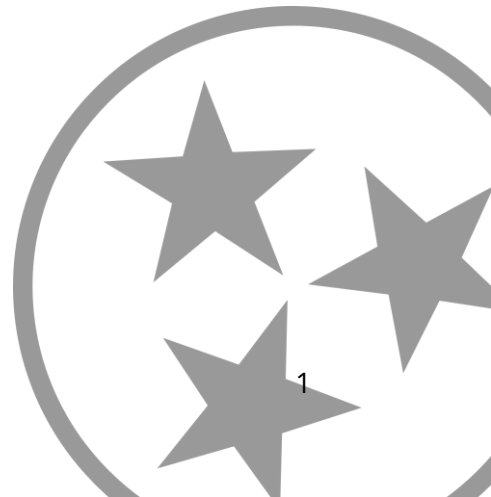


Certificate of Public Advantage

Department Annual Report

Covering Fiscal Year 2022: July 1, 2021-June 30, 2022

Tennessee Department of Health | March 2023



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Executive Summary

In 2018, the two largest health systems in Northeast Tennessee, Mountain States Health Alliance, and Wellmont Health System were issued a Certificate of Public Advantage (COPA) by the State of Tennessee and allowed to merge under the name, Ballad Health. As part of the COPA, the Tennessee Department of Health (TDH or the Department) 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 Annual Report presents TDH's Annual Review of the Ballad Health COPA for Fiscal Year (FY) 2022 (July 1, 2021 – June 30, 2022). Due to the COVID-19 pandemic, many provisions under the (TOC) were temporarily suspended by the State for part or all of Ballad Health's FY22, including data collection and reporting, as stated in a letter dated March 31, 2020 (Suspension Letter), which can be accessed [here](#), and as clarified in a letter to Ballad Health regarding the reasonable recovery period following the temporary suspension of TOC provisions, dated December 3, 2021 (Reasonable Recovery Period Letter), which can be read [here](#). For that reason, this year's Department Annual Report includes a review of a smaller set of inputs.

Ballad Health's continued 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 are acknowledged by TDH as two of the system's greatest successes during FY22.

In FY22, TDH received a limited number of written comments and inquiries from the public. They predominantly consisted of personal complaints they or a family member had at a Ballad facility, billing issues, or the State's suspension of certain TOC provisions during the COVID-19 public health emergency.

While Ballad Health did not submit quarterly reports in FY22, as the requirement to do so was suspended by a letter from TDH to Ballad Health, dated March 31, 2020, which can be read [here](#), Ballad Health did submit an Annual Report for FY22, which can be read [here](#). Highlights from the Ballad Health Fiscal Year 2022 Annual Report, include:

- Ballard Health's leadership in research projects such as the development of a longitudinal study database for tracking and evaluating its population health improvement programs, a study with Harvard Medical School on the competitive dynamics of small hospital markets, and CMS' Accountable Health Communities;
- Ballard Health's expansion of Population Health programs including Appalachian Highlands Care Network, STRONG pregnancies and STRONG starts, and a collective impact activation plan across Ballard Health's 21-county region; and
- An active Clinical Council that not only guided Ballard Health in its COVID-19 responses, but whose nine subcommittees continued to develop policies and promote best-practices across clinical, therapeutic, technological, and system domains.

The COPA Monitor's critical investigative work continued throughout FY22. The COPA Monitor Annual Report for year ending June 30, 2022, (attached as Exhibit 1), included no new recommendations to TDH.

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 effect COVID-19 had on health behaviors that impacted population health, access to health services, and quality improvement efforts, which likely affected the updated values. Despite these headwinds, many prevention measures, such as prenatal care, primary care physician, and cancer screening rates, progressively improved, while pediatric measures, such as dental sealants, third grade reading, and high school smoking had initial set-backs when COVID-19 arrived, but swiftly rebounded for those in Ballard Health's geographic service area.

Trends are provided for multiple Population Health, Access, and Other (Quality) Sub-Index measures for the first time in this Department Annual Report.

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

Economic Sub-Index: **Pass**

Therefore, under the COVID-19 suspension scoring, with a Passing score in the Economic Sub-Index, it is the Tennessee Department of Health's determination that the Ballard 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 et seq. 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 Virginia¹. 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.

¹ 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 (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, and trends relevant to the cognizable benefits and demonstration of 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

For a limited time, TDH suspended certain provisions of the TOC 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.

The temporary suspension began March 1, 2020 and remained in effect through all of fiscal year 2021 (FY21) and part of fiscal year 2022 (FY22). While Ballad Health's requirement to submit an annual report resumed for FY22, some of the data collection requirements remained suspended through December 31, 2022. For this reason, some performance data were not available and not submitted.

Additionally, in recognition of the extraordinary burden placed on Ballad Health and all health care providers during the period of public emergency, and in recognition of the far-reaching impacts of the pandemic on health behaviors, health care access, and outcomes, TDH agreed not to calculate a final score for FY22, as stated in a letter dated October 27, 2021 (Pandemic Period Scoring Letter), which can be accessed [here](#).

These temporary adjustments were made to better allow Ballad Health to respond to the public health and health care emergency caused by the COVID-19 pandemic.

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 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, certain reporting requirements and performance improvement expectations were suspended or modified. TDH determined it was not appropriate to score Ballad Health for pre-pandemic performance expectations related to Access, Population Health, and Other (Quality) Sub-Index measures during this extraordinary period. In [the Pandemic Period Scoring Letter](#), the Department stated that for FY21 and FY22 TDH intends to publish its annual reports utilizing information available to it at the time of publication and will determine a pass/fail Economic Sub-Index Score but not a score on the remaining sub-indices. A final score will not be 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 (FY22):

- 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. Ballard Health produced COVID-19 scorecards, gave press briefings, and served as a trusted voice in the region for COVID-19 information;

- The COPA Compliance Office engaged in weekly calls with TDH staff to provide updates on deliverables, requests, and responses;
- Ballard Health's executive staff met with the COPA Monitor nearly every month of the Fiscal Year and provided information upon request; and
- Ballard Health's executive staff provided updates on its activities to TDH staff on monthly calls and met with TDH staff each quarter to discuss progress made in implementing the system's six spending 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.

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.

Comments on / Summary of Public Input

The Rules (available [here](#)) require the Department to hold a public hearing every three years. The last public hearing was held January 25, 2021. While the Department has made an effort to hold public hearings more often than every three years, a public hearing was not held in 2022 due to high COVID-19 rates as the Omicron variant surged, and due to TDH leadership changes.

TDH's COPA staff received comments electronically and by phone from approximately 20 individuals in FY22. Some public inquiries were regarding the temporary suspension of TOC provisions, while others related to billing issues. The majority of comments were about personal experiences at a Ballad Health facility that are not attributable to the merger of the two hospital systems and thus, not resolvable under the COPA's TOC.

Through FY22, TDH's Division of Health Licensure and Regulation was responsible for the licensing and regulation of hospitals in the state. That Division conducted investigations of safety concerns at all Tennessee health care facilities. Beginning July 1, 2022, those responsibilities moved to Tennessee's Health Facilities Commission. Individuals with a personnel or facility concern were encouraged to submit information to the Health Facilities Commission via this website: <https://www.tn.gov/health/health-professionals/hcf-main/filing-a-complaint.html>

While it is not the role of TDH under the TOC to assist or track individual patients who had a negative experience at a Ballad Health facility, TDH is tracking Ballad Health's performance on multiple 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 FY22 is not included in this report as these comments are not subject to public disclosure pursuant to Tenn. Code Ann. § 68-11-1310(a)(7).

TDH's COPA staff reviews and responds to each comment individually. The majority of complaints are forwarded to the COPA Compliance Officer to share with department leaders at Ballad Health who may be able to resolve the complaint, or to the COPA Monitor to review and determine if the complaint should be formally investigated.

Findings from Reports related to Ballard Health's Fiscal Year 2022

The COPA Compliance Office Annual Report;

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

Findings:

- The COPA Compliance Office Annual Report was filed in compliance with the Terms of Certification and included required information.
- The list of official correspondence and status of requests listed in the COPA Compliance Office Annual Report seems thorough and accurate.

Ballad Health's Periodic Reports

Ballad Health did not submit quarterly reports in FY22. The requirement to submit such reports under Section 6.04(c) of the TOC was suspended by [the Suspension Letter](#).

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

Findings:

- The Ballard Health Annual Report was submitted in compliance with the TOC.
- Some data (such as staffing ratios and patient satisfaction and access survey results) were provided for only a 6-month period, as the requirement for data collection was suspended by TDH for the first six months of FY22. Other Annual Report elements (such as updates on services or functions consolidated, summary of sponsored residency programs, and information on new and ongoing clinical studies) were on activities that are normally required of Ballard Health under the TOC, but which were allowed to be suspended for the entire fiscal year. Nevertheless, Ballard Health continued with the activities and reported on them for the Department's visibility and awareness, which TDH commends.
- The report includes sufficient detail on activities as well as narratives about the progress of various undertakings and the challenges associated with a few of them.
- The Ballard Health Annual Report is well organized. The information required to be included in the Annual Report pursuant to the TOC was clearly labeled and easy to find.
- TDH remains impressed by the work of the Ballard Health Clinical Council and appreciates the description of their work in each Ballard Health Annual Report. TDH believes value would be added if future reports included information on Council membership.

- TDH appreciates the information provided on grants and academic research projects. TDH was most pleased by Ballad Health's leadership and progress on the following innovative programs:
 - Research activities and database development for Ballad Health's STRONG pregnancies and STRONG starts programs: Programs designed to positively impact the relationship relationships between childhood experiences and life outcomes for generations. Building a knowledge base to translate research nationally and across rural areas of the US;
 - Study with Harvard Medical School on the competitive dynamics of small hospital markets; and
 - CMS' Accountable Health Communities: Study on patients arriving at Ballad Health's EDs who are screened for health-related social needs so that high-risk patients are identified and either offered referrals or navigation services.
- Ballad Health's Career Development Plan with various leadership programs, mentorship programs, tuition reimbursement policies, employee performance management processes, and succession planning, seem thoughtful and comprehensive.
- Ballad Health's FY22 Annual Report included a helpful summary of progress made across its six spending plans. Some of the most notable accomplishments under each plan are:
 - Behavioral Health
 - Added 3 outpatient clinics that provided 400 new visits
 - Completed over 3,700 behavioral Health transports
 - Completed over 39,000 SBIRT screenings
 - Added therapists via telehealth to schools
 - Served 239 families through STRONG futures program
 - Rural Health
 - Hired needed PCPs and specialists in rural areas
 - Deployed Virtual Care Services and improved access to urgent care services, specialists, and behavioral health services
 - Provided cardiac monitors for region's EMS.
 - Children's Health
 - Established an ED and pediatric specialty centers in Bristol, TN
 - Expanded school-based telehealth
 - Hired specialists and sub-specialists

- HIE
 - Conducted geographical service area interoperability research
 - Continued to participate with OnePartner, EpicCare Link and enabled Epic's FHIR capabilities to support nationwide HIE network
- Population Health
 - Stood up a social needs referral platform with 125 network partners representing over 260 programs
 - Implemented a Population Health longitudinal database and research studies for support and evaluation of STRONG initiatives
 - Completed a collective impact activation plan and member activation plans to connect the health system with the community
 - Enrolled nearly 1,500 persons in STRONG pregnancies and 400 persons in STRONG starts
 - Built and implemented Appalachian Highlands Care Network, a Project Access program, which connects uninsured patients and their families with free or low-cost clinics, dental services, preventative care services - with enrollment expanded in FY22 to 3,400 individuals.
 - Invested almost \$3M in 30 best-practice Community Health Improvement Sites
- HR/GME
 - Expanded the Tennessee Virginia Regional Health Sciences Consortium
 - Funded Appalachian Highlands Center for Nursing Advancement
 - Expanded medical-legal partnership across all Ballad Health hospitals

- Findings related to Access:
 - Ballard Health notes that there were discussions between Ballard Health and the states to refine the Access Sub-Index measures. Data discussions related to certain Access Sub-Index data collection issues did not advance in FY22.
 - With regard to the Patient Satisfaction Surveys and survey results:
 - TDH noticed that Patient Satisfaction results were mixed across service settings. While **Patient Satisfaction in Owned Medical Practices** had significantly improved post-merger, **Patient Satisfaction in Outpatient Services** had declined slightly, and **Patient Satisfaction in Emergency Services** was down significantly.
 - TDH also noted that while the TOC states that the form and frequency of the patient satisfaction surveys shall be approved by the Department, changes had been made to the form (e.g., survey questions were removed) and to the administration (e.g., ongoing random sampling) in FY22. These changes were made without advanced approval.
 - Lastly, TDH has requested additional comparison information from Ballard Health regarding national performance averages to put in context the impact that COVID-19 had on staffing shortages and wait times that typically have a negative impact on satisfaction scores. As of publication of this report, TDH has not received that additional comparison information.
 - Additional findings on Access Sub-Index measure trending can be found later in this document. Ballard Health's performance across the Access Sub-Index measures is overwhelmingly positive.

- Findings related to Population Health:
 - Ballard Health notes that through a metrics workgroup, there are discussions between Ballard Health and the states to refine the Population Health Sub-Index measures. Data discussions related to certain Sub-Index data collection issues did not advance in FY22.
 - Though Ballard Health is not being scored on Population Health Sub-Index as prescribed in the TOC, for FY22, due to special considerations made by TDH in light of the pandemic's impact, the system did report on the two components of the Year 3 Population Health Sub-Index scoring:

1. Regarding Investment in Population Health: Ballard Health reports exceeding its FY22 spending commitment of \$6,667,000.
 2. Regarding the Achievement of Process Measures identified in the system's Population Health Plan: Ballard Health reports achieving 35 of the 35 Process Measures identified in the FY22 Implementation Roadmap. (TDH does not find in the Ballard Health Annual Report on FY22 the detail measures that were noted as "attached," however, TDH did receive the detailed measures separately and in quarterly updates on the implementation of this plan at in-person meetings.)
- TDH is pleased with the following accomplishments that were reported:
 - Implementation of a population health longitudinal database and research studies;
 - The progress of Ballard Health's collective impact work and activation plan;
 - Initiatives implemented to support STRONG pregnancies and STRONG starts for pregnant women, babies, and young families;
 - Appalachian Highlands Care Network's enrollment increasing to 3,400 individuals, with 86% of members having been connected to primary care; and
 - Ballard Health's investment of \$3M in 30 best-practice Community Health Improvement Sites.
 - Findings related to Quality:
 - TDH appreciates that Ballard Health provided some quality performance values on the entire fiscal year despite the obligation to report data being suspended through the first half of the fiscal year.
 - TDH noted that only 64 of the TOC's 83 Quality Monitoring Measures were listed in the Summary of Quality Indicators.
 - TDH is pleased that because of Ballard Health's conversion to EPIC as its system-wide EHR and usage of Premier as its quality platform, it was able to re-establish its 17 Quality Target Measure Baselines to all-patient data. This reset of baselines to numbers that are based on all-patient data allows for direct comparisons between the baseline performance values and the most recent year's performance values. The same adjustment has not yet been made to the Quality Monitoring Measures; TDH is working with Ballard Health to resolve for future data reporting.

- TDH notes that while values on quality measures under the Summary of Quality Indicators Report (provided in Attachment 1) are all-patient data, the values for the same measures for the Comparison to Similarly-Sized Systems (provided in Attachment 2) appear to be based on different populations. The latter are based on data for Medicare fee-for-service patients only, while the former are on all patients, which may be confusing for readers. TDH is working with Ballad Health to resolve for future data reporting.
- For most measures on patient experience (HCAHPS measures), the number of negative responses grew. For example, when asked if they would recommend the hospital, the percentage of respondents who answered “no, they would probably not or definitely not recommend the hospital,” more than doubled, from 4.8% at baseline to 10.2% in FY22.
- TDH remains encouraged by and supportive of the work undertaken by the Clinical Council and its nine subcommittees as described in Ballad Health’s report. TDH is particularly hopeful to see more details in future reports on the accomplishments of the Patient, Family, and Provider Experience Subcommittee.
- TDH is additionally impressed with the actions taken by the Clinical Council to ameliorate the effects of the pandemic, such as developing opportunities for retired nurses to re-engage in caregiving, managing scarce resource allocation, providing community guidance during and between surges, providing staff guidance on vaccination recommendations and mandates, and expanding the hospital at home program, all of which promoted safety and access to care.
- Findings related to Economic factors:
 - In FY22 Ballad Health spent over \$79M on charity care.
 - Ballad Health achieved over \$33 million in *new* cost-efficiency saving in FY22.
 - Inpatient charges decreased by 0.8% in FY22.
 - While Ballad Health’s total margin in FY22 of 6.7% was above the Fitch Median of 5.5% and S&P Median of 4.0%, its operating margin was below the average at 1.1%, compared to Fitch and S&P’s medians at 2.8% and 1.4% respectively.

The COPA Monitor Annual Report

The COPA Monitor Annual Report for FY22 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 complied with the pricing limits of Addendum One for FY22 (Exhibit A) and recommends Ballad Health receive a *pass score* for the Economic Sub-Index (Section III, page 6). He reports that complaints alleging the COPA or the TOC were not being following by Ballad Health were unsubstantiated (Section IV, page 7) and that the charity care commitment was satisfied by waiver from the COPA Monitor (Exhibit B). The Annual Report further finds that the baseline spending obligation was not met for Rural Health Services and Region-wide Health Information Exchange for FY22 and that the COPA Monitor has no recommendation for remediation of the spending shortfall due to the temporary suspension of monetary commitments (Section IV, page 8). Finally, he reports that no corrective actions nor enforcement mechanisms are recommended (Section IV, page 8).

COPA Monitor Follow-up Recommendations and TDH Responses:

- **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[‡] (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

Below is a sample of trending graphs and charts that were generated from values provided by Tennessee data stewards and those contained in the Department's Population Health Reports. The most recent year's data are reported in the Department's 2022 Population Health Report, which is attached as Exhibit 2.

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

Certain data included in the Population Health Sub-Index Report were collected during the COVID-19 pandemic. Hospitals have raised concerns that the pandemic has exacerbated existing disparities related to health outcomes.² 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."³ 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:

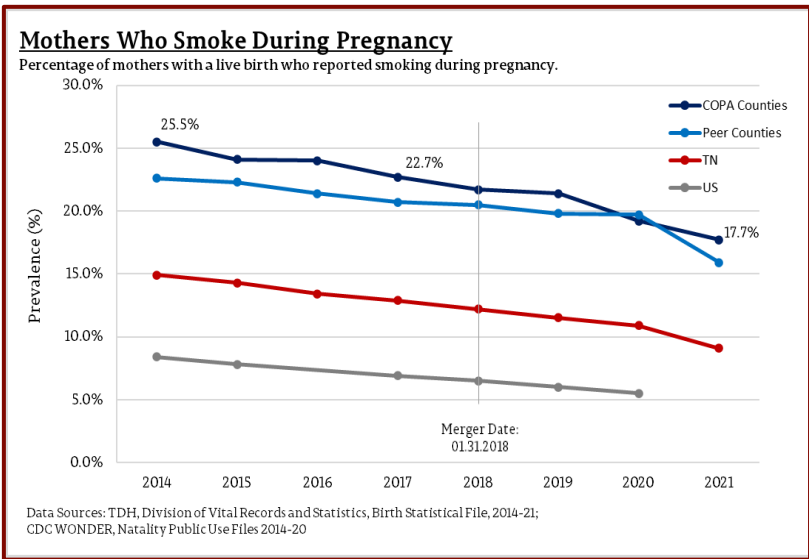
- Because of the suspension of data collection due to COVID-19, the following measures had insufficient data for trend reporting: Overweight and obesity among public school students, physically active students, and mPINC scores.
- Measures on or related to "diseases of despair," including fatal and non-fatal drug overdose rates, percentage of the population experiencing frequent mental distress, and suicide rates, were tracked through the COPA. All were likely significantly impacted by COVID-19, which was declared a public health emergency in Tennessee 25 months after the merger. Rates of change for the population in Ballard Health's geographic service area on fatal and non-fatal drug overdose rates were similar to changes in Peer counties, and the state as a whole. Frequent mental distress and suicide rates did trend higher in the COPA regions in 2019 and 2020 but were back in line with comparison regions by 2021.
- The greatest improvement for residents of Ballard Health's GSA compared to Peer Counties was seen for 3rd grade reading, child mortality, and infant mortality measures.

² <https://oig.hhs.gov/oei/reports/OEI-09-21-00140.pdf>

³ [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)

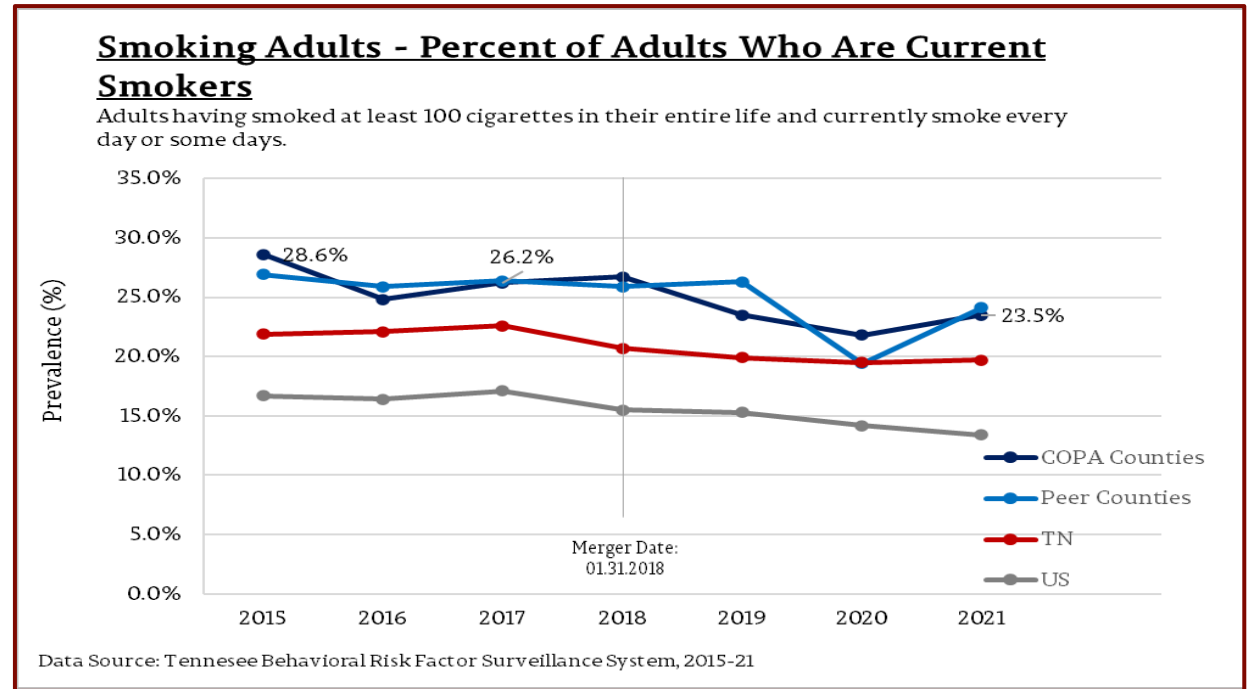
- Trends declined most notably on Breastfeeding Initiation and Cardiovascular Deaths, which were the worse for the COPA Counties as compared to Peers as well as in pre-merger and post-merger comparisons.

Population Health Sub-Index trends: **Smoking measures**



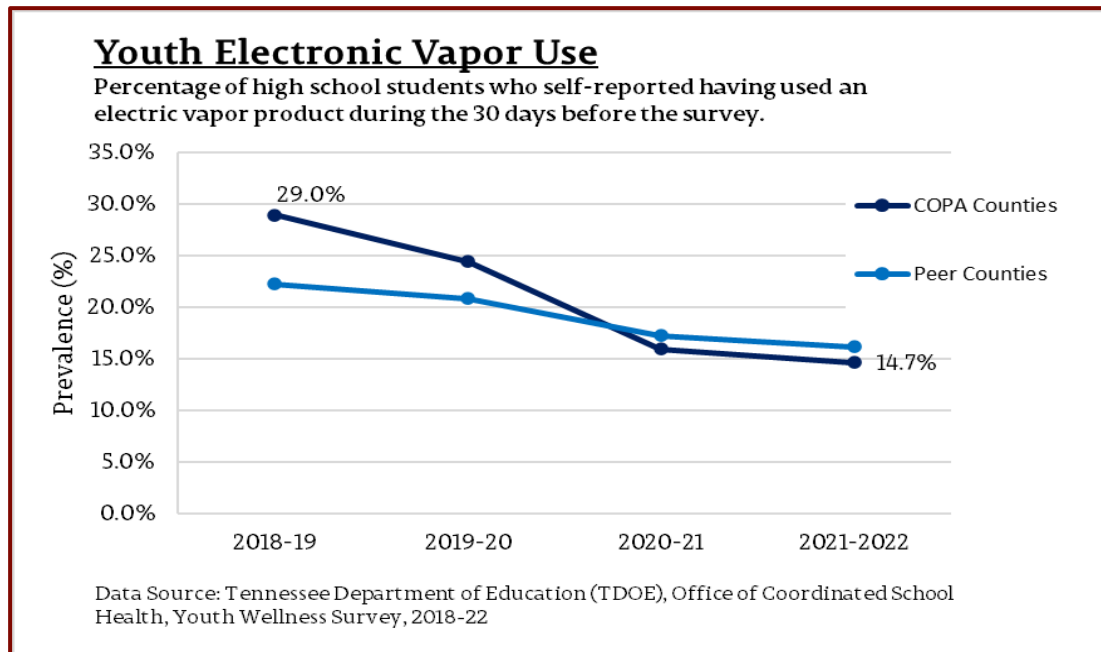
- The percentage of **pregnant women who smoked** in the COPA region was declining prior to the merger and continued to decline subsequent to the merger at a similar rate.
- The rate of decline across all four geographies was similar.

- **Adult smoking** in the COPA region decreased subsequent to the merger. In 2017, the 12-month period prior to the merger, an estimated 26.2% of the adult population smoked and by 2021 the percentage had decreased to 23.5%.
- Smoking rates among the COPA counties and Peer counties followed a similar trend.

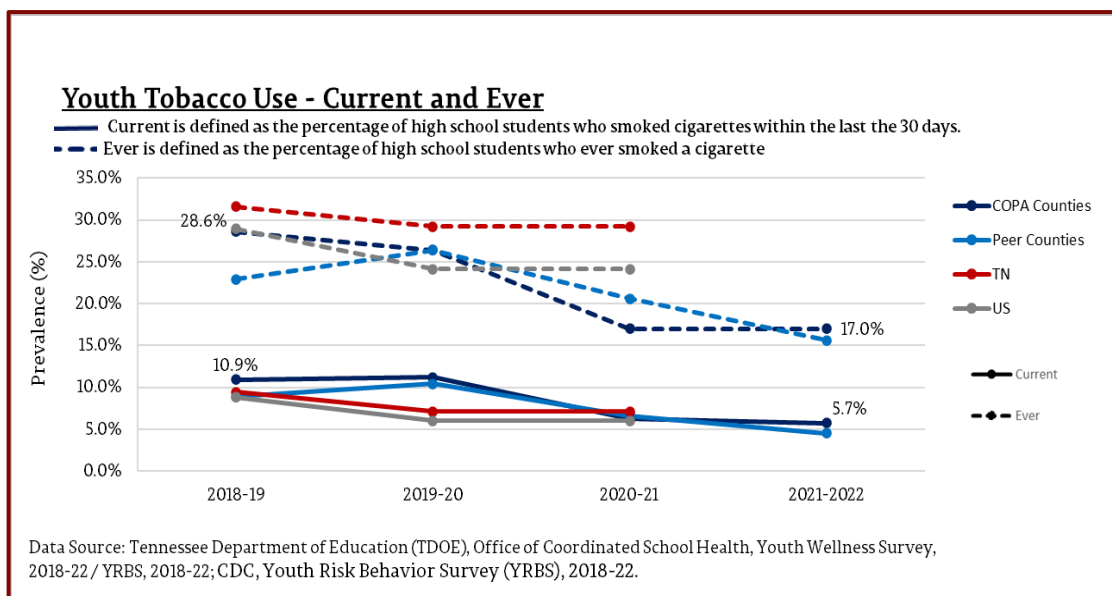


Note: In any instance where a value is not indicated with a marker (dot), it is because the verified value was not available at the time of publication.

