



The Pennsylvania Rural Health Model (PARHM) First Annual Report

Presented to:

Elvedin Bijelic
Center for Medicare & Medicaid Innovation
Centers for Medicare & Medicaid Services
7500 Security Boulevard
Baltimore, MD 21244

Presented by:

Alana Knudson
Project Director
NORC at the University of Chicago
4350 East-West Hwy, Suite 800
Bethesda, MD 20814
301-634-9488

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Contributors

This report reflects the contributions of the entire PARHM Evaluation Team, including the following individuals:

Tyler Bysshe
Meghana Chandra
Karen Diep
Erin Ewald
Diane Farley (Penn State University's Center for Health Care and Policy Research)
Michael Head (IBM Watson Health)
Rachel Henke (IBM Watson Health)
Aleena Imran
Jessica Kasten (IBM Watson Health)
Alana Knudson
Daniel Krauss
Sai Loganathan
Ryan Murphy
Shena Popat
Bethany Shaw (Penn State University's Center for Health Care and Policy Research)
Jenna Sirkin
Michelle Spafford
Laura Wolf (Penn State University's Center for Health Care and Policy Research)

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Acronyms

ACO	Accountable Care Organization
CAH	Critical access hospital
CARES	Coronavirus Aid, Relief, and Economic Security
CEO	Chief executive officer
CHC	Community HealthChoices
CHF	Congestive heart failure
CMMI	Center for Medicare & Medicaid Innovation
CMS	The Centers for Medicare and Medicaid Services
COPD	Chronic obstructive pulmonary disease
CY	Calendar year
DHS	Department of Human Services
DOH	Department of Health
D-SNP	Dual Eligible Special Needs Plan
ED	Emergency department
EHR	Electronic health record
FFS	Fee-for-service
FORHP	Federal Office of Rural Health Policy
FY	Fiscal year
GMCB	Green Mountain Care Board
HEDIS	Healthcare Effectiveness Data and Information Set
PSA	Health Professional Shortage Area
IT	Information technology
MLTSS	Managed long-term services and supports
NCQA	National Committee for Quality Assurance
ODD	Opioid use disorder
PA	Pennsylvania
PARHM	Pennsylvania Rural Health Model
PIDB	Projected Inpatient Database

PPS	Prospective payment system
PRAPARE	Protocol for Responding to and Assessing Patients' Assets, Risks, and Experiences
PSU	Pennsylvania State University
RHRCA	Rural Health Redesign Center Authority
RHRO	Rural Health Redesign Office
RQ	Research questions
RUPRI	Rural Policy Research Institute
SDOH	Social determinants of health
SNF	Skilled nursing facilities
SUD	Substance use disorders
TA	Technical assistance
TCOC	Total Cost of Care
UPMC	University of Pittsburgh Medical Center

Executive Summary

The Centers for Medicare & Medicaid Services (CMS) through the Center for Medicare & Medicaid Innovation (CMMI) designed the Pennsylvania Rural Health Model (PARHM) to test whether hospital global budgets can support care delivery transformation that improves population health outcomes, increases access to high-quality care, and improves the financial viability of rural Pennsylvania acute care hospitals.¹ Designed to reduce the risk of rural hospital closures, the Model seeks to stabilize participating hospitals' finances by providing a predictable revenue stream through global budgets. Global budgets are prospective, fixed payments given by participating payers to cover hospital services in participating hospitals. The PARHM also supports participating hospitals in identifying and implementing activities to transform care delivery by investing in prevention, quality improvement, and community-based services to achieve targets for population health outcomes^a and quality measures.²

Model Components

The Model has two key components designed to align incentives for participating hospitals to achieve the Model aims:

- **Hospital Global Budget Options:** (1) Participating payers provide a fixed amount at a specified frequency over the course of the year or (2) payers continue to pay fee-for-service (FFS) claims for care provided to enrollees and conduct monthly reconciliations to the monthly global budget amount or carry over overages to subsequent months
- **Hospital Transformation Plan:** The Model requires hospitals to develop and receive approval of a hospital transformation plan that specifies how the hospital will redesign care delivery.

The PARHM is a multi-payer initiative with participation from Medicare and commercial payers, including commercial payers' associated Medicaid managed care and Medicare Advantage plans. The Model has six performance years, with performance year 1 (PY1) beginning January 2019. In PY1, five hospitals joined the Model—two independent [critical access hospitals \(CAH\)](#), one system-owned CAH, one independent prospective payment system (PPS) hospital, and one system-owned PPS hospital.

CMMI within CMS contracted with NORC and our partners, Penn State University's Center for Health Care and Policy Research and IBM Watson Health, to conduct an independent

evaluation of the Model. The evaluation captures the implementation context, factors associated with implementation, and the Model's impact on care delivery and outcomes. The Model is designed to improve value-based payment reform and delivery system transformation in rural communities. For this evaluation, we use a mixed-methods approach involving both primary and secondary data sources to

^a Section 15 of the Third Amended and Restated Pennsylvania Rural Health Model State Agreement notes that the Commonwealth shall be responsible for attaining and maintaining the following three population health and access goals for the Commonwealth residents of Rural Counties: (1) increase access to primary and specialty services; (2) reduce deaths related to substance use disorder (SUD) and improve access to treatment for opioid abuse; and (3) reduce rural health disparities through improved chronic disease management and preventive screenings (focusing on cancer, cardiovascular disease and diabetes/obesity).

assess whether and how the Model's approach to global budgets and care delivery transformation achieves the intended goals of CMMI, the Commonwealth, and participating hospitals and payers.

This first annual report focuses on the implementation experience of participating hospitals in PY1 (2019)—Cohort 1 hospitals—and participating payers in PY1 (2019) and PY2 (2020). We also present key characteristics of Cohort 1 hospitals and descriptively assess their baseline financial performance and trends in Medicare spending and utilization before Model implementation. A key limitation of the analysis is the small number of participants (five Cohort 1 hospitals), which makes most comparisons to eligible nonparticipants or national or statewide benchmarks infeasible. There are also notable differences in the baseline financial performance and organizational characteristics of the Cohort 1 hospitals.

Model Design

The Model was built on previous innovation efforts in the Commonwealth to transform care delivery and develop new payment methodologies. In response to the closure of rural hospitals, the Commonwealth, led by the Department of Health (DOH), focused on developing a rural-specific model between 2015 and 2017. CMMI and the Commonwealth, acting through the DOH, entered into the PARHM State Agreement on January 13, 2017. Through the agreement with the Commonwealth, CMMI sets expectations for recruiting hospitals and payers to participate in the Model, calculating global budgets, developing hospital transformation plans, and monitoring quality of care. CMMI and the Commonwealth also sign participation agreements with individual hospitals that opt to participate in the Model.

Model Eligibility Criteria. Hospitals eligible to participate in the Model include all acute care hospitals, including CAHs, located in a rural county, as defined by the Center for Rural Pennsylvania. The definition of “rural county” used for the Model is more expansive than many federal rural definitions.

Global Budget Design. The global budget amount is based on historical net patient revenue for inpatient and outpatient hospital services for each participating payer. For commercial payers and Medicare FFS, net patient revenue is comprised of the insurance paid for services provided. For the Medicare FFS portion of the global budget, CMS makes biweekly payments equivalent to 1/26 of the approved Medicare FFS portion of each hospital's global budget. For CAHs, the Medicare FFS portion of the global budget is reconciled to cost-based reimbursement, as before the Model. Commercial payers continue to pay FFS claims and conduct monthly reconciliations (referred to as a virtual global budget). Participating rural hospitals develop hospital transformation plans to guide care delivery changes and propose service line changes.

Changes to the Model. CMMI and the Commonwealth refined the Model design during the pre-implementation period and PY1 (2019). CMMI allowed for additional adjustments to the Model in response to the COVID-19 pandemic in PY2 (2020), including allowing hospitals to join the Model in PY4 (2022), extending the hospital transformation plan deadline, reducing reporting requirements, and working with the Commonwealth to adjust the Medicare FFS portion of the global budgets to account for service disruptions related to COVID-19.

Key Model Stakeholders. The Pennsylvania DOH is the Commonwealth agency responsible for Model administration. Within the DOH, the Rural Health Redesign Office (RHRO) was created to stand-up the Model. Delays in the passage of state legislation to establish an independent Rural Health Redesign Center Authority (RHRCA) required the RHRO to operate the Model beyond the pre-implementation period and into PY2 (2020) until the RHRCA was established and operational functions transitioned. The RHRO engaged technical assistance providers, implementation contractors, and stakeholders to recruit hospitals, provides data analysis and research, guide development of hospital transformation plans, and provide education and resources for clinical transformation—all activities now overseen by the RHRCA.

At the time of the Model announcement (2017), 67 rural hospitals, including 15 CAHs, were eligible to participate in the Model. Five hospitals joined the Model for PY1 (2019), eight additional hospitals joined the Model for PY2 (2020), and five more hospitals joined the Model for PY3 (2021). To date, all participants remain the Model for PY3 (2021). Participating commercial payers include four Pennsylvania-based payers and one national insurer.

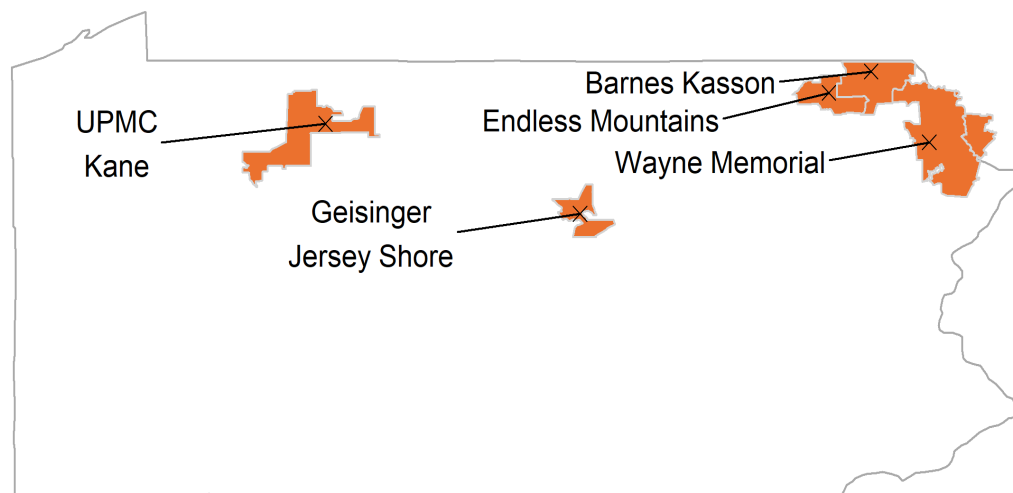
Model Participation

The Model is open to both CAHs and acute care hospitals paid under the Medicare inpatient and outpatient PPSs in rural areas of Pennsylvania, using The Center for Rural Pennsylvania's definition of a population density of less than 284 persons per square mile.³ This broad definition of rurality, which includes areas not federally designated as rural, may have implications for external generalizability.^b Of the five Cohort 1 hospitals, all except Geisinger Jersey Shore are in areas designated as rural by the Federal Office of Rural Health Policy, based on metropolitan designation and Rural-Urban Commuting Area Codes. As of 2018, the service areas of the five Cohort 1 hospitals had an estimated 89,180 residents, including 19,575 Medicare-eligible residents (**Exhibit ES.1**).^c

^b Per the 2019 PARHM State Agreement, CMS identified 67 hospitals in the Commonwealth (15 CAH, 52 PPS) as eligible for participation in PARHM. By comparison, only 40 hospitals (10 CAH, 30 PPS) would be eligible when considering the Federal Office of Rural Health Policy definition of rurality (2013 Rural-Urban Commuting Area Codes via USDA Economic Research Service).

^c Hospital service areas are defined using 2018 [Dartmouth Atlas data](#). Population data is from the 2018 5-year estimates of the American Community Survey.

Exhibit ES.1. Pennsylvania Hospital Service Areas for Cohort 1 Model Participants



Participating Hospitals. A variety of hospitals (small CAHs and larger PPS hospitals; system-owned and independent) participated in the Model's first year, indicating that this approach to payment and delivery reform has broad appeal. Five hospitals signed participation agreements in PY1 (2019)—two independent CAHs, one system-affiliated CAH, one independent PPS hospital, and one health system-owned PPS hospital. The small number of Cohort 1 hospitals (n=5) limits our ability to infer whether the broad appeal of this type of initiative will result in actual participation from a variety of eligible hospitals across the Commonwealth. In addition, the Commonwealth has not met its hospital participation scale targets.

Hospital Decision to Participate. Cohort 1 hospitals noted multiple motivating factors to participate in the Model. Building relationships and trust among CMMI, the Commonwealth, and hospitals were identified as an essential part of the application process. All hospitals valued the opportunity to transform care through the Model. Hospitals also reported that their decisions to participate in the Model were motivated in large part by potential short- and long-term financial benefits.

Participating Payers. An important design feature of the Model is the potential for all-payer participation (Medicare, Medicaid, and commercial), creating greater incentives and flexibility for hospitals to transform care delivery. All-payer participation is also important to fully realize the incentives of the Model's global budget system. The support of CMS is key to the Model's sustainability because of the large share of Medicare FFS discharges and their role in the Model's design and implementation. Due to high rates of Medicare Advantage and Medicaid managed care enrollment, commercial payers are also essential to attaining the Model's all-payer participation goals. Commercial payers were recruited based on historic market shares in areas where participating hospitals operate and include Geisinger, Highmark Blue Cross Blue Shield, University of Pittsburgh Medical Center, Aetna, and Gateway health plans.

Payer Decision to Participate. Commercial payers were motivated to join the Model by a desire to stabilize and sustain rural hospitals but expressed reservations about hospital eligibility, global budget methodology, and accountability for transformation. Commercial payer leadership expressed strong

buy-in and long-term commitment to the Model. They also appreciated the flexibility in deciding which participating hospitals they signed agreements with and the associated business and revenue lines.

Implementation Experience

In this report, we describe the implementation experience for Model stakeholders, including Commonwealth agencies and offices, as well as participating hospitals and payers. We interviewed leadership and staff from Cohort 1 hospitals, participating payers, and Model stakeholders including Commonwealth agencies and offices, the RHRO, and technical experts. Our interviews focused on activities and implementation experiences of hospitals and stakeholders to date (e.g., start of the Model to May-October of 2020). Therefore, Cohort 1 hospital and stakeholder primary data include their experiences implementing the Model during the COVID-19 pandemic (March-October 2020).

Stakeholder Perspectives. Stakeholders agreed that the RHRO in PY1 (2019) and PY2 (2020) was integral in supporting hospitals, encouraging Model participation, and understanding the needs of rural communities. While delayed, the establishment of the RHRCA in 2019 was vital for demonstrating the Commonwealth's continued commitment to the Model. The Commonwealth faced challenges recruiting hospitals due to limited staff capacity, hospital merger and acquisitions across the Commonwealth, and the Model being in the early implementation phase.

Technical Assistance and Implementation Support. The RHRO established an iterative working process with the participating hospitals and payers while developing hospital transformation plans and global budgets, including webinars, check-in-calls, and regular email correspondence with the leadership teams at each hospital and payer. Hospitals valued the resources from technical experts and provided positive feedback about the support they received in global budget development. However, hospitals also reported initial challenges with the intensive hospital transformation plan development process, meeting timeframes, and adapting to changing technical assistance teams during PY1 (2019). Technical experts provided targeted support to hospitals in both PY1 (2019) and PY2 (2020) but faced challenges due to COVID-19 disruptions and budget reductions in PY2 (2020).

Hospital Experiences. Even though biweekly Medicare payments helped hospitals stabilize revenue, hospitals experienced challenges managing shifts in patient volume. In addition, while hospitals identified efficiencies, it was challenging to identify sufficient funds to invest in transformation activities. Some hospitals had to delay transformation planning due to the limited capacity of staff to support implementation and disruptions from COVID-19. Real-time data access and analysis are necessary to support hospitals' understanding of their financial performance; small, rural hospitals have limited internal resources to support these activities for a complex Model.

Quality, Access, and Hospital Performance. The Commonwealth will report on seven quality measures to assess changes in health outcomes and quality of care for rural residents. Stakeholders emphasized the importance of quality measures that are relevant to rural communities and timely data to track patients attributed to the Model.

Descriptive Assessment of Financial Performance and Interim Medicare Spending

The descriptive results in this report provide context on the financial performance and utilization associated with the PY1 (2019) hospital participants during the baseline period and will inform NORC's subsequent analysis of impact. The results are not an assessment of the Model's reach (i.e., scale target performance), impact on the financial viability of the participants, or Medicare utilization and spending. We will include descriptive data on spending and utilization for the Medicaid population in future reports.

Medicare fee-for-service interim payment and utilization measures are based on data from fiscal year (FY) Medicare cost reports (FY2013-FY2018); calendar year (CY) Medicare Parts A and B claims (CY2013-CY2019); and PARHM global budget payment documents in PY1 (CY2019). Financial performance measures are based on data from Medicare cost reports (FY2013-FY2018). Because final reconciled Medicare reimbursement data for all the years in the analysis period were unavailable at the time of this analysis, the results in this report are based on trends in interim Medicare reimbursement for the participating CAHs and PPS hospitals.^d

Financial Performance in the Baseline Period. The short- and long-term financial viability of the Cohort 1 hospitals worsened during the baseline period—a potential motivating factor for their participation in the PARHM. Declining inpatient volume and fixed costs may have negatively impacted financial performance during the baseline period.

Trends in Interim Medicare Payments and Utilization. Biweekly payments under the global budget addresses variability in payments due to seasonality and volume shifts. Hospitals perceived this as an important Model feature. During PY1 (2019), prior to final reconciliation of Medicare reimbursements, interim global budget payments exceeded the interim Medicare reimbursement amount the Cohort 1 hospitals would have been paid under FFS and cost-based reimbursement methods.

Discussion

PARHM is the first CMMI Model that provides rural hospitals an opportunity to test if global budgets can help improve their financial viability, provide flexibility to meet locally defined community health needs through population health activities, and reduce overall health care spending. The Model has attracted interest from a variety of hospital types, indicating that this approach to payment reform appeals to a range of potential participants. However, hospital participation has been slower than anticipated, resulting in challenges to achieving scale participation targets. Similarly, limited payer participation means a smaller share of revenue covered by the global budget. If payer participation increases, a higher share of the total patient revenue of the participating hospitals will be covered by the global budget payment incentives.

Medicare's fixed, biweekly payments helped hospitals manage fluctuations in patient volume and provided financial stability. However, hospitals noted the need for capital to support staff with

^d Since it can take over two years after the end of the fiscal year to determine the final settlement adjustments, there is significant lag in the data on cost-based reimbursement for the participating CAHs.

dedicated time to implement transformation plans. Additionally, while the Model contributes to short-term financial stability, independent rural hospitals still struggle with long-term sustainability. Large cost savings also may not be feasible in the Model due to the limited timeline to realize significant spending reductions.

Because we are in the early stages of the evaluation, this report presents emerging hypotheses that will be fully tested as we collect, integrate, and analyze additional data. Our next annual report will include an assessment of the PARHM's reach (i.e., scale target performance), implementation experiences of the PY1 (2019) and PY2 (2020) hospital participants, and a descriptive assessment of financial performance, spending and utilization, and access and quality of care outcomes during the performance period. If an impact assessment is feasible, future evaluation reports will include findings on the Model's impact on financial performance, utilization and spending, and access and quality of care outcomes for the Medicare and Medicaid populations.

Chapter 1: Introduction to the PARHM and Evaluation

1.1 Overview of the PA Rural Health Model

The Pennsylvania Rural Health Model (PARHM) aims to improve population health outcomes, increase access to high-quality care, and improve the financial viability of acute care hospitals in rural Pennsylvania.¹ Designed to reduce the risk of rural hospital closures, the Model seeks to stabilize participating hospitals' finances by providing a predictable revenue stream through global budgets. Global budgets are prospective, fixed payments given by participating payers to cover hospital services in participating hospitals (regardless of the volume or intensity of services delivered by the hospital). The PARHM also supports participating hospitals in identifying and implementing activities to transform care delivery by investing in prevention, quality improvement, and community-based services to achieve target population health outcomes^e and quality measures.²

Objective and Goals of Model

The PARHM's approach to global budget payments aims to give rural hospitals predictable and stable cash flow, not subject to year-to-year volume fluctuations, and align incentives to pave the way for investment in population health. The Model has financial and delivery system transformation components that are designed to align incentives for participating hospitals to achieve the Model aims (described in **Chapter 2.2**).

- **Hospital Global Budget:** Participating payers have two options for making global budget payments to participating hospitals
 1. **Fixed Global Budget Payment:** Payers provide a fixed amount at a specified frequency (e.g., biweekly, monthly) over the course of the year.⁴ The Centers for Medicare & Medicaid Services (CMS) implemented the fixed global budget payment methodology for services provided to Medicare fee-for-service (FFS) beneficiaries.

^e Section 15 of the Third Amended and Restated Pennsylvania Rural Health Model State Agreement notes that the Commonwealth shall be responsible for attaining and maintaining the following three population health and access goals for the Commonwealth residents of Rural Counties: (1) increase access to primary and specialty services; (2) reduce deaths related to substance use disorder (SUD) and improve access to treatment for opioid abuse; and (3) reduce rural health disparities through improved chronic disease management and preventive screenings (focusing on cancer, cardiovascular disease and diabetes/obesity).

2. **Virtual Global Budget Payment:** Payers continue to pay FFS claims for care provided to enrollees and conduct monthly reconciliations to the monthly global budget amount or carry any overages forward to subsequent months.⁴ Commercial payers chose to reimburse participating hospitals using the virtual global budget payment. This approach required payers to make two types of payments to participating hospitals: 1) an upfront float payment equivalent to one month's global budget at the beginning of the first global budget year, and 2) FFS payments for services rendered.
- **Hospital Transformation Plan:** The Model requires hospitals to develop and receive approval of a plan specifying how the hospital will redesign care delivery. Hospital transformation plans emphasize preventive care and services tailored to the needs of the local population, with a focus on investing in population health management and prevention, avoiding potentially avoidable emergency department (ED) visits and acute hospitalizations, and improving population health.

The global budgets are designed to enable hospitals to invest in population health and prevention activities beyond the acute care setting.⁵ The hospital transformation plans support aligning delivery system transformation to address community health needs, attaining financial sustainability for the rural hospital, achieving savings or budget neutrality for participating payers, building robust community partnerships, and monitoring participant obligations.² The Model's population health, access to care, and quality of care goals include reducing deaths from substance use disorders (SUDs) and improving access to treatment for opioid use; increasing access to primary care and specialty services; and reducing disparities in chronic conditions that affect rural populations (e.g., risk of heart disease, cancer screening and prevention, etc.).

The Model builds on existing models between CMS and states to promote alternative payment and care delivery transformation efforts. These models include the Finger Lakes demonstration in New York,⁶ which pioneered the concept of global budgets in the 1980s, and Maryland's Total Patient Revenue Model,⁷ which experimented with global budgets for rural hospitals beginning in 2010. In both demonstrations, participating facilities controlled revenue and expense growth over time and eliminated financial deficits.^{6,8} More recently, the PARHM builds on elements of Maryland's current Total Cost of Care (TCOC) Model⁹ and Vermont's All-Payer Accountable Care Organization (ACO) Model.¹⁰

Participating Hospitals

Pennsylvania has the nation's third-largest rural population.¹² Forty-eight of the 67 counties in Pennsylvania are categorized as rural by the Commonwealth.³ Nationally, rural residents experience greater risk of death from heart disease, cancer, unintentional injury, chronic lower respiratory disease, and stroke than urban residents.¹³ Rural Pennsylvania residents are more likely to have unmet health needs and limited access to care,¹⁴ as well as higher rates of cancer, obesity, heart disease, and diabetes than their urban counterparts.¹⁵ These residents often rely on rural hospitals for the majority of their health care. As such, Pennsylvania's rural hospitals provide care for approximately 3.4 million people, or one in four Pennsylvanians.¹⁶

WHAT IS A CRITICAL ACCESS HOSPITAL (CAH)?

The CAH designation was created through the 1997 Balanced Budget Act to ensure the sustainability of hospital services in rural communities. CAHs receive cost-based reimbursement for inpatient and outpatient services provided to Medicare beneficiaries at 101 percent of allowable costs. An eligible hospital that meets the following conditions may be designated as a CAH by CMS:¹¹

- Be located more than a 35-mile drive (or 15-mile drive in areas with mountainous terrain or only secondary roads) from any other CAH or hospital;
- Have no more than 25 inpatient beds;
- Furnish 24/7 emergency services; and
- Maintain an annual average acute care inpatient length of stay of 96 hours or less.

Sixty-seven of the Commonwealth's 169 acute care hospitals were in rural communities in the baseline period (2013-2018).¹⁷ Fifteen of the 67 hospitals are critical access hospitals (CAHs), a designation given to eligible rural hospitals by CMS. Congress established this designation in response to rural hospital closures during the 1980s and 1990s.¹⁸ Rural hospitals typically serve as the health and economic anchors of local communities. They provide access to care, employment, and serve as an indicator of community viability. Overall, these hospitals contribute more than \$6 billion to the Commonwealth's economy.¹⁶ As important as they are, rural hospitals also face serious challenges in remaining financially viable. They face declining revenues due to many factors, including low patient volume, overall trends away from inpatient to outpatient care, payer mix, and costs that exceed reimbursement rates.¹⁹ They also face serious population health challenges associated with the opioid epidemic and an aging population, with limited resources to provide complex care and preventive services. More than half of Pennsylvania's rural hospitals reported negative total and operating margins during fiscal year 2016.¹⁶

1.2 Evaluation Overview

The Center for Medicare & Medicaid Innovation (CMMI) within CMS contracted with NORC and our partners, Penn State University's Center for Health Care and Policy Research and IBM Watson Health, to conduct an independent evaluation of the Model. Our evaluation captures the implementation context, factors associated with implementation, and the Model's impact on care delivery and outcomes. The Model is designed to improve value-based payment reform and delivery system transformation in rural communities. For this evaluation, we use a mixed-methods approach involving both primary and secondary data sources to assess whether and how the Model's approach to global budgets and care delivery transformation achieves the intended goals of CMMI, the Commonwealth, and participating

hospitals and payers. A key limitation of the analysis is the small number of participants (five Cohort 1 hospitals), which makes most comparisons to eligible nonparticipants or national or statewide benchmarks infeasible. Furthermore, as described in **Chapter 3.2**, there are notable differences in the baseline financial performance and organizational characteristics of the Cohort 1 hospital participants.

Additionally, we assess participant and Model stakeholder perspectives on the design, implementation, and sustainability of the Model to improve the health of rural Pennsylvania residents. In our analysis, we include stakeholder data from Commonwealth offices and agencies, implementation contractors, and technical experts involved with the Model; we also interviewed participating hospital staff of the five Cohort 1 hospitals, participating payers, and community providers. The original evaluation design included a plan to interview nonparticipating hospitals as well, however, this outreach was halted due to the COVID-19 pandemic.

