 30day mortality rate	0.0%	0.0%	--	--	--	0.0%	2.4%	5.5%	14.5%	0.0%
	<b>Use of Medical Imaging Outpatient</b>										
	OP8 MRI Lumbar Spine for Low Back Pain - Annual	--	--	--	--	--	--	0.35	0.37	0.48	--
	OP10 Abdomen CT Use of Contrast Material - Annual	0.03	0.07	0.05	0.10	0.06	0.00	0.02	0.01	0.09	0.07
	OP13 Outpatients who got cardiac imaging stress tests before lowrisk outpatient surgery - Annual	0.00	--	--	--	--	--	0.05	0.05	0.06	--
	OP9 Mammography Followup Rates - Retired	0.07	--	0.05	--	0.04	--	0.03	--	0.05	--
	OP11 Thorax CT Use of Contrast Material - Retired	0.01	--	0.00	--	0.03	--	0.01	--	0.04	--
	OP14 Outpatients with brain CT scans who got a sinus CT scan at the same time - Retired	0.01	--	0.01	--	--	--	0.01	--	0.01	--

\*\* includes Mountain View Regional Hospital

Desired Performance	Measures	Norton Community Hospital		Smyth County Community Hospital		Russell County Hospital		Hancock County Hospital		Johnson County Community Hospital		Dickenson Community Hospital	
		Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)
	<b>Target Quality Measures</b>												
↓	PSI 3 Pressure Ulcer Rate	0.20	0.00	0.21	0.00	0.24	0.00	--	0.00	--	0.00	--	0.00
↓	PSI 6 Iatrogenic Pneumothorax Rate	0.38	0.41	0.39	0.00	0.39	0.00	--	0.00	--	0.00	--	0.00
↓	PSI 7 Central Venous Catheter-Related Blood Stream Infection Rate - Retired	0.15	--	0.16	--	0.17	--	--	--	--	--	--	--
↓	PSI 8 In Hospital Fall with Hip Fracture Rate	0.10	0.00	0.10	0.00	0.10	0.00	--	0.00	--	0.00	--	0.00
↓	PSI 9 Perioperative Hemorrhage or Hematoma Rate	4.96	0.00	4.69	0.00	0.00	0.00	--	--	--	--	--	--
↓	PSI 10 Postoperative Acute Kidney Injury Requiring Dialysis	1.10	0.00	1.12	0.00	--	0.00	--	--	--	--	--	--
↓	PSI 11 Postoperative Respiratory Failure Rate	12.33	25.00	16.04	0.00	--	0.00	--	--	--	--	--	--
↓	PSI 12 Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate	5.39	0.00	4.03	10.75	--	0.00	--	--	--	--	--	--
↓	PSI 13 Postoperative Sepsis Rate	5.59	0.00	5.81	0.00	--	0.00	--	--	--	--	--	--
↓	PSI 14 Postoperative Wound Dehiscence Rate	2.21	0.00	--	0.00	--	0.00	--	--	--	--	--	0.00
↓	PSI 15 Unrecognized Abdominopelvic Accidental Puncture/Laceration Rate	0.87	0.00	--	0.00	--	0.00	--	--	--	0.00	--	0.00
↓	CLABSI	0.000	0.000	0.000	0.000	0.000	0.000	--	--	--	--	--	--
↓	CAUTI	0.000	0.000	0.000	0.000	0.000	0.000	--	--	--	--	--	--
↓	SSI COLON Surgical Site Infection	0.00	5.00	16.67	0.00	--	--	--	--	--	--	--	--
↓	SSI HYST Surgical Site Infection	0.00	0.00	0.00	--	--	--	--	--	--	--	--	--
↓	MRSA	0.000	0.000	0.000	0.000	0.000	0.171	--	--	--	--	--	--
↓	CDIFF	0.265	0.000	0.174	0.000	0.498	0.000	--	--	--	--	--	--
↑	SMB: Sepsis Management Bundle	79.7%	37.7%	84.3%	68.6%	77.3%	66.7%	--	57.1%	--	100.0%	--	66.7%



