



What's in a Name: A Primer on Global Budget Models

Introduction

The term “global budget” has been used to describe several different health care payment models. Commercial payers have referred to payment arrangements like the Blue Cross Blue Shield of Massachusetts [Alternative Quality Contract](#) (AQC) as a global budget since the early 2000s. At the federal level, the Center for Medicare and Medicaid Innovation (CMMI) has used the term in reference to three models: (1) the [Pennsylvania Rural Hospital model](#); (2) the [Maryland All-Payer model](#); and, (3) the [Maryland Total Cost of Care model](#). Most recently, the term global budget has been used in the “Medicare for All” bills introduced by Senator Sanders (I-VT) and Representative Jayapal (D-WA) to describe the payment approach for institutional health care service providers.

While the term global budget has been used as a common descriptor for all of these payment models, the underlying model designs and goals vary greatly. Consequently, simply referring to a payment model as a global budget fails to adequately communicate the model concept and parameters. In short, “global budget” has become an often used, but inconsistently defined term.

In this paper, the Health Care Transformation Task Force (Task Force) addresses this issue by identifying a set of common characteristics for global budget models, outlining different model types and detailing their common elements. This paper also includes descriptions of several existing global budget models as detailed in Appendix 1. This work builds on an earlier Task Force [white paper](#) that described the range of financial models used by ACOs. It is intended to serve as a resource for policymakers, regulators, and members of the health care industry to assist them in more precisely defining and communicating the relevant features of proposed legislation, regulations, or payment model contracts.

Common Characteristics of Global Budgets

Given that the term global budget is not subject to one definition, the Task Force set forth to identify a set of common characteristics that accurately conveyed the global budget concept while including enough flexibility to encompass the range of design approaches used by models currently in operation. The result is the following description.

Common Characteristics of a Global Budget: A payment arrangement that sets a budget to fund the delivery of care to a population over a specified time period, allows for budget adjustments to reflect factors such as market and population changes, includes incentives based on the quality of care and patient experience outcomes, and incorporates financial accountability for the facility or provider.

Types of Global Budgets

There are several global budget models currently in operation, each with varying goals and design methodologies. Despite this variation, these models can be grouped into two distinct types based on the approach used for establishing the budget: (1) **population-based global budgets**; and (2) **facility-based global budgets**.ⁱ

Type 1: Population-Based Global Budgets

Description: The global budget concept used in reference to models like the Blue Cross Blue Shield of Massachusetts AQC can be described as a population-based global budget. Population-based global budgets are designed around the total cost of care for a patient population and establish a set payment for a providerⁱⁱ responsible for the care of that patient population. Under these models, a provider is accountable for the total cost of care for a specific population of patients. These models may base their budgets on the historical or projected total cost of care for a patient population and generally hold a provider accountable for the total cost of care regardless of where the service was rendered or who delivered the care. These models may include limited carve-outs for specific services such as behavioral health or prescription drug spending for which the provider is not accountable.

Goals: The goals of this type of model are generally to moderate cost growth, offer providers greater flexibility in care delivery, and incentivize alignment across care delivery domains to improve quality and efficiency.

Example: Blue Cross Blue Shield of Massachusetts Alternative Quality Contract

Type 2: Facility-Based Global Budgets

Description: The concept underlying the design of the CMMI global budget models can be described as a facility-based global budget. Facility-based global budget models are designed around the spending of a facilityⁱⁱⁱ and establish a prospective budget for a facility's spending (inpatient, outpatient, or both) that is not linked to specific patient visits or services. Typically, these models base their initial budgets on either the historical spend of a facility or the anticipated resource needs for a facility as a function of the expected or desired set of health care services and utilization rates.

Goals: This type of model is typically implemented with the goals of incentivizing investment in population health and prevention, encouraging adjustments to facility services to better address community needs, improving financial sustainability for facilities experiencing specific market challenges, and reducing potential cost shifting across payers, facilities, and providers.

Examples: Maryland All-Payer Model, Maryland Total Cost of Care Model, Pennsylvania Rural Hospital Model

ⁱ Note: The arrangements and examples described here reflect agreements between separate payers and providers. This document does not cover the range of payment approaches used in joint ownership models or integrated systems.

ⁱⁱ Providers can include physician group practices, physician hospital organizations, or integrated delivery systems.

