Environmental Scan on Reducing Barriers to Participation in Population-Based Total Cost of Care (PB-TCOC) Models and Supporting Primary and Specialty Care Transformation

May 1, 2025

This environmental scan was prepared at the request of the Office of the Assistant Secretary for Planning and Evaluation (ASPE) as background information to assist the Physician-Focused Payment Model Technical Advisory Committee (PTAC) in preparing for a theme-based discussion on reducing barriers to participation in population-based total cost of care (PB-TCOC) models and supporting primary and specialty care transformation. This environmental scan provides background on identifying pathways for maximizing participation of different kinds of organizations in PB-TCOC models; an assessment of and approaches to reducing organization-level barriers; approaches to support primary and specialty care transformation; an assessment of factors that influence the ability of PB-TCOC models to be competitive; and a summary of relevant features in previously submitted PTAC proposals. Appendices include tables summarizing relevant features of selected Center for Medicare and Medicaid Innovation (CMMI of the Innovation Center) models and selected previously submitted PTAC proposals.[i]

[i] This analysis was prepared under contract #HHSP233201500048IHHS75P00123F37023 between the Department of Health and Human Services' Office of Health Policy of the Assistant Secretary for Planning and Evaluation (ASPE) and NORC at the University of Chicago. The opinions and views expressed in this analysis are those of the authors. They do not reflect the views of the Department of Health and Human Services, the contractor, or any other funding organizations. This analysis was completed on May 1, 2025.

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List of Exhibits

List of Acronyms

AAPM	Advanced Alternative Payment Model
ACM	Advanced Care Model
ACO	Accountable Care Organization
ACO REACH	Accountable Care Organization Realizing Equity, Access, and Community Health
ACPT	Accountable Care Prospective Trend
ACS	American College of Surgeons
AHEAD	States Advancing All-Payer Health Equity Approaches and Development
AHRQ	Agency for Healthcare Research and Quality
APC	Advanced Primary Care
APM	Alternative Payment Model
ASPE	Assistant Secretary for Planning and Evaluation
AUCM	Acute Unscheduled Care Model
BPCI	Bundled Payments for Care Improvement
BPCI-A	Bundled Payments for Care Improvement Advanced
CAMP	COPD and Asthma Monitoring Project
CCP-PM	Comprehensive Care Physician Payment Model
CEC	Comprehensive End-Stage Renal Disease Care
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CHW	Community health worker
CJR	Comprehensive Care for Joint Replacement
CKCC	Comprehensive Kidney Care Contracting
CMMI	Center for Medicare and Medicaid Innovation
CMS	Centers for Medicare & Medicaid Services
COPD	Chronic obstructive pulmonary disease
CPC	Comprehensive Primary Care
CPC+	Comprehensive Primary Care Plus
DCE	Direct Contracting Entity
E&M	Evaluation and management
EOM	Enhancing Oncology Model
ESRD	End-stage renal disease
FFS	Fee-for-service
GUIDE	Guiding an Improved Dementia Experience
HaH-Plus	Hospital at Home-Plus
HCC	Hierarchical condition category
HCP-LAN	Health Care Payment Learning & Action Network
HCV	Hepatitis C Virus
HHS	Health and Human Services
HIT	Health information technology
ICM	Intensive Care Management
IDS	Integrated delivery system
IT	Information technology
KCC	Kidney Care Choices
MA	Medicare Advantage

MA VBID	Medicare Advantage Value-Based Insurance Design
MACRA	Medicare Access and Children's Health Insurance Program Reauthorization Act
MAPCP	Multi-Payer Advanced Primary Care Practice
MCP	Making Care Primary
MD-TCOC	Maryland Total Cost of Care
MDPP	Medicare Diabetes Prevention Program
MSSP	Medicare Shared Savings Program
MTM	Part D Enhanced Medication Therapy Management
NGACO	Next Generation Accountable Care Organization
OCM	Oncology Care Model
ONC	Office of the National Coordinator for Health Information Technology
PBPM	Per-beneficiary-per-month
PB-TCOC	Population-based total cost of care
PCDT	Preliminary Comments Development Team
PCF	Primary Care First
PCP	Primary care provider
PDPM	Part D Payment Modernization
PDSS	Part D Senior Savings
PFPM	Physician-focused payment model
PRT	Preliminary Review Team
PTAC	Physician-Focused Payment Model Technical Advisory Committee
RFI	Request for Input
RTS	Report to the Secretary
SCM	Specialty condition-based payment model
SDOH	Social determinants of health
SME	Subject matter expert
SNF	Skilled nursing facility
SNMHI	Safety Net Medical Home Initiative
TCOC	Total cost of care
TEFCA	Trusted Exchange Framework and Common Agreement

I. Introduction and Purpose

Under the bipartisan Medicare Access and Children's Health Insurance Program (CHIP) Reauthorization Act (MACRA) of 2015, Congress significantly changed Medicare fee-for-service (FFS) physician payment methods. The law also specifically encouraged the development of Alternative Payment Models (APMs) known as physician-focused payment models (PFPMs) and created the Physician-Focused Payment Model Technical Advisory Committee (PTAC) to review stakeholder-submitted PFPM proposals and make comments and recommendations on them to the Secretary of Health and Human Services (HHS; "the Secretary").

Since its inception, PTAC has received 35 proposals for PFPMs from a diverse set of physician payment stakeholders, including professional associations, health systems, academic groups, public health agencies, and individual providers.[ii] Committee members evaluate the PFPM proposals based on the extent to which they meet the Secretary's 10 regulatory criteria for PFPMs (specified in federal regulations at 42 CFR § 414.1465).[iii]

The goal of the "Scope" criterion is to ensure that each proposed model will "aim to either directly address an issue in payment policy that broadens and expands the CMS APM portfolio or include APM Entities whose opportunities to participate in APMs have been limited" (Criterion 1). The goal of the "Quality and Cost" criterion is to ensure that each proposed model will "improve health care quality at no additional cost, maintain health care quality while decreasing cost, or both improve health care quality and decrease cost" (Criterion 2).

Among the 35 proposals that were submitted to PTAC between 2016 and 2020, including 28 proposals that PTAC has deliberated and voted on during public meetings, nearly all of the proposals address the potential impact on scope (specifically opportunities for APM participation) and quality and cost, to some degree. Eighteen of these proposals were found to meet both Criterion 1 ("Scope") and Criterion 2 ("Quality and Cost"), including several proposals that were directly related to promoting accountable care, and/or proposed to use waivers to reduce barriers related to participation in APMs.

Given the increased emphasis on developing larger, population-based APMs that encourage accountable care relationships and increased participation of health care providers in value-based care, PTAC has been conducting a series of theme-based discussions that have examined various care delivery and payment issues related to developing and increasing participation in population-based total cost of care (PB-TCOC) models.

This environmental scan seeks to examine key issues related to reducing barriers to participation in PB-TCOC models and supporting primary and specialty care transformation. The environmental scan will also examine components in several previously submitted PTAC proposals that are relevant for encouraging accountability for quality and TCOC as part of their proposed model designs.

[ii] The 35 proposals submitted to PTAC represent an unduplicated count (i.e., proposals with multiple submissions are counted only once) of the number of proposals that have been voted and deliberated on by the Committee members (28) and the number of proposals that have been withdrawn by stakeholders (seven, including one proposal that was withdrawn prior to any review by the Committee members).

[iii] The 10 criteria are scope, quality and cost, payment methodology, value over volume, flexibility, ability to be evaluated, integration and care coordination, patient choice, patient safety, and health information technology.

Topics identified for investigation in this environmental scan include:

- Background on identifying pathways for maximizing participation of different kinds of organizations in PB-TCOC models;
- An assessment of and approaches to reducing organization-level barriers;
- Approaches to support primary and specialty care transformation;
- An assessment of factors that influence the ability of PB-TCOC models to be competitive; and
- Relevant features in selected Center for Medicare and Medicaid Innovation (CMMI or the Innovation Center) models and previously submitted PTAC proposals.

This environmental scan provides PTAC members with background information and context on reducing barriers to participation in PB-TCOC models and supporting primary and specialty care transformation. The environmental scan is expected to help PTAC members review strategies in proposals previously submitted to the Committee. In addition, the environmental scan can inform the Committee members' review of future proposals and future comments and recommendations that Committee members may submit to the Secretary relating to reducing barriers to participation in PB-TCOC models and supporting primary and specialty care transformation.

Section II provides key highlights of the findings from the environmental scan. Section III describes the research questions and methods used in the environmental scan. Subsequent sections provide background on identifying pathways for maximizing participation of different kinds of organizations in PB-TCOC models (Section IV), an assessment of and approaches to reducing organization-level barriers (Section V), approaches to support primary and specialty care transformation (Section VI), an assessment of factors that influence the ability of PB-TCOC models to be competitive (Section VII), relevant features in previously submitted PTAC proposals (Section VIII), and areas where additional information is needed (Section IX). Additionally, a list of abbreviations can be found at the beginning of the environmental scan, following the Table of Contents.

II. Key Highlights

The following section provides important definitions and highlights key findings from this environmental scan on reducing barriers to participation in PB-TCOC models and supporting primary and specialty care transformation.

II.A. Definitions

Beginning in 2021, PTAC has conducted a series of theme-based discussions to examine topics relevant to PFPMs, with a focus on issues related to accountable care and PB-TCOC models. Within this context, PTAC has developed the following working definitions:

<u>Accountable Care Relationship</u>

- A relationship between a provider and a patient (or group of patients) that establishes that provider as accountable for quality and total cost of care (TCOC), including the possibility of financial loss/risk for an individual patient or group of patients for a defined period (e.g., 365 days).

- Would typically include accountability for quality and TCOC for all of a patient's covered health care services.

Population-Based Total Cost of Care (PB-TCOC) Model

- Alternative Payment Model (APM) in which participating entities assume **accountability for quality and TCOC** and receive payments for **all covered health care costs**[iv] for a broadly defined population with varying health care needs during the course of a year (365 days).
- Within this context, a PB-TCOC model would not be an episode-based, condition-specific, or disease-specific specialty model. However, these types of models could potentially be "nested" within a PB-TCOC model.

Pathway

- A pathway may be thought of as a grouping of health delivery organizations that might be treated similarly with regard to benchmarks, two-sided risk, and how performance measures affect payment within the context of other incentives. These parameters could be specified for the pathway.

These definitions will likely continue to evolve as the Committee members collect additional information from stakeholders.

II.B. Key Findings

Below are highlights of the key findings from the different sections covered in this environmental scan.

Background on Identifying Pathways for Maximizing Participation of Different Kinds of Organizations in PB-TCOC Models

Accountable Care Organizations (ACOs) are important in growing accountable care relationships. ACOs were initially developed and led by hospitals and health systems, but recent trends show a rise in physician group-led ACOs. This shift is anticipated to reduce Medicare spending by preventing unnecessary hospitalizations. Physician group-led ACO success, however, requires policy support as physician groups are less likely to have adequate infrastructure and experience with value-based payment programs. Growth in ACOs has plateaued since 2018, partly attributed to the requirement for providers to take on greater risk in APMs and the disruption of the COVID-19 pandemic.

Taxonomies can help researchers, policy makers, practitioners, and health care executives classify organizations that share certain strategic and structural features. Early work in this area identified a taxonomy for hospital-based health systems that included three dimensions: differentiation (the amount of different services offered); integration (the means used to coordinate the services); and centralization (the level in the organization at which services are provided and decisions are made).[1] Taxonomies have also been developed that focus specifically on ACOs. Shortell and colleagues (2014) developed a taxonomy that identified shared characteristics among three types of ACOs: larger, integrated systems; smaller, physician-led practices; and medium sized, combined hospital-physician, and coalition-led groups (i.e., hybrid ACOs).[2]

[iv] For this purpose, all covered health care costs do not include pharmacy-related costs (Medicare Part D).

Taxonomies can be used to differentiate pathways to maximize participation in PB-TCOC models. McWilliams et al. (2021) proposed a framework to differentiate pathways to maximize participation in PB-TCOC models among different types of health care organizations.[3] Four tracks were identified to differentiate organizations based on size, level of revenue, spending in risk contracts, upside and downside risk-sharing, and participation incentives.

Additional research is needed to develop new or refine existing taxonomies and to identify specific pathways that would be appropriate to maximize participation of different types of organizations in PB-TCOC models.

Assessment of and Approaches to Reducing Organization-Level Barriers

Barriers Organizational Leaders and Chief Financial Officers May Face that Affect Profitability

Chief Financial Officers (CFOs) and Chief Executive Officers (CEOs) are well positioned to promote alignment between health plans and organizations to succeed in value-based payment models. However, these organizational leaders face barriers when choosing to participate in PB-TCOC models. Results from a survey completed by senior finance executives across 160 health care organizations revealed that only 13 percent of CFOs reported feeling equipped to manage new and developing care delivery and payment models with existing financial planning tools and processes.[4] Approximately 80 percent of executives agreed that making investments in technology have improved the value of care for patients, yet 96 percent of CFOs reported that their organizations should be doing more to use operational and financial data for decision-making. To encourage the shift toward value-based care, CFOs can work with other senior leaders within their organizations to identify core competencies needed to achieve value-based care and identify where to make investments to ensure long-term success.[5] In addition, organizational leaders can support economic, clinical, and administrative alignment between payers and providers to encourage the shift toward value-based care.[6]

Improving ACO Performance Benchmarks

The method used to set and rebase benchmarks can impact providers' participation in voluntary population-based payment models. The Centers for Medicare & Medicaid Services (CMS) has moved toward using a blended approach to benchmarking, where an ACO's historical spending is combined with the average spending in its region. Benchmarks that blend historical and regional spending can weaken incentives to participate in the short-term by decreasing the achievable financial bonus for ACOs with higher spending. For example, the incorporation of regional spending into the Medicare Shared Savings Program (MSSP) ACO benchmarks favored practices whose spending was lower than their regions and potentially led to the exit of higher-spending ACOs from the program.[7] To encourage participation and long-term savings, McWilliams et al. (2021) recommend dissociating benchmarks from ACO performance.[8] The researchers also recommend setting benchmarks to provide those ACOs that have high spending with an "on ramp" and using an administrative benchmark that decouples benchmarks from realized FFS spending growth.

The Role of Conveners

Conveners[v] can help to increase participation in APMs. Third-party consulting firms and convener organizations affiliated with hospitals can serve as conveners. These organizations typically have expertise in areas important to participation in APMs, such as practice transformation, quality improvement, data exchange and aggregation, and policy.[9] Conveners may also take on all or some of the financial accountability for health systems and provider groups,[10] which can encourage providers to participate in certain value-based risk arrangements who would otherwise be unwilling or unable to take on downside risk. However, use of conveners may lessen the direct impact of value-based incentives for providers.

Incentivizing Clinical Integration

Financial incentives can help achieve clinical integration. Clinical integration can promote better health outcomes and control health care costs by providing a structure that encourages different types of health care providers (e.g., physicians, hospitals) to work together to coordinate patient care across settings. There are four main types of financial incentives to encourage care integration: bundled payments, shared savings, pay for coordination, and pay for performance.[11] Shared savings models may be the most effective type of incentive to improve quality and reduce costs. Under these types of models, providers are jointly accountable for the care provided to a specific population. Although financial incentives can promote integrated care, the effectiveness of each type of incentive may vary by organization type. For example, bundled payments may be the most effective in reducing costs when focused on hospital care rather than primary care. Rewards and penalties built within financial incentives should be balanced based on the context in which the incentives are implemented.[12]

Addressing Workforce Challenges Related to Supporting Value-Based Care

To support the transition to value-based care, existing health care professionals have taken on new roles and responsibilities for certain care services (i.e., "task shifting").[13] In addition, new roles have formed to support enhanced services in value-based care models. There has been a recent emphasis on roles providing care coordination services to reduce fragmentation of care. For example, care coordination is covered under Medicare's new advanced primary care management codes.[14] There has also been a recent emphasis on roles that address patients' needs across health and community-based settings, and these roles tend to focus on providing patient care using population-based strategies. Employers have had to integrate new staff roles into current human resources infrastructure, redesign existing workflows to ensure that staff have the time and resources needed to fulfill their responsibilities, and develop trainings to support new roles and staff.[15] Researchers, policy makers, regulatory bodies, payers, and other workforce stakeholders may need to shift their focus from more traditional to new perspectives to successfully support the transition to value-based care.[16]

Examples of Current Models that have Implemented a Multi-Payer Strategy

A multi-payer strategy refers to the coordination between different health insurance payers within the same region to follow the same policies. There are several key advantages to using a multi-payer strategy, including increasing the delivery of value-based care by reducing administrative burden

[v] The term enabler is sometimes used to describe the same role as a convener. For the purposes of this document, the term convener will be used.

associated with billing, payment, and clinical documentation systems; addressing health disparities by reducing differences in access to care based on insurance type; improving population health by encouraging payers and providers to agree on achieving the same goals and care standards; lowering administrative costs by using consistent payment methods; and increasing access to data by allowing providers to see claims data from different insurance companies.[17] Several CMMI models have implemented a multi-payer strategy, including the Making Care Primary (MCP) Model; the States Advancing All-Payer Health Equity Approaches and Development (AHEAD) Model; the Guiding an Improved Dementia Experience (GUIDE) Model; and the Comprehensive Primary Care (CPC) initiative.

Approaches to Support Primary and Specialty Care Transformation

Best Practices for Patient Attribution in PB-TCOC Models

Patient attribution is the practice of assigning patients to a provider who assumes responsibility for the patients' quality and cost of care. There is no standard approach for patient attribution within PB-TCOC models. Instead, the methodology best suited for the model's design should be utilized.[18] CMMI models employ prospective, retrospective, and/or voluntary attribution methods, with most organizations using claims data as their primary data source to attribute patients to providers.

Multiple attribution methods that assign patients to more than one provider may be appropriate when patients receive care from many providers. These methods include weighted, primary care-centric, episode-based, and cost-based attribution.[19,20,21,22,23] While CMMI models historically have implemented single attribution methods, it would be beneficial to move toward implementing multiple attribution methods to facilitate the integration of specialty care.

Integration of Specialty Care in PB-TCOC Models

One method to integrate specialists into TCOC models is to create "nested episodes" within larger episodes of care to encourage collaboration among care providers. Using a hierarchical structure within TCOC models, nesting episodes of care can create "an environment of cascading accountability" for specific conditions or treatments.[24] Two approaches to creating nested solutions are to create nested episodes for those conditions where cost generally does not vary among patients with the same condition (e.g., low-cost variation such as colon polyps and gastritis) and to create specialty condition-based payment models (SCMs).[25,26] SCMs can be nested in TCOC models, with acute episode payments nested within the SCM and paid separately, permitting specialists accountability for episodes of care. The specialist role in TCOC models can be enhanced by developing whole-person specialty care and longitudinal/chronic specialty care pathways, which allow for the co-management of complex patient care.[27] Other incentives to encourage specialists in TCOC models include using per-person payment or sub-capitation, permitting care management billing codes, incorporating nested payment reforms, awarding bonuses, and providing timely specialist performance data.[28,29,30]

Methods to Share Data between Primary and Specialty Providers in Less Integrated Settings

Data integration across health care systems can be viewed as a continuum, from meeting point-of-care patient needs to supporting population health management.[31] Federal policies and guidance aim to increase transparency and data exchange across providers, create foundational principles for clinical data sharing, and provide a roadmap for system integration.[32] It is estimated that 70 percent of hospitals engage in interoperable activities, but approximately only 40 percent of clinicians use those

data during patient treatment.[33] Approaches to facilitate greater data integration between primary and specialty care providers include standardizing or democratizing data (e.g., making data readily accessible and in a form that is easily usable for everyone who needs them), increasing the usefulness of transferred data by organizing by the relevancy of information to the provider, and establishing data sharing protocols and responsibilities for data encryption and privacy.[34] A high-functioning health IT infrastructure and efficient communication between providers and patients is essential for successful value-based integrated care.[35]

Assessment of Factors that Influence the Ability of PB-TCOC Models to be Competitive

Factors Impacting the Competitiveness of PB-TCOC Models

Providers have multiple competing options when selecting insurance options. Medicare Advantage (MA) plans currently have more favorable benchmarks and flexibility for reimbursement than APMs do.[36] Medicare FFS remains profitable and rewards higher acuity care more than primary care and chronic disease management.[37] Value-based care is seen as having a small market share, being administratively complex, and requiring substantial resources for transformation.[38,39] Advantages of value-based payment models include using incentives not available in FFS to capture underserved populations, establishing peer-to-peer learning, coordinating care, and incorporating social needs into patient care plans.[40,41]

Specific Market Factors Impacting PB-TCOC Model Participation.

Physician concentration, MA penetration, socioeconomic conditions, and market consolidation are specific market factors that may impact PB-TCOC model participation. Low market physician concentration is associated with greater ACO practice participation, as markets with high physician concentration may partner with large health systems, limiting the remaining market share available to develop or join an ACO.[42] MA penetration also may impact physician participation in ACOs. High rates of MA penetration (greater than 40 percent) may make it challenging for providers to join or establish an ACO as there are fewer FFS beneficiaries and more favorable benchmarks and flexibility for reimbursement offered by MA plans.[43] ACO participation has been low in areas with socioeconomic issues, and CMMI is actively expanding APMs to reach underserved beneficiaries.[44] Lastly, health care consolidation may lead to increased resources which could facilitate APM participation.[45]

The Use of Waivers in CMMI Models

Waivers allow for innovative approaches to health care, provider partnerships, financial incentives, and the evaluation of CMMI models. Medicare program rule waivers and fraud and abuse waivers can be categorized into three domains: participation coordination, care delivery design, and patient engagement incentives.[46] Medicare program rule waivers permit models to test innovative care delivery designs, and fraud and abuse waivers negate penalties from certain laws that aim to protect the system from fraud and abuse.

Permitted use of care delivery design and patient engagement incentives has been modest within CMMI models. Model participants cite difficulty determining patient eligibility, administrative burden, and confusion about use of these types of incentives.[47,48] Recommendations to enhance waiver use include providing more detailed guidance, streamlining waivers across models, offering protections for unintended waiver misuse, and expanding the eligible population for waivers.[49]

Factors Influencing Beneficiary Health Behaviors

Beneficiaries can participate in MA, traditional Medicare, or value-based care arrangements. MA is appealing because of low costs and enhanced benefits, such as dental, vision, and hearing coverage.[50] Traditional Medicare offers provider choice and fewer delays in seeking care. In a review of beneficiary health outcomes, MA beneficiaries had higher rates of preventative services, were more likely to see the same providers, and had lower hospital readmission rates than beneficiaries enrolled in traditional Medicare. However, patients in traditional Medicare tended to receive care in high-rated cancer hospitals, skilled nursing facilities (SNFs), and home health agencies.[51] Strategies to influence beneficiaries toward value-based care arrangements include using financial incentives to guide beneficiaries to high-value providers, providing benefits for healthy behaviors and lifestyles, supporting social determinants of health through nutrition and transportation services, and reducing or eliminating copays for primary care.[52,53]

Relevant Features in Previously Submitted PTAC Proposals

Among the 35 proposals that were submitted to PTAC between 2016 and 2020, including 28 proposals that PTAC has deliberated and voted on during public meetings, nearly all of the proposals address the potential impact on scope (specifically opportunities for APM participation) and quality and cost, to some degree. Committee members found that 18 of these proposals met both Criterion 1 ("Scope") and Criterion 2 ("Quality and Cost"), including several proposals that were directly related to promoting accountable care, and/or proposed to use waivers to reduce barriers related to participation in APMs.

III. Research Approach

This section provides a brief review of the research questions and methods that were used in developing this environmental scan.

III.A. Research Questions

Working closely with the Office of the Assistant Secretary for Planning and Evaluation (ASPE) staff and with input from a subset of Committee members known as a Preliminary Comments Development Team (PCDT),[vi] the following high-level research questions were developed to inform this environmental scan:

- What are the barriers that CFOs/clinical leaders may face when choosing to participate/not participate in PB-TCOC models?
- What are the most important organization-level barriers affecting participation in PB-TCOC models? How do these organization-level barriers vary depending on the type of organization?
- What are the best approaches/current evidence-based practices for addressing organization-level barriers affecting participation in PB-TCOC models? How might these approaches vary depending on the type of organization (e.g., large integrated delivery system [IDS], hospital, independent practice) that is participating?
- What methods/best approaches are currently being used to improve the predictability of ACO benchmarks and to effectively address the ratchet effect?

[vi] A Preliminary Comments Development Team (PCDT) comprised five PTAC members: Angelo Sinopoli, MD (Lead); Joshua Liao, MD, MSc; Terry Mills Jr., MD, MMM; Soujanya Pulluru, MD; and James Walton, DO, MBA.

- What types of conveners currently exist in the value-based care landscape, and what evidence has shown that using conveners increases participation?
- What are current approaches used to incentivize clinical integration?
- What are some of the different taxonomies that currently exist for classifying different kinds of health care organizations? Which of these taxonomies are potentially most useful for developing pathways to maximize participation in PB-TCOC models?
- What are some specific potential pathways toward maximizing participation of different kinds of organizations in PB-TCOC models?
- What are current evidence-based approaches to attributing patients in PB-TCOC models?
- What are current evidence-based approaches for multidisciplinary team-based attribution?
- What are evidence-based practices to incentivize primary and specialty providers to integrate care/provide team-based care? How might these approaches vary depending on the type of organization that is participating?
- What are current methods used to share data between primary care and specialty providers in less integrated settings?
- What are specific options for designing procedure-based and longitudinal nested episodes in PB-TCOC models?
- What are examples of current models that have effectively integrated specialty care (e.g., through procedure-based and longitudinal nested episodes, other approaches)? How might the most effective approaches vary depending on the type of organization that is participating?
- What are the factors that may influence beneficiary health behaviors?
- What are the specific market factors that may affect participation in PB-TCOC models in different geographic areas?
- What waivers are currently being used in PB-TCOC models?
- What are examples of current models that have implemented a multi-payer strategy?

These primary research questions, along with secondary research questions, organized by the environmental scan section, are provided in **Appendix A.**

III.B. Research Methods

The environmental scan includes information gathered from a targeted review of the literature, an analysis of selected previous PTAC proposals, and an analysis of selected CMMI models with a focus on five topics (background on identifying pathways for maximizing participation of different kinds of organizations in PB-TCOC models, assessment of and approaches to reducing organization-level barriers, approaches to support primary and specialty care transformation, assessment of factors that influence the ability of PB-TCOC models to be competitive, and relevant features in previously submitted PTAC proposals). Resources most relevant to these topics and the research questions are reviewed and summarized here.

Appendix B, analysis of relevant components of selected previously submitted PTAC proposals, includes information based on a review of the previously submitted proposals themselves, PTAC reports to the Secretary, and content available in other documents related to the PTAC proposal review process documents (e.g., public meeting minutes, Preliminary Review Team [PRT] reports).

The analysis of selected CMMI models (**Appendix C**) is based on a review of publicly available resources, including descriptions on the CMMI website and technical documents related to each selected CMMI model, as well as recent CMMI model evaluation reports when available.

IV. Background on Identifying Pathways for Maximizing Participation of Different Kinds of Organizations in PB-TCOC Models

Health care delivery organizations can range from small independent practices to large IDSs. Characterizing different types of health care delivery organizations could help to identify pathways to maximize PB-TCOC model participation for different types of organizations. This section provides background on historical trends in ACO participation among different organizations, summarizes different taxonomies that currently exist for classifying health care organizations, as well as specific taxonomies that may be useful to develop pathways to maximize participation in PB-TCOC models.

PTAC has developed the following working definitions of an accountable care relationship and of PB-TCOC models:

Accountable Care Relationship

- A relationship between a provider and a patient (or group of patients) that establishes that provider as accountable for quality and total cost of care (TCOC), including the possibility of financial loss/risk for an individual patient or group of patients for a defined period (e.g., 365 days).
- Would typically include accountability for quality and TCOC for all of a patient's covered health care services.

Population-Based Total Cost of Care (PB-TCOC) Model

- Alternative Payment Model (APM) in which participating entities assume **accountability for quality and TCOC** and receive payments for **all covered health care costs**[vii] for a broadly defined population with varying health care needs during the course of a year (365 days).
- Within this context, a PB-TCOC model would not be an episode-based, condition-specific, or disease-specific specialty model. However, these types of models could potentially be "nested" within a PB-TCOC model.