Desired Performance	Measures	Norton Community Hospital		Smyth County Community Hospital		Russell County Hospital		Hancock County Hospital		Johnson County Community Hospital		Dickenson Community Hospital	
		Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)
	<b>General Information-Structural Measures</b>												
YES	ACS REGISTRY - Retired	Yes	--	Yes	--	No	--	No	--	--	--	No	--
YES	SMPART GENSURG General Surgery Registry - Retired	Yes	--	Yes	--	Yes	--	No	--	--	--	Yes	--
YES	SMPART NURSE Nursing Care Registry - Retired	No	--	No	--	No	--	No	--	--	--	No	--
YES	SMSSCHECK Safe Surgery Checklist	Yes	Yes	Yes	Yes	No	No	--	--	Yes	Yes	--	--
YES	OP12 HIT Ability electronically receive lab results	Yes	Yes	Yes	Yes	Yes	Yes	--	--	--	--	--	--
YES	OP17 Tracking Clinical Results Between Visits	Yes	Yes	Yes	Yes	Yes	Yes	--	--	Yes	Yes	--	--
YES	OP25 Outpatient Safe Surgery Checklist	Yes	Yes	Yes	Yes	Yes	Yes	--	--	Yes	Yes	--	--
	<i>Survey of Patient's Experience* Data had adjustments enabled, phone calibration, and skip logic applied</i>												
↑	HCOMP1A P Patients who reported that their nurses "Always" communicated well	82.0%	80.1%	85.0%	82.9%	87.0%	80.2%	90.0%	83.0%	--	100.0%	--	73.3%
↓	HCOMP1U P Patients who reported that their nurses "Usually" communicated well	14.0%	16.5%	12.0%	12.7%	9.0%	13.4%	8.0%	10.3%	--	0.0%	--	20.0%
↓	HCOMP1 SNP Patients who reported that their nurses "Sometimes" or "Never" communicated well	4.0%	3.4%	3.0%	4.5%	4.0%	6.3%	2.0%	6.7%	--	0.0%	--	6.7%
↑	HCOMP2A P Patients who reported that their doctors "Always" communicated well	85.0%	81.8%	88.0%	82.4%	89.0%	84.5%	92.0%	84.4%	--	100.0%	--	75.0%
↓	HCOMP2U P Patients who reported that their doctors "Usually" communicated well	11.0%	13.5%	9.0%	14.3%	8.0%	10.8%	6.0%	1.7%	--	0.0%	--	0.0%
↓	HCOMP2 SNP Patients who reported that their doctors "Sometimes" or "Never" communicated well	4.0%	4.7%	3.0%	3.2%	3.0%	4.7%	2.0%	13.9%	--	0.0%	--	25.0%
↑	HCOMP3A P Patients who reported that they "Always" received help as soon as they wanted	70.0%	58.5%	76.0%	61.9%	78.0%	76.2%	95.0%	95.0%	--	100.0%	--	50.0%
↓	HCOMP3U P Patients who reported that they "Usually" received help as soon as they wanted	22.0%	29.5%	18.0%	30.4%	17.0%	18.9%	4.0%	0.0%	--	0.0%	--	0.0%
↓	HCOMP3 SNP Patients who reported that they "Sometimes" or "Never" received help as soon as they wanted	8.0%	12.0%	6.0%	7.6%	5.0%	4.9%	1.0%	5.0%	--	0.0%	--	50.0%
↑	HCOMP4A P Patients who reported that their pain was "Always" well controlled - Suspended	71.0%	--	73.0%	--	79.0%	--	89.0%	--	--	--	--	--
↓	HCOMP4U P Patients who reported that their pain was "Usually" well controlled - Suspended	22.0%	--	22.0%	--	17.0%	--	5.0%	--	--	--	--	--
↓	HCOMP4 SNP Patients who reported that their pain was "Sometimes" or "Never" well controlled - Suspended	7.0%	--	5.0%	--	4.0%	--	6.0%	--	--	--	--	--

