

Environmental Scan on Improving Care Delivery and Integrating Specialty Care in Population-Based Models March 1, 2023

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 series of theme-based discussions in 2023 on issues and opportunities related to improving care delivery and integrating specialty care in population-based models. The discussion will examine key issues related to improving specialty integration in advanced primary care models and Accountable Care Organizations (ACOs); approaches for structuring coordination between primary care providers and specialists; options for defining and embedding specialty episodes within population-based total cost of care (PB-TCOC) models; structuring financial incentives; the role of health information technology (HIT) and data analytics in specialty integration; addressing challenges affecting specialty integration for safety-net providers and rural providers; and identifying appropriate performance measures for specialty integration.¹ The environmental scan is based on information that was publicly available relating to this topic in the literature as of the time that the analysis was completed.

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List of Acronyms

ACO	Accountable Care Organizations
ADHD	Attention-deficit/hyperactivity disorder
AHA	American Hospital Association
AHC	Accountable Health Communities
AHRQ	Agency for Healthcare Research and Quality
APC	Advanced primary care
APM	Alternative Payment Models
ASPE	Assistant Secretary for Planning and Evaluation
BPCI	Bundled Payments for Care Improvement
CAHPS	Consumer Assessment of Healthcare Providers and Systems
CEC	Comprehensive ESRD Care
CHART	Community Health Access and Rural Transformation
CHF	Congestive heart failure
CHIP	Children's Health Insurance Program
CJR	Care for Joint Replacement
CKD	Chronic kidney disease
CMMI	Center for Medicare and Medicaid Innovation
COPD	Chronic obstructive pulmonary disease
CT	Computed tomography
DRG	Diagnosis-related group
DSRIP	Delivery System Reform Incentive Payment
ED	Emergency department
EHR	Electronic health records
EOM	Enhancing Oncology Model
ESRD	End-stage renal disease
ETC	ESRD Treatment Choices
FFS	Fee-for-service
FQHC	Federally Qualified Health Center
HCBS	Home and community-based service
HHS	Health and Human Services
HIE	Health Information Exchanges
HIT	Health information technology
HIV	Human immunodeficiency virus
HMO	Health maintenance organization
HRSN	Health-related social needs
JMAP	Johns Hopkins Medicine Alliance for Patients
KCC	Kidney Care Choices
KCF	Kidney Care First
MACRA	Medicare Access and CHIP Reauthorization Act
MIPS	Merit-Based Incentive Payment System
MRI	Magnetic resonance imaging
MS	Multiple sclerosis
NGACO	Next Generation Accountable Care Organization
OCM	Oncology Care Model
OIG	Office of the Inspector General

PAC	Post-acute care
PACE	Program of All-Inclusive Care for the Elderly
PBPM	Per-beneficiary per-month
PCMH	Patient-centered medical homes
PCP	Primary care providers
PFPM	Physician-focused payment models
PPS	Prospective payment system
PRT	Preliminary Review Team
PTAC	Payment Model Technical Advisory Committee
RA	Rheumatoid arthritis
SAMHSA	Substance Abuse and Mental Health Services Administration
SCM	Specialty condition-based payment models
SDOH	Social determinants of health
SUD	Substance use disorder
TCOC	Total Cost of Care

Section 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 PTAC evaluates 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). Several of the 10 criteria for proposed PFPMs that PTAC uses to evaluate stakeholder-submitted proposals are especially pertinent to improving care delivery and specialty integration, and nesting specialty episodes within population-based total cost of care (TCOC) models.ⁱⁱⁱ

Given the increased emphasis on developing larger population-based APMs that encourage accountable care relationships, PTAC conducted a series of theme-based discussions in 2022 that examined key care delivery and payment issues related to developing and implementing population-based TCOC models, including potential relationships between larger population-based TCOC models and episode-based or condition-specific models; lessons learned from integrated delivery systems and risk-bearing entities and best practices for incorporating specialty innovations into larger, population-based models; and options for financially structuring population-based TCOC models to incentivize care delivery improvements and provider participation.

A key theme that emerged during the 2022 meeting series was the role of specialty integration in population-based TCOC models including issues and opportunities related to improving care delivery and integrating specialty care in population-based TCOC models. Relevant topics identified for further investigation include:

- Strengthening and increasing participation in team-based advanced primary care models;
- Incentivizing reductions in TCOC within Accountable Care Organizations (ACOs) for services that are provided by specialists;
- Embedding specialty episodes within population-based TCOC models;
- Increasing participation of safety-net providers and rural providers;
- Improving provider readiness to gradually assume higher levels of risk;

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 (28) and the number of proposals that have been withdrawn by stakeholders (7, including one proposal that was withdrawn prior to any review by the Committee).

ⁱⁱⁱ PTAC is using the following working definition for PB-TCOC models. *A population-based total cost of care (PB-TCOC) model is an Alternative Payment Model (APM) in which participating entities assume accountability for quality and TCOC and receive payments for all covered health care costs 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.*

- Approaches for reducing cost-shifting among health care settings;
- The role of health information technology (HIT) and data analytics in specialty care integration;
- Identifying appropriate performance measures for specialty care integration;
- Determining how population-based TCOC models can improve management of care transitions for patients across the health care continuum and between health care and community services; and
- Factors affecting population-based TCOC model implementation, such as considerations related to multi-payer participation and technical issues related to attribution, benchmarking, risk adjustment, and performance metrics.

Several previous submitters have addressed specialty integration, including care coordination between primary care providers (PCPs) and specialists, in their payment methodology and performance measures for their proposed models. PTAC has assessed the submitters' ideas for specialty integration and has provided comments and recommendations on their strengths and weaknesses in the Committee's reports to the Secretary.

