TENNESSEE REGIONAL HEALTHCARE QUALITY IMPROVEMENT COLLABORATIVES

FINAL REPORT

March 2019 – June 2021

Provided for:

Tennessee Department of Health

Prepared by:

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University of Indianapolis Center for Aging & Community

Mission

The University of Indianapolis Center for Aging & Community collaborates, educates and conducts research to enhance the quality of life for all people as they age.

Vision

The University of Indianapolis Center for Aging & Community is a catalyst for change that leads to a world in which all people age with dignity and optimal health.

About Us

The University of Indianapolis Center for Aging & Community (CAC) is one of Indiana's leading centers for aging studies, utilizing an interdisciplinary approach to developing partnerships between higher education, business organizations and the community. The Center prides itself on being a champion for advancing the new reality of older adults as corporate, community, and family assets.

CAC offers outstanding education in Aging Studies. In addition, we provide research and consultation services to civic, philanthropic, business and community organizations who are working to serve older adults. By working with organizations and individuals who work with the aging population, CAC seeks to improve the quality of life for older adults across Indiana and beyond.

For more information about the University of Indianapolis Center for Aging & Community and its current efforts, or to request additional copies of this report, please contact Amy Magan, Communications Manager:

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REPORT HIGHLIGHTS

The following are the key successes of the Tennessee Regional Healthcare Quality Improvement Collaboratives (TNRC) Initiative. Each is discussed in further detail in following sections.

- Five Regional Collaboratives were formed across the state of Tennessee (TN), bringing together long term care (LTC) facilities and community organizations to complete two quality improvement projects
- Collaboratives refined the CMS Quality Assurance Performance Improvement (QAPI) process and worked with their members to fully implement the model, completing two Performance Improvement Projects (PIPs), one as a group and one statewide
- PIP 1- Collaboratives covered 53 of 95 counties in TN (55% of the state)
- PIP 2- Statewide Collaborative efforts reached 60 of 95 counties in TN (63% of the state)
- PIP projects addressed reducing sepsis; urinary tract infections (UTIs); hospital readmissions due to pneumonia and respiratory failure; reducing respiratory infections; and COVID-19 rates of infection (PIP 1 and 2 focus)
- Collaborative PIP 1 outcomes included:
    - **Methodist North Hospital Skilled Nursing Facility Collaborative** aimed to improve early recognition of sepsis, successfully in decreasing sepsis 30-day readmissions.
    - **Readmission Connection Collaborative (West TN Healthcare)** reduced rates of catheter-associated unitary tract infections.
    - **Middle Tennessee Nursing Home Quality Improvement Collaborative (Qsource)** addressed reducing COVID-19 rates and were able to hold rates consistently low during the months of July through October (2020).
    - **Southeast Regional Health Collaborative (Hospice of Chattagnooga/Alleo Health)** experienced rapid decline of Collaborative participation, due to COVID-19, impeding the ability to gather and analyze project-related data to determine successful PIP 1 outcomes for reducing hospital readmissions due to pneumonia and respiratory failure.
    - **Northeast Tennessee Healthcare Quality Improvement Collaborative (ETSU)** progressively suffered from low attendance and participation, due to COVID-19, resulting in the inability to capture positive outcomes for reducing respiratory infections.
- Statewide Collaborative PIP 2 outcomes included:
    - Over 150 LTC facilities and community organizations
    - 19 COVID-19 weekly Q&A webinars were held from January – June (2021)

- Participating Collaborative buildings experienced a decline in rates of Resident Confirmed cases of COVID-19 and Resident COVID-19 related deaths.

TABLE OF CONTENTS

PROJECT OVERVIEW

In an effort to develop a statewide system of Regional Healthcare Quality Improvement Collaboratives that bring together Tennessee nursing facilities for quality improvement, the University of Indianapolis Center for Aging & Community (CAC) was contracted by the Tennessee Department of Health (TDH) to introduce in Tennessee an approach it created, implemented, and refined for several years in Indiana. During that time, CAC demonstrated skill and expertise in designing, implementing, and evaluating projects; developing collaborations and partnerships among key stakeholders; and committing to a system-wide approach to quality improvement that leads to transformational change.

Goals and Objectives

The initiative had two main project goals:

1. Establish successful, sustainable Regional Collaboratives that support QAPI efforts in LTC facilities.
2. Improve LTC quality indicators and measures for both quality of care and quality of life.

As a means to achieve these goals, the project had three main objectives:

1. Determine the feasibility of Regional Collaboratives as a means to encourage quality improvement;
    a. Assessing the effectiveness of the technical assistance provided by CAC
2. Assessing participation of Regional Collaborative nursing homes in the QAPI project model;
3. Determining the impact of various QAPI projects on LTC quality metrics and/or resident health outcomes; and
4. Determining the impact of various QAPI projects on LTC costs.

Reporting Period

This report includes activities throughout the entirety of the project, March (2019) – June (2021).

INITIATIVE DESIGN

Project Team

The Tennessee Regional Healthcare Quality Improvement Collaboratives initiative was coordinated by the University of Indianapolis Center for Aging & Community (CAC). CAC Project Team members included:

Ellen Miller, PhD, PT – Executive Director
Ellen Burton, MPH, CHES – Senior Project Director
Lidia Dubicki, MS – Project Director
Kayleigh Adrian, MS – Project Director
Amy Magan, MS – Communications Manager/Project Director
Amy Marack, MPA – Business Manager

Vickie Harris, owner of QEC Partners, a Tennessee-based consulting firm, was engaged for this project to provide on-site and virtual subject matter expertise, particularly in areas of collaborative building and sustainability and engagement, as well as data collection, analysis, and usage.

Regional Collaborative Overview

In collaboration with TDH, CAC oversaw the development of five Regional Collaboratives across the state. Each of the Collaboratives included a lead organization, up to 20 nursing facilities, and other state and community organizations. The Regional Collaboratives were managed by a lead organization that was the official grantee and liaison with CAC. The Collaborative leaders learned the CMS QAPI process and supported the Collaborative in completing the process. Each Collaborative developed and implemented one QAPI project during the grant period, while working Collaboratively, with CAC, to align the statewide framework for the second project. The CAC Project Team worked with lead organizations to develop Collaborative membership; successfully engage and manage the Collaborative; learn about and teach the QAPI method as needed; and develop, implement, and evaluate both QAPI projects. These projects are addressed fully in the section below. Additionally, a Collaborative map can be found in *Appendix A.*

QAPI Project Overview

During the course of the grant, each Regional Collaborative designed, implemented and reported one healthcare associated infection (HAI) QAPI PIP. This included laying the QAPI

foundation through education and culture change in participating organizations, an assessment of available data to identify areas for improvement, asset and resource mapping to determine ability to address identified issues, development of the QAPI project timeline, implementation of the project, and evaluation of process and health outcomes. COVID-19 presented significant challenges with recruitment and engagement for the Collaboratives, therefore, PIP 2 was realigned as a statewide approach, focused on reducing COVID-19 rates of infection.