Desired Performance	Measures	Norton Community Hospital		Smyth County Community Hospital		Russell County Hospital		Hancock County Hospital		Johnson County Community Hospital		Dickenson Community Hospital	
		Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)
↑	HCOMP5A P Patients who reported that staff "Always" explained about medicines before giving it to them	66.0%	65.6%	73.0%	64.8%	73.0%	64.8%	77.0%	78.3%	--	100.0%	--	100.0%
↓	HCOMP5U P Patients who reported that staff "Usually" explained about medicines before giving it to them	14.0%	14.3%	16.0%	19.3%	14.0%	11.0%	18.0%	20.0%	--	0.0%	--	0.0%
↓	HCOMP5 SNP Patients who reported that staff "Sometimes" or "Never" explained about medicines before giving it to them	20.0%	20.1%	11.0%	15.9%	13.0%	24.1%	5.0%	1.7%	--	0.0%	--	0.0%
↑	HCOMP6Y P Patients who reported that YES, they were given information about what to do during their recovery at home	88.0%	86.1%	91.0%	88.1%	86.0%	84.2%	92.0%	85.4%	--	100.0%	--	87.5%
↓	HCOMP6N P Patients who reported that NO, they were not given information about what to do during their recovery at home	12.0%	13.9%	9.0%	11.9%	14.0%	15.8%	8.0%	14.6%	--	0.0%	--	12.5%
↑	HCOMP7SA Patients who "Strongly Agree" they understood their care when they left the hospital	53.0%	44.3%	61.0%	54.6%	50.0%	46.1%	70.0%	61.6%	--	77.8%	--	35.0%
↓	HCOMP7A Patients who "Agree" they understood their care when they left the hospital	42.0%	49.4%	37.0%	39.0%	47.0%	48.8%	22.0%	24.3%	--	22.2%	--	56.7%
↓	HCOMP7D SD Patients who "Disagree" or "Strongly Disagree" they understood their care when they left the hospital	5.0%	6.3%	2.0%	6.4%	3.0%	5.1%	8.0%	14.0%	--	0.0%	--	8.3%
↑	HCLEAN HSPAP Patients who reported that their room and bathroom were "Always" clean	71.0%	57.6%	75.0%	79.4%	76.0%	71.6%	86.0%	91.6%	--	100.0%	--	100.0%
↓	HCLEAN HSPUP Patients who reported that their room and bathroom were "Usually" clean	18.0%	25.5%	8.0%	14.7%	16.0%	15.5%	14.0%	8.4%	--	0.0%	--	0.0%
↓	HCLEAN HSPSNP Patients who reported that their room and bathroom were "Sometimes" or "Never" clean	11.0%	16.9%	17.0%	5.9%	8.0%	12.9%	0.0%	0.0%	--	0.0%	--	0.0%
↑	HQUIETHSP AP Patients who reported that the area around their room was "Always" quiet at night	61.0%	56.9%	72.0%	62.4%	64.0%	64.8%	79.0%	91.4%	--	66.7%	--	66.7%
↓	HQUIETHSP UP Patients who reported that the area around their room was "Usually" quiet at night	28.0%	32.0%	24.0%	31.6%	30.0%	29.1%	18.0%	0.0%	--	33.3%	--	0.0%
↓	HQUIETHSP SNP Patients who reported that the area around their room was "Sometimes" or "Never" quiet at night	11.0%	11.1%	4.0%	6.0%	6.0%	6.2%	3.0%	8.6%	--	0.0%	--	33.3%
↓	HHSP RATING06 Patients who gave their hospital a rating of 6 or lower on a scale from 0 (lowest) to 10 (highest)	8.0%	12.5%	5.0%	6.3%	9.0%	14.2%	13.0%	2.0%	--	0.0%	--	25.0%