Overview of This Report

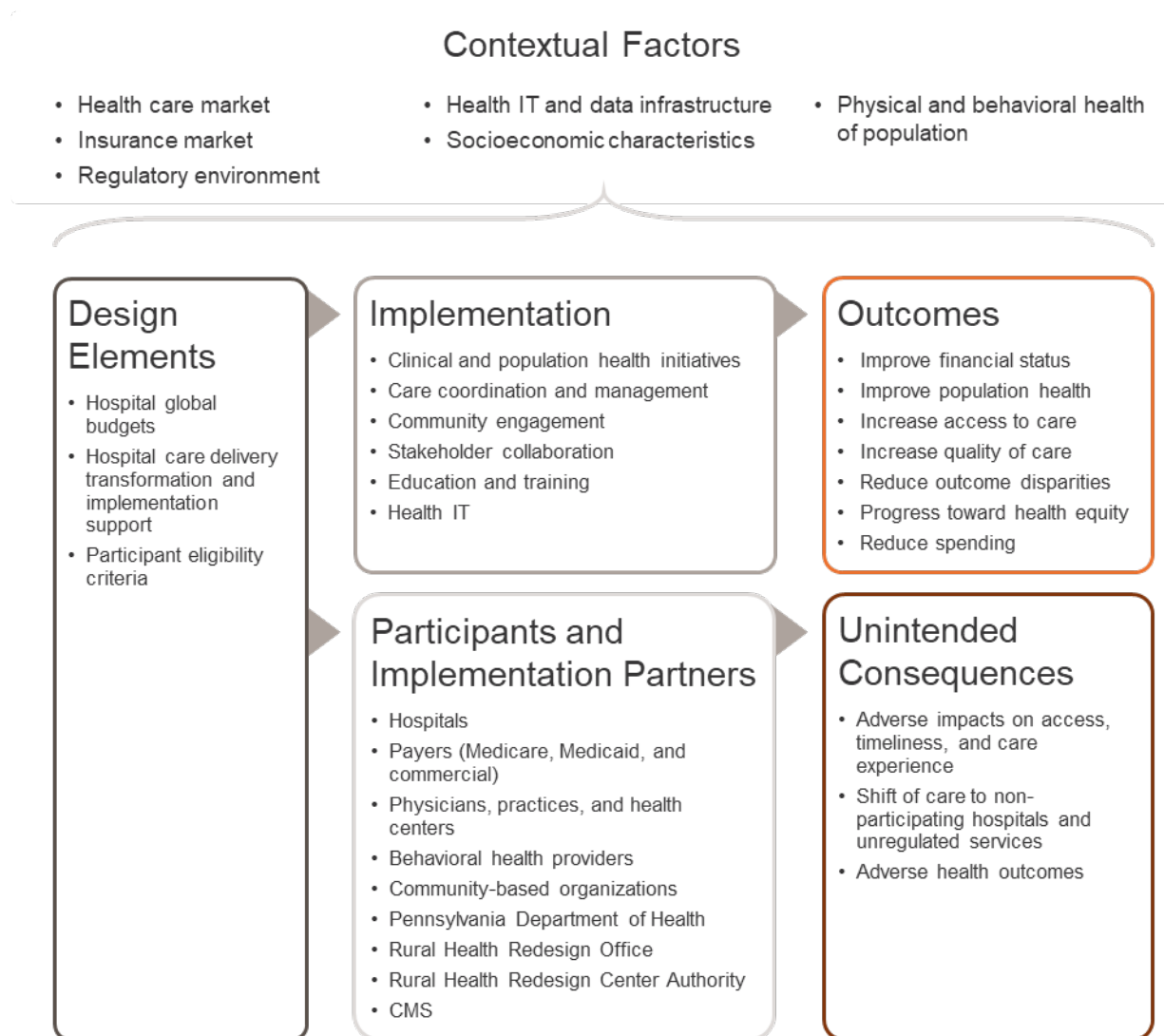
Our first annual report focuses on the implementation experience of participating hospitals in performance year 1 (PY1 or 2019)—Cohort 1 hospitals—and payers that participated in PY1 (2019) and PY2 (2020). We also present key characteristics of Cohort 1 hospitals and descriptively assess their financial performance and trends in Medicare spending and utilization. This report is the first of five annual reports. Subsequent reports will include additional results for the Cohort 2 hospitals that joined the Model in PY2 (2020) and Cohort 3 hospitals that joined in PY3 (2021). Additionally, in the later years of this evaluation, we will assess the Model's impact on spending, utilization, quality of care, and population health measures as well as explore drivers of Model success or failure.

Conceptual Framework

Exhibit 1.1 presents the conceptual framework for the evaluation. This framework recognizes the importance of context, including the federal and/or state regulatory environment, local population characteristics, health information technology (IT) and systems for health information exchange, and provider and payer market features. The local context and PARHM design influence payer and provider participation and the overall Model implementation. In turn, the characteristics of the participants (payers, hospitals, and their implementation partners) will influence implementation and, ultimately, program outcomes.

The conceptual framework identifies determinants of implementation, such as context, Model design elements, hospital care delivery systems, and implementation partners. These factors are associated with the hospitals' respective implementation approaches, overall Model impact, and unintended consequences. Examining implementation processes, as well as impact, will provide valuable insights into whether and how the Model and participants achieve their intended goals and identify any unintended consequences.

Exhibit 1.1. Conceptual Framework to Inform Evaluation Design



Research Questions

This report addresses the research questions (RQs) outlined in **Exhibit 1.2**.

Exhibit 1.2. Evaluation Research Questions

Implementation Experience and Effectiveness

- What are the reasons that some rural hospitals choose to participate, not to participate, or defer participation until later performance years?
- What factors do participating hospitals cite as barriers or facilitators to operating under the Model?
- What are participating hospitals' experiences implementing their hospital transformation plans?
- What are the opinions of the Model from other important model stakeholders (e.g., non-hospital providers or rural community leaders)?
- How did the health care system and state health agencies collaborate to improve the population health of rural Commonwealth residents?

Quantitative Assessments

- How has Medicare spending and service line utilization changed for participating hospitals?
- What are the trends in financial performance of the Cohort 1 hospital participants during the baseline period?

Evaluation Methods

Over the course of our evaluation, we will use an embedded, multiphase mixed-methods design,²⁰ using both primary and secondary data sources to draw upon and analyze primary and secondary data measuring activities, outcomes, and relationships.

The evaluation uses quantitative and qualitative analyses that include the participating hospitals, individually or as a group, and the context in which they are embedded. The combination of these analyses to address the set of research questions listed above required a multiphase mixed-methods design.

For the quantitative component in this report, we conducted a descriptive analysis of financial performance and Medicare FFS spending and utilization during the baseline period (2013-2018) and PY1 (2019) for the Cohort 1 hospitals. We used Medicare cost reports for the financial performance measures and Medicare FFS claims for the spending and utilization measures as (described in **Chapter 5**; see **Appendix C** for additional details).

The qualitative component of this report included reviewing Model documents (secondary data) and conducting interviews and analyzing primary qualitative data. Primary data collection included virtual site visits and interviews with Cohort 1 hospital leadership and staff; interviews with participating commercial payers; and interviews with Model stakeholders, including Commonwealth offices and agencies, implementation contractors, and technical experts involved with the Model (described in **Chapter 4**; see **Appendix A** for additional details). We systematically reviewed and coded documents, interview transcripts, and observational field notes. Using Dedoose®, a web application for managing, analyzing, and presenting qualitative and mixed-methods data, we conducted a thematic analysis of primary and secondary data.²¹ Employing both inductive and deductive methods, our cross-site analysis identified themes, patterns, and divergence across participating hospitals.^{22,23} For future analyses, we will consider multiple designs to evaluate impact, based on sample size adequacy, level of measurement (i.e., rural geographic area, hospital, episode, or individual), and data limitations.

Chapter 2: Model Design

Key Takeaways

Context



- Hospitals eligible to participate in the Model include all CAHs and all acute care hospitals located in a rural county, as defined by the Center for Rural Pennsylvania. The definition of “rural county” used for the Model is more expansive than many federal rural definitions.

Program Design Features



- For the Medicare FFS portion of the global budget, CMS makes biweekly payments equivalent to 1/26 of the approved Medicare FFS portion of each hospital’s global budget. For CAHs, the Medicare FFS portion of the global budget is then reconciled to cost-based reimbursement, as before the Model. Hospitals paid under the Medicare prospective payment system (PPS) have a different reconciliation process and are not reconciled back to Medicare FFS claims or costs. Commercial payers continue to pay FFS claims and conduct monthly reconciliations (virtual global budget). Participating rural hospitals develop hospital transformation plans to guide care delivery changes and propose service line changes.
- CMMI and the Commonwealth refined the Model design during the pre-implementation period and PY1 (2019). CMMI allowed for additional adjustments to the Model in response to COVID-19 in PY2 (2020).

Key Model Stakeholders



- The Department of Health (DOH) is the agency within the Commonwealth responsible for Model administration. Within the DOH, the Rural Health Redesign Office (RHRO) was created to stand-up the Model.
- Delays in the passage of legislation to establish an independent Rural Health Redesign Center Authority (RHRCA) required the RHRO to operate the model beyond the pre-implementation period into PY2 (2020) until the RHRCA could be established and operational functions transitioned.
- The RHRO, and later the RHRCA, engages technical assistance providers, implementation contractors, and stakeholders to recruit hospitals, provide data analysis and research, guide the development of hospital transformation plans, and provide education and resources for clinical transformation.
- The Model is a multi-payer effort with Medicare and commercial payers, including associated Medicaid managed care and Medicare Advantage plans. Participating commercial payers include Geisinger, Highmark Blue Cross Blue Shield, UPMC, Aetna, and Gateway health plans.
- At the time of the Model announcement (2017), 67 rural hospitals, including 15 CAHs, were eligible to participate in the Model. Five hospitals joined the Model for PY1 (2019), eight additional hospitals joined the Model for PY2 (2020), and five more hospitals joined the Model for PY3 (2021).

In this chapter, we discuss the development of the Model; the aims, design, and key features of the Model for payers and providers; and Model oversight. We also discuss the accountability features of the Model. Our analysis draws from a systematic document review of the Model agreement, CMMI materials, Commonwealth documents, public reports, gray literature, and the formative evaluation sponsored by the Commonwealth.

2.1 Development of the PARHM

The Model was built on previous innovation efforts in the Commonwealth to transform care delivery and develop new payment methodologies. In response to the closure of rural hospitals, the Commonwealth, led by the DOH, focused on developing a rural-specific model between 2015 and 2017 with the goals of maintaining access to care in rural Pennsylvania and transforming care delivery. The DOH collaborated with key partners and stakeholders, including other Pennsylvania agencies (e.g., Pennsylvania Insurance Department, Department of Human Services [DHS], and the Governor's Policy Office), payers, hospital leaders, and other governmental and nongovernmental organizations, including: Pennsylvania Department of Agriculture, Pennsylvania Department of Community and Economic Development, Pennsylvania Department of Transportation, Center for Rural Pennsylvania, Hospital and Healthsystem Association of Pennsylvania, Pennsylvania Office of Rural Health, Rural Development Council, Appalachian Regional Commission, U.S. Department of Agriculture, Federal Office of Rural Health Policy, Maryland Health Services Cost Review Commission, National Rural Health Association, and the Rural Policy Research Institute (RUPRI).⁵ DOH invited potential early adopters to participate in design discussions in collaboration with the Hospital and Healthsystem Association of Pennsylvania, the Pennsylvania Office of Rural Health, and other stakeholders.²⁴ CMMI and the Commonwealth announced the Model on January 12, 2017.²⁵

2.2 Model Aims and Key Program Design Features

CMMI and the Commonwealth, acting through the DOH, entered into the PARHM State Agreement on January 13, 2017. The Model is designed to test the impact of using global budgets to support care delivery transformation in participating rural hospitals on health outcomes and quality of care, hospital spending across payers, and financial viability of participating hospitals.² Through an agreement with the Commonwealth, CMMI sets expectations for recruiting hospitals and payers to participate in the Model, calculating global budgets, developing hospital transformation plans, and monitoring quality. The Commonwealth submits quarterly and annual progress reports to CMMI describing progress on goals, accomplishments, issues, and other metrics. CMMI and the Commonwealth also sign participation agreements with individual hospitals that opt to join the program.

Model Eligibility Criteria

Hospitals eligible to participate in the Model include all CAHs and all acute care hospitals that receive reimbursement under the inpatient and outpatient PPSs located in a rural county, as defined by the Center for Rural Pennsylvania. The Center for Rural Pennsylvania defines rural counties by population density—counties with a population density less than the population density of the Commonwealth

(284 persons per square mile as of the 2010 Census) are defined as rural.³ The Center for Rural Pennsylvania’s rural definition is more expansive than many federal rural definitions. At the start of the Model in 2017, a total of 67 hospitals were eligible to participate in the Model.²⁶

Global Budget Design

The Commonwealth collaborated with CMMI to develop a methodology for calculating the prospective global budget for each participating hospital. Each hospital’s global budget is the sum of global budget amounts from each participating payer.

The global budget amount is based on historical net patient revenue for inpatient and outpatient hospital services for each payer. For commercial payers and Medicare FFS, net patient revenue is comprised of the insurance paid for services provided. **Exhibit 2.1** provides an overview of the hospital services included and excluded from the net patient revenue (global budget).⁴

Exhibit 2.1. Included and Excluded Hospital Services in the Global Budget

Included Services	Excluded Services
■ Inpatient hospital services ■ Outpatient hospital services ○ ED ○ Laboratory ○ Imaging ○ Evaluation and management services ○ Same day surgery ○ Ambulance ○ Other outpatient services ■ Critical access hospital swing bed services	■ Professional services (inpatient and outpatient) ■ Clinic services, including those provided by rural health clinics, community mental health clinics, and federally qualified health centers ■ Rural prospective payment system hospital swing bed services ■ Dental services ■ Durable medical equipment ■ Home health services ■ Services provided in dialysis facilities, Indian Health Service facilities, skilled nursing facilities, and other specialty facilities

NOTES: Inpatient professional services are physician services furnished during an inpatient stay. Outpatient professional services are physician services furnished in an outpatient setting (e.g., hospital-based outpatient department).
SOURCE: Centers for Medicare & Medicaid Services. PARHM Detail Business Requirements. Published 2019.

Global budgets are adjusted each year based on inflation, demographic shifts, market shifts (i.e., service lines changes, unplanned shifts in patient volume), and patient transfers.² Global budgets can also be adjusted in subsequent performance years based on hospital performance in Medicare quality programs, improvements in potentially avoidable utilization and population health, and other factors.²

The proposed Medicare FFS portion of the global budget is based on historical revenue under inpatient and outpatient PPSs or cost-based reimbursement in the case of CAHs.

For the Medicare FFS portion of the global budget, CMS makes biweekly payments equivalent to 1/26 of the approved Medicare FFS portion of each hospital's global budget.² Participating rural hospitals continue to submit Medicare FFS claims for services covered by the global budget, but CMS processes these claims as no-pay claims. CMS uses the claims to assess financial targets and to inform the calculation of the Medicare FFS portion of the global budgets in future years of the Model. Similarly, participating rural hospitals may use claims to monitor utilization

and to maintain reimbursement for services excluded from the global budget. Following each performance year, Medicare completes a reconciliation process to adjust for differences in the prospective global budget and actual care provided by each hospital in accordance with the global budget methodology. CAH payments are reconciled to cost-based reimbursement, as before the Model. Rural PPS hospitals are not reconciled back to Medicare FFS claims or costs but rather adjusted based on several factors, including unplanned volume shift, payer mix shifts, planned changes to service lines, and other adjustments.

WHAT ARE SWING BED SERVICES?

CAHs and certain small, rural hospitals may enter into swing bed agreements with Medicare, under which the hospital can use its beds, as needed, to provide either acute or skilled nursing facility (SNF) care. Swing bed services provided by CAHs are excluded from the 96-hour length-of-stay requirement. SNF-level services provided by CAHs are paid 101 percent of allowable costs, while SNF-level services provided by non-CAH hospitals are reimbursed under the SNF PPS.²⁷

Participating payers have two options for making global budget payments to participating hospitals:

1. **Fixed Global Budget Payment:** Payers provide a fixed amount at a specified frequency (e.g., biweekly, monthly) over the course of the year.
2. **Virtual Global Budget Payment:** Payers continue to pay FFS claims for care provided to enrollees and conduct monthly reconciliations to the monthly global budget amount or carry any overages forward to subsequent months.

CMS implemented the fixed global budget payment methodology for services provided to Medicare FFS beneficiaries. For PY1 (2019) through PY3 (2021), commercial payers chose to reimburse participating hospitals using the virtual global budget payment. This approach required payers to make two types of payments to participating hospitals: 1) an upfront float payment equivalent to one month's global budget at the beginning of the first global budget year, and 2) FFS payments for services rendered. Payers conduct regular settlements to reconcile FFS claims payments to the monthly global budget amount or carry any overages forward to subsequent months during the course of the year. Payers conduct an end-of-year settlement to the prospective global budget following six months of claims runout.⁴

Hospital Transformation Plans

Each participating hospital develops a hospital transformation plan to guide care delivery changes. Hospital transformation plans also describe any proposed service line changes (e.g., implementation of pulmonary rehabilitation program). CMMI established requirements for transformation plan components in the Commonwealth agreement (**Exhibit 2.2**).²

Exhibit 2.2. Hospital Transformation Plan Components

Section	Description
Community and Market Service Profile	Service area description, including demographics, economic indicators, social service agencies, population health statistics, and social determinants of health
Hospital Profile	Hospital information, including type (i.e., PPS or CAH), number of beds, services furnished, utilization statistics by service line, financial statements from the previous four years, staffing (including non-employed physicians with admitting privileges), Hospital Compare scores from previous four years, payer mix, and an overview of IT systems
Care Delivery Transformation and Case for Change	Proposed care delivery redesign, the vision for the transformation, the projected impact of the proposed transition on patient access and quality of care, and the business case for making these changes
Selection of a Chronic Disease Management and Prevention Goal	Selection of one of three chronic conditions prioritized under the Model (cancer, cardiovascular disease, or diabetes/obesity), with plans to address this condition
Care Coordination	Engagement with non-hospital providers and suppliers to provide and coordinate care
Transitioned State of Participating Rural Hospital	Plan for care delivery transformation, including milestones and a timeline, financial projections, planned investments from savings achieved under the global budget, performance metrics, and monitoring plan
Projected Hospital Services	Description of service lines, including any removal or addition of hospital service lines and communication to local residents about changes
Organizational Capacity	Resources necessary to implement changes under the plan
Planned Investments from Hospital Savings	Planned investments to implement the plan
Risk Mitigation	Potential risks associated with the proposed care delivery transformation and implementation of global budgets and risk mitigation strategies
Stakeholder Engagement Plan	A plan for obtaining support and continuous feedback from community stakeholders
Waivers	Medicare or Medicaid conditions of participation waivers requested to facilitate care delivery transformation

SOURCE: Centers for Medicare & Medicaid Services. PARHM Detail Business Requirements. Published 2019.

The Commonwealth and CMMI must approve hospital transformation plans before a hospital can sign a participation agreement with CMMI and the Commonwealth. CMMI also engaged subject matter experts in the review to provide feedback on the transformation plans. Participating rural hospitals must submit annual transformation plan updates describing activities completed and changes during the performance year. Based on these updates, the Commonwealth assesses each participating hospital's progress against transformation plan objectives and provides an annual report to each participating hospital summarizing the findings of this assessment, including identification of best practices, opportunities for improvement, and any resources available to help participating hospitals adopt best practices (e.g., tools, publications, webinars, or events).

Model Targets

CMMI and the Commonwealth agreed to participation, financial, and quality/population health targets designed to scale the model, achieve cost savings, and improve health care delivery.

Rural Hospital Participation. As part of the agreement, CMMI and the Commonwealth agreed to rural hospital participation scale targets for each performance year.

1. **PY1 (2019):** A minimum of **six rural hospitals** for the full year.
 2. **PY2 (2020):** A minimum of **18 rural hospitals** for the full year.
 3. **PY3-6 (2021-2024):** A minimum of **30 rural hospitals** for the full years.

The Commonwealth did not meet rural hospital participation scale targets for PY1 (2019) and PY2 (2020). Five rural hospitals joined the Model for PY1 (2019) and an additional eight hospitals joined the Model for PY2 (2020) for a total of 13 participating rural hospitals in PY2 (2020). For PY3 (2021), an additional five rural hospitals joined the Model, for a total of 18 participating rural hospitals.

CMMI also allowed participating hospitals to simultaneously participate in other Medicare programs, models, or demonstrations with appropriate adjustments to the global budget.² However, CMMI can exclude participating hospitals from simultaneous participation in future Medicare programs, demonstrations, or models.²

Payer Participation Goals. CMMI and the Commonwealth agreed to payer participation scale targets to ensure that a sufficient portion of participating hospitals’ net patient revenues were included in the global budget. For PY1 (2019), the Commonwealth was to ensure that the global budget accounted for at least 75 percent of each participating hospital’s eligible net revenue. For PY2 (2020) through PY6 (2024), the Commonwealth is to ensure that the global budget accounts for at least 90 percent of each participating hospital’s eligible net revenue. The Commonwealth met the payer participation scale target in PY1 (2019) but it is anticipated that the 90 percent threshold may not be met in PY2 (2020).

The Commonwealth is also required to report on payer alignment annually to CMMI.² This report includes an assessment on payer-specific Model design elements, including the global budget methodology, global budget payment mechanism, and quality measures used by participating payers to assess the participating hospitals, along with comparing these elements to Medicare FFS under the Model.

Model Financial Targets. CMMI and the Commonwealth agreed to Model-level hospital savings and financial targets. Over the performance period of the Model (2019-2024), the Commonwealth is expected to produce \$35 million in cumulative savings.^{1,2} There are no expected annual savings for PY1 (2019) and PY2 (2020). Expected annual savings are \$1 million for PY3 (2021), \$5 million for PY4 (2022), \$13 million for PY5 (2023), and \$16 million for PY6 (2024). In addition, for PY2 (2020) through PY6 (2024), the Commonwealth must limit the cumulative annual Pennsylvania Rural All-Payer Hospital Cost of Care Growth per Beneficiary to less than or equal to 3.38 percent, which represents the compound annual growth rate for the Commonwealth's gross state product from 1997–2015. Medicare TCOC guardrails were also established to ensure that the Pennsylvania rural Medicare TCOC growth

per beneficiary does not exceed the national rural Medicare TCOC growth per beneficiary. The Commonwealth may request that financial targets be adjusted for exogenous factors (e.g., epidemics).

Quality Measurement and Population Health. CMMI and the Commonwealth agreed on a comprehensive set of measures related to the quality of care delivered by participating rural hospitals and population health goals for residents of counties served by participating hospitals. Revisions to the measures were made in 2020 based on stakeholder feedback on challenges with rural quality measures. Quality of care measures relate to hospital inpatient and outpatient care (e.g., avoidable readmissions). Population health measures are related to one of three primary goals: 1) increase access to primary care and specialty services; 2) reduce deaths related to SUDs and improve access to treatment for opioid use disorder (OUD); and 3) reduce rural health disparities through improved chronic disease management and preventive screenings (focusing on cancer, cardiovascular disease, and diabetes/obesity).²

As part of the Model, the Commonwealth was also required to develop a formal monitoring program to track overall Model progress on care delivery improvement. In addition to tracking progress on programmatic deliverables and hospital transformation plans, the RHRO chose to use existing measures and data sources (e.g., Healthcare Effectiveness Data and Information Set [HEDIS] measures) and payer quality data to minimize the administrative burden for payers and hospitals.

Lastly, the Commonwealth was required to develop an All-Payer Quality Program by PY2 (2020) to take effect in PY3 (2021). If approved by CMMI, this program would hold participating hospitals accountable for a targeted set of multi-payer quality measures and would adjust the Medicare FFS portion of the global budget based on participating hospitals' performance. Development of the All-Payer Quality Program has been on hold given availability of Commonwealth resources and the COVID-19 pandemic.

2.3 Changes to the Model

Since announcement of the Model, there have been several changes to Model requirements and global budget calculations. During the pre-implementation period, CMMI, the RHRO, and implementation contractors refined the global budget calculation methodology, for example, including planned service line expansions or reductions as part of the prospective global budget calculation. Additional PY1 (2019) changes to the global budget methodology included refinements to the demographic adjustment, payer-mix adjustment, and rural geographic area definition. Annual adjustments to the participation agreements require the five participating hospitals to re-sign agreements for each performance year. All five hospitals chose to continue participating in the Model for PY2 (2020).

There were a number of changes and delays related to COVID-19. In PY2 (2020), it was determined that the All-Payer Quality Program would be put on hold due to a shortage of resources resulting from COVID-19. Instead, the current Medicare quality programs will remain in place for the duration of the Model. CMMI also approved flexibilities in response to COVID-19,²⁸ including:

- **Changes to the PY3 (2021) Rural Hospital Participation Scale Targets:** CMMI is allowing hospitals to join the Model in PY4 (2022), requiring the Commonwealth to maintain at least 13 participants for PY3 (2021), and requiring 30 participants for PY4-6.
- **Extension of Hospital Transformation Plan Deadline:** CMMI approved a six-week extension to September 1, 2020, for the Commonwealth to submit hospital transformation plans for new participating hospitals. CMMI also approved an extension to November 15, 2020, for participating hospitals to submit annual updates to their transformation plans.
- **Reduced Reporting:** Until January 2021, the Commonwealth was permitted to exclude any supplementary information on hospital transformation progress from the quarterly progress reports.
- **Medicare Global Budget Adjustment:** CMMI will work with the Commonwealth to adjust the Medicare FFS portion of the global budgets to account for COVID-19, as pandemics are specified as an exogenous factor in the CMMI-approved global budget methodology. At a minimum, adjustment will include the suspension of sequestration related to COVID-19 as appropriate as specified in the Coronavirus Aid, Relief, and Economic Security (CARES) Act.

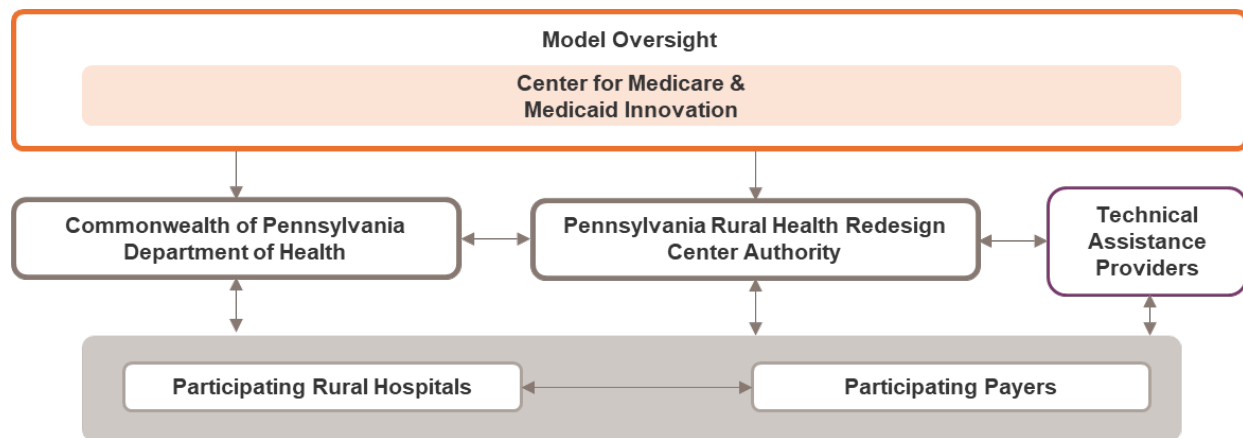
Through its waiver authority under Section 1135 of the Social Security Act, CMS temporarily waived the geographic location requirement and expanded the applicability of telehealth services in response to the COVID-19 pandemic.²⁹ To support continued use of telehealth after COVID-19, CMMI authorized a telehealth benefit enhancement beginning in 2021 that waives the geographic requirement for facility originating sites and allows for telehealth services to be provided at the beneficiary's place of residence. Participating hospitals may apply to CMS for the telehealth benefit enhancement.³⁰

2.4 State Accountability and Oversight: Key Model Stakeholders

Exhibit 2.3 illustrates the accountability and oversight structure for the Model design and implementation: CMMI, state agencies, implementation contractors, technical assistance (TA) providers, payers, and the health care delivery system in Pennsylvania. CMMI provided the Commonwealth with startup funding to implement the Model and flexibility to modify Medicare and Medicaid payment mechanisms. The prospective global budget replaces arrangements that participating rural hospitals have with participating public and private payers for hospital-based inpatient and outpatient services. The Commonwealth is accountable to CMMI to meet participation, financial, quality of care, and population health targets.³¹ The Commonwealth, in collaboration with the independent RHRCA, is responsible for Model implementation and monitoring, quality assurance, and TA to participating rural hospitals.^{f,2} Participating rural hospitals sign agreements with both CMMI and the Commonwealth and submit a hospital transformation plan for approval.