IV.A. Trends in ACO Participation Among Different Organizations

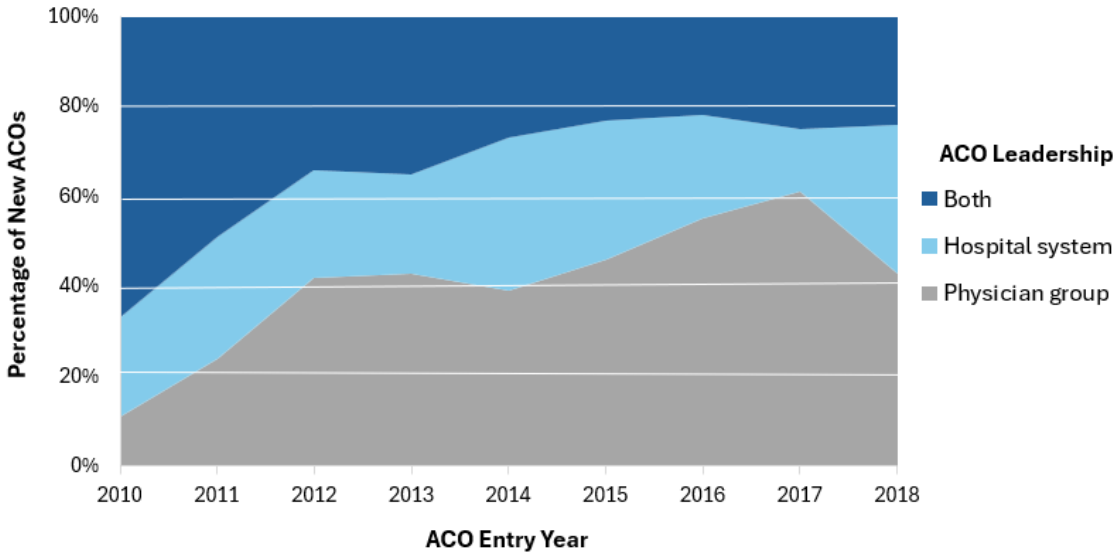
ACOs are critical to having all Medicare beneficiaries in accountable care relationships. ACOs can be led by hospitals, health systems, or physician groups, and each have unique approaches to reducing health care costs that reflect their organization's goals and structure.[54]

Hospitals and health systems led early ACO development from 2010-2015, and these entities influenced the initial policy goals and subsequent regulations for ACOs.[55] Establishing health IT infrastructure and analytic capabilities were not policy priorities because these entities already had such systems in place

[vii] For this purpose, all covered health care costs do not include pharmacy-related costs (Medicare Part D).

or had adequate capital to develop such systems. Exhibit 1 shows that physician groups have recently grown more rapidly compared to hospitals and health systems and account for the largest percentage of new ACOs.[56]

Exhibit 1. Physician-Led ACOs Have Grown the Most Rapidly and Account for the Largest Percentage of New ACOs



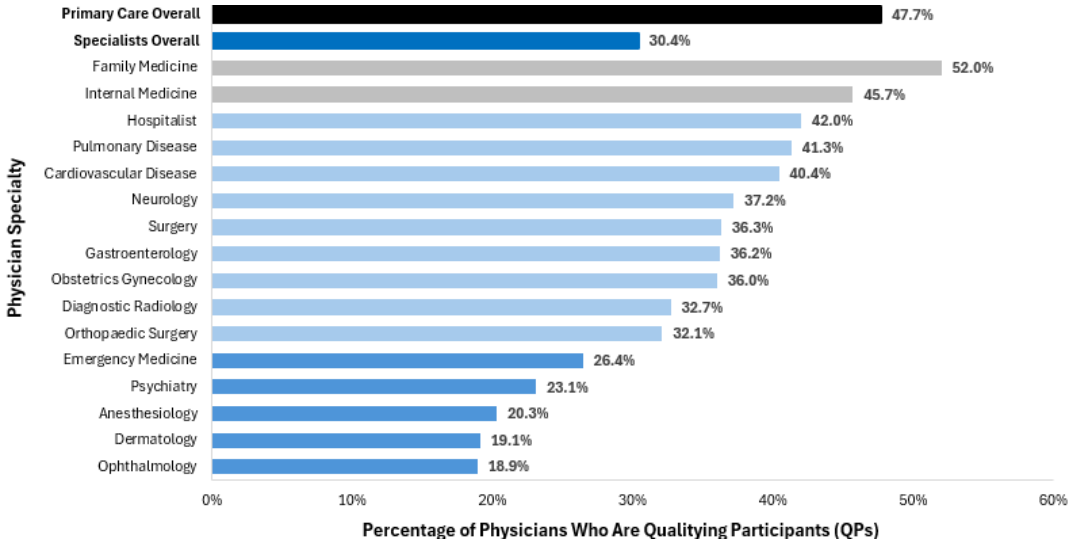
Source: Adapted from figure provided in Muhlestein et al, Accountable Care Organizations Are Increasingly Led by Physician Groups Rather than Hospital Systems. AJMC. 2020.

The growth in physician group-led ACOs is predicted to continue because of the greater availability of physicians to form ACOs. Only 6 percent of available physicians have formed ACOs compared to 28 percent of health systems and hospitals, leaving a substantial market share among physician groups.[57] This trend favors reducing overall Medicare spending as physician-led ACOs have successfully reduced health care costs by managing medical conditions to prevent hospital stays.[58]

Barriers, however, inhibit physicians from forming and leading ACOs to their full potential. Physician groups are less experienced in value-based risk contracts than health systems and hospitals, have tighter financial margins, and have fewer resources to invest in health information technology and EHR systems.[59] To ensure physician group-led ACO success in the coming years, granting additional time to take on downside risk with financial and mentorship support is recommended.[60]

Interestingly, there are differences in the types of providers participating in APMs. Exhibit 2 shows that while the overall growth in participation among physicians has remained steady, primary care physicians (e.g., family and internal medicine) were more likely to participate in APMs than specialty physicians (e.g., anesthesiology, dermatology, ophthalmology).[61]

Exhibit 2. Qualifying Participants in CMS Advanced Alternative Payment Models, 2023



Source: Adapted from figures provided in Muhlestein, Assessing Provider Adoption of Medicare Advanced Alternative Payment Models. Health Affairs Forefront. December 16, 2024.

Recent data shows that ACO growth began to plateau after 2018, with various factors contributing, such as greater downside risk in MSSP and limited opportunity to apply for MSSP in 2021 as the program paused new entrants due to the COVID-19 pandemic.[62] The study from Muhlestein et al. (2021) details that those exiting ACO contracts were higher in number than those starting ACO programs in the years 2018 and 2019. During this same period, the number of Medicare ACO contracts remained steady while commercial and Medicare ACO contracts increased. One potential explanation for the changing rates of ACO contracts is entities moving to another value-based payment vehicle, such as advanced primary care models.

IV.B. Taxonomies for Classifying Different Types of Health Care Organizations

Taxonomies can be useful to classify health care organizations that share similar characteristics or features. Early work (1999) established a taxonomy for hospital-based health systems that included three dimensions representing key features of organizational activity:[63]

1. Differentiation, or the number of different types of services offered;
2. Integration, or the mechanisms used to coordinate the services (e.g., direct ownership, contractual relationships); and
3. Centralization, or the level in the organization at which services are provided and decisions are made.

These three dimensions were intended to serve as a contextual framework for researchers, policy makers, practitioners, and health care executives to characterize key strategic and structural features of health care organizations. Further, the dimensions could be used to understand performance on cost and quality among different types of organizations. For example, the original taxonomy was used to identify five classifications for health care delivery systems:

- Independent hospital systems (e.g., hospitals with small bed size);

- Decentralized small hospital systems (e.g., a small number of hospitals with small bed size located in close proximity);
- Decentralized physician/insurance systems (e.g., larger, urban, and geographically dispersed hospitals);
- Moderately centralized systems (e.g., medium-sized and not-for-profit hospitals); and
- Centralized systems (e.g., not-for-profit hospitals located in close proximity).[64]

Additional research has built upon and expanded this original taxonomy. Recent work (2021) proposes four main classifications for hospital-based health systems: 1) less differentiated, decentralized; 2) highly differentiated, decentralized; 3) highly differentiated, highly centralized; and 4) undifferentiated, decentralized, and low integration.[65] Hospitals in the first category (less differentiated, decentralized) are for-profit hospitals located in suburban areas. This category includes a greater proportion of hospitals that belong to subsidiaries of a parent company, compared with hospitals in the other categories. The more differentiated hospital-based systems (second and third categories) tend to be large, more likely to be involved in teaching activities, and more likely to be in urban areas within one state. Hospitals in the fourth category (undifferentiated, decentralized, low integration) are small and non-teaching hospitals in rural areas, including Critical Access Hospitals. This taxonomy focused on differentiation and centralization as key dimensions for categorizing hospital-based health systems. In addition, the proposed taxonomy suggests that health systems have remained relatively decentralized, such that many systems have continued to allow autonomy among individual hospitals operating in their local markets.

Other taxonomies have been developed to establish a framework to identify similarities and differences in characteristics and features of health care organizations. A taxonomy proposed by Piña et al. (2015) is based on key features for care delivery.[66] Piña et al. (2015) presented a framework developed by the Delivery Systems Committee, a subgroup of the Agency for Healthcare Research and Quality's (AHRQ's) Effective Health Care Stakeholders Group, which characterized different types and sizes of health care organizations.[67] The framework included 26 key elements that reflect important characteristics of health care delivery. Based on similarity, the elements were grouped into six domains. The following list includes each domain with its associated elements:

1. Capacity: size; capital assets; and comprehensiveness of services;
2. Organizational structure: configuration; leadership structure and governance; research and innovation; and professional education;
3. Finances: payment received for services; provider payment systems; ownership; and financial solvency;
4. Patients: patient characteristics; and geographic characteristics;
5. Care processes and infrastructure: integration; standardization; performance measurement, public reporting, and quality improvement; health information system; patient care team; clinical decision support; and care coordination; and
6. Culture: patient centeredness; cultural competence; competition-collaboration continuum (e.g., the number of collaborative initiatives with competitors); community benefit; level of innovation; and working environment.

Taxonomies have also been developed that focus specifically on ACOs. Shortell and colleagues (2014) developed a taxonomy to classify ACOs based on eight key attributes: size; extent of participation; scope

of services; whether the ACO is an IDS; percent of primary care; institutional leadership type; physician performance management; and payment reform experience.[68] These key attributes helped to identify a taxonomy of shared characteristics among three types of ACOs: larger, integrated systems; smaller, physician-led practices; and medium sized, combined hospital-physician, and coalition-led groups (i.e., hybrid ACOs).

According to this taxonomy, larger integrated system ACOs are large ACOs with a wide range of provider types but a low proportion of primary care providers (PCPs). Over 90 percent of the ACOs classified in this group identified as an IDS. These ACOs also had the most experience with payment reform compared with the other types of ACOs. Smaller, physician-led ACOs are small ACOs with few provider types but with a high proportion of PCPs. These ACOs typically have less experience with payment reform compared with the other types of ACOs. The hybrid ACOs are moderate in size and proportion of PCPs. These ACOs are typically led by hospitals, coalitions, or a state, region, or county, and have some prior experience with payment reform. Although this taxonomy provides one way to classify ACOs based on shared characteristics, there is substantial overlap in characteristics across the three categories.[69] For example, a relatively large proportion of ACOs in all three categories identify as an IDS. In addition, 40 percent of large, integrated system ACOs and nearly 22 percent of hybrid ACOs identify as physician-led.

ACOs can also be classified based on certain capabilities and competencies. Two key features of hospitals participating in the MSSP and Pioneer ACO program are the hospital's health information technology (HIT) capabilities and the hospital's strong linkages and engagement among PCPs and specialists.[70] Hospitals are more likely to participate in the MSSP and Pioneer ACO program if they have previous experience with risk-based payments and care management programs and are located in more competitive markets.[71] Hospitals with more centralized systems and integrated physician-hospital alignment were more likely to participate in Pioneer ACOs, whereas hospitals with more decentralized health systems are more likely to participate in the MSSP.[72] Identifying characteristics related to participation in ACOs can help leaders of hospitals and health organizations know which capabilities and competencies are crucial for model participation.

Appendix D includes a table categorizing the taxonomies discussed in this section. Given the evolving nature of health care organizations, additional work is needed to develop new or refine existing taxonomies.

IV.C. Potential Pathways Toward Maximizing Participation of Different Types of Organizations in PB-TCOC Models

Taxonomies can be used to differentiate pathways to maximize participation in PB-TCOC models. That is, health organizations sharing certain characteristics can be grouped and treated similarly in regard to benchmarks, risk adjustment, performance measurement, and participation incentives.

PTAC has developed the following working definition of a pathway for incentivizing increased participation in PB-TCOC models:

- A pathway may be thought of as a grouping of health delivery organizations that might be treated similarly with regard to benchmarks, two-sided risk, and how performance measures affect payment within the context of other incentives. These parameters could be specified for the pathway.

Specific pathways could be useful to maximize participation of different types of organizations in PB-TCOC models. McWilliams et al. (2021) identified four tracks/pathways to accommodate different types of health care organizations based on size, level of revenue, spending in risk contracts, upside and downside risk-sharing, and participation incentives.[73] In this framework, Track 0 consists of small, low-revenue groups such as small PCP practices. This pathway is intended to provide more flexibility in primary care delivery. Track 1 constitutes medium-sized or low-revenue groups (e.g., large primary care-oriented groups) as well as groups that are eligible for Track 0. Track 1 could encourage model participation by serving as a point of entry. Track 2 targets large, higher-revenue organizations (e.g., large multispecialty groups), as well as groups that are eligible for Tracks 0 and 1. Finally, Track 3 includes large, high-revenue organizations (e.g., hospital-based health systems), as well as groups that are eligible for Tracks 0, 1, and 2.

Payment pathways can help to reduce barriers and maximize participation in PB-TCOC models. In the framework proposed by McWilliams et al. (2021), higher tracks include greater downside risk but have stronger incentives. The researchers noted that downside risk may be unnecessary to achieve net savings among lower-revenue ACOs but may be necessary to evoke change within larger health systems. The researchers also emphasized that stronger participation incentives are needed, especially for larger organizations. One key feature of this framework is that it provides flexibility for organizations eligible for multiple tracks to remain in a lower track indefinitely with the option to move up tracks to take on greater downside risk.

Additional research is needed to identify specific pathways that would be appropriate to maximize participation of different types of organizations in PB-TCOC models.

V. Assessment of and Approaches to Reducing Organization-Level Barriers

Health care organizations face barriers to participating in PB-TCOC models. This section summarizes barriers that organizational leaders, including CFOs and CEOs, may face when choosing whether to participate in population-based payment models. This section also summarizes approaches that can help to reduce participation barriers.

V.A. Barriers Organizational Leaders and Chief Financial Officers May Face that Affect Profitability

CFOs and CEOs are well positioned to promote alignment between organizations and health plans to succeed in value-based payment models. However, organizational leaders face barriers with participating in PB-TCOC models. Previous approaches used to manage finances in FFS, such as examining past performance to maximize revenue, may not be effective with value-based care models. To qualify for incentives and avoid penalties in value-based care models, organizational leaders must predict patient costs, measure outcomes, and improve population health.[74]

Results from a survey completed by senior finance executives across 160 hospitals, health systems, and other health care organizations showed that only 13 percent of CFOs reported feeling equipped to manage new and developing payment and care delivery models with existing financial planning tools and processes.[75] Technology and data analytic capabilities play an important role in the transition to value-based care. Approximately 80 percent of executives and 68 percent of physicians agreed that

technology investments have improved the value of care for patients.[76] Despite the importance of technology and high-quality data analytics, most CFOs (96 percent) reported that their organizations should be doing more to use operational and financial data for decision-making.[77] In addition, 52 percent of CFOs reported limited or no access to reliable, clean, and consistent data for financial reporting. Only seven percent of CFOs reported being satisfied with the performance management reporting at their organizations.

Within value-based care, CFOs are responsible for managing more than their organization's financial health, including having responsibility for efforts that impact performance and associated payment. For example, 80 percent of CFOs reported managing efforts related to patient experience, quality of care, and clinical outcomes.[78] More than half of the CFOs also reported managing operational efficiency, strategic growth, and employee growth and retention at their organizations.

To encourage the shift toward value-based care, CFOs can work with other senior leaders within the organization to identify core competencies needed to succeed in value-based care and identify areas in the organization to invest to ensure long-term success.[79] For example, health care leaders can ensure that the full continuum of care is functioning effectively. Strong primary care operations promote accurate patient diagnoses, which in turn can increase accuracy of capturing risk for reimbursement. In addition, efficient primary care operations can contribute to success in value-based care models. For example, proactive outreach to patients at higher risk can ensure that physicians see high-risk patients at the right time and frequency, which can improve the management of chronic conditions.[80]

Another survey of health plan executives and physicians showed that establishing payer-provider alignment around value is a barrier to participation in value-based payment models.[81] Clinical, economic, and administrative alignment between payers and providers can promote the shift toward value-based care.[82] To achieve clinical alignment, financial leaders can collaborate with payers to develop an integrated care management approach with open lines of communication. An integrated care management model could include the development of a multidisciplinary team that, among other roles, includes administrators, payer informaticists, and payer finance executives to ensure that the organization has adequate data to understand the needs of the patient population. To ensure positive patient experiences, CFOs can also focus on improving price transparency, providing out-of-pocket cost estimates, enhancing the capabilities for online bill pay, and supporting the implementation of other tools that have a positive impact on patient experience.[83]

To achieve economic alignment, financial leaders can facilitate data sharing between payers and providers to identify areas where an organization can improve its value and financial performance.[84] Establishing close partnerships with payers can also help CFOs to better understand their markets.[85]

To achieve administrative alignment, financial leaders can identify payer-enabled infrastructure investments that could support clinicians' efforts to improve quality while lowering costs.[86] For example, if financial leaders identify gaps in the organization's ability to provide post-discharge follow-up care, they could convene payers and providers to identify solutions to close the gaps. Key considerations for CFOs during this process include whether the projects can be funded from capital expenditures, whether the projects fit in the organization's long-term plans, and the extent to which the projects support the organization's other strategic plans. As organizations continue to move toward value-based care, organizational leaders can motivate department heads, frontline providers, and office staff to update workflows and help the organization become more comfortable with change.

V.B. Approaches to Reduce Barriers Depending on Type of Organization

There are several approaches to address organization-level barriers affecting participation in PB-TCOC models, including improving ACO performance benchmarks, understanding the potential roles of conveners in supporting model participation, incentivizing clinical integration, and addressing workforce challenges related to supporting value-based care. The section concludes with examples of current models that have implemented a multi-payer strategy.

Improving ACO Performance Benchmarks

Benchmarks for Medicare ACOs are intended to assist providers in increasing the quality of care while controlling overall spending. CMS sets annual spending targets for Medicare ACOs where providers can either earn a shared savings payment by spending below the benchmark, or, depending on the contract, pay a penalty for shared losses when spending exceeds the benchmark. The method used to set and rebase benchmarks can impact providers' participation in voluntary population-based payment models.

CMS has generally used two empirical approaches to set benchmarks for ACOs: regional benchmarks and historical benchmarks.[87] Regional benchmarks are based on historical FFS spending in each county and can be adjusted for changes in patient severity and case mix using CMS Hierarchical Condition Category (HCC) risk scores.[88] This method tends to provide stronger incentives to participate for providers with lower risk-adjusted spending in their region, as incentives are greater when an ACO's expected spending falls below the benchmark.[89] Historical benchmarks are focused on change in an ACO's own spending over time.[90] This method sets the initial benchmark based on historical spending for beneficiaries who would have been attributed to the ACO in the past. Then, benchmarks are reset based on the ACO's performance during the prior period. Rebasing benchmarks according to their performance during the prior year can introduce a "ratchet effect", whereby ACOs meet or exceed their current benchmark (e.g., decreased their spending below the target), and the benchmark is revised to align with the new level of spending. This results in a lower benchmark for the future and consequently makes it increasingly difficult for ACOs to meet the new benchmark and earn financial incentives. This performance-based rebasing method can weaken incentives to reduce spending and discourage long-term participation because meeting future benchmarks becomes increasingly challenging over time.

CMS has moved toward using a blended approach to benchmarking, where an ACO's historical spending is combined with the average spending in its region. With this method, benchmarks are rebased by comparing the mean of the ACO's risk-adjusted expenditure to the region's average risk-adjusted expenditure. Benchmarks that blend historical and regional spending can weaken incentives for ACOs with high spending to participate by decreasing the achievable financial bonus. Research evidence showed that using regional spending for MSSP ACO benchmarks favors practices whose spending is lower than their regions and potentially led to the exit of higher-spending ACOs from the program.[91]

Improving the way benchmarks are set for ACOs can help to reduce organization-level barriers affecting participation in population-based payment models. To encourage participation and long-term savings, McWilliams et al. (2021) suggested removing the association between an ACO's impact on spending and its benchmark.[92] Instead, a gradual convergence in benchmarks from a historical benchmark towards a regional average could provide an "on ramp" for ACOs with high spending in voluntary models. In addition, the researchers recommended using an administrative benchmark that decouples benchmarks from realized FFS spending growth. Administrative benchmark growth is typically informed by policy

considerations rather than actual spending and allows benchmark growth to be separate from realized spending growth. When administrative benchmarks can grow at a faster rate than realized FFS spending, ACOs have an opportunity to profit from delivering efficient care. Allowing this "wedge" to form between administrative benchmarks and actual spending can encourage model participation by allowing providers to keep their generated savings while reducing the likelihood of penalties.[93] McWilliams et al. (2021) suggested conducting an annual regional efficiency assessment where ACOs that are becoming more efficient receive better benchmark trends. For example, a fixed projected growth rate, as part of the Accountable Care Prospective Trend (ACPT) component of benchmarks for ACOs in the MSSP, is used for ACOs entering agreement periods beginning January 1, 2024.[94] For these ACOs, an initial, historical benchmark based on actual baseline spending will grow based on an administrative growth factor with the goal of ensuring that benchmarks are not lowered as a result of the ACOs' reducing FFS spending. Additional work is needed to improve ACO performance benchmark methods to incentivize continued participation in models among different types of organizations.

The Role of Conveners

Conveners[viii] are organizations that help to create a collaborative approach among hospitals, physician groups, and payers to deliver value-based care. There are different types of conveners in the value-based care landscape that facilitate participation in APMs, including intermediary entities such as private, third-party consulting firms (e.g., Advanced Bundle Convener, LLC; NaviHealth, Inc.; Fusion5, Inc.) and organizations affiliated with hospitals.[95] These organizations typically have expertise in areas important to participation in APMs, such as practice transformation, quality improvement, data exchange and aggregation, and policy,[96] and can provide different types of services to support health care organizations with delivering value-based care. For example, NaviHealth focuses on improving care coordination for patients transitioning from acute care settings to post-acute care settings. Conveners can also facilitate collaboration among payers and can assume all or some of the financial accountability for health systems and provider groups participating in APMs.[97,98]

Conveners can be particularly useful for participation in multi-payer models. For example, neutral conveners that were independent of participating payers and practices supported participants of the CPC initiative, Comprehensive Primary Care Plus (CPC+) Initiative, and Multi-Payer Advanced Primary Care Practice (MAPCP) Demonstration.[99] In these models, conveners helped organize and establish trust among payers and collaborated with payers to expand areas in which the payers were interested (e.g., harmonizing practices' participation requirements and definitions of performance measures). In the CPC initiative, payer conveners served in a leadership role and facilitated collaboration among payers by building rapport, fostering working relationships, and supporting the development of concrete and achievable CPC initiative goals.[100]

Conveners may also support participation in voluntary bundled payment models. For example, CMS created a role for conveners in Medicare's Bundled Payments for Care Improvement Advanced (BPCI Advanced) Model.[101] BPCI Advanced hospitals could gain or lose revenue based on their episode spending in relation to target prices set by CMS. Eligible hospitals could participate in the model independently, or they could partner with third-party conveners or convener organizations affiliated

[viii] The term enabler is sometimes used to describe the same role as a convener. For the purposes of this document, the term convener will be used.

with the hospitals. Conveners could share financial risk of spending above the target price. Conveners could also assist the hospitals with making decisions about episode participation in the model, offer hospitals strategies to reduce episode spending, obtain revenue through sharing savings, and provide technical assistance to improve care delivery.

There are advantages and disadvantages to using conveners. Risk-bearing conveners can encourage participation in certain value-based risk arrangements among providers that would otherwise be unwilling or unable to take on downside risk. When conveners assume downside risk as part of a value-based arrangement, they bring infrastructure and administrative, analytic, and coordinating support to providers, who then can increase their knowledge and comfort level participating in risk-sharing models.[102] Sharing risk with another entity may be particularly useful for increasing model participation among certain types of organizations. For example, use of third-party conveners in BPCI Advanced was most common among for-profit and non-teaching hospitals compared with other types of hospitals.[103] Conveners can also assist hospitals with selecting clinical episodes that are more likely to yield financial returns by analyzing target prices, use of post-acute care services, readmissions, and hospital patient volume.[104] For instance, hospitals that partnered with conveners in BPCI Advanced selected episodes that provided more chances to decrease spending on post-acute care and readmissions compared with participating hospitals that did not partner with a convener. However, there may be important implications of convener partnerships, particularly for CMS. Hospitals that partnered with a convener in BPCI Advanced tended to select episodes with greater target prices compared with hospitals that did not partner with a convener.[105] These findings suggest that conveners may increase hospitals' opportunities for shared savings through mean reversion rather than from making meaningful cost reductions. That is, over time, episode spending at hospitals with higher target prices will—through the statistical artifact of mean reversion—move closer to the average episode spending of all hospitals.[106] In addition, conveners can lessen the direct impact of value-based incentives for providers by collecting part of the shared savings. Integrating conveners within health care systems can also add time and administrative burden on providers.[107]

Incentivizing Clinical Integration

Clinical integration can promote better health outcomes and control health care costs by providing a structure that encourages different types of health care providers (e.g., physicians, hospitals) to coordinate patient care across settings. Traditional approaches to payment such as FFS do not sufficiently incentivize integrated care. However, financial incentives can help achieve clinical integration. Recent research identified four main types of financial incentives to encourage care integration: bundled payments, shared savings, pay for coordination, and pay for performance.[108] Key facilitators to adopting and implementing the incentives included stakeholder cooperation, flexible roles and responsibilities among providers (e.g., allowing nurses and general practitioners to share responsibilities), and adequate financial incentives.[109] Key barriers to adopting and implementing the incentives included misaligned incentives (e.g., the FFS payment for a certain type of clinician is higher than the portion of the bundled payment they receive), gaming of the payment mechanism (e.g., enrolling patients who are pre-diabetic into a diabetes disease management program), and a lack of infrastructure (e.g., IT equipment and software, channels for communication, and platforms to share information).[110,111]

Findings from Yordanov et al. (2024) indicated that shared savings models may be the most effective incentive to improve quality and reduce costs.[112] Shared savings models offer opportunities for providers to be accountable for the care provided to a specific population. When providers obtain savings for patients' care relative to a target, they keep a portion of the savings. Under two-sided risk models, the providers can also pay a penalty for exceeding the spending target. The MSSP is one example of a program that uses shared savings incentives to encourage clinical integration of primary and secondary care.

Although financial incentives can promote integrated care, the effectiveness of each type of incentive may vary by organization type. For instance, bundled payments may be most effective in reducing costs when focused on hospital care rather than primary care.[113] One example of a bundled payment program, the BPCI initiative, facilitated care integration by providing a payment for a bundle of health care services provided by hospitals, physicians, post-acute care providers, and other types of practitioners. An evaluation of the program showed a decrease in cost two to three years after implementing the program,[114] demonstrating that the impact of financial incentives on quality and costs can take years to materialize.

Although findings show the effectiveness of financial incentives to encourage clinical integration, there is a dearth of empirical evidence on the effectiveness of different financial incentives on integrating care, limiting the ability to understand and generalize the effectiveness of different incentives to different types of settings. Despite this lack of evidence, it is clear that the rewards and penalties built within financial incentives should be balanced based on the context in which the incentives are implemented.[115] Additional research is needed that examines the long-term impact of financial incentives on clinical integration.

Addressing Workforce Challenges Related to Supporting Value-Based Care

The shift to value-based care has had important implications on the health care workforce. One important component of care transformation has included reconfiguring the existing workforce across hospitals, health systems, and community-based practices. To support the transition to new models of care, existing health care professionals have taken on new roles and responsibilities for certain care services (i.e., "task shifting"). For example, the role of medical assistants has rapidly expanded to support value-based models of care. Medical assistants tend to have a range of responsibilities, including but not limited to completing pre-visit activities, taking patient histories, documenting clinical encounters, reviewing patient charts, coordinating referrals, giving immunizations, and providing preventative care services. In addition, nurses and physician assistants may fulfill tasks that were previously completed by physicians, including providing care for patients with less complicated acute, chronic, or preventative care needs.

In addition to task shifting among existing health care professionals, new roles have formed to support enhanced services in value-based care models. Although care coordination roles are not new, there has been a recent emphasis on roles providing care coordination services to reduce fragmentation of care. Among a bundle of additional services, care coordination is covered under Medicare's new advanced primary care management codes.[116] There has also been a recent emphasis on roles that address patients' needs across health and community-based settings. These roles tend to focus on providing patient care using population-based strategies. For example, health coaches can increase patients' knowledge about their diseases or medications by reconciling lists of medications, reviewing the

patients' comprehension of the care plan following a visit, or connecting patients to social services in their communities. Importantly, different types of providers can serve as a health coach, including nurses, medical assistants, social workers, and community health workers (CHWs). With the development of new roles, employers have had to integrate the new staff roles into existing human resources infrastructure, redesign existing workflows to ensure that staff have the time and resources needed to fulfill their responsibilities, and develop trainings to support new roles and staff.[117]

Researchers, policy makers, regulatory bodies, payers, and other workforce stakeholders may need to shift their focus from more traditional to new perspectives to successfully support the transition to value-based care. For example, stakeholders can shift their focus from traditional perspectives in the following ways:

- Instead of focusing on workforce shortages in the health care system, focus on understanding how to effectively use the existing health care workforce by reallocating clinical responsibilities;
- Instead of focusing on provider types needed to provide care, focus on the roles provided by different types of providers as different types of providers can fulfill the same roles to address patients' needs; and
- Instead of focusing on changing the curriculum for health professions and training new professionals, focus on revising the existing workforce to transform care.[118]

By implementing the strategies listed above, workforce stakeholders can facilitate the transition to value-based care.

Examples of Current Models that have Implemented a Multi-Payer Strategy

A multi-payer strategy refers to the coordination between different health insurance payers within the same region to follow the same policies. Payers can include both private health plans and government programs, including Medicare and Medicaid. Depending on the needs of the providers and/or patient populations, payers can align on different policies such as performance measures and reporting; payment approaches; rewards for health outcomes; standards related to reducing health disparities; and data sharing.

There are several important advantages to using a multi-payer strategy, including increasing the delivery of value-based care by reducing administrative burden associated with billing, payment, and clinical documentation systems; addressing health disparities by reducing differences in access to care based on insurance type; improving population health by encouraging payers and providers to agree on achieving the same goals and care standards; lowering administrative costs by using consistent payment methods; and increasing access to data by allowing providers to see claims data from different insurance companies.[119]

Several CMMI models have implemented a multi-payer strategy, including the MCP Model, the AHEAD Model, the GUIDE Model, and the CPC initiative.

The MCP Model seeks to improve care by encouraging advanced primary care services.[120] Payers eligible to participate in the model include state Medicaid agencies, MA organizations, employer-sponsored plans, and commercial insurers. The MCP Model uses directional alignment where payers must align on a select number of design elements but have flexibility with how they adopt the design elements.[121] The core design elements include performance measurement and reporting, payment approaches, data

sharing, and learning supports (e.g., technical assistance, peer-to-peer learning). Use of directional alignment is intended to reduce payer fragmentation, encourage a shift from FFS to population-based payments for primary care, and allow the flexibility needed for CMS, states, and payers to develop payment programs based on the needs of their providers and beneficiaries.[122] The 10.5-year MCP Model currently operates in eight states (ending in 2034).