Technical Assistance Overview

CAC provided extensive technical assistance for Collaboratives throughout the duration of the project. Technical assistance was provided in various ways, including monthly phone calls, as needed webinars, monthly Collaborative meetings, and Collaborative leadership meetings. Topics included collaborative building; stakeholder engagement; needs assessment; the QAPI process; project design and implementation; and data use, analysis, and evaluation.

Technical Assistance Before COVID-19:

Technical assistance was provided in-person, via phone, and electronically. An in-person kickoff meeting occurred to bring together the leadership team and equip them with necessary skills and training to effectively lead a Collaborative through the QAPI PIP process. Project Director Kayleigh Adrian, and TN Subject Matter Expert Vickie Harris held monthly phone calls with the leadership of each Collaborative to address any identified challenges and assist in the planning and preparation of next steps (action items) during the planning, implementation, and evaluation phases of PIP 1. Additionally, Vickie Harris provided as needed on-site technical support during Collaborative meetings.

Technical Assistance After COVID-19:

CAC worked diligently to provide the Collaboratives with support during the outbreak of COVID-19. As in-person Collaborative gatherings halted, the technical support provided to the Collaborative leads shifted to virtual/electronic by June 2020. Monthly Zoom touch base meetings were held with CAC and the Collaborative leads. Additionally, CAC and Vickie Harris joined virtual Collaborative meetings as needed to provide subject matter expertise and/or QAPI support. Collaborative lead all-team meetings were also held virtually. Through the vast challenges COVID-19 presented, CAC continued working with Collaboratives throughout the duration of the contract to identify and address the ever-changing technical assistance needs. The realignment of PIP 2 allowed CAC to host weekly COVID-19 rapid response/Q&A meetings to provide real-time support and

guidance to Tennessee LTC facilities and community partners working to respond to and contain the outbreak of pandemic in the state.

REGIONAL COLLABORATIVES – PIP #1

The Tennessee Regional Collaboratives initiative began in March (2019). CAC actively searched for Collaborative lead agencies to join CAC in forming the five Regional Collaborative across the state of Tennessee. Three out of the five Collaborative lead agencies (Methodist North Hospital, Hospice of Chattanooga/Alleo Health, and East TN State University School of Public Health) were selected by October (2019) and CAC hosted the first TNRC Kickoff Meeting. After the Kickoff meeting, lead agencies went back to build their Collaboratives, aiming to bring together at least 20 LTC facilities, plus community partners. By the end of (2019), most of the Collaboratives were well on their way to launching PIP 1 by February (2020).

The two remaining Collaborative lead agencies (West Tennessee Healthcare and Qsource) were added to the initiative in January (2020). CAC held an in-person mini kickoff experience for these agencies to ensure they received the same level of support and technical guidance as the three original Collaboratives. All Collaboratives were off to a positive start in the early months of (2020), however the unanticipated events related to COVID-19 created many unforeseen barriers for the Collaboratives as they navigated PIP 1. As a result, CAC requested and received a six month no-cost project extension, beginning in June (2020). The extension was necessary due to the difficulty all five lead agencies were experiencing in regards to Collaborative participation and engagement. As the LTC industry in Tennessee (and across the country) necessarily shifted focus to the prevention of and treatment for COVID-19 in their facilities, the momentum of the initiative was lost and therefore CAC, working with SME Vicki Harris and the Collaborative leads, devised a modified timeline for the project to be executed through the no-cost extension. The updated no-cost extension timeline is included in *Table 1* below.

Table 1- Updated Six Months No-Cost Extension Project Timeline

	2020							2021					
Month	6	7	8	9	10	11	12	1	2	3	4	5	6
Collaborative building/sustaining													
Performance Improvement Project 1 (HAI related)													
Project finalization and re-initialization													
Project implementation													
Performance Improvement Project 2													
Project planning and initialization													
Project implementation													
Project reporting and data analysis													

All Collaboratives worked from March until December (2020), in varying QAPI phases, to achieve the anticipated successes of PIP 1. A detailed description of PIP 1 for each Collaborative can be found in further in this section. *Table 2* below highlights PIP 1 topics and interventions specific to each Collaborative. Additionally, a list of participating Collaborative members for PIP 1 can be found in *Appendix B.*

Table 2- Collaborative PIP 1 Topics and Interventions

Collaborative	PIP 1 Topic	Interventions
Methodist North Hospital Skilled Nursing Facility Collaborative	Early recognition of sepsis to reduce rate of occurrences	• Educational videos • Pre and post sepsis education survey, • Sepsis championship for nursing staff, • Sepsis infomercial
Readmission Connection Collaborative (West TN)	Reduce rates of urinary tract infections	• 3-day UTI reduction protocol based on McGeers criteria • Education and info sent to families • Education and bulletin boards placed in common areas in SNFs • Family education sessions

		• Knowledge assessments for families
Middle Tennessee Nursing Home Quality Improvement Collaborative	Reduce rates of COVID-19	• Screening of staff entering the building • Outside agencies providing a list of negative test results before entering the building • Performing COVID-19 tests on every resident admitted • Quarantining all new admissions for 14 days • Requiring every staff member to wear N95 masks at all times
Southeast Regional Health Collaborative (Hospice of Chattanooga/Alleo Health)	Reduce hospital readmission due to respiratory infections	• Risk stratification of new admissions • Improved oral care and hand washing practices
Northeast TN Healthcare Quality Improvement Collaborative (ETSU)	Reduce respiratory infections	• Staff, resident, and family education • Educational materials posted throughout buildings • Surveys, inventory logs, and meetings to assess capacity, personnel, training, and resource availability

METHODIST NORTH HOSPITAL SKILLED NURSING FACILITY COLLABORATIVE

Methodist North Hospital Skilled Nursing Facility Collaborative is led by Methodist North Hospital. In PIP 1, the Collaborative aimed to improve early recognition and identification of sepsis. Eighty percent of sepsis deaths can be prevented with rapid diagnosis and treatment. Early sepsis identification can reduce hospitalization, readmission, and improve health and well-being for LTC residents. Living in LTC leads to an increased risk of infection, which could lead to sepsis.[i] Sepsis is the third leading cause of death in the United States. Early detection provides the best chance for survival and recovery.[ii] Additionally, early recognition of sepsis, with prompt treatment leads to better resident outcomes and lower healthcare-associated costs.