ⁱⁱⁱ Facilities can include individual hospitals, health systems, or academic medical centers.

Design Elements of Global Budgets

The structure of a global budget model is largely dependent on the goals of those designing and implementing it. While global budgets can be viewed as a mechanism to manage spending growth, there are a range of other reasons for implementing this type of payment model. These reasons include establishing stable and sustainable revenue streams for providers and facilities, managing cost trends for a patient population, providing flexibility for investments and innovation in care coordination and quality improvement efforts, encouraging efficient use of resources, and aligning incentives with community health.

While potential reasons for implementing a global budget model vary, all models should account for a set of common design elements described in this section. The elements are divided into three categories: (1) **financial structures**; (2) **administration and oversight**; and, (3) **stakeholder engagement**.

Design Element 1: Financial Structures

This element covers considerations for defining the population included under the global budget model, the methodology for determining the underlying model budget, and factors to consider for ongoing budget adjustments.

Defining the Population: Population-based global budget models need a clear methodology for determining which patients are included under the budget.^{iv} Common approaches for determining which patients are included in the model are:

- a) **Patient attribution:** Providers are responsible for patients for whom they provide the majority or plurality of primary care services.
- b) **Member selection:** Providers are responsible for patients who have selected the provider as their designated PCP or physician of choice.
- c) **Geographic region:** Providers are responsible for patients residing in a specific region.

Budget Design: Global budget models need a clear methodology for determining the following aspects of the model budget:

- a) Defining costs covered under the budget. These may include:
 - The costs for services delivered at a specific facility;
 - The total cost of care for a patient population; and,
 - The cost of care for a population in a specified geographic region.
- b) Establishing a baseline budget. Common approaches include:
 - Historical claims for a provider, facility, or population;
 - Normative pricing that sets an expected cost and utilization rate per service;
 - Community rating based on the average expected spending per-person; and,
 - Percentage of premium where providers receive a portion of the premium used to cover a given population.

^{iv} Note: Facility-based models are an exception. Their budgets are designed around facility specific spending, rather than a patient's total cost of care, and often do not require the tracking and attribution of patient spending outside of the facility.

- c) Determining the proportion of facility or provider revenue covered under the global budget^v including:
- Identifying the payers that will participate in the global budget;
 - Establishing the proportion of revenue that will be under a global budget to meet the payment models goals; and,
 - Defining how responsibility for the budget is apportioned/managed across payers.
- d) Adjusting the baseline budget over time. Common factors include:
- Inflation adjustments;
 - Changes to benefit designs, service lines or utilization rates;
 - Demographic trends;
 - Risk adjustment^{vi};
 - Disasters/mass causality events/disease outbreaks;
 - Government laws and regulatory requirements;
 - Budget adjustments linked to quality measure performance; and,
 - Market share shifts across participants in facility-based global budgets.

Design Element 2: Administration and Oversight

This element addresses the range of administrative and oversight tasks that are generally part of operating global budget models. These tasks could be shared across many entities including provider organizations, payers, purchasers, government agencies, and non-governmental agencies established to manage the model. Tasks include:

- a) Calculation of baseline budgets and adjustments over time in response to planned and unplanned factors;
- b) Design and implementation of care transformation strategies that align with the defined goals of the global budget and support successful provider operations;
- c) Valuation of claims, payment processing (FFS and capitation), reconciliation/interim and final settlements, and profit or loss payment management (applicable under risk arrangements);
- d) Design and implementation of strategies to maintain or improve the quality of care; and,
- e) Cost, utilization, and quality performance monitoring, analysis, and reporting for the providers and patients covered under the model.

^v This step is only necessary for multi-payer models where it is necessary to calculate what proportion of the budget should be covered by each participating payer.

^{vi} Hierarchical Condition Category Coding (HCC) is the approach commonly used for CMS designed models.

Design Element 3: Stakeholder Engagement

This element addresses the parameters of engagement from the range of stakeholders involved in the design of a global budget model as well as the population receiving care from the impacted providers. Important stakeholder engagement considerations include:

- a) Developing a strategy to engage the appropriate stakeholder groups (payers, providers, purchasers, consumers/patients, state and federal policy makers);
- b) Clearly defining a common vision and goal for developing a global budget model;
- c) Determining potential state and federal regulatory requirements or the need for waivers^{vii};
- d) Identifying and addressing stakeholder concerns; and,
- e) Incorporating feedback to balance model risks and benefits in an acceptable manner.