The AHEAD Model is a state-based total cost of care model that aims to lower health care costs, improve care coordination, address health disparities, and improve population health for people residing in participating states.[123] States participating in the AHEAD Model are accountable for the health care quality and costs across all payers (e.g., Medicare, Medicaid, and private payers). Hospitals participating in the model will receive a Medicare FFS, Medicaid, and commercial payer hospital global budget (i.e., pre-determined, fixed annual budget for inpatient and outpatient services).[124] Hospital global budgets aim to achieve all-payer and Medicare FFS cost growth targets by helping hospitals improve coordination among providers, decrease potentially avoidable utilization, and improve health outcomes. The AHEAD Model's multi-payer alignment intends to achieve Medicaid alignment to hospital global budgets, achieve Medicaid alignment on primary care, and allow states to incentivize other payers to participate in hospital global budgets. Although the model is designed to give states flexibility with transformation efforts, a substantial amount of restructuring of health care spending across payers will be required.[125] The 11-year model currently includes six participating states (ending in 2034).

The GUIDE Model aims to improve care coordination by engaging multiple payers, such as Medicare, Medicaid, and private payers, in aligning their payment structures.[126] Among other requirements, the model will improve dementia care by requiring the use of an interdisciplinary care team with a trained clinician and a care navigator. Using a new set of HCPCS G-Codes for reporting functional limitations and care management services, GUIDE Model participants will submit claims to receive a per-beneficiary-per-month (PBPM) dementia care management payment for providing certain services to eligible beneficiaries and their caregivers. These payments are intended to support a team-based collaborative care approach. In addition, model participants can bill for respite care services (up to $2,500 annually) for beneficiaries with moderate to severe dementia and who have a caregiver.[127] These payments are intended to extend the length of time beneficiaries can stay at home in their communities. The eight-year, nationwide voluntary model (ending in 2032) is currently designed for Medicare Part B enrolled providers who can contract with non-Medicare providers to perform care coordination efforts.

The CPC initiative was a multi-payer initiative that aimed to strengthen primary care.[128] CMS collaborated with commercial and state health insurance plans to provide primary care practices a monthly, non-visit-based care management fee and the chance to share in net savings to the Medicare program. Payments supported primary care practices with providing beneficiaries a core set of primary care functions, including planned care for chronic conditions and preventive care, risk-stratified care management, , patient and caregiver engagement, access and continuity, and coordination of care. The multi-payer collaboration was intended to provide the amount of funding needed to transform primary care. CPC ran for four years and is no longer active (ended 2016).

VI. Approaches to Support Primary and Specialty Care Transformation

There are several approaches to support primary and specialty care transformation in PB-TCOC models. This section summarizes those approaches, including best practices for patient attribution in PB-TCOC

models, methods for sharing data between primary and specialty care in less integrated settings, and integrating specialty care in PB-TCOC models.

VI.A. Best Practices for Patient Attribution in PB-TCOC Models

CMMI models employ prospective, retrospective, and/or voluntary attribution methods, with most organizations using claims data as their primary data source to attribute patients to providers.

- **Prospective attribution** uses claims-based data to assign patients prospectively based on "first touch" or historical care patterns.[129] It can also be active, where the provider or patient affirms the care relationship.[130] Prospective attribution facilitates a proactive approach to care coordination but may not accurately attribute the provider who should be responsible for new or low-utilization patients.[131,132] CMMI models that use or used prospective attribution include ACO Realizing Equity, Access, and Community Health (ACO REACH), Comprehensive End-Stage Renal Disease Care (CEC), CPC+, Maryland Total Cost of Care (MD TCOC), MCP, MSSP, Next Generation ACO (NGACO), Primary Care First (PCF), Pioneer ACO, and Vermont ACO.
- **Retrospective attribution** uses claims-based data to assign patients based on actual care patterns within the performance year.[133] Although it provides an accurate picture of a patient's providers, providers generally do not know the patients attributed to them until after the performance period.[134] MSSP offers retrospective (as well as prospective) attribution.
- **Voluntary attribution** is when a patient reports an existing relationship with a provider and can also be supported by prospective or retrospective attribution methods.[135] ACO REACH, MCP, and PCF Models employ or employed voluntary attribution.

Please refer to the *September 2024 Identifying a Pathway Toward Maximizing Participation in PB-TCOC Models; the June 2023 Care Transitions in Population-Based Models; and the March 2023 Specialty Integration in Population-Based* Models environmental scans for additional information on patient attribution methods.

While CMMI models historically have implemented single attribution methods, integrating specialty care through multiple attribution methods would more accurately represent patients cared for by various providers. Attribution in ACOs has mostly focused on primary care, leaving specialists out of the financial incentives to embrace the principles and goals of value-based payment.[136] Challenges persist, however, to advance attribution for multiple providers, including limited access to data, siloed and fragmented data, and varied provider network affiliations.[137] Further, there is no gold standard methodology for assigning attribution to multiple providers, which makes implementation challenging.[138] Multiple attribution methods would, however, promote a fair distribution of responsibilities outside primary care and incentive team-based, multidisciplinary care.[139] Multiple attribution methods discussed to date are based on the number of visits or provider payments, and either include all physician claims or specific E&M codes.[140,141]

Examples of multiple attribution methods include:

- Weighted multi-attribution: a patient is assigned to multiple providers based on the weighted contribution of each provider.[142]

- Primary care-centric attribution: a patient is primarily attributed to a primary care provider, but other specialists can be attributed for patient care depending on their degree of involvement.[143]
- Episode-based attribution: a patient is assigned for each episode of care to the providers involved in the care and can be weighted based on each provider's contribution.[144,145]
- Cost-based attribution: a patient is assigned to multiple providers based on total costs from each provider.[146]

It may be beneficial to move towards implementing multiple attribution methods to facilitate the integration of specialty care.

VI.B. Integration of Specialty Care in PB-TCOC Models

One method to integrate specialists into TCOC models is to create "nested episodes" within larger episodes of care to encourage collaboration among care providers. Using a hierarchical structure within TCOC models, nesting episodes of care can create "an environment of cascading accountability" for specific conditions or treatments.[147] One approach to creating nested solutions is to assess the variation of cost in particular conditions; those conditions where cost generally does not vary among patients with the same condition (e.g., conditions with low-cost variation such as colon polyps and gastritis) can be translated to nested episodes, while conditions where cost may vary substantially among patients with the same condition (e.g., conditions with high-cost variation such as inflammatory bowel disease) may be best to target for treatment outside of nested episodes.[148]

Another approach to designing nested episodes of care in TCOC models is to create SCMs.[149] Japinga and colleagues (2022) suggest that cardiology, musculoskeletal, respiratory, behavioral, and mental health specialties are favorable for creating longitudinal specialty care pathways. The authors suggest that SCMs could be nested in TCOC models, with acute episode payments nested within the SCM and paid separately, allowing the specialist to be accountable for the acute episode.

Specialists have been incorporated in CMMI models such as the BPCI-A and the Comprehensive Care for Joint Replacement (CJR) Models to address acute episodic specialty care.[150] Expanding the specialist role in accountable care relationships can be advanced by developing whole-person specialty care and longitudinal/chronic specialty care pathways.[151] With this approach, specialists can coordinate and co-manage care for complex patients. The Enhancing Oncology Model (EOM) is an example of providing whole-person specialty care for patient cancer treatment, with less reliance on FFS payment.[152] Longitudinal/chronic specialty care remains a long-term goal for specialty integration. MA plans have engaged specialists in longitudinal care with global capitation models (e.g., PBPM or annual fixed rate) facilitated by their contracted networks.[153] Currently, the MCP Model has enhanced FFS coordination payments that specialists can utilize for coordination and care planning.[154] Track 3 of MCP specifically allows specialty care partners and MCP specialists to bill an ambulatory co-management code.[155] MCP further reflects the Universal Foundation of Measures Initiative[156] in selecting performance measures to align across provider types.[157]

A nested approach promotes shared accountability through collaboration between primary and specialty providers, possibly contributing to a model's overall savings. However, conditions or treatments with high and unpredictable costs are more appropriate for a carve-out approach within

TCOC models. Specialty treatments, such as dialysis care or cancer treatment, are often excluded from global budgets and reimbursed through traditional methods such as FFS.[158] This may be appropriate given the high cost of more complex treatment protocols and medications. However, they may also contribute to misaligned incentives and care fragmentation.[159]

Incentives for specialty engagement and collaboration vary by setting. Physician-led ACOs focused on advanced primary care have less financial incentive to incorporate specialists and may have fewer available specialists in their network.[160,161] Hospital-led ACOs, on the other hand, are likely to have many available specialty providers, but the financial incentives of shared savings to reduce admissions and procedures are weaker than the overall economic benefits of current care practices.[162,163] Unfortunately, specialists in hospital-led ACO networks are not often aware of or engaged in accountable care payment initiatives. Further, patient engagement and care coordination are minimally compensated under FFS and more often targeted at primary care providers.[164,165] Given these factors, it may be appropriate to use a voluntary nested model approach in physician-led ACOs and a mandatory approach in hospital-led ACOs.[166]

Incentives to promote specialty care engagement in TCOC models include utilizing per-person payment or sub-capitation, aligning FFS with condition management, enhancing guidance and incorporation of nested payment reforms, providing bonuses, and providing timely specialty performance data known as shadow bundles.[167,168] ACO models can also employ waivers that allow specialists in ACOs to bill for care management (e.g., transitional care or chronic care management) and utilize e-consultations. Aligning performance measures across primary and specialty care providers is another mechanism to encourage coordination.[169] Lastly, efforts to align beneficiaries with specific providers can improve specialty care integration.[170] Many of these incentives are echoed in CMMI's 2022 strategy to strengthen specialists in value-based care, specifically: enhancing performance data and transparency, maintaining momentum on acute episode payment models and condition-based models, creating financial incentives within primary care for specialists, and facilitating specialist affiliation with population-based models.[171]

VI.C. Methods to Share Data between Primary and Specialty Providers in Less Integrated Settings

Successfully sharing patient data between primary and specialty care providers can support higher-quality care services, minimize errors, and reduce duplicative services. Realizing data interoperability, or the seamless sharing of electronic health information, is an overarching goal of the existing health care system, supported by federal policies and guidance such as the 21st Century Cures Act of 2016, the Office of the National Coordinator for Health Information Technology (ONC) Trusted Exchange Framework and Common Agreement (TEFCA) framework, and the CMS 2020 Interoperability and Patient Access Final Rule. These principles aim to increase transparency and data exchange across providers, create foundational principles for clinical data sharing, and provide a roadmap for system integration.[172]

A 2022 ONC study of office-based physicians found that approximately 65 percent of physicians use electronic patient information exchanges, while 35 percent remain in paper-based systems.[173] The majority of physicians found using electronic exchanges beneficial to patient safety and quality, and physicians using electronic exchanges were most likely to query for patient health information when seeing a new patient or to send patient health information to other providers. Primary care providers

had higher electronic data exchange usage than specialists, with differences also noted in the usage of electronic exchanges and size of practice. A 2023 ONC study estimated that 70 percent of hospitals actively engage in interoperable activities (e.g., sending, receiving, finding, and integrating data).[174] Interestingly, although rates of interoperable activities were high, approximately only 40 percent of clinicians within those systems routinely use those data during patient treatment. This highlights the need for further integration and utilization of shared data in health care settings.

Data integration across health care systems can be viewed as a continuum, meeting point-of-care patient needs or supporting population health management.[175] Barriers to integrating data include technology issues (e.g., different or no electronic health record [EHR] systems, data structure, and mapping requirements), organizational culture, workflow complexity, environmental regulations, data ownership, and payment system initiatives.[176,177] Approaches to facilitate greater data integration between primary and specialty care providers include standardizing or democratizing data (e.g., making data readily accessible and in a form that is easily usable for everyone who needs them), increasing the usefulness of transferred data by organizing by the relevancy of information to the provider, and establishing data sharing protocols and responsibilities for data encryption and privacy.[178] In a systematic review assessing value-based integrated care, most factors and barriers identified were related to health information technology, communication, and coordination, underscoring the necessity of a high-functioning health IT infrastructure and efficient communication between providers.[179]

VII. Assessing Factors that Influence the Ability of PB-TCOC Models to Be Competitive

This section explores potential factors that may influence the ability of PB-TCOC models to be competitive, compared with other options (e.g., FFS, MA). This section also summarizes the use of waivers in CMMI models and factors influencing beneficiary participation in PB-TCOC models.

VII.A. Factors Impacting the Competitiveness of PB-TCOC Models

Several factors may impact the competitiveness of PB-TCOC models, compared with other options such as FFS and MA. Providers are permitted to participate in multiple insurance options, and currently, MA plans offer more favorable benchmarks and flexibility for reimbursement than APMs.[180] Attempts to offer other alternatives to FFS payments, such as bundled payments, have not been successful in lowering overall costs because the number of billable episodes of care in a bundled payment is not limited, making it as profitable as FFS payments.[181,182,183] Academic medical centers continue to focus on higher acuity care (e.g., specialized care for patients with complex health needs) in the FFS system because it is more profitable than primary care, behavioral health, and chronic disease management.[184] This trend is predicted to continue in academic medical centers until value-based care is dominant or mandatory.[185]

Participating in APMs is seen as more administratively complex than FFS, which has prevented or delayed many providers from transitioning to value-based care.[186] The complexity and number of APM options may overlap, creating competition for shared savings within value-based payment models, which is also a disincentive for system-wide care transformation.[187] Value-based care is viewed as a small market share without a sense of urgency for transformation.[188] Further, the need for financial resources to transform practices into value-based care is another barrier to entry. Supporting small and

new ACOs with upfront financing is a suggested strategy to increase the competitiveness of value-based payment models.[189]

A study by Muhlestein (2024) found that 29 percent of all providers and 35 percent of physicians were considered to be qualified participants in the quality payment program (e.g. able to successfully adopt advanced APMs), and just 44 percent of providers participated in one or more advanced APMs. Muhlestein suggested five approaches to increase provider participation in advanced APMs: 1) enhance desirability (e.g., through incentives) to join existing APMs rather than create new APMs; 2) create specialty-specific APMs; 3) develop strategies to aid non-physicians in the adoption of APMs; 4) create a hierarchy of models to aim to reduce model overlap; and 5) research regional differences in APM participation to create region- or market-specific strategies.[190]

Lastly, focusing on reducing health disparities within value-based payment models is a competitive advantage for APMs, compared with FFS. APMs can utilize incentives not readily available under FFS to capture underserved populations and their providers, establish peer-to-peer learning, coordinate care, and incorporate social needs into patient care plans.[191,192]

VII.B. Specific Market Factors Impacting PB-TCOC Model Participation

Market factors that may impact PB-TCOC model participation include physician concentration, MA penetration, socioeconomic conditions, and market consolidation.

Physician Concentration

When examining the impact of provider participation in Medicare ACOs based on the concentration of the physician market (i.e., a practice's market share of physicians), commercial health insurance market (i.e., a commercial insurance's market share of plans), and MA penetration (i.e., percentage of MA enrollment in a county), an inverse relationship between physician concentration and ACO practice participation has been observed, where low physician concentration was associated with greater ACO practice participation.[193] Prior research has also supported the association between low physician concentration and ACO formation.[194] Additionally, physicians in rural counties were more highly concentrated within fewer practices compared with physicians in urban counties; 1,079 out of 1,854 rural counties showed high physician concentration (58 percent) compared to 295 out of 1,144 urban counties (26 percent), which may contribute to slower ACO growth in rural areas.[195] Counties with ACO practices were more likely to be urban, were highly populated with more Medicare beneficiaries and providers, and were in less concentrated physician markets. There was no relationship between the commercial health insurance market concentration and ACO formation noted.

MA Penetration

MA penetration can impact physician participation in Medicare ACOs.[196] MA penetration of 20-40 percent in a county was associated with substantially greater odds of an ACO presence than MA penetration rates of less than 20 or greater than 40 percent. Yan and colleagues (2021) posited that some risk contracting experience from MA participation may support physicians joining ACOs. However, when the MA penetration rates exceed 40 percent, joining or establishing an ACO becomes difficult as there are fewer FFS beneficiaries and more favorable benchmarks and flexibility for reimbursement offered by MA plans. The central theme of a 2024 qualitative study among 49 ACO leaders participating in MSSP centered around recruiting and retaining providers in ACOs.[197] One leader stated, "MA has

whittled away our numbers tremendously."[198] In 2024, 54 percent of beneficiaries were enrolled in MA, and this is anticipated to grow to 60 percent of the market by 2030.[199,200] However, there is a wide range of MA concentration across states, with market share ranging from 2 to 63 percent, with seven states (AL, CT, FL, HI, ME, MI, RI) having over 60 percent of their beneficiaries in MA.[201] In summary, some MA penetration helps expose practices to risk contracting, but higher rates may dominate the market, impacting physician participation in Medicare ACOs.

Socioeconomic Conditions

Socioeconomic conditions may also impact physician participation in PB-TCOC/ACO models. Physician participation in ACOs has historically been low in areas with notable socioeconomic issues, such as high poverty rates, high uninsured rates, and low education rates.[202] Early formation of ACOs was negatively associated with high-poverty and rural regions and positively associated with areas with high costs and quality ratings.[203] Lewis et al. (2013) suggested that providers forming ACO organizations were attracted to areas with high costs that could be potentially reduced and areas already performing well on quality metrics.[204]

A 2022 review by CMMI of its first decade of work identified a greater need to focus on underserved Medicare beneficiaries and healthy equity initiatives within APM models.[205] An analysis of the CPC+ and PCF Models that stratified patients by socioeconomic factors showed fewer model participants who were low income, Hispanic, and within rural communities.[206] As a result of this analysis, CMMI is actively expanding APMs to reach underserved beneficiaries by increasing safety net providers in models, collecting robust socioeconomic data, and developing models that explicitly address health disparities.

Market Consolidation

The percentage of primary care providers in hospital-based systems has grown from 36 to 74 percent over the last decade.[207] Health care consolidation through vertical mergers (i.e., providing different clinical services), horizontal mergers (i.e., providing the same or similar services), and clinically integrated networks (i.e., contracting care without a formal merger) have increased alongside the rise in value-based payment models.[208,209] An association between county-level ACO penetration and physician consolidation exists, with the highest ACO areas prompting the most significant changes among small physician practices.[210] During the last decade, money for investment in primary care increased from $15 million to $3.8 billion.[211] The move to value-based payment systems and capitation payments from MA and ACOs prompted corporate-owned entities' growth and interest in primary care investment.[212] Market consolidation has come with concerns over increased prices and varied effects on the quality of care.[213]

Health system consolidation is associated with greater APM participation.[214] Given the increased resources for value-based transformation within integrated health systems, practicing within such a health system would facilitate APM participation. Primary care practices within clinically and structurally integrated health systems were likelier to participate in multiple APM models.[215] However, independent physicians are disadvantaged when participating in value-based payment models. They will likely need more infrastructure and administrative support to succeed in these models and are at risk of maintaining independence within a value-based payment system.[216,217]

VII.C. The Use of Waivers in CMMI Models

Medicare program rule waivers permit models to test innovative care delivery designs, and fraud and abuse waivers negate penalties from the Physician Self-Referral Law (Stark law),[218] the Anti-Kickback Statute,[219] and/or the Civil Monetary Penalty (gainsharing)[220] applicable to specific value-based compensation arrangements.[221] These laws aim to protect the system from fraud and abuse by limiting physician referrals to entities with which the physician has an established financial relationship, eliminating rewards for patient referrals, and prohibiting the reduction or limitation of medically necessary services for beneficiaries. The enforcement of these laws in value-based care models would inhibit provider partnerships, financial incentives, and the evaluation of CMMI models. There are several federal waivers currently in use in CMMI models to encourage collaboration between entities, incentivize provider participation within models, and permit model performance evaluation. A comprehensive search resulted in 19 CMMI models (9 active and 10 inactive) that used at least one waiver. Medicare program rule waivers and fraud and abuse waivers can be grouped into three main domains: care delivery design, patient engagement incentives, and participant coordination.[222]

Exhibit 3 summarizes the use of waivers in CMMI models by type of waiver (i.e., Medicare program rule, or fraud and abuse) and domain (i.e., care delivery design, patient engagement incentives, and participation coordination). The descriptions of waivers were adapted from multiple sources.[223,224]

Exhibit 3. Use of Waivers in CMMI Models

Domain	Specific Waivers	Description	CMMI Models
Medicare Program Rule Waivers			
Care Delivery Design	3-Day SNF	Allows for a patient to be admitted to an SNF without a prior 3-day hospital stay to promote coordinated care and improve patient transitions.	BPCI-A (Active)[225] BPCI (Not Active)[226] CKCC (Active)[227] DC (Not Active)[228] NGACO (Not Active)[229] Pioneer ACO (Not Active)[230]
	Post-Discharge Home Visit	Allows for a limited number of home visits after discharge from an inpatient facility to reduce the risk of hospitalization and improve patient outcomes.	BPCI-A (Active)[231] BPCI (Not Active)[232] CKCC (Active)[233] DC (Not Active)[234] NGACO (Not Active)[235]
	Care Management Home Visit	Allows a home visit by a clinician (or auxiliary personnel under clinician supervision) before a potential hospitalization to reduce the risk of hospitalization.	DC (Not Active)[236] NGACO (Not Active)[237]
	Home Health Homebound Requirement	Expanded the criteria for home health-bound services to beneficiaries with multiple chronic conditions at risk of an unplanned inpatient hospital admission to improve patient outcomes.	CKCC (Active)[238]
	Telehealth	Removes the originating site requirement for services provided via telehealth to expand care access for beneficiaries.	BPCI-A (Active)[239] BPCI (Not Active)[240] CEC (Not Active)[241] CKCC (Active)[242] DC (Not Active)[243] NGACO (Not Active)[244]
	Kidney Disease Patient Education Services	Increases access to disease patient education by expanding chronic kidney disease (CKD) staging requirements and the provider types allowed to provide education and improve patient outcomes.	CKCC (Active)[245]
	Care Coordination Arrangement	Allows for the use of clinical support services (i.e., case managers, care coordinators) and other items and services to improve care coordination.	CEC (Not Active)[246]
Fraud and Abuse Waivers			
Patient Engagement Incentives	Cost Sharing	Reduces cost-sharing amounts for certain Medicare Part B services to lessen financial constraints on the beneficiary.	CKCC (Active)[247] DC (Not Active)[248] NGACO (Not Active)[249] PCF (Active)[250]
	Chronic Disease Management Reward	Allows up to $75 worth of gift card(s) per year to foster beneficiary participation in chronic disease management programs to incentivize patient engagement and participation in managing chronic disease.	CKCC (Active)[251] DC (Not Active)[252] MA-VBID (Active)[253] NGACO (Not Active)[254]

Domain	Specific Waivers	Description	CMMI Models
	Chronic Disease Management	Allows certain providers to offer free services that are connected to the program's objectives and foster patient management of care (e.g., an at-home health monitoring device). It may also include technology and non-emergency transportation. This incentive encourages the management of chronic disease and may improve patient outcomes.	BPCI-A (Active)[255] BPCI (Not Active)[256] CEC (Not Active)[257] CJR (Active)[258] DC (Not Active)[259] MA-VBID (Active)[260] MDPP (Active)[261] MTM (Not Active)[262] NGACO (Not Active)[263] OCM (Not Active)[264] PCF (Active)[265] PDPM (Not Active)[266] PDSS (Not Active) Pioneer ACO (Not Active)[267] Vermont ACO (Active)
Participation Coordination	Pre-Participation Waiver	Protects organizations that plan to participate in an APM program.	DC (Not Active)[268] MSSP (Active)[269]
	Participation Waivers	Waives sections of the federal anti-kickback statute and the physician self-referral law so that participants can perform activities that "promote accountability for the quality, cost, and overall care" for the model beneficiaries.	NGACO (Not Active)[270] Pioneer ACO (Not Active)[271] Vermont ACO (Active) [272]
	Payment-Related Waivers	Permits payment arrangements across participants that are necessary for program participation. An example would be shared savings (gainsharing) across providers.	BPCI-A (Active)[273] CEC (Not Active)[274] CJR (Active)[275] MDAPM (Not Active)[276] MDTCOC (Active)[277] NGACO (Not Active)[278] OCM (Not Active)[279] Pioneer ACO (Not Active)[280] Vermont ACO (Active) [281]

Abbreviations: BPCI, Bundled Payments for Care Improvement; BPCI-A, Bundled Payments for Care Improvement Advanced; CEC, Comprehensive ESRD Care; CJR, Comprehensive Care for Joint Replacement Model; CKCC, Comprehensive Kidney Care Contracting Options for Kidney Care Choice Model; DC, Global and Professional Options of the Direct Contracting Model; MA-VDIB, Medicare Advantage Value-Based Insurance Design Model; MDAPM, Maryland All-Payer Model Care Redesign Program; MDPP, Medicare Diabetes Prevention Program Expanded Model; MDTCOC, Maryland Total Cost of Care Model; MSSP, Medicare Shared Savings Program; MTM, Part D Enhanced Medication Therapy Management; NGACO, Next Generation Accountable Care Organization; OCM, Oncology Care Model; PCF, Primary Care First; PDPM, Part D Payment Modernization Model; PDSS, Part D Senior Savings Model; Pioneer ACO, Pioneer Accountable Care Organization Model; Vermont ACO, Vermont All-Payer Accountable Care Organization Model

The use of waivers to transform care has been modest within CMMI models. There has been variation in the waivers and incentives offered and used between models. Participants in the BPCI Model were permitted to waive the 3-day hospital requirement for SNF admittance; however, only 35 percent of BPCI participants used this waiver in practice.[282] Patient engagement incentives, such as covering the receipt of medical equipment or transportation services, were underutilized, reaching only approximately 600 beneficiaries. Within the BPCI-A model, few participants reported using care delivery design waivers such as telehealth, home visits, the 3-day hospitalization for SNF admittance, or providing beneficiary incentives.[283] BPCI and BPCI-A participants' limited use of waivers may be due to

difficulty determining patients' eligibility for waivers, the administrative burden associated with implementing waivers, and general confusion about their use.[284,285]

PCF and NGACO Models also reported low utilization of waivers. Only 21 percent of practices participating in PCF reported using at least one waiver, with 13-19 percent utilization rates for patient engagement incentives such as medical equipment, transportation, and nutrition services.[286] Further, only six percent of practices reported using cost-sharing waivers. Just 12 percent of participating ACOs used post-discharge home visits waivers, and eight percent used telehealth waivers. In the NGACO Model, half of the participating ACOs used the 3-day SNF rule waiver, but only 3 percent of SNF stays were attributed to the waiver's use.[287] NGACO participants reported needing more education to use the 3-day SNF waiver and stated challenges in identifying eligible beneficiaries and SNFs. Obtaining authorizations and denials of the 3-day SNF waivers were also barriers to its adoption in practice.

In the CEC model, participants used chronic disease management waivers, offering transportation and nutrition services, but their use declined throughout the model period.[288] Over time, facilities preferred other transportation options over services offered in the waiver because the travel allotment per patient was inadequate. Nutrition services were also utilized less over time due to administrative burden and competing similar programs offered by facilities.

In the Kidney Care Choices (KCC) Model, waivers were used differently between participants in the Kidney Care First (KCF) and Comprehensive Kidney Care Contracting (CKCC) Models.[289] KCF reported that only 4 percent of practices implemented the cost-sharing waiver, and none used disease management rewards, compared to CKCC, where 76 percent implemented the cost-sharing waiver and 61 percent used disease management rewards. However, many participants under both KCF and CKCC used benefit enhancements, such as diabetes patient education and telehealth services. Few participants in the CKCC models (less than 10 percent) used the home health homebound or 3-day SNF waivers.

Waivers are intended to encourage participation in CMMI models, facilitate innovative care design, and increase beneficiary engagement in their care.[290] Potential solutions to increase waiver use in CMMI models include providing detailed guidance on the use of specific waivers, streamlining waiver options across models, offering protections for unintentional waiver misuse, and expanding the population eligible for waivers.[291]

VII.D. Factors Influencing Beneficiary Health Behaviors

Many factors influence beneficiary participation in MA, traditional Medicare, or value-based care arrangements. Beneficiaries are drawn to MA for many reasons, including low or no premiums, annual out-of-pocket limits, additional benefits (e.g., dental, vision, and hearing coverage; gym memberships; over-the-counter medical supplies), and the simplicity of having one plan that provides full medical coverage.[292,293]

In comparison, traditional Medicare offers limited additional benefits apart from medical coverage, and most beneficiaries with traditional Medicare elect for supplemental insurance, such as Medigap, to help cover deductibles, copayments, and coinsurance. In 2022, 42 percent of traditional Medicare beneficiaries (approximately 12.5 million) elected for Medigap coverage.[294] Beneficiaries with Medigap policies are more likely to be white, have higher incomes, and are healthier than traditional Medicare beneficiaries without Medigap policies.[295] They were also less likely to have cost-related issues with

their health insurance, compared with MA plans or traditional Medicare without supplemental coverage.[296]

A primary advantage of traditional Medicare is the beneficiary's freedom to select your providers and fewer delays in receiving care, compared with MA plans that utilize network contracts and prior authorizations to contain costs.[297] A recent literature review found that MA and traditional Medicare beneficiaries have similar satisfaction rates and care coordination efforts.[298] MA plans had higher rates of preventive services, were more likely to use the same providers, and had lower hospital readmission rates than traditional Medicare.[299] However, traditional Medicare performed better than MA in receiving care in the highly-rated cancer hospitals, skilled nursing facilities, and home health agencies.[300]

Strategies to influence beneficiaries toward value-based care arrangements in traditional Medicare include using financial incentives within APMs to guide beneficiaries to high-value providers, giving benefits or rewards for healthy lifestyles, and reducing or eliminating co-pays for primary care. Another approach is to use APM-financed clinical tools, such as shared decision-making tools, to enhance the beneficiary experience.[301] Enhanced strategies to support social determinants of health, such as nutrition and transportation services, would also support beneficiary engagement in value-based care arrangements.[302]

VIII. Relevant Features in Previously Submitted PTAC Proposals

This section summarizes findings from an analysis of components in previously submitted PTAC proposals that are relevant to value-based accountable care. Among the 35 proposals that were submitted to PTAC between 2016 and 2020, including 28 proposals that PTAC has deliberated and voted on during public meetings, nearly all of the proposals address the potential impact on scope (specifically opportunities for APM participation) and quality and cost, to some degree. Committee members found that 18 of these proposals met both Criterion 1 ("Scope") and Criterion 2 ("Quality and Cost"), including several proposals that were directly related to promoting accountable care, and/or proposed to use waivers to reduce barriers related to participation in APMs. **Exhibit 4** includes the results of an analysis of relevant value-based care components of the 18 previously submitted proposals.