Population Health Sub-Index trends: **Smoking measures**



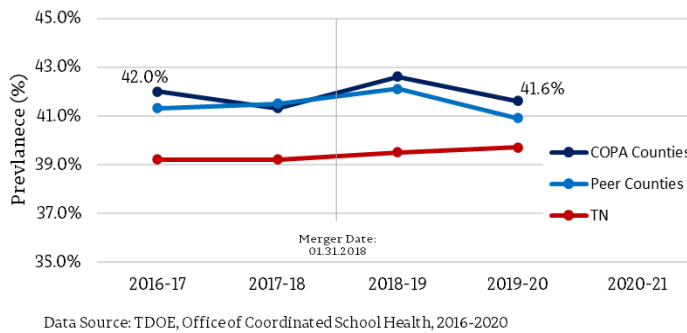
- Estimates of **Youth Electronic Vapor Use** in COPA and Peer Counties declined over the past three years. The rate of decline was steeper in the COPA Counties.
- **Current Youth Tobacco** use declined significantly in the COPA region subsequent to the merger, but at a rate that was similar to Peer Counties in Tennessee.
- The percentage of youth in the COPA region who reported they had **ever smoked a cigarette** declined dramatically, exceeding the improvement seen the Peer Counties.



Population Health Sub-Index trends: **Obesity measures**

Overweight and Obesity among Public School Students

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.

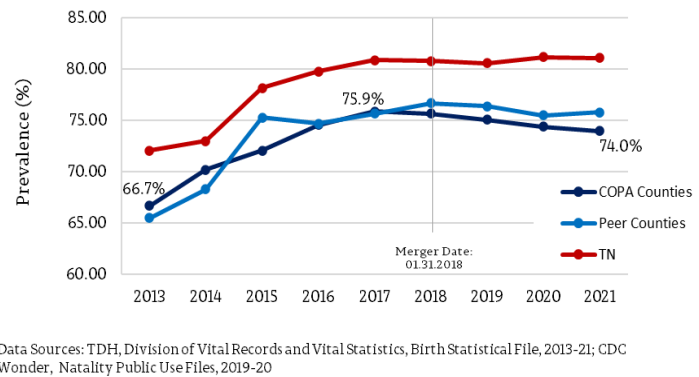


- The percentage of **overweight and obesity among youth** in the COPA region fluctuated greatly over the four years before COVID-19, while the state's percentage climbed steadily.
- Due to COVID-19, more current data are not available.

- The prevalence of **Breastfeeding**, which has been shown to decrease childhood obesity, declined in the COPA region subsequent to the merger.
- While estimates of **obesity among adults** in the COPA region increased over the past four years, increases were also seen in the state as a whole, as well as in the US.

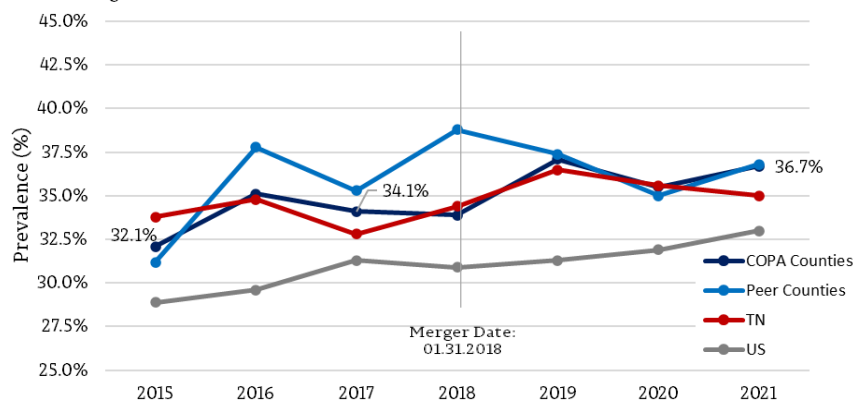
Breastfeeding Initiation

Percentage of live births whose birth certificates report that baby is breastfed. US Value: Proportion of infants who are ever breastfed.



Obesity Adults

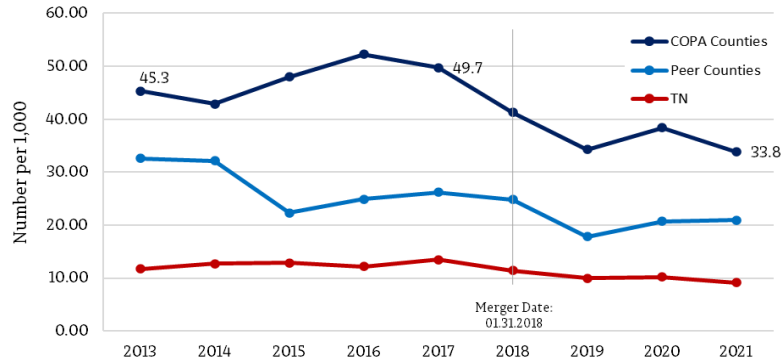
Percentage of adults with a body mass index of 30.0 or higher based on reported height and weight.



Population Health Sub-Index trends: Substance Use

Neonatal Abstinence Syndrome (NAS) Births

Number of reported cases with clinical signs of withdrawal per 1,000 live births.

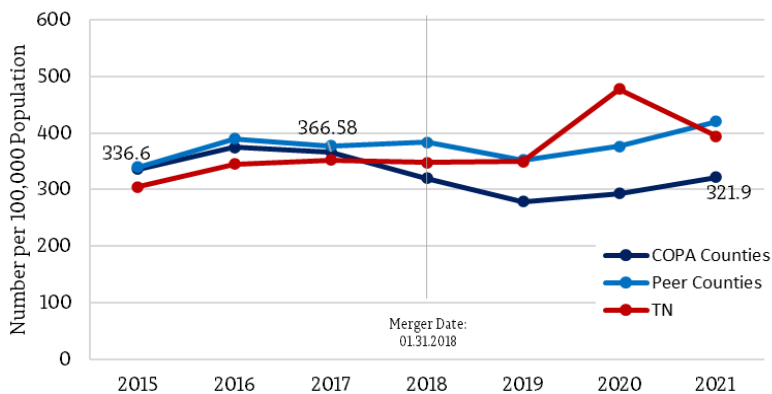


Data Source: TDH, Neonatal Abstinence Syndrome Surveillance, 2013-21

- The rate of **Neonatal Abstinence Syndrome births** in the COPA region fell significantly from its premerger rate of 49.7 per 1,000 in 2017 to 33.8 per 1,000 in 2021. This rate of improvement exceeds that of the Peer Counties as well as the state as a whole.

Non-Fatal Drug Overdoses

Non-fatal overdoses caused by acute poisonings, regardless of intent per 100,000 population.

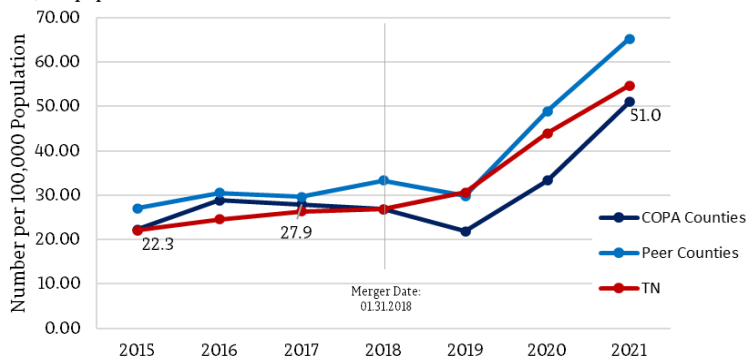


Data Source: TDH, Division of Population Health Assessment, Office of Health Statistics, Hospital Discharge Data System, 2015-21

- The COPA region also saw a significant decline in the rate of **non-fatal drug overdoses**, from 366.58 per 100,000 in 2017 (premerger) to 321.9 per 100,000 in 2021, whereas the Peer Counties and state rates ticked up during the same period.

Drug Deaths

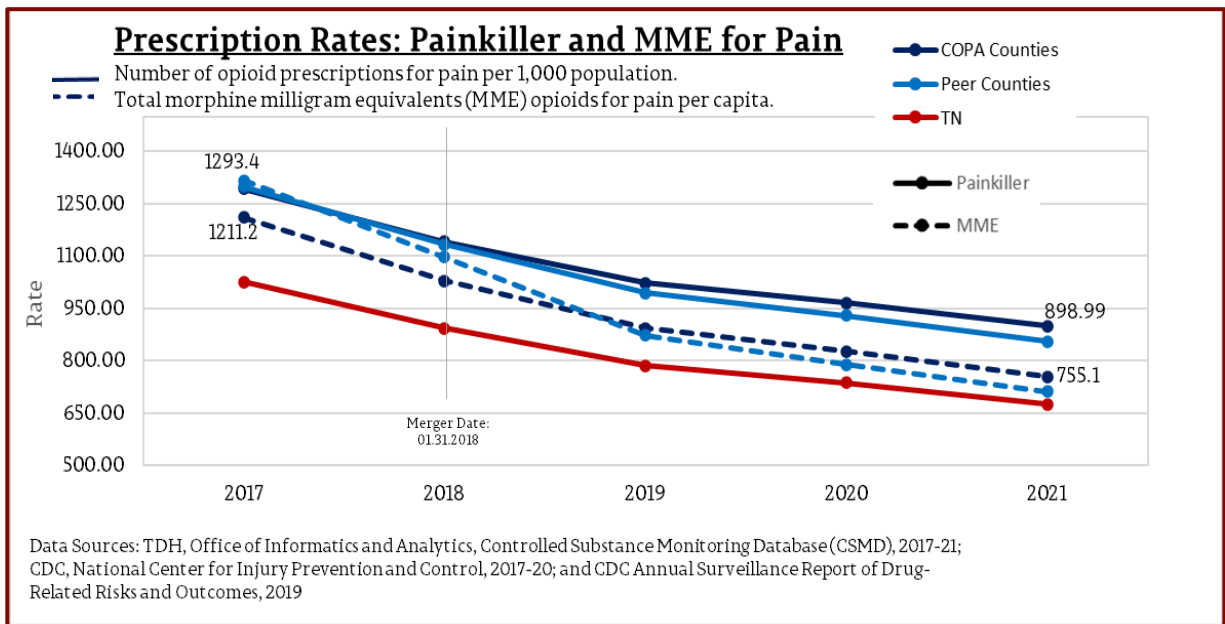
All drug overdose deaths caused by acute poisonings, regardless of intent per 100,000 population.



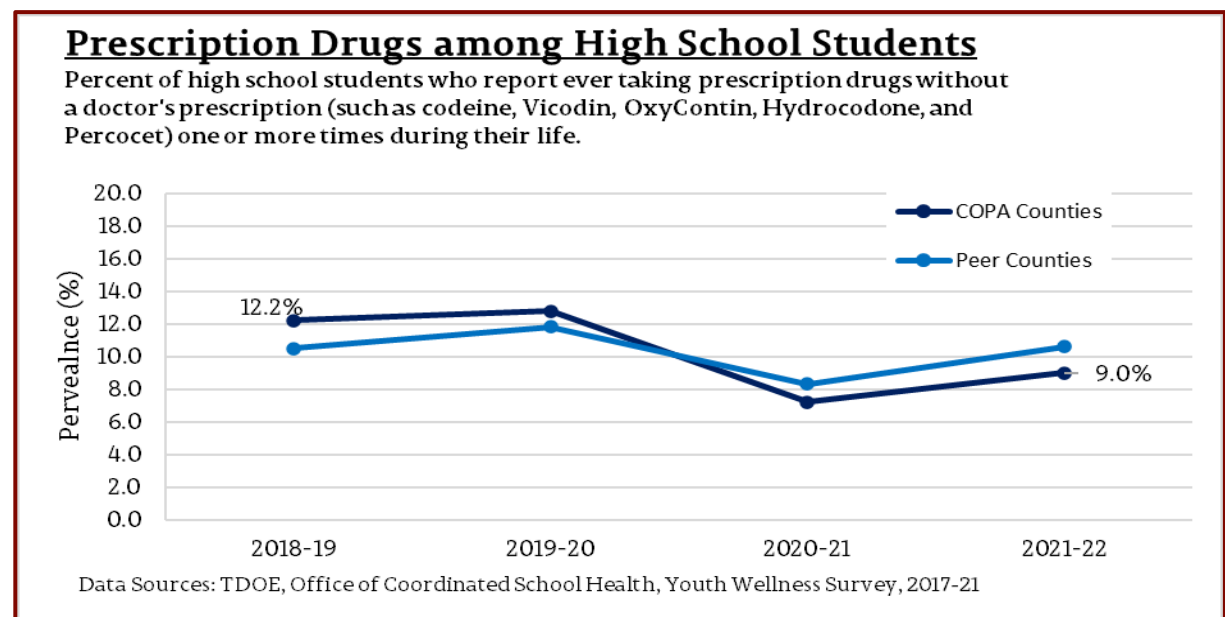
Data Source: TDH, Division of Vital Records and Statistics, Death Statistical File, 2015-21

- **Drug deaths** were sharply up in all regions in 2020 and 2021, which is likely directly and indirectly attributable to COVID-19 pandemic.

Population Health Sub-Index trends: Substance Use



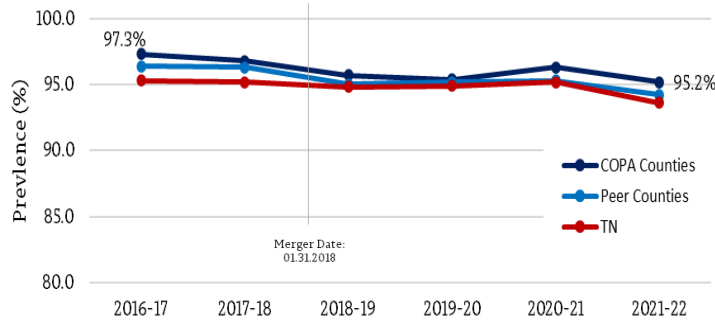
- **Painkiller Prescription** rates dropped consistently over the past four years in the COPA and Peer Counties regions.
- Rates of **MME opioids for pain** fell in the COPA region, from 1293.4 per 1,000 population in 2017 to 898.99 per 1,000 in 2021, but not as steeply as in the Peer Counties.
- The percentage of **high school students who reported taking prescription drugs** without a doctor's prescription declined at a greater rate than in Peer Counties subsequent to the Ballad Health merger.



Population Health Sub-Index trends: **Vaccination measures**

On-Time Vaccinations for Children

Percentage of children that are up to date on state-required vaccines at the time of kindergarten entry.



Data Sources: Kindergarten Immunization Compliance Assessment, 2016-22

- The percentage of **on-time vaccinations for children entering Kindergarten** has remained fairly stable since the COPA was issued, with a slight decline occurring between 2020-21 and 2021-22 school years for all three geographies charted.

- The percentage of **Flu vaccinations in adults and in Older Adults** followed similar patterns over the past six years for all geographies.

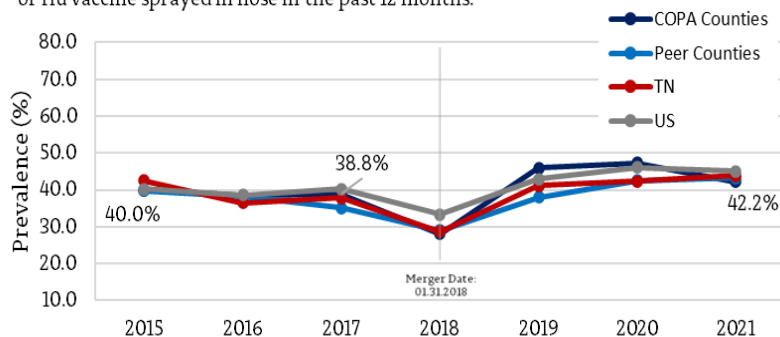
- It is unclear why all geographies, including Tennessee and the US, saw a drop in Flu vaccinations in 2018.

- **Flu vaccinations among adult and older adults** in the COPA Counties peaked in 2020.

- The 2021 flu vaccination percentages were higher for both age groups in the COPA region subsequent to the merger.

Flu Vaccinations in Adults

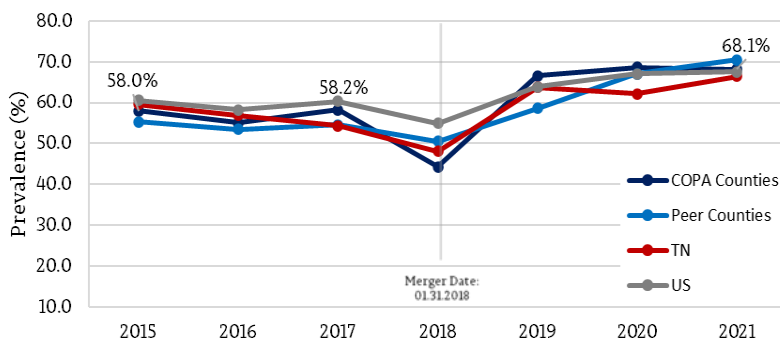
Percent of adults aged 18 and over who self-reported receiving a flu shot or flu vaccine sprayed in nose in the past 12 months.



Data Sources: Tennessee BRFS. TDH, Office of Population Health Surveillance, 2015-21; CDC, BRFS, 2015-21

Flu Vaccinations in Older Adults

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.



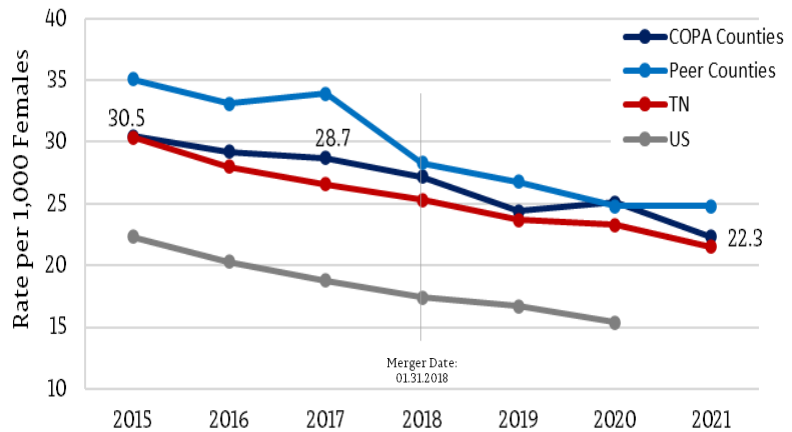
Data Sources: Tennessee BRFS. TDH, Office of Population Health Surveillance, 2015-21; CDC, BRFS, 2015-21

Population Health Sub-Index trends: **Community measures**

- **Teen births** had been declining prior to the merger across all geographies.
- While there was a decline in the **Teen Birth** rate among residents in the COPA Counties, the decline was similar to that seen in the comparison regions.

Teen Births

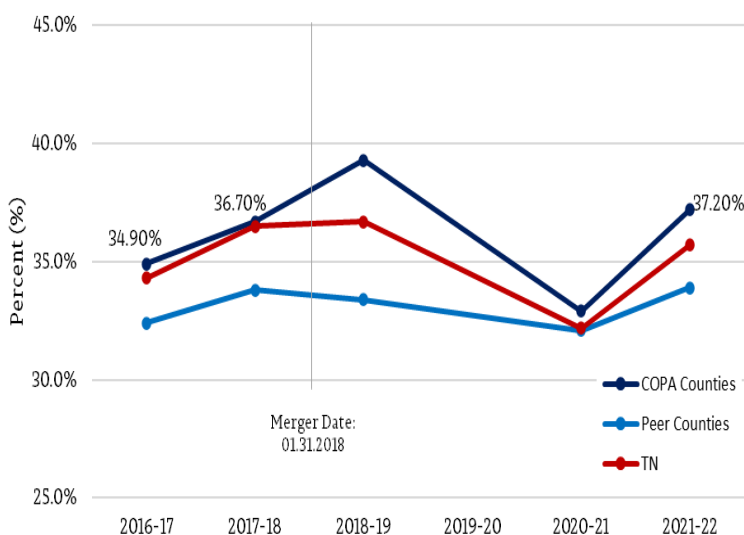
Rate of births per 1,000 females aged 15-19 years.



Data Sources: TDH, Division of Vital Records and Statistics, Birth Statistical File, 2015-21; CDC Wonder, Natality Public Use Files, 2015-20

3rd Grade Reading Level

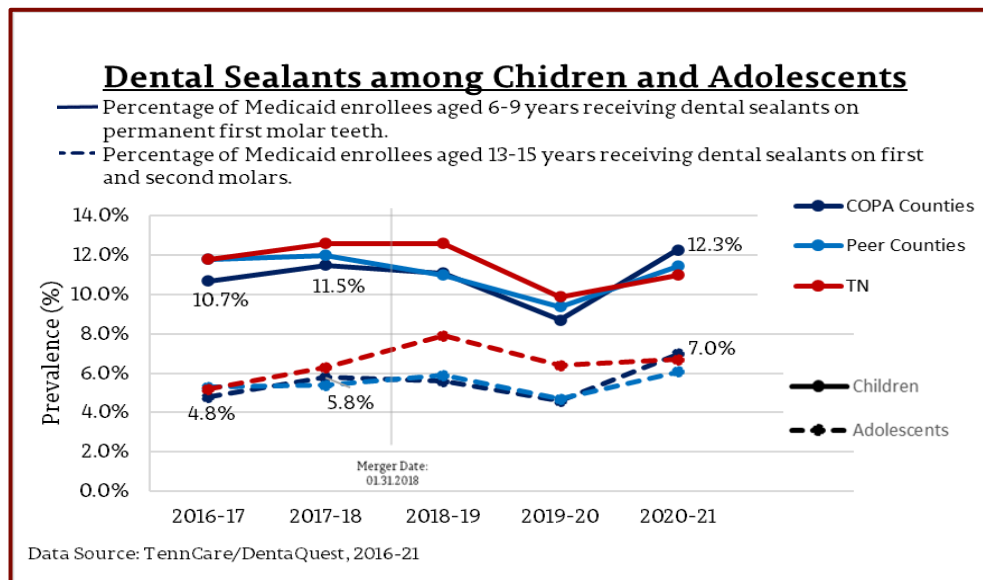
Percentage of 3rd graders scoring "on-track" or "mastered" on TNReady reading assessment.



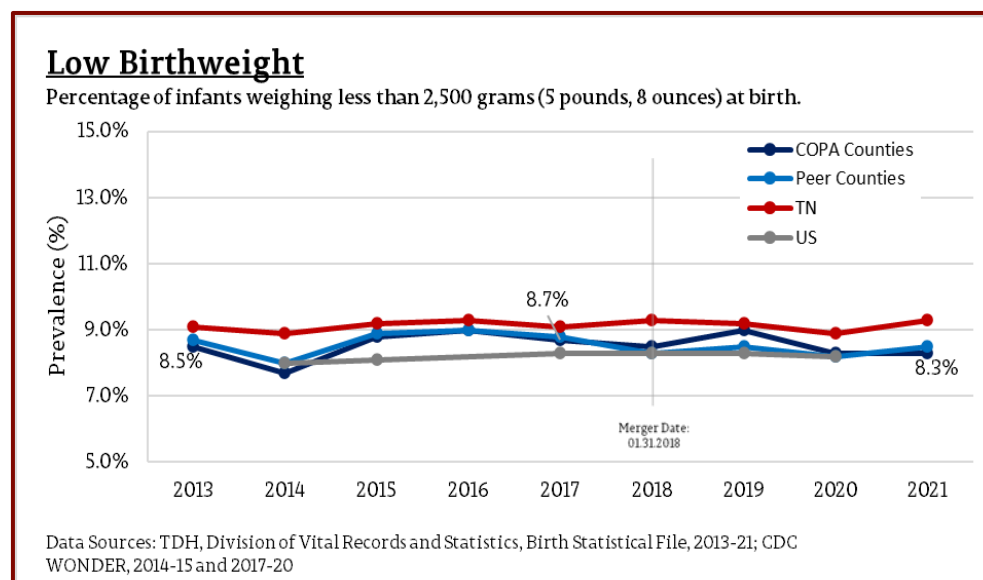
Data Source: Tennessee Department of Education, 2017-19 and 2021-22

- **The percentage of 3rd graders reading at or above their grade level in the COPA region jumped steeply subsequent to the Ballad Health merger, as shown in the 2018-19 test results.**
- **The TNReady assessment was not administered in 2019-20 due to COVID-19.**
- **The scores among 3rd graders in the COPA Counties continued to exceed the scores of their Peer counterparts and of the state as a whole.**

Population Health Sub-Index trends: **Community measures**

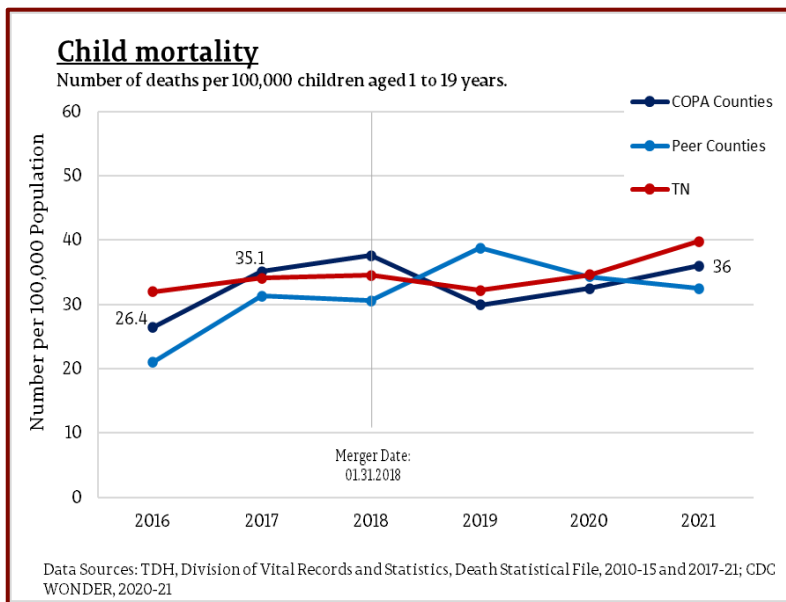


- The percentage of **children 6-9 years receiving Dental Sealants** increased in the COPA Counties. It was the only geography tracked that exceeded its pre-merger 2017-18 value.
- **Dental Sealants among children aged 13-15 years** also increased in the COPA Counties from 5.8% in 2017-18 to 7% in 2020-21. The COPA Counties exceeded the Peer Counties in the most recently reported year.