Desired Performance	Measures	Norton Community Hospital		Smyth County Community Hospital		Russell County Hospital		Hancock County Hospital		Johnson County Community Hospital		Dickenson Community Hospital	
		Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)
↓	HHSP RATING78 Patients who gave their hospital a rating of 7 or 8 on a scale from 0 (lowest) to 10 (highest)	19.0%	20.5%	18.0%	17.1%	32.0%	20.9%	7.0%	0.0%	--	0.0%	--	0.0%
↑	HHSP RATING910 Patients who gave their hospital a rating of 9 or 10 on a scale from 0 (lowest) to 10 (highest)	73.0%	67.0%	77.0%	76.5%	59.0%	64.9%	80.0%	98.0%	--	100.0%	--	75.0%
↑	HRECMND DY Patients who reported YES, they would definitely recommend the hospital	73.0%	60.1%	75.0%	72.1%	61.0%	65.3%	81.0%	82.6%	--	66.7%	--	75.0%
↓	HRECMND PY Patients who reported YES, they would probably recommend the hospital	21.0%	31.0%	22.0%	23.3%	35.0%	27.9%	9.0%	17.4%	--	33.3%	--	0.0%
↓	HRECMND DN Patients who reported NO, they would probably not or definitely not recommend the hospital	6.0%	9.0%	3.0%	4.6%	4.0%	6.8%	10.0%	0.0%	--	0.0%	--	25.0%
	<b>▣ Cataract Surgery Outcome %</b>												
	OP31 Cataracts Improvement- Voluntary Reporting	--	--	--	--	--	--	--	--	--	--	--	--
	<b>▣ Colonoscopy Followup%</b>												
↑	OP29 Avg Risk Polyp Surveillance	13.0%	100.0%	100.0%	100.0%	0.0%	50.0%	--	--	--	--	--	--
↑	OP30 High risk Polyp Surveillance - Retired	100.0%	--	100.0%	--	--	--	0.0%	--	0.0%	--	--	--
	<b>▣ Heart Attack</b>												
↑	OP4 Aspirin at Arrival AMI Chest Pain - Retired	0.94	--	0.99	--	0.99	--	--	--	--	--	--	--
↓	OP3b Median Time to Transfer AMI - Retired	--	--	--	--	--	--	--	--	--	--	--	--
↓	OP5 Median Time to ECG AMI and Chest Pain - Retired	--	--	--	--	--	--	--	--	--	--	--	--
↑	OP2 Fibrinolytic Therapy 30 minutes - Retired	--	--	--	--	--	--	--	--	--	--	--	--
	<b>▣ Stroke Care %</b>												
↑	STK4 Thrombolytic Therapy - Retired	--	--	--	--	--	--	--	--	--	--	--	--
	<b>▣ Emergency Department Throughput</b>												
	<b>EDV Emergency Department Volume</b>	Medium	Medium	Low	Low	Low	Low	Medium	Medium	Low	Low	Low	Low
↓	Median Time from ED Arrival to Transport for Admitted Patients (ED1)	244.0	314.4	176.0	200.9	168.0	197.9	--	179.4	--	652.6	--	133.0
↓	ED2b ED Decision to Transport	69.0	83.0	40.0	48.7	39.1	43.0	--	23.3	--	489.1	--	37.0
↓	Median Time from ED Arrival to Departure for Outpatients (18b)	154.0	185.4	97.0	110.2	90.0	117.5	--	123.7	89.0	95.8	--	114.8
↓	OP20 Door to Diagnostic Evaluation - Retired	14.00	--	11.00	--	7.00	--	--	--	--	--	--	--
↓	OP21 Time to pain medication for long bone fractures - Retired	53.00	--	25.00	--	20.00	--	--	--	--	--	--	--
↓	OP22 Left without being seen	1.0%	1.6%	1.0%	0.9%	1.0%	0.6%	1.0%	0.4%	1.0%	0.7%	1.0%	1.1%
↑	OP23 Head CT stroke patients	--	76.5%	--	62.5%	--	71.4%	--	--	--	100.0%	--	50.0%