Conclusion

Policymakers, regulators, and members of the health care industry should be mindful of the fact that there is more than one interpretation of what features define a global budget model. Multiple model concepts have been referred to as global budgets over the years, creating the potential for confusion depending on the model approach one associates with the term. To minimize the potential for confusion, those designing and discussing global budget models should focus on using more precise language beyond just using the term global budget.

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^{vii} This is most likely to be an issue to consider for multi-payer models.

Appendix 1: Global Budget Examples

Blue Cross Blue Shield of Massachusetts Alternative Quality Contract

Background

In 2007, Blue Cross Blue Shield of Massachusetts (BCBSMA) convened a team of physicians and experts with backgrounds in finance and quality measurement to design a new payment contract with the goal of incentivizing quality improvements and the efficient use of resources. The team designed a population-based global budget payment model that BCBSMA piloted with a subset of hospitals and physicians to gather stakeholder feedback. The result of this work was the Alternative Quality Contract (AQC), a population-based global budget payment model available to physicians' groups.

Financial Structures

The AQC offers providers a multi-year contract that shifts provider's reimbursement from solely FFS to a population-based global budget. The budget is based on the participating provider's historical health care spend with annual adjustments for inflation and the health status of the provider's attributed patient panel based on diagnostic cost groups (DxCG). The budget covers the total cost of care for a patient including inpatient, outpatient, pharmacy, and behavioral health costs. The primary goal of the model's budget design approach is to reduce the growth of future spending. Provider claims continue to be reimbursed on a FFS basis throughout the contract year. At the end of the year the total FFS payments are totaled and compared against the population-based global budget.¹ Providers with total FFS payments below the budget are eligible for shared savings while those who exceed the global budget must repay the difference to BCBSMA. The amount a provider may receive in shared savings or be responsible for in the event of a loss can be as low as approximately 20% and as high as 100% based on the level of risk the provider chose to accept when signing the contract.²

The model had traditionally been limited to HMO products and provider groups with a BCBSMA beneficiary panel size of at least 10,000 patients that have selected an HMO primary care provider. In 2016, BCBSMA expanded the use of the AQC to include PPO products.³ In 2019, BCBSMA and Atrius Health entered into the first AQC agreement allowing Atrius Health to take on 100% risk for a panel of both HMO and PPO patients.

Administration and Oversight Structure

Unlike the Maryland and Vermont All-Payer models, the BCBSMA AQC is a single-payer global budget model. As a single-payer model, the AQC administration and oversight role falls to the BCBSMA management team responsible for administering the AQC contract.

Providers are eligible for an additional PMPM payment based on their performance on selected quality measures. This is based on performance on measures of office and ambulatory based care, measures of hospital care, and recently, the introduction of performance on Patient Reported Outcome Measures (PROMs) into some agreements.⁴ Performance incentives are based on a provider's absolute performance rather than the average performance of a provider's network. According to BCBSMA, this design decision gives providers stable quality goals and rewards incremental improvements. These incentive payments are excluded from a provider's historical base budget and must be earned each year.⁵

Maryland All-Payer Model and Total Cost of Care Model

Background

Maryland operates the first statewide all-payer facility-based global budget model in the U.S. The Maryland All-Payer model set facility-based global budgets for Medicare, Medicaid, and commercial payments for all hospitals in the state starting in 2014. The Maryland All-Payer model was built off a rate setting system established by the Maryland legislature in 1971. The legislature passed an act that created the Health Services Cost Review Commission (HSCRC), an independent State agency with hospital rate setting authority. The HSCRC was responsible for rate setting determinations in the state, starting with private payers only in 1974, and expanding to include Medicare and Medicaid rates under a federal waiver in 1977.

The Maryland rate setting methodology incorporated a volume adjustment system (VAS) which sought to manage growth in the volume of care by setting lower rates for services that experienced volume increases above what was used to set the initial rates. This system was phased out in the 1990's, though the HSCRC retained the ability to set the rate-per-service. This approach resulted in an increase in the volume of inpatient and outpatient services and a high growth rate for total hospital payments. The rapid growth in overall spending threatened to place Maryland out of compliance with the original 1977 federal waiver granting the state the authority to set Medicare rates and prompted the state to approach CMS in 2013 to renegotiate the waiver. The negotiations resulted in the creation of the Maryland All-Payer model launched in 2014.