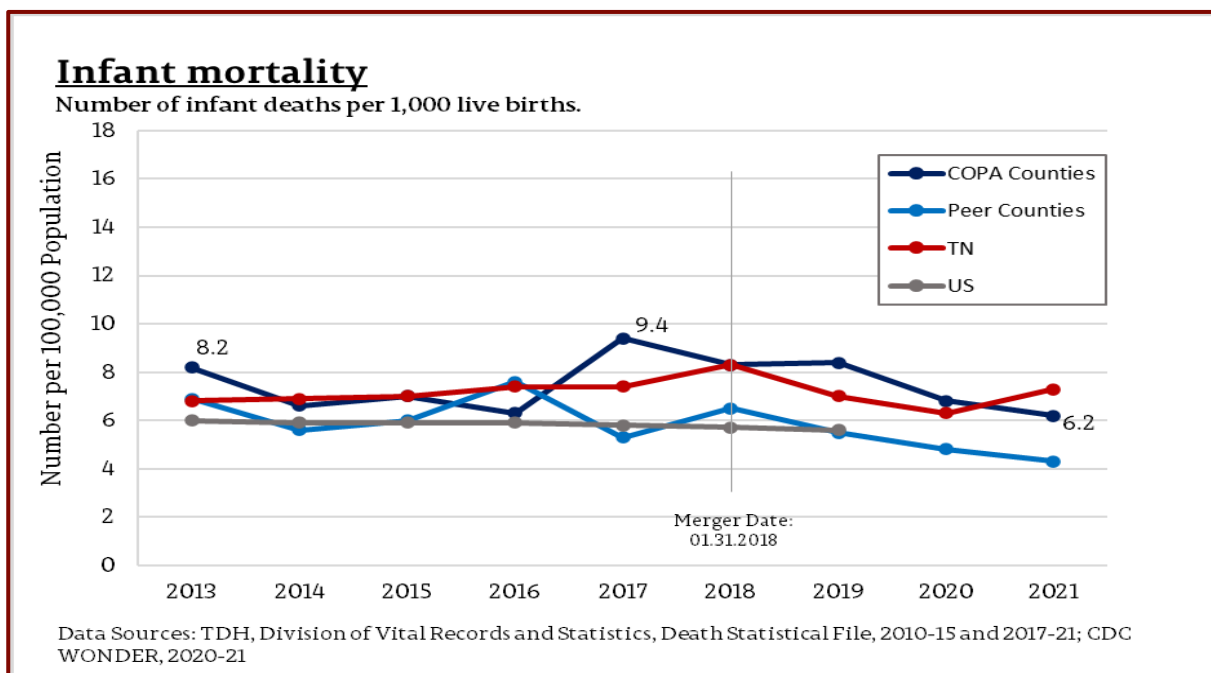
- The prevalence of **Low Birthweight babies** in the COPA region has dropped slightly since the merger but remained relatively stable over the past eight years.
- The percentage of **infants weighing less than 2,500 grams at birth** in the COPA Counties is lower than the state's average percentage.

Population Health Sub-Index trends: **Outcome measures**



- While the **child mortality** rate in the COPA Counties dropped significantly after the merger, those gains were largely lost by 2021.
- **Child Mortality** rates in the COPA Counties and Peer Counties fluctuated more during the last six years than the TN rates.

- **Infant Mortality** rates in the COPA Counties and Peer Counties fluctuated significantly between 2013-2018.
- The **infant mortality** rate in the COPA Counties declined steadily from the pre-merger high of 9.4 per 100,000 population, falling to 6.2 per 100,000 population, below the TN state rate, in 2021.

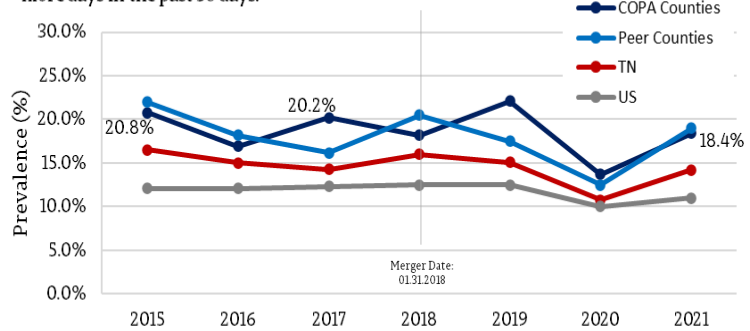


Population Health Sub-Index trends: Outcome measures

- For both **Frequent Physical Distress** and **Frequent Mental Distress** percentages in the COPA Counties were highest in 2019 but fell in 2020, which was counter to expectations that COVID-19 would have increased mental distress.
- **Suicide rates** are thought to be closely linked to frequent mental and physical distress, however, the trends in suicide rates did not strictly follow the trends in the distress measures.
- **Suicide rates** in the COPA Counties increased above the baseline of 18.1 per 100,000 population in 2017 to 19.8 per 100,000 population in 2021, while the other three geographies remained stable.

Frequent Physical Distress

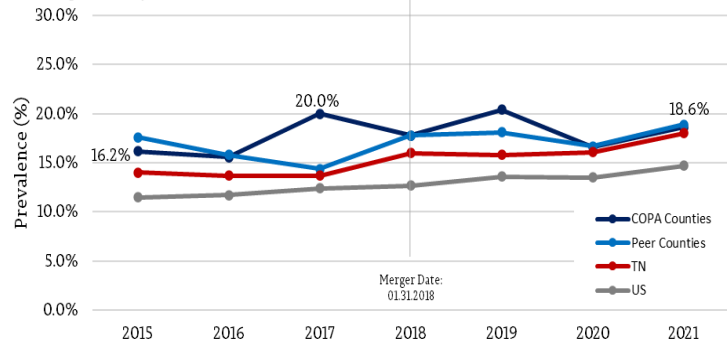
Percentage of adults who reported their physical health was not good 14 or more days in the past 30 days.



Data Sources: Tennessee BRFSS, TDH, Office of Population Health Surveillance, 2021; CDC, BRFSS, 2021

Frequent Mental Distress

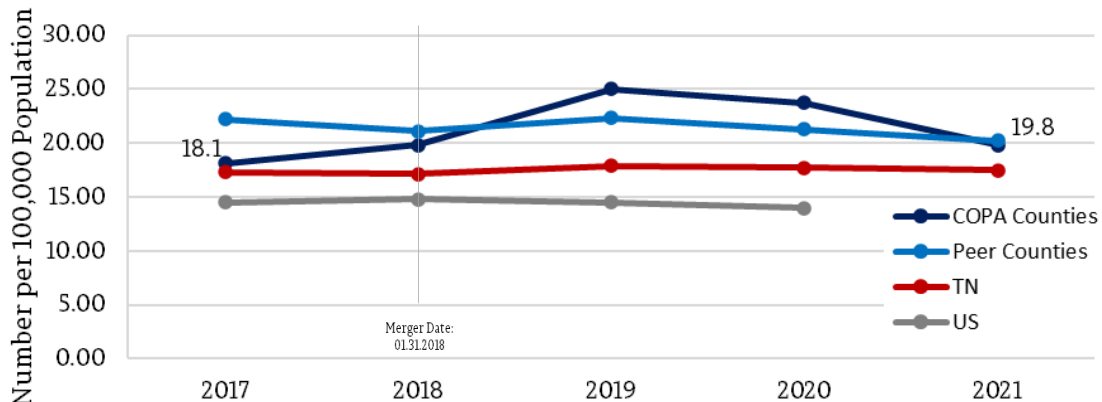
Percentage of adults who reported their mental health was not good 14 or more days in the past 30 days.



Data Sources: Tennessee BRFSS, TDH, Office of Population Health Surveillance, 2016-21; CDC, BRFSS, 2016-21

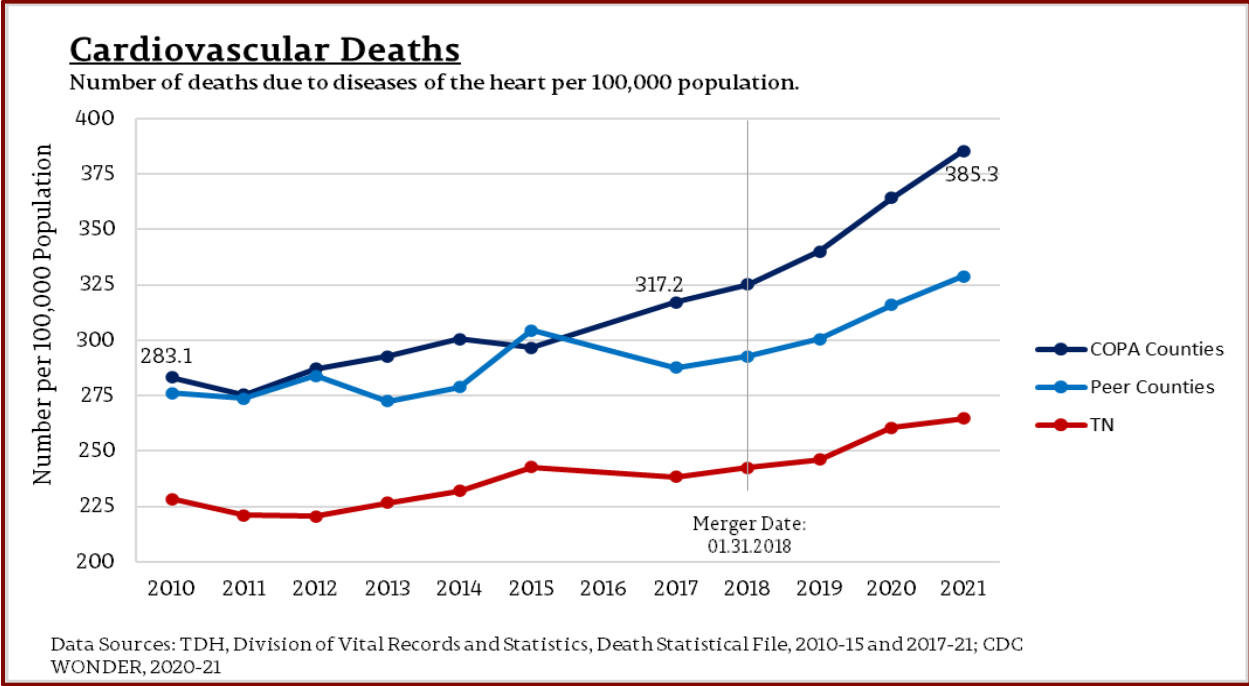
Suicide Deaths

Number of deaths due to intentional self-harm per 100,000 population.

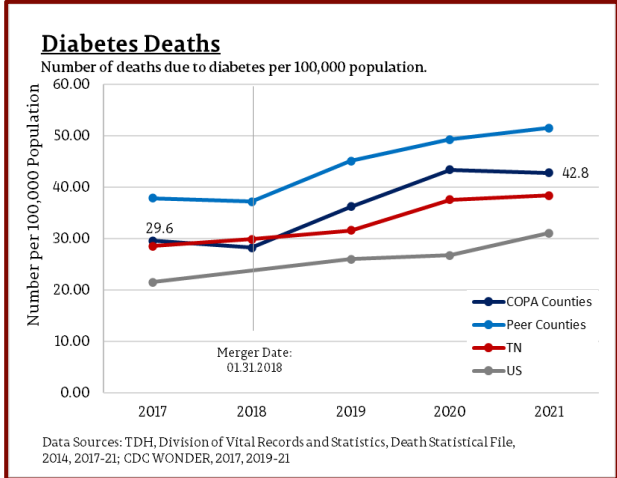
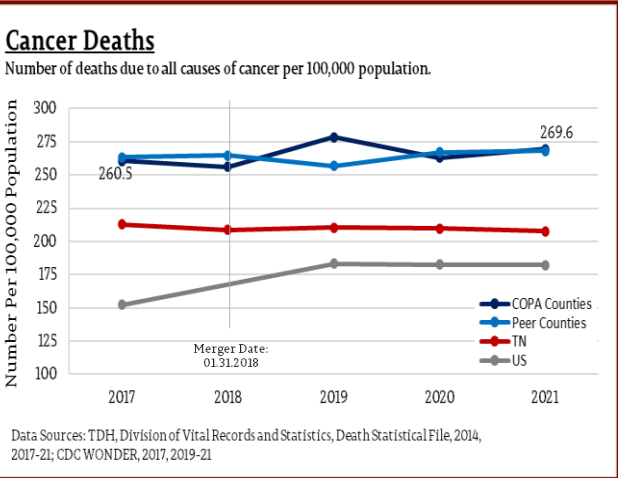


Data Sources: TDH, Division of Vital Records and Statistics, Death Statistical File, 2014-21; CDC WONDER, 2015-20

Population Health Sub-Index trends: Outcome measures



- **Cardiovascular Deaths** were on the rise in the COPA, Peer Counties, and Tennessee prior to 2018, but the rate of increase grew significantly from 2018-2021. The Cardiovascular Death rate grew the most in the COPA Counties from 317.2 per 100,000 population in 2017 to 385.3 per 100,000 population in 2021.
- Because **Cardiovascular Death** rates increased in the Peer Counties as well as in the COPA Counties, there does not appear to be a relationship between the rising rates and the COPA. The elevated rate, however, indicates a growing need in the region for interventions to prevent and treat cardiovascular disease. This is especially true given that cardiovascular disease is the leading cause of death among Tennesseans.



The Department Access to Health Services Report

Below is a sample of trending graphs and charts that were generated from values provided by Tennessee data stewards, Ballad's Data Dictionaries and those contained in the Department's Access to Health Services and Annual Reports. The most recent year's data are reported in the Department's 2022 Access to Health Services Report, which is attached as Exhibit 3.

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

Certain data included in the Access Sub-Index Report were collected during the COVID-19 pandemic. COVID-19 has exacerbated existing disparities in access to care according to hospitals across the United States.⁴ As precautions were taken to limit the spread of COVID-19, 20% of adults in the US reported putting off seeking medical care.⁵ As a result of delaying medical care, 57% of those surveyed reported experiencing further negative health consequences.⁵ An example is with cancer screenings and treatment, which were often delayed during the pandemic, risking disease progression and cancer related mortality.⁶ The pandemic has also been associated with statistically significant decreases in preventable hospitalizations, particularly respiratory-related preventable hospitalizations such as asthma.⁷ 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.⁷

Findings:

- The values for Access Sub-Index measures were reported by Fiscal Year or Calendar Year. Readers are advised to note the fiscal year/calendar year notation at the bottom of each chart.
- Over the life of the COPA, improvement was seen in Ballad Health's service area for most of the Access Sub-Index measures. Significant improvements were seen in preventive health measures such as primary care provider and prenatal care in the first trimester. Improvement was also achieved by Ballad Health in all five screening measures, with the most significant improvement occurring in rates of Colorectal Cancer Screenings and Diabetes and Prediabetes Screenings.

⁴ <https://oig.hhs.gov/oei/reports/OEI-09-21-00140.pdf>

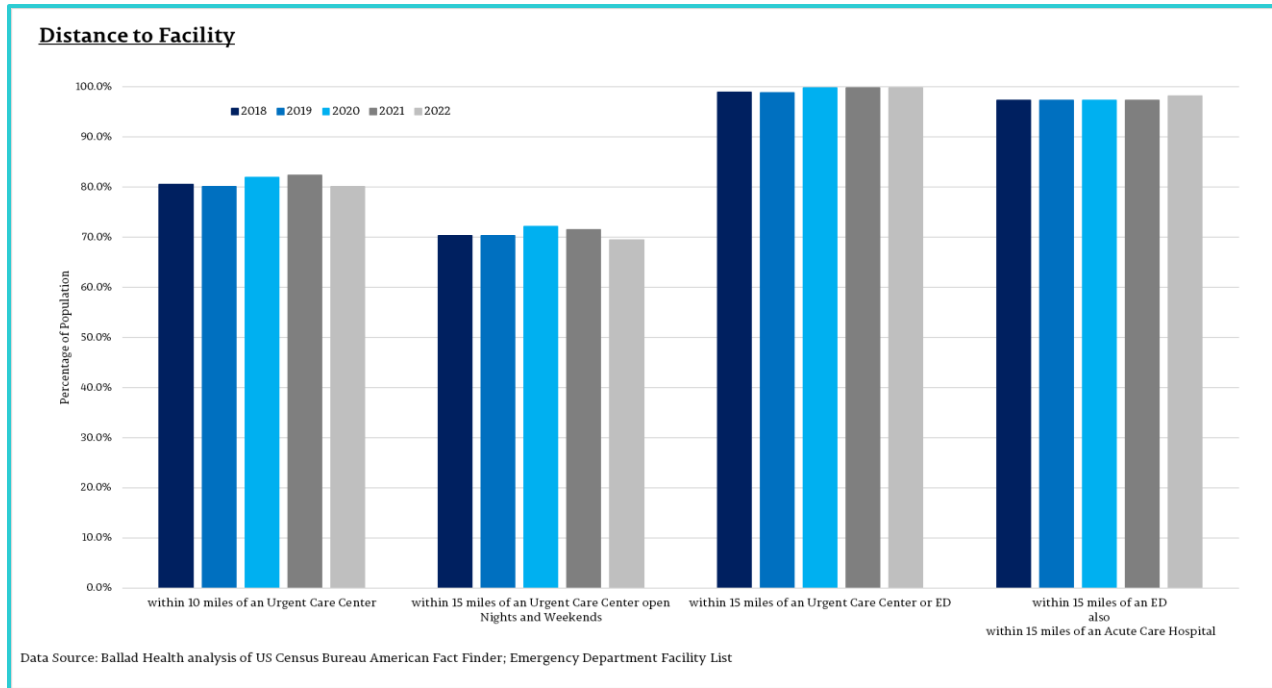
⁵ <https://jamanetwork.com/journals/jama-health-forum/fullarticle/2774358>

⁶ <https://www.sciencedirect.com/science/article/abs/pii/S1040842821000615?via%3Dihub>

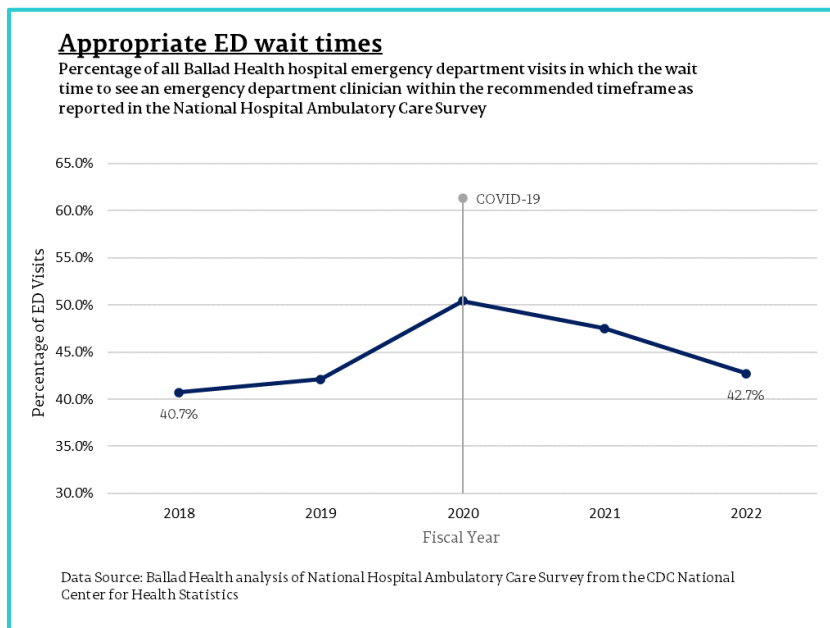
⁷ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8931555/>

- ED admissions for asthma declined among both children 0-4 and children 5-14 years in the COPA region. However, trends were similar in Peer Counties and across TN.
- Unfortunately, several measures related to behavioral health declined, such as 30-Day Follow-Up After a Mental Illness and Effective Antidepressant Medication Management for 6 months. Further, while the administration of SBIRTS (screenings for alcohol and substance abuse, with brief intervention, and referral to treatment) in hospital settings did not decline below the baseline of zero administrations in the years prior to the merger, the increase was less than .05%.

Access Sub-Index trends: Health Delivery System



- The percentage of population within a certain **distance to facilities** in the COPA region remained fairly constant throughout the first five years of the COPA. The small differences over time are largely attributable to population movement across the region.
- Ballad Health did open a hospital with an ED in Lee County, Virginia, in July of 2021, which caused an **increase in the 2022 percentage** of population “within 15 miles of an ED and within 10 miles of an Acute Care Hospital”.



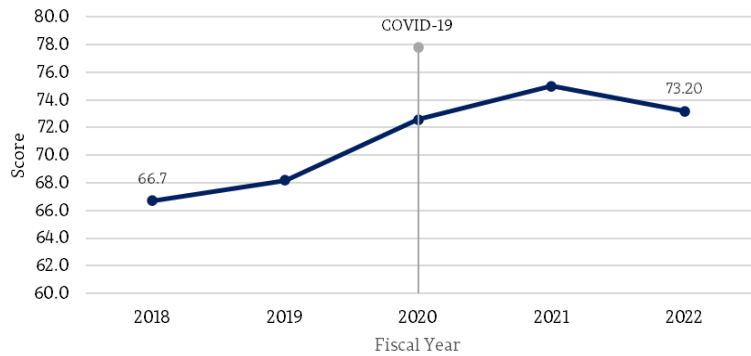
- The percentage of **ED visits in which the door to clinician time was under 15 minutes improved for the first two years of the merger.**
- With the onset of the COVID-19 pandemic, the percentage of **patients seen in the ED within appropriate timeframes** declined to near pre-merger values.

Access Sub-Index trends: Children's Health measures

- The **Pediatric Readiness scores** of Ballad Health's Emergency Departments **have risen subsequent to the merger**, with nearly a 10-point increase between FY18 and FY21.
- Though the score dropped slightly over the past year, the net difference is significantly positive.

Pediatric Readiness

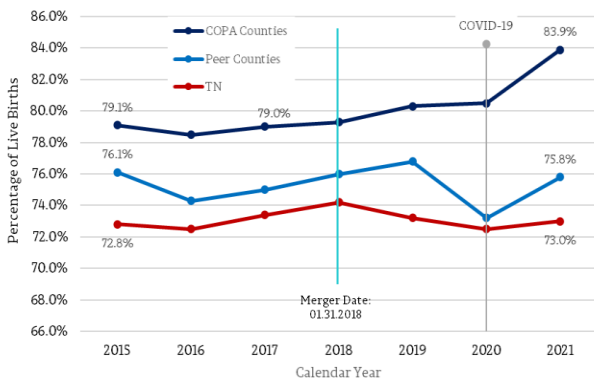
Average score of Ballad Health Emergency Departments on the National Pediatric Readiness Project Survey from the National EMSC Data Analysis Resource Center



Data Source: Ballad Health analysis of a survey tool created by NEDARC

Prenatal Care in 1st Trimester

Percentage of live births in which the mother received prenatal care in the first trimester

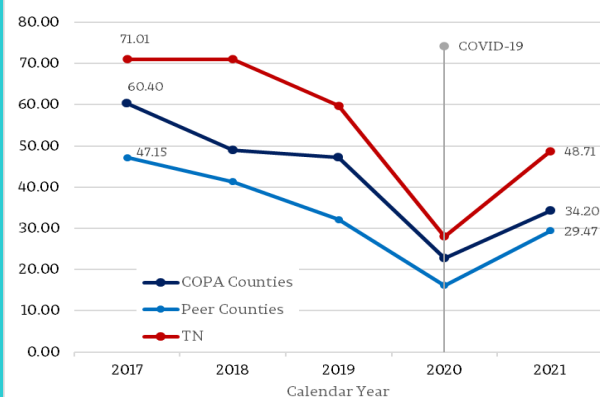


Data Source: Tennessee Department of Health, Division of Vital Records and Statistics

- **Prenatal Care in the COPA region increased significantly over 2017 baseline value** from 79% in 2017 to 83.9% in 2021. **Similar improvement was not seen in Peer Counties nor in the state trends.**
- Trends on **ED admissions for Asthma among children aged 0-4 and 5-14** over the last 5 years were similar among the three geographies tracked. There was a pre-COVID trend downward that fell more sharply with the onset of the pandemic.

ED Admissions for Asthma, Children Age 0-4

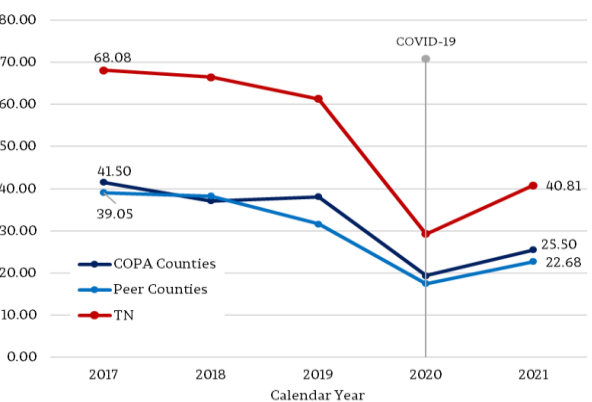
Asthma Emergency Department Visits Per 10,000 (Age 0-4)



Data Source: Hospital Discharge Data System - Tennessee Hospital Association (THA) Emergency Department Dataset

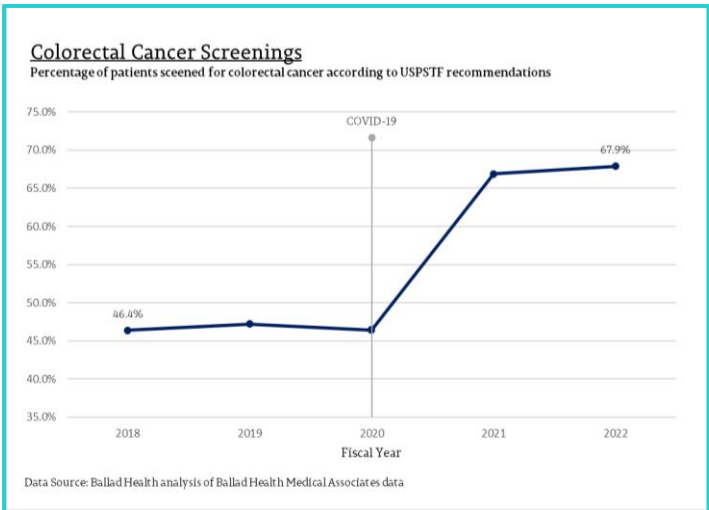
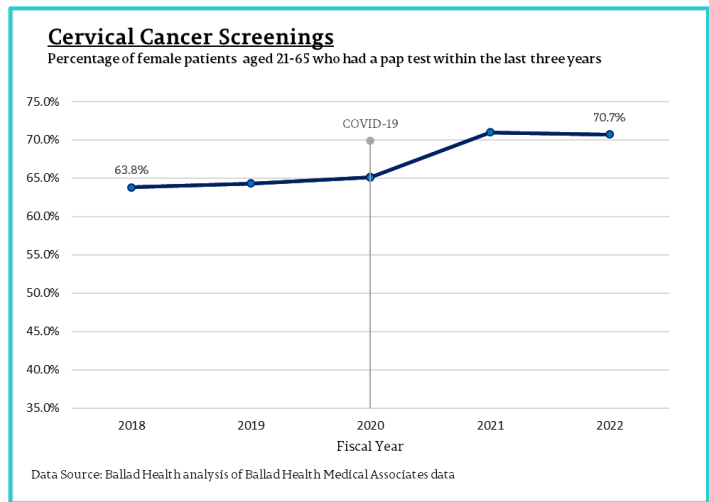
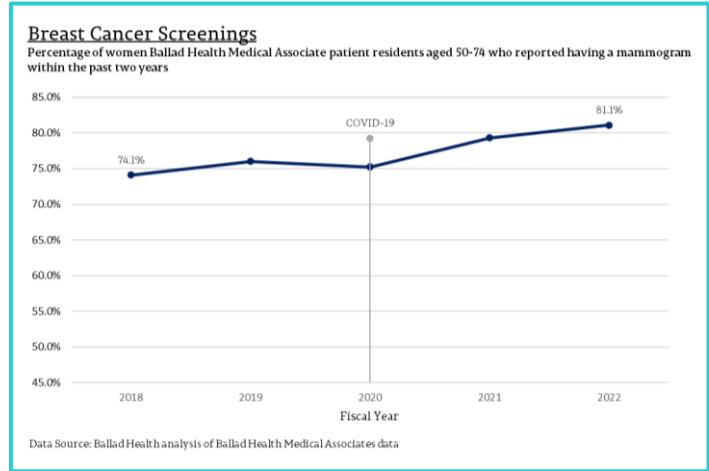
ED Admissions for Asthma, Children Age 5-14

Asthma Emergency Department Visits Per 10,000 (Age 5-14)



Data Source: Hospital Discharge Data System - Tennessee Hospital Association (THA) Emergency Department Dataset

Access Sub-Index trends: Prevention measures



- The percentage of patients **screened for breast cancer improved over the life of the COPA**. That improvement trend was interrupted by a slight decline in 2020 with the onset of COVID-19.