^f The initial agreement with CMS required the Commonwealth to recruit 30 rural hospitals to participate by the third performance year of the Model. In response to COVID-19, CMMI provided the Commonwealth with one additional year to recruit rural hospitals.

Exhibit 2.3. PARHM Model Accountability



Centers for Medicare & Medicaid Services

Through CMMI, CMS tests innovative payment and service delivery models that have the potential to reduce costs while maintaining or improving quality of care. CMMI provides oversight for the Model and monitors Model implementation. CMMI earmarked up to \$25 million in funding for the Commonwealth over seven years to implement the Model. CMMI funding of the Model is contingent on the Commonwealth meeting defined participation, financial, and quality targets each performance year. If the Commonwealth does not meet the Model targets, CMMI can reduce funding for the Model, take corrective action, or discontinue support of the Model.^{1,2} CMMI reduced funding for the Model in PY2 (2020) as the Commonwealth was unable to meet hospital participation scale targets in PY2 (2020).

CMMI's Implementation Contractor: Lewin Group. The Lewin Group provides operational and programmatic support for CMMI's State Innovations Group Multi-Payer Operations. As a part of this work, Lewin provides CMMI with analytic support, such as validating global budget calculations for participating providers as performed by McKinsey for PY1 (2019) and Mathematica for PY2 (2020); and monitoring financial and quality performance.³²

Pennsylvania Department of Health, Rural Health Redesign Office

The DOH is the agency within the Commonwealth responsible for Model administration. Once the Model was established, the DOH created the RHRO to stand-up the model during the pre-implementation period until establishment of the RHRCA.⁹ During this time, the RHRO was responsible for

- recruiting and onboarding hospitals and payers;
- supporting participating hospitals and hospitals considering participation in developing global budgets and transformation plans;
- analyzing data;

⁹ The RHRO staff were contractors to DOH intended to stand-up the Model until the establishment of the RHRCA.

- preparing reports for CMMI, payers, and hospitals;
- directing TA providers and implementation contractors; and
- providing oversight for the Model.

While it was intended that the RHRCA would be in place to implement the Model by the start of PY1 (2019), passage of the RHRCA legislation was delayed until November 2019. The RHRO continued to operate the Model for the pre-implementation period into PY2 (2020) until the RHRCA was established.

Rural Health Redesign Center Authority

The Model design included the creation of an independent center, the RHRCA, to be established by the Pennsylvania General Assembly to facilitate Model implementation and other efforts to sustain Pennsylvania's rural providers beyond the Model. Legislation to establish the RHRCA was first introduced in the Pennsylvania General Assembly on June 26, 2018,³⁴ but was not passed during the 2017-2018 legislative session. Legislation was reintroduced on January 28, 2019.³⁵ On November 27, 2019, the Pennsylvania General Assembly authorized establishment of the Pennsylvania RHRCA to administer activities required under the Model.³³ During PY2 (2020), the RHRCA established a Board, hired staff, and transitioned many of the duties of the RHRO. The RHRCA monitors the implementation and methodologies of global budgets, selects hospitals for participation, approves the hospital transformation plans, enters into contracts with payers, and provides regulatory oversight to track progress. The RHRCA also provides TA to participating hospitals, collects and maintains data from participating payers and hospitals, and provides an annual assessment of each participating hospital's compliance with the hospital transformation plan and global budget targets. Finally, the RHRCA will assess the progress of participating hospitals in achieving population health goals.

RHRCA Board. The RHRCA is governed by a Board comprised of Model stakeholders, which includes leaders of Commonwealth agencies or designees and is designed to have equal representation from payers and hospitals participating in the Model. See call out box for the composition of the RHRCA Board as defined by the RHRCA authorizing legislation.

The RHRCA Board meets monthly and approved the hiring of an Executive Director, Gary Zegiestowsky, to lead the RHRCA in June 2020.

RHRCA BOARD COMPOSITION³³

- The Secretary of Health or a designee
- The Secretary of Human Services or a designee
- The Insurance Commissioner or a designee
- One member selected by each participating commercial payer (excludes any associated Medicaid managed care organization)
- One member selected by each participating payer that is a Medicaid managed care organization
- One member selected by the Hospital and Healthsystem Association of Pennsylvania
- Participating rural hospital members, not to exceed the number of participating payer members
- Two members appointed by the Governor who are nationally recognized experts in rural health care delivery or in developing and administering global budgets

Payers

CMMI and the Commonwealth agreed to payer participation scale targets for the Model. For each participating hospital, the global budget was to account for at least 75 percent of the hospital's eligible

net patient revenue in PY1 (2019) and at least 90 percent of the hospital's eligible net revenue in PY2 (2020) through PY6 (2024).² To meet these targets, the Commonwealth engaged three types of primary payers: Medicare, Medicaid, and commercial payers.

Commercial payers could participate in the Model with their private insurance population. In addition, commercial payers that contract with CMS to cover Medicare Advantage beneficiaries and contract with the Commonwealth to cover Medicaid managed care enrollees could include these populations in the Model as well.

Medicare. Medicare has been a participating payer since the Model's inception. Specifically, all Medicare FFS beneficiaries in the relevant geographies of participating hospitals are included in the global budget calculations. CMS encourages but does not require commercial payers administering Medicare Advantage plans to participate.

Pennsylvania Medical Assistance (Medicaid). The inclusion of Medicaid as a payer was an important Model design feature. The Pennsylvania DHS administers Medicaid, known as Medical Assistance in the Commonwealth, and a separate Children's Health Insurance Program. Pennsylvania expanded the Medicaid program in 2015. The DOH, the lead agency administering the Model, works closely with DHS on the Model's Medicaid components. Within DHS, both the Office of Medical Assistance Programs, which monitors physical health Medicaid managed care organizations, and the Office of Mental Health and Substance Abuse Services, which monitors Medicaid behavioral health managed care organizations, are important agency stakeholders.

Most of the Commonwealth's Medicaid enrollees are in managed care organizations through the HealthChoices Program. HealthChoices enrollees would only be included in global budget calculations if their managed care organization chose to participate in the Model.

The Commonwealth also provides a Medicaid Managed Long Term Services and Supports (MLTSS) program, named Community HealthChoices (CHC), under which organizations are responsible for coordinating physical health, behavioral health, and LTSS needs of enrollees through a capitated, or fixed per-enrollee, per-month, payment arrangement. CHC serves older adults, persons with physical disabilities, and people dually eligible for Medicare and Medicaid. CHC enrollees who receive services from PARHM hospitals could be included in the Model, either as Medicare FFS beneficiaries or through Medicare Advantage enrollment.

Commercial Payers. To meet payer participation scale targets, the Commonwealth recruited commercial payers to participate in the Model. For PY1 (2019), Geisinger, Highmark Blue Cross Blue Shield, and UPMC health plans joined the Model. For PY2 (2020), Aetna and Gateway, a Highmark affiliate, joined the Model. Participating payers calculate hospital global budgets, implement mechanisms for payment and reconciliation, and share performance on monitoring and statewide quality measures with the Commonwealth.

Participating Hospitals

At the time of the Model announcement (2017), 67 rural hospitals, including Pennsylvania's 15 CAHs, were eligible to participate in the Model.² Hospitals eligible to participate in the Model include acute care hospitals located in counties designated as rural by the Center for Rural Pennsylvania. Five hospitals joined the Model for PY1 (2019). Eight additional hospitals joined the Model for PY2 (2020), and five hospitals joined the Model for PY3 (2021), as shown in **Exhibit 2.4**.

Exhibit 2.4. Participating Hospitals

Hospital	Hospital Type	PY1 (2019) ³⁶	PY2 (2020) ²⁶	PY3 (2021) ³⁷
Barnes Kasson in Susquehanna, Susquehanna County	CAH	✓	✓	✓
Endless Mountains in Montrose, Susquehanna County	CAH	✓	✓	✓
Geisinger Jersey Shore in Jersey Shore, Lycoming County	CAH	✓	✓	✓
UPMC Kane in Kane, McKean County	PPS	✓	✓	✓
Wayne Memorial in Honesdale, Wayne County	PPS	✓	✓	✓
Armstrong County Memorial Hospital in Kittanning, Armstrong County	PPS		✓	✓
Chan Soon-Shiong Medical Center at Windber in Windber, Somerset County	PPS		✓	✓
Fulton County Medical Center in McConnellsburg, Fulton County	CAH		✓	✓
Greene Hospital in Waynesburg, Greene County	PPS		✓	✓
Monongahela Valley Hospital in Monongahela, Washington County	PPS		✓	✓
Punxsutawney Area Hospital in Punxsutawney, Jefferson County	PPS		✓	✓
Tyrone Hospital in Tyrone, Blair County	CAH		✓	✓
Washington Hospital in Washington, Washington County	PPS		✓	✓
Bradford Regional Medical Center, McKean County	PPS			✓
Clarion Hospital in Clarion, Clarion County	PPS			✓
Highlands Hospital in Connellsville, Fayette County	PPS			✓
Indiana Regional Medical Center in Indiana, Indiana County	PPS			✓
Meadville Medical Center in Meadville, Crawford County	PPS			✓

NOTE: Hospital Type indicates whether the hospital is an acute care hospital reimbursed under the prospective payment system (PPS) or a critical access hospital (CAH) that receives cost-based reimbursement.

Hospital and Healthsystem Association of Pennsylvania

The Hospital and Healthsystem Association of Pennsylvania collaborated with the Commonwealth on the Model design and continues to support the RHRO with hospital recruitment. The Hospital and Healthsystem Association of Pennsylvania is also a member of the RHRCA Board.

Healthcare Council of Western Pennsylvania

Similar to the role of the Hospital and Healthsystem Association of Pennsylvania, the Healthcare Council of Western Pennsylvania collaborated with the Commonwealth on the Model design and continues to support the RHRO with hospital recruitment.

TA and Implementation Contractors

The DOH engaged a number of TA providers and implementation contractors to recruit hospitals, provide data analysis and research, guide the development of hospital transformation plans, and provide education and resources for clinical transformation. The following TA and implementation contractors were engaged for the pre-implementation period through PY2 (2020).

McKinsey & Company (Pre-Implementation Period). McKinsey & Company, a management consulting organization, was engaged during the pre-implementation period to support Cohort 1 hospitals participating in PY1 (2019) in developing their global budgets and transformation plans. McKinsey's involvement with the Model ended in late 2018.

Pennsylvania Office of Rural Health. The Pennsylvania Office of Rural Health is a partnership between the Federal Office of Rural Health Policy (FORHP), the Commonwealth, and the Pennsylvania State University (PSU) and is located in the Department of Health Policy and Administration at PSU.³⁸ The RHRO contracted with the Pennsylvania Office of Rural Health through a master ordering agreement to provide TA and research,^h including a formative evaluation, to understand facilitators and challenges of the Model. Through this agreement, the Pennsylvania Office of Rural Health engaged additional TA providers to support Model implementation: Mathematica, Rural Health Value, Quality Insights, and Stroudwater Associates.

Mathematica. Mathematica, a policy and research organization, was engaged in January 2019 to support hospitals, payers, and the RHRO. Through a subcontract with the Pennsylvania Office of Rural Health, Mathematica is supporting implementation of the global budget methodology, hospital recruitment and TA, and payer data submissions.³⁹ⁱ

^h With the establishment of the RHRCA, the master ordering agreement is no longer applicable.

ⁱ Beginning in October 2020, the RHRCA is directly contracting with Mathematica.

Rural Health Value. Rural Health Value, a partnership of the RUPRI Center for Rural Health Policy Analysis at the University of Iowa and Stratis Health, was funded by FORHP in 2012 to accelerate rural-centric adaptation to the volume-to-value transition in health care.³¹ During the pre-implementation period, Rural Health Value was funded by FORHP to provide research and resources for the Model. The Pennsylvania Office of Rural Health contracted with Rural Health Value beginning in PY1 (2019) to provide individualized TA to hospitals as they developed and updated their transformation plans.^j

Quality Insights. Quality Insights is a nonprofit organization focused on using data and community solutions to improve health care quality. Quality Insights was contracted to provide clinical TA to hospitals in implementing transformation plans, specifically in the area of chronic obstructive pulmonary disease (COPD).

Stroudwater Associates. Stroudwater Associates is a health care consulting firm with expertise in rural health care finance. Stroudwater Associates is the lead financial advising subcontractor and supports the Commonwealth's hospital recruitment. Their engagement with Model was limited to 2019 to assist with 2020 hospital recruitment.

^j Beginning in October 2020, the RHRCA is directly contracting with Rural Health Value.

Chapter 3: Model Participation

Key Takeaways

Model Reach



- A variety of hospitals (small CAHs and larger PPS hospitals; system-owned and independent) participated in the Model's first year, indicating that this approach to payment and delivery reform has broad appeal.
- Although all participating hospitals have been retained to date, the Commonwealth has not met its hospital participation scale targets.
- The Model's broad definition of rurality, which includes areas not federally designated as rural, may have implications for external generalizability.
- All-payer participation (Medicare, Medicaid, and commercial) is important to fully realize the incentives of the Model's global budget system.

Motivating Factors for Hospital Participation



- Building relationships and trust between the CMMI, the Commonwealth, and hospitals were identified as an essential part of the application process.
- Hospitals reported that their decisions to participate in the Model were motivated in large part by potential short- and long-term financial benefits.

Payer Participation



- CMS support is key to the Model's sustainability because of the large share of Medicare FFS discharges and their role in the Model's design and implementation.
- Due to high rates of Medicare Advantage and Medicaid managed care enrollment in Pennsylvania, commercial payers are essential to attaining the Model's payer participation scale targets.
- Commercial payers were motivated to join the Model by a desire to stabilize and sustain rural hospitals but expressed reservations about hospital eligibility, global budget methodology, and accountability for transformation.

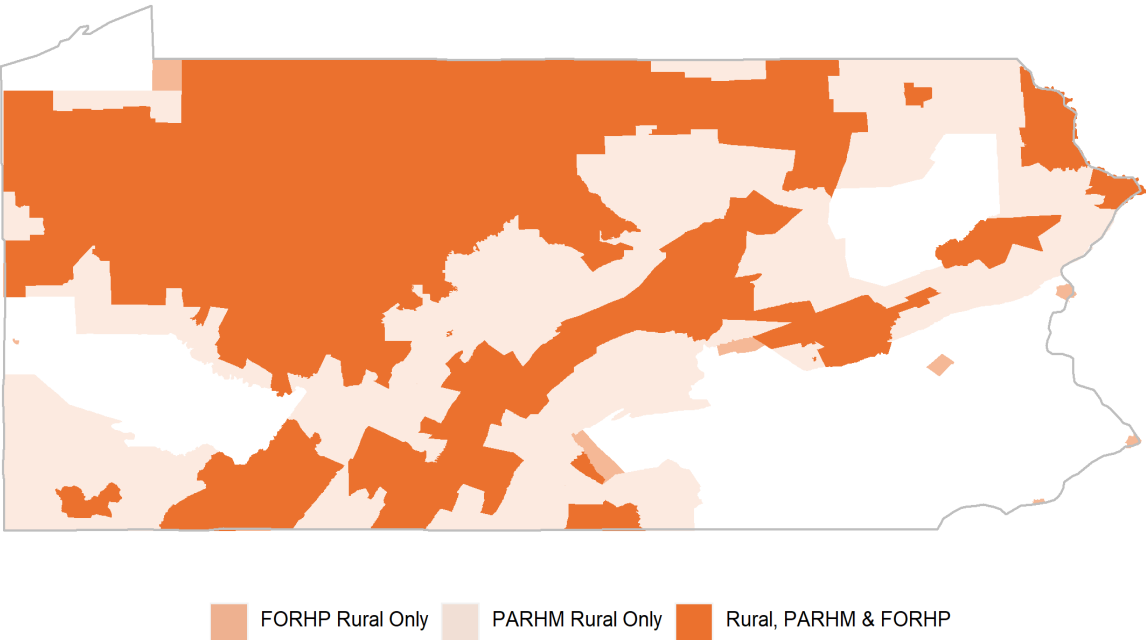
In this chapter, we discuss key features of participating hospitals and payers, and how these features relate to decisions to participate in the Model.

3.1 Model Eligibility and Scope

As described in **Chapter 2**, the Model is open to both CAHs and acute care hospitals paid under Medicare PPS in rural areas of Pennsylvania, using the Center for Rural Pennsylvania’s definition of a population density of less than 284 persons per square mile.³ This definition is much broader than federal definitions of rurality, which may have implications for generalizability of the findings from the PARHM to other areas considered rural.^k **Exhibit 3.1** depicts the overlap in areas defined as rural by FORHP and those designated as rural by the Commonwealth for purposes of the PARHM.

Of the five Cohort 1 participating hospitals, all except Geisinger Jersey Shore are in areas designated as rural by FORHP, based on metropolitan designation and Rural-Urban Commuting Area codes. Additionally, only Endless Mountains is in an area designated as a primary care Health Professional Shortage Area.^l

Exhibit 3.1. Rural Areas as Defined by the Commonwealth and FORHP

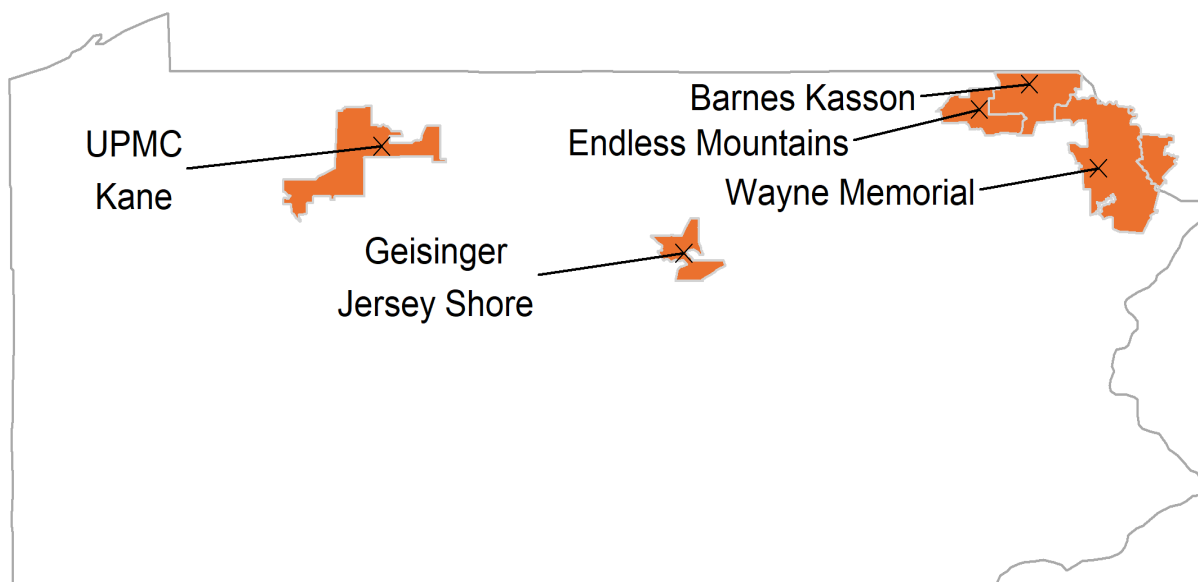


^k Per the 2019 PARHM State Agreement, CMS identified 67 hospitals in the Commonwealth (15 CAH, 52 PPS) as eligible for participation in PARHM. By comparison, only 40 hospitals (10 CAH, 30 PPS) would be eligible when considering the FORHP definition of rurality (2013 Rural-Urban Commuting Area Codes via USDA Economic Research Service).

^l Accessed via [HRSA's Health Professional Shortage Area Find Tool](#).

As of 2018, 89,180 residents, including 19,575 Medicare-eligible residents, lived in the hospital service areas of the five hospitals participating in the Model in PY1 (2019) (**Exhibit 3.2**).^m These five hospitals had a total of 193 acute care inpatient beds and 28,442 all-payer admissions in 2018, including 3,570 Medicare discharges.⁴⁰

Exhibit 3.2. Pennsylvania Hospital Service Areas for Cohort 1 Model Participants



Of the five Cohort 1 Model hospitals, Wayne Memorial serves the greatest number of people, with a population of 39,569 in its hospital service area (**Exhibit 3.3**). With 9,657 beneficiaries aged 65 and older (24.4 percent of the total population), Wayne Memorial also serves the highest proportion of Medicare-eligible beneficiaries. Overall, the communities served by the five Cohort 1 Model hospitals are largely white, have higher rates of uninsured compared to the Pennsylvania average (6.2 percent), and low unemployment rates.

^m Hospital service areas are defined using the 2018 [Dartmouth Atlas Data](#). Population data is from the 2018 5-year estimates of the American Community Survey (ACS).

Exhibit 3.3. Residents of Communities Served by Cohort 1 Model Participants were Predominantly White and 65 Years and Over

Category	Barnes-Kasson	Endless Mountains	Geisinger Jersey Shore	UPMC Kane	Wayne Memorial
Total Population	12,488	10,088	14,374	12,661	39,569
Population 65 and older (%)	2,669 (21.4)	2,292 (22.7)	2,754 (19.2)	2,203 (17.4)	9,657 (24.4)
Male, %	50.6	48.9	50.2	65.3	50.3
White, %	97.2	96.9	98.0	77.9	94.5
Below Poverty Line, %	13.3	10.7	11.2	16.2	11.1
Unemployment, %	2.9	2.7	3.4	3.2	3.2
Uninsured, %	7.3	6.9	5.2	4.2	6.1

SOURCE: American Community Survey, 2018 5-year estimates

In 2019, total net patient revenue for Cohort 1 hospitals was \$173.97 million, and Medicare’s share was \$77.5 million (both Medicare FFS and Medicare Advantage).ⁿ Medicare FFS global budget payments to Cohort 1 hospitals in 2019 totaled \$41.8 million; in this report, due to data availability, we focus our spending and utilization analyses on Medicare FFS data.^o

3.2 Participating Hospitals

Overall, the PARHM has generated interest from a variety of hospitals, demonstrating its appeal to a range of potential participants (**Exhibit 3.4**). Two important factors in terms of Model participation are hospital affiliation (i.e., whether a hospital is independent or part of a larger system) and hospital type (i.e., CAH or PPS). These two structural components are associated with many of the differences among the participating hospitals, and throughout this report we highlight the differences that are impacted by these key factors. Notably, among the Cohort 1 hospitals, there are two independent CAHs, one system-owned CAH, one independent PPS hospital, and one system-owned PPS hospital; this limits our ability to make inferences about any single hospital type or affiliation due to small sample size.

With only five hospitals, comparison to eligible nonparticipating hospitals is difficult; however, it is notable that of the 15 CAHs in Pennsylvania, three chose to participate in the PARHM in its first year.⁴¹ Wayne Memorial is an outlier among the five Cohort 1 participants, with more beds and higher net patient revenue in 2018 than the other four participating hospitals combined.

Overall, PARHM hospitals have key differences that will impact our interpretation and discussion of findings. The small number of Cohort 1 participating hospitals, coupled with key differences in hospital type and affiliation, limits the external generalizability of the findings in this report.

ⁿ Data from the 2019 Pennsylvania Health Care Cost Containment Council (PHC4).

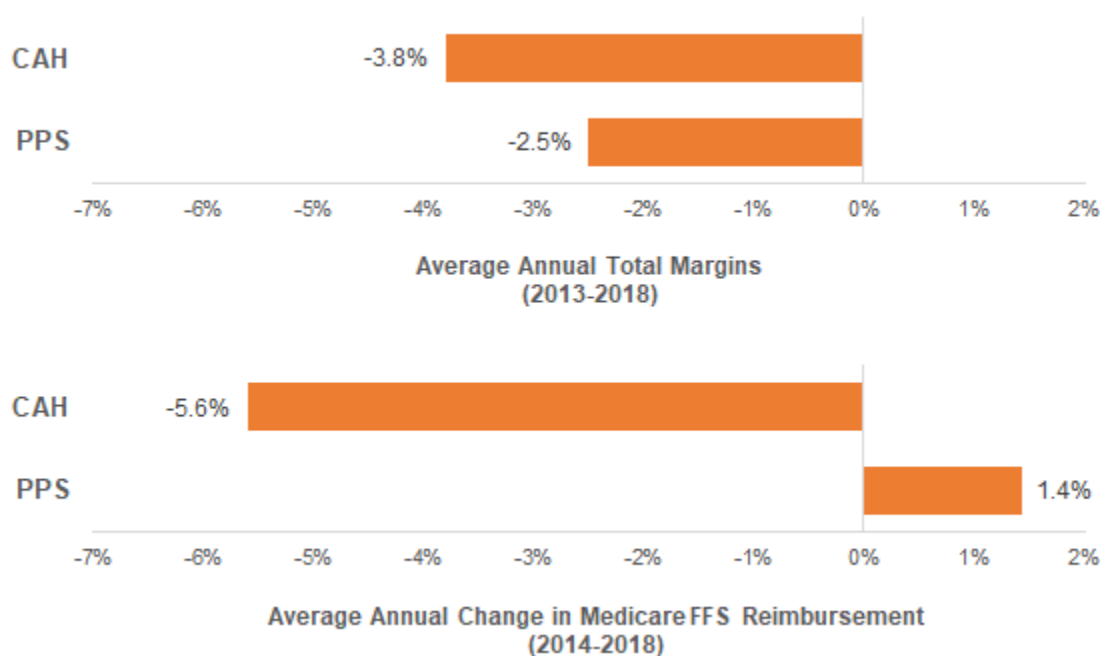
^o Data from 2019 Medicare FFS claims.

Exhibit 3.4. Cohort 1 PARHM Hospitals Varied by Hospital Type, Size, and Financial Status

Category	Barnes-Kasson	Endless Mountains	Geisinger Jersey Shore	UPMC Kane	Wayne Memorial
Affiliation	Independent	Independent	System, Geisinger	System, UPMC	Independent
Hospital Type	CAH	CAH	CAH	PPS	PPS
Number of Beds	25	25	25	31	87
Medicare Net Patient Revenue Share	46%	53%	42%	41%	42%
Net Patient Revenue	\$20,086,692	\$19,580,558	\$21,129,549	\$18,484,178	\$89,673,972
Days Cash on Hand	3.64	2.76	Cash held at system level	22.85	258.52

SOURCES: PARHM PY1 Hospital Transformation Plans; Medicare Cost Reports (FY2018)

In terms of financial status, Cohort 1 hospitals had, on average, negative total margins in the years leading up to the Model; CAHs also showed a decrease in average annual Medicare FFS reimbursement (**Exhibit 3.5**). Participating hospitals cited their suboptimal financial condition as a motivating factor for participation during interviews with hospital leadership (see next section for more details). For a more detailed assessment of financial performance, see **Chapter 5** in this report.

Exhibit 3.5. On Average, Cohort 1 PARHM Hospitals Operated with Negative Annual Total Margins and Showed Decreased Annual Medicare FFS Reimbursement Prior to Joining the Model

SOURCES: Medicare Cost Reports (FY2013-FY2018); Medicare FFS Claims (CY2014-CY2018)

In the next section, we explore the factors that motivated the five Cohort 1 hospitals to participate in the Model, using primary data collected from interviews with hospital leadership and stakeholders. We report our findings thematically to protect the identity of respondents.

3.3 Hospital Decision to Participate

Hospital leaders appreciated the support they received from Commonwealth and CMMI officials during the multi-month Model decision-making process. The five Cohort 1 hospitals that joined the Model in PY1 (2019) each reported engaging in a multi-month period of exploration before deciding to participate. Leaders across hospitals discussed the importance of the access they had to Commonwealth officials during this process and were complimentary of that support, as illustrated by this hospital leader's reflection:

We met some really amazing people who were clearly dedicated and passionate about this work, but they were also learning as they went, right? It was new to everyone. They spent time with us, and they came to our campus, and we worked back and forth. I think negotiation is not the proper word, but we really talked through a lot of things and what was achievable in the timeframes and what probably was not achievable in the timeframe. We enjoyed them very much. Again, they were learning as they went, too. That's just exactly what you would expect with something so fresh.