PIP 1 intervention implementation and data collection phases ran from March (2020) until November (2020). Interventions for PIP 1 included various educational components (badge-buddies, posters, pamphlets, pocket-guides, educational videos, pre-and-post sepsis education surveys). Additional educational materials developed and implemented consisted of a Sepsis Champion education class; a data collection tool that informed the user about signs and symptoms of sepsis as information was entered; the development of the Sepsis Academy Curriculum; as well as a Sepsis infomercial as a quick and efficient tool to educate audiences in a condensed manner.

Though this Collaborative struggled with sustaining Collaborative participation and data submission, they were successful in decreasing Sepsis 30-day readmissions. The economic consequences of sepsis nationally are significant. A recent study (2019), examined more than one million index admissions and found that annual sepsis cost was estimated at more than $23.3 billion dollars. The average cost per sepsis readmission within 30 days of discharge was $16,852.[iii]

One final achievement from this Collaborative is the winning of the Silver Telly Award (2021) for their innovation on the development of the Sepsis Infomercial by Methodist North Hospital. The Telly Awards honor excellence in video and television across all screens.[iv] This achievement was rightfully earned as their enthusiasm to creative education was apparent. To view more about the award, visit the Telly Awards webpage.

READMISSION CONNECTION COLLABORATIVE

Readmission Connection Collaborative is led by West Tennessee Healthcare/Jackson-Madison General Hospital. In PIP 1, the Collaborative aimed to reduced rates of unitary tract infections (UTIs) in LTC residents. Urinary tract infections are the second most frequent infection in the long-term care (LTC) facilities and the most common cause of hospitalization for bacterial infection. In addition, UTIs are the most common cause of nursing-home acquired bacteremia, and account for one-third of hospitalized LTC patients.[v] Both UTIs and asymptomatic bacteriuria are common in older adults, and often prove to be significant challenges for providers. Unfortunately, the overutilization of antibiotics for "suspected" UTI is leading to the development of multidrug-resistant organisms.[vi]

This Collaborative was formed from a smaller community coalition group that was already taking place so most of the Collaborative members were already actively engaged from the start. Intervention implementation and data collection were set to begin September (2020) and continue until December (2020). Tracked interventions included a 3-day UTI reduction protocol based on McGeers criteria; education and informational letters sent to families; education and data bulletin boards placed in common areas in the skilled nursing facilities; family education sessions; and pre-knowledge assessment for families and staff education.

Much like other Collaboratives, the biggest challenge was maintaining attendance and participation. Competing participant priorities, inability for in-person meetings, and challenges with getting intervention items to Collaborative participants were all significant COVID-19 related barriers to PIP 1. The lack of Collaborative participation led to a lack of project-related data to analyze, making the determination of successful PIP 1 outcomes difficult. Urinary tract infection rates increased, likely due to the rapid spread of COVID-19 in LTC. Additional barriers, such as staffing inconsistencies and unforeseen challenges due to COVID-19, compromised the outcomes of this PIP as well.

Though their primary aim of reducing resident rates of UTIs was not as successful as hoped, the Collaborative was successful at reducing their secondary metric of decreasing rates of catheter-associated urinary tract infections (CAUTIs). The Collaborative was able to decrease rates of CAUTI in participating LTC facilities, which is certainly a successful achievement. According to a published article in 2018, the average cost of CAUTI treatment in LTC is estimated to be $1,745 dollars (per episode), hospitalizations for a CAUTI is around $13,554 dollars (per episode), and the cost of septicemia (which often occurs due to UTIs) is reported to be $19,914 (per episode).[vii]

MIDDLE TENNESSEE NURSING HOME QUALITY IMPROVEMENT COLLABORATIVE

Middle Tennessee Nursing Home Quality Improvement Collaborative is led by Qsource. Due to securing a lead agency to support the Collaborative efforts in Middle Tennessee later than anticipated, PIP 1 for this Collaborative began during the early emergence of COVID-19 in Tennessee. As a result, the Collaborative aimed to reduce COVID-19 rates in LTC. As the public health crisis bombarded LTC facilities, leading to poor health outcomes and even death, closing gaps in infection control practices was essential to preventing the spread of COVID-19 in LTC.

PIP 1 Collaborative building began in March (2020) but ultimately faced a delay in gaining Collaborative member support for implementing a data-collecting PIP. To sustain and support Collaborative engagement during the critical time of COVID-19 outbreaks in LTC, this Collaborative temporarily shifted focus and became a guiding resource for their participating members. Qsource, along with TN QIN-QIO, Alliant Health Solutions provided regular meetings to Collaborative members to provide technical support and updated COVID-19 regulations and guidance.

Though real-time interventions implementation for the Middle Tennessee Collaborative began in September (2020) and continued until December (2020), data was gathered retrospectively from May through August (2020). Tracked interventions included improving screening of staff entering the building, requiring outside agencies to provide a list of their employees' negative test results before building entry, performing COVID-19 tests on every resident admitted, quarantining all new admissions for 14 days, and requiring every staff member to wear N95 masks at all times. The Collaborative looked at National Healthcare Safety Network (NHSN) data points, suspected cases of COVID-19, confirmed cases of COVID-19, and COVID-19 related deaths. Data trends remained consistently low during the months of July through October (2020), even though real-time data tracking didn't take place until September (2020). As the end of PIP 1 grew closer toward the end of the reporting period (October-December), COVID-19 rates in participating LTC climbed, correlating with the increased spread of COVID-19 infections within the community. The regional increase rate of COVID-19 infections is likely due to the increased gatherings during the holiday season.

As mentioned, the success of holding consistently lower rates from July-October (2020) is certainly an accomplishment. In retrospect, after experiencing the climb in LTC COVID-19 rates, the Collaborative suggested the tracking of community rates in correlation with LTC rates to track local trends and predictions as a lesson learned from this project.