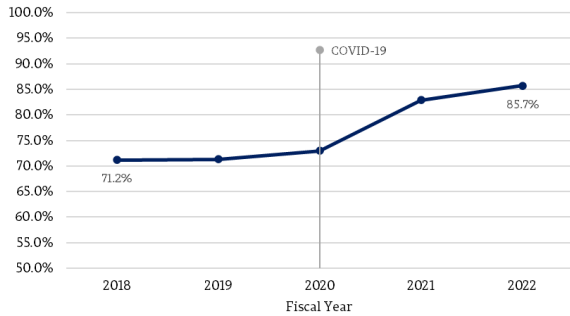
- **Cervical Cancer Screenings increased steadily** from 63.8% of patients in FY18 to 70.7% in FY22.

- **Screenings for Colorectal Cancer improved dramatically over the life of the COPA**. The percentage of patients screened **increased by more than twenty percentage points**, from 46.4 in FY18 to 67.9% in FY22.

Access Sub-Index trends: Prevention measures

Screenings for Diabetes

Percentage of overweight or obese patients aged 40-70 who are screened for prediabetes and diabetes.

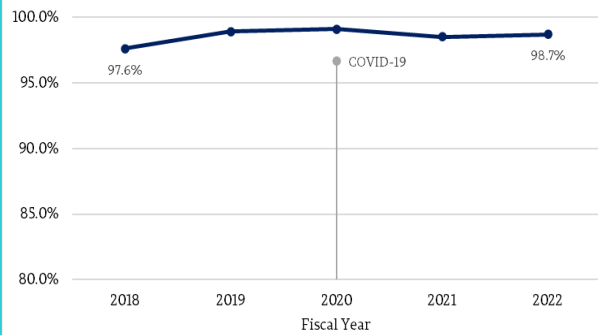


- The percentage of patients **screened for Diabetes** increased year over year for the past four years, with a total improvement of 14.5 percentage points.

- Hypertension screenings** among patients, which were already above 97%, increased further in the years subsequent to the merger.

Screenings for Hypertension

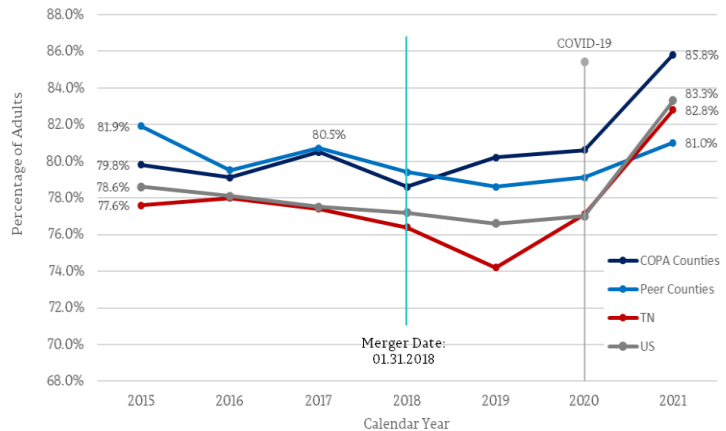
Percentage of patients aged 18+ who are screened for hypertension



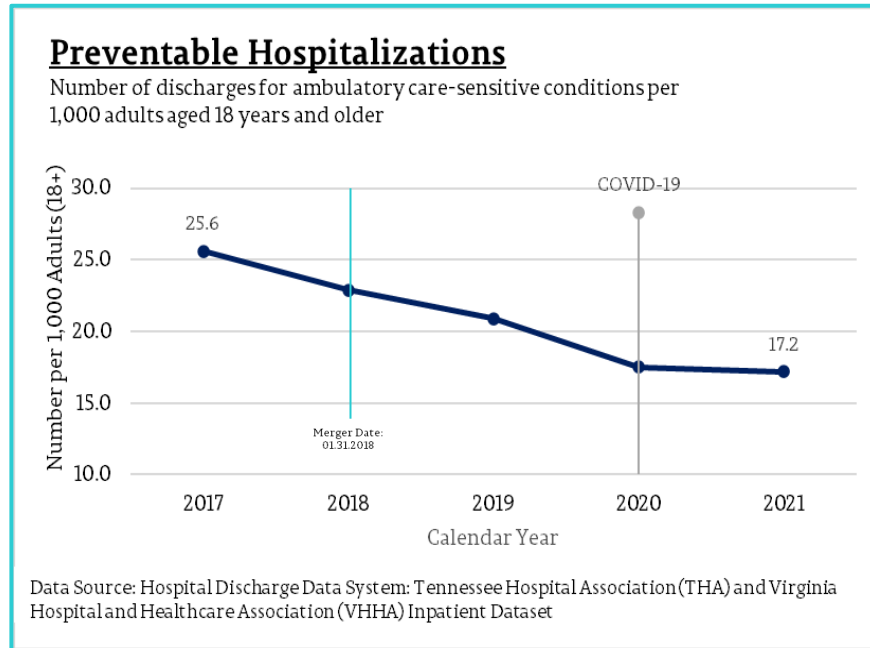
- The percentage of residents who reported they had a **Personal Care Provider** (or Primary Care provider) increased in the COPA Counties subsequent to the merger.
- From 2020-2021 all regions improved, however rate of improvement in the COPA Counties was greater than that of its Peer Counties from 80.5% in 2017 to 85.8% in 2021.

Primary Care - Percent of Population with a Personal Care Provider

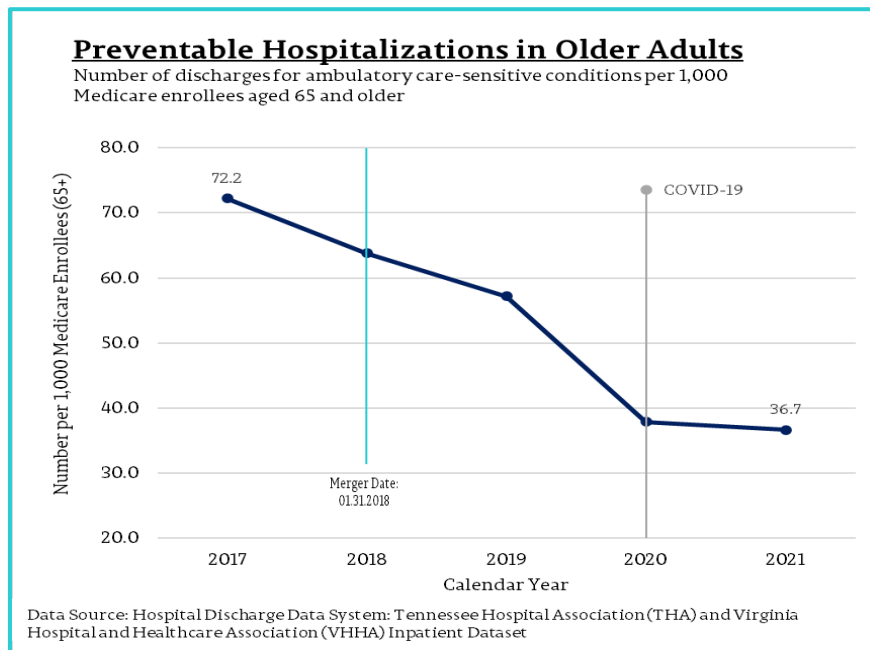
Percentage of adults who reported having one person they think of as a personal doctor or health care provider



Access Sub-Index trends: Prevention measures



- The rate of Ballad Health’s **preventable hospitalizations** **dropped precipitously subsequent to the merger** for both older adults and all adult patients.
- While COVID-19 impacted the 2020 and 2021 **preventable hospitalization** rates across the county, a **decrease** was seen in the COPA region prior to the pandemic for both age groups.

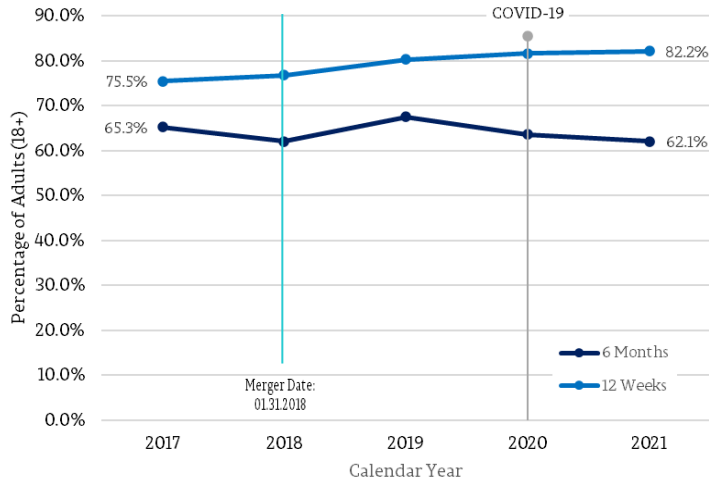


NOTE: Ambulatory Care-Sensitive Conditions are health conditions for which adequate management, treatment, and interventions delivered in the ambulatory care setting can potentially prevent hospitalization.

Access Sub-Index trends: Behavioral Health measures

Antidepressant Medication Management

Percentage of adults 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) or for 180 days (6 months)



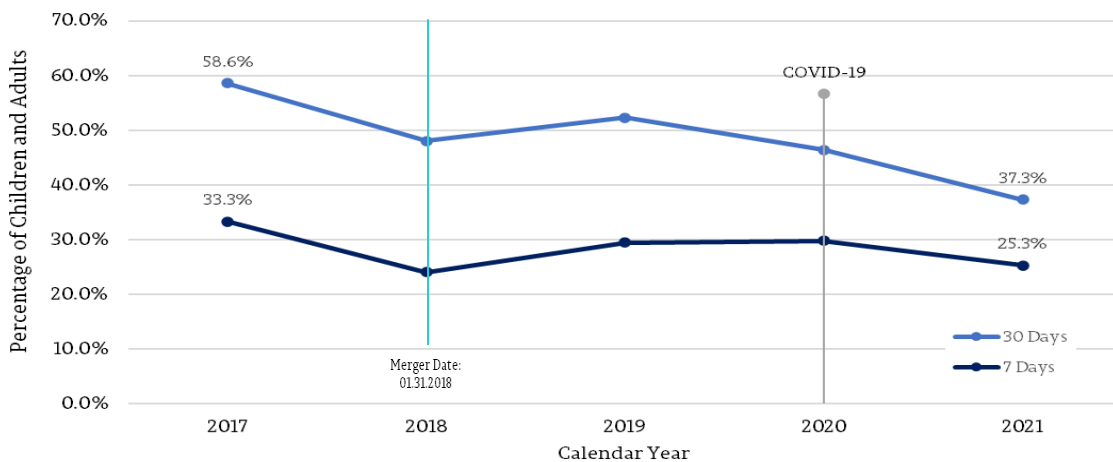
Data Source: Ballad Health analysis of MSSP and Team Member Claims data

- The percentage of Ballad Health patients whose **Antidepressant Medication** was well managed over 12 weeks increased consistently over the last five years.
- However, the percentage of patients whose **Antidepressant Medication** is well managed over 6 weeks decreased slightly over the pre-merger value.

- The percentage of patients who received **follow up care for a mental health illness** declined since the merger at both the seven day and 30-day follow-up periods.

Mental Illness Follow-Up

Percentage of individuals aged 6 years+ who are hospitalized for treatment of selected mental health disorders and who were subsequently seen by a mental health provider within the reported number of days

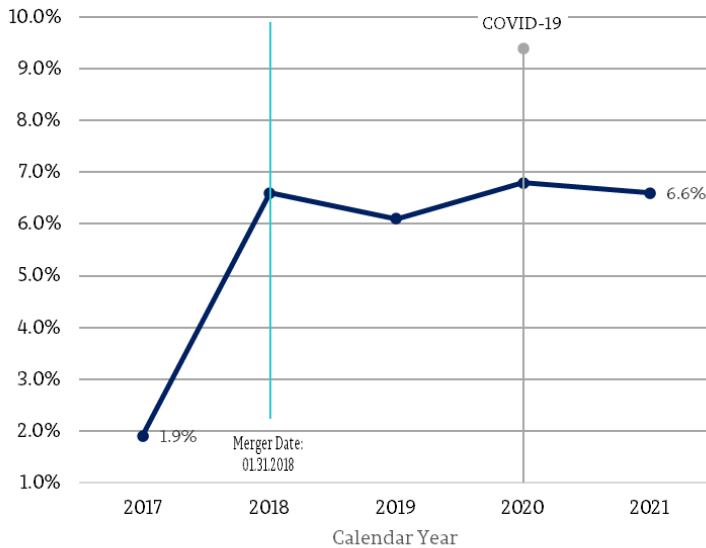


Data Source: Ballad Health analysis of MSSP and Team Member Claims data

Access Sub-Index trends: Behavioral Health measures

Engagement of Drug or Alcohol 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



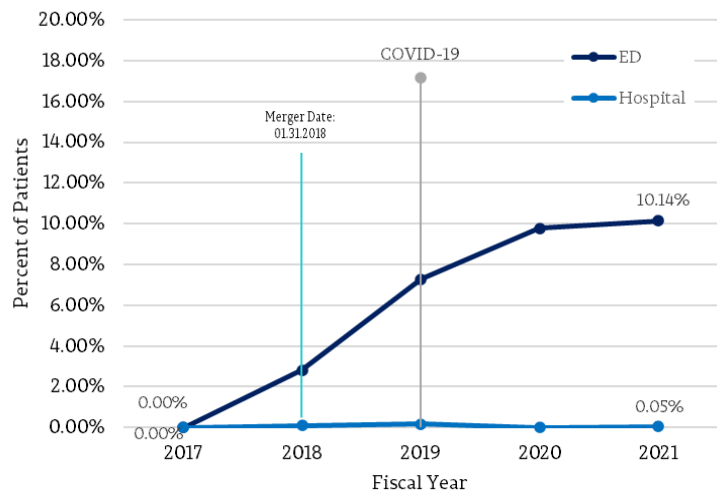
Data Source: Ballad Health analysis of Team Member Claims data

- Within the first year of the merger, the percentage of Ballad Health patients who initiated treatment within 30 days of receiving a diagnosis for alcohol or other drug dependence more than tripled from 1.9% in 2017 to 6.6% in 2021.
- Further gains were not seen for this measure, but the initial improvement was maintained.

- Ballad Health's legacy systems did not administer screenings for alcohol and substance abuse, with a brief intervention and referral to treatment (SBIRTs).
- Ballad Health's ED administration of SBIRTs climbed to 10% over the life of the COPA.
- Ballad Health administered one SBIRT outside of the ED in 2021, which constitutes improvement over baseline. Continuing gains were not seen in SBIRT administration percentages among acute inpatients.

SBIRT Administration

Percentage of patients admitted to a Ballad Health hospital or emergency department who are screened for alcohol and substance abuse, provided a brief intervention, and referred to treatment (SBIRT)



Data Source: Ballad Health analysis of Ballad Health Social Needs Screening Tool database

The Department Other (Quality) Report.

Below are a sample of trending graphs and charts that were generated from values contained in the Department's Other (Quality) Reports. The most recent year's data are reported in the Department's 2022 Other (Quality) Report, which is attached as Exhibit 4.

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

Certain data for this Other (Quality) Report were 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.⁸ 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.⁹ Those increases continued in 2021 compared to pre-pandemic years.¹⁰ Hospitals also reported that staffing shortages have affected patient care, and that exhaustion and trauma have taken a toll on staff's mental health.⁸ Administrators detailed challenges associated with vaccine distribution efforts and concerns about vaccine hesitancy among staff and members of their communities.⁸ 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.¹¹ Nor are they equipped to manage the degree of aberration now being encountered in the underlying data.¹¹ The COVID-19 pandemic has disrupted the health care system in ways that have affected patient, provider, and hospital-level decisions, behavior, and performance.¹¹

Findings:

- Consistent with national trends related to the pandemic, Ballad Health experienced an increase in most healthcare-associated infections in this reporting period compared to baseline. C. diff was the only exception, and in this measure, Ballad Health achieved greater than a 70% reduction in event rates.
- During this reporting period, the Ballad Health system improved over baseline on some patient safety indicators (PSIs) including PSI 3 Pressure Ulcer Rate, PSI 8 In Hospital Fall with Hip Fracture rate, and PSI 15 Unrecognized abdominopelvic accidental puncture/laceration rate.

⁸ <https://oig.hhs.gov/oei/reports/OEI-09-21-00140.pdf>

⁹ <https://www.cdc.gov/hai/data/portal/covid-impact-hai.html>

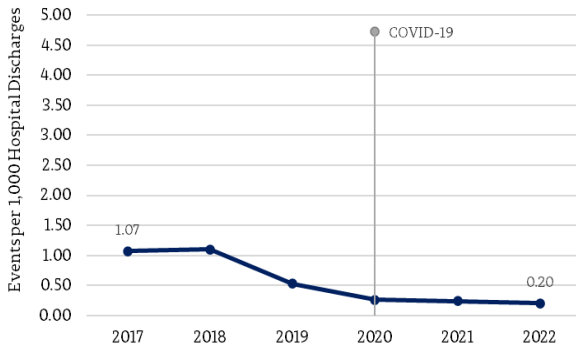
¹⁰ <https://www.cdc.gov/hai/data/portal/progress-report.html>

¹¹ <https://www.healthaffairs.org/doi/10.1377/forefront.20210520.815024/full/>

Other (Quality) Sub-Index trends: Patient safety indicators

Pressure Ulcer Rate

Pressure ulcer events per 1,000 hospital discharges



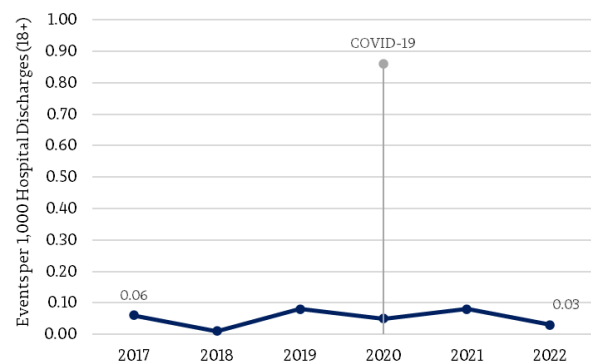
Data Source: Ballad Health (Premier)

- **Pressure Ulcer Rates** fell precipitously from the 2017 baseline rate of 1.07 per 1,000 discharges to 0.20 per 1,000 discharges in 2022.
- No impact from COVID-19 was apparent from these annual data.

- Moderate fluctuations were seen in the rate of **In-Hospital Fall with Fracture** since the COPA was issued in early 2018 with no clear positive or negative trend.

In-Hospital Fall with Fracture Rate

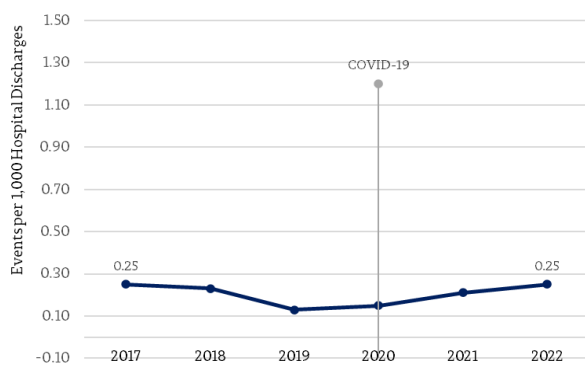
In hospital fall with hip fracture (secondary diagnosis) per 1,000 discharges for patients ages 18 years and older.



Data Source: Ballad Health (Premier)

Iatrogenic Pneumothorax Rate

Iatrogenic Pneumothorax events per 1,000 hospital discharges



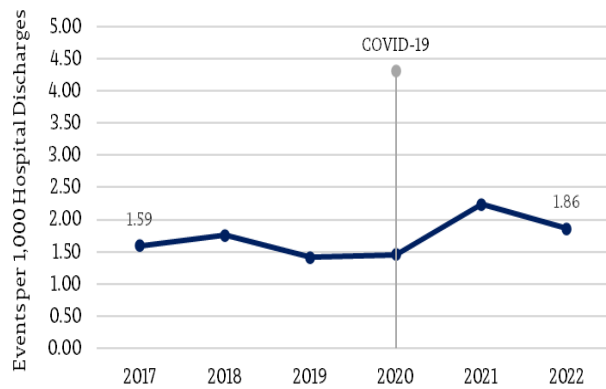
Data Source: Ballad Health (Premier)

- The rate of **iatrogenic Pneumothorax** events declined subsequent to the merger, but increased subsequent to the COVID-19 pandemic, resulting in no net change.

Other (Quality) Sub-Index trends: Patient safety indicators

Postoperative Hemorrhage or Hematoma Rate

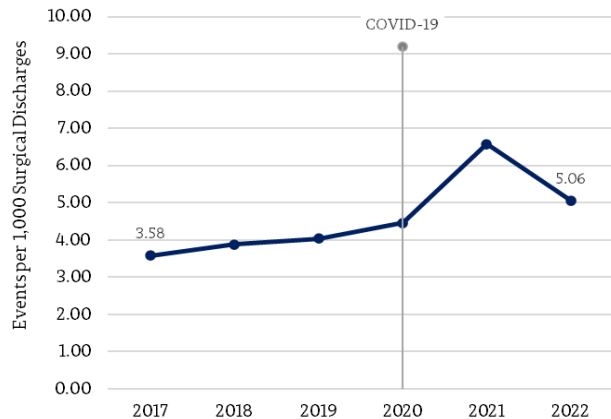
Postoperative Hemorrhage or Hematoma events per 1,000 hospital discharges.



Data Source: Ballad Health (Premier)

Postoperative Sepsis Rate

Rate of postoperative sepsis events per 1,000 surgical discharges.

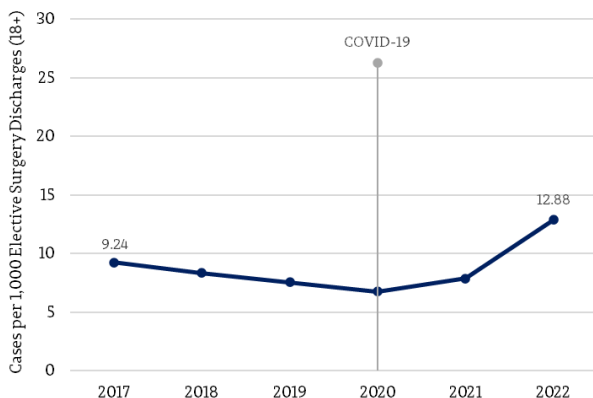


Data Source: Ballad Health (Premier)

- The rate of **Postoperative Hemorrhage or Hematoma** events and **Postoperative Sepsis** events increased markedly in 2021, after the onset of COVID-19. Rates for both types of events declined in 2022.
- **Postoperative Respiratory Failure** rate and **Perioperative Pulmonary Embolism or DVT** rate appeared to decline in the first two years of the COPA, but with the COVID-19 pandemic rates began to rise.

Postoperative Respiratory Failure Rate

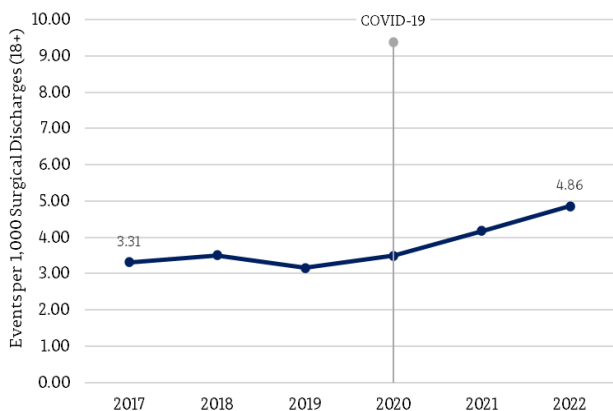
Postoperative respiratory failure (secondary diagnosis), prolonged mechanical ventilation, or reintubation cases per 1,000 elective surgical discharges for patients ages 18 years and older.



Data Source: Ballad Health (Premier)

Perioperative Pulmonary Embolism or DVT Rate

Perioperative pulmonary embolism or proximal deep vein thrombosis (secondary diagnosis) events per 1,000 surgical discharges for patients ages 18 years and older.

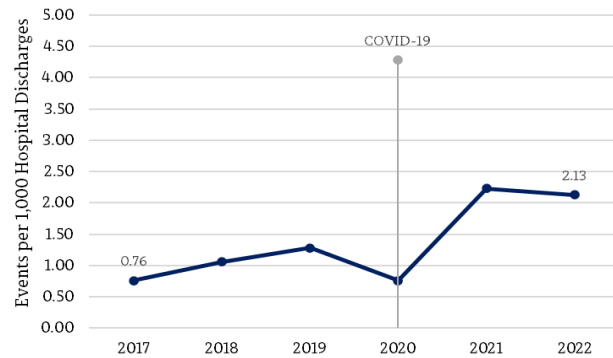


Data Source: Ballad Health (Premier)

Other (Quality) Sub-Index trends: Patient safety indicators

Postoperative Acute Kidney Injury Requiring Dialysis

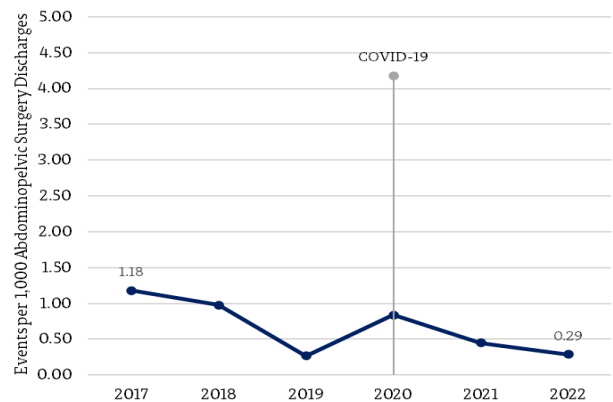
Postoperative Acute Kidney Injury Requiring Dialysis events per 1,000 hospital discharges.