The Maryland All-Payer model was designed under CMMI authority with the goal of reducing per-capita hospital expenditures and improving patient outcomes. The model allowed Maryland to retain its rate setting authority for Medicare expenditures. As a condition of the model, Maryland agreed to shift 80% of hospital revenue into a facility-based global budget payment model, limit annual per-capita cost growth to 3.58%^{viii}, generate at least \$330 million in overall Medicare savings, and achieve a 30% reduction in hospital acquired conditions over a five-year model period. According to HSCRC data for 2014-2017, Maryland was on track with the waiver requirements reporting 2.03% annual per-capita cost growth, \$916 million in cumulative Medicare savings, a reduction in hospital readmissions from 1.22 percent above the national average to 0.19 percentage points below the national average, and a 53% reduction in the rate of hospital acquired conditions across all payers.⁶

In 2019, Maryland and CMS entered into a new ten-year model agreement called the Total Cost of Care (TCOC) model. The TCOC model built off the Maryland All-Payer model to incorporate financial incentives for hospital and provider alignment on care delivery and state-level accountability for meeting financial targets for all Medicare beneficiary expenditures in the state. The TCOC model added two additional programs to the existing facility-based global budget model, the Care Redesign Program (CRP) and the Maryland Primary Care Program (MDPCP).⁷

The CRP is a voluntary program that allows hospitals to enter into a participation agreement with CMS, the state of Maryland, and providers. Under the agreement hospitals that have reached a Medicare savings threshold may make incentive payments to non-hospital health care providers who partner with the hospital and perform care redesign activities aimed at improving quality of care. The MDPCP is a voluntary program modeled after CMMI's Comprehensive Primary Care Plus model and offers primary care providers a per beneficiary per month payment (PBPM) from CMS to offer advanced primary care services to their patients. Participating practices are also eligible to participate in one of two tracks, a standard track and an

^{viii} This was the 10-year average per capita state gross product calculated at the time of the model design.

advanced track, that offer differing levels of performance-based incentive payments and risk for providers who reduce the hospitalization rate and improve the quality of care for their attributed Medicare beneficiaries.

The model also has an option for participating practices to partner with a Care Transformation Organization (CTO). A CTO is an entity that hires and manages an interdisciplinary care management team capable of furnishing an array of care coordination services to Maryland Medicare beneficiaries attributed to Participant Practices. The CTO is intended to extend care management services to providers who lack the capacity to deliver this service, in exchange for part of the per beneficiary per month payment and a separate performance-based incentive payment from CMS.⁸

Financial Structures

The Maryland All-Payer model uses a historical approach to set a prospective facility-based global budget for each hospital in the state. The budget includes all hospital inpatient and outpatient services unless specifically excluded by the HSCRC. The initial budget is based on gross hospital revenue from the previous year with adjustments for inflation, infrastructure requirements, demographic changes in age and population size, changes in payer mix, and performance on quality measures. The global budget calculation includes a market shift adjustment designed to adjust budgets across hospitals in response to changes in patient preference for one facility over another. The market shift adjustment is separate from the demographic adjustments and serves as a budget neutral adjustment across hospitals to compensate for changes in patient volume due to efforts to achieve the triple aim of better care, better health, and lower costs.⁹ The rate setting methodology also incorporates a transfer adjustment to account for patient transfers between community hospitals and academic medical centers due to patient complexity.¹⁰ Hospitals may request a review of their budget if they feel there have been market changes that justify budget updates.