SOUTHEAST REGIONAL HEALTH COLLABORATIVE

Southeast Regional Health Collaborative is led by Hospice of Chattanooga/Alleo Health. In PIP 1, the Collaborative aimed to reduce the number of hospital readmissions for pneumonia and/or respiratory distress for LTC residents. Other than childbirth, pneumonia is the number one cause for hospital admissions.[viii] Older adults have a higher risk of getting pneumonia and dying from the infection.[ix] Additionally, pneumonia is the most common cause of sepsis and septic shock, causing 50% of all episodes. An evaluation of reporting institutions in the Greater Chattanooga area showed that pneumonia/respiratory distress was the single most common reason for readmission.

Due to COVID-19 also having a major impact on pneumonia and respiratory infections LTC residents, the Collaborative narrowed the scope of PIP1 and determined the following interventions: risk stratification of new admissions improved oral care for residents, and improved hand washing practices throughout participating facilities. Data collection was set to begin in April (2020). Unfortunately, this timeline coincided with the worsening of COVID-19, resulting in a rapid decline of Collaborative participation. The Collaborative spent the remaining months trying to build Collaborative participation to begin intervention implementation and data collection. The lost momentum led to the inability to gather and analyze project-related data to determine successful PIP 1 outcomes.

NORTHEAST TENNESSEE HEALTHCARE QUALITY IMPROVEMENT COLLABORATIVE

Northeast Tennessee Healthcare Quality Improvement Collaborative is led by East Tennessee State University College of Public Health. In PIP 1, the Collaborative aimed to reduce the incidences of infection, primarily respiratory infections, which can lead to reduced quality of life and even death in LTC residents. Additionally, respiratory infections serve as a significant burden on the healthcare system, as well as on the Centers for Medicare & Medicaid Services (CMS) Quality Measures within LTC. Most importantly, reducing respiratory infections is crucial for the health and wellbeing of Tennesseans, particularly the older adult population, as risks for complications and co-morbidities climb.

Due to Northeast Tennessee having higher than average incidences of chronic obstructive pulmonary disease (COPD as a result of the rate of individuals within the area who actively smoke, this Collaborative aimed to address this challenge. Data collection began on April (2020) and ran until July (2020), which included the efforts of staff, residents, and families within participating Collaborative buildings. Interventions included staff, resident, and family education and educational materials (handwashing, infection prevention practices) posted throughout the buildings. Additionally, surveys, inventory logs, and meetings were used to assess capacity, personnel, training, and resource availability.

Despite the momentum during the planning and implementation phases of PIP 1, this Collaborative progressively suffered from low attendance and participation asCOVID-19 worsened. The lack of Collaborative participation and data reporting resulted in the inability to capture positive outcomes for reducing respiratory infections. Significant barriers included inadequate education around benefits of project implementation; lack of staff resources available during the pandemic and competing staff priorities due to COVID-19. Though PIP 1 did not go as planned, a noteworthy success is the emphasis on shared efforts and resources within LTC and community that was created by the regional framework of the Collaborative.

REGIONAL COLLABORATIVES – PIP #2

As PIP 1 ended (December 2020), the impacts of COVID-19 on the success of the project were significant. CAC continued to provide technical assistance to the Collaborative leads as they navigated the challenging circumstances caused by the pandemic. CAC, along with the Collaborative leads, determined that continuing PIP 2 along the same path of PIP 1 would lead to the same challenges of member recruitment and participation. The unrelenting demands of keeping nursing home residents safe from COVID-19 tremendously impacted the amount of time and attention Collaborative members could devote to the TNRC Project.

To determine how best to support the Collaborative members and to fulfill the quality improvement outcomes of this project, CAC engaged in discussion with Vickie Harris (QEC Partners), Julie Clark (Alliant Health) and with our own project team to design a realignment of PIP #2. The project team felt strongly that a PIP 2 realignment could allow nursing homes to continue their focus on preventing the spread of COVID-19, while receiving support and resources to help them with the current realities of their day-to-day responsibilities.

CAC, along with the support of the Collaborative leads, proposed a cross-collaborative approach for PIP 2, to provide Collaborative members with timely and relevant resources about COVID-19 reporting, regulations and clinical best practices, along with just-in-time individualized support. CAC felt strongly that this approach would improve project participation and allow for re-engagement of once-participating nursing homes whose participation had fallen off due the demands of pandemic. Secondly, the realignment would support other statewide efforts to curtail the spread of COVID-19 in Tennessee long term care facilities.

The realignment of a centralized PIP 2 allowed the opportunity to provide 60-minute weekly Question & Answer (Q&A) formatted webinars, led by an infection prevention COVID-19 nurse specialist and Tennessee Quality Innovation Network-Quality Improvement Organization (QIN-QIO), Alliant Health. These weekly meetings provided an opportunity to focus on the urgent challenges in LTC and were open to any LTC facility in Tennessee, not just those who had participated in one of the five Collaboratives. The webinars were recorded for later viewing for those who could not join in real time. Additionally, facilities that had previously been participating Collaborative members had the opportunity to receive “just-in-time” service, allowing giving these buildings access to the clinical nurse specialist for specific, building-related questions or concerns. Also, the realignment allowed for a centralized data collection process by which CAC accessed available National healthcare Safety Network (NHSN) data to eliminate the burden of data reporting from the Collaborative members.