Some hospital leaders also mentioned the TA they received during their decision-making period to prepare their application materials, but the details of those experiences were no longer easy to recall.^{p42}

Most hospital leaders expressed concern about the financial details of the Model, which were being finalized during their decision-making period. For example, some hospital leaders were unsure whether the needed payers would participate if their organization chose to sign onto the Model. One hospital made it clear that its participation was dependent on a guarantee that Medicare would continue with cost-based reimbursement for CAHs. Equalizing Medicare payments across the year “rather than having to spend half of your week trying to redistribute money and decide where you're going to get this, to pay that, and then pay that back” was noted by leaders from multiple hospitals, such as this one, as a strong motivator for considering the Model.

Several hospital leaders commented that the Model would provide their hospital some time to determine longer-term plans. But one hospital board member said the hospital focused on the sustainability of Model transformation activities in their discussions, asking, “And then what do we do in five years? Do we get dropped like a hot potato and we go down the drain anyway or is there something there that we can use to sustain ourselves and will the payers still be part of that?” The Model provides a two-year transition period for hospitals to transition back to FFS if the Model ends or is terminated.²

Among the five Cohort 1 hospitals, some implemented top-down decisions, while others pursued a more bottom-up, buy-in strategy as part of the Model exploration process. Two independent hospitals

^p Additional details regarding the TA provided by Rural Health Values during the application process can be found here: <https://ruralhealthvalue.public-health.uiowa.edu/files/PARHM%20Model.pdf>

reported deep engagement by the chief executive officer (CEO) and their respective boards of directors, while the third independent hospital handled the exploration and decision-making largely within the hospital's administrative team. The remaining two hospitals, both of which became system affiliates during the consideration process, reported that the system had to be brought into the conversation once the mergers progressed and that it was ultimately the system that had the final say in the decision to participate. In one case, high-level system leaders set the expectation for participation, while in the other case, system leaders needed to be convinced to allow the hospital to participate.

The level of physician engagement in the decision-making process also varied across hospitals.

Some hospital leaders noted that although physicians assume no financial risk in the Model, they drive the quality of patient care and are an important source of patient referrals to hospitals and, therefore, are an integral part of the Model's potential success. Hospital leaders engaged physicians in various ways during the application process, including some who sought physician buy-in as part of the deliberation period and some who did not engage physicians until after the application was submitted. The engagement strategies used by hospitals leaders varied, in part, by the hospital-physician relationship (e.g., employed physicians, contracted physicians, or community-based physicians with admitting privileges). One hospital leader explained its approach as reassuring physicians that the hospital's participation would not undermine physician autonomy to care for patients and would instead provide them with additional help, as in: *"What can we take off your plate?"* Another hospital leader described the process of introducing the idea over time to encourage physician leaders to take ownership, saying, *"Just plant the seed...and eventually it will come back to you as their idea and we're all in."*

The majority of hospitals reported that the prospective calculations and consistent cash flow were central to their decision to participate, but some hospitals' motivations went beyond financial considerations. This finding aligns with hospitals' declining margins and Medicare FFS revenues in the years leading up to Model implementation (see **Exhibit 3.6** and **Chapter 5** for more details). For example, one hospital with a positive margin and adequate cash reserves decided to participate due to longer-term downward trends in patient utilization.

Another hospital leader reported not needing the financial stability offered by the Model because its affiliated system provided the *"bank"* to support the hospital financially and instead being motivated to help other hospitals by being part of the movement. In another case, hospital leaders decided to continue participation as they realized the Model is an incubator of innovation and allowed for flexible transformation. A series of discussions with the Commonwealth ultimately led to a new hospital transformation plan that included organizational-level changes in addition to planned changes to service lines and specific areas of care in the hospital's original plan. Several other hospitals also reported being motivated to join because as one said, the shift toward population-based health and value-based payment is the *"way the world is going."*

All hospitals valued the opportunity to transform care through the Model. Whether or not the financial aspects of the Model were central to their hospital's priorities, leaders from all five of the Cohort 1 hospitals indicated that the ability to change the process of care through the Model was important to them. As stated by one hospital CEO:

We were one of the few organizations that joined this Model, not because of financial necessity, we joined this Model because I saw this as a way to really transform our health

care system... when you say you're a health care system, really be talking and walking the same direction [keep people in their community healthy].

3.4 Payer Participation

An important design feature of the PARHM is the potential for all-payer participation, creating greater incentives and flexibility for hospitals to transform care. Each participating hospital's global budget must account for 75 percent of eligible net patient revenue in PY1 (2019) and 90 percent in PY2 (2020) and beyond; multiple payers must participate to meet these scale targets.² Three of five Cohort 1 hospitals met their PY1 payer participation scale targets, and a fourth hospital is expected to meet the target after reconciliation to its global budget to account for planned service line growth as provided within the global budget methodology FFS growth.⁴³

Commercial payers cover privately insured individuals and also contract with CMS to cover Medicare Advantage beneficiaries and contract with the Commonwealth to cover Medicaid managed care enrollees. Nearly 45 percent of Pennsylvania Medicare beneficiaries are in Medicare Advantage^q and an estimated 92 percent of Pennsylvania Medicaid enrollees are in managed care plans.^r Given the large proportion of Medicare Advantage beneficiaries and Medicaid managed care enrollees, commercial payer participation goes beyond just the privately insured and is integral to the Model's success and sustainability. In fact, the five PARHM commercial payers made up 29 percent of the Cohort 1 hospitals' eligible net patient revenue in calendar year (CY) 2019 and 69 percent of the Cohort 2 hospitals' eligible net patient revenue in CY 2020.^s Below we describe themes related to payer participation decisions that emerged from a review of Model documents and interviews with payers.

CMS support is key to the Model's sustainability because Medicare discharges comprise over half of participating hospitals' stays.^t CMS has been committed to the Model as a participating payer since its

^q IBM analysis of CMS Medicare Advantage State/County Penetration enrollment data December 2020 available at: <https://www.cms.gov/research-statistics-data-and-systems/statistics-trends-and-reports/mcradvpartdenroldatama-state-county/ma-statecounty-penetration-2020-12> (the statewide penetration rate is 44.8 percent based on the total number enrolled in Medicare Advantage divided by the total eligible Medicare beneficiaries).

^r This estimate is based on the sum of enrollment in the Commonwealth's physical health program (HealthChoices) and managed long-term services and supports (MLTSS) program (Community HealthChoices) divided by the total number of Medicaid beneficiaries (September 2020 Medicaid managed care enrollment reports on the Pennsylvania Department of Human Services website). The Commonwealth also has a behavioral health managed care program, but the individuals enrolled in that program are generally also enrolled in either HealthChoices or Community HealthChoices for their other Medicaid services. Additional managed care programs not included in this estimate are: the LIFE program (Pennsylvania's Program for All-inclusive Care for the Elderly) with roughly 7,000 enrollees and a small program in four counties serving adults with autism (the Adult Community Autism Program).

^s The Cohort 1 hospital percentage is based on the information found in Figures 25 through 29-1 in the Quarter 15 Progress Report: Rural Health Redesign Model, October 30, 2020 (sum of the 5 cohort 1 hospitals' commercial payer revenue divided by the sum of their eligible net patient revenue). The Cohort 2 hospital percentage comes from the 2020 *Global Budgets by Payer Type* chart in the same report. These percentages may shift after all adjustments have been made in the global budget reconciliation process.

^t IBM analysis of IBM Watson Health Projected Inpatient Database (PIDB) specific to the PARHM PY 1 and 2 participating hospitals (CY 2018 data). The PIDB is an all-payer inpatient hospital database that includes short-term, general, non-federal

inception, as is the case with all state-specific models tested by CMMI. Specifically, all Medicare FFS beneficiaries are included in the global budget calculations. CMS encourages but does not require commercial payers covering Medicare Advantage beneficiaries to participate in the PARHM.^u

Pennsylvania has high Medicare Advantage penetration, and Medicare Advantage beneficiaries are included in the Model if their health plans (commercial payers) participate. Pennsylvania has one of the highest Medicare Advantage enrollment rates in the nation, with 44 percent of Medicare beneficiaries enrolled in a Medicare Advantage plan in 2019.⁴⁴ Medicare Advantage enrollment varies considerably across the Commonwealth, with the highest percentages concentrated in the southwestern area of the state.⁴⁵ On average, rural counties in Pennsylvania have a modestly higher percentage of Medicare beneficiaries enrolled in Medicare Advantage than urban counties (47 percent and 44 percent, respectively).^v CMS is supportive of Medicare Advantage participation in PARHM; however, Medicare beneficiaries enrolled in Medicare Advantage are not part of the Model unless the commercial insurers administering the Medicare Advantage plans decide to participate. The five PARHM commercial payers made up 87 percent of the PARHM Cohort 1 and Cohort 2 hospitals' Medicare Advantage discharges in CY 2018. Commercial payers' motivations and decisions around participating in the Model are described in a subsequent section.

A majority of Pennsylvania's Medicaid enrollees are in managed care plans administered by commercial payers. The majority of Medicaid enrollees (2.5 million) are enrolled through the Commonwealth's HealthChoices physical health program and the remainder (379,000) are part of the CHC MLTSS program.⁴⁶ Medicaid FFS enrollees represent a very small share of the overall Medicaid population in Pennsylvania and are not included in the Model.^w Analysis of CY 2018 Pennsylvania hospital discharge data shows that Medicaid FFS enrollees accounted for fewer than 3 percent of all Pennsylvania acute care hospital stays and fewer than 2 percent of the Model Cohort 1 and Cohort 2 hospitals' stays.^x

Four of the five commercial payers participating in the Model (all but Highmark) also participate in one or both of the Commonwealth's Medicaid managed care programs.^y The four participating payers have included their Medicaid managed care lines of business in the PARHM (See **Exhibit 3.7**). Together, these payers made up 82 percent of the PARHM Cohort 1 and Cohort 2 hospitals' Medicaid managed care discharges in CY 2018. HealthChoices enrollees are included in the Model through the commercial

hospitals. Medicare stays include both FFS and Medicare Advantage. Medicare represented a slightly smaller share, 48 percent, of all Pennsylvania acute care hospital discharges in the same time period.

^u As noted, commercial payers' participation is needed to meet payer participation scale targets. However, the RHRO's (now RHRCA's) recruitment efforts have been focused more broadly on commercial payers' participation rather than specific business lines such as Medicare Advantage.

^v IBM analysis of the CMS Medicare Advantage State/County Penetration enrollment data December 2020, using the Center for Rural Pennsylvania's categorization of rural and urban counties.

^w There is no reference to Medicaid FFS as an included payer in the Technical Specification for rural hospital global budget or other Model documents.

^x IBM analysis of the IBM Watson Health PIDB.

^y Ibid. Highmark does not participate directly in Medicaid but participates through its affiliate Gateway.

payers that also participate in HealthChoices and in the zones that include PARHM hospital service areas.

The inclusion of CHC enrollees in the Model is somewhat challenging to estimate because of the composition of this population (dual-eligible versus Medicaid-only) and variation in Medicare enrollment (FFS versus Medicare Advantage). Over 90 percent of CHC enrollees are dual-eligible beneficiaries.⁴⁷ Thus, CHC enrollees are predominantly Medicare beneficiaries from the standpoint of Model participation. CHC dual-eligible beneficiaries can either remain in Medicare FFS or enroll in a Medicare Advantage program. Approximately half of CHC dual-eligible beneficiaries are in Medicare FFS, with the remainder enrolled in Medicare Advantage (primarily in Dual Eligible Special Needs Plans [D-SNPs]).⁴⁷ Four of the participating commercial payers offer D-SNPs, and combined, they have the majority of CHC D-SNP enrollment (most of the CHC beneficiaries enrolled in D-SNPs for Medicare coverage are enrolled in one of these four plans).^z Accordingly, we estimate that most CHC beneficiaries receiving services from participating hospitals could be included in the Model, either as Medicare FFS beneficiaries or through D-SNP enrollment.^{aa} Overall, the commercial payers reported that they served approximately 184,252 Medicaid managed care enrollees in the Model service areas in the second quarter of calendar year 2020 (including Cohort 1 and Cohort 2 hospitals).⁴³

Characteristics of Commercial Payers in PY1 (2019) and PY2 (2020)

Commercial payers were recruited based on historic market shares in areas where participating hospitals operate and include four Pennsylvania-based payers and one national insurer. The recruitment of commercial payers to participate in the Model began during the pre-implementation period in 2017 (PY0). The DOH^{bb} focused recruitment efforts on commercial payers with the highest market shares in areas where hospitals were likely to or had already agreed to participate. Recruitment included payer-specific meetings and opportunities to be involved in discussions related to the Model design. Five commercial payers agreed to participate (**Exhibit 3.6**). Geisinger Health Plan, Highmark, and UPMC joined the Model in PY1 (2019), while Aetna and Gateway joined in PY2 (2020).^{cc} With the exception of national carrier Aetna, all commercial payers are nonprofit, Pennsylvania-based plans.

^z Participation in CHC is defined in this context as offering both a CHC Medicaid managed care plan and a CHC D-SNP. There are three commercial payers that participate in CHC as Medicaid managed care plans, and they are all required to also offer D-SNPs to facilitate “aligned” enrollment of beneficiaries in the same plan for Medicare and Medicaid.

^{aa} It’s also possible that some CHC dual-eligible beneficiaries could be included in the Model through their enrollment in a non-D-SNP Medicare Advantage product that is offered by a PARHM commercial payer. Just over 11% of CHC dual-eligible beneficiaries are enrolled in other types of Medicare Advantage plans.

^{bb} Recruitment efforts are now handled by the RHRCA.

^{cc} Gateway agreed to participate in PY1 but did not have sufficient volume with the Cohort 1 hospitals to enter into agreements with them.

Exhibit 3.6. PARHM Commercial Payers in PY1 (2019) & PY2 (2020) were Largely Regional Nonprofit Entities that Offered Commercial, Medicare Advantage, and Medicaid Managed Care Products

Demographics

Category	Aetna	Gateway	Geisinger	Highmark	UPMC
Participation Years	PY2	PY2	PY1 & PY2	PY1 & PY2	PY1 & PY2
Geographic Area	National	Regional	Regional	Regional	Regional
Integrated Health Systems [†]			X	X	X
# PARHM Hospitals with which Payer has Agreements	13	5	3 in PY1 3 in PY2	13	13

Ownership Type

Category	Aetna	Gateway	Geisinger	Highmark	UPMC
For-profit	X				
Nonprofit		X	X	X	X

Product Lines Included in Model

Category	Aetna	Gateway	Geisinger	Highmark	UPMC
Commercial ^β	X	Does not offer	X	X	X
Medicare Advantage	X	X	X	X	X
Medicaid Managed Care	X	X	X	Via affiliate, Gateway	X
Quality (NCQA rating)	4.0	4.0	4.0	3.5	4.5

SOURCES: Payer interviews for all characteristics except profit status (company websites) and quality (National Committee for Quality Assurance ratings for Pennsylvania commercial insurance plans).

NOTES: Both PY1 (2019) and PY2 (2020) hospitals are included here because the qualitative findings below reflect all five of the participating payers in PY1 and PY2. NCQA = National Committee for Quality Assurance.

[†] In addition to operating as a payer in the PARHM, Geisinger and UPMC health systems each include one participating hospital (Geisinger Jersey Shore, UPMC Kane).

^βThe types of insurance products included in the commercial product line vary by payer (e.g., inclusion of self-insured products).

Commercial payers’ decision to participate was driven mainly by a desire to stabilize and sustain independent rural hospitals. Payers reported that they have an important role in helping rural hospitals transform care delivery to improve hospitals’ financial stability and capabilities to more effectively serve the needs of their communities. Commercial payers recognized that savings were not likely in the near term, but they did foresee a path to savings by supporting hospitals in developing and carrying out transformation plans that reflect community needs. One stakeholder commented that commercial payers were concerned about the financial impact of COVID-19 and wanted to do a “*deep dive*” on the finances for 2020. Commercial payers noted that the Model’s use of a global budget aligned with their overall shift to value-based payment to drive quality and efficiency improvements and provided an opportunity to test value-based payment with rural providers. One payer summarized the important role of rural hospitals and recognizing the payer’s role in helping them remain open and independent:

I do think there's value in working with the community hospitals and the community providers because they are the ones that are really serving our members, Medicare members, Medicaid members, and it's on us to help them do things differently because if we don't ...they're either closing their doors or somebody else is coming in to buy them.

Commercial payer leadership expressed strong buy-in and long-term commitment to the Model.

Commercial payer representatives indicated a long-term commitment to the Model, and at the time of the interviews, they did not anticipate that their organizations' leadership would periodically reconsider Model participation.^{dd}

Commercial payers appreciated the flexibility in deciding which participating hospitals they signed agreements with and the associated business and revenue lines. Three payers signed agreements with all of the participating hospitals, while the other two payers signed agreements with a subset of participating hospitals. The majority of payers that signed with a subset of hospitals noted that the main reason for not signing with some was because they had little or no market share at those hospitals.

Payers made individual determinations with each hospital about business lines (e.g., Medicaid, Medicare Advantage, and private insurance contracts) and service lines through an iterative process, and they plan to continue this approach throughout the Model. Several commercial payers have substantial business with self-insured employers (e.g., through Administrative Service Organizations), and they varied in whether or not they included self-insured employer plans. One included self-insured plans, while the other two excluded all or most because their large employer clients were not yet comfortable with global budget arrangements with hospitals and were not ready to commit. Commercial payers could also determine which service lines to include in their agreements (e.g., inpatient acute care, outpatient ED). Payers assessed the extent to which their populations used hospitals' service lines to guide decisions about which lines to include in agreements.

Early Experiences and Payer Alignment

Commercial payer experiences were generally positive. Payers reported working successfully with hospitals to sign agreements and believed the Model could reach its goals of sustaining independent hospitals and encouraging care delivery transformation. They were pleased with the transparency of Model design and appreciated the flexibility to craft individual hospital agreements covering which business and service lines would be included and the opportunity to revisit these agreements annually. They also worked collaboratively with TA providers to help them navigate the financial details of the hospital agreements, which often was a lengthy process because the payers and hospitals relied on different data sources. They appreciated being part of Model design and implementation discussions with the Commonwealth, hospitals, and other commercial payers, and believed PARHM leadership listened and responded to concerns. One commercial payer noted: “[PARHM leadership] have built an

^{dd} For one payer, there was some inconsistency between the remarks made by the representative during the interview and the RHRCA 2019 annual progress report, which described a risk in terms of the payer's continued engagement in the Model.

environment for very open candid conversation, which I think is all you can do when you're doing something new."

Commercial payers expressed reservations about hospital eligibility. Payers noted concerns about expanding the participant pool in PY2 (2020) to include larger hospitals in metro-adjacent areas. These larger hospitals generally have greater access to resources, and payers perceived them as less directly critical to rural communities. Another concern about hospital eligibility centered on potential participants' affiliations with larger systems, with payers saying it was the system's responsibility to make sure their rural hospitals are financially viable and "right sized."

While this is the Rural Health initiative, I think some of the hospitals either in the program or in consideration are really not rural. And I think that we have some concerns when you have close proximities to some larger urban areas that you lose some of that need for making sure that patients have access. If they're within 20 minutes of several hospitals, then does that same narrative around the imperativeness of that access still remain for those members?

Commercial payers shared concerns about the global payment methodology, Model complexity, and hospital transformation plan accountability. Several payers voiced concerns about the virtual global budget payment, as one payer representative described:

We really felt strongly around global capitation and global payment. We thought that was one of the true values of this program. But that's not actually what we have. We have what's called a virtual cap, which ultimately looks and feels a lot like continued FFS.

While CMS makes biweekly Medicare payments to participating hospitals based on a global budget calculation, commercial payers chose to pay the hospitals up front for one month's share of the annual global budget while continuing to pay the hospital's claims on a FFS basis, with monthly reconciliations up to the global budget amount (first drawing down the up-front payment to cover shortages between the FFS payments and the budget). Commercial payers decided on the virtual global budget payment methodology in the first year of the Model as an interim step to gain experience with global budget payment. With the RHRCA Board in place to govern a change, the payers may subsequently move to fixed global budget payments in future years.⁴⁸ If the commercial payers' FFS payments exceed the monthly global budgets, the overage is applied to subsequent months. To reduce the risk of payers having to recoup payments from hospitals at final settlement, an interim step has been added to the monthly reconciliation that allows for the comparison of the budget to a 12-month rolling FFS average. Final settlement is supposed to occur between commercial payers and the hospitals roughly six months after the end of the performance year; however, final reconciliation for PY1 (2019) has been delayed.⁴³

Commercial payers described a significant time and resource commitment due to the complexity of the Model and establishing the agreements with each hospital. In some cases, they had to implement global budget payments on top of or in conjunction with existing value-based payment arrangements with hospitals. The commercial reconciliation process is also time consuming because it includes monthly reconciliations and adjustments that require multiple data pulls.

I think for us as an organization, the one challenge I think it is presenting is that it's a lot, it's a big gnarly thing to unwind and try to figure out. Again, you've got all these different hospitals with different viewpoints. It's a significant time commitment, it's a big resource commitment from people around the enterprise. I think that's been the one challenge for us, but again I think it's not a surprise. We knew that coming in, so we've allotted for that, we've accounted for it, but it is quite a workload.

Finally, payers noted that they appreciated the opportunity to review hospitals' transformation plans, which was important for transparency. However, several payers did not believe the hospitals' plans, which included goals and action steps, provided enough detail on how the hospitals would make changes to achieve Model goals. Payers were uncertain about how hospitals will be held accountable for implementation of their plans. One payer referred to the hospital transformation plans as a "black box" in terms of understanding the changes that hospitals are making and how they are tracked. In general, payers recognized the resource constraints faced by rural hospitals in implementing system change and were interested in having a larger role in developing the hospital transformation plans given their business expertise.

Chapter 4: Implementation Experience

Key Takeaways

Stakeholder Perspectives



- Stakeholders agreed that the RHRO in PY1 (2019) and PY2 (2020) was integral in supporting hospitals, encouraging Model participation, and understanding the needs of rural communities. While the RHRCA legislation was delayed, its establishment in 2019 was vital for demonstrating the Commonwealth's continued commitment to the Model.
- The Commonwealth faced challenges recruiting hospitals due to limited staff capacity, hospital merger and acquisitions across the Commonwealth, and the Model being in the early implementation phase.

Technical Assistance and Implementation Support



- Hospitals valued the resources from technical experts and provided positive feedback about the support they received in global budget development.
- Hospitals reported initial challenges with the intensive hospital transformation plan development process, meeting timeframes, and adapting to changing TA teams.
- TA experts provided targeted support to hospitals in both PY1 (2019) and PY2 (2020) but faced challenges due to COVID-19 disruptions and budget reductions in PY2 (2020).

Hospital Experiences



- The biweekly Medicare payments helped hospitals stabilize revenue. While hospitals identified efficiencies, it was challenging to identify sufficient funds to invest in transformation activities.
- Some hospitals had to delay transformation planning due to the limited capacity of staff to support implementation and disruptions from COVID-19.
- Real-time data access and analysis are necessary to support hospitals' understanding of their financial performance; small, rural hospitals have limited internal resources to support these activities for a complex Model.

Quality, Access, and Hospital Performance



- The Commonwealth will report on seven quality measures to assess changes in health outcomes and quality of care for rural residents.
- Stakeholders emphasized the importance of quality measures that are relevant to rural communities and timely data to track patients attributed to the Model.

In this chapter, we describe the implementation experience for Model stakeholders, including Commonwealth agencies and offices, as well as participating hospitals and payers. The analysis in this chapter is based on stakeholder, payer, Cohort 1 hospitals, and community provider interviews conducted virtually from May to October 2020. We supplemented primary data collection with a review of documents, including RHRO presentations and reports. While we only interviewed leadership and staff from Cohort 1 hospitals, our interviews focused on activities and implementation experiences of hospitals and stakeholders to date (i.e., start of the Model to May-October of 2020 when we conducted interviews). Therefore, Cohort 1 hospital and stakeholder primary data include their experiences implementing the Model during the COVID-19 pandemic (March-October 2020). We report our findings thematically to protect the identity of respondents.

PARHM STAKEHOLDERS

- DOH
- Department of Human Services (DHS)
- Pennsylvania Insurance Department (PID)
- RHRO
- The Pennsylvania Office of Rural Health
- Other state officials
- Hospital and Healthsystem Association of Pennsylvania
- Hospital Council of Western Pennsylvania

TA EXPERTS

- The Pennsylvania Office of Rural Health
- Mathematica
- Quality Insights
- Rural Health Value
- Stroudwater Associates
- McKinsey
- Federal Office of Rural Health Policy
- National Rural Health Association

4.1 Stakeholder Perspectives of PARHM Implementation [RQ2b, RQ8]

Model Design and Development

Stakeholders have differing priorities for the Model. Several respondents mentioned that not all stakeholders share the same primary goal for the Model. CMMI's goal is to improve population health outcomes, increase access to high-quality care, and improve the financial viability of acute care hospitals in rural Pennsylvania, while also reducing the growth of hospital expenditures across payers.² While the Commonwealth agrees that it is important to reduce costs and meet scale targets, its main priority is keeping rural hospitals open and improving access to care. One stakeholder believed that the leading driver of the Model was maintaining access to care in rural communities. Another stakeholder commented that *"savings should be the tertiary or quaternary goal for this program"* since it may take several years of transformation to generate meaningful levels of savings.

Hospitals would have benefited from upfront funding to support hospital transformation plan implementation. While the Commonwealth provided TA for transformation plan development, hospitals did not receive additional funds—beyond anticipated savings from the global budget—to implement transformation plan activities. As one stakeholder explained, *"There's the reality of what you can scratch together when you're really only able to finance the transformation through improved marginal revenue*

under the global budget going forward.” Most stakeholders noted the challenge for small, under-resourced hospitals to find and dedicate funds to implement transformation activities. Additional funds would enable hospitals to cover staff time or hire additional staff to implement programs, such as a care coordinator for SUD services or to invest in IT infrastructure to expand telehealth services.

Commonwealth Oversight and Monitoring

In PY1 (2019) and PY2 (2020), the RHRO provided instrumental support; stakeholders viewed the establishment of the RHRCA in November 2019^{ee} as vital for encouraging Model participation. The RHRO has consistently supported participating hospitals by providing education on global budgets and directing them to resources (such as grant opportunities) to help facilitate Model implementation. Hospitals valued the RHRO’s support (described in **Chapter 3.3**).

Initially, stakeholders questioned whether the Model would proceed due to the delay of the RHRCA legislation. However, the creation of the RHRCA confirmed the Commonwealth’s commitment, which increased stakeholder confidence in the Model. Stakeholders commented that hospitals believed it was important to have an independent board oversee the Model, as some prospective hospitals had reservations about submitting financial and operational data to the state agency if the legislation authorizing the RHRCA failed. Stakeholders unanimously agreed that the creation of the RHRCA increased Model participation, as described by one stakeholder, *“When the legislation was passed, that really did open things up quite a bit for participation.”*

Rural Health Redesign Center Authority (RHRCA) Legislation

Delays in the passage of legislation to establish the RHRCA required the Rural Health Redesign Office (RHRO) to operate the Model from the pre-implementation period into PY2 (2020) until the RHRCA was established. This included recruiting hospitals for the first two performance years, as the recruitment period for Cohort 1 and 2 hospitals ended by the time the RHRCA was approved.

Understanding the realities and needs of rural communities is essential for Model implementation. Many stakeholders commented on the importance of Model leaders truly understanding the needs of rural communities given the structural, economic, and cultural differences between rural and urban environments. Part of the RHRO’s and RHRCA’s role has been—and will continue to be—providing this education. The RHRCA Board includes hospitals and payers, which helps ensure Model participants’ perspectives are represented as part of Model decisions and design. As one stakeholder noted, *“There’s a gap between theory, practice, and educating. I’ve spent a lot of time trying to educate the realities of rural. I personally don’t know if anybody understands rural unless you’ve lived rural.”*

Participant Recruitment

The Commonwealth faced challenges meeting hospital recruiting targets in PY1 (2019) and PY2 (2020). Stakeholders attributed these challenges to the Model being in the early implementation phase, limited RHRO staff capacity to support recruitment, and the eligibility criteria (described in **Chapter 3.1**).