The Maryland All-Payer model leverages existing FFS architecture, rather than prospective capitated payments, to pay hospitals. Hospitals continue to bill under the existing FFS system at rates set by HSCRC, however, they are required to monitor their total year to date charges and revenue, compare them to their annual global budget, and adjust their unit charges for services on an ongoing basis to remain within their approved budget. If a hospital's actual gross revenue is projected to fall outside their approved annual budget for a given year the hospital can adjust rates upward or downward by up to 5 percent to remain on target to reach their budget.^{ix} The HSCRC calculates the difference between each hospital's actual gross revenue and approved budget. If gross revenue exceeded the annual budget the difference is subtracted from the budget amount that would otherwise have been approved for the hospital for the subsequent year. Conversely, if the gross revenue charged by the hospital was less than the annual budget, the difference is added to the budget amount for the hospital in the subsequent year.¹¹

Under the Maryland TCOC model the hospital budgeting process remains largely the same with the addition of a Medicare Performance Adjustment (MPA) calculated by HSCRC and applied to each hospital. Under the MPA, the HSCRC attributes all Medicare FFS beneficiaries in Maryland to a hospital. If the cost trend for the attributed beneficiaries exceeds the benchmark CMS will reduce Medicare global budget payments to the hospital by a comparable amount in the subsequent year. The MPA holds a hospital accountable for the full spectrum of care for attributed beneficiaries and includes a quality adjustment score based on measures comparable to those in the Merit-Based Incentive Payment System (MIPS).¹²

^{ix} The limit may be increased to 10 percent at the discretion of the HSCRC for hospitals able to demonstrate that they would not otherwise be able to meet their budget target.

CRP participating hospitals that generate Medicare cost savings may use a predetermined amount of funding to offer resources to support their partner providers and suppliers in activities that improve quality of care and reduce the growth in total cost of care for Maryland Medicare beneficiaries. The amount of funding hospitals may provide is set by the HSCRC.

Under the MDPCP, participating providers may choose between a standard and advanced model track. Under the standard track, providers are eligible for a PBPM payment ranging from \$6 to \$50 per beneficiary depending on risk score and a \$2.50 PBPM performance incentive fee based on quality scores. Under the advanced track, providers are eligible for a PBPM payment ranging from \$9 to \$100 per beneficiary depending on risk score and a \$4 PBPM performance incentive fee based on quality scores. Practices participating in the advanced track are eligible to receive their PBPM payments prospectively as a Comprehensive Primary Care Payment offering additional financial flexibility. The MDPCP payments do not impact the hospital budgeting process.¹³

Administration and Oversight Structure

The HSCRC acts as the governing body for the Maryland All-payer model and the TCOC model. The HSCRC is overseen by seven commissioners appointed by the governor. The commissioners are volunteers representing a range of health care system stakeholders including consumers, payers, providers, and hospital administrators. Each member serves a seven-year term and no more than three members may have provider affiliations. The stated goals of the HSCRC are to: (1) Constrain hospital cost growth; (2) Ensure that hospitals have the financial ability to provide efficient, high quality services to all Marylanders; and, (3) Increase the equity or fairness of hospital financing.¹⁴

To implement the Maryland All-Payer model, the HSCRC determines a hospital-specific budget and establishes individual budget agreements with each participating hospital. The agreements detail the revenue areas governed by the agreement, the approved budget amounts for the hospital, compliance requirements, processes for monitoring and evaluation, and the methodology for calculating each hospital's market share. Under the TCOC model the HSCRC maintains its role in the oversight of the model program and is responsible for adjusting budgets and rates to meet the savings targets. TCOC adds a requirement for the HSCRC to attribute Medicare FFS beneficiaries to a hospital, calculate their total cost of care, and, if those costs exceed a target amount based on national trends, debit those costs against the attributed hospitals global budget benchmark in future years.

Under the 2014 waiver agreement with CMS establishing the All-Payer model, Maryland agreed to a quality improvement strategy that called for a 30 percent reduction in hospital acquired conditions over the 5-year life of the model. To accomplish this, Maryland enacted a range of performance-based payment models including the Maryland Hospital Acquired Conditions, Quality Based Reimbursement, and Readmission Reduction Incentive Programs.¹⁵

The Maryland Hospital Acquired Conditions (MHAC) program started in 2011 and linked hospital payment to their rate of Potentially Preventable Complications (PPCs).^x Hospitals with PPC rates above the state average were assessed a financial penalty while those with PPC rates below the state average received a reward. The MHAC program was budget neutral and required reward payments to be equal to penalties. This resulted in unpredictable payment adjustments dependent on the number of and size of penalties accessed.¹⁶

^x PPCs were defined using a methodology developed by 3M: <http://multimedia.3m.com/mws/media/1042609O/resources-and-references-his-2015.pdf>