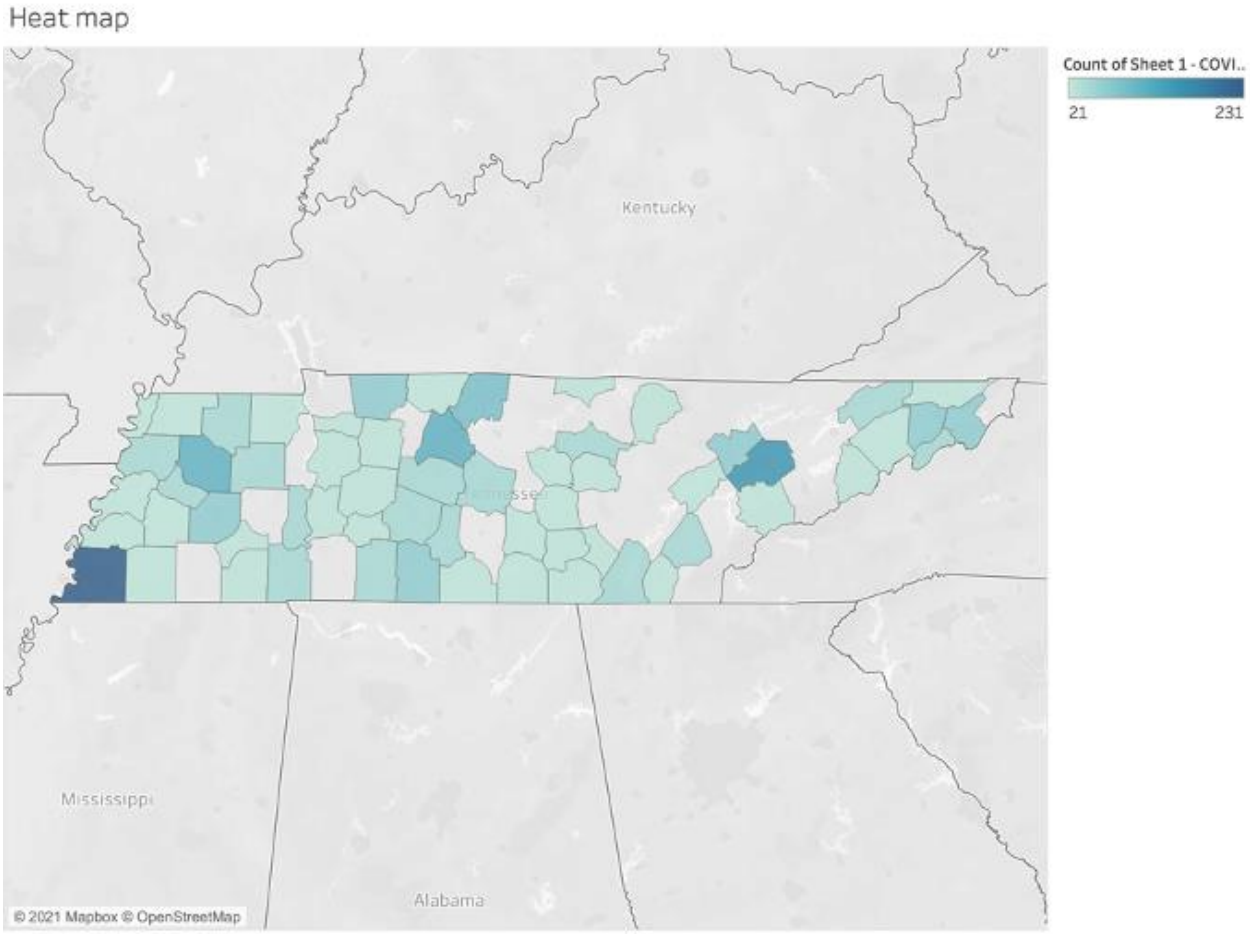
The opportunity provided participating LTC facilities with timely information related to COVID-19 clinical best practices, guidance, and support. The participation of the QIN-QIO was also crucial as Julie Clark stayed abreast of current federal and local COVID-19 updates, and helped with QAPI support during and after the sessions. Topics covered during these sessions included, vaccine FAQs; ways to decrease vaccine hesitancy; directed plan of correction and root cause analysis assistance; case study review; strengthening infection prevention in long term care; preparing for safe family visitation; effective leadership in a time of crisis; as well as preparing for the resumption of state surveys in the time of COVID-19.

PIP 2 was successful in increasing Collaborative participation, reaching nearly 160 various Tennessee organizations. Fifty-five percent (55%) of those attending was from LTC facilities, with the remaining 45% coming from various TN support organizations. A list of all participating organizations can be found in *Appendix C*. A breakdown of percentage of PIP 2 Collaborative members can be found in *Table 3* below. Additionally, *Figure 1* shows the geographic participation coverage PIP 2 reached in throughout the state. Note that *Figure 1* is a heat map, which grows darker, representing more participating members.

Table 3- Breakdown of PIP 2 Collaborative Participation Members

Regional Collaborative Affiliation	Count
Methodist North Hospital Skilled Nursing Facility Collaborative	14
Readmission Connections	19
Middle Tennessee Quality Improvement Collaborative	12
Southeast Tennessee Regional Health Collaborative	44
Northeast Tennessee Healthcare Quality Improvement Collaborative	19
None	9
Grand Total	**159**

Figure 1- PIP 2 Statewide Geographic Coverage



Upon the conclusion of PIP 2, CAC is pleased to report that 100% of Q&A weekly webinar attendees found all topics relevant, gained practical knowledge, as well as presented opportunities to improve quality of care for LTC residents. Also, CAC discovered participating LTC facilities showed a significant decline in rates of Resident Confirmed cases of COVID-19 and Resident COVID-19 related death. Although these findings coincide with COVID-19 vaccine distribution, results for PIP 2 consistently outperform the state average, indicating a direct benefit of participation in the project.

CAC also assessed the following:

- Average weekly COVID-19 cases and deaths before and after the implementation of PIP 2. *(Figure 2*)
- Average weekly staff COVID-19 cases and deaths the implementation of PIP 2. (*Figure 3*)

- Average number of residents and staff with a new positive COVID-19 test result the implementation of PIP 2. (*Figure 4*)

Note: CAC categorized the findings between members who previously participated in PIP 1 and those who were new to joining PIP 2 to see if there were any differences between a longer duration in Collaborative participation. Findings indicated active participating LTC facilities consistently outperformed those who did not.