^{ee} On November 27, 2019, the Pennsylvania General Assembly authorized establishment of the Pennsylvania RHRCA. [add a note about the delays] Please see Chapter 2 for additional details.

One stakeholder suggested that the lack of tangible data on how hospitals are performing financially and operationally can hinder initial recruitment as prospective participants are waiting to see how early adopters have benefitted from the Model.

Once the RHRCA was implemented, recruitment responsibilities were managed jointly by the RHRO and the RHRCA for PY3 (2021) participants. The RHRCA has fewer staff compared to the RHRO at the initial implementation of the Model. The reduction in CMMI funds to the RHRCA, due to the failure to meet scale targets, magnified the existing hiring challenges that made it difficult to employ and maintain staff. Between building the budgets and creating the transformation plans, reduced staff capacity created challenges for achieving Model participation goals. COVID-19 also impacted the recruitment process in 2020, as staff members were no longer able to meet with eligible prospective participants in person and hospital leaders were focused on response efforts.

Hospital mergers and acquisitions within Pennsylvania have created barriers to recruiting because there are fewer independent hospitals in the Commonwealth. This shift in Pennsylvania hospital ownership reflects the national trend of increased mergers among rural U.S. hospitals.⁴⁹ In 2015, 49 of the 67 hospitals identified as eligible to participate in the Model were independent. The number of independent hospitals decreased to 17 with an increase in mergers and acquisitions from 2015 to 2019.⁵⁰ As of PY2 (2020), 11 of the 17 independent hospitals are participating in the Model.^{ff}

This shift led to recruiting challenges because the value proposition of Model participation is not the same for an independent hospital versus a system-affiliated hospital. Hospitals affiliated or owned by larger health systems typically are not as financially strapped as independent hospitals because they have access to system resources. The RHRO faced challenges recruiting hospitals affiliated with systems because these hospitals either were not as concerned with financial stability or larger systems were more inclined to close a financially troubled rural hospital rather than invest in transformation. RHRO staff spent extensive time educating health system leadership about the importance of maintaining a hospital in rural communities.

While a part of the Model design, annual adjustments to the participation agreement create more burden for participating hospitals. Participants have to recommit to the Model and go through the process each year because of amendments to participation agreements. In one case, the Commonwealth had to convince a hospital to continue participating. In addition to carving out review time, each hospital incurs legal costs for reviewing the agreement before signing it. System-affiliated hospitals may have in-house legal and fiscal expertise, but independent hospitals may need to use external legal and financial consulting services to consider the impact of the agreement.

The Commonwealth's expansive definition of "rural" was advantageous for recruitment. As described in **Chapter 2.2**, the Commonwealth used its own definition of rural to determine hospital eligibility for Model participation versus using the federal rural definition. Several stakeholders mentioned that using the Commonwealth's definition helped expand the pool of eligible hospitals to 67. However, some

^{ff} As of PY3 (2021), 11 of the 13 independent hospitals are participating in the Model. Tyrone Hospital and Monogahela Valley Hospital were recently acquired by Penn Highlands Healthcare.

hospitals have faced challenges with the Commonwealth rural definition versus the federal rural definition. These hospitals are classified as rural for Model eligibility, but they do not all meet federal rural definitions and do not qualify for federal rural funding (e.g., FORHP grants).

Global Budget Implementation

Stakeholders described how consistent funding from the global budget has been the biggest benefit of the Model for hospital participants. The biweekly Medicare payments were helpful for hospitals to stabilize their cash flow throughout the year. The Model has been particularly helpful during the pandemic when hospitals had a continual cash flow despite the reduction in volume due to canceling elective procedures. One stakeholder noted that a CEO remarked they were “*weathering this storm without worrying about the majority of my hospital revenue*” due to being a part of the Model.

While the pandemic has highlighted the value of the Model, reconciliation will be a challenge for some hospitals because of COVID funding. All five hospitals received funding through the CARES Act Provider Relief Fund. Several participating hospitals lack accounting systems with the capability to separate relief funds from other payments to prevent duplicate payments. Additionally, hospitals reportedly will face challenges collecting and submitting needed documentation for relief funds. Therefore, technical experts are concerned that financial tracking and the associated reconciliation for PY2 (2020) may be particularly challenging for participating hospitals.

4.2 TA and Implementation Support [RQ2b]

The RHRO established an iterative working process with the participating hospitals and payers while developing transformation plans and global budgets, including webinars, check-in-calls, and regular email correspondence with the leadership teams at each hospital and payer. TA providers and implementation contractors (referenced collectively as “technical experts” to protect respondent identities) assisted hospitals and payers through in-person workshops, webinars, and weekly phone meetings. **Exhibit 4.1** summarizes the primary roles of technical experts (described in **Chapter 2.4**) and their outreach as reported in interviews conducted between May and September 2020.

Nearly all Cohort 1 hospitals interviewed referenced interacting with Mathematica, McKinsey,⁹⁹ and the RHRO. Several also recalled their interactions with Quality Insights, but this was mentioned less frequently and specifically in the area of COPD care. Others referenced the provider and payer summits hosted by the RHRO and educational resources.

Payers reported receiving data reporting and methodology support from the implementation contractors.

The Commonwealth reduced the RHRO and technical experts’ scope of work to accommodate CMMI’s budget reduction in PY2 (2020). Total funding of \$3 million was available for TA and implementation support from October to December 31, 2019.⁴³ An additional \$4 million was contingent upon meeting

⁹⁹ **McKinsey** worked with Cohort 1 hospitals on global budget development and transformation planning. Their involvement ended in late 2018.

the target participation requirement in PY1 (2019).⁴³ Given that the Commonwealth did not meet the PY1 (2019) participation targets, the additional funds were not made available in PY2 (2020). The DOH identified \$2 million in supplemental funding in PY2 (2020) and provided this to the RHRCA in the form of a loan with repayment terms. As a result of these budget reductions, some TA was eliminated or reduced in PY2 (2020). For example, developing materials to help inform hospitals' strategic planning for different scenarios (e.g., workforce shortages, mergers and acquisitions, financial viability, service line expansions) and educational sessions for hospitals around community engagement were eliminated.

Exhibit 4.1. Technical Experts Aided in Transformation Planning, Global Budgeting, and Supporting Hospital and Payer Participants

Technical Experts	Primary Responsibilities	Outreach to Hospital or Payer Participants
Mathematica	- Process Medicare claims, prepare Medicare budgets for Center for Medicare & Medicaid Innovation (CMMI) review - Work with commercial payers to determine data submission guidelines, process the data, and send the results back to commercial payers and hospitals - Develop adjustments to the global budgets - Interact with CMMI to work through the technical updates on the Model	- The onboarding process with hospitals entailed financial modeling to project revenue and expenditure trends over the next five years; showing the impact of the global budget on their finances; and highlighting what potential avoidable utilization, goals, and reductions would mean to a hospital - Weekly calls with commercial payers to ensure reliable data extraction - Review the quality data and act as neutral intermediary between hospitals and payers to help reconcile discrepancies
Rural Health Value	- Develop a systematic process for hospital transformation plan development - Assist Cohort 2 and Cohort 3 hospitals with transformation plan development	- Assign a coach to lead hospitals through a 10-week transformation plan development process beginning in PY1 - Provide sample goals and action steps using examples from existing hospital transformation plans; use a common template—design a “fairly structured coaching program with certain milestones and certain elements” but still allow for customization according to hospital needs
Quality Insights	- Provide clinical technical support to assist hospitals with implementing hospital transformation plans - Support redesign of clinical workflows to standardize care pathways for chronic obstructive pulmonary disease (COPD) care - Leverage electronic health record (EHR) systems and redesign clinical pathways to standardize care for COPD	- Attend hospital COPD team meetings - Assist hospitals with identifying COPD champion(s) - Help hospitals develop COPD protocol - Address transition of care for COPD patients; work with community outpatient clinics associated with the rural hospitals

Technical Experts	Primary Responsibilities	Outreach to Hospital or Payer Participants
	- Support collaboration with community-based primary care providers to more proactively diagnose and effectively manage COPD patients - Provide project management and outcomes tracking - Provide basic data summarization and analysis of data sets at the request of participating hospitals	
Stroudwater Associates	- Perform cost report technical review and provide recommendations for improvement at request of Cohort 1 or Cohort 2 hospitals and provide the RHRO with a formal report of the review - Present financially relevant topics to participating and interested hospitals at provider summits	Review financial operations in the context of the cost report; after comparing the cost report with the financial statements and talking with the CEO, produce a short report on key findings and opportunities
RHRO	- Coordinate and oversee Model administration - Interact with/support Model participants and stakeholders - Facilitate communication among hospitals, payers, and technical assistance providers	- Assist with transformation planning process - Procure resource referral tool for statewide use to help providers understand the social determinants of health (SDOH) and connect patients with resources - Convene all-payer and all-provider summits - Establish workgroups for peer collaboration: SDOH, regional strategies, care coordination, transportation, operational efficiency, and substance use disorder - Biweekly meetings with participating hospitals and payers

NOTES: *Medicaid is not directly enrolled in the Model; Medicaid plans are routed through the commercial payers.

(a) **McKinsey** worked with Cohort 1 hospitals on global budget development and transformation planning. Their involvement ended in late 2018; (b) **The Hospital and Healthsystem Association of Pennsylvania** initially provided support in recruiting hospitals and now participates as a member of the RHRCA Board. RHRO leadership also engaged with The Hospital and Healthsystem Association of Pennsylvania as a recruitment partner for PY3 (2021) on-boarding.

Feedback on Technical Assistance and Implementation Support: Perspectives from Hospitals, Payers, and Technical Experts

Hospitals and payers provided positive feedback about the support they received in global budget development. Hospital participants described the technical expertise in global budget development as responsive and supportive. One hospital leader found it helpful that TA experts “brought [the global budget] to us in palatable size servings and we were able to work with that and it’s been sustained.” Payers were also appreciative of global budget support: “I think the [technical expert] team does a lot of work, and I’m glad that they do, and I hope they keep doing that.” Another payer expressed appreciation

that the technical expert was comparing its plan data to the hospital system's data *"because the plan does not get the health system's data...glad that [TA expert] has uncovered that."*

According to technical experts, interactions with the hospitals and commercial payers for global budget development was not standardized and instead focused on *"one-off"* questions from data reports. They noted that with each report production, a different payer's data might emerge as needing closer examination. Commercial payers appreciated the opportunity to ask questions of the technical experts. Specifically, one commercial payer reported challenges *"identifying the type of claims and the type of spend that we needed to include."* This payer valued the iterative back and forth with technical experts.

Hospital participants and technical experts reported challenges with the transformation plan development process, which was modified in future performance years. Hospital participants described the transformation plan development process as a heavy lift and time consuming. Technical experts echoed a similar concern with respect to the Model design, describing the program as *"[un]wieldy to complete and [un]wieldy to monitor."* One challenge in PY1 (2019) was the time that hospitals spent working with complex documents as opposed to designing transformation goals and action steps; the RHRO simplified this process for Cohort 2 hospitals from Word format to an Excel spreadsheet that would allow for the analysis of data captured.

Another technical expert's perspective was that the hospitals' vision, mission, values, overarching goals, and action plans were not sufficiently developed to effectively achieve their transformation goals. Hospitals believed that their transformation plan goals were overly ambitious in PY1 (2019). One hospital CEO noted that they were *"overly aggressive"* and that *"a lot of items had to be pushed...we had to realign some things in PY2 [and we've] rephased our strategy on different items, such as care coordination, COPD, and pulmonary rehab."* Another hospital also wished they had more guidance in creating actionable and realistic goals during the planning phase.

Hospitals reported that there were sometimes unrealistic timeframes imposed by TA providers and implementation contractors. One hospital expressed frustration with timelines that one technical expert imposed: *"We were under an extremely tight time constraint when they were finally able to get here."* This hospital leader also expressed concerns about the weekly meetings when they initially joined the Model because of the dedicated time required up front.

Because of the new RHRCA governance structure, some technical experts expressed uncertainty about how and to what degree they would be involved with the Model moving forward. The TA providers were uncertain about the role that they would play in future performance years.

Technical experts did not have insights into one another's work; they viewed their efforts as siloed and believed they would have benefited from a bigger picture of hospital and Model progress. The technical experts reported few interactions with one another and a related concern that there was little alignment between the technical expertise for global budgeting and transformation planning, *"I do think that some alignment would benefit both work streams."* Another technical expert reported having no access to participating hospitals' transformation plans, saying, *"We had to seek out conversations with the hospital to kind of get an idea of what they were working on, but we also did the dance because it felt*

like we should have already had some insight to it from our perspective going in ... it would have felt like more of a collaborative effort."

Hospitals valued the various educational resources delivered by TA providers and implementation contractors. Appreciation for email notifications about new grant opportunities was referenced across hospital respondents. One respondent mentioned access to an online library and educational resources from the RHRO as valuable. Another hospital participant noted that it was meaningful when a TA provider connected the hospital to a pulmonary rehab program in a very rural clinic.

Hospitals and payers reported that changes in technical experts were challenging. One hospital respondent reported that they faced obstacles switching between different technical experts when contractors changed. One of the challenges that hospitals associated with this change was associated with additional work related to changes in the global budget methodology. Different approaches between technical experts caused one payer to *"almost have to start over"* and fall behind in implementation. This payer noted different methodologies utilized by technical support providers requiring a *"restart"* once they made the change. The payer was understanding that these types of changes are inevitable during a multi-year Model.

COVID-19 contributed to a decrease in interactions between technical experts and hospitals. When COVID-19 disrupted hospital operations, interactions with some TA providers and implementation contractors decreased; the demands of the pandemic also put Cohort 3 hospital applicants on a compressed schedule. Technical experts expressed similar concern that there were fewer opportunities to interact deeply with other technical experts and the RHRO in 2020.

Several payers referenced data reporting challenges, and there was a desire for more support in data reporting. A payer described many *"incremental requests"* for new information from one technical expert. One payer suggested simplifying the calculations by requiring payers to provide a standard specification of claims to the technical expert to then complete the calculation. According to one stakeholder, there are two interrelated issues in Pennsylvania that contributed to data challenges—a competitive insurance market and the lack of an all-payer claims database. Without an all-payer claims database, there are not any comprehensive sources of patient-level data across the Commonwealth, and there are technical complications involved in getting consistent data from disparate payer systems. TA experts noted that public and commercial payers operate various quality measurement and value-based programs using different performance measures, making comparisons across payers challenging.

Technical experts frequently described contracting delays as problematic. One technical expert described how contracting delays between the RHRO, the Pennsylvania Office of Rural Health, and the technical experts delayed their engagement with hospitals in PY1 (2019) and PY2 (2020). Despite delays, the technical expert reiterated the importance of the work: *"We believed that they were good partners and they were eventually going to come through and they did, but we did not get paid until we were two or three months into the second contract cycle."*

4.3 Hospital Experiences Implementing PARHM [RQ1a, RQ1b, RQ5]

Global Budget Development and Implementation

Respondents from the Cohort 1 hospitals described experiences developing, implementing, and managing global budgets during PY1 (2019) and PY2 (2020).

Developing the Global Budget

Global budget development was an iterative process completed in collaboration with payers, the RHRO, and the Commonwealth's implementation contractors. As a part of deciding whether to participate in the Model, Cohort 1 hospital leaders needed to understand the global budget and implications for their hospital. Hospital respondents described the process of developing the global budgets, beginning with a review of three years of historical revenue in consultation with the RHRO, CMMI, payers, and implementation contractors. Hospitals conducted their own historical revenue assessments and compared findings to the information provided by the RHRO, CMMI, commercial payers, and implementation contractors. Hospitals used this information to finalize the global budget for each payer.

The RHRO addressed global budget methodology concerns from potential participants prior to PY1 (2019). As early adopters, Cohort 1 hospitals were able to provide input to the global budget methodology prior to joining the Model. Hospital leaders suggested including opportunities for growing market share (unplanned volume shift) and for CAHs to reconcile back to cost-based reimbursement annually.

Implementing the Global Budget

Global budgets helped to stabilize hospital revenue. Hospital leaders commented that the biweekly payments were important for stabilizing cash flow. Financial planning for future years was affected to some extent as a result of the global budget. For CAHs, annual Medicare revenue amounts were the same as cost-based reimbursement used prior to the Model; however, the stable cash flow created a sense of security for meeting financial obligations. Yet, one of the challenges for CAHs is reliance on cost-based reimbursement, as one CAH leader noted, *"We just know we have future sustainability issues that we'll have to tackle in out years that we will still continue to need to come up with solutions for."* PPS hospitals commented that they reviewed the previous year's global budget and expected market shifts (i.e., service lines changes, unexpected shifts in patient volume) for future years. While predictable revenue helped hospitals identify how they would invest in transformation, hospital leaders stressed that lack of upfront funding limited investment in transformation activities, similar to stakeholder views previously described.

Even with stable cash flow, hospitals experienced challenges managing volume shifts. As small rural hospitals, most Cohort 1 hospitals have low patient volumes, creating the potential for a few patients to cause large variation. For example, one hospital had two high-cost chemotherapy patients who were in

the historical population and then no longer in their population, which caused fluctuations in their market share and revenue.

Almost all respondents commented that the global budget was particularly helpful for stabilizing cash flow during COVID-19. As the pandemic began and elective utilization dropped, the global budget provided cash flow so hospitals could meet ongoing financial obligations. However, hospitals noted that the global budgets do not include all services (e.g., professional services), so they still experienced some revenue loss. The regular global budget payments provided a lifeline while hospitals waited for additional funding, such as CARES Act funding.

Cohort 1 hospitals reviewed their costs to identify potential efficiencies, though opportunities were limited. A few respondents commented that the global budget required an assessment of costs, including staffing, to identify savings opportunities. An implementation contractor provided models describing opportunities for cost savings. CAH respondents commented that, given their size, many costs are fixed (e.g., minimum required staffing levels, physical plant) and there were few opportunities to reduce variable costs. One CAH respondent provided feedback to the implementation contractor that the initial models did not reflect the fixed costs for small rural hospitals, resulting in the implementation contractor revising the cost savings model to more accurately reflect fixed versus variable costs.

PPS hospitals discussed the need to provide care efficiently, including opportunities to review staffing to support delivery transformation. One respondent commented, *“We’ve really taken every opportunity to try to squeeze out what we can, where we can, and yet to have it right sized to well suit our needs going forward. And I think we’ve done a great job there.”* PPS hospitals were exploring opportunities to use advanced practice providers and tele-emergency care in their EDs.

Hospitals leveraged funds outside of the global budget to implement hospital transformation activities, but all noted the need to invest in staff resources. Hospitals lacked sufficient funding through potential savings to implement transformation activities in the first year and sought other funding sources. One system-affiliated hospital received additional resources to invest in transformation from its health system. Three hospitals sought grant funding, with support from the RHRO who funded a grant writer through the master ordering agreement with the Pennsylvania Office of Rural Health. One hospital applied for a federal grant concurrent with joining the Model and received a grant to expand telehealth services. Another hospital applied for and received a federal grant to address the opioid crisis in its community. The third received a grant from a regional foundation to support a transformation goal to address food insecurity for patients with diabetes. At the time of the interviews during PY2 (2020), hospitals had not aligned physician incentives to global budgets or transformation goals.

Timely data were unavailable and required hospitals to track financial performance internally, to the extent possible, in the first year. Hospitals received limited financial performance data from payers throughout PY1 (2019) and PY2 (2020). Therefore, hospitals developed internal tracking mechanisms to monitor their performance with the global budget. One respondent commented that it required almost a year to develop the internal processes for financial tracking. Hospital leaders regularly shared their financial estimates with board members and providers.

Hospitals and the RHRO identified global budget issues upon implementation that required resolution.

Upon implementation, hospitals recognized challenges with their global budgets that were not identified during the initial vetting process prior to participation. For example, one PPS hospital discovered an issue with bad debt payments and low volume adjustments. Swing bed payments are included in CAH global budgets but not in PPS hospital global budgets. In the first year, PPS hospitals did not receive swing bed payments and were retroactively paid for these services. One CAH commented that it was initially penalized for appropriately transferring patients in need of higher acuity services than the CAH could provide, requiring negotiation with the implementation contractor to adjust the calculations. Hospitals indicated that CMS, RHRO, and the implementation contractor were responsive to their questions and concerns and resolved any issues.

Hospitals receive commercial payments through the same mechanisms that were in place before the Model. For commercial payers, hospitals continue to bill FFS claims and reconcile payments with the global budget monthly, with a 90-day claims runout. For Medicare FFS, hospitals also continue to submit FFS claims, but CMS processes these claims as no-pay claims. From the hospital perspective, there were minimal changes to billing and accounting as part of the Model.

Some CAH respondents were skeptical about the sustainability of the global budget based on historical revenue and reconciliation to cost-based reimbursement. For example, representatives from two CAH hospitals commented that their historic revenues and operating margins were not sustainable long term within the CAH cost-based reimbursement structure. One CAH representative said:

So even though it's a stable revenue amount going forward with those payers, it didn't really, per se, cover our cost. So, under the global budget model, we're still losing money, it's just not as much maybe. With Medicare, the sequestration, and other impacts that have been put through to the CAH community... the bad debt reimbursement being reduced from 100 percent to 65 percent, et cetera. Those have all had negative impacts, so we're not really being paid cost anymore. Which when [Medicare] is our largest volume of business ... it doesn't really set yourself up for a sustainable model.

Hospital respondents commented on similar sustainability challenges with commercial payers. Low volumes of commercially insured patients can result in large volume shifts. These hospitals also believed they had little leverage with commercial payers to negotiate rates because their costs were higher than urban hospitals.

One hospital was acquired by a health system prior to joining the Model. As a part of the acquisition, the health system began to build services and grow volumes at that hospital. According to the hospital representative, these changes were implemented after the three-year period that was used to develop the global budgets. Hospital representatives were concerned about the global budgets not keeping pace with growth.

Despite concerns about long-term financial viability, a hospital respondent commented that participation in the Model supports physician recruitment, saying, *"It gives optimism to the recruits that it's [a] financially viable organization that I'm going to go to, that I'm going to move my family to. And so I*

think it's had a beneficial impact as far as being able to recruit and retain the physician component there, which is key."

PPS hospitals were more concerned than CAHs about reconciliation. At the time of the interviews, hospital respondents were waiting on the final Medicare reconciliation for PY1 (2019) to better understand the impact of their global budgets. CAHs were not concerned about reconciliation because they complete interim cost reports to monitor financial performance and will reconcile to cost-based reimbursement. PPS hospitals were more concerned and commented on the need for more timely data on Medicare FFS claims. Across hospitals, there were questions about how unplanned volume shifts would affect reconciliation. One respondent commented:

I think that what they told us upfront was that August of this year [2020] we would be doing the final reconciliations on last year, which internally seems like a very long time. But really, by the time all the data is processed and they do what they need to do and all the payers do what they need to do, you can see how it's work intensive and it does take some time to work through to finalize everything.

Despite the time required for reconciliation, hospitals received some estimates that provided them with limited performance information.

Hospitals appreciated the RHRO's support, responsiveness, and accessibility in answering financial questions before and during implementation. A key facilitator noted by all respondents was RHRO and RHRCA responsiveness to questions and concerns about the global budgets.

Delivery System Transformation

This section describes Cohort 1 hospital experiences developing hospital transformation plans and implementing transformation activities in PY1 (2019) and PY2 (2020). Despite some disruptions and limited staff to plan and manage hospital transformation plan activities, hospitals reported progress in areas such as community outreach, pulmonary care, SUD/ODU treatment, and telehealth expansion. Overall, the Model encouraged formal and informal assessments of community needs, highlighted the importance of clinical champions of care, and exposed hospitals to various grant opportunities that could supplement and support their hospital transformation plan activities.

Hospital Transformation Plan Development Process

All five Cohort 1 hospitals received TA from DOH, the Commonwealth, and other technical experts to assess community needs and hospital performance in key areas; identify opportunities for improvement and transformation strategies; and develop a high-level hospital plan using a comprehensive transformation framework.

With RHRO and other technical expert support, hospitals assessed community needs and their organizational capabilities to determine transformation plan priorities. Hospitals used the community health needs assessment and internal Medicare FFS claims data to identify the top community health care needs as well as key drivers of potentially avoidable utilization. Across the five hospitals, strategic

priority areas identified for improvement included chronic disease management for such conditions as COPD and congestive heart failure (CHF); improved access to behavioral health care, including SUD/OD treatment services; and geriatric care. All hospitals also completed a baseline capabilities assessment focusing on areas such as organizational design, community programs and partnerships, care management, and administrative labor for the transformation.

Using a variety of data sources, hospital staff described how they planned for transformation and explored interventions. A variety of data sources, such as Medicare claims data, Pennsylvania Health Care Cost Containment Council, commercial payer, and hospital financial and EHR data informed these discussions. With support from technical experts, hospital staff brainstormed economical and effective interventions to address identified needs and determined strategic priority areas. According to one technical expert, *"It was required in the transformation plan to think about not [only] the impact on utilization, but what might it cost to implement [the] different [action] steps."* Technical experts encouraged creativity and urged hospitals to think about, for example, how to *"repurpose staff to fill new roles [instead of hiring new staff] and incurring new expenses."* Each hospital developed a transformation plan with specific goals impacting areas such as potentially avoidable utilization, operational efficiency, and overall community need.

Hospitals varied in how they identified strategic priority areas. Some hospitals leveraged experience with ACO initiatives for the transformation plan. Since some hospitals built ACO goals into the hospital transformation plans, they had a pre-existing culture and workflow around population health strategies; their staff was already headed toward a path of transformation. One hospital leader stated:

We capitalized on what we had already had in place through the ACO and applied it [to the Model] ...we took everything in our ACO action plan [and applied it to the] transformation plan for the Rural Health Model because the initiatives were essentially the same: to promote health and wellness, reduce readmissions, [and] reduce utilization for those with CHF and COPD.

One hospital mentioned that it would have invested in population health goals with or without participation in the Model. However, for other hospitals, the community health needs assessment and use of such tools as the Protocol for Responding to and Assessing Patients' Assets, Risks, and Experiences (PRAPARE)^{hh} provided important insights into local social determinants of health, including housing and food insecurity, and other socioeconomic drivers of poor health outcomes for their patients.⁵¹

One hospital has embraced regular use of the PRAPARE tool, while another spoke highly of its utility; the tool allowed hospitals to connect patients to services in the community. A third hospital collaborated with a local federally qualified health center on a private grant opportunity to target food insecurity; the PRAPARE tool revealed that the hospital's patients are *"making decisions [about] whether to put food on the table or take their prescribed medications because they just don't have enough*

^{hh} The [Protocol for Responding to and Assessing Patients' Assets, Risks, and Experiences \(PRAPARE\)](#) is a national effort to help health centers and other providers collect the data needed to better understand and act on their patients' social determinants of health.

money.” Another hospital had a diverse board consisting of local community members, business representatives, physicians, and lawyers who helped to delineate and pinpoint areas of focus.

Some hospitals focused on transforming care for chronic disease areas with high utilization. The community assessments identified weight management, mental health care, and SUD treatment as urgent community needs across the five hospitals. At the same time, analysis of Medicare FFS claims data identified patients with CHF, COPD, diabetes, and/or SUD/ODU as high utilizers of care. Hospitals decided to focus on an amalgam of these issues, emphasizing health issues and populations that drive high costs. When asked how one hospital identified areas of focus for the transformation plan, a clinician stated:

It was at a time where the drug overdoses in the area were high. We've always had a large volume of COPD patients. So, I think just looking at community needs and where our utilization was just sort of took us where we needed to go.

However, what the hospitals decided to prioritize under the Model did not always align with what key staff identified as pressing needs. For instance, when a staff member was asked about how the organization decided on COPD as a focus, they noted that COPD was highly recommended by the Commonwealth but that nutrition should have been pursued instead to meet the community's needs. Other hospitals also reported that the Model activities did not always align with needs identified in community health needs assessments.