Exhibit 4. PTAC Proposals that Met Criterion 1 ("Scope") and Criterion 2 ("Quality and Cost")

Proposal	Clinical Focus	Value-Based Care Components
American Academy of Family Physicians (AAFP) *(Provider association and specialty society)* Advanced Primary Care: A Foundational Alternative Payment Model (APC-APM) for Delivering Patient-Centered, Longitudinal, and Coordinated Care Recommended for limited-scale testing, 12/19/2017	Primary Care	**Overall Model Design Features**: APC-APM builds on concepts tested through CPC and CPC+ models. Primary care medical homes work closely with patients' other health care providers to coordinate and manage care transitions, referrals, and information exchange. **Specialty Integration Approaches**: N/A **Use of Waivers**: N/A **Financial Methodology**: Capitated PBPM with shared risk options for accountability. **How Payment is Adjusted for Performance**: Participants assume performance risk. APMs that meet or exceed agreed-upon benchmarks retain incentive payment. Failure to meet benchmarks would involve repaying all or part of the incentive payment. **Approaches to Incorporate Multi-Payer Alignment:** APC-APM aligns with the multi-payer CPC and CPC+ models, which promote longitudinal, comprehensive, and coordinated care with primary care teams.
American College of Emergency Physicians (ACEP) (*Provider association/specialty society*) Acute Unscheduled Care Model (AUCM): Enhancing Appropriate Admissions Recommended for implementation, 09/06/2018	Emergency medicine	**Overall Model Design Features**: Several elements are adapted from the CJR and the BPCI Advanced Models. **Specialty Integration Approaches**: N/A **Use of Waivers**: Telehealth: Allows emergency physicians to provide telehealth services in the beneficiary's residence and to bill one of the in-home visits as telehealth. Post-discharge home visit: Licensed clinical staff may provide home visits under the general supervision of an emergency physician. Transitional care management: Authorizes emergency physicians to bill for a transitional care management code, utilizing Current Procedural Terminology (CPT) codes (99494 and 99496) or the ED-specific acute care transition codes. **Financial Methodology**: Bundled payment methodology with retrospective reconciliation. **How Payment is Adjusted for Performance**: A composite quality score, including post-ED event rates and patient safety measures, determines whether participants are eligible for a reconciliation payment or if repayment to Medicare is warranted. **Approaches to Incorporate Multi-Payer Alignment:** N/A

Proposal	Clinical Focus	Value-Based Care Components
American College of Physicians-National Committee for Quality Assurance (ACP-NCQA) *(Provider association and specialty society/other)* The "Medical Neighborhood" Advanced Alternative Payment Model (AAPM) (Revised Version) Recommended for testing to inform payment model development, 09/15/2020	Improved coordination in primary and specialty care practices	**Overall Model Design Features**: The model builds on the CPC+, Patient-Centered Medical Homes (PCMHs), and Patient-Centered Specialty Practice (PCSP) concepts. **Specialty Integration Approaches**: Pre-consultations to ensure that the specialist has all the necessary supporting documentation and that scheduling an appointment is appropriate in a patient's treatment plan. **Use of Waivers**: Telehealth: Removes the requirements for Medicare site-of-service and geographic limitations for telehealth services. 3-day SNF: This policy exempts participants from requiring patients to have at least a 3-day hospital inpatient stay to be eligible for SNF coverage. Shared Savings: Allows for participants to share savings based on performance. Stark and Anti-kickback Fraud and Abuse: Permits health care providers to engage in specific value-based compensation agreements. Pre-participation: Protects groups when in the process of building an Advanced APM without a formal contract. **Financial Methodology**: Participants receive a monthly PBPM care coordination fee and a retrospective positive or negative payment adjustment. Track 1 includes fee-for-service payments, while Track 2 has a reduced fee-for-service payment and a comprehensive specialty care payment (CSCP). **How Payment is Adjusted for Performance**: Performance-based payment adjustment is based on spending relative to a financial benchmark, adjusted for performance on quality and utilization metrics. **Approaches to Incorporate Multi-Payer Alignment:** Intended to align payment criteria and incentives across payers.
The American College of Surgeons (ACS) *(Provider association/specialty society)* The ACS–Brandeis Advanced Alternative Payment Model Recommended for limited-scale testing, 4/11/2017	Cross-clinical focus with sets of procedural episodes of care	**Overall Model Design Features**: Focused on procedural episodes, leveraging the Episode Grouper for Medicare (EGM) software developed by CMS and Brandeis University. The model is based on shared accountability, integration, and care coordination as fundamental building blocks. **Specialty Integration Approaches**: The EGM automatically identifies clinicians participating in patient care during a defined episode of care. **Use of Waivers**: Waivers permitting financial incentives to encourage beneficiaries to accept referrals. **Financial Methodology**: Retrospective payment that compares episode target prices to the actual cost of the care provided. **How Payment is Adjusted for Performance**: Performance (e.g., unacceptable, acceptable, good, excellent) determines the shared savings retained by the APM entity or the amount to repay CMS for losses. **Approaches to Incorporate Multi-Payer Alignment:** The model creates a "bundle of bundles" and clusters episodes of care to facilitate business efficiencies in a multi-payer environment.

Proposal	Clinical Focus	Value-Based Care Components
Avera Health (Avera Health) (*Regional/local multispecialty practice or health system*) Intensive Care Management in Skilled Nursing Facility Alternative Payment Model (ICM SNF APM) Recommended for implementation, 3/27/2018	Geriatric primary care for residents in long-term care	**Overall Model Design Features**: Provides access to a geriatrician-led care team through telemedicine, provides geriatric care management and management of care transitions, and mentors and trains long-term care staff. **Specialty Integration Approaches**: N/A **Use of Waivers**: N/A **Financial Methodology**: One-time payment for new admission care and a PBPM payment for post-admission care. Two payment method options are proposed for the model: 1) a *performance-based payment* adjusted on quality performance; and 2) a *shared savings model* with an annual financial reconciliation. **How Payment is Adjusted for Performance**: In the *performance-based payment* option, payments are adjusted positively or negatively by the ability to meet performance criteria. **Approaches to Incorporate Multi-Payer Alignment**: N/A
Coalition to Transform Advanced Care (C-TAC) (*Coalition*) Advanced Care Model (ACM) Service Delivery and Advanced Alternative Payment Model Recommended for limited-scale testing, 3/26/2018	Advanced illness, palliative care, end-of-life care	**Overall Model Design Features**: An interdisciplinary care team implements the ACM care delivery services. **Specialty Integration Approaches**: Comprehensive care coordination is achieved through interdisciplinary care teams. **Use of Waivers**: Consideration of waivers granted in the NGACO and OCM models (e.g., telehealth expansion waiver; SNF 3-day rule waiver; post-discharge and care management home visit waivers; participation waiver; shared savings distribution waiver; waiver for patient incentives). **Financial Methodology**: A non-tiered PMPM payment with downside risk for TCOC and an upside bonus for quality, subject to maximum payment and loss amounts. **How Payment is Adjusted for Performance**: pay-for-quality structure, where participants are eligible for a quality-based bonus funded by shared savings and determined by performance measure performance. **Approaches to Incorporate Multi-Payer Alignment**: N/A
Hackensack Meridian Health and Cota, Inc. (HMH/Cota) *(Regional/ local multispecialty practice or health system; Device/ technology company)* Oncology Bundled Payment Program Using CNA-Guided Care Recommended for limited-scale testing, 9/8/2017	Oncology	**Overall Model Design Features**: This is an oncology bundled payment model in which care choices are modulated by the prior outcomes of similar patients from real-world data. This process is called Cota Nodal Address (CNA) guided care. **Specialty Integration Approaches**: N/A **Use of Waivers**: N/A **Financial Methodology**: Prospective payment is provided to HMH for patients participating in the model. HMH bears the risk of bundled payments and distributes payments to physicians. **How Payment is Adjusted for Performance**: Compensation is, in part, incentive-based and determined by the achievement of clinical quality and patient satisfaction outcomes. **Approaches to Incorporate Multi-Payer Alignment**: N/A

Proposal	Clinical Focus	Value-Based Care Components
Johns Hopkins School of Nursing and the Stanford Clinical Excellence Research Center (Hopkins/Stanford) *(Academic institution)* CAPABLE Provider Focused Model Recommended for testing as specified in PTAC comments, 9/6/19	Chronic conditions and functional limitations	**Overall Model Design Features**: A time-limited intervention performed by an interdisciplinary team to target specific functional goals, perform limited home repairs and modifications, and address common geriatric concerns. **Specialty Integration Approaches**: The intervention uses an integrated team of providers. **Use of Waivers**: N/A **Financial Methodology:** Partial bundled payment with partial upside, moving toward a fully capitated model of care. **How Payment is Adjusted for Performance**: A bonus for meeting quality metrics would be awarded. **Approaches to Incorporate Multi-Payer Alignment**: N/A
Illinois Gastroenterology Group and SonarMD, LLC (IGG/SonarMD) *(Regional/local single specialty practice; Device/technology company)* Project Sonar Recommended for limited-scale testing, 4/10/2017	Chronic disease (Crohn's disease)	**Overall Model Design Features**: The model integrates evidence-based medicine with proactive patient engagement. It allows physicians to participate in chronic disease management that is not triggered by a surgical procedure or on an inpatient or outpatient basis. **Specialty Integration Approaches**: The model targets specialists in managing chronic disease. **Use of Waivers**: N/A **Financial Methodology**: Add-on PBPM payment with two-sided risk, plus a payment to support remote monitoring. **How Payment is Adjusted for Performance**: Payments would be adjusted based on quality and financial performance. **Approaches to Incorporate Multi-Payer Alignment**: N/A
Innovative Oncology Business Solutions, Inc. (IOBS) *(For-profit corporation)* Making Accountable Sustainable Oncology Networks (MASON) Referred for further development and Implementation, 12/10/2018	Oncology	**Overall Model Design Features**: Builds off the Community Oncology Medical Home (COME HOME) CMMI project. **Specialty Integration Approaches**: N/A **Use of Waivers**: N/A **Financial Methodology**: Determined by the oncology payment category (OPC), consisting of FFS payments for physician visits, imaging, lab, radiation therapy, surgery; infusion with a facility fee; ambulatory payment classifications (APC) for hospital outpatient care; diagnosis-related groups (DRGs) for inpatient care; and the patient-centered oncology payment (PCOP) for medical home infrastructure. **How Payment is Adjusted for Performance**: Two percent of the OPC, which includes all expenses related to cancer care except drugs, is reserved for a quality pool. If quality measures are not met, the two percent is not rewarded. **Approaches to Incorporate Multi-Payer Alignment**: N/A

Proposal	Clinical Focus	Value-Based Care Components
Large Urology Group Practice Association (LUGPA) *(Provider association and specialty society)* LUGPA Advanced Payment Model for Initial Therapy of Newly Diagnosed Patients with Organ Confined Prostate Cancer Not recommended, 2/28/18	Prostate cancer	**Overall Model Design Features**: This model creates episode-based payments for low-risk prostate cancer patients appropriate for active surveillance (AS) instead of active intervention (AI). **Specialty Integration Approaches**: Urologists and other coordinating physicians at risk for a beneficiary's TCOC over 12 months are incentivized to collaborate with physicians across the continuum of care, including specialists, therapists, and facility-based providers. **Use of Waivers**: Stark law waiver to permit compensation for increased utilization of AS or individual performance on quality measures. **Financial Methodology**: Add on PBPM payment with shared risk. **How Payment is Adjusted for Performance**: Participants are eligible for a performance-based payment if quality thresholds are met to enhance the utilization of AS. **Approaches to Incorporate Multi-Payer Alignment**: N/A
Icahn School of Medicine at Mount Sinai (Mount Sinai) (*Academic institution*) "HaH-Plus" (Hospital at Home-Plus): Provider-Focused Payment Model Recommended for implementation, 9/17/2017	Inpatient services in the home setting	**Overall Model Design Features**: Multidisciplinary care around an acute care event to reduce complications and readmissions. **Specialty Integration Approaches**: N/A **Use of Waivers**: Homebound requirement for HaH participants during the acute phase of HaH care (but would remain for post-acute services) and a waiver of the OASIS assessment requirement at the start and the conclusion of the acute phase of HaH care. **Financial Methodology**: Bundle payment covering the acute episode and an additional 30 days of transition services. Two components are in the payment model: 1) a new DRG-like HaH-Plus payment to substitute for the acute inpatient payment to the hospital and attending physician, and 2) the potential for a performance-based payment linked to the total Medicare spend for the entire HaH-Plus episode and the APM performance on quality metrics. **How Payment is Adjusted for Performance**: The APM entity's performance on quality metrics influences payment. **Approaches to Incorporate Multi-Payer Alignment**: Submitters stated that MA and Medicaid managed care plans expressed interest in the HAH model. This model was also implemented at the VA.
New York City Department of Health and Mental Hygiene (NYC DOHMH) *(Public health department)* Multi-provider, bundled episode of care payment model for treatment of chronic hepatitis C virus (HCV) using care coordination by employed physicians in hospital outpatient clinics Not recommended, 12/18/2018	Hepatitis C virus (HCV)	**Overall Model Design Features**: The Project INSPIRE Model proposes integrated medical, behavioral, and social services for patients with HCV. **Specialty Integration Approaches**: The model supports a wide range of physicians through tele-mentoring. **Use of Waivers:** N/A **Financial Methodology**: Bundled payment with the opportunity for shared savings. **How Payment is Adjusted for Performance**: Additional shared savings are awarded for being a "high-performing facility" based on their sustained virological response (SVR) score. **Approaches to Incorporate Multi-Payer Alignment**: N/A

Proposal	Clinical Focus	Value-Based Care Components
Pulmonary Medicine, Infectious Disease and Critical Care Consultants Medical Group (PMA) (*Regional/local single specialty practice*) The COPD and Asthma Monitoring Project Not Recommended, 4/11/2017	Pulmonology, COPD, and asthma	**Overall Model Design Features**: Remote, interactive monitoring mode targets high-risk patients with COPD and other chronic lung conditions. **Specialty Integration Approaches**: The CAMP program allows remote specialists to initiate therapies and document their actions. **Use of Waivers**: Stark law waiver for a safe harbor designation; pharmaceutical and devise manufacturer waivers would be permitted to allow beneficiaries COPD and asthma controller agents and devices without cost; no copayments would be required. **Financial Methodology**: Bundled episode-based payment replacing FFS with shared risk. **How Payment is Adjusted for Performance**: N/A **Approaches to Incorporate Multi-Payer Alignment**: N/A
Personalized Recovery Care (PRC) (*Regional/local single specialty practice*) Home Hospitalization: An Alternative Payment Model for Delivering Acute Care in the Home Recommended for implementation, 3/26/2018	Inpatient services in the home setting or skilled nursing facility	**Overall Model Design Features**: This is a home hospitalization care model that proposes to provide inpatient hospitalization-level care and personalized recovery care (PRC) at home or a skilled nursing facility for patients with certain conditions through an episodic payment arrangement. **Specialty Integration Approaches**: The PRC model is intended for multi-specialty practices. **Use of Waivers**: 3-day SNF: This policy exempts participants from requiring patients to have at least a 3-day hospital inpatient stay to be eligible for SNF coverage. **Financial Methodology**: Bundled episode-based payment not tied to an anchor admission, replacing FFS with shared risk. Bundled payment has two components: 1) risk payment for delivering care compared to the targeted cost of care and 2) a per-episode payment made for care provided instead of an acute care hospitalization. **How Payment is Adjusted for Performance**: A portion of physician compensation is tied to quality metrics and outcomes. **Approaches to Incorporate Multi-Payer Alignment**: PRC is currently available in commercial and MA plans.
Renal Physicians Association (RPA) (*Provider association and specialty society*) Incident ESRD Clinical Episode Payment Model Recommended for implementation, 12/18/2017	End-stage renal disease (ESRD)	**Overall Model Design Features**: Condition-specific, episode-of-care payment model for ESRD patients during the first six months of dialysis therapy that promotes coordination, patient choice for treatment, CKD patient education, quality of life, and advanced care planning. **Specialty Integration Approaches**: Targets nephrologists, internal medicine, or other physicians treating ESRD patients. **Use of Waivers**: A waiver to assist patients with transportation to dialysis and vascular access services. **Financial Methodology**: Episode of care payment model with shared savings achieved over the entire 6-month episode of care. There is also a one-time bonus payment for nephrologists to facilitate a patient receiving a kidney transplant preemptively or during the episode of care. **How Payment is Adjusted for Performance**: Physicians' quality scores based on performance on patient-centered quality measures determine the percentage of overall shared savings the physician receives. The higher the quality score, the higher amount of shared savings received. **Approaches to Incorporate Multi-Payer Alignment**: Designed for Medicare but could be adapted to other payers.

Proposal	Clinical Focus	Value-Based Care Components
University of Chicago Medicine (UChicago) *(Academic Institution)* The Comprehensive Care Physician Payment Model (CCP-PM) Recommended for limited-scale testing, 9/7/2018	Frequently hospitalized patients	**Overall Model Design Features**: The model seeks to defragment care for patients at risk for hospitalization by providing a physician to provide inpatient and outpatient care. **Specialty Integration Approaches**: Encourages participation of specialists who provide primary care (e.g., gynecology). **Use of Waivers**: N/A **Financial Methodology**: Add on PBPM payment with shared risk **How Payment is Adjusted for Performance**: Providers will continue to be incentivized or penalized for quality outcome measures based on their APM or MIPS participation. **Approaches to Incorporate Multi-Payer Alignment**: The model can be adapted across other payers, such as Medicaid and private payers.
The University of New Mexico Health Sciences Center (UNMHSC) (*Academic institution*) ACCESS Telemedicine: An Alternative Healthcare Delivery Model for Rural Emergencies Recommended for implementation, 9/16/2019	Cerebral emergency care; telemedicine	**Overall Model Design Features**: Rural EDs can consult neurologists via teleconsultation and assess patients' condition when they present at the hospital ED. The model aims to reduce costs in hospital transfers and ambulatory medicine. **Specialty Integration Approaches**: Neurological and neurosurgical consultations from specialists via telehealth. **Use of Waivers**: N/A **Financial Methodology**: Additional one-time payment without shared risk **How Payment is Adjusted for Performance**: Performance is monitored but does not impact payment. **Approaches to Incorporate Multi-Payer Alignment**: CMS and commercial payers can use the creation of a new bundled code for telemedicine consultations.

Appendix B includes additional information about the relevant components of the 18 proposals that met both Criterion 1 ("Scope") and Criterion 2 ("Quality and Cost").

IX. Areas Where Additional Information is Needed

This section includes a summary of some areas for consideration to guide future research on identifying a pathway toward maximizing participation in PB-TCOC models. **Appendix E** further describes areas for future exploration and research.

Organizational Taxonomies and Pathways

Additional research is needed to develop new or refine existing taxonomies and to identify specific pathways that would be appropriate to maximize participation of different types of organizations in PB-TCOC models. While some research has been conducted in this area, more research is needed to determine organizational taxonomies and pathways most suitable to maximizing participation in PB-TCOC models.

ACO Performance Benchmarks

Additional work is needed to improve ACO performance benchmark methods to incentivize continued participation in models among different types of organizations. CMS has generally used two empirical

approaches to set benchmarks for ACOs: regional benchmarks and historical benchmarks. CMS has moved toward using a blended approach to benchmarking, where an ACO's historical spending is combined with the average spending in its region. Alternatively, researchers recommend using an administrative benchmark that decouples benchmarks from realized FFS spending growth. More research is needed to determine the best methods to incentivize PB-TCOC model participation.

Appendix A. Research Questions by Environmental Scan Section

Section	Research Questions

Section IV. Identifying Pathways for Maximizing Participation of Different Kinds of Organizations in PB-TCOC Models	• What are some of the different taxonomies that currently exist for classifying different kinds of health care organizations? Which of these taxonomies are potentially most useful for developing pathways to maximize participation in PB-TCOC models?
	• What are some specific potential pathways toward maximizing participation of different kinds of organizations in PB-TCOC models?
	  ○ What kinds of organizational characteristics are most important for determining potential pathways toward maximizing their participation in PB-TCOC models?
	  ○ What are specific payment pathways that would be appropriate for reducing barriers and maximizing participation of these different types of organizations in PB-TCOC models, such as:
	  ▪ Benchmarks
	  ▪ Upside/Downside risk
	  ▪ Performance measures

Section V. Assessment of and Approaches to Reducing Organization-Level Barriers	• What are the barriers that CFOs/clinical leaders may face when choosing to participate/not participate in PB-TCOC models?
	  ○ What are current best practices to eliminate or reduce the barriers to participation?
	  ○ How might these approaches vary depending on the type of organization that is participating?
	• What are the most important organization-level barriers affecting participation in PB-TCOC models? How do these organization-level barriers vary depending on the type of organization?
	• What are the best approaches/current evidence-based practices for addressing organization-level barriers affecting participation in PB-TCOC models? How might these approaches vary depending on the type of organization (e.g., large IDS, hospital, independent practice) that is participating?
	  ○ Improving ACO performance benchmarks
	  ○ Workforce challenges related to supporting value-based care
	  ○ Other organization-level barriers
	• What methods/best approaches are currently being used to improve the predictability of ACO benchmarks and to effectively address the ratchet effect?
	  ○ Do any methods currently effectively address the ratcheting effect?
	  ○ How might these approaches vary depending on the type of organization that is participating?
	  ○ How can current approaches be tweaked to more effectively address the ratcheting effect?
	• What types of conveners currently exist in the value-based care landscape, and what evidence has shown that using conveners increases participation?
	  ○ Are certain types of conveners more conducive to improving an organization/increasing participation than other types of conveners?

Section	Research Questions
	○ Has evidence shown that organizations that use conveners have resulted in an increase in certain types of providers? What types of providers? ○ What are the advantages and disadvantages to using conveners? • What are current approaches used to incentivize clinical integration? ○ What are examples of PB-TCOC models that are using value-based payment incentives to encourage clinical integration? ○ How might these approaches vary depending on the type of organization that is participating? • What are examples of current models that have implemented a multi-payer strategy? ○ What are the goals of multi-payer alignment? ○ What are specific areas where multi-payer alignment can have the greatest impact on increasing participation in PB-TCOC models?
Section VI. Approaches to Support Primary and Specialty Care Transformation	• What are current evidence-based approaches to attributing patients in PB-TCOC models? ○ What are examples of different attribution methods in specific value-based care or PB-TCOC models? ○ Which methods were used for certain settings? Which methods were most effective? ○ Which methods were used for certain types of conditions or providers (such as primary care versus specialist)? Which methods were most effective? • What are current evidence-based approaches for multidisciplinary team-based attribution, such as: ○ Attribution to a primary care provider and one or more specialists who are treating the same patient ○ Attribution to a multidisciplinary team of providers who are accountable for the quality and TCOC of a patient's care • What are evidence-based practices to incentivize primary and specialty providers to integrate care/provide team-based care? How might these approaches vary depending on the type of organization that is participating? ○ How do incentives vary or differ between primary and specialty care providers? ○ What are examples of models that have effectively aligned specialty payment mechanisms? ○ What are examples of models that have aligned performance measures across primary and specialty care? • What are current methods used to share data between primary care and specialty providers in less integrated settings? • What are specific options for designing procedure-based and longitudinal nested episodes in PB-TCOC models? • What are examples of current models that have effectively integrated specialty care (e.g., through procedure-based and longitudinal nested episodes, other approaches)? How might the most effective approaches vary depending on the type of organization that is participating?

Section	Research Questions

Section VII. Assessing Factors that Influence the Ability of PB-TCOC Models to Be Competitive	• What are the factors that may influence beneficiary health behaviors?
	• What are the specific market factors that may affect participation in PB-TCOC models in different geographic areas?
	  ○ Effects of MA penetration
	  ○ Regional socioeconomic conditions/Area Deprivation Index (ADI)
	  ○ Consolidation of market
	• What waivers are currently being used in PB-TCOC models?
	  ○ What has been the impact of these waivers?
	  ○ How can these waivers be improved?
	  ○ What are other program flexibilities currently needed in the value-based care environment? How might these approaches vary depending on the type of organization that is participating?

Appendix B. Summary of Relevant Components for Selected PTAC Proposals Reviewed by PTAC

Overview of Methodology Used to Review the Proposals

The following information was reviewed for each submitter's proposal, where available: proposal and related documents, PRT Report, and Report to the Secretary (RTS). Information found in these materials was used to summarize the proposals' main design features, including organization types, specialty integration approaches, use of waivers, financial methodology, how payment is adjusted for performance, attribution, risk adjustment, benchmarking, and approaches to incorporate multi-payer alignment.

The goal of the "Scope" criterion is to ensure that each proposed model will "aim to either directly address an issue in payment policy that broadens and expands the CMS APM portfolio or include APM Entities whose opportunities to participate in APMs have been limited" (Criterion 1). The goal of the "Quality and Cost" criterion is to ensure that each proposed model will "improve health care quality at no additional cost, maintain health care quality while decreasing cost, or both improve health care quality and decrease cost" (Criterion 2).

Among the 35 proposals that were submitted to PTAC between 2016 and 2020, including 28 proposals that PTAC has deliberated and voted on during public meetings, nearly all of the proposals address the potential impact on scope (specifically opportunities for APM participation) and quality and cost, to some degree. Eighteen of these proposals were found to meet both Criterion 1 ("Scope") and Criterion 2 ("Quality and Cost"), including several proposals that were directly related to promoting accountable care, and/or proposed to use waivers to reduce barriers related to participation in APMs.

Findings from the review of these 18 proposals are summarized in the following table.

Exhibit B1. Key Value-Based Care and Technical Components of Selected PTAC PFPM Proposals

Model Name	Clinical Focus, Providers, Setting, Patient Population	Value-Based Care Components	Technical Components
American Academy of Family Physicians (AAFP) *(Provider association and specialty society)* Advanced Primary Care: A Foundational Alternative Payment Model (APC-APM) for Delivering Patient-Centered, Longitudinal, and Coordinated Care Recommended for limited-scale testing, 12/19/2017	**Clinical Focus**: Primary Care **Providers**: Physicians with a primary specialty in family medicine, general practice, geriatric medicine, pediatric medicine, or internal medicine **Setting**: Primary care practices **Patient Population**: Medicare FFS beneficiaries	**Overall Model Design Features**: APC-APM builds on concepts tested through CPC and CPC+ models. Primary care medical homes work closely with patients' other healthcare providers to coordinate and manage care transitions, referrals, and information exchange. **Organization Types**: Primary care practices **Specialty Integration Approaches**: N/A **Use of Waivers**: N/A	**Financial Methodology**: Capitated PBPM with shared risk options for accountability. **How Payment is Adjusted for Performance**: Participants assume performance risk. APMs that meet or exceed agreed-upon benchmarks retain incentive payment. Failure to meet benchmarks would involve repaying all or part of the incentive payment. **Attribution**: Voluntary; prospective, claims-based **Risk Adjustment**: The two tracks for prospective, primary care global payment would be risk stratified based on patient complexity (e.g., comorbidities). **Benchmarking**: Based on historical performance and reassessed after two or more years. Success is measured by assessments of quality and cost-effective care relative to agreed-upon benchmarks. **Approaches to Incorporate Multi-Payer Alignment**: APC-APM aligns with the multi-payer CPC and CPC+ models, which promote longitudinal, comprehensive, and coordinated care with primary care teams.

Model Name	Clinical Focus, Providers, Setting, Patient Population	Value-Based Care Components	Technical Components
American College of Emergency Physicians (ACEP) (*Provider association/specialty society*) Acute Unscheduled Care Model (AUCM): Enhancing Appropriate Admissions Recommended for implementation, 09/06/2018	**Clinical Focus**: Emergency medicine **Providers**: Emergency medicine physicians and advanced practice professionals **Setting**: Hospital emergency departments (EDs) **Patient Population**: Medicare FFS beneficiaries presenting in the ED	**Overall Model Design Features**: Several elements are adapted from the CJR and the BPCI Advanced Models. **Organization Types**: Hospital emergency departments **Specialty Integration Approaches**: N/A **Use of Waivers**: Telehealth: Allows emergency physicians to provide telehealth services in the beneficiary's residence and to bill one of the in-home visits as telehealth. Post-discharge home visit: Licensed clinical staff may provide home visits under the general supervision of an emergency physician. Transitional care management: Authorizes emergency physicians to bill for a transitional care management code, utilizing Current Procedural Terminology (CPT) codes (99494 and 99496) or the ED-specific acute care transition codes.	**Financial Methodology**: Bundled payment methodology with retrospective reconciliation. **How Payment is Adjusted for Performance**: A composite quality score, including post-ED event rates and patient safety measures, determines whether participants are eligible for a reconciliation payment or if repayment to Medicare is warranted. **Attribution**: Attribution is assigned to an ED professional after 1) a qualifying visit results in a discharge home; and 2) observational services were provided in the ED. **Risk Adjustment**: Two models, the CMS HCC methodology and custom-risk models built by MPA Healthcare Solutions, would be utilized in predicting admission rates. **Benchmarking**: Participants are benchmarked against their historical performance. **Approaches to Incorporate Multi-Payer Alignment**: N/A

Model Name	Clinical Focus, Providers, Setting, Patient Population	Value-Based Care Components	Technical Components
American College of Physicians-National Committee for Quality Assurance (ACP-NCQA) *(Provider association and specialty society/other)* The "Medical Neighborhood" Advanced Alternative Payment Model (AAPM) (Revised Version) Recommended for testing to inform payment model development, 09/15/2020	**Clinical Focus**: Improved coordination in primary and specialty care practices **Providers**: Primary and specialty care practitioners **Setting**: Primary and specialty care practices **Patient Population**: Medicare FFS beneficiaries with multiple chronic conditions	**Overall Model Design Features**: The model builds on the CPC+, Patient-Centered Medical Homes (PCMHs), and Patient-Centered Specialty Practice (PCSP) concepts. **Organization Types**: Not specified **Specialty Integration Approaches**: Pre-consultations to ensure that the specialist has all the necessary supporting documentation and that scheduling an appointment is appropriate in a patient's treatment plan. **Use of Waivers**: Telehealth: Removes the requirements for Medicare site-of-service and geographic limitations for telehealth services. 3-day SNF: This policy exempts participants from requiring patients to have at least a 3-day hospital inpatient stay to be eligible for SNF coverage. Shared Savings: Allows for participants to share savings based on performance. Stark and Anti-kickback Fraud and Abuse: Permits health care providers to engage in specific value-based compensation agreements. Pre-participation: Protects groups when in the process of building an Advanced APM without a formal contract.	**Financial Methodology**: Participants receive a monthly PBPM care coordination fee and a retrospective positive or negative payment adjustment. Track 1 includes fee-for-service payments, while Track 2 has a reduced fee-for-service payment and a comprehensive specialty care payment (CSCP). **How Payment is Adjusted for Performance**: Performance-based payment adjustment is based on spending relative to a financial benchmark, adjusted for performance on quality and utilization metrics. **Attribution**: Voluntary; claims-based **Risk Adjustment**: Based on HCC scoring, adjusting for additional factors that influence outcomes (e.g., social determinants of health). **Benchmarking**: Retrospectively reconciled based on the practice's historical and regional spending in equal parts. **Approaches to Incorporate Multi-Payer Alignment**: Intended to align payment criteria and incentives across payers.