Under the Maryland All-Payer model, the MHAC program was modified to align with the waiver requirements and provide stronger incentives for quality improvement. The largest change to the program was a shift in how hospital performance on PPCs was calculated. Rather than comparing hospital PPC rates to the state average, the modified MHAC program compares actual PPC rates to a hospital's expected PPC rate. The expected PPC rate for a hospital is the state average PPC rate multiplied by the hospital's total number of discharges and risk-adjusted based on diagnosis and patient severity. Financial rewards and penalties are determined using a point scale based on a hospital's base year PPC scores with the focus placed on hospitals at the top and bottom ends of the scale. These adjustments allowed for larger and more predictable penalties and incentives. The specific conditions of focus for the program and performance thresholds are determined annually and published in publicly available reports.

The Quality Based Reimbursement (QBR) program started in 2009 and is similar in concept to the Medicare Value-Based Purchasing program. The QBR program holds 2 percent of hospital revenue at risk based on performance across the three domains: 1) person and community engagement, 2) clinical care, and 3) patient safety.¹⁷ The person and community engagement domain accounts for 50 percent of a hospital's score and the clinical care and safety domains account for 15 percent and 35 percent respectively. Hospital performance is calculated in comparison to a national benchmark and each hospital's historical performance. The methodology for the QBR program is updated annually. For CY 2020 revenue adjustments range from a -2 percent penalty for hospitals with a QBR score of 0 percent to +2 percent adjustment for hospitals with a score of 80 percent or higher.¹⁸

The Readmission Reduction Incentive Programs (RRIP) launched in 2014 with the goal of incentivizing hospitals to reduce avoidable readmissions by putting a percentage of hospital revenue at risk based on readmission rates.¹⁹ To calculate readmission rates the HSCRC leverages the data submitted by each hospital and information available in the statewide health information exchange, the Chesapeake Regional Information System for our Patients (CRISP), to create a unique identifier for each patient so that an individual's entire utilization history can be traced to any Maryland hospital. The RRIP is based on inpatient readmissions anywhere in the state that occur within 30 days of discharge from a Maryland hospital. RRIP readmissions are all-payer, all-site, and all-cause (with limited exceptions for ante-natal, serial chemotherapy and a few planned readmissions). Year over year RRIP rewards and penalties are based on improvement compared to a hospital's own baseline. The methodology for RRIP is updated annually. For CY 2021 the revenue adjustments range from a -2 percent to +1 percent based on a hospital's readmission rate as compared to their historical benchmark.²⁰

Under the TCOC model, Maryland selected six high-priority areas to focus on as part of a quality strategy designed to improve population health: (1) substance use disorder; (2) diabetes; (3) hypertension; (4) obesity; (5) smoking; and, (6) asthma. The model allows the state to select the specific measures associated with these areas and includes an Outcomes-Based Credits framework, which enables CMS to grant the State credits for performance on the CMS-approved population health measures and targets, structured as a discount to the State's actual TCOC used in calculating the State's performance against the Model's savings targets. The amount of these Outcomes-Based Credits will be based on the return on investment (ROI) that Medicare would expect from the State's improved performance on the CMS-approved population health measures and targets.²¹ The Primary Care Program includes a set of specific electronic clinical quality measures that participating providers must report and for which performance determines eligibility for the PBPM performance incentive payments.²²

Pennsylvania Rural Hospital Model

Background

In 2017, Pennsylvania signed an agreement with CMS to create the Pennsylvania Rural Hospital Model (PARHM). PARHM is an all-payer facility-based global budget model designed to provide a fixed prospective payment to rural hospitals in Pennsylvania. The Rural Hospital Model was created under CMMI authority in response to the financial challenges faced by rural Pennsylvania hospitals that threatened their ability to remain financially viable under a fee for service (FFS) system. Rural hospitals have struggled to remain financially viable under FFS due to their inability to generate service volumes large enough to cover their fixed costs. As of 2018, 34 percent of rural hospitals nationwide reported being at risk of closure. In comparison, a 2015 report found that 48 percent of rural hospitals in Pennsylvania had negative operation margins over each of the prior three years and an additional 21 percent had margins below 3 percent.²³ Overall, 69 percent of rural hospitals in Pennsylvania were in or near financial distress prompting the state to work with CMS to design a model that would shift rural hospitals out of FFS and into facility-based global budgets with the goal of providing rural hospitals a reliable revenue stream and incentive structure to support care delivery reforms and quality improvement.²⁴