Hospitals developed comprehensive transformation plans and updated them as required in subsequent months. Each hospital used the same template in an effort to standardize the transformation plans and was tasked with populating sections on hospital background, community needs, capabilities assessment, market service profile, vision and goals for transformation, strategic priorities, action steps, and path forward. In PY2 (2020), the hospital transformation plan was restructured using a spreadsheet format to improve readability and organization. The RHRO further streamlined the spreadsheet and hospital goals in PY3 (2021) to make the transformation plans more user friendly.

The lack of upfront funds to invest in staff, planning, and implementation hindered hospital transformation plan development for some hospitals, but the RHRO's consistent engagement and TA facilitated the process. One hospital CEO mentioned that “*smaller facilities do not have the [resources and] personnel to plan for and manage such a Model on their own.*” Another hospital staff member believed that the Model did not provide resources to fund staff time for the meetings and the extensive work required to develop the hospital transformation plans. For this reason, TA was essential for these hospitals.

Hospital Transformation Activities

Clinical champions for COPD care were critical in supporting pulmonary health innovation and transformation efforts. All hospitals identified potentially avoidable utilization related to COPD as a key priority for improvement under the Model; COPD patients are among the highest utilizers of care at these hospitals. As part of their hospital transformation plans, hospitals planned to provide comprehensive chronic disease management to improve COPD care and reduce readmissions. One

hospital noted in their hospital transformation plan that there has been a historic lack of wellness programs in the local community to reduce COPD occurrence and that improving access to preventive care would help reduce future cases. Another hospital also planned to enhance community knowledge of advance care planning and directives, including physician orders for life-sustaining treatment, to improve end-of-life care. Despite widespread concern centered on improving care for patients with COPD, however, most hospitals had not implemented activities to improve COPD care due to delays caused by COVID-19. While some Cohort 1 hospitals had initiated planning in PY1 (2019), some hospitals had to “*balance priorities*” related to transformation in the first year of the Model and COVID-19 exacerbated these delays in PY2 (2020).

The two hospitals making the most progress in transforming COPD care identified a single clinical champion who successfully moved plans for COPD care improvement through the initiation and development phases. One hospital gave its cardiac nurse authority to develop policies for pulmonary rehabilitation. The nurse leveraged a background in cardiac rehab and the hospital’s clinical network to develop a pulmonary rehabilitation protocol. Similarly, at another hospital, a single respiratory therapist led the work of researching and developing protocols for pulmonary rehabilitation and developed a support program for patients affected by chronic lung diseases. In both of these cases, the clinical champions went beyond their formal job responsibilities. While both hospitals developed plans to improve COPD care, they were unable to implement the rehabilitation and support programs due to COVID-19.

Expansion of SUD/ODU treatment and overdose prevention was a priority area for two hospitals; one made progress toward this goal. The hospital acquired a grant from the Federal Office of Rural Health Policy (which it learned about through the Model) to support SUD/ODU work. The hospital partners with a community-based organization that provides recovery support and a warm hand-off (i.e., transfer of care between two members of the health care team with the patient present) to services at the hospital’s medication-assisted treatment e-clinic. Additionally, the organization provides education and training in the warm hand-off process to the nursing and ED staff.

Most hospitals identified community engagement as a key priority in hospital transformation plans, but only one hospital made progress in routinely engaging the community and forming strong networks for ambulatory care, behavioral health, and social service referrals. The quality and impact of hospitals’ community partnerships and programming were included as part of the baseline capabilities assessment during the hospital transformation plan development process. Three hospitals identified community engagement as one of their strengths and noted in their hospital transformation plans that existing partnerships would facilitate hospital transformation. Two of five hospitals also linked a future increase in community partnerships and programs to a possible reduction in potentially avoidable utilization. Hospitals hoped that expanding community outreach efforts and developing partnerships would help improve population health and increase access to care.

One hospital made notable changes toward engaging the community and forming strong networks of care and services. The hospital’s staff members were grateful for the partnerships they built through quarterly meetings and strengthened with various community organizations since the start of the

Model. These meetings include guest speakers, information sharing, Model education, and brainstorming ways to connect community members and patients to various services. Through close collaboration with community organizations, the hospital has created programs to improve nutrition, behavioral health, and access to food. For instance, the hospital set up a monthly food bank distribution event as well as a weight management and nutrition program with behavioral health counseling. Additionally, the hospital leveraged the existence of a strong community coalition to set up a rapid response to COVID-19, focusing quarterly meetings on responding to the pandemic and ensuring a strong community-based response.

Other hospitals either had strong community networks already in place or are unsure how to involve their community in transformation efforts. For instance, one hospital CEO noted it had not yet figured out how to involve the community in transformation efforts, commenting, *“Our objective is [to] reduce readmissions, and quite frankly, I’m not sure what the role of the community can be in there.”* Another hospital board member emphasized that community partnerships already *“run deep”* because being a rural community, they *“realize the importance of [their hospital staff] working together for the betterment of the community.”* The hospital sponsors annual meetings where residents identify initiatives important to the local community.

Despite being a key priority area for three hospitals, little to no progress was made in transforming geriatric care. At three hospitals, Medicare FFS data indicated that some geriatric patients were high utilizers of care, prompting the hospitals to consider targeted intervention to improve geriatric care delivery. While the hospitals aimed to identify high utilizers, reduce inpatient hospital admissions through the development of detailed care plans, and implement wellness initiatives, none reported making progress toward these goals. One hospital identified the COVID-19 pandemic as the main reason for the delay.

The greatest barrier to transformation for Cohort 1 hospitals was COVID-19, as many hospitals were only in the planning stages in PY1 (2019). Hospitals attempted to carry out various activities to redesign care delivery, improve chronic disease management, better understand patient needs, and form strong community networks to address the health concerns of their local populations. However, they were faced with a number of financial, environmental, and planning challenges. Although the pandemic did not force hospital closures (as of our interviews), it contributed to delays in program implementation. Most hospitals had to divert focus and reallocate resources to respond to COVID-19, which delayed transformation activities. Additionally, many hospitals had designed transformation activities for in-person interaction among hospital leadership, TA providers, staff, and patients; some of these staff members worked remotely for periods of 2020. Without frequent interactions and goal-directed communication concerning the Model among stakeholders or the target patient populations, hospitals were unable to make major progress in the strategic priority areas.

COVID-19 accelerated telehealth implementation for two hospitals. One hospital went from *“almost zero to full in clinic telehealth access within a month,”* noting that they were planning to do this in a later year as part of their transformation plan but COVID-19 expedited adoption of telehealth. Another hospital received a U.S. Department of Agriculture grant to implement telehealth, which it learned about

and received support to apply for through participation in the Model. While the Model allowed for some of the same support as the eventual COVID-19 telehealth waivers, the pandemic accelerated the need and initiative to roll out telehealth rapidly.

Limited staff capacity was a barrier to implementing care transformation. As previously mentioned, independent hospitals have limited resources and personnel to manage transformation. Although TA was helpful, the lack of startup funds to invest in staff to lead transformation activities was a challenge identified by at least two hospitals. Respondents from one hospital noted that the amount of time administrators had to spend on Model meetings and paperwork was already onerous; to implement the plan would require even more time and resources that the hospital simply does not have.

4.4 Assessing Quality, Access, and Hospital Performance in the Model

The Model includes different mechanisms to monitor and measure the quality of care provided by participating hospitals: 1) an All-Payer Quality Program (currently on hold), 2) the quality metrics outlined in the CMMI contract with the Commonwealth, and 3) a monitoring plan. The DOH submitted a monitoring plan and quality template to CMMI on March 30, 2019, and in the following quarter, the RHRO began receiving baseline quality data from the commercial payers.

All-Payer Quality Program. As part of the Commonwealth's agreement with CMMI, the RHRO is required to develop an All-Payer Quality Program.ⁱⁱ The goal is for all participating payers to agree to a common set of evidence-based, attainable performance measures to reduce administrative burden on the rural hospitals. The program had not been fully developed or implemented at the time of our interviews and is currently on hold.⁵²

Quality Measures and Monitoring. The Model aims to test “whether care delivery transformation in conjunction with hospital global budgets improves health outcomes and quality of care for Pennsylvania’s rural residents.”⁵² The agreement further articulates that CMMI and the Commonwealth will agree on a comprehensive set of measures for each performance year and quality targets for rural counties in Pennsylvania. CMMI and the Commonwealth identified an initial set of quality measures in 2017. In 2019, the Commonwealth began collecting HEDIS data from commercial payers,⁴⁸ and on November 30, 2020, finalized measures for data collection.⁵³ An updated set of 33 measures, which fit within the Model’s three population health and quality

QUALITY REPORTING MEASURES

1) inpatient and ED visit for ambulatory care-sensitive conditions, 2) hospital-wide all-cause readmission (Medicare), 3) plan all-cause readmission (commercial and Medicaid Managed Care), 4) use of pharmacotherapy for opioid use disorder (Medicare), 5) pharmacotherapy for OUD (Medicaid managed care, and commercial), 6) risk of continued opioid use, 7) rate of adults with preventive care visits, and 8) follow-up after ED visits for patients with multiple chronic conditions.⁵³

ⁱⁱ The RHRCA will now be required to develop the all-payer quality program.

goals, was identified for consideration. These measures were each scored and ranked independently by the Commonwealth and CMMI using mutually agreed upon assessment criteria, such as relevance, validity, reliability, alignment, and feasibility. The selected quality measure set was then presented to the participating hospitals and commercial payers for consideration. The eight measures fall within the following domains: chronic conditions, substance use, and access to care (see **Appendix B** for details). The commercial payers agreed to use the same measure set, but the Commonwealth will accept some deviations in instances where the data are not readily available.

The CMMI implementation contractor also develops quarterly monitoring reports to assess quality and ensure that the Model does not have unintended consequences related to access to care. These dashboards will be available to participating hospitals in future performance years.^{jj}

Hospital and Stakeholder Perspectives on Assessing Quality

Stakeholders noted the importance of focusing on quality measures that are relevant in a rural context. Measuring rural health care quality can be challenging, in part, because of low patient volume, and the adoption of relevant quality measures in a rural context can help rural hospitals improve community health and enhance patient care. Model stakeholders are collaborating to develop a data-driven approach to quality measurement that is relevant to rural hospitals and provides meaningful performance measurement despite low patient volume.

A technical expert noted that the initial set of population health measures, identified by CMMI and the Commonwealth in 2017, included some measures that do not change quickly and *“the ability of a hospital, even within a global budget model to impact these types of patient outcome measures is going to be relatively limited over the timeframe of this model.”* While they believe that the Model may reduce health disparities (e.g., cancer death rates between rural and urban Pennsylvanians), the timeframes outlined in the Model are not reasonable to observe significant movement in these measures.

Hospitals need regular and timely data to improve performance. Stakeholders noted that population health measures may not change significantly over the performance period. Hospitals emphasized that participating hospitals as well as other stakeholders may need to review interim measures (e.g., ED utilization) to determine whether the Model is changing behavior. One hospital noted that while it received comprehensive claims data during the recruitment process in 2017, it has not received data reflecting its participation in the Model since and is unaware of its performance. Hospital representatives appreciated the fact that despite the original data being slightly dated, the patient-level data helped them understand the trends and change practices accordingly. Hospitals emphasized the need for timely data to review and improve performance and noted that they would prefer interim data more frequently, even if the data are updated over time.

Stakeholders stated that there were several challenges to getting claims data from payers and hospitals, including the challenge of defining service areas and the difficulty of validating data sourced from historical claims databases that are routinely updated. One of the technical experts noted that

^{jj} The dashboards were made available to hospital participants in the summer of 2020.

participating hospitals need patient-level data from payers, but there was not enough alignment between the global budget and transformation plan work streams to provide hospitals with the data they need. Stakeholders also noted the need to adopt a mixed-methods approach to collect both qualitative and quantitative data at the community level to evaluate population health in rural areas.

Hospitals expressed concerns about their ability to influence some quality measures, particularly for issues primarily addressed outside of the hospital setting. One hospital CEO noted that certain metrics regarding follow-up care for SUDs or behavioral health may not be in the hospital's sphere of influence because these services are often provided by primary care or specialty outpatient providers—services that are excluded from the global budget. The hospital leader noted:

If you're sending people out for drug and alcohol treatment, or behavioral health treatment, you can be sending them hours away to the next available bed ... Now those follow-up metrics are provided by [practitioners] who you don't own, but that's a quality measure for the hospital.

The CEO contrasted the Model with ACO models where hospitals are able to track patients across the continuum of care and many practitioners delivering outpatient care are affiliated with the ACO. Hospital leaders noted the challenges of operating without more information on patient care outside of the hospital.

Chapter 5: Descriptive Assessment of Financial Performance and Interim Medicare Spending

Key Takeaways

Measure Domains and Data Sources



- Financial performance measures are based on data from Medicare cost reports (FY2013-FY2018).
- Medicare FFS interim payment and utilization measures are based on data from Medicare cost reports (FY2013-FY2018), Medicare Parts A and B claims (CY2013-CY2019), and PARHM Global Budget Payment documents (PY1).
- The descriptive results in this report provide context on the financial performance and utilization associated with the Cohort 1 hospitals during the baseline period and will inform NORC's subsequent analysis of impact. The results are not an assessment of the Model's reach (i.e., scale target performance), impact on the financial viability of the participants, or Medicare utilization and spending.

Financial Performance in the Baseline Period



- The short- and long-term financial viability of the Cohort 1 hospitals worsened during the baseline period—a potential motivating factor for their participation in the PARHM.
- Declining inpatient volume and fixed costs may have negatively impacted financial performance during the baseline period.

Trends in Interim Medicare Payments and Utilization



- Biweekly payments under the global budget eliminates variability in payments due to seasonality and volume shifts. Hospitals perceived this as an important Model feature and facilitator.
- During PY1 (2019), prior to final reconciliation of Medicare reimbursements, interim global budget payments exceeded the interim Medicare reimbursement amount the participants would have been paid under the FFS and cost-based reimbursement methods.

NORC's evaluation will assess quantitatively the PARHM's impact on the financial viability of participating hospitals, health care spending and utilization, as well as access to care and population health outcomes for the population served by participating hospitals. Because of the limited reach of the Model during the early implementation phase and its implications to evaluability, we employed an incremental approach to assessing the Model's impact on outcomes by conducting an exploratory, descriptive analysis of the PARHM hospitals' outcomes in the baseline period. Findings from this preliminary analysis will inform our subsequent evaluation of the Model's impact on outcomes.

In this report, we present descriptive data on the preliminary, exploratory analysis of financial performance, interim Medicare FFS reimbursement, and utilization during the baseline period (2013-2018) and PY1 (2019) for the Cohort 1 hospitals.^{kk} This report does not include descriptive data on spending and utilization for the Medicaid population; future reports will include these analyses.

This section presents the methods informing the quantitative assessment, followed by the descriptive assessment of the financial performance outcomes sourced from the Medicare cost reports and Medicare spending and utilization outcomes sourced from Medicare FFS claims and the Model's global budget payment program documents.

5.1 Methods

The exploratory, descriptive assessment of baseline trends in outcomes includes the five Cohort 1 hospitals. The period of analysis is six baseline years (2013-2018) and PY1 (2019). During the baseline period, two of the five Cohort 1 hospitals were acquired by health systems that operate in the Commonwealth. The UPMC health system acquired Kane Community hospital in 2016, and the Geisinger health system acquired Jersey Shore Hospital in 2017. In addition to descriptively assessing model-wide trends, we also stratified the analysis based on the participating hospitals reimbursement methodology—inpatient and outpatient PPS or cost-based reimbursement for CAHs.

Exhibit 5.1 presents the measure domains and measures included in the descriptive assessment and the associated data sources.^{ll} The Medicare cost reports served as the data source for the financial performance measures. **Appendix Exhibit C.2.1** presents the cost report worksheets and data elements that were used to construct each of the financial performance measures. Medicare FFS spending and utilization measures were compiled from the Medicare FFS claims on the Chronic Conditions Warehouse Virtual Research Data Center. **Appendix Exhibit C.2.1** presents additional details on specifications for the claims-based measures.

^{kk} We included six years of data in the baseline period to provide insights on the long-term financial trajectory of the participants. We may consider a shorter baseline time period to assess the Model's impact on outcomes.

^{ll} This report only includes a descriptive assessment of trends for the financial performance and Medicare spending and utilization measure domains. The assessment of population health, access, and quality of care outcomes for the population served by the PARHM participants will be included in future reports after the analysis associated with attributing rural geographic areas and the target populations to the PARHM participants is completed.

The PARHM's performance is assessed on a calendar year basis. However, the data in Medicare cost reports are reported on a fiscal year (FY) basis; the definition of fiscal year varies by hospital. As a result, the financial performance outcomes for FY2018 overlap with both baseline year (2018) and PY1 (2019). Medicare FFS claims-based spending and utilization measures are reported on a calendar year basis.

Because final reconciled Medicare reimbursement data for all the years in the analysis period were unavailable at the time of this analysis, the results in this report are based on trends in interim Medicare reimbursement for the Cohort 1 CAHs and PPS hospitals.^{mm}

Exhibit 5.1. Measure Domains, Measures, and Data Sources

Domain: Financial Performance

Sub-Domain	Measures	Data Sources
Profitability	- Total Margin - Operating Margin	Medicare Cost Reports (FY2013-FY2018)
Liquidity	- Days Cash on Hand - Days in Gross Accounts Receivable	
Capital Structure	- Debt Service Coverage Ratio - Long-Term Debt to Capitalization	
Cost Structure	- Average Age of Plant - Salaries to Net Patient Revenue - Total Costs for Hospital-Based Services - Total Inpatient Costs - Outpatient Costs	
Revenue Structure	Payer Mix	

Domain: Medicare Fee-for-Service (FFS) Spending and Utilization

Sub-Domain	Measures	Data Sources
Medicare FFS Reimbursement	- Interim Medicare FFS Payment for Global Budget-Covered Services - Interim Medicare FFS Payment for Hospital Inpatient Services - Interim Medicare FFS Payment for Hospital Outpatient Services - PY1 (2019) Global Budget Payments - Preliminary Cost-Based Reimbursement for Global Budget-Covered Services	Medicare Parts A and B Claims (CY2013-CY2019)
Variability in Medicare FFS Reimbursement	- Variability in Biweekly, Interim Medicare FFS Reimbursement - Variability in Final Cost-Based Reimbursement Settlement Adjustments	Medicare Parts A and B Claims (CY2013-CY2019) Medicare Cost Reports (FY2013-FY2018)

^{mm} Since it can take over two years after the end of the fiscal year to determine the final settlement adjustments, there is significant lag in the data on cost-based reimbursement for the participating CAHs.

Sub-Domain	Measures	Data Sources
Change in Service-Mix	- Change in Inpatient Service Mix - Change in Hospital-Wide Service Mix	Medicare Parts A and B Claims (CY2013-CY2019)

The following are the key limitations of the analysis:

The preliminary descriptive assessment of baseline trends presented in this report does not reflect the impacts of the PARHM. Instead, the assessment provides context on the financial performance and utilization associated with the Cohort 1 hospitals during the baseline period and will inform NORC's subsequent analysis of impact. The results are not an assessment of the Model's reach (i.e., scale target performance), impact on the financial viability of the participants, or Medicare utilization and spending. Future evaluation reports will quantitatively assess the PARHM's impact on the financial viability of participating hospitals, health care spending and utilization, as well as access to care and population health outcomes for the Medicare and Medicaid populations served by the participating hospitals.

The small participant size and the heterogeneity in the characteristics of the Cohort 1 hospitals make most comparisons to eligible nonparticipants or national or statewide benchmarks infeasible. As described in **Chapter 3.2**, there are significant differences in the baseline financial performance and organizational characteristics of the Cohort 1 hospitals. Therefore, the benchmark needs to be specific to each hospital and has to be based on a comparison group of hospitals with similar baseline characteristics, located in areas similar to the Cohort 1 hospitals, and serving similar populations. Future reports will include descriptive and impact analysis findings relative to a comparison group.

The spending and utilization trends in the baseline period are not case-mix adjusted. The results do not reveal whether the observed trends in spending and utilization are a result of changes in patient case mix or service mix and treatment patterns that are independent of the case mix. The small patient volumes of the Cohort 1 hospitals limits our ability to produce reliable, case-mix adjusted baseline trends.

Financial performance measures, which are based on fiscal year, do not align with the Model's performance periods. The data in the Medicare cost reports are based on each hospital's fiscal year. Hospitals can also change their definition of fiscal year across reporting periods. However, the Model's performance periods are based on calendar years. Therefore, the baseline financial performance for FY2018 presented in this report overlaps with PY1 (CY2019).

Medicare FFS reimbursements for participating CAHs are not based on the final, cost-based reimbursement settlement amounts. Since CAHs are reimbursed on a cost basis, interim FFS payments are reconciled to costs after the end of the fiscal year. Because it can take over two years after the end of the fiscal year to determine the final settlement adjustments, there is a notable lag in the data on cost-based reimbursement for the participating CAHs. However, since the CAHs' interim FFS reimbursement trends are highly correlated with the cost-based reimbursement trends, the descriptive results in this report provide insights on the overall trends in spending and utilization for the participating CAHs.

The trends in outcomes of Wayne Memorial—the largest hospital among the Cohort 1 hospitals—has an outsized effect on model-wide trends. Wayne Memorial Hospital has over three times the bed capacity when compared to the other four Cohort 1 hospitals. Wayne Memorial's baseline trends in financial performance and Medicare spending and utilization are also different from the other participants. To mitigate this challenge, we assessed hospital-specific performance and noted key differences in trends among the hospitals.

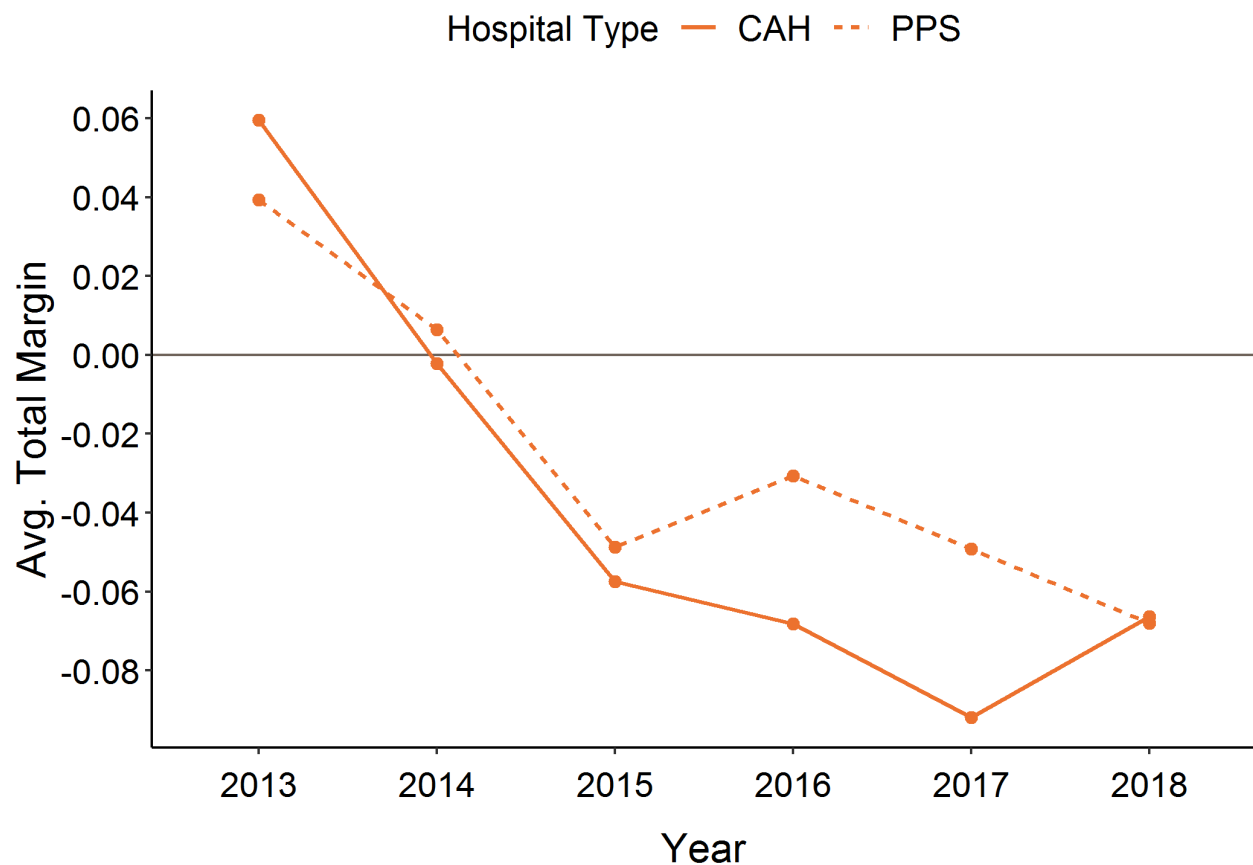
5.2 Descriptive Assessment of Financial Performance in the Baseline Period

The global budget payments and the implementation of the transformation plans are expected to impact the operational efficiency and long-term financial viability of the participating hospitals. To provide context for understanding the Model's impact on financial viability of the participants during the performance period, we present key descriptive results for select financial performance measures that span the following measure domains: 1) profitability, 2) liquidity, 3) capital structure, 4) cost structure, and 5) revenue structure.⁵⁴

The short- and long-term financial viability of the Cohort 1 hospitals worsened during the baseline period. Declines in inpatient volume and unchanged inpatient costs may have contributed to their worsening financial status in the baseline period and influenced their decision to participate in the Model. Across the Model, we observe declining, negative financial margin (total and operating), low levels of liquidity, increasing costs relative to revenue, and declining ability to sustain long-term debt and raise additional capital for the Cohort 1 hospitals. We also observe variation in baseline financial trends across hospitals. Below, we describe the expected impacts of the observed trends in select financial measures on the Cohort 1 hospitals' operational efficiency and financial viability.

- Total margins—an indicator of a hospital's overall financial strength and ability to generate profits and resources required to invest in facilities, staff, and infrastructure—of the participating CAHs and PPS hospitals were negative and declined measurably during the baseline period, especially between FY2013-FY2015 (see **Exhibit 5.2**), except for Wayne Memorial. UPMC Kane saw declines across financial measures, including total margin after its acquisition by the UPMC health system in 2017. It is likely that these declines across measures were due to changes in accounting practices with the transition to the UPMC system.