The purpose of this environmental scan is to provide PTAC members with background information and context about current perspectives on issues and opportunities related to improving care delivery and integrating specialty care in population-based models. The information in this environmental scan is expected to help PTAC members review specialty integration components in proposals previously submitted to the Committee. In addition, the environmental scan can inform the Committee's review of future proposals, and future comments and recommendations Committee members may submit to the Secretary relating to specialty integration in population-based TCOC models.

This environmental scan summarizes and analyzes relevant information from PTAC's review of proposals from previous submitters. This environmental scan also synthesizes findings from relevant literature; selected Center for Medicare and Medicaid Innovation (CMMI) models; and other Centers for Medicare & Medicaid Services (CMS) and state models, demonstrations, and programs. 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 explore the current state of specialist integration in primary care (Section IV); enhancing specialty participation in team-based models (Section V); nesting specialty episodes within population-based TCOC models (Section VI); incentivizing specialist participation and engagement within population-based TCOC models (Section VII); unintended consequences from provider consolidation within population-based TCOC models (Section VIII); health information technology and data analytics (Section IX); enhancing performance metrics (Section X); relevant features in selected PTAC proposals (Section XI); and areas where additional information is needed (Section XII). Additionally, a list of exhibits and a list of abbreviations can be found at the beginning of the environmental scan, following the table of contents.

Section II. Key Highlights

The following section highlights important findings from this environmental scan on approaches for improving specialty care integration and care coordination with PCPs in population-based models.

Current approaches for integrating specialty care with primary care

Specialists are integrated with primary care as patient-centered medical neighbors (PCMNs) in patient-centered medical homes (PCMHs) based on the patient's condition and severity through three common approaches:

1. Specialists provide guidance, support, and consultation to the PCP who maintains responsibility for the patient's care;
2. Specialists assume co-responsibility with the PCP and manage a set of problems related to the patient's condition; or
3. Specialists temporarily assume full responsibility as the first point of contact for the patient.

Please see Section IV.B for additional information about medical neighborhoods.

Commonly, there is an arrangement through a care coordination agreement between the PCMH and the specialty practice. The care coordination agreement specifies who is accountable for which processes and outcomes of care, as well as the content of the patient's data set, which could include information on patients' medical record, admission dates, their care plan, and/or their social determinants of health (SDOH). This data travels with the patient throughout their stages of care. The care coordination agreement clarifies the processes and transitions between care providers for each patient's care plan.¹

Specialist Integration in Rural Communities

Patients living in rural areas often have reduced access to specialist care due to specialists clustering in urban areas and fractured technological infrastructure.² Telemedicine models in which rural patients are able to access specialist services via audio or video technology have resulted in positive health outcomes among these patients.^{3, 4, 5} These models allow for a wide range of mental health specialists to treat patients who would otherwise be unable to access their services. The models also allow for better support for substance use and disease management to rural patients. The Centers for Medicare & Medicaid Services (CMS) has several innovative models that connect beneficiaries to clinical and/or community services in order to address unmet health-related social needs (HRSNs), including the Pennsylvania Rural Health Model (PARHM) and the Community Health Access and Rural Transformation (CHART) Model.

Specialist Integration for Safety Net Providers

Medicare beneficiaries receive health care services from safety net providers have been less likely to benefit from population-based TCOC models. For some FQHCs, participation in APMs has improved care coordination between primary, specialty, and hospital-based care, and has also opened new avenues for addressing the health-related social needs of their patients.⁶ If population-based TCOC models seek to be effective in lowering Medicare costs, it is important to specifically consider potential barriers to APM uptake by safety net providers who serve beneficiaries with high costs and high needs. Safety-net providers have often been hesitant to participate in these models due to a lack of sufficient models with features that specifically account for the challenges of delivering care in low-income settings, such as appropriate risk adjustment methodologies.^{7,8} Researchers have also noted the importance of identifying appropriate quality measures to better evaluate the care delivered to populations with higher social risk.⁹

The challenge of incentivizing safety-net provider participation in APMs is further complicated because the prospective payment bundles that Medicare and Medicaid pay FQHCs do not accurately reflect the

cost of delivering care to those seeking services from FQHCs.^{10 11 12 13} Given the unique payment arrangement between FQHCs and government health programs, many APMs do not account for FQHCs in their design,¹⁴ and lack mechanisms for incentivizing FQHCs to participate.

Researchers and providers have identified several strategies that they believe will help encourage FQHCs to participate in APMs. Some strategies are similar to those suggested for APMs more broadly, such as longer on-ramps and up-front funding to support care management and infrastructure investments, especially for smaller providers.¹⁵ Practitioners have also highlighted the need for partnerships with community organizations and social services providers who can assist FQHCs in addressing the health-related social needs (HRSNs) of their patients.¹⁶ Other strategies are relatively unique to FQHCs. For example, some researchers have suggested calculating capitation amounts based on the actual number and profile of patients served by an FQHC rather than on the patients assigned to the FQHC by a health plan (typically a Medicaid managed care organization).¹⁷ Additionally, some FQHC leaders have also suggested that payment models better account for the uninsured patients, who, at many FQHCs, can account for over a quarter of all patients.¹⁸

Opportunities for reducing spending for services provided by specialists

While specialists often spend limited time with patients due to their nature of treating isolated aspects of a patient's condition, for some conditions spending reductions may result from creating incentives for longer visit durations for specialty care early in the progression of a disease or episode to manage utilization and spending over a longer period of time. Approaches to incentivize reductions in spending for services provided by specialists include:

- Increasing specialist visit duration, which will allow the specialist to spend more time on care management and patient education;¹⁹
- Frontloading care, which involves higher frequency or intensity of medical interventions earlier in the care episode;²⁰
- Standardizing and tailoring guidelines to different specialties, which may target certain types of spending within specialties;²¹ and
- Reshaping utilization to substitute high-value for low-value services through involving specialists in APMs.²²

Opportunities for improving specialty care and related outcomes

Several opportunities exist to improve specialty care and its integration into primary care systems. For example, the specialty services provided in end-of-life care can be enhanced by incorporating palliative care into population-based TCOC models, which would improve the continuity of care across the life cycle.²³ Palliative care is associated with lower acute care utilization, lower symptom burden, and improved patient and caregiver outcomes.²⁴

Another opportunity is through incentivizing appropriate clinical referrals in ACOs by promoting a system in which "care delivered by a specialist to whom a PCP referred an attributed beneficiary becomes an extension of the PCP's care."²⁵ Improving clinical referrals will allow the correct specialist to provide tailored care for the patient's condition

Additionally, specialty care can be better integrated into safety-net and rural provider settings to provide these populations with more access to specialist services. Prior and existing APMs have had

unintended barriers affecting participation for certain safety-net and rural providers.²⁶ Approaches for increasing safety-net and rural providers' participation in population-based TCOC models include:

- Establishing longer on-ramps for rural practices interested in APM participation;²⁷
- Developing APMs that specifically target care transformation in rural settings, such as the PARHM;²⁸
 - Ensuring that that APM payment methodologies are “transparent, predictable, and sustainable”;²⁹ and
- Identifying suitable, risk-adjusted quality measures to better evaluate the care delivered to high-risk populations.³⁰

HIT and specialist performance metrics' approaches and opportunities for improvement

Integrating health information technology into health care has been found to improve efficiency among practices, as well as improve patient outcomes.^{31, 32} Electronic health records are used by health care team members to collect patient data, which are then shared through Health Information Exchanges. Adopting data use agreements, having a centralized data system, and implementing collaborative care agreements can improve data quality and subsequent sharing among health care providers and practices.

Specialty care performance measures largely fall into the following categories: prevention and healthy behaviors, care coordination, and patient safety.³³ Specialty care performance measures can be improved by designing them to address components of how specialty care is integrated, including economic incentives and markets, compared to primary care.

Relevant Features in PTAC Proposals

PTAC evaluates 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). Several of the 10 criteria for proposed PFPMs that PTAC uses to evaluate stakeholder-submitted proposals are especially pertinent to improving care delivery and specialty integration, and nesting specialty episodes within population-based TCOC models. The information in the proposals related to specialty integration include the proposals':

- Approach for improving specialty integration;
- Delineation of provider roles and responsibilities;
- Provision of specialist consultations;
- Approach to improve care coordination;
- Provider communication and use of telehealth modalities;
- Managing care transitions; and
- Addressing equity and HRSNs.

Areas where additional research is needed

Opportunities to further research health care system aspects and their role in improving patient outcomes include:

- Assessing the longitudinal impact of nesting specialty episodes on cost and patient outcomes.
- Empirically evaluating the link between capitated payment arrangements and improved care management and coordination.

- Leveraging other digital health tools to improve specialty care and integration.
- Evaluating specialty care integration across varying practice settings.
- Providing more information on specialist integration

Section III. Research Approach

Section III 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 staff from the Office of the Assistant Secretary for Planning and Evaluation (ASPE), with input from a subset of Committee members known as a Preliminary Comments Development Team (PCDT)^{iv}, the following high-level list of research questions was developed to inform this environmental scan:

- What approaches are currently used to integrate specialty care into primary care in different models?
 - What are specialists' roles in advanced primary care (APC) models and ACOs, and among rural providers?
 - How are different specialties (i.e., behavioral health) integrated into primary care?
- What are some opportunities to enhance rural and safety-net providers' participation in population-based models?
- What opportunities exist to increase specialty participation in primary care practices? What are some barriers to specialists' involvement?
 - Are certain specialties better suited for capitation within a PB-TCOC model?
 - What are some innovative approaches for specialty integration (i.e., telehealth)?
- What factors should be considered when nesting specialty episodes in PB-TCOC models?
 - What is the definition of a specialty episode? What are approaches to determine the conditions and services that are associated with different episodes of care?
 - What are the criteria for determining which episodes are most appropriate for nesting?
- What are some unintended consequences from provider consolidation within PB-TCOC models?
- How can health information technology and data analytics be leveraged to improve patient outcomes?
 - What are current strategies for data sharing and coordination among health care providers?
 - What approaches exist to improve data quality and sharing between primary and specialty providers?
- What are options to improve performance metrics, particularly for specialty care and rural providers?

^{iv} A Preliminary Comments Development Team (PCDT) comprised of PTAC members Jennifer Wiler, MD, MBA (Lead); Lawrence Kosinski, MD, MBA; Walter Lin, MD, MBA; Terry L. Mills Jr., MD, MMM; Chinni Pulluru, MD; and Jim Walton, DO, MBA, provided feedback relating to the research approach used in this environmental scan.