Model Name	Clinical Focus, Providers, Setting, Patient Population	Value-Based Care Components	Technical Components
The American College of Surgeons (ACS) *(Provider association/specialty society)* The ACS–Brandeis Advanced Alternative Payment Model Recommended for limited-scale testing, 4/11/2017	**Clinical Focus**: Cross-clinical focus with sets of procedural episodes of care **Providers**: Single or multispecialty practices and groups of small provider practices **Setting**: Inpatient, outpatient, ambulatory **Patient Population**: Medicare FFS beneficiaries from over 100+ conditions or procedures	**Overall Model Design Features**: Focused on procedural episodes, leveraging the Episode Grouper for Medicare (EGM) software developed by CMS and Brandeis University. The model is based on shared accountability, integration, and care coordination as fundamental building blocks. **Organization Types**: Advanced APM entities **Specialty Integration Approaches**: The EGM automatically identifies clinicians participating in patient care during a defined episode of care. **Use of Waivers**: Waivers permitting financial incentives to encourage beneficiaries to accept referrals.	**Financial Methodology**: Retrospective payment that compares episode target prices to the actual cost of the care provided. **How Payment is Adjusted for Performance**: Performance (e.g., unacceptable, acceptable, good, excellent) determines the shared savings retained by the APM entity or the amount to repay CMS for losses. **Attribution**: The EGM logic assigns a level of fiscal risk to all clinicians who participate in the care of each patient for each type of episode. **Risk Adjustment**: Adjusted for each patient based on the patient's historical claims data. **Benchmarking**: Episode benchmarks are patient-specific and risk-adjusted from Medicare Parts A and B claims data. **Approaches to Incorporate Multi-Payer Alignment**: The model creates a "bundle of bundles" and clusters episodes of care to facilitate business efficiencies in a multi-payer environment.

Model Name	Clinical Focus, Providers, Setting, Patient Population	Value-Based Care Components	Technical Components
Avera Health (Avera Health) (*Regional/local multispecialty practice or health system*) Intensive Care Management in Skilled Nursing Facility Alternative Payment Model (ICM SNF APM) Recommended for implementation, 3/27/2018	**Clinical Focus**: Geriatric primary care for residents in long-term care **Providers**: Geriatric care teams that include geriatricians, PCPs, nurses, social workers, pharmacists **Setting:** Skilled nursing homes and long-term care facilities **Patient Population**: Medicare FFS beneficiaries in skilled nursing homes or long-term care facilities	**Overall Model Design Features**: Provides access to a geriatrician-led care team through telemedicine, provides geriatric care management and management of care transitions, and mentors and trains long-term care staff. **Organization Types:** Not specified **Specialty Integration Approaches**: N/A **Use of Waivers**: N/A	**Financial Methodology**: One-time payment for new admission care and a PBPM payment for post-admission care. Two payment method options are proposed for the model: 1) a *performance-based payment* adjusted on quality performance; and 2) a *shared savings model* with an annual financial reconciliation. **How Payment is Adjusted for Performance**: In the *performance-based payment* option, payments are adjusted positively or negatively by the ability to meet performance criteria. **Attribution**: N/A **Risk Adjustment**: The *performance-based payment* option does not require payments to be risk-adjusted. The *shared savings model* would use CMS HCC risk score to adjust the target bundle price. **Benchmarking**: Programs can benchmark themselves against the long-term care population. **Approaches to Incorporate Multi-Payer Alignment**: N/A

Model Name	Clinical Focus, Providers, Setting, Patient Population	Value-Based Care Components	Technical Components
Coalition to Transform Advanced Care (C-TAC) (*Coalition*) Advanced Care Model (ACM) Service Delivery and Advanced Alternative Payment Model Recommended for limited-scale testing, 3/26/2018	**Clinical Focus**: Advanced illness, palliative care, end-of-life care **Providers**: PCPs, specialists **Setting**: Hospitals, health systems, hospices, home health **Patient Population**: Medicare FFS beneficiaries with advanced illness in the last year of life	**Overall Model Design Features**: An interdisciplinary care team implements the ACM care delivery services. **Organization Types**: Advanced APM entities **Specialty Integration Approaches**: Comprehensive care coordination is achieved through interdisciplinary care teams. **Use of Waivers**: Consideration of waivers granted in the NGACO and OCM models (e.g., telehealth expansion waiver; SNF 3-day rule waiver; post-discharge and care management home visit waivers; participation waiver; shared savings distribution waiver; waiver for patient incentives).	**Financial Methodology**: A non-tiered PMPM payment with downside risk for TCOC and an upside bonus for quality, subject to maximum payment and loss amounts. **How Payment is Adjusted for Performance**: pay-for-quality structure, where participants are eligible for a quality-based bonus funded by shared savings and determined by performance measure performance. **Attribution**: N/A **Risk Adjustment**: Determined through episode-based regression analysis. **Benchmarking**: Based on risk-adjusted historical trends, adjusted at the regional level and weighted toward more recent episodes. **Approaches to Incorporate Multi-Payer Alignment**: N/A

Model Name	Clinical Focus, Providers, Setting, Patient Population	Value-Based Care Components	Technical Components
Hackensack Meridian Health and Cota, Inc. (HMH/Cota) *(Regional/ local multispecialty practice or health system; Device/ technology company)* Oncology Bundled Payment Program Using CNA-Guided Care Recommended for limited-scale testing, 9/8/2017	**Clinical Focus:** Oncology **Providers:** Clinicians with admitting privileges in the Hackensack Meridian Health (HMH) health system **Setting**: HMH health system that includes hospitals, home health, rehabilitation clinics, skilled nursing facilities, and mental health facilities **Patient Population**: Medicare patients with breast, colon, rectal, or lung cancer attributed to clinicians in the HMH health system	**Overall Model Design Features**: This is an oncology bundled payment model in which care choices are modulated by the prior outcomes of similar patients from real-world data. This process is called Cota Nodal Address (CNA) guided care. **Organization Types**: Hospitals **Specialty Integration Approaches**: N/A **Use of Waivers**: N/A	**Financial Methodology**: Prospective payment is provided to HMH for patients participating in the model. HMH bears the risk of bundled payments and distributes payments to physicians. **How Payment is Adjusted for Performance**: Compensation is, in part, incentive-based and determined by the achievement of clinical quality and patient satisfaction outcomes. **Attribution**: N/A **Risk Adjustment**: CNA will adjust for relative patient risk. **Benchmarking**: Based on data-driven classification system for cancer patient risk and treatment pathways **Approaches to Incorporate Multi-Payer Alignment**: N/A

Model Name	Clinical Focus, Providers, Setting, Patient Population	Value-Based Care Components	Technical Components
Johns Hopkins School of Nursing and the Stanford Clinical Excellence Research Center (Hopkins/Stanford) *(Academic institution)* CAPABLE Provider Focused Model Recommended for testing as specified in PTAC comments, 9/6/19	**Clinical Focus**: Chronic conditions and functional limitations **Providers**: Interdisciplinary team of an occupational therapist, registered nurses, and a handy worker **Setting**: Home and community-based settings **Patient Population**: Medicare FFS beneficiaries with at least two chronic conditions and difficulty with at least one activity of daily living	**Overall Model Design Features**: A time-limited intervention performed by an interdisciplinary team to target specific functional goals, perform limited home repairs and modifications, and address common geriatric concerns. **Organization Types**: Value-incentivized organizations **Specialty Integration Approaches**: The intervention uses an integrated team of providers. **Use of Waivers**: N/A	**Financial Methodology:** Partial bundled payment with partial upside, moving toward a fully capitated model of care. **How Payment is Adjusted for Performance**: A bonus for meeting quality metrics would be awarded. **Attribution**: N/A **Risk Adjustment**: N/A **Benchmarking**: N/A **Approaches to Incorporate Multi-Payer Alignment**: N/A

Model Name	Clinical Focus, Providers, Setting, Patient Population	Value-Based Care Components	Technical Components
Illinois Gastroenterology Group and SonarMD, LLC (IGG/SonarMD) *(Regional/local single specialty practice; Device/technology company)* Project Sonar Recommended for limited-scale testing, 4/10/2017	**Clinical Focus**: Chronic disease (Crohn's disease) **Providers**: Specialty physicians **Setting**: Outpatient settings and specialty care practices **Patient Population**: Medicare FFS beneficiaries	**Overall Model Design Features**: The model integrates evidence-based medicine with proactive patient engagement. It allows physicians to participate in chronic disease management that is not triggered by a surgical procedure or on an inpatient or outpatient basis. **Organization Types**: APM entities **Specialty Integration Approaches**: The model targets specialists in managing chronic disease. **Use of Waivers**: N/A	**Financial Methodology**: Add-on PBPM payment with two-sided risk, plus a payment to support remote monitoring. **How Payment is Adjusted for Performance**: Payments would be adjusted based on quality and financial performance. **Attribution**: N/A **Risk Adjustment**: Patient risk assessment is calculated with the American Gastroenterology Associations' risk assessment tool, and patients are placed in risk categories. **Benchmarking**: N/A **Approaches to Incorporate Multi-Payer Alignment**: N/A
Innovative Oncology Business Solutions, Inc. (IOBS) *(For-profit corporation)* Making Accountable Sustainable Oncology Networks (MASON) Referred for further development and Implementation, 12/10/2018	**Clinical Focus**: Oncology **Providers**: Oncologists, surgeons, PCPs, pathologists, radiologists **Setting**: Oncology practices **Patient Population**: Medicare FFS beneficiaries	**Overall Model Design Features**: Builds off the Community Oncology Medical Home (COME HOME) CMMI project. **Organization Types:** Not specified **Specialty Integration Approaches**: N/A **Use of Waivers**: N/A	**Financial Methodology**: Determined by the oncology payment category (OPC), consisting of FFS payments for physician visits, imaging, lab, radiation therapy, surgery; infusion with a facility fee; ambulatory payment classifications (APC) for hospital outpatient care; diagnosis-related groups (DRGs) for inpatient care; and the patient-centered oncology payment (PCOP) for medical home infrastructure. **How Payment is Adjusted for Performance**: Two percent of the OPC, which includes all expenses related to cancer care except drugs, is reserved for a quality pool. If quality measures are not met, the two percent is not rewarded. **Attribution**: N/A **Risk Adjustment**: Adjusted for comorbidities and the clinical situation of each patient. **Benchmarking**: Based on the distribution of expenditures. **Approaches to Incorporate Multi-Payer Alignment**: N/A

Model Name	Clinical Focus, Providers, Setting, Patient Population	Value-Based Care Components	Technical Components
Large Urology Group Practice Association (LUGPA) *(Provider association and specialty society)* LUGPA Advanced Payment Model for Initial Therapy of Newly Diagnosed Patients with Organ Confined Prostate Cancer Not recommended, 2/28/18	**Clinical Focus**: Prostate cancer **Providers**: Urologists and other coordinating physicians **Setting**: Urology practices **Patient Population**: Patients with low-risk, localized prostate cancer	**Overall Model Design Features**: This model creates episode-based payments for low-risk prostate cancer patients appropriate for active surveillance (AS) instead of active intervention (AI). **Organization Types**: APM entities **Specialty Integration Approaches**: Urologists and other coordinating physicians at risk for a beneficiary's TCOC over 12 months are incentivized to collaborate with physicians across the continuum of care, including specialists, therapists, and facility-based providers. **Use of Waivers**: Stark law waiver to permit compensation for increased utilization of AS or individual performance on quality measures.	**Financial Methodology**: Add on PBPM payment with shared risk. **How Payment is Adjusted for Performance**: Participants are eligible for a performance-based payment if quality thresholds are met to enhance the utilization of AS. **Attribution**: After a beneficiary's initial episode of care is attributed to a practice, any Medicare claim in the subsequent 12 months would be assigned to that episode. **Risk Adjustment**: Initial episodes incorporate the CMS-HCC scores of beneficiaries. **Benchmarking**: Defined based on a practice's historical clinical decision-making. **Approaches to Incorporate Multi-Payer Alignment**: N/A
Icahn School of Medicine at Mount Sinai (Mount Sinai) (*Academic institution*) "HaH-Plus" (Hospital at Home-Plus): Provider-Focused Payment Model Recommended for implementation, 9/17/2017	**Clinical Focus**: Inpatient services in the home setting **Providers**: Physicians and HaH-Plus providers, including nurse practitioners, registered nurses, social workers, physical, occupational, and speech therapists **Setting**: Patient homes **Patient Population**: Medicare FFS beneficiaries that have one of the 44 acute conditions	**Overall Model Design Features**: Multidisciplinary care around an acute care event to reduce complications and readmissions. **Organization Types**: Advanced APM PFPM **Specialty Integration Approaches**: N/A **Use of Waivers**: Homebound requirement for HaH participants during the acute phase of HaH care (but would remain for post-acute services) and a waiver of the OASIS assessment requirement at the start and the conclusion of the acute phase of HaH care.	**Financial Methodology**: Bundle payment covering the acute episode and an additional 30 days of transition services. Two components are in the payment model: 1) a new DRG-like HaH-Plus payment to substitute for the acute inpatient payment to the hospital and attending physician, and 2) the potential for a performance-based payment linked to the total Medicare spend for the entire HaH-Plus episode and the APM performance on quality metrics. **How Payment is Adjusted for Performance**: The APM entity's performance on quality metrics influences payment. **Attribution**: N/A **Risk Adjustment**: A comparison group admitted to non-participating hospitals in the same region during the same calendar quarter will be used to obtain a spending target. **Benchmarking**: Calculated using CMS claims data for nationwide episodes that are candidates for HAH-Plus. **Approaches to Incorporate Multi-Payer Alignment**: Submitters stated that MA and Medicaid managed care plans expressed interest in the HAH model. This model was also implemented at the VA.

Model Name	Clinical Focus, Providers, Setting, Patient Population	Value-Based Care Components	Technical Components
New York City Department of Health and Mental Hygiene (NYC DOHMH) *(Public health department)* Multi-provider, bundled episode of care payment model for treatment of chronic hepatitis C virus (HCV) using care coordination by employed physicians in hospital outpatient clinics Not recommended, 12/18/2018	**Clinical Focus**: Hepatitis C virus (HCV) **Providers**: Primary care and internal medicine physicians (infectious disease specialists, gastroenterologists) **Setting**: Hospital-based outpatient clinics **Patient Population**: Patients with HCV	**Overall Model Design Features**: The Project INSPIRE Model proposes integrated medical, behavioral, and social services for patients with HCV. **Organization Types**: APM entities **Specialty Integration Approaches**: The model supports a wide range of physicians through tele-mentoring. **Use of Waivers:** N/A	**Financial Methodology**: Bundled payment with the opportunity for shared savings. **How Payment is Adjusted for Performance**: Additional shared savings are awarded for being a "high-performing facility" based on their sustained virological response (SVR) score. **Attribution**: N/A **Risk Adjustment**: A facility-specific sustained SVR will be calculated, adjusting for case-mix and patient-level influences (e.g., disease stage, age). **Benchmarking**: Representative of all payment model participants, such as the average SVR for all participating facilities. **Approaches to Incorporate Multi-Payer Alignment**: N/A
Pulmonary Medicine, Infectious Disease and Critical Care Consultants Medical Group (PMA) (*Regional/local single specialty practice*) The COPD and Asthma Monitoring Project Not Recommended, 4/11/2017	**Clinical Focus**: Pulmonology, COPD, and asthma **Providers**: Pulmonary physicians **Setting**: Patient home, outpatient **Patient Population**: Medicare patients with COPD and asthma	**Overall Model Design Features**: Remote, interactive monitoring mode targets high-risk patients with COPD and other chronic lung conditions. **Organization Types**: Not specified **Specialty Integration Approaches**: The CAMP program allows remote specialists to initiate therapies and document their actions. **Use of Waivers**: Stark law waiver for a safe harbor designation; pharmaceutical and device manufacturer waivers would be permitted to allow beneficiaries COPD and asthma controller agents and devices without cost; no copayments would be required.	**Financial Methodology**: Bundled episode-based payment replacing FFS with shared risk. **How Payment is Adjusted for Performance**: N/A **Attribution**: Assigned by a CAMP-based system that matches a patient to a common ID through the master patient index or creates a new patient ID and captures the attribution relationship. **Risk Adjustment**: Patients are grouped into three risk categories (low, medium, high) based on their disease control. **Benchmarking**: A risk-adjusted, national chronic condition-based benchmark. **Approaches to Incorporate Multi-Payer Alignment**: N/A

Model Name	Clinical Focus, Providers, Setting, Patient Population	Value-Based Care Components	Technical Components
Personalized Recovery Care (PRC) (*Regional/local single specialty practice*) Home Hospitalization: An Alternative Payment Model for Delivering Acute Care in the Home Recommended for implementation, 3/26/2018	**Clinical Focus**: Inpatient services in the home setting or skilled nursing facility **Providers**: Admitting physicians at facilities receiving PRC payments; on-call physicians; recovery care coordinators **Setting**: Patient home or skilled nursing facility **Patient Population**: Commercial and Medicare Advantage patients with one of 150 acute conditions	**Overall Model Design Features**: This is a home hospitalization care model that proposes to provide inpatient hospitalization-level care and personalized recovery care (PRC) at home or a skilled nursing facility for patients with certain conditions through an episodic payment arrangement. **Organization Types**: APM entities **Specialty Integration Approaches**: The PRC model is intended for multi-specialty practices. **Use of Waivers**: 3-day SNF: This policy exempts participants from requiring patients to have at least a 3-day hospital inpatient stay to be eligible for SNF coverage.	**Financial Methodology**: Bundled episode-based payment not tied to an anchor admission, replacing FFS with shared risk. Bundled payment has two components: 1) risk payment for delivering care compared to the targeted cost of care and 2) a per-episode payment made for care provided instead of an acute care hospitalization. **How Payment is Adjusted for Performance**: A portion of physician compensation is tied to quality metrics and outcomes. **Attribution**: Patient is identified upon admission to home hospitalization using claims data. **Risk Adjustment**: Based on clinical characteristics. **Benchmarking**: Derived from the historical 30-day episodic cost of related care with a 3% discount applied. **Approaches to Incorporate Multi-Payer Alignment**: PRC is currently available in commercial and MA plans.

Model Name	Clinical Focus, Providers, Setting, Patient Population	Value-Based Care Components	Technical Components
Renal Physicians Association (RPA) (*Provider association and specialty society*) Incident ESRD Clinical Episode Payment Model Recommended for implementation, 12/18/2017	**Clinical Focus**: End-stage renal disease (ESRD) **Providers**: Nephrologists, PCPs **Setting**: Dialysis centers **Patient Population**: Medicare patients with ESRD	**Overall Model Design Features**: Condition-specific, episode-of-care payment model for ESRD patients during the first six months of dialysis therapy that promotes coordination, patient choice for treatment, CKD patient education, quality of life, and advanced care planning. **Organization Types**: Not specified **Specialty Integration Approaches**: Targets nephrologists, internal medicine, or other physicians treating ESRD patients. **Use of Waivers**: A waiver to assist patients with transportation to dialysis and vascular access services.	**Financial Methodology**: Episode of care payment model with shared savings achieved over the entire 6-month episode of care. There is also a one-time bonus payment for nephrologists to facilitate a patient receiving a kidney transplant preemptively or during the episode of care. **How Payment is Adjusted for Performance**: Physicians' quality scores based on performance on patient-centered quality measures determine the percentage of overall shared savings the physician receives. The higher the quality score, the higher amount of shared savings received. **Attribution**: The date of the first dialysis treatment entered by a nephrologist will determine the attribution of the incident dialysis patient. **Risk Adjustment**: An individual Medicare beneficiary's most recent HCC risk score is normalized such that an average-risk patient would have a score of 1.0. A value >1.0 would indicate co-morbidities associated with higher care costs, whereas a value <1.0 indicates the converse. **Benchmarking**: Regional cost benchmarks will be set for the first six months of dialysis care for patients with ESRD. **Approaches to Incorporate Multi-Payer Alignment**: Designed for Medicare but could be adapted to other payers.

Model Name	Clinical Focus, Providers, Setting, Patient Population	Value-Based Care Components	Technical Components
University of Chicago Medicine (UChicago) *(Academic Institution)* The Comprehensive Care Physician Payment Model (CCP-PM) Recommended for limited-scale testing, 9/7/2018	**Clinical Focus**: Frequently hospitalized patients **Providers**: Inpatient and outpatient providers **Setting**: Home care and rehabilitation **Patient Population**: Medicare beneficiaries who are at high risk for hospitalization	**Overall Model Design Features**: The model seeks to defragment care for patients at risk for hospitalization by providing a physician to provide inpatient and outpatient care. **Organization Types**: Not specified **Specialty Integration Approaches**: Encourages participation of specialists who provide primary care (e.g., gynecology). **Use of Waivers**: N/A	**Financial Methodology**: Add on PBPM payment with shared risk **How Payment is Adjusted for Performance**: Providers will continue to be incentivized or penalized for quality outcome measures based on their APM or MIPS participation. **Attribution**: N/A **Risk Adjustment**: N/A; the submitter noted that the high-risk population the CCP-PM targets poses significant challenges to risk adjustment. **Benchmarking**: Benchmarks will be used in the model, but the method to establish them was not discussed. **Approaches to Incorporate Multi-Payer Alignment**: The model can be adapted across other payers, such as Medicaid and private payers.
The University of New Mexico Health Sciences Center (UNMHSC) (*Academic institution*) ACCESS Telemedicine: An Alternative Healthcare Delivery Model for Rural Emergencies Recommended for implementation, 9/16/2019	**Clinical Focus**: Cerebral emergency care; telemedicine **Providers**: Neurologists, neurosurgeons, and providers in rural and community systems **Setting**: Inpatient, outpatient, or emergency department **Patient Population**: Patients with neurological emergencies	**Overall Model Design Features**: Rural EDs can consult neurologists via teleconsultation and assess patients' condition when they present at the hospital ED. The model aims to reduce costs in hospital transfers and ambulatory medicine. **Organization Types**: APM entities **Specialty Integration Approaches**: Neurological and neurosurgical consultations from specialists via telehealth. **Use of Waivers**: N/A	**Financial Methodology**: Additional one-time payment without shared risk **How Payment is Adjusted for Performance**: Performance is monitored but does not impact payment. **Attribution**: N/A **Risk Adjustment**: N/A **Benchmarking**: N/A **Approaches to Incorporate Multi-Payer Alignment**: CMS and commercial payers can use the creation of a new bundled code for telemedicine consultations.

Appendix C. Summary of Key Components for Selected CMMI Models

Overview of Methodology Used to Review the Selected CMMI Models

Available information on selected CMMI models' summary pages on the CMMI website was reviewed. This included model overviews, informational webinars, evaluation reports and findings (as applicable), summaries, fact sheets, and press releases. Information found in these materials was used to summarize the models' main design features, including organization types, specialty integration approaches, use of waivers, financial methodology, how payment is adjusted for performance, attribution, risk adjustment, benchmarking, and approaches to incorporate multi-payer alignment.

Four CMMI models were selected because the models are/were primary care ACOs and included in the supplemental Medicare ACO analysis. Findings from the review of these three models are summarized in the following table.

Exhibit C1. Key Value-Based Care and Technical Components of Selected CMMI Models

Model Name	Clinical Focus, Providers, Setting, Patient Population	Value-Based Care Components	Technical Components
Pioneer Accountable Care Organization (Pioneer ACO) *Not Active* Years active: 2012 – 2016	**Clinical Focus:** Primary and specialty care **Providers:** Participating PCPs and specialists **Setting:** Primary and specialty care practices, hospitals, inpatient and outpatient settings **Patient Population:** Medicare FFS beneficiaries	**Overall Model Design Features:** Pioneer ACO brought together ACOs with experience in care coordination across different settings to progress from a shared savings to a population-based payment model. **Organization Types:** physician-led ACOs, IDSs, hospital-physician partnership ACOs **Specialty Integration Approaches:** Communication protocols, tailored treatment plans **Use of Waivers:** Skilled Nursing Facility (SNF) Three-Day Rule Waiver: waived the requirement of a three-day stay in an inpatient, acute care, or critical access hospital before admission to a SNF. Participation Waiver: waived portions of the Federal anti-kickback statute and the physician self-referral law to enable participants to undertake certain activities that "promote accountability for the quality, cost, and overall care" for the model beneficiaries. Shared Savings Distribution Waiver: allowed for shared savings across providers. Compliance with the Physician Self-Referral Law Waiver: waived the physician self-referral law between the ACO and its participants Waiver for Patient Incentives: waived portions of the Federal anti-kickback statute to enable participants to provide patient incentives.	**Financial Methodology:** For the first two years, ACOs had a shared savings payment arrangement; in the third year, ACOs who earned savings were eligible to shift to a population-based payment, which was a PBPM payment that would replace FFS payments. ACOs assume 60% risk and must take on downside risk. **How Payment is Adjusted for Performance:** ACOs must meet quality performance standards to earn shared savings (if achieved). **Attribution:** Voluntary; Prospective claims-based **Risk Adjustment:** Adjusts using a method similar to the HCC model and accounts for beneficiaries' medical conditions **Benchmarking:** Based on a combination of national expenditures and the ACO's historical expenditures **Approaches to Incorporate Multi-Payer Alignment:** Required to expand payment arrangements beyond Medicare to commercial and other payers

Model Name	Clinical Focus, Providers, Setting, Patient Population	Value-Based Care Components	Technical Components
Next Generation Accountable Care Organization (NGACO) *Not Active* Years active: 2016 – 2021	**Clinical Focus:** Primary and specialty care **Providers:** Participating PCPs and specialists **Setting:** Primary and specialty care practices, hospitals, inpatient and outpatient settings **Patient Population:** Medicare FFS beneficiaries	**Overall Model Design Features:** NGACO built on components implemented as part of the Pioneer ACO Model and MSSP. **Organization Types:** Physician practice-affiliated ACOs, IDSs / hospital-affiliated ACOs, hospital-physician partnership ACOs **Specialty Integration Approaches:** Centralized care managers, shared access to EHRs, communication protocols **Use of Waivers:** Telehealth Expansion Waiver: Waived the requirement that use of telehealth services be limited to rural geographic areas; also, allows for the use of asynchronous telehealth technology – where medical information can be provided through virtual telehealth methods (e.g., retinal scanning images) for dermatology and ophthalmology specialties. Skilled Nursing Facility (SNF) Three-Day Rule Waiver: Waived the requirement of a three-day stay in an inpatient, acute care, or critical access hospital before admission to a SNF. Post-Discharge and Care Management Home Visit Waivers: Gave flexibility for staff outside the direct physician to provide home visits to beneficiaries following discharge from an inpatient setting by waiving the requirement that these services must be provided by the physician. Participation Waiver: Waived portions of the Federal anti-kickback statute and the physician self-referral law to enable participants to undertake certain activities that "promote accountability for the quality, cost, and overall care" for the model beneficiaries. Shared Savings Distribution Waiver: Allowed for shared savings across providers. Compliance with the Physician Self-Referral Law Waiver: Waived the physician self-referral law between the ACO and its participants Waiver for Patient Incentives: Waived portions of the Federal anti-kickback statute to enable participants to provide patient incentives. All-Inclusive Population-Based Payments (AIPBP) Payment Arrangement Waiver: Allowed for certain payment arrangements. Cost Sharing: Reduced cost-sharing amounts for certain Medicare Part B services to minimize beneficiary financial barriers. Chronic Disease Management Reward: Permitted up to $75 worth of gift card(s) per year to encourage eligible beneficiaries to participate in chronic disease management programs.	**Financial Methodology:** ACOs gradually shift from FFS to all-inclusive population-based payments, which are monthly payments to the ACO based on estimated total annual costs of care. ACOs assume either 80% or 100% risk and must take on downside risk. **How Payment is Adjusted for Performance:** ACOs may receive an earned quality bonus for meeting quality requirements. CMS uses a quality "withhold," in which a portion of an ACO's benchmark is held "at-risk" dependent on the ACO's quality score. An ACO that achieves a 100% quality score will have the full withhold credited to its benchmark. ACOs that receive less than a 100% quality score will have a proportionate amount withheld. **Attribution:** Voluntary; Prospective, claims-based **Risk Adjustment:** Adjusts benchmarks based on health status differences between beneficiaries **Benchmarking:** Prospectively set based on a combination of regional expenditures and the ACO's historical expenditures **Approaches to Incorporate Multi-Payer Alignment:** N/A

Model Name	Clinical Focus, Providers, Setting, Patient Population	Value-Based Care Components	Technical Components
Global and Professional Direct Contracting (GPDC) *Not Active* Years active: 2021-2022	**Clinical Focus:** Primary and specialty care **Providers:** Direct Contracting Entities (DCEs); Participating PCPs and specialists **Setting:** Broad applicability **Patient Population:** Medicare FFS beneficiaries; patients with complex chronic diseases and serious illnesses	**Overall Model Design Features:** GPDC brought together health care providers, including PCPs, specialty providers, and hospitals, to form a Direct Contracting Entity (DCE). GPDC was retitled the ACO REACH Model in 2023 to underscore the importance of addressing health disparities. **Organization Types:** Physician-led ACOs, hospital-led ACOs, IDSes, independent practice associations **Specialty Integration Approaches:** communication protocols, care management protocols, telehealth consultations **Use of Waivers:** Participation Waiver: waived portions of the Federal anti-kickback statute and the physician self-referral law to enable participants to undertake certain activities that "promote accountability for the quality, cost, and overall care" for the model beneficiaries. Telehealth Expansion Waiver: waives the requirement that use of telehealth services be limited to rural geographic areas; also, allows for the use of asynchronous telehealth technology – where medical information can be provided through virtual telehealth methods (e.g., retinal scanning images) for dermatology and ophthalmology specialties. Skilled Nursing Facility (SNF) Three-Day Rule Waiver: waives the requirement of a three-day stay in an inpatient, acute care, or critical access hospital before admission to a SNF. Care Management Home Visit Waiver: allows a home visit by a clinician before a potential hospitalization to reduce the risk of hospitalization. Home Health Homebound Requirement: expands the criteria for home health-bound services to beneficiaries with multiple chronic conditions at risk of an unplanned inpatient hospital admission. Post-Discharge Home Visit Waiver: allows for a limited number of home visits after discharge from an inpatient facility to reduce the risk of hospitalization and improve patient outcomes. Cost Sharing: reduces cost-sharing amounts for certain Medicare Part B services to minimize beneficiary financial barriers. Chronic Disease Management Reward: permits up to $75 worth of gift card(s) per year to encourage eligible beneficiaries to participate in chronic disease management programs.	**Financial Methodology:** Two risk-sharing options: 1) Professional: 50% savings/losses; participants receive a primary care capitation payment (risk-adjusted monthly payment for primary care services; 2) Global: 100% savings/losses; participants can receive either a primary care capitation payment or a total care capitation payment (risk-adjusted monthly payment for all covered services, including specialty care). **How Payment is Adjusted for Performance:** 5% of benchmark is withheld each year for DCEs to earn back based on their performance on quality measures. Specifically, 1% can be earned back based on their score on 1 of 2 utilization measures; DCEs can earn back the remaining 4% based on reporting all other measures (pay-for-reporting). **Attribution:** Voluntary; Prospective, claims-based **Risk Adjustment:** Adjusts the benchmark for DCEs that have a higher percentage of underserved beneficiaries. These DCEs are identified using a measure that combines the ADI and dual Medicaid status. **Benchmarking:** Based on the DC/KCC rate book or a blend of historical and regional expenditures or regional expenditures, depending on DCE type and alignment **Approaches to Incorporate Multi-Payer Alignment:** GPDC is not a multi-payer model; however, the model encourages participation of other payers beyond Medicare.