Exhibit 5.2. Total Margins Declined During the Baseline Period (2013-2018) – Cohort 1 Hospital Participants

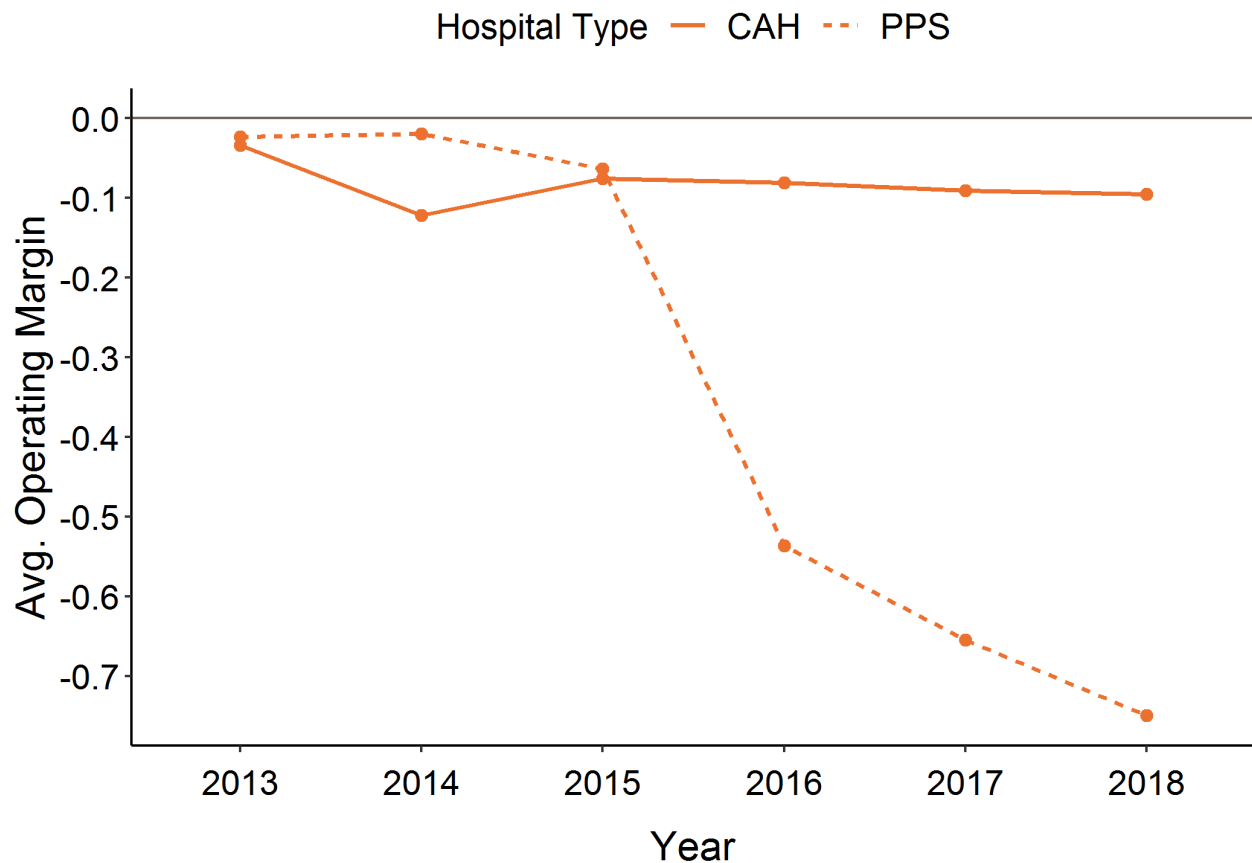


SOURCE: Medicare Cost Reports (FY2013-FY2018)

NOTE: Trends reflect group averages.

- Operating margins—an indicator of a hospital’s operating expenses relative to operating revenues related to patient care—of the participating CAHs and PPS hospitals were negative and declined during the baseline period (**Exhibit 5.3**). As with total margin, UPMC Kane’s operating margin declined measurably after being acquired by the UPMC health system.

Exhibit 5.3. Operating Margins Declined Measurably During the Baseline Period (2013-2018) – Cohort 1 Hospital Participants

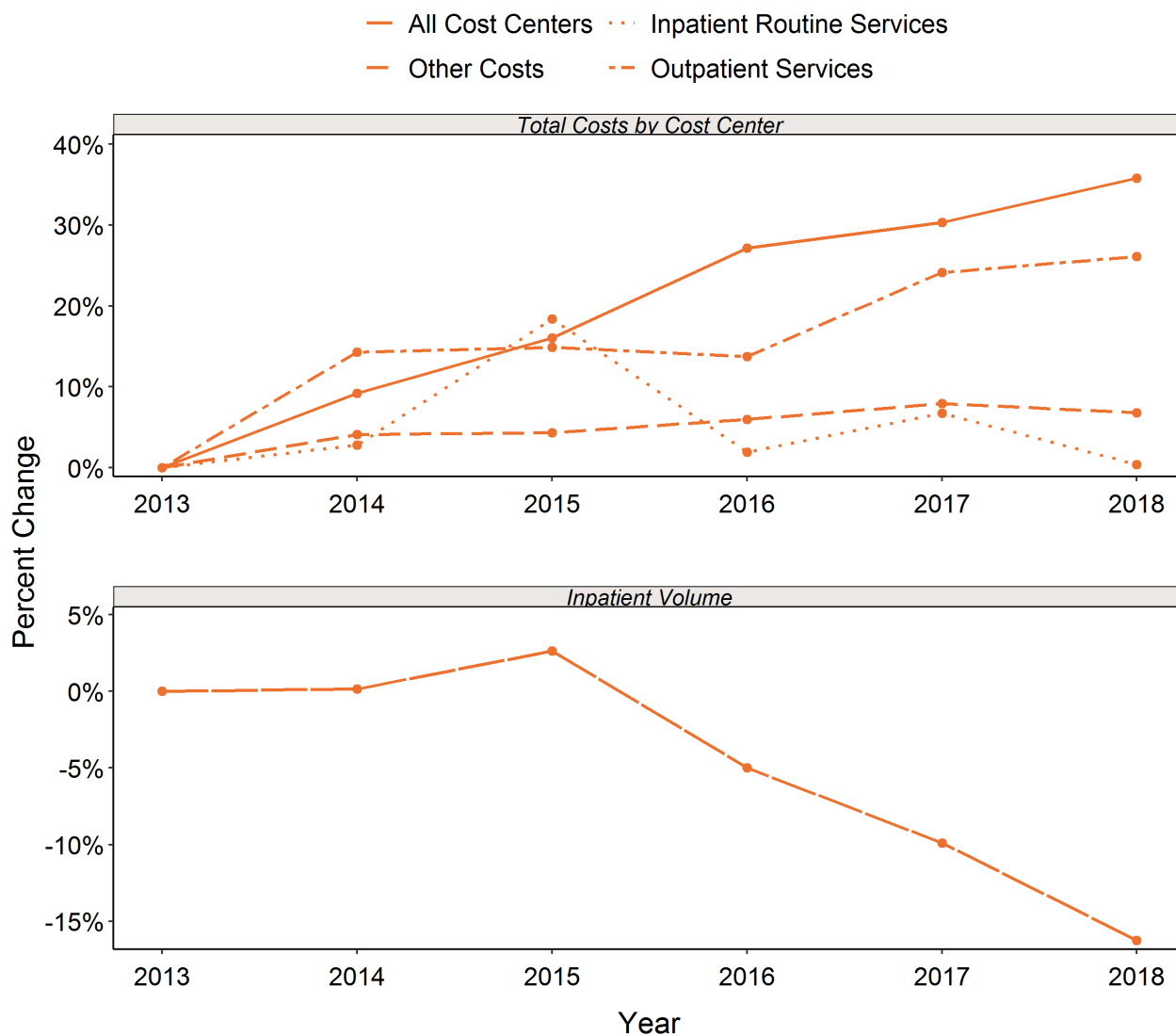


SOURCE: Medicare Cost Reports (FY2013-FY2018)

NOTES: Trends reflect group averages. A significant drop in net patient revenue during the baseline period for one of the Cohort 1 PPS hospitals contributed to the measurable decline in average operating margin for PPS hospitals.

- Total costs, especially for outpatient services, increased during the baseline period for the Cohort 1 hospitals (**Exhibit 5.4**).ⁿⁿ Costs associated with inpatient services remained unchanged during the baseline period despite a decrease in overall inpatient volume, which may have contributed to the declining total and operating margins in the baseline period.

Exhibit 5.4. Costs Associated with Inpatient Routine Services Increased Despite the Decline in Inpatient Volumes During the Baseline Period (2013-2018) – Cohort 1 Hospital Participants



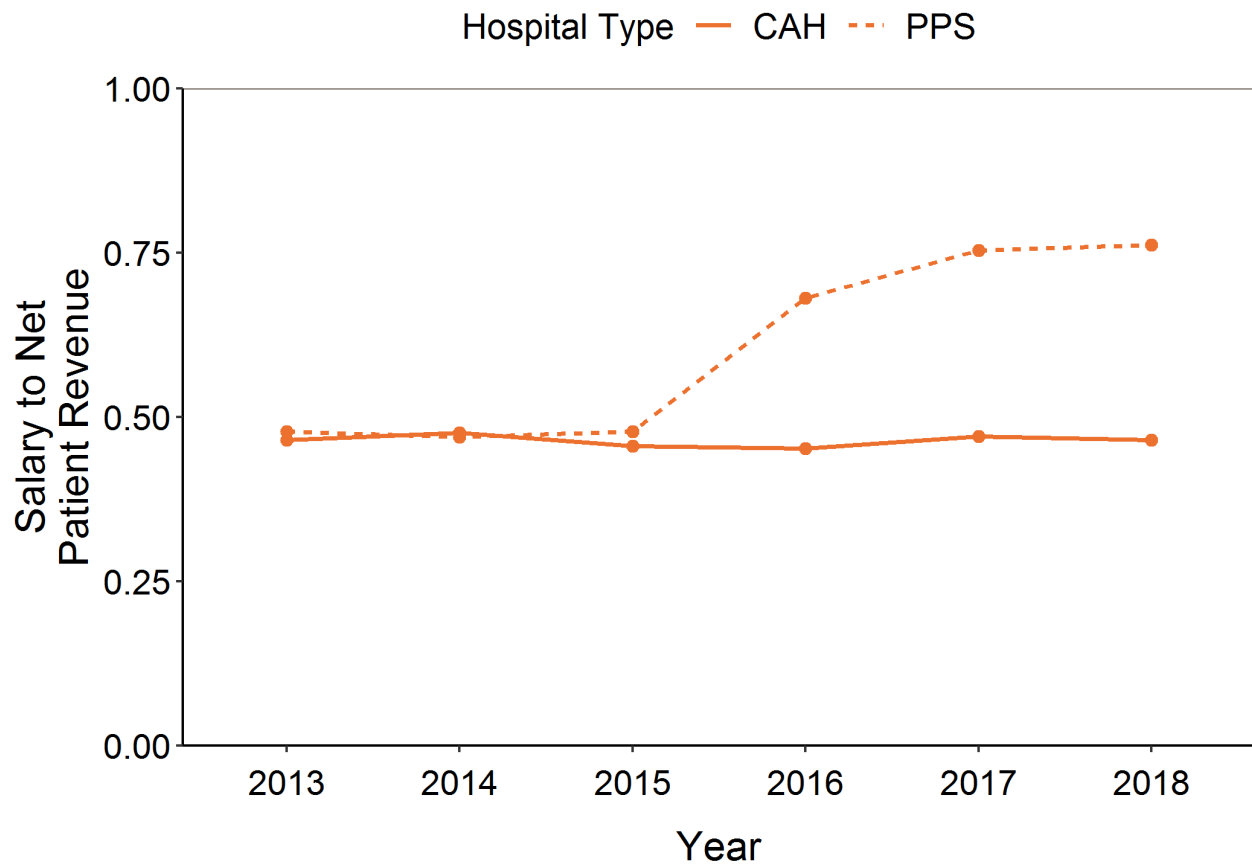
SOURCES: Medicare Cost Reports (FY2013-FY2018); Medicare FFS Claims (CY2014-CY2018)

NOTES: Trends reflect group averages. Final, reconciled Medicare reimbursement data for all the years in the analysis time period were not available at the time of this analysis, the results in this report are based on trends in interim Medicare reimbursement for the participating CAH and PPS hospitals.

ⁿⁿ For CAH, total costs include nonallowable costs, such as some of forms of advertising expenses, bad debt expense, lobbying dues, etc.

- Salaries to net patient revenue—an indicator of the staffing efficiency of a hospital—was high for the Cohort 1 CAHs and PPS hospitals (**Exhibit 5.5**) during the baseline period. UPMC Kane’s performance on this metric worsened after it was acquired by the UPMC health system. Costs associated with salaries are a major component of overall expenditures. The degree to which salaries are fixed costs as opposed to variable costs, especially in a market with declining inpatient volume, may have impacted the financial performance of the Cohort 1 hospitals.

Exhibit 5.5. Salaries to Net Patient Revenue Increased During the Baseline Period (2013-2018) – Cohort 1 Hospital Participants

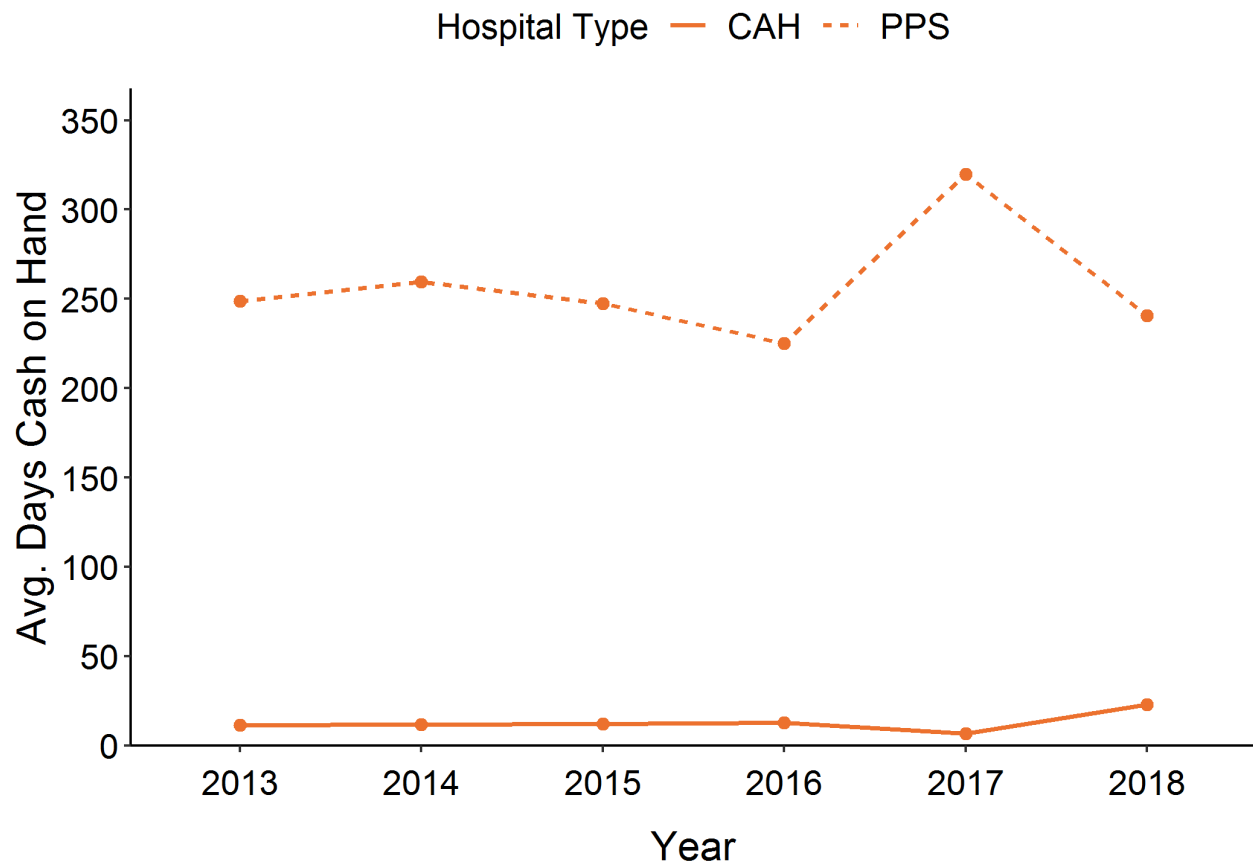


SOURCES: Medicare Cost Reports (FY2013-FY2018); Pennsylvania Health Care Cost Containment Council

NOTES: Trends reflect group averages. A significant drop in net patient revenue during the baseline period for one of the PPS participant hospitals contributed to the measurable decline in the salaries to net patient revenue measure for PPS participants.

- Days cash on hand—a measure of the participating Cohort 1 hospitals’ cash flow relative to the size of their expenses—remained at low levels throughout the baseline period (**Exhibit 5.6**) for CAHs. The low levels of liquidity may have constrained the participating CAHs’ ability to meet short-term obligations and make debt payments during the baseline period.

Exhibit 5.6. Days Cash on Hand Remained at Low Levels During the Baseline Period (2013-2018) – Cohort 1 Hospital Participants

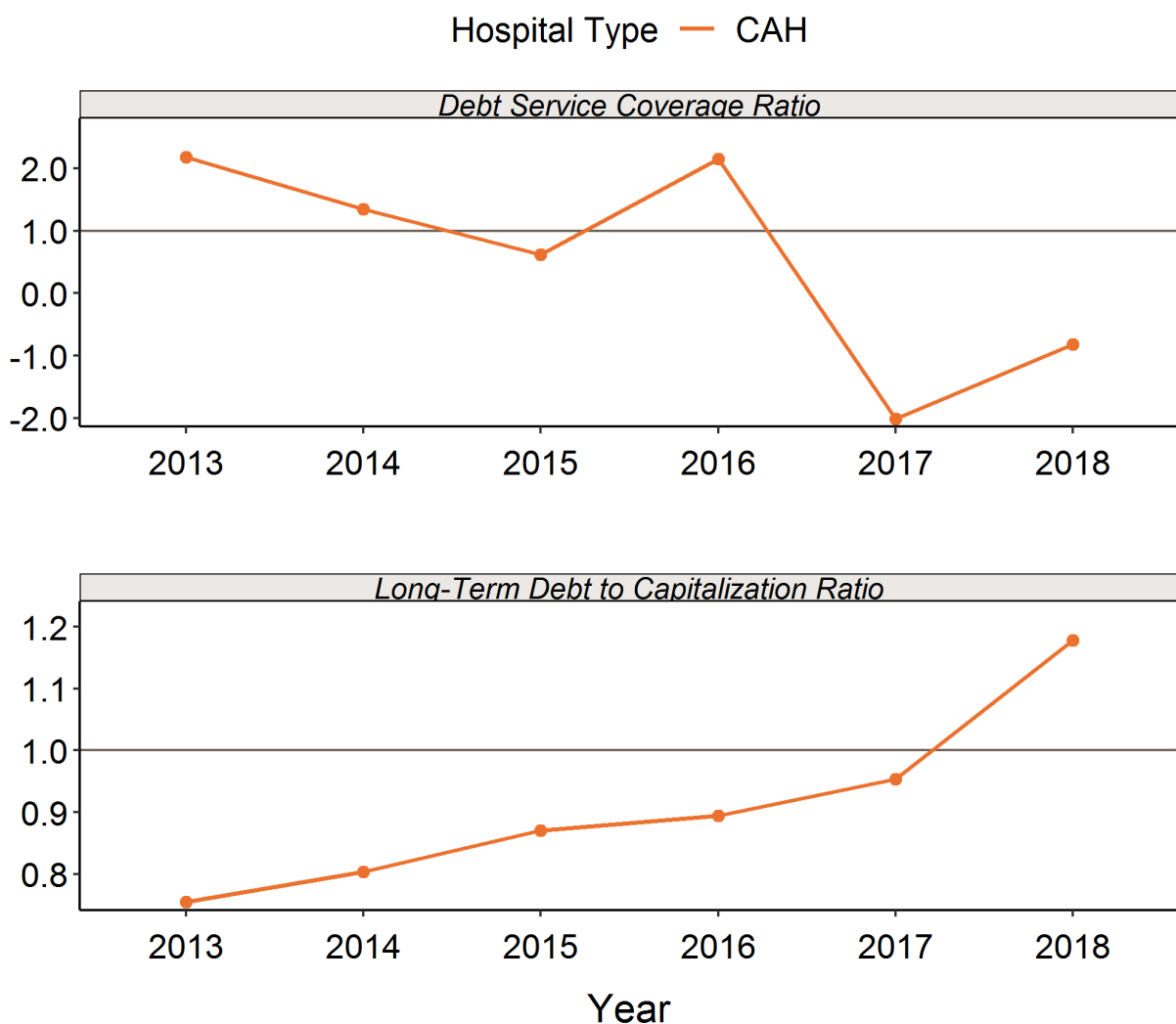


SOURCE: Medicare Cost Reports (FY2013-FY2018)

NOTE: Trends reflect group averages.

- The ability of Cohort 1 CAHs to pay obligations related to long-term debt, sustain accumulated debt, and take on additional debt worsened during the baseline period.
 - ▶ Debt service coverage ratio—an indicator of a hospital’s ability to pay obligations related to long-term debt and take on additional debt—remained low during the baseline period for two of the three Cohort 1 CAHs (**Exhibit 5.7**).
 - ▶ Long-term debt to capitalization ratio—an indicator of a hospital’s ability to sustain accumulated debt—was at high levels and worsened during the baseline period for the Cohort 1 CAHs (**Exhibit 5.7**).

Exhibit 5.7. The Ability to Pay Obligations and Sustain Accumulated Debt Worsened During the Baseline Period (2013-2018) – Cohort 1 CAH Participants



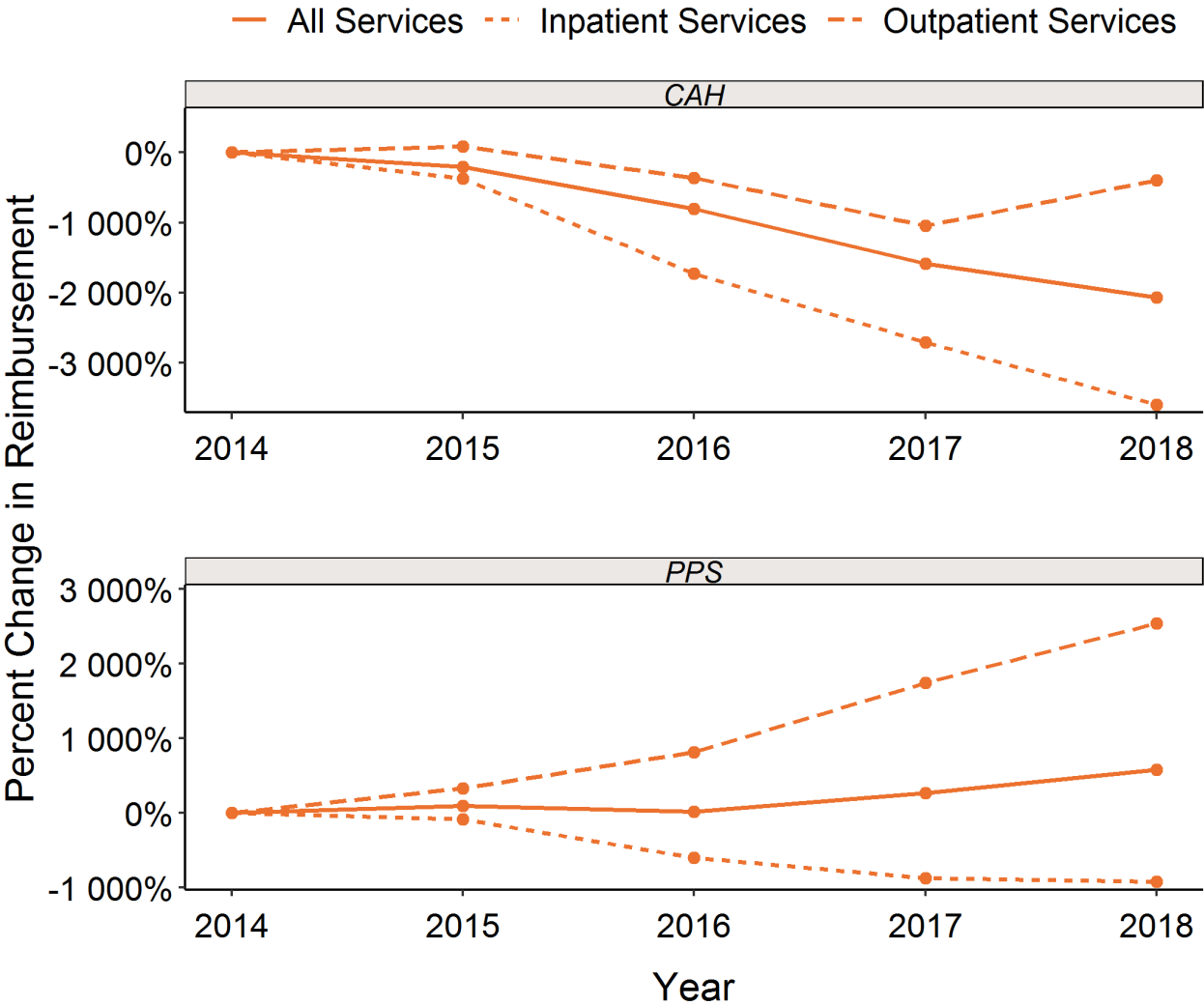
SOURCE: Medicare Cost Reports (FY2013-FY2018)

NOTE: Trends reflect group averages.

5.3 Descriptive Assessment of Trends in Interim Medicare FFS Payments and Utilization

During the baseline period, interim Medicare FFS payments declined for the Cohort 1 CAHs and increased for the Cohort 1 PPS hospitals (Exhibit 5.8). All Cohort 1 hospitals experienced a decline in interim Medicare payments for inpatient services and an increase in Medicare payments for outpatient services.

Exhibit 5.8. Interim Medicare FFS Payments During the Baseline Period (2014-2018) Declined for Cohort 1 CAH participants and Increased for PPS Hospital Participants



SOURCE: Medicare FFS Claims (CY2014-CY2018)
NOTE: Trends are based on group totals. Final reconciled Medicare reimbursement data for all the years in the analysis period were unavailable at the time of this analysis; the results in this report are based on trends in interim Medicare reimbursement for the Cohort 1 CAHs and PPS hospitals.

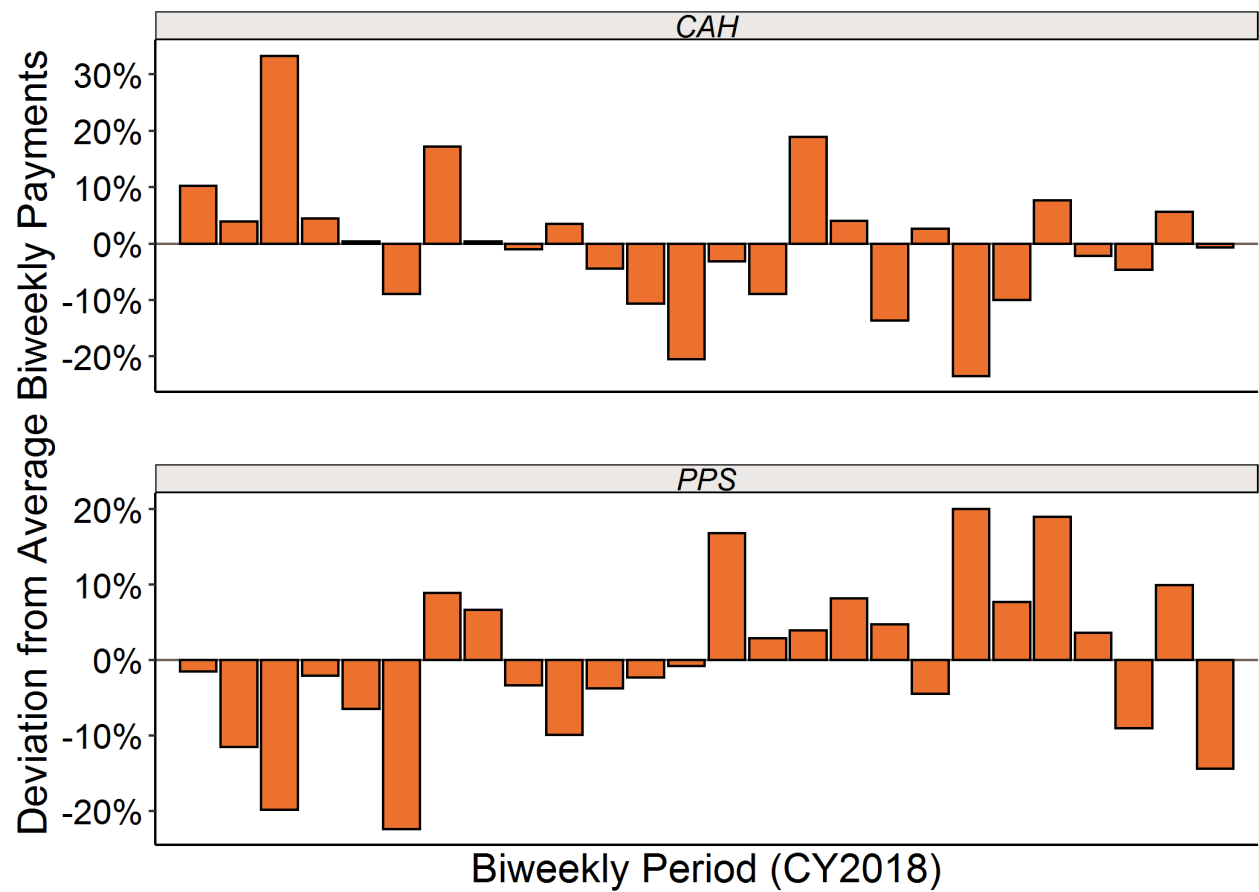
During PY1 (2019), global budget payments exceeded the interim Medicare reimbursement amount the participants would have been paid under the PPS and cost-based reimbursement methods.^{oo}

Based on trends for each participating hospital, with the exception of Wayne Memorial, global budget payments exceeded the interim FFS payments the participants would have received under PPS or cost-based reimbursement. See **Appendix Exhibit D.1** for financial performance and interim Medicare FFS payments for Cohort 1 hospitals.