III.B. Research Methods

The environmental scan presents background information from a targeted literature review, reviews of PTAC documents, and review of resources related to CMMI and other models. The aim of the targeted internet search was to identify and to synthesize information from existing peer-reviewed publications and gray literature from organizations focused on health care delivery transformation. The following terms were used to conduct this targeted internet search: “specialty care;” “population-based cost of care;” “rural providers;” “nesting specialty episodes;” and “health information technology.” These terms were used with more specific search terms for each section. The inclusion criteria focused the search on publications from health care agencies and research organizations between 2012 and the present, in the English language, and based in the United States. The analysis of PTAC proposals included a thorough review of past proposals, PTAC reports to the Secretary, and content available in other PTAC process documents (e.g., public meeting minutes, Preliminary Review Team [PRT] reports). The analysis of CMMI APMs was based on a review of publicly available resources, including the description and technical documents related to each selected model on the CMMI website and the most recent CMMI evaluation report for the model, when available. Where CMMI evaluation reports were not available on the CMMI website, an online internet search was conducted to locate other relevant evaluations, including those that may have been initiated by the participants themselves. For CMMI models that involved a state Medicaid agency, the agency’s website was reviewed to identify any additional information on the model.

III.C. Definitions

The following are some key definitions relating to the analysis of opportunities for improving care delivery and specialty integration in population-based models.

Acute vs. chronic disease care. CMS defines an episode of care as “the set of services provided to treat a clinical condition or procedure.”³⁴ Acute care “includes the health system components, or care delivery platforms, used to treat sudden, often unexpected, urgent or emergent episodes of injury and illness that can lead to death or disability without rapid intervention.”³⁵ Acute care encompasses several health care domains, including emergency medicine, trauma care, critical care, urgent care, pre-emergency care, and short-term inpatient stabilization.³⁶ Acute care services are often time-sensitive and provided via frequent and rapid interventions.³⁷

There are multiple definitions for what constitutes a chronic disease, which is also referred to as a chronic condition.³⁸ The Agency for Healthcare Research and Quality (AHRQ) defines a chronic disease as a condition that lasts at least 12 months, and “places limitations on self-care, independent living, and social interactions and/or requires ongoing intervention with medical products, services, and special equipment.”³⁹ Chronic diseases span multiple health care domains; thus, a wide range of services may be involved in chronic care.

Care coordination. As discussed in PTAC’s [Environmental Scan on Care Coordination in the Context of Alternative Payment Models \(APMs\) and Physician-Focused Payment Models \(PFPMs\)](#), “there is no consensus on the definition of care coordination.” The AHRQ’s definition provides a starting point: “Care coordination involves deliberately organizing patient care activities and sharing information among all of the participants concerned with a patient’s care to achieve safer and more effective care. This means that the patient’s needs and preferences are known ahead of time and communicated at the right time

to the right people, and that this information is used to provide safe, appropriate, and effective care to the patient.”⁴⁰

“Multiple terms and definitions exist for care coordination. Related terms include coordinated care, care integration, and care management. Variation in overlap among the meaning of these terms often depend on implementing provider type, whether implementation targets certain patient populations, or both. Care coordination may focus on the full population, the needs of specific populations (e.g., those with a common condition or vulnerable groups), or a specific period of time (e.g., acute care or transition). AHRQ’s Care Coordination Measures Atlas outlines several specific functional domains that are associated with care coordination, including: establish accountability or negotiate responsibility; communicate; facilitate transitions; assess needs and goals; create a proactive plan of care; monitor, follow up, and respond to change; support self-management goals; link to community resources; and align resources with patient and population needs. This environmental scan also identifies various activities that are associated with these functions (e.g., use of care coordinators, communication, monitoring, and self-management goals).”⁴¹

Episode-based payment models. Providers in CMS’ innovation centers’ episode payment initiative models continue to receive standard Medicare FFS rates for services provided to beneficiaries during their episodes of care. The payments received during the episode are retrospectively compared to target prices set by CMS. Participants may receive additional payments if the episode’s costs are less than the prospectively determined target price (assuming quality thresholds are met). These pre-determined target prices bundle the items and services the beneficiary receives across care settings as well as types of Medicare. Additionally, participants may be responsible for a repayment to Medicare in models with downside risk.⁴²

Specialty condition-based payment models (SCMs). Condition-level payments for specialized care that could be “nested” within population-based payment models. Payments are designed to support long-term condition management, coordination, and services for beneficiaries. This approach allows for flexibility in amount and risk to facilitate a range of primary-specialty alignment approaches.⁴³

PB-TCOC models with nested episodes. This arrangement includes APMs that use a standard population-based payment approach for a broad population, but also embed more specific variations of that approach to govern payments associated with care for patients during certain clinical episodes, conditions, or diseases that are “nested” within the population-based APM.⁴⁴

Features of specialty integration and nested episodes. Specialist integration into primary care practices varies based on the practices’ capabilities and the clinical needs of the beneficiaries they serve.⁴⁵ Specialists’ involvement starts with the primary care practice’s patient consultation, which provides information to determine if the patient requires specialty care.⁴⁶ In the event the patient does need specialty care, the specialist may provide ongoing guidance to the PCP, manage a discrete set of problems related to the patient’s condition, or temporarily assume responsibility as the first point of contact for the patient’s care. Specialists may play additional roles depending on the nature of the patient’s condition.⁴⁷

Specialist participation can be incorporated into APMs through nested care episodes, which have defined durations during which the primary care team is responsible for patient care.⁴⁸ Acute nested episodes may be initiated by a major procedure or hospital admission, while initiation of condition-based episodes is more likely to be based on diagnostic information. There are differences in the

services involved for acute and condition-based episodes, though one common approach is to create an inclusive bundle of services which includes expenditures related to the overall care for the condition and known complications of procedures routinely performed for the condition.