Data Source: Ballad Health (Premier)

Accidental Puncture or Laceration Rate

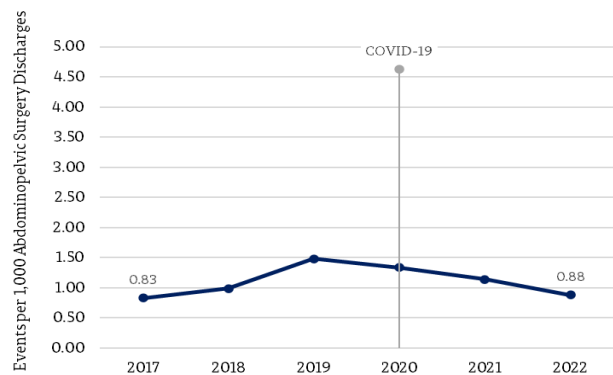
Accidental punctures or lacerations (secondary diagnosis) per 1,000 discharges for patients ages 18 years and older, who have undergone an abdominopelvic procedure.



Data Source: Ballad Health (Premier)

Post Wound Dehiscence Rate

Rate of postoperative reclosures of the abdominal wall per 1,000 abdominopelvic surgery discharges.



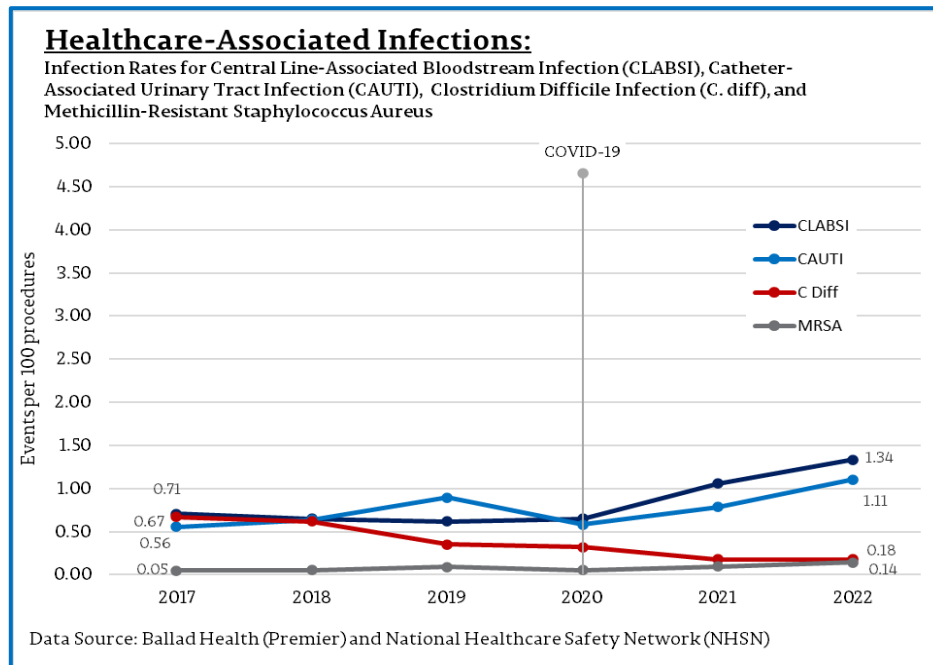
Data Source: Ballad Health (Premier)

- Rates of **Postoperative Acute Kidney Injury Requiring Dialysis** events **increased at Ballad facilities prior to the pandemic** and dropped with the onset of the pandemic. The drop may have been a result of the suspension of elective surgeries in 2020. After the pandemic's initial onset, **rates resumed their elevated trend.**

- **Accidental Puncture or Laceration** rates at Ballad facilities **declined significantly after the merger**, interrupted only by a brief rise in 2020.

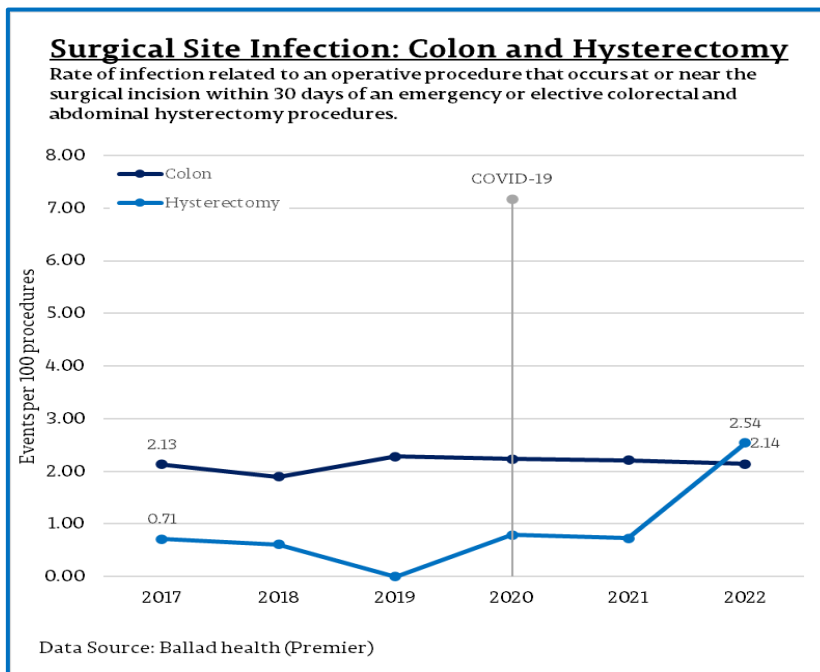
- The rate of **Post Wound Dehiscences** in Ballad facilities increased in the first two years of the merger but gradually declined to near baseline levels by 2022.

Other (Quality) Sub-Index trends: Patient safety indicators



- While **CLABSI** and **CAUTI** rates remained relatively unchanged in the first three years of the COPA, they rose in the two years following the onset of COVID-19.
- **C. diff** rates steadily declined by more than 70% subsequent to the merger, whereas **MRSA** rates had little change. Rates for both did not appear to be impacted by COVID-19.

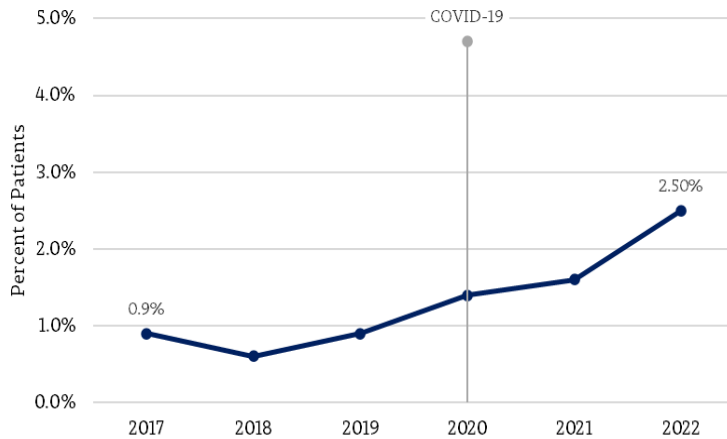
- **Colon Surgical Sight Infection** rates appear to have remained flat over the past six years, with no discernable impact from the merger or COVID-19. In contrast, **Hysterectomy Surgical Sight Infection** rates dropped for two consecutive periods after the merger, but began climbing at the onset of COVID-19. The most recent Hysterectomy SSI rate is well above the premerger rate.



Other (Quality) Sub-Index trends: Emergency Department

Left Without Being Seen (ED)

Percent of patients who left the emergency department before being seen.



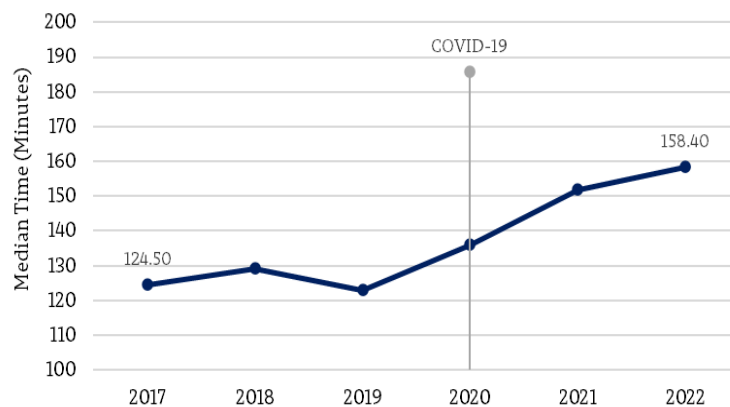
Data Source: Ballad Health (Premier)

- The percentage of patients who **left the ED without being seen** was relatively unchanged for the first two years of the merger. In 2020 **rates went above the pre-merger levels and have continued to climb.**

- **ED Wait Times**, defined as Admit Decision Time to ED Departure Time for Admitted Patients at Ballad facilities, rose in the years following the merger, likely exacerbated by COVID-19 and continuing staffing challenges. **The wait time in 2022 was more than 30 minutes longer than it was pre-merger.**

Admit Decision Time to ED Departure Time for Admitted Patients

Median time from admit decision time to time of departure from the emergency department (ED) for ED patients admitted to inpatient status.



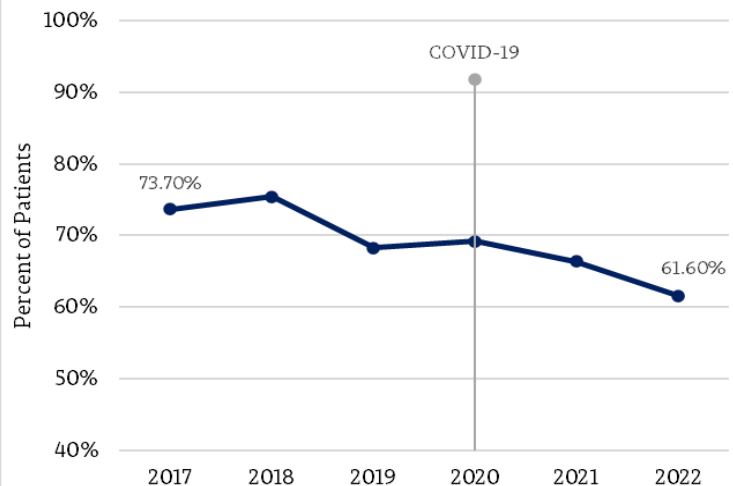
Data Source: Ballad Health (Premier)

Other (Quality) Sub-Index trends: Patient Satisfaction

- Trend lines are similar for these four metrics on patients' perceptions of their hospital experience.
- The percentage of patients' who reported a **Willingness to Recommend** the hospital, experience of **nurses and doctors communicating well** with them and who reported **understanding their care** when they left the Ballad facility, declined at a similar rate from 2018 to 2019.
- The percentages remained stable from 2019-2021 but declined again in 2022.

Willingness to Recommend

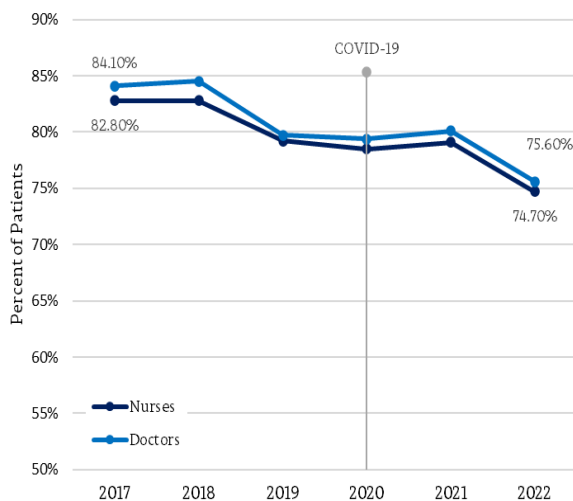
Percentage of patients who reported that they "would definitely recommend" the hospital to their friends and family.



Data Source: Ballad Health (Press Ganey)

Communication: Nurses and Doctors

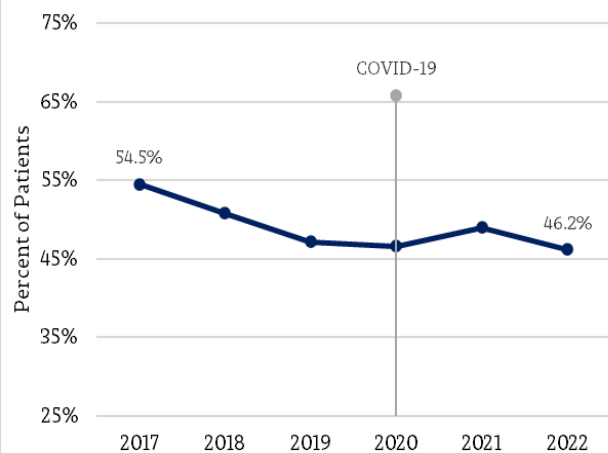
Percentage of patients who reported that their nurses and doctors "always" communicated well.



Data Source: National Healthcare Safety Network (NHSN)

Understood Care

Percentage of patients who reported that they "strongly agree" that they understood their care when they left the hospital.



Data Source: Ballad Health (Press Ganey)

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 FY22, 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 and trends have been provided on Population Health, Access, and Other (Quality) Sub-Indices on pages 14-17 and 18-45 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 (FY22) 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, 2022. 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 1

COPA MONITOR ANNUAL REPORT

YEAR ENDING JUNE 30, 2022

LARRY L. FITZGERALD, COPA MONITOR

March 21, 2023

Tennessee Department of Health Commissioner Ralph Alvarado, MD, FACP

Attorney General, Jonathan Skrmetti

Deputy Attorney General, Kevin Kreutz

Copies:

Joe Hilbert, Deputy Commissioner Virginia Department of Health

Alan Levine, Ballad Health, Executive Chairman, President and Chief Executive Officer

Dr. Brian Noland, Vice Chair/Lead Independent Director

David Lester, Ballad Health Board Treasurer

David Golden, Audit/Compliance Board Committee Chair

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- I. Introduction and Background
- II. Force Majeure Event
- III. Index Score
- IV. Compliance with the COPA and Terms of Certification
- V. Corrective Actions
- VI. Enforcement Mechanisms
- VII. Recommendations
- VIII. Summary

Exhibit A - Annual Review of Terms of Certification - Addendum One

Exhibit B - 2022 Charity Care Waiver

I. INTRODUCTION AND BACKGROUND

A Certificate of Public Advantage (COPA) was granted by the Tennessee Department of Health (TDH) when it determined that the benefits outweighed the public disadvantages associated with a reduction in competition that would result from the merger of Mountain States Health Alliance (MS) and the Wellmont Health System (WM) into a new company named Ballad Health. With the issuance of the COPA, TDH and the Attorney General's Office became responsible for regulating and actively supervising Ballad Health to ensure the merger provided a public advantage. In effect, competition was replaced with regulation.

A Terms of Certification (TOC) document was negotiated and signed as part of the COPA process that outlines the procedure for active supervision of Ballad Health by the State of Tennessee. The TOC can be accessed here:

<https://www.tn.gov/content/dam/tn/health/documents/copa/Executed-Second-Amended-and-Restated-Terms-of-Certification-2021-04-27.pdf>

This oversight includes the computation of a numerical score for three Sub-Indexes and a pass or fail score for a fourth Sub-Index. When combined, the Sub-Indexes represent the Index, a composite score. The purpose of this Index is to provide an objective evaluation of whether there is a continuing public advantage from the merger by tracking progress in four categories: 1) Population Health; 2) Access to Health Services; 3) Economic; 4) Other (Quality). This Index is to be computed annually for the life of the COPA.

The TDH will consider the Index score; Ballad Health's degree of compliance with the TOC; Ballad Health's performance trends; and, other factors to make an annual determination of the ongoing public advantage of Ballad Health to the Northeast Tennessee and Southwest Virginia regions.

In addition to the objective evaluation system by which TDH will track the ongoing public advantage provided by Ballad Health, there are other elements of active supervision. The active supervision structure includes two distinct functions: 1) COPA Compliance Office and (2) COPA Monitor. The COPA Monitor is responsible for evaluating the continued public advantage of the COPA by monitoring Ballad Health's compliance with the TOC, and by collaborating with the TDH to evaluate performance against the Index. The COPA Monitor conducts audits; reviews reports from the Compliance Office and Ballad Health; and makes recommendations to the Commissioner of Health, the TDH, and the Attorney General.

This report is the fifth COPA Monitor Annual Report that, pursuant to the TOC, includes the following: the Index score; updates on compliance with the COPA and the TOC; status of existing corrective actions; any recommended enforcement mechanisms if necessary; any

additional findings; and any other information requested by the Commissioner, TDH and the Attorney General.

II. FORCE MAJEURE EVENT

On March 12, 2020, Governor Bill Lee issued Executive Order No. 14 declaring a state of emergency in Tennessee to facilitate the treatment and containment of the COVID-19 pandemic. Thereafter, on March 13, 2020, President Trump issued a declaration proclaiming that the COVID-19 outbreak in the United States constituted a national emergency beginning March 1, 2020. The declaration of state and national emergencies due to the COVID-19 pandemic constituted a “Force Majeure Event” for purposes of the TOC. The Commissioner for the Tennessee Department of Health and the Tennessee Attorney General temporarily suspended portions of articles three, four, five and six of the TOC. The temporary suspension was lifted for some provisions as of January 1, 2022 and for all remaining provisions as of July 1, 2022. Details on the temporary suspension of certain articles in the TOC are posted on the TN Department of Health website and can be accessed here:

<https://www.tn.gov/content/dam/tn/health/documents/copa/2020-03-31%20Temporary%20Suspension-Letter%20-executed.pdf>.

<https://www.tn.gov/content/dam/tn/health/documents/copa/2021-12-03-AG-and-TDH-Reasonable-Recovery-Letter-to-Ballad.pdf>

III. INDEX SCORE

As part of the TDH’s exercise of active supervision, an Index Score to annually track demonstration of ongoing public advantage is computed. Due to the temporary suspension of some articles in the TOC due to the Force Majeure Event, the only score this year that will be measured is the Economic Sub-Index. The Economic Sub-index consists of measures to verify a minimization of economic disadvantages resulting from a reduction in competition or degree of compliance with the TOC. Ballad Health’s ongoing compliance with the provisions of TOC Article V and Addendum One to the TOC constitutes the metrics within the Economic Sub-index. Some portions of TOC Article V have been temporarily suspended. The letter that authorized a change to the Index Score for fiscal year 2022 is posted on the TN Department of Health website, and 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>

The parts of TOC Section V that were not temporarily suspended address relationships and contractual obligations with payors, physicians, and vendors. Addendum One was only suspended to the extent that payors agreed to voluntarily prepay, or otherwise, financially support Ballad’s public emergency relief efforts. The primary purpose of Addendum One is to

limit the increase in payment rates to Ballad from payors to a percentage that is primarily based on the Centers for Medicare and Medicaid Services Market Basket Inflation Index. Compliance with the parts of Section V that were not suspended and Addendum One determines the fiscal year 2022 pass/fail score for the Economic Sub-Index.

Addendum One, COPA Managed Care Contract Pricing Limitations and Excess Payment Testing, requires the COPA Monitor to approve Ballad Health's payor contracts that are newly signed or renegotiated after February 1, 2018. Ballad Health complied with the pricing limits of Addendum One for fiscal year 2022. A separate report stating this conclusion was issued, "Annual Review of Terms of Certification - Addendum One," which is attached as Exhibit A.

In addition to pricing limitations for payor contracts, TOC Article 5.02:

- Requires Ballad Health to negotiate in good faith with all payors that are selling or plan to sell medical insurance in the Ballad Health service area.
- Provides that Ballad Health cannot require a payor to make it an exclusive provider for its products.
- Encourages Ballad Health to sign payor contracts that include provisions for improved quality and other value-based incentives.
- Prohibits Ballad Health from bargaining or insisting on a "most favored nations" clause in payor contracts.

The intent of TOC Article 5.02 is to prohibit Ballad Health from using its monopolistic power to discriminate against medical insurance payors that are selling products in the service area or those that are beginning to sell medical insurance products in the service area. Furthermore, it prohibits Ballad Health from discriminating against providers that are not owned or employed by Ballad Health.

All the provisions of TOC Article 5.02 were reviewed with the Ballad Health Chief Administrative Officer who certified that each of the provisions had been followed. There have been no complaints filed with the COPA Monitor from any medical insurance payor. There is no evidence that Ballad Health has not complied with TOC Article 5.02.

TOC Section 5.05 established obligations for Ballad Health regarding physician services. In summary, the section has the following provisions:

- It prohibits Ballad Health from restricting nonemployed physicians from practicing in facilities not owned by Ballad Health.
- It prohibits Ballad Health from requiring a covenant not to compete against Ballad Health except with employed physicians, and then only during the term of their employment.
- It provides that Ballad Health will provide an open medical staff offering equal access to all qualified physicians according to the criteria of the Joint Commission and the medical staff bylaws.

In summary, the provisions of TOC Section 5.05 are written to protect independent providers from harmful actions by Ballad Health.

No complaints have been filed with the COPA Monitor from any physician that were determined to be a violation of the Terms of Certification.

There is no evidence that Ballad Health has not complied with TOC Section 5.05 - Physician Services.

Ballad Health cannot place restrictions on vendors from doing business with entities that compete with Ballad Health, which is one of several restrictions applicable to vendors and suppliers. No vendor has filed a complaint with the COPA Monitor that these provisions were violated by Ballad Health.

There is no evidence at this time that Ballad Health has not complied with the remaining non-suspended parts of TOC Section 5.

The COPA Monitor recommends to the TDH that Ballad Health be given a pass score for the Economic Sub - Index.

IV. COMPLIANCE WITH THE COPA AND TERMS OF CERTIFICATION

- Complaints filed with the COPA Compliance officer or the COPA Monitor

One Complaint was filed with the COPA Compliance officer that alleged the COPA and Terms of Certification had not been followed. After a review, it was determined that the complaint was not a violation of the COPA and the Terms of Certification.

Other complaints were filed that were determined to be related to subjects that were not in the scope of the COPA or Terms of Certification. However, each complaint was forwarded to the appropriate state agency or department of Ballad Health for followup.

- Charity Care

The TOC requires that charity care provided by Ballad Health each year must be greater than a base amount increased for inflation. The base amount of charity care is the amount of charity care on IRS Form 990 for fiscal year 2017. If the charity care provided by Ballad Health in any year does not meet the required amount, the COPA Monitor may waive the noncompliance with the charity care requirement. The amount of charity care provided in fiscal year 2022 was below the minimum amount required by the TOC due to changes made in the Medicaid program in both states. The Commonwealth of Virginia expanded its Medicaid program after 2017; therefore, a number of Virginia residents whose care would have been classified as charity in 2017 qualified for Medicaid in 2022. Additionally, the Commonwealth of Virginia increased the amount paid by Medicaid for services by a significant amount after 2017, and thus the loss Ballad Health incurred for treating Virginia Medicaid patients was reduced. Additionally, payments made by TennCare to Ballad in 2022 were significantly greater than payments made in 2017. Based on the analysis provided by Ballad, I approve the request to waive the Terms of Certification minimum Total Charity Care requirement for fiscal year 2022.

- Monetary Commitment

The TOC requires that Ballad Health spend a minimum of \$308,000,000 (the monetary commitment) over 10 years on initiatives in six plan areas: Behavioral Health Services, Children's Services, Rural Health Services, Health Research and Graduate Medical Education, Population Health Improvement, and Region-wide Health Information Exchange. Only new and incremental capital and operating expenditures paid by Ballad Health pursuant to state-approved plans count toward satisfaction of the monetary commitment.

Ballad Health computed a baseline spending amount for each of the six plan areas. The baseline is the average annual spending for the three years that ended June 30, 2017, in each of the six plan areas. Spending toward the monetary commitments is defined as being incremental spending after the baseline spending for the fiscal year has been met. Ballad Health exceeded its baseline spending obligations for each of the six plan areas in fiscal years 2019

and 2020. However, the baseline spending obligation was not met for Rural Health Services, Population Health Improvement, and Region-wide Health Information Exchange for fiscal year 2021. Further, the baseline spending obligation was not met for Rural Health Services and Region-wide Health Information Exchange for fiscal year 2022.

Ballad Health is required to prepare and submit for state approval a three-year plan to achieve goals and invest the monetary obligation for each of the six plan areas. The plans approved by the state in fiscal year 2019 expired on June 30, 2021. However, since the monetary obligations were under temporary suspension, the state permitted Ballad to refresh the three-year plans for fiscal year 2022 and delay the submitting of new three year plans until late spring of 2022. These six plans for the three-year period ending June 30, 2025, were submitted by Ballad Health and approved by the state in fiscal year 2023.

The actual spending toward the baseline spending obligation and the monetary obligations reported by Ballad Health were audited by the Internal Audit Department. The COPA Monitor reviewed the work of the Internal Audit Department and performed additional verification work. The conclusions were that the monetary obligations for Children's Services, Population Health Improvement, and Health Research and Graduate Medical Education were met through June 30, 2022. However, the monetary obligations for Rural Health Services, Behavioral Health Services, and Region-wide Health Information Exchange were not met by June 30, 2022.

Ballad Health had a monetary obligation in fiscal year 2022; however, the monetary obligations were temporarily suspended until July 1, 2022. Therefore, the COPA Monitor does not have a recommendation for remediation of the spending shortfall.

V. CORRECTIVE ACTIONS

There are no corrective actions recommended.

VI. ENFORCEMENT MECHANISMS

No enforcement mechanisms are required or suggested.

VII. RECOMMENDATIONS

Follow-up on recommendations from prior year in COPA Monitor Annual Reports that remain open as of June 30, 2022 are the following:

In the COPA Monitor Annual Report for 2020, a recommendation was made to reduce the TOC charity care minimum requirement and base the new requirement on IRS Form 990 for 2020. This recommendation has not been completed.

In the COPA Monitor Annual Report for 2020, a recommendation was made that Virginia and Tennessee work with Ballad Health to reduce the differences in the regulations between the two states. The objective of the recommendation was not to eliminate or minimize any regulation, but to make existing regulations more consistent between the two states. Work is progressing on the recommendation.

2022 COPA Monitor recommendations:

Due to the Force Majeure Event, a number of the TOC provisions were temporarily suspended for 2022. There are no new recommendations for 2022.

VIII. SUMMARY

The only part of the Index Score that is measured for 2022 is the Economic Sub - Index. The recommendation is that Ballad Health be awarded a passing score for the Economic Index.

Ballad Health was not in compliance with the charity care minimum expense requirement. Based on a review of the subject matter, the COPA Monitor waived the charity care TOC provisions for 2022.

Ballad Health, like virtually all hospitals, was faced with operational and financial challenges in fiscal year 2022 due to the pandemic. Certain provisions of the TOC were temporarily suspended since state leadership made the decision that the public would be more advantaged if Ballad Health leadership was relieved from several TOC provisions on a temporary basis.

The temporary suspension of certain provisions of the TOC were all lifted on July 1, 2022.

Larry L. Fitzgerald
COPA Monitor

EXHIBIT A
ANNUAL REVIEW OF TERMS OF CERTIFICATION - ADDENDUM ONE

TO: Commissioner Morgan McDonald, MD, MPH, FACP, FAAP
710 James Robertson Parkway
Nashville, TN 37243

Janet Kleinfelter, Deputy Attorney General
P. O. Box 20207
Nashville, TN 37202

Joe Hilbert, Deputy Commissioner Virginia Department of Health
109 Governor Street
Richmond, VA 23219

DATE: January 9, 2023

SUBJECT: Annual Review of Terms of Certification - Addendum One

FROM: Larry L. Fitzgerald, Tennessee COPA Monitor

In order to protect patients, employers, payors and others that utilize the services of or contract with Ballad, The Terms of Certification (TOC) provides limits upon price increases for facility, physician, and other services. An important role for the Tennessee COPA Monitor is to monitor Ballad's payor contracts that are newly-signed or renegotiated after February 1, 2018. The Tennessee COPA Monitor performs this work on behalf of Tennessee and Virginia. However, the work is completed with collaboration with the Virginia Monitors.