Desired Performance	Measures	Norton Community Hospital		Smyth County Community Hospital		Russell County Hospital		Hancock County Hospital		Johnson County Community Hospital		Dickenson Community Hospital	
		Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)
	<b>Preventive Care %</b>												
↑	IMM3OP27 FACADHPCT HCW Influenza Vaccination - Seasonal	97.0%	99.0%	99.0%	99.0%	98.0%	96.0%	100.0%	98.0%	100.0%	99.0%	--	99.0%
↑	IMM2 Immunization for Influenza - Retired	99.0%	--	100.0%	--	100.0%	--	--	--	--	--	--	--
	<b>Blood Clot Prevention/Treatment</b>												
	VTE5 Warfarin Therapy at Discharge - Voluntary Reporting	--	--	--	--	--	--	--	--	--	--	--	--
↓	VTE6 HAC VTE - Retired	--	--	--	--	--	--	--	--	--	--	--	--
	<b>Pregnancy and Delivery Care %</b>												
↓	PC01 Elective Delivery	0.00%	3.03%	--	--	--	--	--	--	--	--	--	--
	<b>Surgical Complications Rate</b>												
↓	Hip and Knee Complications	--	0.00	0.03	0.00	--	--	--	--	--	--	--	--
↓	PSI4SURG COMP Death rate among surgical patients with serious treatable complications	--	0.00	--	0.00	--	--	--	--	--	--	--	--
↓	PSI90 Complications / patient safety for selected indicators	0.89	0.89	0.83	0.89	0.89	0.92	1.00	0.99	1.00	1.00	--	0.99
	<b>Readmissions 30 Days Rate%</b>												
↓	READM30 AMI Acute myocardial infarction (AMI) 30day readmission rate	2.4%	10.0%	17.9%	0.0%	--	50.0%	--	--	--	--	--	--
↓	READM30 CABG Coronary artery bypass graft (CABG) surgery 30day readmission rate	--	--	--	--	--	--	--	--	--	--	--	--
↓	READM30 COPD Chronic obstructive pulmonary disease 30day readmission rate	14.8%	18.3%	12.0%	18.8%	17.6%	16.9%	--	16.7%	--	--	--	--
↓	READM30HF Heart Failure 30Day readmissions rate	20.1%	24.1%	18.8%	22.0%	19.0%	34.4%	--	0.0%	--	--	--	--
↓	READM30 HIPKNEE 30day readmission rate following elective THA / TKA	0.0%	0.0%	12.0%	18.2%	--	--	--	--	--	--	--	--
↓	READM30 HOSPWIDE 30day hospitalwide allcause unplanned readmission	9.2%	15.6%	9.7%	15.0%	15.0%	18.6%	15.6%	12.5%	--	37.5%	--	33.3%
↓	READM30PN Pneumonia 30day readmission rate	16.1%	22.1%	16.3%	14.3%	18.7%	18.5%	17.0%	14.3%	--	66.7%	--	100.0%
↓	READM30 STK Stroke 30day readmission rate	10.0%	13.2%	11.8%	0.0%	--	16.7%	--	--	--	--	--	--

Desired Performance	Measures	Norton Community Hospital		Smyth County Community Hospital		Russell County Hospital		Hancock County Hospital		Johnson County Community Hospital		Dickenson Community Hospital	
		Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)	Baseline (CMS patients)	FY21 (All patients)
	<b>Mortality 30 Days Death Rate %</b>												
↓	MORT30AMI Acute myocardial infarction (AMI) 30day mortality rate	8.9%	9.1%	0.0%	0.0%	--	0.0%	--	--	--	--	--	--
↓	MORT30 CABG Coronary artery bypass graft surgery 30day mortality rate	--	--	--	--	--	--	--	--	--	--	--	--
↓	MORT30 COPD 30day mortality rate COPD patients	0.7%	1.9%	1.5%	2.0%	0.9%	4.8%	--	0.0%	--	--	--	--
↓	MORT30HF Heart failure 30day mortality rate	1.4%	4.0%	5.5%	2.0%	3.4%	5.9%	--	0.0%	--	--	--	--
↓	MORT30PN Pneumonia 30day mortality rate	1.6%	2.1%	2.8%	1.3%	2.1%	3.2%	16.9%	0.0%	--	0.0%	--	0.0%
↓	MORT30STK Stroke 30day mortality rate	2.5%	2.6%	4.5%	0.0%	--	0.0%	--	--	--	--	--	--
	<b>Use of Medical Imaging Outpatient</b>												
	OP8 MRI Lumbar Spine for Low Back Pain - Annual	0.43	--	--	--	--	--	--	--	--	--	--	--
	OP10 Abdomen CT Use of Contrast Material - Annual	0.05	0.01	0.01	0.00	0.03	0.01	--	--	--	--	--	0.00
	OP13 Outpatients who got cardiac imaging stress tests before lowrisk outpatient surgery - Annual	0.03	--	0.04	--	0.04	--	--	--	--	--	--	--
	OP9 Mammography Followup Rates - Retired	0.03	--	0.04	--	0.01	--	--	--	--	--	--	--
	OP11 Thorax CT Use of Contrast Material - Retired	0.01	--	0.00	--	0.01	--	--	--	--	--	--	--
	OP14 Outpatients with brain CT scans who got a sinus CT scan at the same time - Retired	0.01	--	0.00	--	--	--	--	--	--	--	--	--