Specialty care. Specialty care is provided by a doctor who treats only certain parts of the body, certain health problems, or certain age groups.⁴⁹ The care can be ongoing or limited to a specific duration of time and can address a range of medical conditions.^{50,51} Specialty care encompasses many common and high-acuity diseases, including but not limited to cardiology, oncology, rheumatology, immunology, and psychiatry; the services provided vary across medical domains.^{52v}

Primary care. According to CMS, primary care is “a basic level of care usually given by doctors who work with general and family medicine, internal medicine (internists), pregnant women (obstetricians), and children (pediatricians). A nurse practitioner (NP) or a state-licensed registered nurse with special training, can also provide this basic level of health care.”⁵³

Section IV. Current State of Specialist Integration in Primary Care

Specialists are integrated into primary care practices through different approaches and to varying extents.⁵⁴ Several innovative models provide opportunities for improving specialty care accessibility and integration, including in communities traditionally underserved by health care resources. This section draws on experience from PCMH models and other models that have successfully integrated specialty care into their primary care practices.

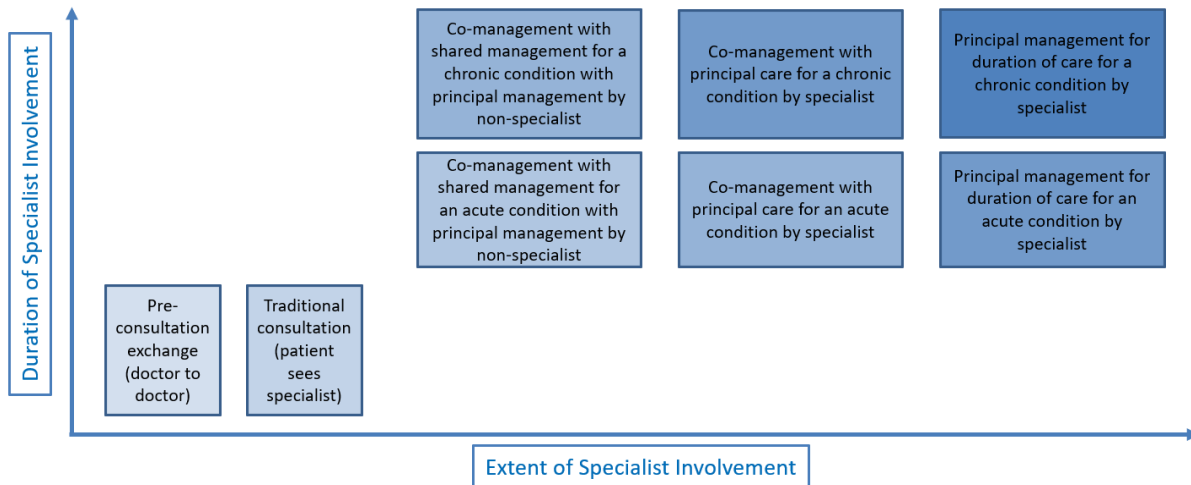
IV.A. Primary Care Physicians, Specialists, and Care Settings’ Coordination Approaches

There are differing levels of communication, coordination, and integration between PCPs and specialists across care settings in population-based models. In one study, PCMH beneficiaries reported that their information was frequently shared between their PCPs, specialists, and hospitals, as indicated by: 1) PCPs’ knowledge that the patient had been hospitalized, and 2) PCPs’ ability to access test results from specialists.⁵⁵ Another study found that higher levels of communication between primary care and specialty physicians, particularly through HIT systems, resulted in lower rates of potentially avoidable hospitalizations.⁵⁶ A study of ACOs and their approaches to integrating specialists found that streamlining data-sharing platforms allowed for optimal coordination between PCPs and specialists, which ultimately improved patient outcomes.⁵⁷ The Comprehensive Care Program has PCPs providing both inpatient and outpatient care to patients with increased risk for hospitalization, with some involvement from specialists.⁵⁸ This program has seen decreases in hospitalization rates among patients and improved interdisciplinary coordination and patient engagement with decision-making.^{59, 60}

Specialists’ roles in delivering care in coordination with PCPs varies based on the extent and duration of specialist involvement needed to provide high-quality, patient-centered care. Exhibit 1 shows an example of the continuum of primary care and specialty care provider participation and co-management of patient care.

^v This document does not discuss post-acute care services in depth, although they are important drivers in many beneficiaries’ care trajectory. These services will be discussed further at the June meeting.

Exhibit 1. Continuum of Specialty Integration by Extent and Duration of Specialist Involvement



For example, for a patient receiving specialty care from a nephrologist, specialists may coordinate with PCPs in the following ways:

- Pre-consultation exchange (doctor to doctor)
 - PCP calls nephrologist for advice on diagnosis and care for patient with diabetes and high blood pressure, conditions that place them at high risk for chronic kidney disease (CKD) and end-stage renal disease (ESRD).
- Traditional consultation (patient sees specialist)
 - PCP requests traditional consultation from nephrologist for a patient whose estimated glomerular filtration rate (eGFR) reaches 59, indicating CKD Stage 3a.
- Specialist co-management with shared management by a PCP for a chronic condition
 - PCP provides periodic assessments of a patient with Stage 3a or higher CKD, and nephrologist follows up if eGFR continues to decline.
- Specialist co-management with principal care for a chronic condition
 - Nephrologist oversees dialysis treatment and management of patient with ESRD, and PCP coordinates screenings and preventive care and manages other conditions.⁶¹

IV.B. Specialists’ Role in Advanced Primary Care Models

Specialists’ role in advanced primary care (APC) models is to serve as PCMN to PCMHs. Specialists’ participation in patient care as PCMN varies based on the patients’ condition and throughout the condition’s progression.^{62 63} Specialists become involved if the PCP determines patients require specialty care. The specialist is then responsible for managing or co-managing the patient’s treatment.