Model Name	Clinical Focus, Providers, Setting, Patient Population	Value-Based Care Components	Technical Components
Accountable Care Organization Realizing Equity, Access, and Community Health (ACO REACH) *Active* Years active: 2023-Present	**Clinical Focus:** Primary and specialty care **Providers:** Participating PCPs and specialists **Setting:** Broad applicability **Patient Population:** Medicare FFS beneficiaries; patients with complex chronic diseases and serious illnesses	**Overall Model Design Features:** ACO REACH brings together health care providers, including PCPs, specialty providers, and hospitals, to form an ACO. ACO REACH was formerly named the Global and Professional Direct Contracting (GPDC) Model from prior to 2023. See table row on GPDC for more information. **Organization Types:** Physician-led ACOs, hospital-led ACOs, IDSes, **Specialty Integration Approaches:** Same as GPDC; see GPDC table row for more information. **Use of Waivers:** Same as GPDC; see GPDC table row for more information.	**Financial Methodology:** Same as GPDC; see GPDC table row for more information. **How Payment is Adjusted for Performance:** ACOs earn a quality score (0-100%) based on performance across all measures compared to the benchmark; 2% of ACO benchmark is withheld to be earned back based on quality score. Additionally, there is a Continuous Improvement and Sustained Exceptional Performance (CI/SEP) component. ACOs that meet or exceed the CI/SEP criteria can receive up to the full (2%) based on quality score; ACOs that do not meet the CI/SEP criteria can receive only half (1%) based on quality score. **Attribution:** Same as GPDC; see GPDC table row for more information. **Risk Adjustment:** Adjusts the benchmark for ACOs that have a higher percentage of underserved beneficiaries. These ACOs are identified using a measure that combines the ADI and dual Medicaid status. **Benchmarking:** Based on historical baseline expenditures and/or ACO REACH/KCC rate book or a blend of historical and regional expenditures or regional expenditures, depending on ACO type and alignment **Approaches to Incorporate Multi-Payer Alignment:** Same as GPDC; see GPDC table row for more information.

Appendix D. Taxonomies for Classifying Different Types of Health Care Organizations

Authors	Organization Type	Taxonomy
Bazzoli et al. (1999)	Hospital-led health networks and systems	Three key strategic and structural dimensions inform taxonomies: • Differentiation • Integration • Centralization
Dubbs et al. (2004)	Hospital-led health systems	Taxonomy identifies five types of hospital-led health systems: • Independent hospital systems • Decentralized small hospital systems • Decentralized physician/insurance systems • Moderately centralized systems • Centralized systems
Shortell et al. (2014)	Accountable Care Organizations (ACOs)	Taxonomy identifies three types of ACOs: • Larger, integrated systems • Smaller, physician-led practices • Medium sized, combined hospital-physician and coalition-led groups (i.e., hybrid ACOs)
Piña et al. (2015)[ix]	Health care delivery organizations and systems	Taxonomy identifies six domains reflecting 26 structural and strategic elements: • Capacity: size; capital assets; and comprehensiveness of services • Organizational structure: configuration; leadership structure and governance; research and innovation; and professional education • Finances: payment received for services; provider payment systems; ownership; and financial solvency • Patients: patient characteristics; and geographic characteristics • Care processes and infrastructure: integration; standardization; performance measurement, public reporting, and quality improvement; health information system; patient care team; clinical decision support; and care coordination • Culture: patient centeredness; cultural competence; competition-collaboration continuum (e.g., the number of collaborative initiatives with competitors); community benefit; level of innovation; and working environment
Shortell et al. (2021)	Hospital-based health systems	Taxonomy identifies four types of hospital-based health systems: • Less differentiated, decentralized • Highly differentiated, decentralized • Highly differentiated, highly centralized • Undifferentiated, decentralized, and low integration
McWilliams et al. (2021)	Health care organizations	Multi-track population-based payment model: • Track 0: small, low-revenue groups • Track 1: medium-sized or low-revenue groups and groups that are eligible for Track 0 • Track 2: large, higher-revenue organizations and groups that are eligible for Tracks 0 and 1 • Track 3: large, high-revenue organizations and groups that are eligible for Tracks 0, 1, and 2

[ix] The framework was developed by the Delivery Systems Committee, a subgroup of the Agency for Healthcare Research and Quality's (AHRQ's) Effective Health Care Stakeholders Group.

Appendix E. Areas for Future Exploration and Research

Please note that the items listed below may be better addressed through the Request for Input (RFI), subject matter expert (SME) discussions or listening sessions, roundtable panel discussions, or another research approach. They are captured here for further exploration:

- Developing new or refining existing organizational taxonomies
- Identifying specific pathways that would be appropriate to maximize participation of different types of organizations in PB-TCOC models
- Improving ACO performance benchmark methods to incentivize continued participation in models among different types of organizations
- Gaining perspectives of CFOs on reducing barriers to participation in PB-TCOC models
- Increasing the role of conveners in increasing participation in PB-TCOC models
- Examining the long-term impact of financial incentives on clinical integration
- Developing team-based attribution methods
- Aligning specialty payment mechanisms
- Supporting data sharing between primary and specialty care providers in less integrated settings
- Assessing the impact of vertical integration and implications for ACOs
- Developing approaches to maximize beneficiary participation in accountable care

Appendix F. Annotated Bibliography

American College of Physicians. Beyond the referral: principles of effective, ongoing primary and specialty care collaboration. Published 2022. Accessed December 4, 2024. https://www.acponline.org/sites/default/files/acp-policy-library/policies/beyond_the_referral_position_paper_2022.pdf

Subtopic: Key Highlights; Approaches to Support Primary and Specialty Care Transformation
Type of Source: Report
Objective: To provide recommendations on how primary and specialty care teams can collaborate to promote coordinated care.
Main Findings: The proposed framework includes guiding principles organizations can implement to streamline referrals and improve coordination among primary and specialty care. The principles include patient and family partnering, defined clinical roles and responsibilities, timely, productive communication, and effective data sharing. Shared expectations, as well as critical and helpful elements, are described for each guiding principle.
Strengths/Limitations: This position paper's strengths include the wide range of stakeholders contributing to the proposed framework.
Generalizability to the Medicare Population: Moderate; the authors considered findings from CMS models and programs when discussing the guiding principles for improving primary care and specialty care collaborations.
Methods: A workgroup of professional medical organizations, patient and family advocacy organizations, and subject matter experts in care coordination was established to identify critical elements common in successful primary care and specialty care collaborations.

Anglin G, Tu HA, Liao K, Sessums L, Taylor EF. Strengthening multipayer collaboration: lessons from the comprehensive primary care initiative. *Milbank Q.* 2017;95(3):602-633. doi:10.1111/1468-0009.12280

Subtopic: Assessment of and Approaches to Reducing Organization-Level Barriers
Type of Source: Journal Article
Objective: To describe lessons learned from the Comprehensive Primary Care (CPC) initiative.
Main Findings: To overcome barriers (e.g., competing institutional priorities) and increase the likelihood of successful payer collaborations, multi-payer initiatives should consider contracting with neutral payer conveners, engaging other stakeholders in addition to payers, engaging payer champions, and gathering feedback from practice representatives. In addition, CMS can consider continuing to build trust with payers early in initiatives, clarifying its responsibilities and limitations if it plans to have a dual role as a convener and participating payer in initiatives and, whenever possible, coordinating with other regional initiatives.
Strengths/Limitations: One strength of this study was its focus on identifying challenges and opportunities related to CMS' dual role as an initiative convener and participating payer.
Generalizability to the Medicare Population: Moderate; this article discussed lessons learned from a large multi-payer initiative in which CMS played a role as a convener and a payer.
Methods: Between 2013 and 2016, semi-structured interviews were conducted with participating payers and payer conveners, including CMS staff, CPC participating payers, and payer conveners. In addition, payer engagement and participation were tracked during CPC multi-payer meetings between 2012 and 2016. Qualitative data were coded to identify factors that facilitate and hinder successful payer collaboration.

Bazzoli GJ, Harless DW, Chukmaitov AS. A taxonomy of hospitals participating in Medicare accountable care organizations. *Health Care Manage Rev*. 2019;44(2):93-103. doi:10.1097/HMR.0000000000000159

Subtopic: Background on Identifying Pathways for Maximizing Participation of Different Kinds of Organizations in PB-TCOC Models
Type of Source: Journal Article
Objective: To identify a taxonomy for hospitals participating in Medicare Accountable Care Organizations (ACOs), including the Medicare Shared Savings Program (MSSP) and Pioneer program.
Main Findings: Different subgroups of hospitals participate in MSSP and Pioneer ACOs. Health information technology infrastructure and physician engagement in arrangements are two key features among hospitals participating in CMS ACOs.
Strengths/Limitations: One limitation of this study is that the analysis focused on characteristics of early ACO participants, who may differ from later ACO participants.
Generalizability to the Medicare Population: Strong; the study focused on shared characteristics among CMS ACO participants.
Methods: Hospitals participating in ACOs were included in the analysis. Cluster analysis was used to identify subgroups of hospitals that share similar characteristics.

Bazzoli GJ, Shortell SM, Dubbs N, Chan C, Kralovec P. A taxonomy of health networks and systems: bringing order out of chaos. *Health Serv Res*. 1999 Feb;33(6):1683-1717.

Subtopic: Key Highlights; Background on Identifying Pathways for Maximizing Participation of Different Kinds of Organizations in PB-TCOC Models
Type of Source: Journal Article
Objective: To describe a taxonomy of shared characteristics among hospital networks and systems.
Main Findings: Using theory, three key dimensions were identified as part of the proposed taxonomy to characterize health networks and systems: differentiation, integration, and centralization. Cluster analysis results showed that differentiation and centralization are important dimensions for identifying groups of hospital-led health networks and systems.
Strengths/Limitations: Data-related limitations, such as the lack of hospital intensity data, the number and specialties of physicians, and the number of contracts and covered patients, negatively impacted the researchers' ability to evaluate the dimension of integration.
Generalizability to the Medicare Population: Moderate; although the analysis did not focus specifically on the Medicare population, results could inform Medicare-related health policies.
Methods: American Hospital Association data from 1994 and 1995 were used in a cluster analysis.

Berlin NL, Gulseren B, Nuliyalu U, Ryan AM. Target prices influence hospital participation and shared savings in Medicare bundled payment program. *Health Aff*. 2020;39(9):1479-1485. doi:10.1377/hlthaff.2020.00104

Subtopic: Assessment of and Approaches to Reducing Organization-Level Barriers
Type of Source: Journal Article
Objective: To estimate the relationship between financial incentives and hospital participation in the voluntary Bundled Payments for Care Improvement (BPCI) Advanced Model program.
Main Findings: Hospitals with greater target prices were likelier to participate in the program than hospitals with lower target prices. Episode spending for individual hospitals showed mean reversion, such that hospitals with greater target prices at baseline experienced even greater spending reductions. These findings highlight the potential for CMS to pay large bonuses to

hospitals due to the statistical artifact of mean reversion rather than meaningful spending reductions.

Strengths/Limitations: One limitation of this study is that the analysis did not consider spending on home health or durable medical equipment. In addition, the study did not consider physician group practices acting as episode initiators; findings cannot be generalized to this population.

Generalizability to the Medicare Population: Strong; this study focused on participation and shared savings in a Medicare bundled payment program.

Methods: Target prices were estimated using claims data for BPCI Advanced model years 1 and 2. Logistic regression was used to estimate the relationship between target prices and hospital participation in the program.

Berlin NL, Peterson TA, Chopra Z, Gulseren B, Ryan AM. Hospital participation decisions in Medicare Bundled Payment Program were influenced by third-party conveners: study examines role of third-party conveners in hospital decisions to participate in Medicare bundled payment program. *Health Aff*. 2021;40(8):1286-1293. doi:10.1377/hlthaff.2020.01766

Subtopic: Key Highlights; Assessment of and Approaches to Reducing Organization-Level Barriers

Type of Source: Journal Article

Objective: To understand the role of third-party conveners in the voluntary Bundled Payments for Care Improvement (BPCI) Advanced Model program.

Main Findings: Participating hospitals were more likely to partner with conveners if they had for-profit and non-teaching status. Hospitals that partnered with conveners were more likely to select clinical episodes with greater target prices and more opportunities for shared savings than those that did not.

Strengths/Limitations: One limitation of this study is that the authors could not identify unrecognized hospital-convener partnerships.

Generalizability to the Medicare Population: Strong; this study focused on hospital-convener partnerships in a Medicare bundled payment program.

Methods: Medicare fee-for-service claims data for beneficiaries discharged between 2013 and 2016 were merged with hospital participation in the BPCI Advanced program. Logistic regression was used to examine the relationship between target prices and BPCI Advanced participation among hospitals with versus without conveners.

Biniek JF, Ochieng N, Cubanski J, Neuman T. Cost-related problems are less common among beneficiaries in traditional Medicare than in Medicare Advantage, mainly due to supplemental coverage. KFF. Published January 21, 2021. Accessed November 26, 2024. https://www.kff.org/medicare/issue-brief/cost-related-problems-are-less-common-among-beneficiaries-in-traditional-medicare-than-in-medicare-advantage-mainly-due-to-supplemental-coverage/

Subtopic: Assessing Factors that Influence the Ability of PB-TCOC Models to Be Competitive

Type of Source: Report

Objective: To understand health care cost-related problems experienced by beneficiaries in traditional Medicare compared with Medicare Advantage enrollees.

Main Findings: Among all Medicare beneficiaries, one in six reported a cost-related problem in 2018. There was a lower rate of the issues related to health care costs reported by traditional Medicare beneficiaries compared with beneficiaries enrolled in Medicare Advantage, potentially because there is a lower rate of traditional Medicare beneficiaries with supplemental coverage. There were differences in findings by race and ethnicity. For example, a smaller proportion of Black beneficiaries in traditional Medicare reported cost-related problems compared with Black Medicare Advantage enrollees.

Strengths/Limitations: One limitation in this analysis was that results could not be stratified by race and ethnicity for Asian adults, American Indian and Alaska Native adults, Native Hawaiian and Other Pacific Islander adults, or some subgroups of Hispanic adults.
Generalizability to the Medicare Population: Strong; this analysis focused specifically on costs for traditional Medicare beneficiaries and Medicare Advantage enrollees.
Methods: Medicare Current Beneficiary Survey data from 2018 were analyzed to understand the frequency of beneficiaries reporting the following problems with health care costs: trouble getting care due to cost or money, delay in care due to cost, or problems paying medical bills.

Blavin F, Smith LB, Ramon C, et al. Opportunities to improve data interoperability and integration to support value-based care. Urban Institute. Published July 2022. Accessed December 4, 2024. https://www.urban.org/sites/default/files/2022-07/Opportunities%20to%20Improve%20Data%20Interoperability%20and%20Integration%20to%20Support%20Value-Based%20Care_v3.pdf

Subtopic: Key Highlights; Approaches to Support Primary and Specialty Care Transformation
Type of Source: Report
Objective: To identify opportunities and barriers to improving data quality and integration.
Main Findings: This report identified data integration opportunities for point of care coordination, quality measurement and reporting, and population health, along with leveraging specific public policies to support value-based programs. It also addresses the misconception that higher levels of integration are always preferable.
Strengths/Limitations: The report compiles knowledge from subject matter experts across seven states, though little representation from Western states. Additionally, definitions and levels of integration vary by organization.
Generalizability to the Medicare Population: Moderate; while this study does not specifically focus on Medicare populations, improved data interoperability across health care systems would benefit their care experience and potentially their care outcomes.
Methods: Qualitative case study interviews.

Bleser WK, Tchuisseu YP, Shen H, et al. ACO REACH and advancing equity through value-based payment, part 1. *Health Aff Forefront*. 2022. doi:10.1377/forefront.20220513.630666

Subtopic: Key Highlights; Assessing Factors that Influence the Ability of PB-TCOC Models to Be Competitive
Type of Source: Blog Post
Objective: To summarize a framework for categorizing various approaches to advance health equity in value-based payment model design.
Main Findings: The authors summarized nine equity-focused value-based payment model design elements, including using request-for-proposal and contracting language to foster equity and accountability; engaging diverse providers to participate in the models; engaging the community; providing upfront financial resources to support equity; allowing timely collection and sharing of demographic and health-related social needs data; promoting infrastructure to connect providers to social services and community services; encouraging accountability for advancing equity; and providing advanced payment model incentives for equity.
Strengths/Limitations: N/A
Generalizability to the Medicare Population: Strong; the article considered value-based payment model design elements among the Accountable Care Organization Realizing Equity, Access, and Community Health (ACO REACH) Model.
Methods: The authors reviewed relevant literature and policy initiatives and spoke to subject matter experts about equity-focused value-based payment models.

Branstad PA, Maechling CR. Explaining corporate America's aggressive investment in primary care. *Health Aff Forefront*. 2023. doi:10.1377/forefront.20230404.432804

Subtopic: Assessing Factors that Influence the Ability of PB-TCOC Models to Be Competitive
Type of Source: Blog Post
Objective: To describe the motivations and incentives of corporations acquiring primary care practices and discuss the potential long-term outcomes of their investment.
Main Findings: The article posits that CMS's goal of having all Medicare beneficiaries in accountable care relationships by 2030 has been a financial motivation for corporate investment in primary care. Potential negative outcomes of corporation investment and consolidation include higher care costs without improvement in quality and risk to advancements in improving social determinants of health.
Strengths/Limitations: N/A
Generalizability to the Medicare Population: Moderate; the Medicare population is potentially impacted by the effects of corporate consolidation and acquisition in their health care costs and quality of care.
Methods: N/A

Cantor MN. Modernizing medical attribution. *J Gen Intern Med*. 2020;35(12):3693-3. doi:10.1007/s11606-020-05838-7

Subtopic: Key Highlights; Approaches to Support Primary and Specialty Care Transformation
Type of Source: Editorial
Objective: To review challenges and present potential solutions for incorporating a weighted multiple attribution model into health care.
Main Findings: A weighted multiple attribution model would assign provider attribution based on the weighted contribution from each provider. Examples of its use outside the health care field were described, such as internet marketing, where multi-touch attribution credits different advertisement channels leading to a product purchase. Challenges exist in creating a fair, accurate, and transparent algorithm among multiple providers that requires industry buy-in and system change.
Strengths/Limitations: N/A
Generalizability to the Medicare Population: Moderate; the success of value-based payment models that support accountable care relationships between beneficiaries and providers is tied to accurate and fair patient attribution methods.
Methods: N/A

Casalino LP. Categorizing accountable care organizations: moving toward patient-centered outcomes research that compares health care delivery systems. *Health Serv Res*. 2014 Nov 19;49(6):1875-1882. doi:10.1111/1475-6773.12254

Subtopic: Background on Identifying Pathways for Maximizing Participation of Different Kinds of Organizations in PB-TCOC Models
Type of Source: Editorial
Objective: To describe how a taxonomy of accountable care organizations (ACOs) by Shortell et al. (2012) that classifies ACOs into four clusters (i.e., large integrated systems, smaller physician-led ACOs, hybrid ACOs, and larger integrated delivery systems) contributes to the field of health services and ACO research.
Main Findings: The paper by Shortel et al. (2012) develops an ACO taxonomy guided by theory. The cluster of ACOs in the taxonomy also appears to have face validity.
Strengths/Limitations: N/A

Generalizability to the Medicare Population: Moderate; this paper adds credibility to an ACO taxonomy and supports future research investigating ACO growth and trends.
Methods: N/A

Chernew ME, McWilliams JM, Shah SA. The case for administrative benchmarks (and some challenges). 2023;4(10). doi:10.1056/CAT.23.0194

Subtopic: Key Highlights; Assessment of and Approaches to Reducing Organizational-Level Barriers
Type of Source: Journal Article
Objective: To provide an overview of different methods used for benchmarking.
Main Findings: Whereas empirical benchmarks are tied to actual spending or forecasts based on lagged spending in traditional Medicare, administrative benchmarks are set by taking a base rate and expanding it by an administrative factor reflecting goals, anticipated volume, and intensity growth. Using administrative benchmarks may allow one to avoid the shortcomings of using empirical benchmarks, such as the ratchet effect.
Strengths/Limitations: N/A
Generalizability to Medicare Population: Strong; the article discusses challenges in calculating benchmarks for CMS programs and models, including accountable care organizations (ACOs).
Methods: N/A

Chukmaitov AS, Harless DW, Bazzoli GJ, Deng Y. Factors associated with hospital participation in Centers for Medicare and Medicaid Services' accountable care organization programs. *HCMR*. 2019;44(2):104-114. doi:10.1097/HMR.0000000000000182

Subtopic: Background on Identifying Pathways for Maximizing Participation of Different Kinds of Organizations in PB-TCOC Models
Type of Source: Journal Article
Objective: To identify attributes of hospitals and environmental factors influencing hospital participation in the Medicare Shared Savings Program (MSSP) or the Pioneer Accountable Care Organization (ACO) models. The magnitude of the attributes and longitudinal trends of ACOs were also assessed.
Main Findings: Hospital factors such as previous involvement in risk-based payment and using a care management program for high-risk beneficiaries were associated with MSSP and Pioneer ACO participation. Hospitals with advanced health IT infrastructure were associated with participating in MSSP and avoiding penalties in Pioneer ACO. Being part of a health system was also associated with MSSP involvement. Environmental factors such as residing in areas with higher median incomes and competitive markets were associated with participation. Hospital factors were more influential than environmental factors in predicting if a hospital participated in MSSP.
Strengths/Limitations: Private ACOs were not part of this study.
Generalizability to the Medicare Population: Moderate; understanding hospital and environmental influences on ACO participation is valuable for broadening participation and transforming traditional Medicare to value-based payment programs.
Methods: Hospital ACO participation was obtained nationally from CMS public datasets, including the Premier Hospital Quality Incentive Demonstration, the Physician Group Practice transition, and Care Management for High-Cost Beneficiaries.

Dubbs NL, Bazzoli GJ, Shortell SM, Kralovec PD. Reexamining organizational configurations: an update, validation, and expansion of the taxonomy of health networks and systems. *Health Serv Res.* 2004 Feb;39(1):207-220. doi:10.1111/j.1475-6773.2004.00222.x

Subtopic: Background on Identifying Pathways for Maximizing Participation of Different Kinds of Organizations in PB-TCOC Models
Type of Source: Journal Article
Objective: To review and update a taxonomy of health care organizations using updated data to understand if additional clusters of organizations exist.
Main Findings: Overall, the updated 1998 taxonomy echoed the original 1994 taxonomy, with enhanced decentralized in clusters. The update resulted in four clusters being identified regarding networks, including independent hospital networks, decentralized networks, centralized hospital services networks, and centralized physician/insurance networks. Five clusters were identified regarding systems: independent hospital systems, decentralized systems, decentralized physician/insurance systems, moderately centralized systems, and centralized systems. The parameters used in forming the taxonomy (e.g., differentiation, integration) remained relevant over time.
Strengths/Limitations: The 1998 taxonomy update used additional data sets, including the 1994 and 1998 American Health Association Annual Survey of Hospitals.
Generalizability to the Medicare Population: Moderate; a taxonomy to classify health care systems is relevant for policy research within the Medicare program.
Methods: Principal components factor analysis was conducted.

Dummit L, Marrufo G, Marshall J, et al. CMS bundled payments for care improvement initiative models 2-4: year 5 evaluation & monitoring annual report. The Lewin Group. Published October 2018. Accessed November 20, 2024. https://downloads.cms.gov/files/cmmi/bpci-models2-4-yr5evalrpt.pdf

Subtopic: Assessing Factors that Influence the Ability of PB-TCOC Models to Be Competitive
Type of Source: Report
Objective: To evaluate the Bundled Payments for Care Improvement (BPCI) Model over three years from 2013 through 2016 for Models 2, 3, and 4. The BPCI model financially rewarded participants for reducing Medicare payments for 48 types of clinical episodes compared to their target price.
Main Findings: The BPCI initiative reduced Medicare payments; however, BPCI did not result in savings to the Medicare program. In Models 2 and 4, the most common clinical episode was major joint replacement of the lower extremity (MJRLE). In Model 3, SNFs were most likely to participate in MJRLE, and congestive heart failure (CHF) had the most enrollment of home health agencies and the largest patient volume.
Strengths/Limitations: The BPCI model was voluntary, so its results are not generalizable to the entire Medicare population. The limited sample size also impacted the ability to assess outcomes for Model 4.
Generalizability to the Medicare Population: Strong; BPCI is a Medicare model.
Methods: Medicare claims and enrollment data, post-acute care provider-patient assessments, awardee-submitted data, beneficiary surveys, participant interviews, and site visits were analyzed. A difference-in-difference analysis was performed.

Dummit L, Tripp A, Bergman S, et al. CMS bundled payment for care improvement advanced model year 2 evaluation report annual report. The Lewin Group. Published March 2021. Accessed November 20, 2024. https://www.cms.gov/priorities/innovation/data-and-reports/2021/bpci-yr2-annual-report

Subtopic: Assessing Factors that Influence the Ability of PB-TCOC Models to Be Competitive
Type of Source: Report

Objective: To evaluate the bundled payment for care improvement advanced (BPCI-A) model on payment, utilization, quality, patient-reported functional status, and Medicare savings.
Main Findings: BPCI-A hospitals reduce episode payments for seven clinical episodes, reducing total payments from 1.5 to 4.3 percent. Quality of care was not impacted in BPCI-A participating hospitals, but mortality rates decreased for urinary tract infections and renal failure while increasing for simple pneumonia and respiratory infections. Functional status changes among BPCI-A participants were unclear compared to those in a comparison group. BPCI-A resulted in a financial loss for the Medicare program during the evaluation period.
Strengths/Limitations: The BPCI-A model was voluntary, so its results are not generalizable to the entire Medicare population.
Generalizability to the Medicare Population: Strong; although voluntary, BPCI-A is a Medicare model.
Methods: A difference-in-difference analysis was performed.

Fiesinger T. Patient attribution: why it matters more than ever. *Fam Pract Manag*. 2016;(6):25-30. https://www.aafp.org/pubs/fpm/issues/2016/1100/p25.html. Accessed December 3, 2024.

Subtopic: Key Highlights; Approaches to Support Primary and Specialty Care Transformation
Type of Source: Report
Objective: To review how patients are attributed to providers in accountable care relationships.
Main Findings: Patients are attributed through metrics such as timing (e.g., prospective or retrospective), type (e.g., majority or plurality of care), exclusivity (e.g., single or multiple providers), and level of attribution (e.g., group practice or organization). Medicare uses a two-step attribution process based on primary care services received.
Strengths/Limitations: N/A
Generalizability to the Medicare Population: Moderate; it is important for providers to understand the types of attribution methods to enhance the accuracy of patient attribution in value-based payment models.
Methods: N/A

Fowler L, Rawal P, Fogler S, et al. The CMS Innovation Center's strategy to support person-centered, value-based specialty care. https://www.cms.gov/blog/cms-innovation-centers-strategy-support-person-centered-value-based-specialty-care. Published November 7, 2022. Accessed December 6, 2024.

Subtopic: Key Highlights; Approaches to Support Primary and Specialty Care Transformation
Type of Source: Blog Post
Objective: To introduce the Innovation Center's new specialty strategy and implementation timeline supporting beneficiary access to high-quality specialty care.
Main Findings: Four strategy elements were presented, with short- and long-term goals for each described. The four anchor elements include enhancing specialty care performance data transparency, maintaining momentum for acute episode payment models and condition-based models, creating financial incentives within primary care for specialist engagement, and creating financial incentives for specialists to affiliate with population-based models and value-based care.
Strengths/Limitations: N/A
Generalizability to Medicare Population: Strong; this work describes the Innovation Center's strategy to increase value-based specialty care in the Medicare program.
Methods: N/A

Fraher E, Machta R, Halladay J. The workforce transformations needed to staff value-based models of care. Chapel Hill, NC: Carolina Health Workforce Research Center, Program on Health Workforce.