The fixed biweekly payments during the performance period may provide a more predictable revenue stream to the participants by eliminating the variability in reimbursement resulting from seasonality in the utilization of hospital care. For FY2018 (prior to PARHM), both Cohort 1 CAHs and PPS hospitals demonstrated variability in interim FFS Medicare reimbursement throughout the year (Exhibit 5.9). Cohort 1 hospitals experienced biweekly percent deviations of over 10 percent above or below the average of the biweekly payment amount over the course of the year. Since hospital participants receive fixed biweekly payments during the performance period, it eliminates the variability in reimbursement resulting from seasonality in the utilization of hospital care. However, the Model may have an unintended effect of increasing the variability in final settlement adjustments when global budget payments are reconciled to costs for the Cohort 1 CAHs.

^{oo} Interim payments in this report represent biweekly amounts paid out. Final reconciled Medicare reimbursement data for all the years in the analysis period were unavailable at the time of this analysis.

Exhibit 5.9. The Model’s Fixed Biweekly Payments Eliminated the Variability in Interim FFS Reimbursements That Existed Prior to Model Participation for the Cohort 1 Participants

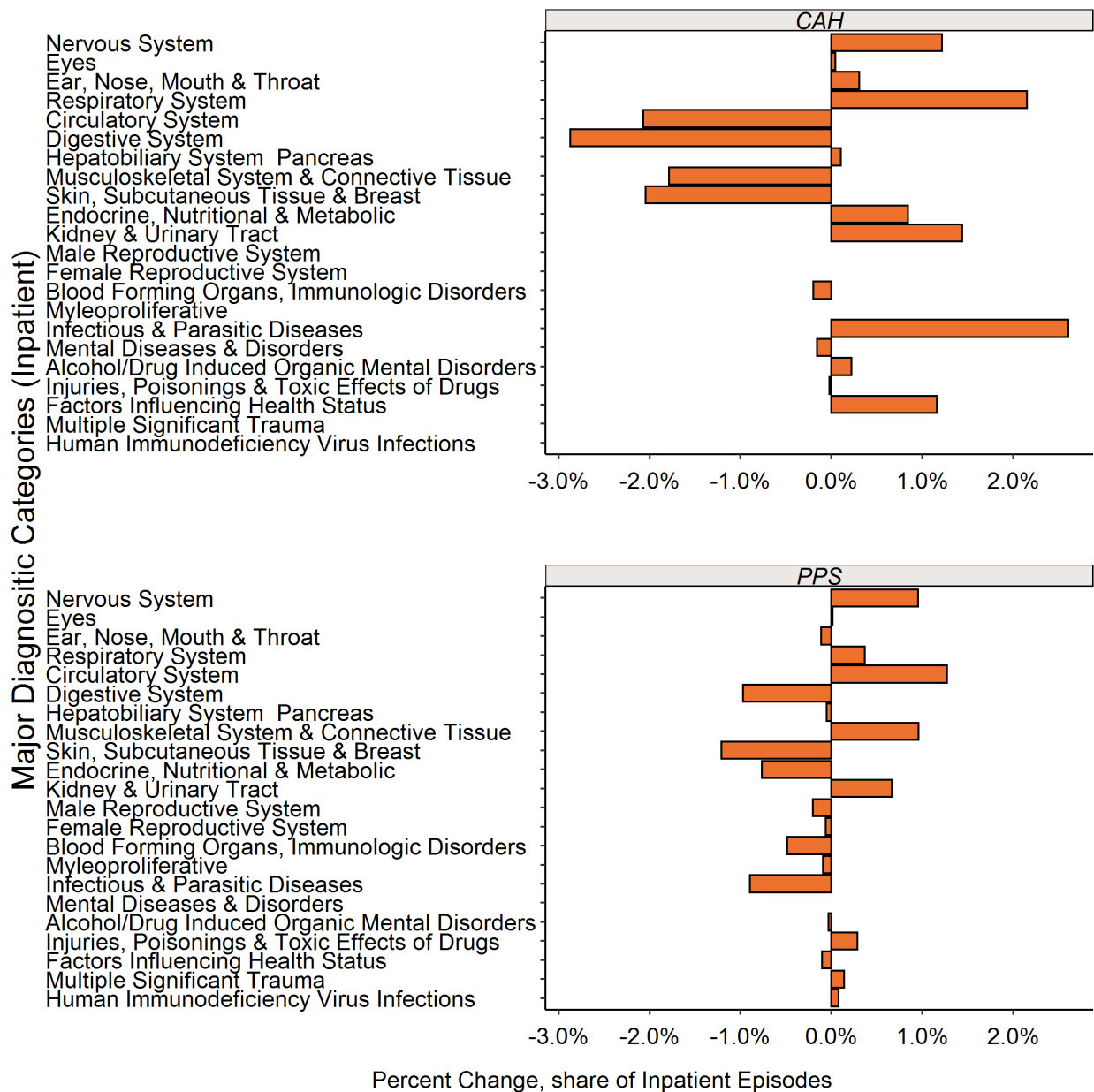


SOURCE: Medicare Cost Reports (FY2013-FY2018)

NOTE: Trends reflect group averages.

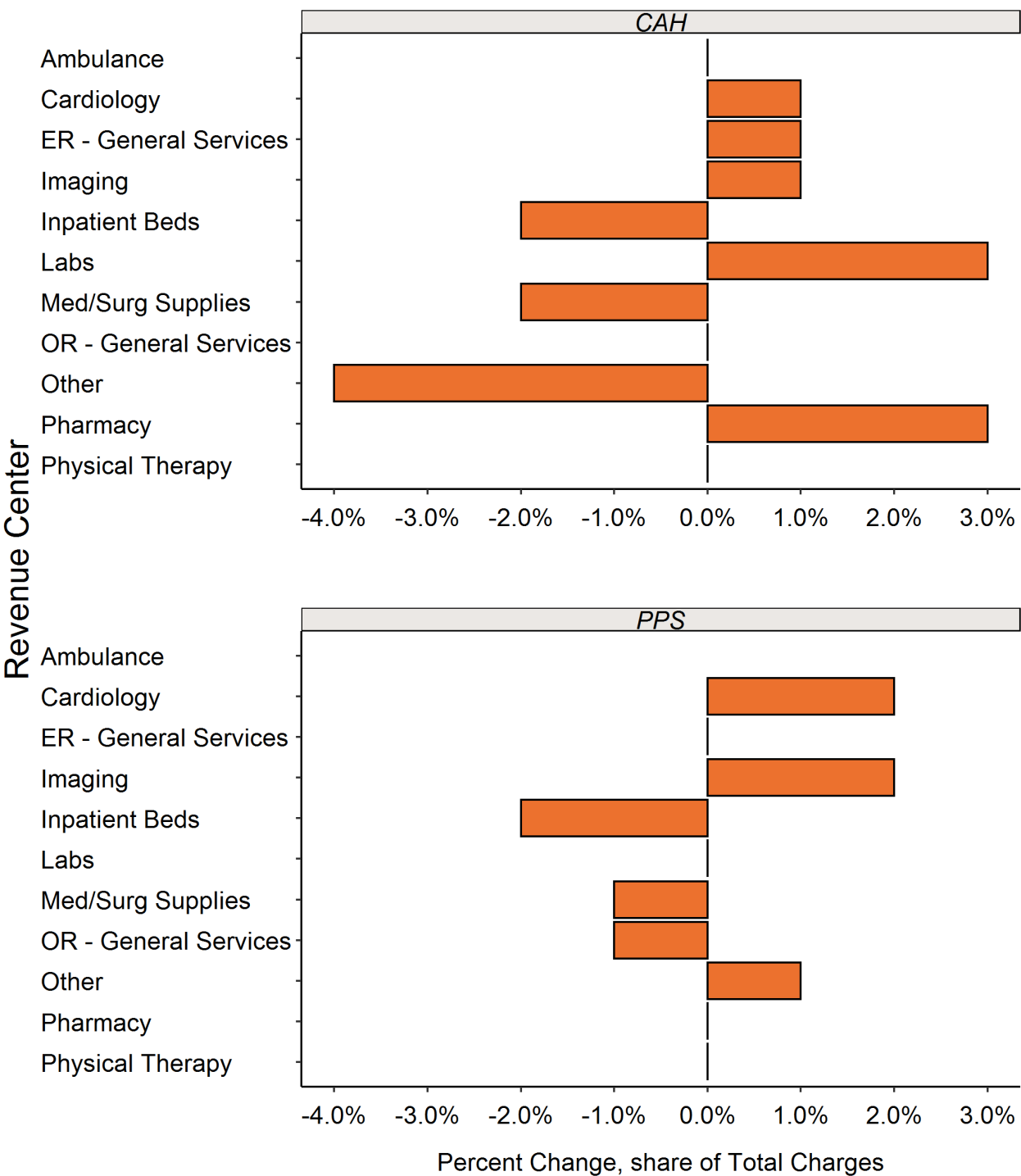
Based on reported major diagnostic categories, we observed no measurable change in service mix among Cohort 1 hospitals. The share of inpatient episodes by major diagnostic category remained largely unchanged between the baseline period (CY2014-CY2018) and PY1 (CY2019) (Exhibit 5.10). The share of hospital-wide, total charges by revenue center also remained unchanged between the baseline and performance period (Exhibit 5.11).

Exhibit 5.10. Share of Inpatient Episodes, by Major Diagnostic Category and Cohort 1 Type of Hospital, Change between Baseline Period (CY2014-CY2018) and PY1 (CY2019)



SOURCE: Medicare FFS Claims (CY2014-CY2019)
NOTE: Final reconciled Medicare reimbursement data for all the years in the analysis period were unavailable at the time of this analysis; the results in this report are based on trends in interim Medicare reimbursement for the Cohort 1 CAHs and PPS hospitals.

Exhibit 5.11. Share of Total Charges by Revenue Center and Type of Cohort 1 Hospital, Change between BY (CY2014-CY2018) and PY1 (CY2019)



SOURCE: Medicare FFS Claims (CY2014-CY2019)
NOTE: Final reconciled Medicare reimbursement data for all the years in the analysis period were unavailable at the time of this analysis; the results in this report are based on trends in interim Medicare reimbursement for the Cohort 1 CAHs and PPS hospitals.

Chapter 6: Discussion

Our first annual report examined the perspectives and experiences of Model stakeholders, Cohort 1 participating hospitals, and participating payers from document review, virtual site visits, and interviews. This report also includes preliminary descriptive data on the financial performance and interim Medicare FFS payments and utilization during the baseline period (2013-2018) and PY1 (2019) for the Cohort 1 hospitals.

Because we are in the early stages of the evaluation, this report presents emerging hypotheses that will be fully tested as we collect, integrate, and analyze additional data. We recognize there are limitations to the interpretation of our first-year findings, for example, the preliminary descriptive assessment of baseline trends does not reflect the impacts of the Model. In addition, the small number of Cohort 1 hospitals and the heterogeneity in their characteristics make most comparisons to eligible nonparticipants or national or statewide benchmarks infeasible. At the time of the Cohort 1 hospital interviews, the reconciliation and cost settlements had not yet been completed (reconciliation occurred later in the fall of 2020 after our data collection period). Therefore, neither our qualitative nor quantitative data included in this report reflect the reconciliation process and associated adjustments for Cohort 1 hospitals. Finally, for our primary data collection, we were unable to conduct focus groups or interviews with Medicare beneficiaries and overall had a limited number of interviews due to COVID-19. In the later years of this evaluation, we will assess the Model's impact on hospital finances, utilization, quality of care, and population health measures while continuing to explore drivers of Model success or failure.

In this chapter, we summarize key findings on Model aims and design, participation, implementation experience, and sustainability; discuss the implications of our findings; and lay the groundwork for future analyses.

Model Aims and Design

Stakeholders and participants have divergent views regarding Model objectives. As with many complex initiatives, there was some variation in how respondents described the Model's overarching goals. Respondents recognized that there were multiple goals within the Model's framework, including rural hospitals' financial viability and quality of care; access to care in rural communities; care delivery transformation; and cost containment. Stakeholders recognize that greater alignment of the purpose and priority of Model goals would facilitate implementation.

One technical expert noted that while CMS emphasized cost savings, hospital leaders continued to reference the importance of growth. Growth may come in many forms for hospitals, such as increases in market share, utilization of an existing service through promotion, or in volume due to a new service line addition. Broader conversations among stakeholders may be needed regarding the global budget design and the associated challenges facing rural hospitals operating with tight or negative margins in

an environment that is still closely tied to FFS payment with virtual global budgets and reconciliation to cost-based reimbursement (in the case of CAHs).. Reconciling the two goals of the Model—stabilizing the financial status of the rural hospitals and reducing the cost to payers will be a significant challenge.⁵⁵ As one stakeholder noted, *“The true goal of the model is to test a new way of thinking for hospital leaders”* and to help hospital leaders direct attention to patient care and community health. There is general consensus among Cohort 1 hospitals that improving patient care, community linkages, and access are goals that they hope to achieve through Model participation. Many of the hospitals view the goal of long-term spending reductions through the global and virtual budgets as more challenging within the current framework.

While the RHRCA was delayed, its establishment may improve communication and alignment among stakeholders and participating hospitals and payers. The RHRO within DOH fulfilled many of the roles of the RHRCA from the pre-implementation period into PY2 (2020) during the onboarding of the RHRCA Board and staff. Participating rural hospitals, payers, and other stakeholders reported high levels of trust with RHRO staff members, noting their extensive experience working in the rural Pennsylvania health care delivery system. Implementing global budgets requires institutional infrastructure to support collaboration among state government, payers, and rural hospitals, and it is important for an independent administrative agency to have credibility with key public and private partners.^{56,57} Despite satisfaction with RHRO efforts, stakeholders noted the importance of establishing an independent governing body with payer and hospital representation to move the Model forward, similar to Vermont’s Green Mountain Care Board⁵⁸ and the Maryland Health Services Cost Review Commission.⁵⁹ With more operational flexibility, the RHRCA will be better positioned to facilitate alignment and communication among payers and hospitals. In future performance years, we will examine the role of the RHRCA in Model implementation.

Global budget payments provide steady cash flow to hospitals but are reconciled to cost-based reimbursement (for CAHs) and are adjusted for unplanned volume shift (and other factors) for PPS hospitals. While an annual global budget provides predictability, the Medicare reconciliation process had still not occurred for Cohort 1 hospitals. Additionally, the virtual global budgets for commercial payers (that administer Medicaid managed care, Medicare Advantage, and commercial plans) do not fully transition hospitals away from the traditional payment methods. Stabilized cash flow alone may be an insufficient financial incentive to move delivery system transformation forward for financially strapped rural hospitals already operating with small or negative margins. It is not yet clear how stabilization of cash flow streams will increase the hospital bottom lines or decrease total expenditures for payers.

Participating hospitals and some stakeholders would appreciate flexibility and more communication related to major disruptions, such as occurred during the COVID-19 pandemic. In PY2 (2020), CMMI and the Commonwealth collaborated to modify Model requirements, based on the Commonwealth’s requested flexibilities, in response to COVID-19. These changes included reducing hospital participation scale targets, extending the hospital transformation plan submission deadline, reducing reporting on hospital transformation activities, and adjusting the Medicare global budget. Even with this flexibility, hospital leaders were concerned about reconciliation for PY2 (2020) given the large fluctuations in volume throughout the year. Stakeholders called for the Model to be *“organic and flexible.”* One

respondent suggested that recruitment of later adopters may be more effective if CMMI and the Commonwealth modify the Model's parameters based on learnings from early adopters. Demonstrating this flexibility may make the Model more attractive to hospitals that remain hesitant to join. Furthermore, some Cohort 1 hospitals expressed a desire to adapt the Model in later years, particularly with respect to COVID-19 in PY2 (2020).

Model Participation

Participation has been slower than anticipated, but most participating hospitals reported that their financial status was central to their decision to participate. The Commonwealth faced recruiting challenges to meet Model scale targets due to financial concerns among eligible hospitals about the sustainability and long-term viability of the Model, delays in the RHRCA legislation, mergers among eligible hospitals, and hesitation among hospital system leadership. However, leaders from all five of the Cohort 1 hospitals valued the opportunity to change care delivery through the Model and to engage with the Commonwealth and other Model participants; although, they also acknowledged that transformation has been slow due to COVID-19 disruptions and contract delays in PY2 (2020). The Cohort 1 hospitals that did ultimately participate valued the financial stability of global budgets, opportunity to transform care, technical assistance, and the collaboration with the Commonwealth and other participants to improve community health.

The short- and long-term financial viability of the Cohort 1 hospitals worsened during the baseline period. Declines in inpatient volume and unchanged inpatient care costs may have contributed to their worsening financial status in the baseline period. Model-wide, we observed declining, negative financial margins, low levels of liquidity, increasing costs relative to revenue, and declining ability to sustain long-term debt and raise additional capital for the Cohort 1 hospitals. Participants and stakeholders mentioned the uncertainty about what will come after the Model, which also may have contributed to some of the recruitment challenges across the first two performance years.

Challenges to achieving scale targets and limited payer participation contribute to a smaller share of revenue covered by the global budget. As payer participation (Medicare, Medicaid, and commercial) increases, a higher share of the total patient revenue of the participating hospitals will be covered by the global budget payment incentives. The total net patient revenue of the Cohort 1 hospitals in FY2019 was \$173.9 million^{PP}, whereas the total Medicare revenue covered under the global budget in PY1 (2019) was \$41.8 million. Commercial payers' decision to participate was motivated by recognition of their important role in supporting independent rural hospitals. Payers made individual determinations about which hospitals they signed agreements with and the inclusion of the business lines (e.g., Medicaid, Medicare Advantage, and commercial contracts) and service lines in the agreements.

Lack of alignment remains across public and commercial payers, which may prevent attainment of scale as measured by the percentage of hospital revenue covered by global budget incentives. Commercial payers also expressed reservations about hospital eligibility, specifically in relation to

^{PP} Data from the 2019 Pennsylvania Health Care Cost Containment Council (PHC4).

expanding the pool in PY2 (2020) to include larger hospitals and implementation of the global payment. Payers were uncertain about how hospitals were held accountable for implementation of transformation plans. It will be important for the Model stakeholders to consider how to mitigate these concerns and encourage expanded participation in future performance years.

The Model has attracted interest from a variety of hospital types, indicating that this approach to payment reform appeals to a range of potential participants. Five hospitals signed participation agreements in PY1 (2019)—two independent CAHs, one system-affiliated CAH, one independent PPS hospital, and one health system-owned PPS hospital. The small number of Cohort 1 participants (n=5) limits our ability to infer whether the broad appeal of this type of initiative will result in actual participation from a variety of eligible hospitals across the Commonwealth.

The Model uses a substantially different definition of rurality than the common federal definitions. The Center for Rural Pennsylvania defines counties with a population density of less than 284 persons per square mile as rural, which is an eligibility criteria for participation in the Model.³ This definition is considerably different from federal definitions of rurality and may have implications for external generalizability of the Model for future rural initiatives.

Model Implementation

Hospitals need capital to support staff with dedicated time to implement transformation plans.

Stakeholders noted that if hospitals are only able to finance transformation through improved marginal revenue under the global budget, *“it’s much harder for small undercapitalized organizations...to do whatever it takes to implement an exciting transformation plan.”* Without upfront capital and funding to support transformation, hospitals struggled to dedicate staff and resources to implement their hospital transformation plans and operationalize care delivery transformation. A recent study found that hospitals with lower financial liquidity are more likely to be small, rural, have low occupancy rates, and have CAH status.⁶⁰

Pennsylvania does not have as extensive a history of health reform as other states implementing multi-payer models, such as Vermont and Maryland, and participating hospitals may need more upfront funding and support to initiate transformation efforts. In the later years of the Maryland model, each hospital was eligible for transitional funding, through competitive grants, to support delivery system transformation focused on improved care coordination, chronic disease management, and resource utilization.⁶¹ Transformation requires knowledge, skill, a designated leader with dedicated and supportive staff with access to commensurate resources; major disruptions and limited staff capacity make it harder to prioritize transformation activities. The provision of additional TA to participating hospitals could support their implementation efforts and help hospitals stay on track, even in times of disruption.

Hospitals and payers generally assessed technical experts positively. One hospital described the RHRO and implementation contractors’ support with global budget development as critical to its participation. All participants appreciated technical experts’ support in developing hospital transformation plans. However, technical experts reported operating in silos and experiencing delays

due to contracting issues, which may have limited their effectiveness in supporting hospitals. These work streams and natural silos were likely established under the initial contracts and may change under the newly established RHRCA. Some respondents found the transition and turnover between implementation contractors affected the ability of Model participants and stakeholders to retain and transfer institutional knowledge. The Cohort 1 hospitals viewed TA as a positive aspect of the Model, particularly TA related to managing global budgets and transformation activities. This support likely increased accountability and facilitated hospitals in narrowing gaps where internal staffing and health IT resources were limited. The potential for future cohorts to receive this type of support, particularly in the early years of the Model, may compel some of the independent hospitals to participate and reduce perceptions of burden or competing priorities for hospital staff.

While some stakeholders would like to see more accountability in the transformation process, hospitals and stakeholders recognize that meaningful transformation is a slow and iterative process. Some technical experts and commercial payers emphasized the need for greater accountability regarding hospital transformation plan implementation but noted the importance of flexibility in evaluating hospitals. One clinician hoped there *“is accountability for how the coalitions [i.e., community partnerships] are operating and if they are following the Model and making progress.”* A hospital CEO noted that while the Model uses the right measures, hospitals are not *“always in the circle of influence”* with respect to their patients and lack access to data about patients receiving follow-up care outside of their hospital or system.

One of the goals of the Model is for hospitals to consider transformation with a focus on community organization partnership to align with broader Model goals. While these relationships are evolving, one limiting factor may be the lack of alignment between goals, financial incentives, and accountability (through quality measures) across payers and organizations (e.g., hospital and community partners) to make additional progress in some of the goals outlined in hospital transformation plans and the overall Model aims.

Hospitals need access to timely data and more clarity regarding quality measures. Several respondents emphasized the need for regular reporting regarding quality and utilization measures associated with claims data. One hospital CEO stated that *“currently reports regarding the previous year are received more than 8 months into the next year.”* They referenced interim claims data based on 45 days’ worth of claims and noted that *“having a 90 percent accurate picture in half the time might be more helpful.”* Some of the quality measures that the hospitals will be accountable for were not finalized at the time of our interviews, and hospitals that are unaffiliated with larger health systems did not have timely utilization data to understand care seeking patterns among their patients. Stakeholders also noted that the absence of regular reporting affects recruitment, as potential applicants are reluctant to commit to the Model without reviewing tangible data-based results.

Perceptions of Model Impact and Sustainability

The Model contributes to short-term financial stability, but independent rural hospitals still struggle with long-term sustainability. Model participants unanimously agreed that the global budget helped hospitals gain more financial stability, but the degree of financial stability varied across hospitals. For

example, a recent study noted that a global budget may be successful in relieving pressure to invest in high-margin elective services for short-term stability, but this could undermine sustainability as patients increasingly may migrate to high-volume referral centers for care.⁵⁶ One hospital CFO commented, *"Knowing that I'm getting that money helps in knowing that if my volumes decrease significantly, I know I'm getting those dollars every month so that helps me move forward."* However, a hospital CEO stated that the global budget model helps hospitals balance cash flow but doesn't provide enough financial support and time for change or transformation. *"We're just going out of business slower,"* he explained. Ultimately, changing the timing of the cash flow did not alter the overall profitability of struggling hospitals. System-affiliated hospitals described having more long-term security because of access to financial resources from the system.

Medicare's fixed biweekly payments helped hospitals manage volume fluctuations and provided financial stability. The Cohort 1 hospitals, especially the CAHs, experienced variation in service volume and Medicare reimbursement during the baseline period. The fixed biweekly payment during the performance period eliminated variability in Medicare reimbursement and ensured a predictable revenue stream for hospitals. However, the increased complexity of the settlement and reconciliation processes may increase uncertainty regarding final settlement adjustment amounts, especially with the uncertainty for PY2 (2020).

An unanticipated benefit of the Model was the predictable payments received during COVID-19, when elective procedures were canceled, disrupting utilization tied to FFS payment. Global budget payments provided a lifeline to hospitals while they waited for CARES Act and other supplemental funding. At the time of interviews, hospitals had not completed reconciliation, and there were outstanding questions about how COVID-19 and associated funding would affect hospital global budgets.

Large cost savings may not be feasible in the PARHM. Several stakeholders noted that while cost savings are important, the Model timeline may be insufficient to realize significant spending reductions. One hospital CEO noted that the Model may be able to *"bend the curve"* by slowing the rate of spending growth but that actual spending reductions would be unlikely. Another hospital CEO noted that due to the large number of fixed costs that rural hospitals have, significant cost savings seem unlikely. The literature supports these concerns, noting that the pressure to achieve near-term savings in global budget models may undermine the hospital's financial stability and its ability to meet community health needs.⁵³ It may be more likely that the Model achieves the other elements of the quadruple aim—better outcomes (i.e., quality and access) and improved clinician and patient experience within rural communities.⁶²

Stakeholders also emphasized that physicians and other health care providers need to be included within the Model framework to reduce *"spiraling health care costs"* and *"shift the cost curve."* In the current Model, the financial risk is all absorbed at the hospital level and does not affect how physicians and other providers are paid. Other CMMI evaluations have highlighted the limitations of care delivery transformation when hospital and physician incentives are misaligned. A recent study noted that in models excluding physician payment, there was limited influence on physician behavior that may have hindered the models' effectiveness to catalyze broader changes in care delivery.^{8,56,63} Studies also found that community-based physicians have stronger incentives than hospitals to reduce costly

hospital use,^{64,65} behavior change among clinical providers is an essential element to alter utilization patterns. Leaving primary care and other outpatient services out of the global budget may limit the Model's impact on cost.

Although the descriptive results provide limited insights on the PAHRM's expected impact on Medicare spending and utilization, it is worth noting that global budget payments in PY1 (2019) exceeded the interim Medicare reimbursement amount Cohort 1 hospitals would have been paid under the inpatient and outpatient PPS and cost-based reimbursement methods. These payments do not reflect the final reconciled amounts as we did not have these data at the time of the report. The continuation of cost-based reimbursement for CAHs participating in the Model still ties those hospitals to national Medicare policy that will likely influence financial sustainability, along with Model participation.

Next Steps/Future Reports

The PARHM is the first CMMI Model that provides rural hospitals an opportunity to test if global budgets can help improve their financial viability, provide flexibility to meet locally defined community health needs through population health activities, and reduce overall health care spending. Since the Model was conceptualized over five years ago, there have been many changes in Pennsylvania's rural health environment. For example, a number of independent rural hospitals have merged or been acquired by health systems, health plan networks and markets have shifted, and the COVID-19 public health emergency disrupted how many providers operated and met local health care needs. Despite these challenges, an underlying premise in the design and implementation of the Model is the important role that hospitals play in rural communities, along with community partners, in identifying and addressing local health needs.

Our next annual report will include an assessment of the PARHM's reach (i.e., scale target performance), implementation experiences of the Cohort 1 and Cohort 2 hospital participants, and a descriptive assessment of financial performance, spending and utilization, and access and quality of care outcomes during the performance period. If an impact assessment is feasible, future evaluation reports will include findings on the Model's impact on financial performance, utilization and spending, and access and quality of care outcomes for the Medicare and Medicaid populations.

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