Table 4 FY21 data for Target Quality Measures with updated all-patient baseline data

Desired Performance	Measures	Ballad Health	
		Baseline	FY21
	<i>Quality Target Measures</i>		
↓	PSI 3 Pressure Ulcer Rate	1.07	0.24
↓	PSI 6 Iatrogenic Pneumothorax Rate	0.25	0.21
↓	PSI 8 In Hospital Fall with Hip Fracture Rate	0.06	0.08
↓	PSI 9 Perioperative Hemorrhage or Hematoma Rate	1.59	2.24
↓	PSI 10 Postoperative Acute Kidney Injury Requiring Dialysis	0.76	2.23
↓	PSI 11 Postoperative Respiratory Failure Rate	9.24	7.86
↓	PSI 12 Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate	3.31	4.18
↓	PSI 13 Postoperative Sepsis Rate	3.58	6.57
↓	PSI 14 Postoperative Wound Dehiscence Rate	0.83	1.14
↓	PSI 15 Unrecognized Abdominopelvic Accidental Puncture/Laceration Rate	1.18	0.45
↓	CLABSI	0.710	1.058
↓	CAUTI	0.560	0.785
↓	SSI COLON Surgical Site Infection	2.13	2.21
↓	SSI HYST Surgical Site Infection	0.71	0.73
↓	MRSA	0.050	0.096
↓	CDIFF	0.670	0.182
↑	SMB: Sepsis Management Bundle	56.9%	52.9%

# Appendix 1: *Other (Quality) Sub-Index Data*

## *Notes*

The COPA Quality **Target** Measures are comprised of the following Centers for Disease Control and Prevention (CDC), Centers for Medicare & Medicaid Services (CMS), National Healthcare Safety Network (NHSN), and Healthcare-Associated Infection (HAI) measures:

- 11 Agency for Healthcare Research and Quality (AHRQ) Quality Indicators
  - These 11 measures make up the Patient Safety and Adverse Events Composite, also known as PSI 90, as updated 8-31-16, and referred to as v6.0, and were the most updated and modified version of the Patient Safety Indicators for Selected Indicators Quality Indicator Composite as of the drafting of the [Terms of Certification](#).
  - The AHRQ's PSI 90 Fact Sheet with measure definitions can be accessed here: [https://www.qualityindicators.ahrq.gov/News/PSI90\\_Factsheet\\_FAQ.pdf](https://www.qualityindicators.ahrq.gov/News/PSI90_Factsheet_FAQ.pdf)
- Five Hospital Acquired Condition measures were originally part of the COPA's Quality Target Measures list. These five measures, along with the CMS PSI 90 measures referenced above, comprise the measures in the Centers for Medicare and Medicaid Services Hospital-Acquired Conditions Reduction Program.
  - One of the measures, Surgical Site Infections (SSI) has subsequently been split into two measures for the Other (Quality) Sub-Index Table 1 and 2: Colon Surgical Site Infection and Hysterectomy Surgical Site Infection.
  - An overview from QualityNet of the Hospital Acquired Condition (HAC) Reduction Program, and links to the data dictionary can be accessed here: <https://www.qualitynet.org/inpatient/hac>

The COPA Quality **Monitoring** Measures consist of measures reported on Hospital Compare. Hospital Compare measures were selected by CMS Hospital Quality Initiative as they related to hospital performance and quality of care.