Figure 2- Average Resident COVID-19 Cases and Deaths Before and After PIP 2

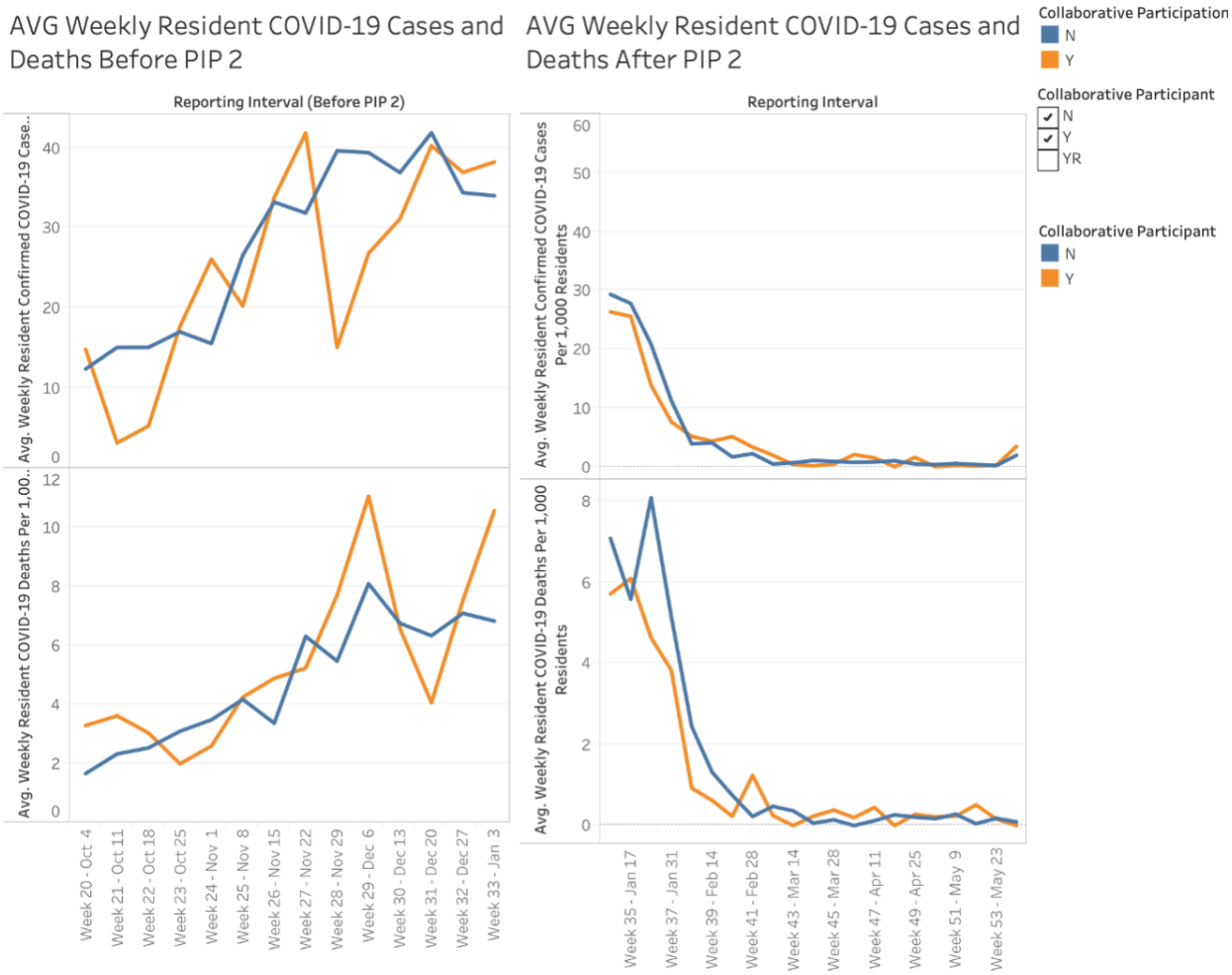


Figure 3- Average Staff COVID-19 Cases and Deaths Before and After PIP 2

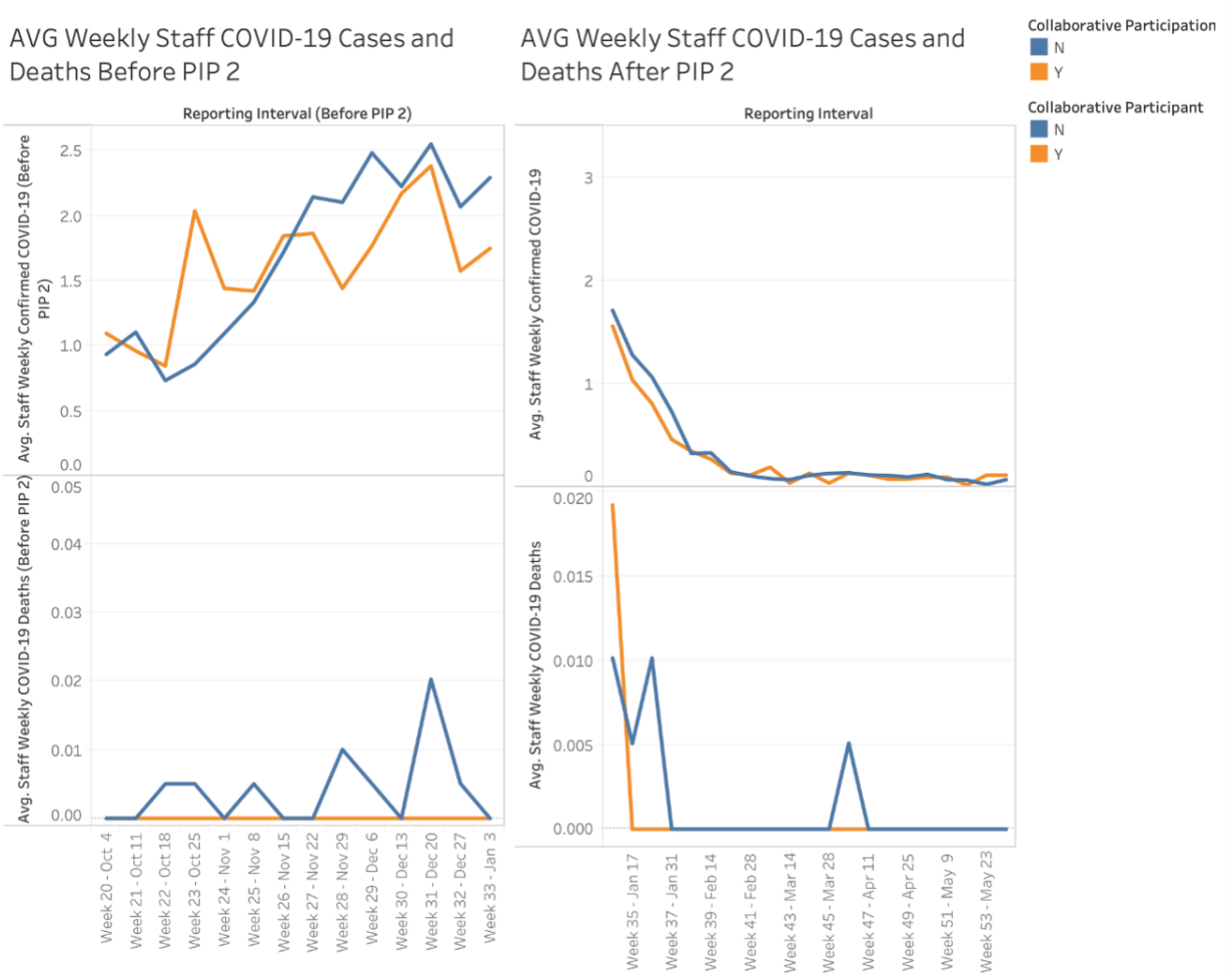
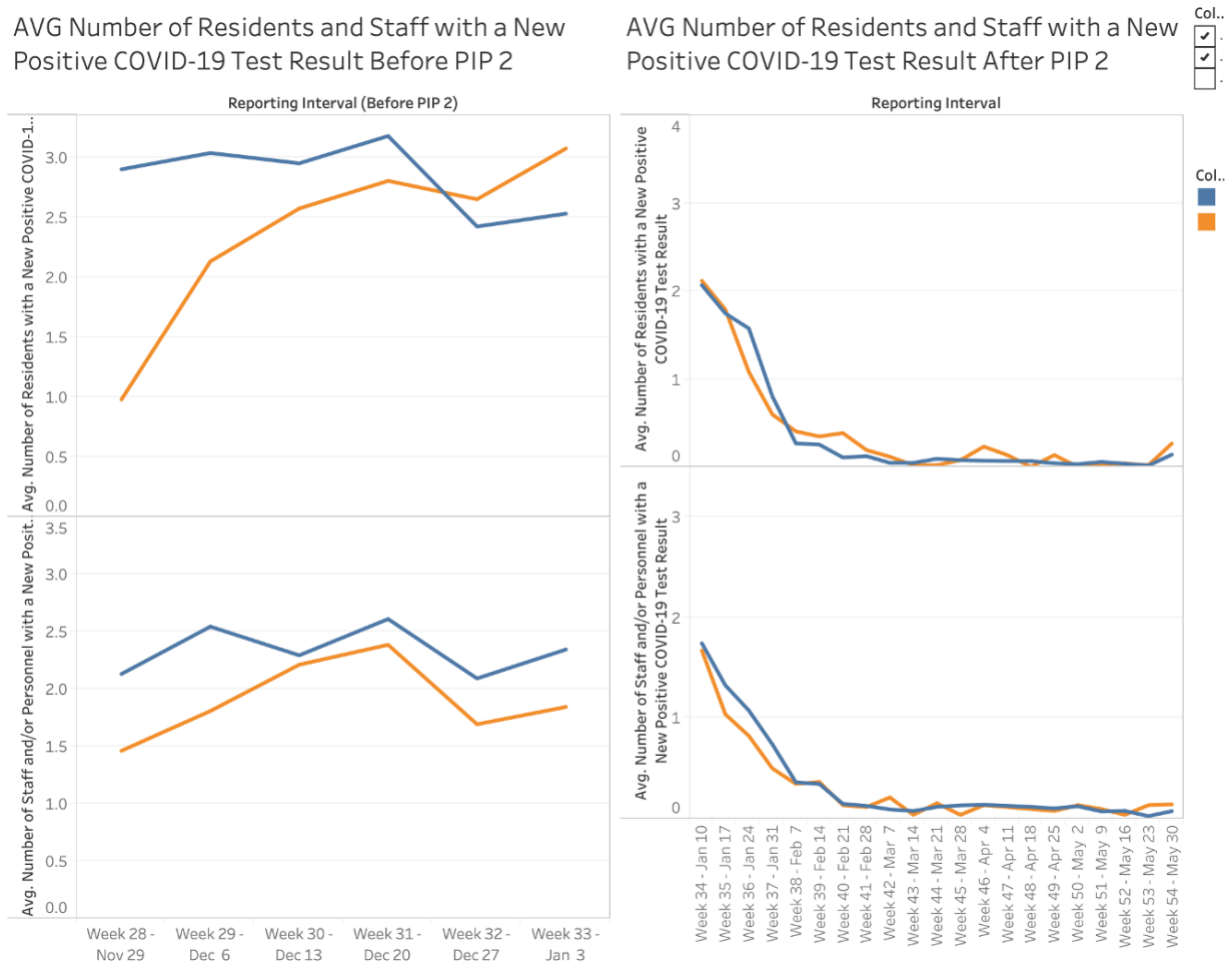

AVG Weekly Staff COVID-19 Cases and Deaths Before PIP 2
Reporting Interval (Before PIP 2)
Avg. Staff Weekly Confirmed COVID-19 (Before PIP 2)
Avg. Staff Weekly COVID-19 Deaths (Before PIP 2)
Week 20 - Oct 4
Week 21 - Oct 11
Week 22 - Oct 18
Week 23 - Oct 25
Week 24 - Nov 1
Week 25 - Nov 8
Week 26 - Nov 15
Week 27 - Nov 22
Week 28 - Nov 29
Week 29 - Dec 6
Week 30 - Dec 13
Week 31 - Dec 20
Week 32 - Dec 27
Week 33 - Jan 3
AVG Weekly Staff COVID-19 Cases and Deaths After PIP 2
Reporting Interval
Avg. Staff Weekly Confirmed COVID-19
Avg. Staff Weekly COVID-19 Deaths
Week 35 - Jan 17
Week 37 - Jan 31
Week 39 - Feb 14
Week 41 - Feb 28
Week 43 - Mar 14
Week 45 - Mar 28
Week 47 - Apr 11
Week 49 - Apr 25
Week 51 - May 9
Week 53 - May 23
Collaborative Participation
N
Y
Collaborative Participant
N
Y

Figure 4- Average Number of Residents and Staff with a New Positive COVID-19 Test Result Before and After PIP 2



EVALUATION

Evaluation for this project focuses on the initiative's two key goals:

1. Establish successful, sustainable Regional Collaboratives that support QAPI efforts in LTC facilities.
2. Improve LTC quality indicators and measures for both quality of care and quality of life.