The monitoring process occurs prospectively before a payor contract or contract amendment has been signed; concurrently, during the term of the payor contract; and, retrospectively, one year past the beginning of a new or renegotiated payor contract. Payor contracts are classified as Exempt, Value-based, Attestation, or Measured.

Exempt payers are those payors that do not negotiate any part of their managed care agreements or payment rates with Ballad. These are generally government-based payor contracts for programs such as Medicare. The rates are set by a government authority and Ballad, like all providers, accepts the rates.

Value-based payors are those payors with no fixed price increases. Price increases to Ballad are totally dependent on the achievement of mutually negotiated quality and/or cost goals. In effect, if Ballad had realized an increase in prices from a Value-based payor, the increase in

pricing to the community would be offset through reduced cost from improved quality and more appropriate utilization of facilities.

An annual list of value-based payments received by Ballad is submitted annually by Ballad to the Tennessee Department of Health and the Virginia Department of Health.

Attestation Payors are those payors that execute a statement attesting that their new or amended payor contract with Ballad includes price increases that are below the annual increase to prices established by the TOC. Most of the large payors that are not exempt or value-based have signed the attestation statement. The COPA Monitor maintains copies of the annual attestation statements from each payor.

Measured payors are those payors that do not meet the definition of one of the three classifications listed above. All payors are measured payors unless the payor meets the specific definition of one of the groups discussed above.

The COPA Monitor reviews new-measured payor contracts and contract amendments following three steps. First, contracts are reviewed and approved by the COPA Monitor before Ballad signs a new payor contract or amendment to a payor contract. In fiscal year 2022, the COPA Monitor gave prospective approval for approximately eight new or amended payor contracts.

Second, the COPA Monitor reviews a sample of payor payments after a new or amended payor contract has gone into effect to determine that the price increase approved by the COPA Monitor was in fact effectuated.

Third, the COPA Monitor completes a retrospective annual review of the collections under each new and amendment payor contract. The objective of the third step is to provide further assurance that price increases were below the price limit established by the TOC.

The Ballad Chief Financial Officer certified Ballad's compliance with the TOC section titled Managed Care Contracts and Pricing Limitations.

Based on the reviews listed above that were completed in fiscal year 2022, Ballad complied with the pricing limits in the TOC for fiscal year 2022.

EXHIBIT B

2022 CHARITY CARE WAIVER

Larry L. Fitzgerald
COPA Monitor
6689 Hastings Lane
Franklin, TN 37069

January 13, 2023

Morgan McDonald, MD, FACP, FAAP
Interim Commissioner, Tennessee Department of Health
700 James Robertson Parkway
Nashville, TN 37243

Dear Dr. McDonald:

The Terms of Certification requires Ballad to provide Total Charity Care each year in an amount greater than Base Charity Care defined as the combined amount of charity care provided by Wellmont Health System and Mountain States Health Alliance in 2017 increased by inflation to the year being measured. If Total Charity Care is below Base Charity Care for any annual reporting period, the Terms of Certification (TOC) allows Ballad to include in its Annual Report an explanation of the reduction. The COPA Monitor will provide a decision about the appropriateness of the explanation provided by Ballad.

Ballad reported to the COPA Monitor that fiscal year 2022 Total Charity Care is estimated to be \$73,000,000. The Base Charity Care minimum requirement for fiscal year 2022 is \$108,000,000. Ballad fell short of its minimum Total Charity Care obligation by \$35,000,000. Ballad requested a waiver from the Total Charity Care requirement for fiscal year 2022.

Tennessee and Virginia have made significant enhancements to their Medicaid programs since 2017. The Medicaid programs in both Virginia and Tennessee have expanded the number of patients who qualify for Medicaid and the amount of payment for Medicaid services rendered. There is a significant number of patients in 2017 who would have been classified as charity patients with no payment for services provided by Ballad. However, in 2022, these patients would have qualified for Medicaid. Additionally, Medicaid services were paid at a higher rate in 2022 compared to 2017, thus the loss from treating Medicaid patients was materially reduced. Therefore, the impact of changes to the Medicaid program in each state accounts for the reduction in Total Charity Care provided by Ballad in 2022 as compared to 2017.

In 2022, the Tennessee COPA Monitor and the Virginia COPA Monitor did not receive any complaints from citizens suggesting care was not provided or delayed because the patient was uninsured.

There will never be circumstances when a base year and a measurement year will be identical. Charity care will vary from year to year for numerous reasons, beyond the control of Ballad.

The Medicaid program changes from the base period of fiscal year 2017 to fiscal year 2022 have been so significant that I recommend the Base Charity Care minimum obligation be recomputed based on a recent year that is more representative of the current charity environment.

Based on the analysis provided by Ballad, I approve the request to waive the Terms of Certification minimum Total Charity Care requirement for fiscal year 2022.

Sincerely,

Larry L. Fitzgerald
COPA Monitor

Exhibit 2



2022 Population Health Report

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

Tennessee Department of Health | COPA Report | March 2023



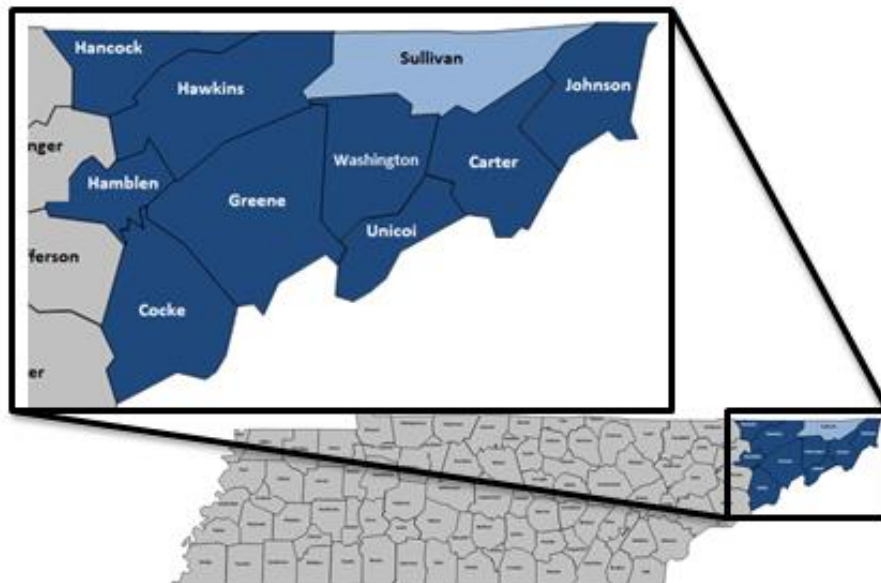
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Population Health Sub-Index

Introduction

The Population Health Sub-Index is one set of measures that the State uses to objectively track changes in 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.

Population Health Sub-Index Design

The Population Health Sub-Index consists of measures informed by the Tennessee State Health Plan¹ objectives, the National Academy of Medicine’s population health efforts², the models of health used in United Health Foundation’s America’s Health Rankings³ (AHR), and the Robert Wood Johnson Foundation’s County Health Rankings⁴ (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 originally 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 2022 COPA Population Health Report displays the most recent values available to TDH, as of January 2023, on the Population Health Sub-Index measures.

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

¹ State of Tennessee, 2015 Edition of the State Health Plan, Division of Health Planning, Tennessee Department of Health, 2015

² 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.

³ United Health Foundation. America’s Health Rankings. <https://www.americashealthrankings.org>

⁴ University of Wisconsin Population Health Institute. County Health Rankings & Roadmaps. www.countyhealthrankings.org.

2022 updated Population Health Data Table

TABLE 1

		TN COPA Counties Value	TN Peer Counties' Value	TN Value	US Value
BIG FOUR / Behaviors					
Tobacco Use		COPA	PEER	TN	US
1*	Smoking (% of adults)	23.5%	24.1%	19.7%	13.4%
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%	23.8%
5	Smoking among those with a high school education or more (%)	20.6%	20.7%	17.6%	12.1%
6*	Mothers who smoke during pregnancy (% of live births)	17.7%	15.9%	9.1%	5.5%
7*	Youth tobacco use (% of high school students)	5.7%	4.5%	7.1%	6.0%
8	Youth -ever tried cigarette smoking (% of high school students)	17.4%	15.6%	29.2%	24.1%
9	Youth electronic vapor product use (% of high school students)	14.7%	16.2%	22.1%	32.7%
Physical Activity		COPA	PEER	TN	US
10*	Physically active adults (% of adults)	67.3%	62.7%	71.3%	76.1%
11*	Physically active students (% of high school students)	48.0%	45.6%	39.9%	44.1%
Obesity		COPA	PEER	TN	US
12	Obesity (% of adults)	36.7%	36.8%	35.0%	33.0%
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	33.1%	37.8%
16	Obesity among those with a high school education or more (% of adults)	37.2%	36.6%	35.3%	32.4%
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
Breastfeeding Measures		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%	75.8%	81.1%	83.9%
21*	Infants breastfed at six (6) months (% of 6-month olds)	New	New	24.9%	24.9%
High School Student Healthy Eating		COPA	PEER	TN	US
22	Fruit consumption among high school students (% of high school students)	88.8%	87.3%	88.9%	93.7%
23	Vegetable consumption among high school students (% of high school students)	83.5%	86.2%	89.0%	92.1%
24	Soda consumption among high school students (% high school students)	79.5%	77.9%	76.1%	68.3%
Substance Abuse		COPA	PEER	TN	US
25*	NAS (Neonatal Abstinence Syndrome) births (cases per 1,000 live births)	33.8	20.9	9.1	n/a
26*	Drug deaths (deaths per 100,000 population)	51.0	65.3	54.7	n/a
27	Drug overdoses (non-fatal overdoses per 100,000 population)	321.9	420.8	394.2	n/a

28	Painkiller prescriptions (prescriptions <i>per 1,000 population</i>)	1,249.5	1,059.3	805.5	433
29	Prescription drugs among high school students (% of high school students using prescription pain relievers not prescribed by the doctor)	9.0%	10.6%	13.7%	14.3%
30*	MME for Pain (Total morphine milligram equivalents (MME) opioids for pain per capita)	755.1	711.7	506.2	424.6
IMMUNIZATIONS		COPA	PEER	TN	US
31*	On-time vaccinations – children (% of children that are up-to-date on immunizations at the time of kindergarten entry).	95.2%	94.2%	93.6%	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)	424	364	3631	n/a
34	Vaccinations – HPV Females (# of HPV shots administered for females aged 11 to 17 years, either quadrivalent or bivalent)	5502	4560	50917	n/a
35	Vaccinations – HPV Males (# of HPV shots administered for males aged 11 to 17 years, either quadrivalent or bivalent)	5345	4417	50702	n/a
36*	Vaccinations – Tdap (# of Tdap shots administered for patients aged 11 to 17 years)	7025	6607	72170	n/a
37*	Vaccination - Flu, Older Adults (% adults aged 65+)	68.1%	70.5%	66.4%	67.5%
38	Vaccinations - Flu, Adults (% of adults)	42.2%	43.2 %	43.9%	45.1%
COMMUNITY / ENVIRONMENT		COPA	PEER	TN	US
39*	Teen births (births <i>per 1,000 females aged 15-19 years</i>)	22.3	24.8	21.5	15.4
Third Grade Reading		COPA	PEER	TN	US
40*	Third grade reading level (% of 3rd graders who score “on-track” or “mastered” on TNReady reading assessment)	37.2%	33.9%	35.7%	n/a
41	Third grade reading level - Higher density counties (% of students)	40.1%	35.6%	n/a	n/a
42	Third grade reading level - Lower density counties (% of students)	33.2	32.0	n/a	n/a
Oral Health		COPA	PEER	TN	US
43	Fluoridated water (% of population on community water systems receiving fluoridated water)	92.4%	93.7%	88.8%	73.0%
44*	Dental sealants – children (% Medicaid enrollees aged 6–9 years)	12.3%	11.5%	11.0%	n/a
45	Dental sealants - adolescents (% Medicaid enrollees aged 13-15 years)	7.0%	6.1%	6.7%	n/a
OUTCOMES		COPA	PEER	TN	US
46*	Frequent mental distress (% of adults)	18.6%	18.9%	18.0%	14.7%
47	Frequent physical distress (% of adults)	18.4%	19.0%	14.2%	11.0%
48*	Infant mortality (deaths per 1,000 live births)	6.2	4.3	7.3	5.6
49*	Low birthweight (% of live births)	8.3%	8.5%	9.3%	8.2%
50	Child mortality (deaths per 100,000 population for children aged 1-19 years)	36.0	32.5	39.8	25.9
51	Cardiovascular deaths (deaths per 100,000 population)	385.3	3285.9	264.7	279.0
52	Cancer deaths (deaths per 100,000 population)	269.6	268.1	207.6	182.4
53	Diabetes deaths (deaths per 100,000 population)	42.8	51.5	38.4	31.1
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)	19.8	20.2	17.5	14.5
56*	Premature death ratio (ratio of deaths before age 75 per 100,000 population for higher to lower density counties)	0.842	0.794	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 2023 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 paused during the COVID-19 pandemic 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
BEHAVIORS			
Tobacco Use			
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, 2021	Centers for Disease Control (CDC), Behavioral Risk Factor Surveillance System (BRFSS), 2021
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 & 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 & 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, 2021
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, 2021	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 and Statistics, Birth Statistical File, 2021	CDC WONDER, Natality Public Use Files 2020
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, 2021-22 / 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, 2021-22 / 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, 2021-22 / YRBS, 2019	CDC, YRBS, 2019
Physical Activity			
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, 2021	CDC, BRFSS, 2021

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, 2021-22 / YRBS, 2019	CDC, YRBS, 2019
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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, 2021	CDC, BRFSS, 2021
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 & 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 & 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, 2021
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, 2021	CDC, BRFSS, 2021
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 and Vital Statistics, Birth Statistical File, 2021	CDC Wonder, Natality Public Use Files, 2020
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 2019 births	CDC, National Immunization Survey, among 2019 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, 2021-22 / YRBS, 2019	CDC, YRBS, 2019
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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, 2021-22 / 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, 2021-22 / 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, 2021	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 and Statistics, Death Statistical File, 2021	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, 2021	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), 2021	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, 2021-22 / 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, 2021	CDC Annual Surveillance Report of Drug-Related Risks and Outcomes, 2019

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, 2021	CDC, National Immunization Survey- Child, 2018-2020
32*	Ballad entity participation in TennIIS <i>(Number of Ballad Health entities in Tennessee participating in TennIIS.)</i>	Ballad Health / Tennessee Immunization Information System (TennIIS), 2021	n/a
33	Entity participation in TennIIS <i>(Number of entities in Tennessee participating in TennIIS.)</i>	TennIIS, 2021	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, 2021	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, 2021	n/a

36*	Vaccinations - Tdap (<i>Number of tetanus-diphtheria-acellular pertussis (Tdap) vaccine shots administered to males aged 11 to 17 years.</i>)	TennIIS, 2021	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, 2021	CDC, BRFSS, 2021
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, 2021	CDC, BRFSS, 2021

COMMUNITY / ENVIRONMENT

39*	Teen births (<i>Rate of births per 1,000 females aged 15-19 years.</i>)	TDH, Division of Vital Records and Statistics, Birth Statistical File, 2021	CDC Wonder, Natality Public Use Files, 2020
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Third Grade Reading

40*	Third grade reading level (<i>Percentage of 3rd graders scoring "on-track" or "mastered" on TNReady reading assessment.</i>)	TDOE, 2022	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 & US Values: Not stratified by population density.</i>)	TDOE, 2022	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 & US Values: Not stratified by population density.</i>)	TDOE, 2022	n/a

Oral Health

43	Fluoridated water (<i>Percent of population on community water systems receiving fluoridated water.</i>)	CDC, My Water's Fluoride, 2022	CDC, Water Fluoridation Reporting System, 2018
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, 2020-21	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, 2020-21	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, 2021	CDC, BRFSS, 2021
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, 2021	CDC, BRFSS, 2021

48*	Infant mortality (<i>Number of infant deaths (before age 1) per 1,000 live births.</i>)	TDH, Division of Vital Records and Statistics, Death Statistical File, 2021	CDC WONDER, 2019
49*	Low birthweight (<i>Percentage of infants weighing less than 2,500 grams (5 pounds, 8 ounces) at birth.</i>)	TDH, Division of Vital Records and Statistics, Birth Statistical File, 2021	CDC WONDER, 2020
50	Child mortality (<i>Number of deaths per 100,000 children aged 1 to 18 years.</i>)	TDH, Division of Vital Records and Statistics, Death Statistical File, 2021	CDC WONDER, 2021
51	Cardiovascular deaths (<i>Number of deaths due to diseases of the heart per 100,000 population.</i>)	TDH, Division of Vital Records and Statistics, Death Statistical File, 2021	CDC WONDER, 2021
52	Cancer deaths (<i>Number of deaths due to all causes of cancer per 100,000 population.</i>)	TDH, Division of Vital Records and Statistics, Death Statistical File, 2021	CDC WONDER, 2021
53	Diabetes deaths (<i>Number of deaths due to diabetes per 100,000 population.</i>)	TDH, Division of Vital Records and Statistics, Death Statistical File, 2021	CDC WONDER, 2021
54*	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
55	Suicide deaths (<i>Number of deaths due to intentional self-harm per 100,000 population.</i>)	TDH, Division of Vital Records and Statistics, Death Statistical File, 2021	CDC WONDER, 2021
56*	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 and Statistics, Death Statistical File, 2021	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 2020-21 data were collected from 10/1/2020 - 9/30/2021.

Fluoridated Water data:

2022 Values on each of the three geographies: 1) The TN COPA Counties; 2) TN Peer Counties region; and 3) the state of Tennessee are based on TDH's analysis of CDC's My Water's Fluoride online data, accessed via https://nccd.cdc.gov/doh_mwf/default/default.aspx.

Hospital Discharge Data System data:

Crude rates were used for the TN COPA Counties, 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 (TennIIS) data:

- A participating facility is an entity in TennIIS production that has submitted or entered an administered and/or historical vaccination during the calendar year.
- 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 calendar year.
- The entity can report administered and/or historical vaccinations and the entity can submit these vaccines manually or electronically. The numbers of participating entities were summed for: 1) Ballad Health, 2) the TN COPA Counties, 3) TN Peer Counties region.⁵

⁵ The TennIIS values was incorrectly labeled as a percentage in prior reports. The values calculated and reported have in fact always been a simple count and are labeled correctly in this report.

- 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: 2021 Population Data Files, Division of Population Health Assessment, TDH.

IMMUNIZATION	VACCINATION CVX CODES EVALUATED
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, 2021, TDH, Division of Population Health Assessment.

ICD-10 Coding for Tennessee Mortality Data, 2021

Underlying Cause of Death	ICD-10 Codes or UCD Group Codes Used
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 and Statistics.

Vital Statistics – Birth data:

Birth Data acknowledgement: Birth data were provided by TDH, Division of Vital Records and 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 2017 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: 8585/1362* = 43%; Overall participation = 38.7%
 - Peer: 11/12 counties = 91.7%; remaining students: 807/1321** = 61.1%; Overall participation = 56.0%

*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. (School BMI values for 2020-21 are not available due to extremely low screening numbers.)

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).
 - Non-fatal drug overdose data acknowledgment: data were provided by TDH, Division of population Health Assessment, Hospital Discharge Data System

Painkiller Prescriptions:

Prescription rate per 1,000 residents who filled opioid for pain and benzodiazepine prescriptions in TN.

- The numerator is the number of prescriptions filled by level of stratification and the denominator is the yearly population by level of stratification in 1,000s.
- Count of unique patients who filled at least one prescription for opioids for pain and benzodiazepines.
- Prescriptions that were written but not filled by the patient are not tracked in the CSMD. The CSMD provides a reasonably accurate measure of the amount of controlled substances dispensed in TN, but may not capture the full extent of prescribing practices.
- The CSMD does not have information on patient behavior beyond filling prescriptions. Measures are calculated with the assumption patients take their medications as prescribed. Patients may choose not to take their medication or may share medications with others.
- A small proportion of prescriptions reported to the CSMD are for veterinary patients. These patients are not explicitly excluded from calculations and may have small impacts on the data presented here. It is estimated that around 1% of all prescriptions reported to the CSMD are written for veterinary patients in any given year.
- Additional inclusions, and exclusion:
 - Only Tennessee residents were considered
 - Only opioids for pain and benzodiazepines in DEA schedules II,III, IV were included
 - Buprenorphine products that are FDA-indicated for the treatment of opioid use disorder are excluded
 - Only opioids for pain and benzodiazepines identified in the CDC's MME Conversion table were considered for opioid for pain and benzodiazepine indicators.
 - Prescriptions with zero or implausibly high quantities were excluded
 - Prescriptions with zero or implausibly high days supply were excluded
- Additional Notes:
 - After exclusions, a count of all prescriptions filled in each category as identified by the CDC's MME Conversion Table or IBM Micromedex RED BOOK data. Visit <https://www.cdc.gov/opioids/data-resources/index.html> for more details.
 - Yearly population data for calculation of rates was obtained from CDC Wonder bridged race population estimates. Visit <https://wonder.cdc.gov/bridged-race-population.html> for more details.
 - Controlled Substance Monitoring Database Data acknowledgment: Controlled Substance Monitoring Database, Office of Informatics and Analytics, TDH.

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. Values reported are the count of number of prescriptions, by county, divided by county population in thousands.

Additional notes and exclusions:

- Rates were calculated using 2021 county population. Population data were 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) were excluded.
- Prescriptions with implausible quantities (<1 or greater than 100,000 doses) were 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, and English II.
- 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:

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; 3) 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 2021 US data are detailed in a CDC BRFSS report that can be accessed here:
https://www.cdc.gov/brfss/annual_data/2021/pdf/compare_2021-508.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 2023 via 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, 2020.

In reports prior to 2021 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.

- 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.

- A 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>

Painkiller Prescription:

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

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>

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 ≥ 4 doses of DTaP, ≥ 3 doses of poliovirus vaccine, ≥ 1 dose of measles-containing vaccine, the full series of Hib (≥ 3 or ≥ 4 doses, depending on product type), ≥ 3 doses of HepB, ≥ 1 dose of VAR, and ≥ 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>

Fluoridated Water data:

The US value for percentage of population on community water systems receiving fluoridated water was calculated by the CDC and accessed via <https://www.cdc.gov/fluoridation/statistics/2018stats.htm>

Note: All data are subject to limitations as explained in the data source.

Credits

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TDH Division of Health Planning

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- Jim Mathis
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- Mark Bloodworth
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Exhibit 3



2022 Access to Health Services Report

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

Tennessee Department of Health | COPA Report | March 2023



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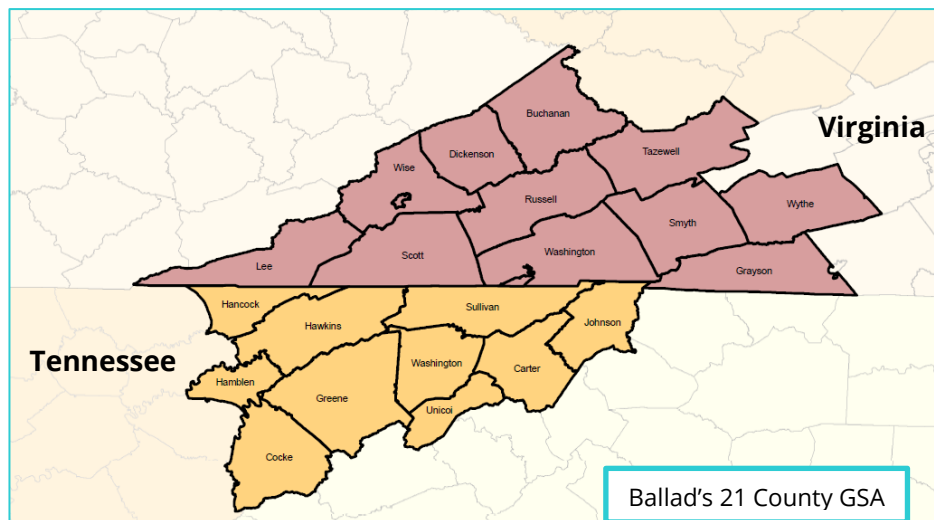
Access Sub-Index

Introduction

This department report contains updated values on the Access Sub-Index Measures. Measures were selected to objectively track changes and evaluate the impact of the Ballad Health merger.

The Tennessee Department of Health believes all Tennesseans should have reasonable access to health services. Access to health care is vital to overall physical, social, and mental health; prevention of disease; detection and treatment of illnesses; quality of life; preventable death and life expectancy.

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 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.



Note: For measures where only data on the Tennessee Counties are available, the TN GSA (the 10 counties in the Tennessee portion of Ballad's GSA) values are provided.

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 Ballard 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. Maintaining or improving access according to these Sub-Index measures, is a component of the annual evaluation and determination of the COPA’s ongoing public benefits

Table 1 of this 2022 COPA Access to Health Services Report displays the most recent values available to TDH, as of January 2023, on the Access 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.

2022 Access Sub-Index Data Table

TABLE 1

	Measure	GSA Value
CHARACTERISTICS OF HEALTH DELIVERY SYSTEM		
1	Population within 10 miles of an urgent care center (%)	80.1%
2	Population within 10 miles of an urgent care center open nights and weekends (%)	69.4%
3	Population within 10 miles of Urgent Care Facility or Emergency Department (%)	99.7%
4	Population within 15 miles of an Emergency Department (%)	98.1%
5	Population within 15 miles of an acute care hospital (%)	98.1%
6	Pediatric Readiness of Emergency Department	73.0%
7	Appropriate Emergency Department Wait Times (%)	42.7%
8	Specialist Recruitment and Retention	*
UTILIZATION OF HEALTH SERVICES		
Primary Care		
9	Personal Care Provider	80.6%
Appropriate Use of Care		
10	Preventable Hospitalizations - Older Adults (discharges per 1,000 people 65+)	36.7
11	Preventable Hospitalizations - Adults (discharges per 1,000 people 18+)	17.2
Secondary Prevention (Screenings)		
12	Screening - Breast Cancer	81.1%
13	Screening - Cervical Cancer	70.7%
14	Screening - Colorectal Cancer	67.9%
15	Screening - Diabetes	85.7%
16	Screening - Hypertension	98.7%
Infant and Children		
17	Asthma Emergency Department Visits Per 10,000 (Age 0-4)	34.2
18	Asthma Emergency Department Visits Per 10,000 (Age 5-14)	25.5
19	Prenatal care in the first trimester	83.9%
Mental Health & Substance Abuse		
20	Follow-Up After Hospitalization for Mental Illness (% Within 7 Days Post-Discharge)	25.3%
21	Follow-Up After Hospitalization for Mental Illness (% Within 30 Days Post-Discharge)	37.3%
Antidepressant Medication Management		
22	Effective Acute Phase Treatment (84 days)	82.2%
23	Effective Continuation Phase Treatment (180 days)	62.1%

24	Engagement of AOD (Alcohol or Drug) Treatment	6.6%
25	Rate of SBIRT administration - hospital admissions	0.05%
26	Rate of SBIRT administration - ED visits	10.14%
CONSUMER SATISFACTION		
27	Patient Satisfaction and Access Surveys	<i>complete</i>
28	Patient Satisfaction and Access Survey - Response Report	<i>complete</i>

* = Ballad Health has not agreed to the TDH definition.