The American College of Physicians notes that there are three main options for co-management of patient care that vary depending on the patient’s condition severity:⁶⁴

1. If the patient’s condition requires less specialty involvement, the PCP will maintain responsibility for the patient’s treatment with the specialist providing ongoing guidance and follow-up.
2. If the patient’s condition warrants a moderate level of specialist input, the specialist will manage a discrete set of problems identified by the PCP pertaining to the patient’s condition.

3. If the patient's condition has progressed to a state that requires intensive specialist involvement, the specialist may temporarily assume responsibility as the patient's first contact of care. The PCP receives ongoing treatment information and continues to provide guidance on aspects of care.

The patient's care may be transferred entirely to the specialty practice if the patient requires treatment for a complex condition that affects multiple aspects of their physical and general functioning, based on the PCP's recommendation and patient's approval. In this instance, the specialty practice would be expected to meet the requirements of an approved third-party PCMH recognition process and affirm willingness to provide care consistent with PCMH's "Joint Principles." The Joint Principles include delivering care that is whole-person, focused on quality and safety, and comprehensive. Ongoing communication and coordination between specialists and PCPs throughout the care process are necessary to effectively provide coordinated care.⁶⁵

IV.C. Behavioral Health Specialists' Integration

Behavioral health care can be integrated into primary care through collaboration between behavioral health care providers and PCPs to varying extents across different settings. In instances with limited collaboration with primary care, behavioral health care professionals work in separate facilities and rarely communicating about patients. This is often seen in private practices and government agencies when caring for patients with routine medical or psychosocial problems. More robust collaboration occurs in a fully integrated system, where behavioral health care professionals are co-located, share the same care approach and systems, and have agreed upon the services and treatment to provide. This is practiced in hospice centers and other clinical settings that care for patients with the most difficult and complex biopsychosocial conditions.⁶⁶

Specialist integration in behavioral health care teams may also improve health care utilization. Research demonstrates significantly higher emergency department (ED) use among patients with comorbid behavioral health conditions (e.g., depression, schizophrenia) or SUD.^{67,68} To address this, several health systems have embedded behavioral health specialists, including psychiatrists, therapists, and clinical social workers, in primary care sites in their networks.^{69,70} In a study of a large, integrated academic medical center, behavioral health specialist integration was associated with a 13 percent decrease in ED use over a three-year period.⁷¹

Several models integrate behavioral health into primary care. The Substance Abuse and Mental Health Services Administration (SAMHSA)'s Primary and Behavioral Health Care Integration program co-locates primary and specialty care in community-based behavioral health settings.⁷² This program was found to improve participants' physical health compared to those who did not participate.⁷³ SAMHSA's Integration of HIV Medical Care into Behavioral Health Programs also focus on co-locating specialists and PCPs to provide HIV medical treatment and behavioral health services.⁷⁴ Another approach is to use a behavioral health consultant (i.e., psychologist, licensed clinical social worker, or other behavioral health professional) as a member of the health care team.⁷⁵ AHRQ's Evidence NOW: Managing Unhealthy Alcohol Use Initiative implements behavioral health services, such as alcohol screening, brief interventions, and medication therapy, into primary care practices.⁷⁶ Additionally, AHRQ has several models which integrate medication-assisted treatment for opioid use disorder in primary care settings. These models involve tiered care models with centralized intake and stabilization of patients with

ongoing management in community settings; screening and induction performed in ED, inpatient, or prenatal settings with subsequent referral to community settings; and community-based stakeholder engagement to develop practice standards and improve quality of care.⁷⁷

IV.D. Involvement of Specialists among Rural Providers and Safety-Net Providers

Rural and safety-net providers care for patients who are traditionally underserved by health care resources and that have high clinical and social risk. Medicare beneficiaries in these settings have been less likely to benefit from population-based TCOC models, at least in part due to hesitancy among rural and safety-net providers to participate in such models. This hesitancy largely stems from a lack of sufficient models with features that specifically account for the challenges of delivering care in rural and low-income settings, such as appropriate risk adjustment methodologies.^{78,79} While there have been attempts to better support rural and safety-net provider participation in APMs, efforts to date have had mixed results.^{80,81} This section highlights several challenges facing rural and safety-net providers, as well as approaches for addressing some of these challenges.

Specialists generally cluster in urban areas with larger populations due to lower service demand in rural areas, limiting rural communities' access to certain specialty services.⁸² Studies have found that increases in the proportion of rural residents is significantly associated with decreases in the number of mental health facilities accepting Medicaid; number of gastroenterologists, general surgeons, and radiation oncologists; availability of substance use disorder (SUD) treatment facilities; and the number of behavioral health professionals.^{83, 84, 85, 86} Moreover, restrictive and fractured infrastructure and technology hinder coordination between PCPs and specialists in rural areas.⁸³ As a result, PCPs absorb functions of specialists' practices, such as scheduling chronic disease management visits, holding group medical visits, and monitoring patients' substance use through office visits.⁸⁷

IV.E. Strategies for Increasing Rural Care Providers' Participation in PB-TCOC Models

Rural providers have been slower to participate in population-based TCOC models and other APMs.⁸⁸ The hesitancy of rural providers to participate in population-based TCOC models and other APMs is often due to insufficient monetary and technological resources, or insufficient patient panels available in rural settings to meet participation requirements.⁸⁹

Researchers have linked features of the 2015 Medicare Access and CHIP Reauthorization Act (MACRA) to possible unintended consequences for rural providers.⁹⁰ MACRA established the Merit-Based Incentive Payment System (MIPS) and the potential for providers to receive bonus payments for participation in certain APMs. MIPS excludes providers with low volumes of Medicare patients from the Quality Payment Program, and many APMs also require a certain threshold of Medicare beneficiaries for participation.⁹¹ This initially disqualified many rural providers from participation in either MIPS or other APMs.⁹²