- These 83 measures fall under several performance categories: general/structural, patient experience, timely & effective care, complications, readmission, mortality, and efficient use of medical imaging.
- Hospitals may not be able to report data on all measures, due to the number and types of patients they treat.
- More information on Hospital Compare measures can be accessed here: <https://www.medicare.gov/hospitalcompare/Data/Measure-groups.htmlb>

# Credits

## **Commissioner Morgan McDonald, MD, FACP, FAAP**

### **TDH Division of Health Planning**

- Elizabeth Jones
- Jim Mathis
- Judi Knecht
- Sarah Elliott

### **Arundel Metrics**

- Tom Eckstein
- Sarah Milder
- Mary Ann Honors

### **TDH Office of Population Health Surveillance**

- Shalini Parekh
- Fred Croom

### **TDH Office of Communication & Media Relations**

- Sarah Tanksley



## Appendix 1

# COPA: Department Annual Report on FY21 supplemental findings

## *Findings from Reports on Ballad Health's Fiscal Year 2021*

### **The COPA Compliance Office Annual Report**

Findings:

The COPA Compliance Office Annual Report was filed simultaneously with the Ballad Health Annual Report on FY21, in compliance with the TOC and included required information.

### **The Ballad Health Annual Report**

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

- Ballad Health provided narrative on several ongoing Health Research and Graduate Medical Education projects. Among those of interest to TDH are:
  - Ballad Health's collaborative study with Harvard Medical School, Department of Health Care Policy, Healthcare Markets and Regulation Lab, on hospital competition in small markets;
  - STRONG pregnancy, STRONG, Starts, and STRONG LINK program studies; and
  - The C3 Fit Stroke research in conjunction with Vanderbilt University.
- Multiple worthy grant projects were described in the FY21 report. Ballad Health funded more than \$2 million. Ballad Health was also awarded or assisted others in bringing in over \$7.5 million in grants during FY21. These grants are important to fund needed programs and research and support the economic development of the region.
- TDH was pleased with Ballad Health's leadership in the region during COVID-19. As noted in the report, the system provided critical communication to staff and the community regarding the pandemic throughout FY21.
- Related to Access:
  - TDH applauds Ballad Health for investing \$45 million into patient care and staff wages. Competitive wages are critical to retaining and recruiting staff.
  - The investment of capital and resources made by Ballad Health to reopen the Lee County Community Hospital to provide access to health care services to residents in and near Lee County are commendable. By opening a critical access hospital, Ballad Health has exceeded its obligations to provide essential services to the residents of Lee County as required under the TOC and the Virginia Cooperative Agreement.

- TDH was pleased to read that in FY21 Ballard Health launched the Appalachian Highlands Care Network to manage the care of community members who are high utilizers of emergency and inpatient care. Ballard Health reports that within its first ten months, over 1,700 members were enrolled and able to access free prevention, primary care, diagnostics, emergency, and inpatient services in the region.
- Related to Population Health. TDH was pleased with the following reported accomplishments:
  - Launch of Ballard Health's Strong pregnancies program pilot, which matches expectant mothers who have health-related social needs with community health workers who can connect them with the resources to resolve their health-related needs.
  - Growth of Strong Starts program that navigates families for up to five years to support healthy development and readiness for kindergarten.
  - Ballard Health's launch of a medical-legal partnership with Virginia Tech and the Appalachian School of Law in which law students assist patients in addressing legal issues that negatively impact health and contribute to population health inequities.
- Related to Economic factors. TDH noted the following:
  - Due to cost efficiency steps taken, over \$57 million in cost reductions were achieved by Ballard Health in FY21.
  - Ballard Health provided over \$80 million in unreimbursed TennCare and Medicaid and charity care to residents in FY21.
- Related to Quality:
  - While an improvement in Ballard Health's performance was seen in 10 of the 17 Target Quality Measures over the baselines, only two of the six healthcare associated infections showed improvement.
  - Ballard Health's performance on patient experience of care worsened in FY21. Patients who responded to survey questions related to communication with providers and staff, cleanliness of facilities, and overall experience gave lower scores in FY21 than in previous years. Patient experience of care likely worsened across the nation during the pandemic due to multiple policy changes and facilities experiencing severe staffing shortages. Future reports with comparison data may provide more insight.
  - TDH continues to be impressed by the work of the Clinical Council and its sub-committees as described in the report. TDH supports Ballard Health's involvement in IBM Watson's Top Decile Health System program and use of huddles for timely communication and initiation of corrective action plans.