CAC is pleased with the success of creating five Regional Collaboratives throughout the state of Tennessee. Despite the outbreak of COVID-19, leading to a six-month, no-cost project extension, and a statewide Collaborative realignment for PIP 2, three out of five of the Collaboratives showed improvements in the quality indicators selected for PIP 1. Likewise, quality indicators for PIP 2 were successful, indicating a correlational relationship with LTC facilities who participated in PIP 2 and the decline in COVID-19 confirmed cases and deaths. Given the circumstances, CAC's ability to to collect and analyze project-related data was drastically impacted by the constraints of COVID-19, thus the project's successes are somewhat anecdotal in nature. Many lessons were learned and the adaptability formed during the duration of this initiative will be critical in sustaining future Collaborative participation and momentum.

APPENDICIES

APPENDIX A: REGIONAL COLLABORATIVE MAP

State of Tennessee
Regional Healthcare Quality Improvement Collaboratives

Methodist North Hospital Skilled Nursing Facility Collaborative
Lead Organization: Methodist North Hospital
Lead Contact: Sandra Freeman, sandra.freeman@mlh.org **Counties**: Crockett, Dyer, Fayette, Haywood, Lauderdale, Shelby, and Tipton

Readmission Connection Collaborative
Lead Organization: West TN Healthcare/Jackson-Madison General Hospital **Lead Contact**: Audrey Trammell, audrey.trammell@wth.org **Counties**: Benton, Carroll, Chester, Crockett, Decatur, Dyer, Fayette, Gibson, Hardeman, Hardin, Haywood, Henderson, Henry, Lake, Lauderdale, McNairy, Madison, Obion, Tipton, and Weakley

Middle Tennessee Nursing Home Quality Improvement Collaborative
Lead Organization: Qsource
Lead Contact: Sarah Sutherland, ssutherland@qsource.org **Counties**: Cheatham, Davidson, Hickman, Maury, Robertson, Rutherford, Sumner, Wilson, and Williamson

Southeast Tennessee Regional Collaborative
Lead Organization: Alleo Health/Hospice of Chattanooga
Lead Contact: Greg Phelps, greg_phelps@hospiceofchattanooga.org **Counties**: Bradley, Bledsoe, Grundy, Marion, McMinn, Meigs, Polk, Rhea, and Sequatchie

Northeast Tennessee Healthcare Quality Improvement Collaborative
Lead Organization: East TN State University/ College of Public Health **Lead Contact**: Virginia Kidwell, kidwell@mail.etsu.edu
Counties: Carter, Claiborne, Cocke, Grainger, Green, Hancock, Hamblen, Hawkins, Johnson, Sullivan, Unicoi, and Washington

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APPENDIX B: PIP #1 COLLABORATIVE PARTICIPANTS

Methodist North Hospital Skilled Nursing Facility Collaborative	**Readmission Connection Collaborative (West TN)**	**Middle Tennessee Regional Nursing Home Collaborative**	**Southeast Tennessee Regional Health Collaborative**	**Northeast Tennessee Healthcare Quality Improvement Collaborative**
The Kings Daughters and Sons	Adamsville Healthcare	Cumberland Health Care and Rehab	Hearth Hospice	Signature Healthcare of Elizabethton
AHC Applingwood	Ahava Healthcare	NHC Place Sumner	Health Care at Standifer Place	Signature Healthcare of Greenville
Memphis Jewish Home	AHC	Signature Portland	NHC Sequatchie	Greystone Healthcare Center-Blountville
Signature Healthcare of Memphis	AHC Decatur County	Westmoreland Care & Rehab	Life Care of Red Bank	The Waters of Roan Highlands
Allen Morgan Health and Rehab Center	AHC Dyersburg	Sumner Regional Med	Southeast TN AAAD	Christian Care Center of Unicoi County
Bright Glade Convalescent Ctr	AHC Humboldt	Alliant Health Care Solutions	Hospice of Chattanooga/Alleo Health	Lakebridge- A Waters Community
Harborview Nursing and Rehab	AHC McKenzie	Gallatin HC Center	QEC Partners	Ivy Hall Nursing Home
Majestic Gardens	AHC McNairy County	NHC Dickson	CHI Memorial	NHC- Kingsport
Millington Healthcare Center	AHC Northbrooke	QSource	Life Care Center of Hixson	Signature Healthcare of Rogersville

Galloway Health and Rehab	AHC Savannah	Grace Whites Creek	Laurelbrook	Holston Manor- Kingsport
NHC Healthcare, Somerville	AHC VanAyer	NHC Hendersonville	Woodland Terrance	Erwin Healthcare
Crestview Health Care Center	Bailey Park	QEC Partners	Grace Healthcare of Decatur	Christian Care Center of Bristol
Midtown Health and Rehab	Briarwood CLC	Lebanon Center for Rehab and Healing	Alliant	Asbusry Place- Kingsport
Spring Gate Rehab & Healthcare Center	Community Eldercare Services	Quality Center Rehab	NHC Athens	Hermitage Healthcare
Grace Healthcare of Cordova/Cordova Health and Wellness	Diversicare- Martin	Waters of Gallatin	Ascension	TN AAAD
Magnolia Creek	Hillview CLC	Silversolutions	LPNT	Ballad Health
Collierville H&R	Lauderdale CLC	Hendersonville Medical Ctr	Life Care of Red Bank	QEC Partners
St. Claire Health and Rehab	Laurelwood	TDH	Alexian Village	Cornerstone Village
	Maplewood	ACH Cumberland	St. Barnabas (Siskin)	Wexford House
The Kings Daughters and Sons	Oakwood CLC	Bethany Center Rehab		Orchardview Nursing Home
AHC Applingwood	Ripley Healthcare	Whitehouse Health Care		TN Institute of Public Health
Memphis Jewish Home	QEC	Nashville Center for Rehab		ETSU College of Public Health
Signature Healthcare of Memphis	Alliant	Quality Center Rehab		Alliant Health

Allen Morgan Health and Rehab Center	AHC Union City	Signature Madison		Washington County Health Dept.
Bright Glade Convalescent Ctr	Trenton Healthcare	Skyline Hospital		TDH
	AHC Lexington	AHC Bethesda/Clarksville/Cumberland/Mt. Juliet		Hensley- Durham Health and Rehabilitation
	Signature Healthcare Ridgely	Wilson Manor		
	Abilis Health			
	Humboldt Nursing and Rehab			
	AHC Westwood			
	Reelfoot Manor			
	Obion County Nursing Home			
	Henderson Health and Rehab			

APPENDIX C: PIP #2 COLLABORATIVE PARTICIPANTS

See Attached Excel Spreadsheet

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