To address these challenges, CMS developed separate MIPS participation and reporting requirements for rural providers.⁹³ CMS has also created various assistance programs to support rural clinicians, such as the Support for Small Practices initiative, which provides training, education, and technical assistance

surrounding MIPS measures.⁹⁴ However, many rural providers remain unable to participate in APMs due to practice size and/or the relatively high level of risk associated with the financial requirements of most APMs given limited financial reserves. A survey conducted as part of the evaluation of the first performance year (PY1) of the Vermont All-Payer Model (VTAPM) found that rural hospitals believed that the Medicare ACO's payment structure needed to be more "transparent, predictable, and sustainable" for CMS to achieve increased participation.⁹⁵ Only two of Vermont's eight critical access hospitals (CAHs) took part in the Medicare ACO, several of which noted tight financial margins as a leading reason for withholding participation.⁹⁶

CMMI developed APMs that specifically target care transformation in rural settings.^{97,98} The PARHM introduced in 2017 aims to promote rural care delivery transformation through hospital global budgets.⁹⁹ The first evaluation report of the PARHM points to participation by hospitals with a range of characteristics as an indication that the model was able to generate interest from a diversity of hospitals. PARHM participants included independent and system-owned hospitals, as well as prospective payment system (PPS) hospitals and CAHs.¹⁰⁰ Despite these differences, the majority of hospitals in the first cohort had negative total margins in the years directly preceding the model implementation, which participants cited as a key reason affecting their willingness to join a model offering prospective payments and consistent cash flow.¹⁰¹ Several hospitals also identified the support provided by state and CMMI officials as an important factor in their decision to participate in the model.¹⁰² Finally, participants noted that the PARHM offered an opportunity to truly enhance care delivery processes and take part in the broader shift toward population- and value-based care.¹⁰³ Participants did, however, raise concerns regarding whether these activities would be sustainable after the model concludes.¹⁰⁴

In 2020, CMMI introduced the CHART Model.¹⁰⁵ CHART seeks to improve access to efficient, value-based care in rural communities by providing upfront investments and predictable capitated payments while also offering operational and regulatory flexibility through various waiver options.¹⁰⁶ Initially, the model included two tracks: (1) the Community Transformation Track available to hospitals and other state-based organizations, and (2) the ACO Transformation Track available to ACOs.¹⁰⁷ However, the ACO-based track was terminated in February 2022, which limits the ability of many rural beneficiaries to receive care through an ACO.¹⁰⁸ The CHART model is yet to undergo a formal evaluation.

IV.F. Strategies for Increasing Safety-Net Providers' Participation in Population-Based TCOC Models

Safety-net providers serve Medicare beneficiaries with high costs and high needs. If population-based TCOC models seek to be effective in lowering Medicare costs, it is important to specifically consider safety-net providers and potential barriers to APM uptake by these providers. Researchers have noted insufficient risk adjustment for social determinants of health (SDOH) as a key inhibitor to safety-net providers' participation in APMs.¹⁰⁹ For example, MIPS providers who care for dual-eligible beneficiaries have repeatedly had lower MIPS scores, even when accounting for greater clinical risk.^{110,111} To address challenges in performance measurement for safety-net providers, researchers have noted the importance of identifying suitable quality measures to better evaluate the care delivered to populations with higher social risk.¹¹² Research has demonstrated how insufficient quality measures can disincentivize patient-centered care.¹¹³

The challenge of incentivizing safety-net provider participation in APMs is further complicated by the unique payment arrangement that federally qualified health centers (FQHCs) have with Medicare and Medicaid. Medicare and Medicaid pay FQHCs using a PPS in which FQHC providers are paid a bundled rate for primary care visits.¹¹⁴ However, the amount of the prospective bundle does not vary based on the particular service (or services) provided during a given visit.¹¹⁵ Prospective bundled payments were initially intended to proactively account for the additional costs often associated with the FQHC patient population.¹¹⁶ More recently, some providers have indicated that the prospective payment bundles do not accurately reflect the cost of delivering care to those seeking services from FQHCs.¹¹⁷ However, given the unique payment arrangement between FQHCs and government health programs, many APMs do not account for FQHCs in their design.¹¹⁸ Therefore, many APMs lack mechanisms for incentivizing FQHCs to participate.

More recently, some FQHCs have begun to explore participating in APMs. For some FQHCs, participation in APMs, even if not a full population-based TCOC model, has improved care coordination between primary, specialty, and hospital-based care, and has also opened new avenues for addressing the HRSNs of their patients.¹¹⁹ For example, through participation in the Program of All-Inclusive Care for the Elderly (PACE), the Southern California-based FQHC AltaMed Health Services has been able to provide medical care and social services such as meals and transportation to over 3,500 elderly, low-income patients.¹²⁰ Additionally, some FQHCs have elected to take on financial risk, including downside risk.¹²¹

Researchers and providers have identified several strategies that they believe will help encourage FQHCs to participate in APMs. Some strategies are similar to those suggested for APMs more broadly, such as longer on-ramps and upfront funding to support care management and infrastructure investments, especially for smaller providers.¹²² Practitioners have also highlighted the need for partnerships with community organizations and social services providers who can assist FQHCs in addressing the HRSNs of their patients.¹²³ Other strategies are relatively unique to FQHCs; if implemented, these strategies could help to address the fact that many APMs lack features specifically intended to attract and support FQHCs. For example, some experts have suggested calculating capitation amounts based on the actual number and profile of patients served by an FQHC rather than on the patients assigned to the FQHC by a health plan (typically a Medicaid managed care organization).¹²⁴ Many of the patients that health plans attribute to FQHCs never actually receive services from the center to which they are attributed; however, providers may still be held accountable for these unseen patients.¹²⁵ Some FQHC leaders have also suggested that payment models better account for the uninsured patients, who, at many FQHCs, can account for over a quarter of all patients.¹²⁶