Published November 2015. Accessed January 22, 2025. https://www.shepscenter.unc.edu/wp-content/uploads/2015/12/DataBrief_ValueBasedWorkforce_FraherMachtaHalladay_final.pdf

Subtopic: Key Highlights; Assessments of and Approaches to Reducing Organizational-Level Barriers
Type of Source: Report
Objective: To discuss how the health care workforce must adapt to support the transition to alternative payment models.
Main Findings: Existing staff will need to take on new roles within value-based payment systems, such as medical assistants expanding their role to pre-visit activities, administering immunizations, and documenting clinical encounters. Registered nurses are increasing their patient-care activities, and nurse practitioners are managing their patient caseloads. New roles will be needed, such as a patient navigator, in alternative payment models. Lastly, roles encompassing patient care and population-based strategies will be needed.
Strengths/Limitations: The literature scan did not focus on outcomes of workforce changes such as cost or quality.
Generalizability to the Medicare Population: Moderate; the Medicare population will be interfacing with the adapting health care workforce when receiving health care in accountable care relationships.
Methods: A literature review focused on changes in health care staff roles in acute, ambulatory, and community care settings.

Freed M, Biniek JF, Damico A, Neuman T. Medicare Advantage in 2024: enrollment update and key trends. KFF. Published August 8, 2024. Accessed November 26, 2024. https://www.kff.org/medicare/issue-brief/medicare-advantage-in-2024-enrollment-update-and-key-trends/

Subtopic: Key Highlights; Assessing Factors that Influence the Ability of PB-TCOC Models to Be Competitive
Type of Source: Report
Objective: To present trends and describe the growth in Medicare beneficiaries electing Medicare Advantage (MA) plans.
Main Findings: In 2024, 54% of Medicare beneficiaries were enrolled in Medicare Advantage (MA). Participation in MA ranged across states, with seven states having 60% or more eligible beneficiaries enrolled in MA. Growth in MA is attributed to no premiums and an out-of-pocket limit, paired with additional benefits such as vision, dental, and hearing services. MA plans use specific provider networks and prior authorizations to obtain care.
Strengths/Limitations: The study calculated the eligible Medicare beneficiaries enrolled in MA from the population of beneficiaries with both Parts A and B Medicare.
Generalizability to the Medicare Population: Moderate; these findings reflect growth among Medicare beneficiaries in MA plans, an important consideration for Medicare program policy and the transition to value-based payment models.
Methods: The data supporting this brief included MA enrollment, benefit, and landscape files combined with the CMS Chronic Conditions Data Warehouse Master Beneficiary Summary File.

Freed M, Ochieng N, Cubanski J, Neuman T. Key facts about Medigap enrollment and premiums for Medicare beneficiaries. KFF. Published October 18, 2024. Accessed November 25, 2024. https://www.kff.org/medicare/issue-brief/key-facts-about-medigap-enrollment-and-premiums-for-medicare-beneficiaries/

Subtopic: Assessing Factors that Influence the Ability of PB-TCOC Models to Be Competitive
Type of Source: Report

Objective: To describe the trends and characteristics of Medicare beneficiaries in traditional Medicare who elect for Medigap insurance coverage.
Main Findings: In 2023, approximately 42% of traditional Medicare beneficiaries had a Medigap policy, and they were more likely to be White, with higher incomes and better health. The average monthly premium for Medigap plans was $217.
Strengths/Limitations: N/A
Generalizability to the Medicare Population: Moderate; Medicare beneficiaries who elect to have traditional Medicare could benefit from more information about Medigap policies.
Methods: This brief's data included the Health Coverage Portal and the Medicare Supplement Market Data report.

Gonzalez-Smith J, Zhao A, Bleser W, Saunders R. Improving waivers and program flexibilities for advanced payment models. Duke Margolis Center for Health Policy. Published June 30, 2021. Accessed November 13, 2025. https://healthpolicy.duke.edu/sites/default/files/2021-06/Improving%20Waivers%20and%20Program%20Flexibilities.pdf

Subtopic: Key Highlights; Assessing Factors that Influence the Ability of PB-TCOC Models to Be Competitive
Type of Source: Report
Objective: To describe the purpose of Medicare program waivers in CMMI models, review the current usage, and present recommendations to increase their use.
Main Findings: Waivers fall into three categories: care delivery design (e.g., admitting patients to a skilled nursing facility without a 3-day hospitalization), patient engagement incentives and benefits (e.g., reducing cost sharing), and participant coordination (e.g., allowing for payment arrangements between participants). Few participants in CMMI models use waivers, and recommendations to increase uptake include enhancing guidance for waiver use, expanding participants benefiting from waivers, and adding safe harbors for the incorrect use of waivers.
Strengths/Limitations: A strength of the report was the classification of waivers from past and present CMMI models.
Generalizability to the Medicare Population: Moderate Medicare waivers are intended to increase beneficiary engagement in CMMI models.
Methods: N/A

Houchens RL, McCracken S, Marder W, Kelley R, Anderson W. Multiple attribution of episodes for physician profiling in Medicare: a preliminary investigation. MedPAC. Published June 2009. Accessed January 9, 2025. https://www.medpac.gov/wp-content/uploads/import_data/scrape_files/docs/default-source/contractor-reports/Jun09_MultipleAttribution_CONTRACTOR_JP.pdf

Subtopic: Key Highlights; Approaches to Support Primary and Specialty Care Transformation
Type of Source: Report
Objective: To evaluate the outcomes of a multiple attribution method compared with a single attribution method for an episode of care.
Main Findings: Multiple attribution indices based on average episode-level ratios were more stable than indices based on the ratio of averages. Indices based on total dollars were also more stable than indices based on evaluation and maintenance (E&M) dollars. Decisions on which attribution approach to use should be based on the outcome of interest.
Strengths/Limitations: This study did not capture and test all multiple attribution methods.
Generalizability to the Medicare Population: Moderate; appropriate provider attribution is essential for value-based payment models to improve care outcomes in the Medicare program.

Methods: Eight indices of physician performance were derived from the percentage of total episodes and total dollars for each episode with multiple providers. MedPAC data was used in the analysis.

Huber K, Gonzalez-Smith J, Wang A, et al. Engaging specialists in accountable care: tailoring payment models based on specialists and practice contexts. *Health Aff Forefront.* 2023. doi:10.1377/forefront.20231219.115250

Subtopic: Key Highlights; Approaches to Support Primary and Specialty Care Transformation
Type of Source: Blog Post
Objective: To describe how different specialists can be engaged in accountable care organizations (ACOs) and present potential policy solutions to increase participation.
Main Findings: Goals for engaging specialists were presented for whole-person, acute episode, longitudinal, and chronic specialty care. The authors recommended refining population models with corresponding condition-level measures for whole-person specialty care. For acute episode specialty care, the authors note that quality and safety systems measures should be included to encourage high-performance care and coordination. Specific to longitudinal specialty care, the authors recommend shifting toward person-level payments, per-patient patients, and substantiation payments to reduce acute episodes and increase provider coordination.
Strengths/Limitations: N/A
Generalizability to Medicare Population: Strong; increasing specialists' engagement in ACOs is a Medicare policy priority that would benefit beneficiaries with improved care management.
Methods: N/A

Hughes DL. CMS Innovation Center launches new initiative to advance health equity. *Health Aff Forefront*. 2022. doi:10.1377/forefront.20220302.855616

Subtopic: Key Highlights; Assessing Factors that Influence the Ability of PB-TCOC Models to Be Competitive
Type of Source: Blog Post
Objective: To describe how the aim of advancing health equity is incorporated into future CMMI models and the 2030 strategic vision.
Main Findings: Strategies include expanding participating providers to include those within the safety net caring for underserved communities, gathering richer and more diverse beneficiary data, and assessing health equity outcomes in CMMI model evaluations. The Accountable Care Organization (ACO) Realizing Equity, Access, and Community Reach (REACH) Model incorporates the leading health equity goals.
Strengths/Limitations: N/A
Generalizability to the Medicare Population: Strong; advancing health equity will benefit Medicare beneficiaries in accountable care relationships.
Methods: N/A

Ikram U, Aung KK, Song Z. Private equity and primary care: lessons from the field. *NEJM Catalyst*. 2024. doi:10.1056/CAT.21.0276

Subtopic: Assessing Factors that Influence the Ability of PB-TCOC Models to Be Competitive
Type of Source: Editorial
Objective: To gather lessons for successful partnerships between primary care organizations and private equity investments.
Main Findings: The advantages of private equity investments in primary care included steady capital for care innovations, strategic planning support, organizational transformation, and provider education about system-level improvements and efficiencies. Challenges were

unreported due to concern about anonymity in responding, but participants reported receiving conflicting advice from investors.
Strengths/Limitations: N/A
Generalizability to the Medicare Population: Moderate; public equity investment is growing in primary care practices, and the positive and negative outcomes are relevant to Medicare practitioners and beneficiaries.
Methods: Interviews with providers, executives, and investors at innovative primary care organizations with private equity backing for at least five years.

Jacobs D, Rawal P, Fowler L, Seshamani M. Expanding accountable care's reach among Medicare beneficiaries. N Engl J Med. 2022;387(32):99-102. doi:10.1056/NEJMp2202991

Subtopic: Key Highlights; Assessing Factors that Influence the Ability of PB-TCOC Models to Be Competitive
Type of Source: Editorial
Objective: To describe potential changes that The Centers for Medicare and Medicaid Innovation (CMMI) plans to increase accountable care organization (ACO) participation, reduce Medicare spending, and make ACOs more equitable.
Main Findings: Plans include testing new ACO models within the Medicare Shared Savings Program, providing upfront investments for small ACOs without prior value-based payment experience, and expanding ACOs in underserved areas. Equity-enhancing ACO features will also be assessed, including benchmark adjustments to encourage care for underserved populations and broadening the data that ACOs collect about beneficiaries (e.g., social-needs data).
Strengths/Limitations: N/A
Generalizability to the Medicare Population: Strong; this piece is from the CMMI leadership describing potential changes to their alternative payment models to benefit the Medicare program and beneficiaries.
Methods: N/A

Japinga M, Jayakumar P, de Brantes F, et al. Strengthening specialist participation in comprehensive care through condition-based payment reforms. Duke Margolis Center for Health Policy. Published 2022. Accessed December 6, 2024. https://healthpolicy.duke.edu/sites/default/files/2022-11/Strengthening%20Specialist%20Participation%20in%20Comprehensive%20Care%20through%20Condition-Based%20Payment%20Reforms.pdf.

Subtopic: Key Highlights; Approaches to Supporting Primary and Specialty Care Integration
Type of Source: Report
Objective: To recommend strengthening specialist participation in comprehensive care through condition-based payment reforms.
Main Findings: The report highlights various steps that can be taken to support the infrastructure needed to improve specialty care, such as increased data sharing between primary and specialty providers. The report also notes that providers are at different readiness levels to implement condition-based payment reforms, and CMS should, therefore, accommodate providers based on their degree of readiness.
Strengths/Limitations: N/A
Generalizability to Medicare Population: Strong; the report focuses on strategies for specialty engagement and Medicare payment reform.
Methods: Economic analysis.

Johnson DC, O'Donnell J, Pothen M, Nguyen V, Smith T. Framework for specialty value transformation: perspectives from a commercial payer. *Health Aff Forefront*. 2021. doi:10.1377/forefront.20210825.518146

Subtopic: Assessment of and Approaches to Reducing Organizational-Level Barriers
Type of Source: Blog Post
Objective: To present four ways commercial payers can integrate specialty services into value-based payment.
Main Findings: The four mechanisms include episode-based bundled payments, risk-bearing conveners for bundled payment episodes, condition-based alternative payment models, and risk-bearing vendors for chronic conditions, each with varying risk tolerance levels, clinical scope, level of specialist control, and practice structure.
Strengths/Limitations: N/A
Generalizability to the Medicare Population: Moderate; the article describes four approaches for integrating specialists into value-based payment models, which would benefit beneficiaries who see specialists in the care.
Methods: N/A

Kannarkat JT, Shah S, Parekh N, Crosson FJ. Strengthening the Center for Medicare and Medicaid Innovation's approach to constructing alternative payment models. *Milbank Q.* 2023;101(1):11-25. doi:10.1111/1468-0009.12597

Subtopic: Key Highlights; Assessing Factors that Influence the Ability of PB-TCOC Models to Be Competitive
Type of Source: Editorial
Objective: To assess the Center for Medicare and Medicaid's Innovation (CMMI) strategic refresh and present ideas to strengthen CMMI's goals.
Main Findings: Suggestions to enhance the strategic refresh include streamlining and increasing incentives across models, addressing participant selection bias by introducing a risk floor to minimize financial losses, making other payment options less desirable, and engaging beneficiaries by installing incentive programs and reducing co-payments.
Strengths/Limitations: N/A
Generalizability to the Medicare Population: Moderate; this piece presents additional strategies for CMMI model success, which impacts beneficiaries in accountable care relationships.
Methods: N/A

Kanter GP, Polsky D, Werner RM. Changes in physician consolidation with the spread of accountable care organizations. *Health Aff*. 2019. doi:10.1377/hlthaff.2018.05415

Subtopic: Assessing Factors that Influence the Ability of PB-TCOC Models to Be Competitive
Type of Source: Journal Article
Objective: To examine if physician consolidation increased three years after accountable care organizations (ACOs) were introduced as part of the Medicare Shared Savings Program (MSSP) and describe the attributes of practice changes during this period.
Main Findings: Counties with more ACO participation saw greater increases in practice sizes after MSSP began in 2012. In counties with high ACO participation, there was a 2.7 percentage point decrease in practices with fewer than 10 practitioners and a 4.0 percentage point increase in practices with more than 50 practitioners.
Strengths/Limitations: A strength was using a counterfactual of counties with no ACOs during the study period.

Generalizability to the Medicare Population: Moderate; this article details physician consolidation in response to ACOs, and this trend may impact quality and cost for Medicare beneficiaries seeking health care services.
Methods: Difference-in-difference analysis was performed.

Khullar D, Schpero WL, Casalino LP. Accountable care organization leader perspective on the Medicare Shared Savings Program a qualitative study. *JAMA*. 2025;(5)3. doi:10.1001/jamahealthforum.2024.0126

Subtopic: Assessing Factors that Influence the Ability of PB-TCOC Models to Be Competitive
Type of Source: Journal Article
Objective: To illuminate the experiences of accountable care organization (ACO) leaders in the Medicare Shared Savings Program (MSSP) and understand their successes and challenges with participation.
Main Findings: Five key themes were identified from the interviews: 1) focusing on key initiatives such as increasing annual wellness visits and coordinating care transitions; 2) engaging clinicians with performance data results and increased personal relationships with leadership; 3) distributing shared savings with provider practices; 4) recruiting and retaining patients and providers in MSSP; 5) aligning value-based payments incentives with hospital-based ACOs is challenging.
Strengths/Limitations: The study was limited to ACO experience in MSSP.
Generalizability to the Medicare Population: Moderate; understanding how ACO leadership views their participation in MSSP is valuable for future value-based payment model updates.
Methods: Qualitative interviews were conducted among 49 ACOs participating in MSSP.

Kocher B, Wachter RM. Why is it so hard for academic medical centers to succeed in value-based care? *Health Aff Scholar*. 2023:1(1):1-3. doi:10.1093/haschl/qxad002

Subtopic: Key Highlights; Assessing Factors that Influence the Ability of PB-TCOC Models to Be Competitive
Type of Source: Editorial
Objective: To describe the characteristics of academic medical centers that make it uniquely challenging to transform and succeed in value-based payment models.
Main Findings: Academic medical centers employ more specialists than other hospital systems, have a high market share in communities, and are rewarded by a fee-for-service payment system for high-volume systems with high acuity. These characteristics have limited academic medical centers' growth in areas of care such as primary care and population health, which are cornerstones in value-based payment models. The economic drivers in value-based payment models to reduce hospitalizations and surgeries do not align with academic medical centers' operations.
Strengths/Limitations: N/A
Generalizability to the Medicare Population: Moderate; many beneficiaries receive care at academic medical centers, and knowing the factors inhibiting the adoption of value-based payment models is informative for future public policy planning.
Methods: N/A

Kosinski LR, Brill JV. The impact of cascading accountability on specialty practice: time for a nested solution. *CGH.* 2023;21:260-263. doi:10.1016/j.cgh.2022.11.001

Subtopic: Key Highlights; Approaches to Support Primary and Specialty Care in PB-TCOC Models
Type of Source: Editorial
Objective: To describe the current state of alternative payment models (APMs) available to specialists and strategies to engage specialists to participate in APMs.

Main Findings: Currently, CMS has not implemented specialty-focused APMs, nor is there evidence that CMS will implement specialty-focused, episode-focused, or disease-specific APMs in the future. Carve-outs have been used with the Kidney Care Choices Model and the OCM, but they are likely not applicable to specialties. Nested models, hierarchical models within ACO global budgets encompassing population-wide management and value-based care for episode-based payments, may be more conducive to specialty care.
Strengths/Limitations: N/A
Generalizability to Medicare Population: Strong; the article discusses specialist participation in Medicare APMs.
Methods: N/A

L&M Policy Research. Pioneer ACO final report. Published December 2, 2016. Accessed November 25, 2024. https://www.cms.gov/priorities/innovation/files/reports/pioneeraco-finalevalrpt.pdf

Subtopic: Assessing Factors that Influence the Ability of PB-TCOC Models to Be Competitive
Type of Source: Report
Objective: To evaluate the effects of the Pioneer Accountable Care Organization (ACO) model on Medicare spending, utilization, and quality.
Main Findings: Overall spending performance reductions were mainly due to utilization reduction efforts within inpatient settings. Major savings were observed within the two performance years. Ten ACOs saw significant savings in both performance years, and another ten saw substantial savings in only one of the two years. Twelve ACOs had little to no savings or losses. Features of the Pioneer ACO Model, such as hospital relationships, did not appear to affect ACO spending performance within the two performance years observed.
Strengths/Limitations: The evaluation did not control for Medicare price differences among providers. Additionally, the time-varying characteristics used to control for selection did not account for all relevant factors.
Generalizability to Medicare Population: Strong; the model directly impacts Medicare beneficiaries.
Methods: The evaluation used a difference-in-differences design, interviews, focus groups, and document reviews.

Lewis VA, Colla CH, Carluzzo KL, Kler SE, Fisher ES. Accountable care organizations in the United States: market and demographic factors associated with formation. *Health Serv Res*. 2013;1(48):1840-1858. doi:10.1111/1475-6773.12102

Subtopic: Key Highlights; Assessing Factors that Influence the Ability of PB-TCOC Models to Be Competitive
Type of Source: Journal Article
Objective: To determine how many accountable care organizations (ACOs) are in the United States, where they are located, and what characteristics are associated with ACO formation.
Main Findings: The article identified 227 ACOs across the United States, with 55 percent of the population residing in areas served by these ACOs. ACOs are more likely to form in high-cost areas that perform higher on quality measures and have fewer primary care physician groups. They are less likely to form in high-poverty regions and rural areas.
Strengths/Limitations: Many characteristics related to ACO formation are likely more critical at a provider or organizational level than at the regional level.
Generalizability to Medicare Population: Strong; the study focused specifically on Medicare ACOs and their location.
Methods: A cross-sectional study of all ACOs established by August 2012 was conducted using multivariate logistical regression.

Liao JM, Navathe AS, Werner RM. The impact of Medicare's alternative payment models on the value of care. Annu Rev Public Health. 2020; 41:551-565. doi:10.1146/annurev-publhealth-040119-094327

Subtopic: Assessing Factors that Influence the Ability of PB-TCOC Models to Be Competitive
Type of Source: Journal Article
Objective: To provide an overview of the population-based and episode-based models implemented by CMS and analyze the impact of said models on important outcomes of interest, including clinical, cost, utilization, and quality.
Main Findings: Population-based models improved outcomes by reducing low-value services (Pioneer Model), modest reductions in Medicare spending among physician group accountable care organizations (ACOs) (as seen in Medicare Shared Savings Program), and fewer emergency department visits (as seen in Comprehensive Primary Care). Episode-based payment models improved outcomes by improving average episode savings of $585 (as seen in Acute Care Episode Demonstration), improved functional status (as seen in Bundled Payments for Care Improvement), and decreased spending by 3.1% on hospital and post-acute care (as seen in Comprehensive Joint Repair).
Strengths/Limitations: High participant dropout in Pioneer, limited assessment of AIM in MSSP, and scant evaluations of Next Generation ACO were cited as limitations.
Generalizability to the Medicare Population: Strong; this is an analysis of CMMI models designed as population-based or episode-based total cost of care models.
Methods: The article reviewed the applicable literature on CMMI models.

Lyu PF, Chernew ME, McWilliams JM. Benchmarking changes and selective participation in the Medicare Shared Savings Program: study examines changes in Medicare Share Savings Program participation patterns. *Health Aff*. 2023;42(5):622-631. doi:10.1377/hlthaff.2022.01061

Subtopic: Key Highlights; Assessment of and Approaches to Reducing Organizational-Level Barriers
Type of Source: Journal Article
Objective: To understand trends in accountable care organization (ACO) participation in the Medicare Shared Savings Program (MSSP) after regionalized benchmarking was introduced.
Main Findings: Regionalized benchmarking encourages ACO participation based on individual spending levels. Participants with lower-than-regional spending receive higher bonuses without substantial change in care processes with regionalized benchmarking. After regionalized benchmarking was introduced in MSSP, ACOs shifted toward lower-spending participants.
Strengths/Limitations: The study did not have a control group, so the analysis was limited to pre-post comparisons.
Generalizability to the Medicare Population: Strong; the change in ACO participation after regionalizing benchmarks was introduced in MSSP is critical information for policymakers to use in future value-based payment model design in the Medicare program.
Methods: ACOs were identified using the MSSP Provider-level Research Identifiable Files. Beneficiary attribution and spending outcomes were calculated using Medicare claims data and the Medicare Data on Provider Practice and Spending.

Marrufo G, Negrusa B, Ullman D. Comprehensive End-Stage Renal Disease Care (CEC) model: fifth annual evaluation report. The Lewin Group. Published January 2022. Accessed November 20, 2024. https://www.cms.gov/priorities/innovation/data-and-reports/2022/cec-annrpt-py5

Subtopic: Assessing Factors that Influence the Ability of PB-TCOC Models to Be Competitive
Type of Source: Report
Objective: To evaluate the impact of the Comprehensive End-Stage Renal Disease Care (CEC) Model on patient outcomes.

Main Findings: The CEC Model resulted in an estimated $217 million aggregate reduction in total Medicare Part A and B payments over the five performance years, primarily generated through decreased hospitalizations and readmissions. Additionally, CEC interventions resulted in lower catheter use for 90 days or longer, increased outpatient dialysis sessions, and reduced payments and hospitalizations for ESRD-related complications. The CEC Model also showed a modest improvement in patient survival relative to the comparison group.
Strengths/Limitations: The CEC is a voluntary model, so the findings may not be generalizable across all Medicare populations. Additionally, organizations studied reflect common characteristics of metropolitan communities. There may also be unobservable characteristics, such as motivation to participate in an advanced alternative payment model, which researchers cannot sufficiently control with available data.
Generalizability to Medicare Population: Strong; although voluntary, CEC is a Medicare model.
Methods: Difference-in-differences design.

McWilliams MJ, Chen A, Chernew ME. From vision to design in advancing Medicare payment reform: a blueprint for population-based payments. Published October 2021. Accessed January 24, 2025. https://www.brookings.edu/wp-content/uploads/2021/10/From-Vision-to-Design-in-Advancing-Medicare-Payment-Reform-1.pdf

Subtopic: Key Highlights; Background on Identifying Pathways for Maximizing Participation of Different Kinds of Organizations in PB-TCOC Models; Assessment of and Approaches to Reducing Organizational-Level Barriers
Type of Source: White Paper
Objective: To review payment reform to date and to describe a multi-track population-based payment model as a potential future direction.
Main Findings: The authors had six recommendations, including defining a parsimonious set of model tracks, establishing stronger participation incentives, setting benchmarks to provide an "on-ramp" for high-spending accountable care organizations (ACOs), improving risk adjustment, promoting health equity, and revising the definition of ACOs.
Strengths/Limitations: The paper did not discuss the role of episode-based payment beyond general considerations.
Generalizability to Medicare Population: Strong; these recommendations inform Medicare policy and support population-based payment reform.
Methods: N/A

Muhlestein D. Assessing provider adoption of Medicare Advanced Alternative Payment Models. *Health Aff Forefront*. 2024. doi:10.1377/forefront.20241212.507239

Subtopic: Background on Identifying Pathways for Maximizing Participation of Different Kinds of Organizations in PB-TCOC Models; Assessing Factors that Influence the Ability of PB-TCOC Models to Be Competitive
Type of Source: Blog Post
Objective: To assess the number of eligible providers engaged in the Quality Payment Program's advanced alternative payment models (AAPMs).
Main Findings: The number of qualified providers participating in AAPMs increased from 7.7 percent in 2017 to 29.3 percent in 2023, totaling 362,704 providers. Primary care providers were more likely than specialists to participate. In 2023, 52 percent of family medicine physicians participated, while dermatologists were the least likely specialists to participate, at 19.1 percent. The Midwest had the highest percentage of providers participating. Recommendations to increase provider participation in AAPMs include creating incentives for primary care providers

to join existing AAPMs, designing specialty-specific AAPMs, creating a hierarchy of models, and understanding regional differences in AAPM adoption.
Strengths/Limitations: N/A
Generalizability to the Medicare Population: Strong; these findings contribute to having all Medicare beneficiaries in accountable care relationships by 2030.
Methods: N/A

Muhlestein D, Bleser WK, Saunders RS, McClellan MB. All-payer spread of ACOS and value-based payment models in 2021: the crossroads and future of value-based care. *Health Aff Forefront.* 2021. doi: 10.1377/forefront.20210609.824799

Subtopic: Background on Identifying Pathways for Maximizing Participation of Different Kinds of Organizations in PB-TCOC Models
Type of Source: Blog Post
Objective: To describe the trends in ACOs from 2010-2021 and present future recommendations for value-based payment contracts.
Main Findings: Since 2018, ACO growth has plateaued. In 2018 and 2019, more contracts exited an ACO than those who joined. Medicare ACO contracts have remained steady, while Medicaid and commercial ACO contracts have increased. The authors posit the changes seen in ACO contracts reflect the other value-based contract options available, along with stronger requirements for downside risk.
Strengths/Limitations: The data reflected Medicare, Medicaid, and commercial ACOs.
Generalizability to the Medicare Population: Strong; ACO trends help inform future Medicare policy to support and bolster ACO contracts in the Medicare program.
Methods: Data were obtained from Milliman Torch Insight.

Muhlestein D, Tu T, Colla CH. Accountable care organizations are increasingly led by physician groups rather than hospital systems. *Am J Manag Care.* 2020;26(05). https://www.ajmc.com/view/accountable-care-organizations-are-increasingly-led-by-physician-groups-rather-than-hospital-systems. Accessed February 13, 2025.

Subtopic: Background on Identifying Pathways for Maximizing Participation of Different Kinds of Organizations in PB-TCOC Models
Type of Source: Journal Article
Objective: To assess the changes in entities (i.e., hospitals, health systems, physician groups) that formed and led ACOs from 2010 to 2020.
Main Findings: From 2010 to 2015, hospitals and health systems led most ACOs. Since then, physician-group-led ACOs have increased, with substantial opportunities to grow compared to hospitals or health systems. Physician-led ACOs have been more successful at reducing health care spending but are not as equipped for risk-based contracts (e.g., infrastructure and less experience with risk). Policy and resource support for physician group-led ACOs is recommended.
Strengths/Limitations: A strength was considering the broad organization when sorting ACOs into hospital-led, health system-led, or physician group-led categories.
Generalizability to the Medicare Population: Strong; understanding of ACO formation and leadership changes is needed for the continued growth and success of accountable care relationships in the Medicare program.
Methods: The Leavitt Partners ACO data was used to identify ACO provider types. Market size estimates were from Torch Insight, a commercial healthcare data aggregator.

Negrusa B, Wiens J, Ullman D. Kidney Care Choices (KCC) model: first annual evaluation report, performance year 2022. The Lewin Group. Published August 2024. Accessed November 20, 2024. https://www.cms.gov/kcc-model-eval-ann-rpt-1

Subtopic: Assessing the Factors that Influence the Ability of PB-TCOC Models to Be Competitive
Type of Source: Report
Objective: To estimate the impact of the Kidney Care Choices (KCC) model for patients in the performance year 2022 and compare outcomes with patients in similar nephrology practices not participating in the KCC model.
Main Findings: Model participants could participate in Kidney Care First (KCF) or Comprehensive Kidney Care Contracting (CKCC). In both model tracks, home peritoneal dialysis increased, with increases observed in home dialysis for KCF and home dialysis training in CKCC. Most quality measures and patient experience for in-center dialysis were unchained, and the waitlist for kidney transplantation increased in the CKCC track.
Strengths/Limitations: The KCC model is voluntary, so findings may not be generalized across all Medicare populations. Although participation spanned 33 states and the District of Columbia, the Midwest and West were underrepresented in the model.
Generalizability to the Medicare Population: Strong; KCC is a voluntary Medicare model.
Methods: Aggregated KCC patients were compared with non-KCC patients to understand demographics, social drivers of health, and kidney disease status differences. An online survey of all active KCF practices was conducted using closed and open-ended questions to understand motivations for joining the model.