Appendix 1:

Access Sub-Index Data Source Table

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

	Measure	Description	Source [†]
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 Ballad 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, 2022 ^F
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 Ballad 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, 2022 ^F
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 Ballad 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, 2022 ^F
4	Population within 15 miles of an emergency department (%)	Population within 15 miles of any emergency room; emergency rooms may be owned by the Ballad 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, 2022 ^F
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 Ballad 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, 2022
6	Pediatric Readiness of Emergency Department	Average score of Ballad 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, 2022 ^F
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. ^{††}	Ballad Health analysis of National Hospital Ambulatory Care Survey from the CDC National Center for Health Statistics, 2022 ^F

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 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, 2021
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, 2021
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 ^{†††} , 2022 ^F
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 ^{†††} , 2022 ^F
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 ^{†††} , 2022 ^F
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, 2022 ^F
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, 2022 ^F
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, 2021 ^{**}

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, 2021 **
19	Prenatal care in the first trimester	Percentage of live births in which the mother received prenatal care in the first trimester	Tennessee Birth Statistical File, TDH, Division of Vital Statistics, 2021
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, 2021
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, 2021
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, 2021
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, 2021
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, 2021

25	SBIRT administration - hospital admissions	Percentage of patients admitted to a Ballard Health hospital who are screened for alcohol and substance abuse, provided a brief intervention, and referred to treatment (SBIRT)	Ballad Health analysis of Ballard Health Social Needs Screening Tool database, 2022 ^F
26	Rate of SBIRT administration - ED visits	Percentage of patients admitted to a Ballard Health emergency department who are screened for alcohol and substance abuse, provided a brief intervention, and referred to treatment (SBIRT)	Ballad Health analysis of Ballard Health Social Needs Screening Tool database, 2022 ^F
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, 2021
28	Patient Satisfaction and Access Survey – Response Report	Report documents a satisfactory plan for the Ballard 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, 2021

† = Data provided by Ballard Health as source data are available to the State. Methodologies for calculating values for each measure are described in Ballard Health’s Access Measure Data Dictionary, which was submitted to TDH 1/9/2023.

F = Values reported on these measures are based on Fiscal Year data (July 1, 2021-June 30, 2022). 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 Ballard 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 2022 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 2022 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 2022 data on trimester that prenatal care began are not directly comparable to data from all 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 Ballard Health is listed as the data source are detailed in the 2022 Access Measures Data Dictionary, developed by Ballard Health for TDH's understanding and review of the methodology used in calculating the values.*

Credits

Commissioner Ralph Alvarado, M.D., FACP

TDH Division of Health Planning

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

TDH Office of Informatics and Analytics

- Nagesh Aragam
- Ben Tyndall
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- Shalini Parekh
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2022 Other (Quality) Report

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

Tennessee Department of Health | COPA Report | March 2023



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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'.¹

Hospital quality is important for:

- Individual and population health: Measuring and monitoring hospital quality is essential to improving health outcomes and service delivery;²
- Business: Positive feedback from consumers leads to the goodwill of service providers in the market, which indirectly expands their business;³
- Cost-effectiveness: Poor quality of care, measured by medical errors in the hospital setting, account for approximately \$20B each year. ⁴

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

² Lieberthal RD, Comer DM. What are the characteristics that explain hospital quality? A longitudinal pridit approach. *Risk Manag Insur Rev.* 2013;17(1):17-35.

³ Gupta KS, Rokade V. Importance of quality in health care sector: A review. *J Health Manag.* 2016;18(1):84-94.

⁴ Rodziewicz TL, Houseman B, Hipskind JE. Medical Error Reduction and Prevention. 2022 Dec 4. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2022 Jan-. PMID: 29763131.

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 stated the baseline values for the Sub-Index measures and each subsequent annual reports contains updated values on each measure to track changes over time in healthcare quality at Ballad Health facilities.

In 2022, TDH and Ballad agreed to restate the baselines so that these values were based on the events experienced by any patient at any Ballad facility and not merely on patients enrolled in a Medicare fee for service plan. These new values are set forth in the Ballad Health FY22 Annual Report and are restated in this report.

The Other (Quality) Sub-Index measures include the following nationally established quality and consumer satisfaction measures and measure categories:

- Centers for Medicare and Medicaid Services' Patient Safety Indicators
- Healthcare Associated Infections
- Hospital Consumer Assessment of Healthcare Providers and System's Patient Satisfaction
- Timely and Effective Care
- Surgical Complications, Readmission, and Mortality
- Medical Imaging

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 FY22.

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 FY22 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 FY22 values for the Other (Quality) Sub-Index to TDH in October of 2022.

The values are presented in the first three tables below at the system-, state-, and individual facility-level. These tables display most recent fiscal year values (based on FY22 all-patient data) and baseline values (based on restated CY17 all-patient data).

Table 1 FY22 data for Target Quality Measures at System- and State-level

Desired Performance	Measures	Ballad Health Baseline	Ballad Health	TN Ballad Health
		Baseline	FY22	FY22
	<i>Quality Target Measures</i>			
↓	PSI 3 Pressure Ulcer Rate	1.07	0.20	0.21
↓	PSI 6 Iatrogenic Pneumothorax Rate	0.25	0.25	0.28
↓	PSI 7 Central Venous Catheter-Related Blood Stream Infection Rate - Retired	0.15	--	--
↓	PSI 8 In Hospital Fall with Hip Fracture Rate	0.06	0.03	0.03
↓	PSI 9 Perioperative Hemorrhage or Hematoma Rate	1.59	1.86	1.87
↓	PSI 10 Postoperative Acute Kidney Injury Requiring Dialysis	0.76	2.13	2.24
↓	PSI 11 Postoperative Respiratory Failure Rate	9.24	12.88	12.41
↓	PSI 12 Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate	3.31	4.86	5.10
↓	PSI 13 Postoperative Sepsis Rate	3.58	5.06	4.82
↓	PSI 14 Postoperative Wound Dehiscence Rate	0.83	0.88	1.01
↓	PSI 15 Unrecognized Abdominopelvic Accidental Puncture/Laceration Rate	1.18	0.29	0.33
↓	CLABSI	0.71	1.34	1.24
↓	CAUTI	0.56	1.11	1.26
↓	SSI COLON Surgical Site Infection	2.13	2.14	2.25
↓	SSI HYST Surgical Site Infection	0.71	2.54	2.51
↓	MRSA	0.09	0.14	0.14
↓	CDIFF	0.67	0.18	0.20
↑	SMB: Sepsis Management Bundle	56.9%	53.8%	50.3%

Desired Performance	Measures	Ballad Health Baseline	Ballad Health	TN Ballad Health
		Ballad Health		TN Ballad Health
	Baseline	FY22	FY22	
	<i>General Information-Structural Measures</i>			
YES	ACS REGISTRY - Retired	Yes	--	--
YES	SMPART GENSURG General Surgery Registry - Retired	Yes	--	--
YES	SMPART NURSE Nursing Care Registry - Retired	Yes	--	--
YES	SMSSCHECK Safe Surgery Checklist	Yes	Yes	Yes
YES	OP12 HIT Ability electronically receive lab results	Yes	Yes	Yes
YES	OP17 Tracking Clinical Results Between Visits	Yes	Yes	Yes
YES	OP25 Outpatient Safe Surgery Checklist	Yes	Yes	Yes
	<i>Survey of Patient's Experience</i> <i>Data had adjustments enabled, phone calibration, and skip logic applied</i>			
↑	HCOMP1A P Patients who reported that their nurses "Always" communicated well	82.8%	74.7%	79.0%
↓	HCOMP1U P Patients who reported that their nurses "Usually" communicated well	13.6%	16.1%	12.4%
↓	HCOMP1 SNP Patients who reported that their nurses "Sometimes" or "Never" communicated well	3.6%	9.1%	8.6%
↑	HCOMP2A P Patients who reported that their doctors "Always" communicated well	84.1%	75.6%	78.4%
↓	HCOMP2U P Patients who reported that their doctors "Usually" communicated well	11.9%	15.6%	13.8%
↓	HCOMP2 SNP Patients who reported that their doctors "Sometimes" or "Never" communicated well	3.9%	8.8%	7.9%
↑	HCOMP3A P Patients who reported that they "Always" received help as soon as they wanted	72.8%	59.7%	59.7%
↓	HCOMP3U P Patients who reported that they "Usually" received help as soon as they wanted	20.6%	25.2%	24.9%
↓	HCOMP3 SNP Patients who reported that they "Sometimes" or "Never" received help as soon as they wanted	6.6%	15.2%	15.4%
↑	HCOMP4A P Patients who reported that their pain was "Always" well controlled - Suspended	74.1%	--	--
↓	HCOMP4U P Patients who reported that their pain was "Usually" well controlled - Suspended	19.6%	--	--
↓	HCOMP4 SNP Patients who reported that their pain was "Sometimes" or "Never" well controlled - Suspended	6.3%	--	--
↑	HCOMP5A P Patients who reported that staff "Always" explained about medicines before giving it to them	68.1%	57.9%	63.1%
↓	HCOMP5U P Patients who reported that staff "Usually" explained about medicines before giving it to them	15.9%	16.7%	14.8%
↓	HCOMP5 SNP Patients who reported that staff "Sometimes" or "Never" explained about medicines before giving it to them	16.0%	25.4%	22.1%
↑	HCOMP6Y P Patients who reported that YES, they were given information about what to do during their recovery at home	87.2%	84.4%	84.5%
↓	HCOMP6N P Patients who reported that NO, they were not given information about what to do during their recovery at home	12.8%	15.6%	15.5%

Desired Performance	Measures	Ballad Health Baseline	Ballad Health	TN Ballad Health
		Ballad Health		TN Ballad Health
	Baseline	FY22	FY22	
↑	HCOMP7SA Patients who "Strongly Agree" they understood their care when they left the hospital	54.5%	46.2%	51.4%
↓	HCOMP7A Patients who "Agree" they understood their care when they left the hospital	40.8%	46.5%	41.9%
↓	HCOMP7D SD Patients who "Disagree" or "Strongly Disagree" they understood their care when they left the hospital	4.8%	7.4%	6.7%
↑	HCLEAN HSPAP Patients who reported that their room and bathroom were "Always" clean	73.9%	61.7%	60.2%
↓	HCLEAN HSPUP Patients who reported that their room and bathroom were "Usually" clean	17.2%	19.3%	19.2%
↓	HCLEAN HSPSNP Patients who reported that their room and bathroom were "Sometimes" or "Never" clean	8.9%	19.0%	20.7%
↑	HQUIETHSP AP Patients who reported that the area around their room was "Always" quiet at night	66.5%	58.6%	58.5%
↓	HQUIETHSP UP Patients who reported that the area around their room was "Usually" quiet at night	26.9%	28.6%	28.5%
↓	HQUIETHSP SNP Patients who reported that the area around their room was "Sometimes" or "Never" quiet at night	6.6%	12.8%	13.0%
↓	HHSP RATING06 Patients who gave their hospital a rating of 6 or lower on a scale from 0 (lowest) to 10 (highest)	7.8%	14.7%	15.0%
↓	HHSP RATING78 Patients who gave their hospital a rating of 7 or 8 on a scale from 0 (lowest) to 10 (highest)	18.9%	23.9%	24.2%
↑	HHSP RATING910 Patients who gave their hospital a rating of 9 or 10 on a scale from 0 (lowest) to 10 (highest)	73.3%	61.4%	60.8%
↑	HRECMND DY Patients who reported YES, they would definitely recommend the hospital	73.7%	61.6%	62.0%
↓	HRECMND PY Patients who reported YES, they would probably recommend the hospital	21.5%	28.1%	27.8%
↓	HRECMND DN Patients who reported NO, they would probably not or definitely not recommend the hospital	4.8%	10.2%	10.2%
	<i>Cataract Surgery Outcome %</i>			
	OP31 Cataracts Improvement- Voluntary Reporting	--	--	--
	<i>Colonoscopy Followup%</i>			
↑	OP29 Avg Risk Polyp Surveillance	76.1%	97.0%	96.0%
↑	OP30 High risk Polyp Surveillance - Retired	77.7%	--	--
	<i>Stroke Care %</i>			
↑	STK4 Thrombolytic Therapy - Retired	83.0%	--	--
↓	<i>Heart Attack</i>			
↓	OP4 Aspirin at Arrival AMI Chest Pain - Retired	0.97	--	--
↑	OP3b Median Time to Transfer AMI - Retired	47.50	--	--
	OP5 Median Time to ECG AMI and Chest Pain - Retired	5.22	--	--
↑	OP2 Fibrinolytic Therapy 30 minutes - Retired	0.00	--	--

Desired Performance	Measures	Ballad Health Baseline	Ballad Health	TN Ballad Health
		Ballad Health		TN Ballad Health
		Baseline	FY22	FY22
	<i>Emergency Department Throughput</i>			
	EDV Emergency Department Volume	--	--	--
↓	Median Time from ED Arrival to Transport for Admitted Patients (ED1)	227.3	460.1	448.5
↓	ED2b ED Decision to Transport	69.0	217.6	221.6
↓	Median Time from ED Arrival to Departure for Outpatients (18b)	124.5	158.4	180.0
↓	OP20 Door to Diagnostic Evaluation - Retired	15.09	--	--
↓	OP21 Time to pain medication for long bone fractures - Retired	37.84	--	--
↓	OP22 Left without being seen	0.9%	2.5%	2.6%
↑	OP23 Head CT stroke patients	84.7%	65.0%	63.0%
	<i>Preventive Care %</i>			
↑	IMM3OP27 FACADHPCT HCW Influenza Vaccination - Seasonal	97.0%	98.5%	98.0%
↑	IMM2 Immunization for Influenza - Retired	97.4%	--	--
	<i>Blood Clot Prevention/Treatment</i>			
	VTE5 Warfarin Therapy at Discharge - Voluntary Reporting	--	--	--
↓	VTE6 HAC VTE - Retired	0.02	--	--
	<i>Pregnancy and Delivery Care %</i>			
↓	PC01 Elective Delivery	0.56%	6.77%	4.48%
	<i>Surgical Complications Rate</i>			
↓	Hip and Knee Complications	0.03	0.00	0.00
↓	PSI4SURG COMP Death rate among surgical patients with serious treatable complications	140.60	189.70	201.23
↓	PSI90 Complications / patient safety for selected indicators	0.83	0.95	0.94
	<i>Readmissions 30 Days Rate%</i>			
↓	READM30 AMI Acute myocardial infarction (AMI) 30day readmission rate	12.9%	13.3%	13.3%
↓	READM30 CABG Coronary artery bypass graft (CABG) surgery 30day readmission rate	8.9%	12.9%	12.9%
↓	READM30 COPD Chronic obstructive pulmonary disease 30day readmission rate	18.2%	19.9%	21.6%
↓	READM30HF Heart Failure 30Day readmissions rate	20.5%	23.9%	23.7%
↓	READM30 HIPKNEE 30day readmission rate following elective THA / TKA	3.8%	5.3%	4.8%
↓	READM30 HOSPWIDE 30day hospitalwide allcause unplanned readmission	12.0%	14.3%	14.1%
↓	READM30PN Pneumonia 30day readmission rate	17.7%	18.0%	18.2%
↓	READM30 STK Stroke 30day readmission rate	9.0%	11.3%	11.1%

Desired Performance	Measures	Ballad Health Baseline	Ballad Health	TN Ballad Health
		Ballad Health		TN Ballad Health
	Baseline	FY22	FY22	
	<i>Mortality 30 Days Death Rate %</i>			
↓	MORT3OAMI Acute myocardial infarction (AMI) 30day mortality rate	4.7%	6.6%	6.8%
↓	MORT3O CABG Coronary artery bypass graft surgery 30day mortality rate	2.0%	2.0%	2.0%
↓	MORT3O COPD 30day mortality rate COPD patients	1.8%	3.7%	4.1%
↓	MORT3OHF Heart failure 30day mortality rate	3.9%	5.1%	4.8%
↓	MORT3OPN Pneumonia 30day mortality rate	4.7%	7.4%	8.0%
↓	MORT3OSTK Stroke 30day mortality rate	8.2%	7.3%	7.8%
	<i>Use of Medical Imaging Outpatient</i>			
	OP8 MRI Lumbar Spine for Low Back Pain - Annual	0.41	0.53	0.54
	OP10 Abdomen CT Use of Contrast Material - Annual	0.06	0.05	0.06
	OP13 Outpatients who got cardiac imaging stress tests before lowrisk outpatient surgery - Annual	0.04	0.04	0.03
	OP9 Mammography Followup Rates - Retired	0.07	--	--
	OP11 Thorax CT Use of Contrast Material - Retired	0.01	--	--
	OP14 Outpatients with brain CT scans who got a sinus CT scan at the same time - Retired	0.02	--	--

Table 3 FY22 data for the Other (Quality) Sub-Index by individual facility

Desired Performance	Measures	Ballad Health	Holston Valley	Johnson City	Bristol Regional	Indian Path	Greeneville	Franklin Woods	Sycamore Shoals	Unicoi County
		Baseline	Medical Center	Medical Center*	Medical Center	Community Hospital	Community Hospital	Community Hospital	Hospital	Hospital
		Baseline	FY22	FY22	FY22	FY22	FY22	FY22	FY22	FY22
	<i>Quality Target Measures</i>									
↓	PSI 3 Pressure Ulcer Rate	1.07	0.11	0.39	0.12	0.00	0.44	0.00	0.00	0.00
↓	PSI 6 Iatrogenic Pneumothorax Rate	0.25	0.40	0.29	0.09	0.00	0.59	0.24	0.32	0.00
↓	PSI 7 Central Venous Catheter-Related Blood Stream Infection Rate - Retired	0.15	--	--	--	--	--	--	--	--
↓	PSI 8 In Hospital Fall with Hip Fracture Rate	0.06	0.00	0.05	0.08	0.00	0.00	0.00	0.00	0.00
↓	PSI 9 Perioperative Hemorrhage or Hematoma Rate	1.59	0.92	0.93	5.01	3.80	4.77	0.00	0.00	--
↓	PSI 10 Postoperative Acute Kidney Injury Requiring Dialysis	0.76	1.33	2.77	5.30	0.00	0.00	0.00	0.00	--
↓	PSI 11 Postoperative Respiratory Failure Rate	9.24	9.33	17.28	13.89	0.00	0.00	10.67	17.54	--
↓	PSI 12 Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate	3.31	4.90	5.68	6.40	0.00	2.99	4.63	0.00	--
↓	PSI 13 Postoperative Sepsis Rate	3.58	4.29	4.25	2.88	12.99	6.99	9.23	9.90	--
↓	PSI 14 Postoperative Wound Dehiscence Rate	0.83	0.00	3.89	0.00	0.00	0.00	0.00	0.00	0.00
↓	PSI 15 Unrecognized Abdominopelvic Accidental Puncture/Laceration Rate	1.18	0.00	0.90	0.45	0.00	0.00	0.00	0.00	0.00
↓	CLABSI	0.71	1.25	1.56	1.18	0.00	0.80	1.00	0.91	0.00
↓	CAUTI	0.56	0.85	2.10	1.32	0.00	1.82	0.40	0.00	6.37
↓	SSI COLON Surgical Site Infection	2.13	0.95	3.74	2.23	3.51	2.30	2.08	0.00	--
↓	SSI HYST Surgical Site Infection	0.71	5.19	0.00	1.59	0.00	0.00	0.00	0.00	--
↓	MRSA	0.09	0.15	0.19	0.14	0.00	0.14	0.00	0.06	0.00
↓	CDIFF	0.67	0.27	0.20	0.18	0.00	0.14	0.08	0.19	0.00
↑	SMB: Sepsis Management Bundle	56.9%	50.9%	44.4%	48.3%	56.5%	46.9%	61.0%	40.0%	56.6%

* includes Woodridge Psychiatric Hospital & Niswonger Children's Hospital

Desired Performance	Measures	Ballad Health Baseline	Holston Valley Medical Center	Johnson City Medical Center*	Bristol Regional Medical Center	Indian Path Community Hospital	Greeneville Community Hospital	Franklin Woods Community Hospital	Sycamore Shoals Hospital	Unicoi County Hospital
		Baseline	FY22	FY22	FY22	FY22	FY22	FY22	FY22	FY22
	<i>General Information-Structural Measures</i>									
YES	ACS REGISTRY - Retired	Yes	--	--	--	--	--	--	--	--
YES	SMPART GENSURG General Surgery Registry - Retired	Yes	--	--	--	--	--	--	--	--
YES	SMPART NURSE Nursing Care Registry - Retired	Yes	--	--	--	--	--	--	--	--
YES	SMSSCHECK Safe Surgery Checklist	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
YES	OP12 HIT Ability electronically receive lab results	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes
YES	OP17 Tracking Clinical Results Between Visits	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes
YES	OP25 Outpatient Safe Surgery Checklist	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	<i>Survey of Patient's Experience*</i> <i>Data had adjustments enabled, phone calibration, and skip logic applied</i>									
↑	HCOMP1A P Patients who reported that their nurses "Always" communicated well	82.8%	71.5%	72.7%	71.2%	78.2%	72.0%	81.4%	73.0%	85.0%
↓	HCOMP1U P Patients who reported that their nurses "Usually" communicated well	13.6%	13.7%	19.2%	14.9%	16.3%	13.5%	14.3%	19.9%	10.2%
↓	HCOMP1 SNP Patients who reported that their nurses "Sometimes" or "Never" communicated well	3.6%	14.8%	8.1%	13.9%	5.5%	14.5%	4.3%	7.2%	4.8%
↑	HCOMP2A P Patients who reported that their doctors "Always" communicated well	84.1%	75.3%	72.5%	73.4%	79.1%	73.9%	81.3%	72.7%	80.4%
↓	HCOMP2U P Patients who reported that their doctors "Usually" communicated well	11.9%	12.8%	18.6%	14.4%	16.0%	13.0%	13.8%	20.1%	15.9%
↓	HCOMP2 SNP Patients who reported that their doctors "Sometimes" or "Never" communicated well	3.9%	11.9%	9.0%	12.2%	5.0%	13.1%	4.9%	7.2%	3.7%
↑	HCOMP3A P Patients who reported that they "Always" received help as soon as they wanted	72.8%	54.6%	57.4%	54.8%	66.1%	60.3%	68.5%	58.9%	71.4%
↓	HCOMP3U P Patients who reported that they "Usually" received help as soon as they wanted	20.6%	22.9%	27.0%	26.2%	22.2%	24.4%	23.0%	27.6%	19.9%
↓	HCOMP3 SNP Patients who reported that they "Sometimes" or "Never" received help as soon as they wanted	6.6%	22.6%	15.6%	19.0%	11.7%	15.3%	8.6%	13.6%	8.7%
↑	HCOMP4A P Patients who reported that their pain was "Always" well controlled - Suspended	74.1%	--	--	--	--	--	--	--	--
↓	HCOMP4U P Patients who reported that their pain was "Usually" well controlled - Suspended	19.6%	--	--	--	--	--	--	--	--
↓	HCOMP4 SNP Patients who reported that their pain was "Sometimes" or "Never" well controlled - Suspended	6.3%	--	--	--	--	--	--	--	--

* includes Woodridge Psychiatric Hospital & Niswonger Children's Hospital

Desired Performance	Measures	Ballad Health Baseline	Holston Valley Medical Center	Johnson City Medical Center*	Bristol Regional Medical Center	Indian Path Community Hospital	Greeneville Community Hospital	Franklin Woods Community Hospital	Sycamore Shoals Hospital	Unicoi County Hospital
		Baseline	FY22	FY22	FY22	FY22	FY22	FY22	FY22	FY22
↑	HCOMP5A P Patients who reported that staff "Always" explained about medicines before giving it to them	68.1%	55.7%	54.7%	57.0%	62.2%	59.9%	63.3%	57.9%	57.3%
↓	HCOMP5U P Patients who reported that staff "Usually" explained about medicines before giving it to them	15.9%	14.8%	17.6%	15.3%	14.8%	15.3%	17.2%	18.5%	18.6%
↓	HCOMP5 SNP Patients who reported that staff "Sometimes" or "Never" explained about medicines before giving it to them	16.0%	29.5%	27.8%	27.7%	23.0%	24.8%	19.5%	23.7%	24.1%
↑	HCOMP6Y P Patients who reported that YES, they were given information about what to do during their recovery at home	87.2%	84.6%	83.1%	83.9%	86.4%	82.6%	85.8%	80.6%	80.7%
↓	HCOMP6N P Patients who reported that NO, they were not given information about what to do during their recovery at home	12.8%	15.4%	16.9%	16.1%	13.6%	17.4%	14.2%	19.4%	19.3%
↑	HCOMP7SA Patients who "Strongly Agree" they understood their care when they left the hospital	54.5%	44.3%	43.6%	44.4%	50.2%	44.1%	53.3%	45.3%	48.0%
↓	HCOMP7A Patients who "Agree" they understood their care when they left the hospital	40.8%	49.3%	46.7%	48.7%	44.1%	48.7%	42.1%	47.2%	46.9%
↓	HCOMP7D SD Patients who "Disagree" or "Strongly Disagree" they understood their care when they left the hospital	4.8%	6.4%	9.7%	7.0%	5.7%	7.2%	4.6%	7.5%	5.1%
↑	HCLEAN HSPAP Patients who reported that their room and bathroom were "Always" clean	73.9%	57.7%	56.7%	54.2%	76.8%	53.5%	64.0%	69.4%	80.8%
↓	HCLEAN HSPUP Patients who reported that their room and bathroom were "Usually" clean	17.2%	16.0%	22.9%	20.0%	14.7%	18.9%	19.1%	16.9%	10.3%
↓	HCLEAN HSPSNP Patients who reported that their room and bathroom were "Sometimes" or "Never" clean	8.9%	26.3%	20.5%	25.8%	8.5%	27.6%	16.8%	13.8%	9.0%
↑	HQUIETHSP AP Patients who reported that the area around their room was "Always" quiet at night	66.5%	58.3%	45.4%	61.5%	62.9%	63.8%	69.6%	60.9%	77.6%
↓	HQUIETHSP UP Patients who reported that the area around their room was "Usually" quiet at night	26.9%	24.6%	36.9%	24.5%	24.9%	23.6%	25.9%	30.9%	21.1%
↓	HQUIETHSP SNP Patients who reported that the area around their room was "Sometimes" or "Never" quiet at night	6.6%	17.1%	17.8%	14.0%	12.2%	12.6%	4.5%	8.3%	1.3%
↓	HHSP RATING06 Patients who gave their hospital a rating of 6 or lower on a scale from 0 (lowest) to 10 (highest)	7.8%	15.3%	20.1%	16.2%	10.5%	20.0%	7.7%	11.6%	8.9%
↓	HHSP RATING78 Patients who gave their hospital a rating of 7 or 8 on a scale from 0 (lowest) to 10 (highest)	18.9%	27.0%	25.7%	25.7%	19.5%	31.9%	17.9%	25.1%	13.9%
↑	HHSP RATING910 Patients who gave their hospital a rating of 9 or 10 on a scale from 0 (lowest) to 10 (highest)	73.3%	57.7%	54.2%	58.1%	69.9%	48.1%	74.4%	63.4%	77.2%
↑	HRECMND DY Patients who reported YES, they would definitely recommend the hospital	73.7%	61.6%	52.7%	60.5%	73.2%	49.4%	77.7%	61.8%	76.0%
↓	HRECMND PY Patients who reported YES, they would probably recommend the hospital	21.5%	27.1%	33.8%	27.1%	20.9%	38.1%	18.0%	29.4%	17.7%
↓	HRECMND DN Patients who reported NO, they would probably not or definitely not recommend the hospital	4.8%	11.3%	13.6%	12.4%	5.9%	12.5%	4.3%	8.8%	6.3%