The PARHM launched in January of 2019 with five rural hospitals, Barnes-Kasson County Hospital, Endless Mountains Health System, Geisinger Jersey Shore Hospital, UPMC Kane, and Wayne Memorial Hospital and payer participation from Medicare, Medicaid and four private insurers: Gateway Health Plan, Geisinger Health Plan, Highmark Blue Cross and Blue Shield and UPMC Health Plan. The model intends to enroll 30 hospitals by January 2021.

Financial Structures

Under the PARHM, the state develops a methodology for a prospective all-payer global budget for each rural acute care and critical access hospital participating in the model. The global budget applies to inpatient, outpatient, and critical access hospital swing bed services. Rural hospitals are required to create Rural Hospital Transformation Plans that detail how they will use the global budget model to invest in population health and tailor their service lines to reflect the needs of the communities they serve.

The baseline budget for the first year of the model is built on each hospital's historical net revenue for inpatient and outpatient services across all payers participating in the model. The budget calculation is the greater of 1) the revenue from the most recent fiscal year for which complete claims data are available or 2) the simple average of that fiscal year and the two previous years. Subsequent budget calculations are based on the prior year's final fixed payment amount with adjustments to account for unit price trends, demographic changes, quality performance, changes in the hospital's transformation plans, and other factors. The budget, transformation plans, and adjustment factors all require annual CMS approval.

Each payer is assigned to pay their share of the hospital budget as determined by the proportion of the hospital's historical total net revenue that payers' rates represent. CMS pays the Medicare FFS portion of the budget as 26 payments dispersed on a biweekly basis.

The PARHM includes financial targets for Medicare and for all participating payers. The Medicare specific financial targets are \$35 million in hospital savings over the life of the model. Additionally, Medicare per beneficiary expenditures may not exceed the growth rate of National total Medicare expenditures per rural beneficiary, making this model budget neutral for Medicare. Across all participating payers the state must maintain a financial target of no more than 3.38 percent in annual hospital spending

growth on inpatient and outpatient hospital-based services per resident of Pennsylvania's rural areas served by participating rural hospitals.^{xi}

Administration and Oversight Structure

The PARHM agreement with CMS included funding to establish a Rural Health Redesign Center (RHRC). The state plans to use legislative action to create the RHRC with the mission of supporting rural hospitals with technical expertise, data analytics, quality measurement, research support, and assistance in identifying and address common issues directly and indirectly related to health (e.g., access to behavioral health services, transportation, broadband internet). Unlike the HSCRC in Maryland, the RHRC does not have authority to establish budgets for hospitals or set reimbursement rates for providers.^{25,26}

As part of the model agreement, Pennsylvania committed to achieving targets related to health care access and population health outcomes. To support this commitment the PARHM allows the state to tie financial incentives for hospitals to their performance in three areas; 1) increasing access to primary care, 2) reducing rural health disparities in chronic disease management, and 3) decreasing deaths due to substance use. The state is also required to design and implement a strategy to measure the quality of care delivered under the Rural Hospital Model. The CMS agreement did not specify the details of the quality measurement strategy; however, the state released the following preliminary set of quality measures:

- Case-adjusted average length of stay
- 30-day readmission rate
- Potentially avoidable inpatient admissions and spending^{xii}
- Potentially avoidable ED admissions and spending^{xiii}

Additional details on the structures and processes of this model is expected as the implementation rollout and operations activities mature.

^{xi} 3.38 percent represents the compound annual growth rate for Pennsylvania's gross state product from 1997 to 2015.

^{xii} Specified as one of the following conditions: diabetes with short-term complications, diabetes with long-term complications, uncontrolled diabetes without complications, diabetes with lower- extremity amputation, chronic obstructive pulmonary disease, asthma, hypertension, heart failure, angina without a cardiac procedure, dehydration, bacterial pneumonia, or urinary tract infection

^{xiii} As defined by the billings algorithm developed at NYU: <https://wagner.nyu.edu/faculty/billings/nyued-background>

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