NORC at the University of Chicago. Next Generation Accountable Care Organization model evaluation: third evaluation report. Published September 2020. Accessed November 20, 2024. https://www.cms.gov/priorities/innovation/data-and-reports/2020/nextgenaco-thirdevalrpt-fullreport

Subtopic: Assessing Factors that Influence the Ability of PB-TCOC Models to Be Competitive
Type of Source: Report
Objective: To evaluate the Next Generation Accountable Care Organization (NGACO) Model through performance year three (end of 2018).
Main Findings: Across the first three performance years, gross Medicare expenditures decreased; however, net Medicare spending did not decrease. Cumulative net and gross spending patterns differed across cohort years, with the 2016 cohort demonstrating the highest net spending increase and the 2017 cohort demonstrating the most significant reduction in gross spending. In its first year, the 2018 cohort had statistically significant reductions in gross spending. Concerning spending in the third performance year, NGACOs decreased gross but did not reduce net spending. Additionally, the effect size of the model-wide reduction in gross spending in PY3 was more significant than the gross spending reduction in PY2. Regarding utilization, there were no observed model-wide reductions in acute care hospital spending, though there was a 12 percent increase in annual wellness visits across NGACOs. No significant changes in quality of care measures were detected in PY3 or cumulatively.
Strengths/Limitations: The evaluation draws on quantitative and qualitative methods and effectively synthesizes findings from these different methods. The model employs a difference-in-differences design, effectively assessing causal relationships between the model and observed outcomes. The evaluation notes that in future reports, researchers plan to further categorize NGACOs according to their care management/coordination/delivery and risk stratification approaches to isolate better organizational and structural characteristics associated with improved outcomes. Additionally, the evaluation captures only the first three performance years; some outcomes may take longer to see changes.

Generalizability to Medicare Population: Strong; the model evaluated directly served Medicare beneficiaries and providers.
Methods: The evaluation used both quantitative and qualitative methods, including regression modeling such as difference-in-differences modeling to assess the causal effects of the model, qualitative comparative analysis to examine NGACOs' contextual and structural pathways to reduce Medicare spending, interviews with leaders, and surveys with NGACO leadership and affiliated physicians.

NORC at the University of Chicago and the Department of Health and Human Services' Office of Health Policy of the Assistant Secretary for Planning and Evaluation (ASPE). Environmental scan on identifying a pathway toward maximizing participation in population-based total cost of care (PB-TCOC) models. Published September 2024. Accessed December 17, 2024. https://aspe.hhs.gov/sites/default/files/documents/7e033c2185e3c25b6fba7e7bf648f231/PTAC-Sep-16-Escan.pdf

Subtopic: Key Highlights; Approaches to Support Primary and Specialty Care in PB-TCOC Models
Type of Source: Report
Objective: To provide background information to assist PTAC in understanding current issues and opportunities for maximizing participation in population-based total cost of care models.
Main Findings: Current limitations to increasing participation include competing revenue from fee-for-service payment, administrative burden, and provider concerns with shared risk. Opportunities to increase participation include reducing the number of available alternative payment models, aligning technical specifications across models, and increasing financial incentives for participation.
Strengths/Limitations: Including grey and peer-reviewed literature to answer the research questions was a strength.
Generalizability to the Medicare Population: Strong; CMS aims to have all traditional Medicare beneficiaries in an accountable care relationship by 2030, and this report reviews the current state and the next steps to increase participation.
Methods: A list of research questions related to care transitions was drafted. A literature review was conducted to answer the research questions.

NORC at the University of Chicago and the Department of Health and Human Services' Office of Health Policy of the Assistant Secretary for Planning and Evaluation (ASPE). Environmental scan on improving management of care transitions in population-based models. Published June 2023. Accessed January 9, 2025. https://aspe.hhs.gov/sites/default/files/documents/61e603e1beb3f5eb4d528b1e91fadf12/PTAC-Jun-12-Escan.pdf

Subtopic: Approaches to Support Primary and Specialty Care Transformation
Type of Source: Report
Objective: To provide background information to assist PTAC in understanding the current issues and opportunities for improving care transitions in the population-based models.
Main Findings: Barriers to improving care transitions exist at the system, provider, and patient levels, ranging from a lack of electronic health information exchanges to not knowing about care coordination efforts and low use of Medicare transitional care management codes. Efforts to improve care transitions should include medication management, transition planning, patient engagement, and health care provider engagement.
Strengths/Limitations: A strength was a comprehensive list of search terms used for each set of research questions.

Generalizability to the Medicare Population: Strong; the environmental scan provides an overview of care transitions related to population-based models to inform interested parties for targeted improvement efforts.
Methods: A list of research questions related to care transitions was drafted. A literature review was conducted to answer the research questions.

NORC at the University of Chicago. Evaluation of the Next Generation Accountable Care Organization (NGACO) model final report. Published January 2024. Accessed November 15, 2024. https://www.cms.gov/priorities/innovation/data-and-reports/2024/nextgenaco-sixthevalrpt

Subtopic: Assessing Factors that Influence the Ability of PB-TCOC Models to Be Competitive
Type of Source: Report
Objective: To present findings from the NGACO model across its six performance years, assessing if model goals were obtained.
Main Findings: The NGACO model reduced gross spending across performance years. Net spending did not decline, attributable to the shared savings paid to NGACO participants. Spending and utilization declined in acute care hospitals, for professional services (e.g., evaluation and management visits), in outpatient facilities (e.g., ED visits and observations), and spending alone declined in other post-acute care settings. Quality of care was not impacted during the NGACO model performance periods. NGACO participants largely viewed the data analytic capabilities and standardized care management as enhancements to their practices.
Strengths/Limitations: This evaluation covered six performance years and accounted for participants joining and leaving the model over time.
Generalizability to the Medicare Population: Strong; the NGACO is a CMMI model.
Methods: A difference-in-difference analysis was used to assess beneficiary outcomes compared to a matched comparison group. NGACO leadership was surveyed and interviewed. Configurational comparison methods were used to investigate spending outcomes.

Ochieng N, Biniek JF. Beneficiary experience, affordability, utilization, and quality in Medicare Advantage and traditional Medicare: a review of the literature. KFF. Published September 16, 2022. Accessed November 25, 2024. https://www.kff.org/medicare/report/beneficiary-experience-affordability-utilization-and-quality-in-medicare-advantage-and-traditional-medicare-a-review-of-the-literature/

Subtopic: Key Highlights; Assessing Factors that Influence the Ability of PB-TCOC Models to Be Competitive
Type of Source: Report
Objective: To evaluate outcomes between Medicare Advantage (MA) beneficiaries and traditional Medicare insurance.
Main Findings: Many outcomes were similarly rated between beneficiaries with MA and traditional Medicare, including access to care, satisfaction, care coordination, and prescription drug experience. MA beneficiaries were more likely to use the same care provider and receive information during care exchanges. Traditional Medicare beneficiaries were more likely to receive care in highly rated hospitals, skilled nursing facilities, and home health services.
Strengths/Limitations: The literature review was comprehensive, spanning multiple search engines, but it could have missed relevant articles and findings.
Generalizability to the Medicare Population: Strong; Medicare beneficiaries must select either an MA or a traditional Medicare health insurance plan, and this review provides insight into outcomes from both options.
Methods: A literature review of 62 studies comparing MA and Medicare fee-for-service outcomes was conducted.

Office of the National Coordinator for Health Information Technology (ONC). Interoperability among office-based physicians in 2019. Published July 2022. Accessed December 4, 2022. https://www.healthit.gov/sites/default/files/2022-07/Interoperability_Among_Office-Based_Physicians_in_2019.pdf.

Subtopic: Approaches to Support Primary and Specialty Care Transformation
Type of Source: Report
Objective: To illustrate physician practices related to interoperable health information exchanges.
Main Findings: Approximately 65 percent of physicians sent, received, or queried patient health information electronically, while 35 percent remained in paper-based systems. Most physicians using electronic information exchanges reported benefits that included improving care quality and coordination.
Strengths/Limitations: N/A
Generalizability to the Medicare Population: Moderate; the progress of physicians using electronic information exchanges is promising, and Medicare beneficiaries will benefit from improved care quality and coordination.
Methods: Nationally representative survey data informed the findings of this report brief.

Office of the National Coordinator for Health Information Technology (ONC). Interoperable exchange of patient health information among US hospitals: 2023. Published May 2024. Accessed December 4, 2024. https://www.healthit.gov/sites/default/files/2024-05/Interoperable-Exchange-of-Patient-Health-Information-Among-U.S.-Hospitals-2023.pdf.

Subtopic: Key Highlights; Approaches to Support Primary and Specialty Care Transformation
Type of Source: Report
Objective: To describe US hospitals that routinely engage in interoperable exchange of information, including sending, receiving, finding, and integrating in patient care.
Main Findings: The interoperable exchange of information in US hospitals increased by 52 percent, from 46 percent in 2018 to 70 percent in 2023. Up to 90 percent of hospitals send patient information electronically, while approximately 75 percent integrate the information received within patient EHRs.
Strengths/Limitations: N/A
Generalizability to the Medicare Population: Moderate; the interoperable exchange of patient information is a priority for the Medicare program and value-based payment models. Seamless, electronic information exchange enhances Medicare beneficiaries' health care experience and outcomes.
Methods: ONC has tracked hospital interoperable exchange use since 2014, and that data was used to inform this report brief.

Ouayogode MH, Fraze T, Rich EC, Colla CH. Association of organizational factors and physician practices' participation in alternative payment models. *JAMA Netw Open*. 2020;3(4);e202019. doi:10.1001/jamanetworkopen.2020.2019

Subtopic: Key Highlights; Assessing Factors that Influence the Ability of PB-TCOC Models to Be Competitive
Type of Source: Journal Article
Objective: To examine the association of organizational characteristics, ownership, and integration with the intensity of participation in alternative payment models (APMs) among physician practices.
Main Findings: Nearly half (49.2 percent) of practices reported participating in 3 or more APMs, most participating in pay-for-performance and accountable care organization models. The study

found that operating within a health care system, greater clinical and function integration, and being in the Northeast were associated with greater APM participation.
Strengths/Limitations: The study relied on practices serving more than three primary care physicians, limiting its generalizability outside this population. The analysis specifically targeted the benefits/challenges of APMs.
Generalizability to the Medicare Population: Moderate; understanding the profile of organizations participating in APMs and their advantages and disadvantages is valuable for designing public policy and expanding accountable care relationships between Medicare beneficiaries and providers.
Methods: Cross-sectional descriptive study, covariate-adjusted logistic and proposal odds regression models, sensitivity analyses.

Pantely S. Whose patient is it? patient attribution in ACOs. Milliman Healthcare Reform Briefing Paper. Published January 2021. Accessed January 9, 2026. https://www.milliman.com/-/media/milliman/importedfiles/uploadedfiles/insight/healthreform/whose-patient-is-it.ashx#:~:text=Episode%2Dbased%20attribution%20assigns%20each,the%20entire%20course%20of%20treatment

Subtopic: Key Highlights; Approaches to Support Primary and Specialty Care Transformation
Type of Source: Journal Article
Objective: To describe the different components of attribution methods used in accountable care organization (ACO) models.
Main Findings: An attribution method can be based on the patient activity (e.g., visits) or episode-based triggered by an applicable event. Attribution can also be assigned to a single provider or multiple providers. Lastly, attribution can be assigned prospectively or retrospectively. An advantage of prospective attribution versus retrospective attribution is that reporting data is available in a timely manner.
Strengths/Limitations: N/A
Generalizability to the Medicare Population: Strong; it is useful to understand the different attribution methods and their advantages and disadvantages within value-based payment models.
Methods: N/A

Peikes D, Taylor EF, O'Malley AS, Rich EC. The changing landscape of primary care: effects of the ACA and other efforts over the past decade. *Health Aff*. 2020;39(3):421-428. doi:10.1377/hlthaff.2019.01430

Subtopic: Key Highlights; Assessment of and Approaches to Reducing Organizational-Level Barriers
Type of Source: Journal Article
Objective: To describe how primary care has been affected by the Affordable Care Act and the establishment of the Center for Medicare and Medicaid Innovation, which designs and tests care models to enhance primary care while reducing costs and maintaining or improving quality. Lessons learned and future directions are also presented.
Main Findings: Recommendations from the initial eight CMMI models focused on primary care include educating clinicians on implementation changes, meeting clinicians where they are with prior experience in transforming infrastructure and care processes, encouraging a learning culture, simplifying reporting requirements, recognizing that it takes times to redesign systems, and involve many providers. Models can be enhanced by creating stronger incentives, transparently describing payment approaches, designing for multi-payer collaboration, tailoring educational and learning outreach, and providing data feedback. Including changes for other

providers such as specialists and hospitalists in models and testing higher funding for primary care is recommended for present-day models.
Strengths/Limitations: N/A
Generalizability to the Medicare Population: Strong; this article discusses the history of CMMI and recommendations for the future of model design.
Methods: This article was informed by evaluations of the Comprehensive Primary Care and Comprehensive Primary Care Plus models combined with clinical and research experience in primary care services and delivery.

Piña IL, Cohen PD, Larson DB, et al. A framework for describing health care delivery organizations and systems. *Am J Public Health*. 2015;105(4):670-679.
Subtopic: Background on Identifying Pathways for Maximizing Participation of Different Kinds of Organizations in PB-TCOC Models
Type of Source: Journal Article
Objective: To establish a common framework and language for discussing health delivery system changes.
Main Findings: The taxonomy developed six domains, including capacity, organizational structure, finances, patients, care process and infrastructure, and culture. The taxonomy can be applied to organizations of all sizes.
Strengths/Limitations: The taxonomy was developed with stakeholder participation and input.
Generalizability to the Medicare Population: Moderate; the taxonomy facilitates transparent evaluations of health care systems, and establishes a common language for future research and evaluation.
Methods: The taxonomy was created from a literature review of prior health care system taxonomies and group discussions with AHRQ's Effective Health Care Stakeholder Group (SG) and the Delivery Systems Committee (DSC).

Rolnick JA, Liao JM, Emanuel EJ, et al. Spending and quality after three years of Medicare's bundled payments for medical conditions: quasi-experimental difference-in-differences study. *BMJ*. 2020;m1780. doi:10.1136/bmj.m1780
Subtopic: Assessment of and Approaches to Reducing Organizational-level Barriers
Type of Source: Journal Article
Objective: To assess the association among hospitals participating in the Bundled Payments for Medical Conditions (BPCI) model 2 and long-term changes in spending, 90-day mortality, and use for acute myocardial infarction, congestive heart failure, chronic obstructive pulmonary disease, and pneumonia.
Main Findings: Among BPCI-participating hospitals, costs decreased by 1.2%, and mortality did not change. Skilled nursing use spending decreased while home health spending increased.
Strengths/Limitations: Only Model 2 of BPCI was used in this evaluation.
Generalizability to the Medicare Population: Strong; BPCI is a CMMI model that produced cost savings among bundles of non-surgical conditions.
Methods: Propensity score matching matched hospitals participating in and not participating in the BPCO model 2. Difference-in-difference analysis was used to assess the study's outcomes.

Rooke-Ley R, Song Z, Zhu JM. Value-based payment and vanishing small independent practices. JAMA. 2024;332(11):871-872. doi:10.1001/jama.2024.12900
Subtopic: Assessing Factors that Influence the Ability of PB-TCOC Models to Be Competitive
Type of Source: Editorial

Objective: To describe the challenges that independent physicians face within the value-based payment (VBP) landscape.
Main Findings: Transitioning to VBP for independent physicians can be challenging because of the health technology infrastructure requirements, knowledge of coding practices, and quality measure reporting. Strategies to support independent physicians who choose not to join a larger health care system include subsidizing practices and capital to participate in VBP.
Strengths/Limitations: N/A
Generalizability to the Medicare Population: Moderate; this article highlights tensions of independent physicians with VBP and presents policy suggestions to maintain independent practices in Medicare and the larger health care system.
Methods: N/A

Schurrer J, Timmins L, Gruszczynski M, et al. Evaluation of the Primary Care First model: second annual report. Mathematica. Published February 2024. Accessed November 20, 2024. https://www.cms.gov/priorities/innovation/data-and-reports/2024/pcf-second-eval-rpt

Subtopic: Assessing Factors that Influence the Ability of PB-TCOC Models to Be Competitive
Type of Source: Report
Objective: This second annual report assesses the experiences of the first two cohorts of the Primary Care First (PCF) Model and evaluates preliminary outcomes of hospitalizations and Medicare expenditures among participating beneficiaries.
Main Findings: The report found that most participants had prior clinical transformation experience, which may have limited their room for improvement. Preliminary results indicated no impact on hospitalizations, and Medicare expenditures increased by 1.5 percent during the model evaluation period. Modifying the payment accuracy adjustment mid-way through the model was seen as a penalty by participants.
Strengths/Limitations: The report was presented as preliminary results because of upcoming changes to a comparison group, and the likelihood of finding meaningful changes in outcomes early in the model was low.
Generalizability to the Medicare Population: Strong; this report assesses a CMMI model focused on primary care.
Methods: Primary data was collected through a survey and interviews to assess how cohorts implemented the model. Qualitative responses were analyzed and coded to determine the main themes.

Shah S, Rooke-Ley H, Fuse Brown EC. Corporate investors in primary care- profits, progress, and pitfalls. *N Eng J Med*. 2023;388(2):99-101. doi:10.1056/NEJMp2212841

Subtopic: Assessing Factors that Influence the Ability of PB-TCOC Models to Be Competitive
Type of Source: Editorial
Objective: To review the trend behind corporate investment in primary care, the associated risks and benefits, and strategies to reduce risks.
Main Findings: Total-cost value-payment payments are appealing to investors because they have the potential to increase profits by growing their patient population and allotted budgets. Benefits include support for administrative activities for physicians and innovative care models for patients. Risks for patients include equity and access to care.
Strengths/Limitations: N/A
Generalizability to the Medicare Population: Strong; this article outlines the current landscape of corporate investment in primary care, describing both advantages and barriers to care.
Methods: N/A

Shenfled DK, Navathe AS, Emanuel EJ. The promise and challenge of value-based payment. *JAMA Intern Med*. 2024;184(7):716-717. doi:10.1001/jamainternmed.2024.1343

Subtopic: Assessing Factors that Influence the Ability of PB-TCOC Models to Be Competitive
Type of Source: Editorial
Objective: To describe the current state of value-based payment (VBP) models, presenting the challenges of value-based payment design and adoption.
Main Findings: The Comprehensive Care for Joint Replacement (CJR) and Medicare Shared Savings Programs (MSSP) have successfully reduced costs while maintaining or improving the quality of care. Challenges exist: VBP remains only a small part of physician pay, with limited downside and upside risk. Further, VBP incentives are stronger for physician-led ACOs rather than hospital-led ACOs. Lastly, transitioning to VBP is challenging and slow-moving, with payment being difficult to understand when tied to quality and outcomes.
Strengths/Limitations: N/A
Generalizability to the Medicare Population: Strong; this article summarizes the main challenges in VBP models and presents areas to focus on and improve for broader adoption.
Methods: N/A

Shortell SM, Gottlieb DJ, Martinez Camblor P, O'Malley AJ. Hospital-based health systems 20 years later: a taxonomy for policy research and analysis. *Health Serv Res*. 2021 Jun;56(3):453-463. doi:10.1111/1475-6773.13621

Subtopic: Background on Identifying Pathways for Maximizing Participation of Different Kinds of Organizations in PB-TCOC Models
Type of Source: Journal Article
Objective: To create an updated hospital-based taxonomy accounting for changes in the health care environment, including value-based payment, telehealth, and consolidation, among other factors.
Main Findings: Four types of hospital-based systems were identified in the taxonomy, including 1) decentralized, less differentiated, 2) highly differentiated, decentralized, 3) highly differentiated, highly centralized, and 4) undifferentiated, decentralized, and low integration. Most hospital-based systems were found to be decentralized and functioned as holding companies for individual hospitals.
Strengths/Limitations: The National Survey of Health System and Organizations measures validated the taxonomy.
Generalizability to the Medicare Population: Moderate; the taxonomy categorized health care systems and operations for monitoring as health care evolves to value-based payment methods, technological advancements, and mergers and consolidation.
Methods: Hierarchical clusters analysis, a one-way analysis of variance, and a discriminant analysis were used to create groups within the taxonomy.

Shortell SM, Wu FM, Lewis VA, Colla CH, Fisher ES. A taxonomy of accountable care organizations for policy and practice. *Health Serv Res*. 2014 Dec;49(6):1883-1899. doi:10.1111/1475-6773.12234

Subtopic: Key Highlights; Background on Identifying Pathways for Maximizing Participation of Different Kinds of Organizations in PB-TCOC Models
Type of Source: Journal Article
Objective: To understand the characteristics of accountable care organizations (ACOs) and the factors related to the success or failure of these organizations.
Main Findings: The exploratory ACO taxonomy resulted in three clusters of ACOs, including 1) large, integrated delivery systems, 2) smaller, physician-led ACOs, and 3) hybrid ACOs.

Strengths/Limitations: The taxonomy was informed by data from early ACOs, which may not reflect present-day ACOs.
Generalizability to the Medicare Population: Strong; this work helps define characteristics of ACO participating in value-based payment programs.
Methods: 173 ACO executives completed a survey either online or by phone. Cluster analysis, pairwise comparisons, and discriminant analyses were performed.

Spence J, Sussman JH. 2019 CFO outlook: Healthcare: Performance management trends and priorities in healthcare. Kaufman Hall. Published 2019. Accessed December 15, 2024. https://www.kaufmanhall.com/sites/default/files/documents/2019-01/2019-cfo-outlook-healthcare.pdf.

Subtopic: Key Highlights; Assessment of and Approaches to Reducing Organizational-Level Barriers
Type of Source: Report
Objective: To identify industry progress with performance management among chief financial officers (CFOs) and senior financial executives.
Main Findings: CFOs were less confident in their organizational ability to manage financial change. Managing changing payment methods was a high-priority area among CFOs.
Strengths/Limitations: The study sample included executives representing approximately 160 health systems, hospitals, and other health care settings, but may not be limited in generalizability.
Generalizability to the Medicare Population: Moderate; hearing from corporate leadership about their experiences with value-based payment model participation is valuable for future policy planning and for increasing participation.
Methods: Online survey

Timbie JW, Ridgely MS. What have we learned about health care consolidation? RAND Health Care. Accessed November 26, 2024. https://www.rand.org/health-care/centers/health-system-performance/what-have-we-learned/consolidation.html

Subtopic: Assessment of and Approaches to Reducing Organizational-Level Barriers
Type of Source: Blog Post
Objective: To describe and define clinically integrated networks (CINs) in the context of health system changes in response to value-based payment reform.
Main Findings: CINs comprise health systems that partner to improve care and lower costs without a formal merger. They offer operational advantages for health systems and independence for partnered physician practices while retaining support for EHR systems and quality measure reporting. It remains unclear if the development of CINs increases health care costs.
Strengths/Limitations: N/A
Generalizability to the Medicare Population: Strong; CINs are one type of integrated health system organization that operates within value-based environments.
Methods: N/A

Tsiachristas A. Financial incentives to stimulate integration of care. *Int J Integr Care*. 2016;16(4):8. doi:10.5334/ijic.2532

Subtopic: Key Highlights; Assessment of and Approaches to Reducing Organizational-Level Barriers
Type of Source: Journal Article

Objective: To summarize financial incentives related to care integration, present barriers and facilitators to financial incentives, and describe the optimal design of financial incentives.
Main Findings: Financial incentives in health care settings can be rewards or penalties and can be used to stimulate performance improvements. Comprehensive and integrated financial incentives, such as global payments, come with greater risk. Designing incentives should align with intrinsic motivations, reward and balance risk with premiums, offer stakeholders choices, blend group and individual incentives, minimize the time between care and reward, and find incentives with sustainable effects over time.
Strengths/Limitations: This perspective paper does not indicate how the author found or analyzed the included literature.
Generalizability to the Medicare Population: Strong; the paper presents background and strategies for designing health care incentives, which is a strategy for supporting success in alterative payment models in the Medicare program.
Methods: N/A

Tsiachristas A, Dikkers C, Boland MR, Rutten-van Mölken MP. Exploring payment schemes used to promote integrated chronic care in Europe. *Health Policy*. 2013;113(3):296-304. doi:10.1016/j.healthpol.2013.07.007

Subtopic: Assessment of and Approaches to Reducing Organizational-Level Barriers
Type of Source: Journal Article
Objective: To review payment approaches implemented to address chronic conditions in European countries.
Main Findings: Austria, France, and Germany used pay-for-coordination, England used pay-for-performance, and the Netherlands used bundled payment. Financial incentives, flexible work roles, and stakeholder buy-in facilitated payment schemes across the countries. Misaligned incentives and gaming the system were barriers. Additionally, the success of payment approaches in addressing chronic conditions was dependent on the structure of the health care system.
Strengths/Limitations: Qualitative interviews were limited in number and hindered the ability to generalize findings.
Generalizability to the Medicare Population: Moderate; many of these same payment approaches are implemented in value-based payment models, and lessons from these countries can be applied to enhance the treatment of chronic conditions in the US health care system.
Methods: A literature review and telephone interviews with experts in chronic care in European countries were conducted.

Van Hoorn ES, Lizhen Y, Leeuwen N, Raat H, Lingsma HF. Value-based integrated care: a systematic literature review. *Int J Health Policy Manag*. 2024;13. doi:10.34172/ijhpm.2024.8038

Subtopic: Key Highlights; Approaches to Support Primary and Specialty Care Transformation
Type of Source: Journal Article
Objective: To identify elements for integrated care within value-based health care and provide recommendations for successful implementation within value-based environments.
Main Findings: The most frequently cited facilitators of value-based health care integration were information technology, financing, and communication and coordination. Barriers were related to information technology, financing, and workforce. The literature supported that care integration efforts positively influence clinical outcomes, health care utilization, and patient-reported outcomes in value-based health care.
Strengths/Limitations: The systematic review may have missed articles on value-based health care as a universally accepted definition had not been established.

Generalizability to the Medicare Population: Strong; care integration is an integral part of value-based health care transformation and alternative payment models.
Methods: A systematic review of the literature was performed.

Werner RM, Emanuel E, Pham HH, Navathe AS. The future of value-based payment: a roadmap to 2030. Penn Leonard Davis Institute of Health Economics. Published February 2021. Accessed November 26, 2024. https://ldi.upenn.edu/our-work/research-updates/the-future-of-value-based-payment-a-road-map-to-2030/

Subtopic: Assessing Factors that Influence the Ability of PB-TCOC Models to Be Competitive
Type of Source: White Paper
Objective: To assess the impact of alternative-based payment models on the US health care system and provide recommendations for future value-based payment models.
Main Findings: Over the ten years since the passage of the Affordable Care Act, many alternative payment models (APMs) have been piloted across the country to transform the US health care system to prioritize value over volume. These models have yet to be widely adopted, and many of their methodologies overlap, causing administrative burdens. Additionally, the models have yet to reduce health disparities among racial or socioeconomic lines successfully. To improve and continue the progress of prioritizing value, the authors recommended enhancing the alignment of models, simplifying the payment landscape, encouraging risk-bearing models, providing incentives to move providers away from fee-for-service payment, setting a goal for achieving health equity, and integrating social services into health care delivery.
Strengths/Limitations: The white paper used lessons learned from the models to inform recommendations for future models.
Generalizability to the Medicare Population: Strong; APMs arise from CMS initiatives, and thus, many Medicare patients participate in these models.
Methods: The white paper included an analysis and review of the APM landscape.

Yan BW, Samson LK, Ruhter J, Zuckerman RB, Sheingold SH. Understanding Medicare ACO adoption in the context of market factors. *Popul Health Manag*. 2021;24(3):360-368. doi:10.1089/pop.2020.0060

Subtopic: Key Highlights; Assessing Factors that Influence the Ability of PB-TCOC Models to Be Competitive
Type of Source: Journal Article
Objective: To understand how market factors such as commercial insurance market penetration, Medicare Advantage (MA) market penetration, and physician practice concentration influence accountable care organization (ACO) participation.
Main Findings: ACOs were likelier in urban counties with high population density, higher MA penetration, higher household income, and unconcentrated physician markets. Counties with no ACO practices were more likely to be rural, with lower population density and more concentrated physician and commercial insurance markets. ACO presence was associated with less concentrated physician markets and moderate MA penetration.
Strengths/Limitations: This study only examined Medicare ACOs and was cross-sectional and nonrandomized.
Generalizability to the Medicare Population: Strong; this study provides evidence that MA penetration and physician practice concentration are market factors that influence participation in ACOs.
Methods: Logistic regression analysis examined the association between ACO presence in a county and market factors.

Yasaitis LC, Pajerowski W, Polsky D, Wener RM. Physician participation in ACOs in lower in places with vulnerable populations than in more affluent communities. *Health Aff*. 2016. doi:10.1377/hlthaff.2015.1635

Subtopic: Assessment of and Approaches to Reducing Organization-Level Barriers
Type of Source: Journal Article
Objective: To assess physician participation in Medicare and commercial accountable care organizations (ACOs) and the sociodemographic characteristics of likely patient populations.
Main Findings: Female physicians, physicians in large and multispecialty practices, and primary care practices were likelier to be in an ACO. Nationally, areas with low participation had residents who were more likely to have less than a high school education, live in poverty, be Black, or be disabled.
Strengths/Limitations: Physician data was self-reported and did not include all Medicare physicians. However, the physician sample included in the study was geographically representative.
Generalizability to the Medicare Population: Strong; achieving equity in health care access and health outcomes is a priority for the Medicare program. Future ACO development can target areas where care disparities are present.
Methods: Multivariate linear regressions were performed to examine the association between ACO provider participation rates and the sociodemographic characteristics of the practice location.

Yordanov D, Oxholm AS, Prætorius T, Kristensen SR. Financial incentives for integrated care: a scoping review and lessons for evidence-based design. *Health Policy*. 2024;141:104995. doi:10.1016/j.healthpol.2024.104995

Subtopic: Key Highlights; Assessment of and Approaches to Reducing Organizational-Level Barriers
Type of Source: Journal Article
Objective: To identify financial incentives that promote care integration across providers for patients with certain chronic conditions and assess these incentives' cost-effectiveness.
Main Findings: Four types of incentives were identified: bundled payments, pay for performance, pay for coordination, and shared savings. Shared savings had substantial evidence supporting improvements in quality of care and cost-sharing. Bundled payments had mixed results in expenditures, depending on the setting. Examining the cost-effectiveness of each incentive type was limited due to few studies in this area.
Strengths/Limitations: The strength was that the literature assessed and included in the review represented the US and Dutch health care systems. A limitation was the limited research on cost-effectiveness due to program effects taking time to develop and measure.
Generalizability to the Medicare Population: Strong; the incentives identified and lessons from the study are informative for future development of value-based payment models and incentives for care coordination.
Methods: A scoping review of the literature was conducted.

Appendix G. References

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