* includes Woodridge Psychiatric Hospital & Niswonger Children's Hospital

Desired Performance	Measures	Ballad Health Baseline	Holston Valley Medical Center	Johnson City Medical Center*	Bristol Regional Medical Center	Indian Path Community Hospital	Greeneville Community Hospital	Franklin Woods Community Hospital	Sycamore Shoals Hospital	Unicoi County Hospital
		Baseline	FY22	FY22	FY22	FY22	FY22	FY22	FY22	FY22
	<i>Cataract Surgery Outcome %</i>									
	OP31 Cataracts Improvement- Voluntary Reporting	--	--	--	--	--	--	--	--	--
	<i>Colonoscopy Followup%</i>									
↑	OP29 Avg Risk Polyp Surveillance	76.1%	93.0%	100.0%	75.0%	--	100.0%	100.0%	100.0%	--
↑	OP30 High risk Polyp Surveillance - Retired	77.7%	--	--	--	--	--	--	--	--
	<i>Stroke Care %</i>									
↑	STK4 Thrombolytic Therapy - Retired	83.0%	--	--	--	--	--	--	--	--
↓	<i>Heart Attack</i>									
↓	OP4 Aspirin at Arrival AMI Chest Pain - Retired	0.97	--	--	--	--	--	--	--	--
↑	OP3b Median Time to Transfer AMI - Retired	47.50	--	--	--	--	--	--	--	--
	OP5 Median Time to ECG AMI and Chest Pain - Retired	5.22	--	--	--	--	--	--	--	--
↑	OP2 Fibrinolytic Therapy 30 minutes - Retired	0.00	--	--	--	--	--	--	--	--
	<i>Emergency Department Throughput</i>									
	EDV Emergency Department Volume	--	--	--	--	--	--	--	--	--
↓	Median Time from ED Arrival to Transport for Admitted Patients (ED1)	227.3	896.5	406.6	448.5	621.4	557.3	500.7	426.9	401.7
↓	ED2b ED Decision to Transport	69.0	601.1	189.6	221.6	306.5	304.1	277.3	204.8	137.3
↓	Median Time from ED Arrival to Departure for Outpatients (18b)	124.5	217.7	186.3	192.8	168.0	194.8	191.7	180.0	135.9
↓	OP20 Door to Diagnostic Evaluation - Retired	15.09	--	--	--	--	--	--	--	--
↓	OP21 Time to pain medication for long bone fractures - Retired	37.84	--	--	--	--	--	--	--	--
↓	OP22 Left without being seen	0.9%	2.3%	1.9%	3.0%	4.1%	2.7%	2.7%	4.7%	1.4%
↑	OP23 Head CT stroke patients	84.7%	92.0%	71.0%	91.0%	--	30.0%	50.0%	27.0%	25.0%
	<i>Preventive Care %</i>									
↑	IMM3OP27 FACADHPCT HCW Influenza Vaccination - Seasonal	97.0%	98.0%	99.0%	99.0%	98.0%	99.0%	98.0%	100.0%	99.0%
↑	IMM2 Immunization for Influenza - Retired	97.4%	--	--	--	--	--	--	--	--
	<i>Blood Clot Prevention/Treatment</i>									
	VTE5 Warfarin Therapy at Discharge - Voluntary Reporting	--	--	--	--	--	--	--	--	--
↓	VTE6 HAC VTE - Retired	0.02	--	--	--	--	--	--	--	--
	<i>Pregnancy and Delivery Care %</i>									
↓	PC01 Elective Delivery	0.56%	--	7.69%	10.00%	--	--	7.00%	--	--
	<i>Surgical Complications Rate</i>									
↓	Hip and Knee Complications	0.03	0.00	0.00	0.00	--	0.00	--	0.00	--
↓	PSI4SURG COMP Death rate among surgical patients with serious treatable complications	140.60	209.04	252.87	169.49	0.00	62.50	125.00	105.26	--
↓	PSI90 Complications / patient safety for selected indicators	0.83	0.80	1.15	0.95	0.81	0.87	0.88	1.03	0.92

* includes Woodridge Psychiatric Hospital & Niswonger Children's Hospital

Desired Performance	Measures	Ballad Health Baseline	Holston Valley Medical Center	Johnson City Medical Center*	Bristol Regional Medical Center	Indian Path Community Hospital	Greeneville Community Hospital	Franklin Woods Community Hospital	Sycamore Shoals Hospital	Unicoi County Hospital
		Baseline	FY22	FY22	FY22	FY22	FY22	FY22	FY22	FY22
	<i>Readmissions 30 Days Rate%</i>									
↓	READM30 AMI Acute myocardial infarction (AMI) 30day readmission rate	12.9%	11.4%	14.3%	11.7%	0.0%	38.1%	28.6%	29.4%	--
↓	READM30 CABG Coronary artery bypass graft (CABG) surgery 30day readmission rate	8.9%	8.0%	14.9%	16.2%	--	--	--	--	--
↓	READM30 COPD Chronic obstructive pulmonary disease 30day readmission rate	18.2%	18.4%	25.6%	23.7%	22.6%	24.8%	14.5%	20.4%	3.6%
↓	READM30HF Heart Failure 30Day readmissions rate	20.5%	21.5%	28.4%	25.8%	23.8%	20.3%	13.4%	18.3%	16.7%
↓	READM30 HIPKNEE 30day readmission rate following elective THA / TKA	3.8%	7.0%	3.7%	4.3%	--	0.0%	--	6.0%	--
↓	READM30 HOSPWIDE 30day hospitalwide allcause unplanned readmission	12.0%	14.6%	13.9%	15.0%	10.5%	14.7%	11.1%	16.0%	13.6%
↓	READM30PN Pneumonia 30day readmission rate	17.7%	18.4%	19.5%	19.2%	9.8%	14.4%	17.7%	20.9%	14.9%
↓	READM30 STK Stroke 30day readmission rate	9.0%	9.8%	12.4%	11.0%	0.0%	7.8%	6.5%	14.3%	0.0%
	<i>Mortality 30 Days Death Rate %</i>									
↓	MORT30AMI Acute myocardial infarction (AMI) 30day mortality rate	4.7%	6.9%	7.0%	5.1%	50.0%	4.5%	22.2%	10.5%	--
↓	MORT30 CABG Coronary artery bypass graft surgery 30day mortality rate	2.0%	3.1%	1.1%	1.7%	--	--	--	--	--
↓	MORT30 COPD 30day mortality rate COPD patients	1.8%	8.4%	5.3%	1.6%	0.0%	1.3%	4.5%	3.1%	0.0%
↓	MORT30HF Heart failure 30day mortality rate	3.9%	5.7%	6.6%	4.0%	0.0%	4.6%	1.8%	1.3%	0.0%
↓	MORT30PN Pneumonia 30day mortality rate	4.7%	9.4%	10.6%	8.7%	1.1%	7.4%	5.9%	5.4%	3.9%
↓	MORT30STK Stroke 30day mortality rate	8.2%	7.5%	12.1%	2.7%	0.0%	3.8%	0.0%	0.0%	0.0%
	<i>Use of Medical Imaging Outpatient</i>									
	OP8 MRI Lumbar Spine for Low Back Pain - Annual	0.41	0.59	0.49	0.51	--	0.57	--	--	--
	OP10 Abdomen CT Use of Contrast Material - Annual	0.06	0.07	0.06	0.04	0.05	0.08	0.07	0.06	0.07
	OP13 Outpatients who got cardiac imaging stress tests before lowrisk outpatient surgery - Annual	0.04	0.03	0.04	0.06	--	0.03	0.04	0.00	--
	OP9 Mammography Followup Rates - Retired	0.07	--	--	--	--	--	--	--	--
	OP11 Thorax CT Use of Contrast Material - Retired	0.01	--	--	--	--	--	--	--	--
	OP14 Outpatients with brain CT scans who got a sinus CT scan at the same time - Retired	0.02	--	--	--	--	--	--	--	--

* includes Woodridge Psychiatric Hospital & Niswonger Children's Hospital

Desired Performance	Measures	Ballad Health Baseline	Hawkins County Memorial Hospital	Johnston Memorial Hospital	Lonesome Pine Hospital	Norton Community Hospital	Smyth County Community Hospital	Russell County Hospital	Hancock County Hospital	Lee County Community Hospital	Johnson County Community Hospital	Dickenson Community Hospital
		Baseline	FY22	FY22	FY22	FY22	FY22	FY22	FY22	FY22	FY22	FY22
	<i>Quality Target Measures</i>											
↓	PSI 3 Pressure Ulcer Rate	1.07	0.00	0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	PSI 6 Iatrogenic Pneumothorax Rate	0.25	0.00	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	PSI 7 Central Venous Catheter-Related Blood Stream Infection Rate - Retired	0.15	--	--	--	--	--	--	--	--	--	--
↓	PSI 8 In Hospital Fall with Hip Fracture Rate	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
↓	PSI 9 Perioperative Hemorrhage or Hematoma Rate	1.59	0.00	1.28	0.00	3.38	0.00	0.00	--	--	--	--
↓	PSI 10 Postoperative Acute Kidney Injury Requiring Dialysis	0.76	--	0.00	--	0.00	0.00	--	--	--	--	--
↓	PSI 11 Postoperative Respiratory Failure Rate	9.24	--	35.46	--	0.00	0.00	--	--	--	--	--
↓	PSI 12 Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate	3.31	0.00	1.19	333.33	3.13	0.00	0.00	--	--	--	--
↓	PSI 13 Postoperative Sepsis Rate	3.58	--	15.27	--	0.00	0.00	--	--	--	--	--
↓	PSI 14 Postoperative Wound Dehiscence Rate	0.83	--	0.00	0.00	0.00	0.00	0.00	--	--	--	--
↓	PSI 15 Unrecognized Abdominopelvic Accidental Puncture/Laceration Rate	1.18	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	0.00
↓	CLABSI	0.71	0.00	1.24	4.27	2.59	0.00	4.84	--	--	--	--
↓	CAUTI	0.56	0.00	0.39	0.00	0.67	0.00	0.00	--	--	--	--
↓	SSI COLON Surgical Site Infection	2.13	--	2.22	--	0.00	0.00	--	--	--	--	--
↓	SSI HYST Surgical Site Infection	0.71	--	5.56	--	0.00	--	--	--	--	--	--
↓	MRSA	0.09	0.00	0.11	0.00	0.33	0.00	0.20	--	--	--	--
↓	CDIFF	0.67	0.00	0.04	0.00	0.18	0.00	0.20	--	--	--	--
↑	SMB: Sepsis Management Bundle	56.9%	54.5%	54.2%	61.4%	50.0%	82.0%	64.7%	56.3%	55.9%	75.0%	0.0%

Desired Performance	Measures	Ballad Health Baseline	Hawkins County Memorial Hospital	Johnston Memorial Hospital	Lonesome Pine Hospital	Norton Community Hospital	Smyth County Community Hospital	Russell County Hospital	Hancock County Hospital	Lee County Community Hospital	Johnson County Community Hospital	Dickenson Community Hospital
		Baseline	FY22	FY22	FY22	FY22	FY22	FY22	FY22	FY22	FY22	FY22
	<i>General Information-Structural Measures</i>											
YES	ACS REGISTRY - Retired	Yes	--	--	--	--	--	--	--	--	--	--
YES	SMPART GENSURG General Surgery Registry - Retired	Yes	--	--	--	--	--	--	--	--	--	--
YES	SMPART NURSE Nursing Care Registry - Retired	Yes	--	--	--	--	--	--	--	--	--	--
YES	SMSSCHECK Safe Surgery Checklist	Yes	Yes	Yes	Yes	Yes	Yes	No	--	--	Yes	--
YES	OP12 HIT Ability electronically receive lab results	Yes	No	Yes	No	Yes	Yes	Yes	--	--	--	--
YES	OP17 Tracking Clinical Results Between Visits	Yes	No	Yes	Yes	Yes	Yes	Yes	--	--	Yes	--
YES	OP25 Outpatient Safe Surgery Checklist	Yes	Yes	Yes	No	Yes	Yes	Yes	--	--	Yes	--
	<i>Survey of Patient's Experience</i> <i>Data had adjustments enabled, phone calibration, and skip logic applied</i>											
↑	HCOMP1A P Patients who reported that their nurses "Always" communicated well	82.8%	84.7%	73.5%	83.9%	72.5%	82.3%	78.4%	79.8%	70.0%	100.0%	100.0%
↓	HCOMP1U P Patients who reported that their nurses "Usually" communicated well	13.6%	7.5%	18.3%	5.9%	17.8%	13.8%	16.1%	6.7%	23.3%	0.0%	0.0%
↓	HCOMP1 SNP Patients who reported that their nurses "Sometimes" or "Never" communicated well	3.6%	7.8%	8.2%	10.2%	9.6%	3.9%	5.4%	13.5%	6.7%	0.0%	0.0%
↑	HCOMP2A P Patients who reported that their doctors "Always" communicated well	84.1%	82.8%	75.1%	84.3%	74.4%	79.9%	78.1%	83.9%	77.6%	86.7%	100.0%
↓	HCOMP2U P Patients who reported that their doctors "Usually" communicated well	11.9%	8.6%	17.3%	9.3%	15.5%	14.8%	15.3%	4.9%	19.0%	13.3%	0.0%
↓	HCOMP2 SNP Patients who reported that their doctors "Sometimes" or "Never" communicated well	3.9%	8.6%	7.5%	6.4%	10.1%	5.3%	6.7%	11.2%	3.3%	0.0%	0.0%
↑	HCOMP3A P Patients who reported that they "Always" received help as soon as they wanted	72.8%	78.3%	56.0%	81.9%	55.9%	64.9%	64.8%	78.9%	67.9%	100.0%	50.0%
↓	HCOMP3U P Patients who reported that they "Usually" received help as soon as they wanted	20.6%	18.0%	27.1%	13.1%	27.4%	26.4%	25.0%	12.5%	26.3%	0.0%	0.0%
↓	HCOMP3 SNP Patients who reported that they "Sometimes" or "Never" received help as soon as they wanted	6.6%	3.7%	17.0%	5.0%	16.7%	8.7%	10.2%	8.6%	5.9%	0.0%	0.0%
↑	HCOMP4A P Patients who reported that their pain was "Always" well controlled - Suspended	74.1%	--	--	--	--	--	--	--	--	--	--
↓	HCOMP4U P Patients who reported that their pain was "Usually" well controlled - Suspended	19.6%	--	--	--	--	--	--	--	--	--	--
↓	HCOMP4 SNP Patients who reported that their pain was "Sometimes" or "Never" well controlled - Suspended	6.3%	--	--	--	--	--	--	--	--	--	--

Desired Performance	Measures	Ballad Health Baseline	Hawkins County Memorial Hospital	Johnston Memorial Hospital	Lonesome Pine Hospital	Norton Community Hospital	Smyth County Community Hospital	Russell County Hospital	Hancock County Hospital	Lee County Community Hospital	Johnson County Community Hospital	Dickenson Community Hospital
		Baseline	FY22	FY22	FY22	FY22	FY22	FY22	FY22	FY22	FY22	FY22
↑	HCOMP5A P Patients who reported that staff "Always" explained about medicines before giving it to them	68.1%	66.6%	55.5%	74.7%	57.9%	61.9%	61.8%	60.0%	54.6%	100.0%	100.0%
↓	HCOMP5U P Patients who reported that staff "Usually" explained about medicines before giving it to them	15.9%	14.1%	17.8%	11.0%	15.5%	18.7%	17.1%	16.7%	27.3%	0.0%	0.0%
↓	HCOMP5 SNP Patients who reported that staff "Sometimes" or "Never" explained about medicines before giving it to them	16.0%	19.3%	26.7%	14.3%	26.6%	19.3%	21.1%	23.4%	18.2%	0.0%	0.0%
↑	HCOMP6Y P Patients who reported that YES, they were given information about what to do during their recovery at home	87.2%	85.8%	86.2%	88.3%	82.8%	89.7%	87.1%	85.8%	59.4%	90.0%	83.3%
↓	HCOMP6N P Patients who reported that NO, they were not given information about what to do during their recovery at home	12.8%	14.2%	13.8%	11.7%	17.2%	10.3%	12.9%	14.2%	40.6%	10.0%	16.7%
↑	HCOMP7SA Patients who "Strongly Agree" they understood their care when they left the hospital	54.5%	55.9%	43.5%	57.6%	41.7%	53.0%	45.9%	60.0%	29.3%	76.7%	44.4%
↓	HCOMP7A Patients who "Agree" they understood their care when they left the hospital	40.8%	38.6%	48.0%	37.6%	48.6%	42.1%	46.9%	34.4%	61.6%	13.8%	55.6%
↓	HCOMP7D SD Patients who "Disagree" or "Strongly Disagree" they understood their care when they left the hospital	4.8%	5.5%	8.5%	4.7%	9.7%	4.8%	7.2%	5.6%	9.1%	9.5%	0.0%
↑	HCLEAN HSPAP Patients who reported that their room and bathroom were "Always" clean	73.9%	65.8%	72.0%	74.5%	52.6%	78.5%	66.9%	77.8%	60.0%	71.4%	66.7%
↓	HCLEAN HSPUP Patients who reported that their room and bathroom were "Usually" clean	17.2%	18.4%	18.2%	14.3%	24.5%	15.3%	22.3%	11.1%	15.0%	14.3%	33.3%
↓	HCLEAN HSPSNP Patients who reported that their room and bathroom were "Sometimes" or "Never" clean	8.9%	15.8%	9.8%	11.2%	22.9%	6.3%	10.8%	11.1%	25.0%	14.3%	0.0%
↑	HQUIETHSP AP Patients who reported that the area around their room was "Always" quiet at night	66.5%	64.1%	56.1%	73.0%	53.4%	69.9%	66.7%	80.8%	55.0%	42.9%	66.7%
↓	HQUIETHSP UP Patients who reported that the area around their room was "Usually" quiet at night	26.9%	20.5%	32.0%	13.0%	30.6%	24.2%	25.6%	11.5%	40.0%	57.1%	0.0%
↓	HQUIETHSP SNP Patients who reported that the area around their room was "Sometimes" or "Never" quiet at night	6.6%	15.4%	11.9%	14.0%	16.0%	5.9%	7.7%	7.7%	5.0%	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)	7.8%	10.3%	15.3%	6.3%	15.7%	6.7%	14.3%	15.4%	0.0%	0.0%	33.3%
↓	HHSP RATING78 Patients who gave their hospital a rating of 7 or 8 on a scale from 0 (lowest) to 10 (highest)	18.9%	23.1%	22.6%	22.9%	25.1%	14.3%	19.9%	3.9%	42.1%	0.0%	33.3%
↑	HHSP RATING910 Patients who gave their hospital a rating of 9 or 10 on a scale from 0 (lowest) to 10 (highest)	73.3%	66.7%	62.1%	70.8%	59.3%	79.0%	65.8%	80.8%	57.9%	100.0%	33.3%
↑	HRECMND DY Patients who reported YES, they would definitely recommend the hospital	73.7%	78.4%	58.1%	80.2%	57.6%	68.0%	57.6%	69.6%	55.0%	71.4%	50.0%
↓	HRECMND PY Patients who reported YES, they would probably recommend the hospital	21.5%	13.5%	31.7%	17.7%	28.7%	27.0%	32.9%	26.1%	35.0%	28.6%	50.0%
↓	HRECMND DN Patients who reported NO, they would probably not or definitely not recommend the hospital	4.8%	8.1%	10.2%	2.1%	13.8%	5.0%	9.5%	4.4%	10.0%	0.0%	0.0%

Desired Performance	Measures	Ballad Health Baseline	Hawkins County Memorial Hospital	Johnston Memorial Hospital	Lonesome Pine Hospital	Norton Community Hospital	Smyth County Community Hospital	Russell County Hospital	Hancock County Hospital	Lee County Community Hospital	Johnson County Community Hospital	Dickenson Community Hospital
		Baseline	FY22	FY22	FY22	FY22	FY22	FY22	FY22	FY22	FY22	FY22
	<i>Cataract Surgery Outcome %</i>											
	OP31 Cataracts Improvement- Voluntary Reporting	--	--	--	--	--	--	--	--	--	--	--
	<i>Colonoscopy Followup%</i>											
↑	OP29 Avg Risk Polyp Surveillance	76.1%	95.0%	100.0%	100.0%	96.0%	100.0%	--	--	--	--	--
↑	OP30 High risk Polyp Surveillance - Retired	77.7%	--	--	--	--	--	--	--	--	--	--
	<i>Stroke Care %</i>											
↑	STK4 Thrombolytic Therapy - Retired	83.0%	--	--	--	--	--	--	--	--	--	--
↓	<i>Heart Attack</i>											
↓	OP4 Aspirin at Arrival AMI Chest Pain - Retired	0.97	--	--	--	--	--	--	--	--	--	--
↑	OP3b Median Time to Transfer AMI - Retired	47.50	--	--	--	--	--	--	--	--	--	--
	OP5 Median Time to ECG AMI and Chest Pain - Retired	5.22	--	--	--	--	--	--	--	--	--	--
↑	OP2 Fibrinolytic Therapy 30 minutes - Retired	0.00	--	--	--	--	--	--	--	--	--	--
	<i>Emergency Department Throughput</i>											
	EDV Emergency Department Volume	--	--	--	--	--	--	--	--	--	--	--
↓	Median Time from ED Arrival to Transport for Admitted Patients (ED1)	227.3	254.0	660.7	370.0	530.8	257.7	211.4	210.8	378.4	570.5	714.7
↓	ED2b ED Decision to Transport	69.0	60.0	402.9	82.4	260.9	67.2	44.5	26.6	145.4	410.9	122.8
↓	Median Time from ED Arrival to Departure for Outpatients (18b)	124.5	96.8	219.7	138.2	180.8	120.8	123.0	128.0	153.1	102.3	117.3
↓	OP20 Door to Diagnostic Evaluation - Retired	15.09	--	--	--	--	--	--	--	--	--	--
↓	OP21 Time to pain medication for long bone fractures - Retired	37.84	--	--	--	--	--	--	--	--	--	--
↓	OP22 Left without being seen	0.9%	0.9%	3.4%	1.6%	3.1%	1.4%	1.2%	0.3%	3.1%	1.0%	1.3%
↑	OP23 Head CT stroke patients	84.7%	50.0%	92.0%	100.0%	57.0%	85.0%	--	33.0%	50.0%	--	80.0%
	<i>Preventive Care %</i>											
↑	IMM3OP27 FACADHPCT HCW Influenza Vaccination - Seasonal	97.0%	98.0%	99.0%	99.0%	98.0%	99.0%	99.0%	98.0%	--	94.0%	100.0%
↑	IMM2 Immunization for Influenza - Retired	97.4%	--	--	--	--	--	--	--	--	--	--
	<i>Blood Clot Prevention/Treatment</i>											
	VTE5 Warfarin Therapy at Discharge - Voluntary Reporting	--	--	--	--	--	--	--	--	--	--	--
↓	VTE6 HAC VTE - Retired	0.02	--	--	--	--	--	--	--	--	--	--
	<i>Pregnancy and Delivery Care %</i>											
↓	PCO1 Elective Delivery	0.56%	--	10.70%	--	13.30%	--	--	--	--	--	--
	<i>Surgical Complications Rate</i>											
↓	Hip and Knee Complications	0.03	--	0.00	--	0.00	0.00	--	--	--	--	--
↓	PSI4SURG COMP Death rate among surgical patients with serious treatable complications	140.60	--	80.65	--	111.11	285.71	--	--	--	--	--
↓	PSI90 Complications / patient safety for selected indicators	0.83	0.97	1.29	0.93	0.74	0.85	0.90	0.97	0.97	0.99	0.99

Desired Performance	Measures	Ballad Health Baseline	Hawkins County Memorial Hospital	Johnston Memorial Hospital	Lonesome Pine Hospital	Norton Community Hospital	Smyth County Community Hospital	Russell County Hospital	Hancock County Hospital	Lee County Community Hospital	Johnson County Community Hospital	Dickenson Community Hospital
		Baseline	FY22	FY22	FY22	FY22	FY22	FY22	FY22	FY22	FY22	FY22
	<i>Readmissions 30 Days Rate%</i>											
↓	READM30 AMI Acute myocardial infarction (AMI) 30day readmission rate	12.9%	0.0%	13.8%	50.0%	7.7%	11.1%	0.0%	--	--	--	--
↓	READM30 CABG Coronary artery bypass graft (CABG) surgery 30day readmission rate	8.9%	--	--	--	--	--	--	--	--	--	--
↓	READM30 COPD Chronic obstructive pulmonary disease 30day readmission rate	18.2%	27.3%	17.0%	11.5%	7.5%	14.8%	18.6%	0.0%	25.0%	0.0%	0.0%
↓	READM30HF Heart Failure 30Day readmissions rate	20.5%	30.4%	22.7%	31.7%	26.5%	22.7%	26.8%	20.0%	25.0%	--	--
↓	READM30 HIPKNEE 30day readmission rate following elective THA / TKA	3.8%	--	0.0%	--	14.3%	16.7%	--	--	--	--	--
↓	READM30 HOSPWIDE 30day hospitalwide allcause unplanned readmission	12.0%	16.2%	15.4%	15.0%	15.5%	14.7%	19.7%	16.0%	21.5%	24.0%	21.4%
↓	READM30PN Pneumonia 30day readmission rate	17.7%	23.4%	20.4%	12.9%	16.0%	11.1%	18.3%	30.0%	27.3%	16.7%	0.0%
↓	READM30 STK Stroke 30day readmission rate	9.0%	37.5%	12.8%	37.5%	9.8%	7.4%	33.3%	0.0%	0.0%	--	--
	<i>Mortality 30 Days Death Rate %</i>											
↓	MORT30AMI Acute myocardial infarction (AMI) 30day mortality rate	4.7%	50.0%	4.9%	0.0%	7.1%	10.0%	0.0%	--	--	--	--
↓	MORT30 CABG Coronary artery bypass graft surgery 30day mortality rate	2.0%	--	--	--	--	--	--	--	--	--	--
↓	MORT30 COPD 30day mortality rate COPD patients	1.8%	0.0%	4.5%	0.0%	2.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
↓	MORT30HF Heart failure 30day mortality rate	3.9%	0.0%	9.8%	2.3%	3.6%	2.9%	8.3%	0.0%	0.0%	--	--
↓	MORT30PN Pneumonia 30day mortality rate	4.7%	2.1%	8.3%	0.7%	5.7%	1.8%	3.2%	0.0%	4.3%	0.0%	0.0%
↓	MORT30STK Stroke 30day mortality rate	8.2%	0.0%	5.5%	11.1%	0.0%	3.6%	0.0%	0.0%	0.0%	--	--
	<i>Use of Medical Imaging Outpatient</i>											
	OP8 MRI Lumbar Spine for Low Back Pain - Annual	0.41	--	0.48	--	--	0.54	--	--	--	--	--
	OP10 Abdomen CT Use of Contrast Material - Annual	0.06	0.02	0.03	--	0.02	0.02	0.03	--	--	--	0.00
	OP13 Outpatients who got cardiac imaging stress tests before lowrisk outpatient surgery - Annual	0.04	--	0.03	--	--	0.06	--	--	--	--	--
	OP9 Mammography Followup Rates - Retired	0.07	--	--	--	--	--	--	--	--	--	--
	OP11 Thorax CT Use of Contrast Material - Retired	0.01	--	--	--	--	--	--	--	--	--	--
	OP14 Outpatients with brain CT scans who got a sinus CT scan at the same time - Retired	0.02	--	--	--	--	--	--	--	--	--	--

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
- 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>

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