IV.G. Strategies for Addressing Health-Related Social Needs and Variation in Access to Specialty Care in Population-Based TCOC models

Health care disparities, reflected in patients' HRSNs, may include differential access to health care by income, literacy, language, location, and/or mobility.¹²⁷ Having at least one HRSN, such as food insecurity, housing instability, or exposure to interpersonal violence, can lead to worse health outcomes. For example, studies have found that people experiencing food insecurity have a higher likelihood of incurring chronic diseases compared to those who are food secure.¹²⁸ Further discussion is provided in

PTAC's [Background Information Related to Optimizing Efforts to Address Social Determinants of Health and Equity in the Context of Alternative Payment Models and Physician-Focused Payment Models.](#)

Care coordination for populations traditionally underserved by health care resources typically includes the PCP performing an initial patient assessment, working with patients to develop care plans, and connecting with other providers to address additional services needed.¹²⁹ Care coordination models can be based on clinical episodes of care, such as chemotherapy regimens, or ongoing treatment for chronic conditions, such as dialysis care for patients with ESRD. These models may focus on specific populations who might benefit most from coordination between health care and social services. Care coordination and approaches to address HRSNs are discussed in PTAC's previous [Environmental Scan on Care Coordination in the Context of Alternative Payment Models \(APMs\) and Physician-Focused Payment Models \(PFPMs\).](#)

Other innovative models for addressing HRSNs include CMMI's Accountable Health Communities (AHC) Model and Medicaid home and community-based service (HCBS) waivers. The AHC model involved bridge organizations screening Medicare and Medicaid beneficiaries for unmet HRSNs and referring them to community services through partnerships with clinical delivery sites.¹³⁰ An evaluation of the model found that participating beneficiaries had a high acceptance rate for navigation (74 percent).¹³¹ Among these participants who completed at least one year of navigation, 14 percent had at least one HRSN resolved. Participating beneficiaries were also found to have 9 percent fewer ED visits than those who did not participate in the model in the first year after screening.¹³² Several states have used Section 1115 Medicaid demonstration waivers to fund efforts to provide SDOH-related services.

- North Carolina's Health Opportunities Pilot provides food, housing, and transportation services to high-needs Medicaid enrollees through community-based organizations or social service agencies¹³³.
- California's CalAIM focuses on promoting equitable access to health services for individuals transitioning from incarceration to community re-entry, from homelessness to housing, and from institutional to home-based care. These services include housing supports, medically tailored meals, and behavioral health¹³⁴.
- Arizona's Health Care Cost Containment System provides housing support services to enrollees experiencing or at risk of experiencing homelessness and have at least one social risk¹³⁵;
- Arkansas's Health and Opportunity for Me, Massachusetts' MassHealth, and Oregon's Health Plan programs provide housing support, nutrition counseling, and case management to enrollees who have at least one risk factor¹³⁶.
- New York's Delivery System Reform Incentive Payment (DSRIP) program funds SDOH initiatives implemented by public hospitals and safety-net providers."¹³⁷

IV.H. Innovative Approaches to Specialty Integration

Telemedicine care involving the coordination of PCPs and specialists allows for specialist services to be provided to communities that have limited in-person access to these services. Several innovative models that use different approaches to virtually coordinating specialist and primary care have yielded positive outcomes for patients' mental and physical health.

One approach involves telemedicine-based collaborative care, which allows for the incorporation of an array of mental health specialists and for care managers to have more time to oversee care coordination activities, compared to in-person collaborative care.¹³⁸ This approach involves on-site PCPs and off-site depression care managers, pharmacists, psychologists, and psychiatrists, while in-person models often include only on-site depression care managers. A study of this model found that rural patients in the telemedicine-based group had significantly higher treatment response rates and remission rates, as well as larger reductions in depression severity, compared to participants in the in-person-based group.¹³⁹

Another example provides comprehensive medication management services to rural veterans by clinical pharmacy specialists via telehealth, with PCPs referring patients to mental health specialists. These specialists assume sole or primary responsibility for patients' behavioral care through telepsychiatry visits, often indefinitely.¹⁴⁰ A study of this model found that participating patients who received clinical audio and video telehealth encounters were found to have lower blood pressure and improved tobacco cessation.¹⁴¹

The Extension for Community Healthcare Outcomes (ECHO) project focused on improving outcomes among rural patients with chronic illnesses by establishing primary care practices as being accountable for patient care. In this approach, the PCP retains responsibility for managing the patient while web-based disease management tools facilitate consults. Specialists and PCPs jointly manage complex chronic illness care for patients.¹⁴²

Rural programs may also co-locate specialist services in the same physical space to streamline referrals, increase access to care, and improve inter-provider communication.¹⁴³ The Lake County Tribal Health Consortium in rural California seeks to decrease substance use among pregnant Native American women through co-locating social and behavioral health with primary care and prenatal services.¹⁴⁴ The Giles Free Clinic is a FQHC in rural western Virginia that co-locates primary care with behavioral health and oral health care, which has increased education about and access to dental services.¹⁴⁵ Humboldt County in rural California co-located social and behavioral health services with primary care for adults and children.¹⁴⁶

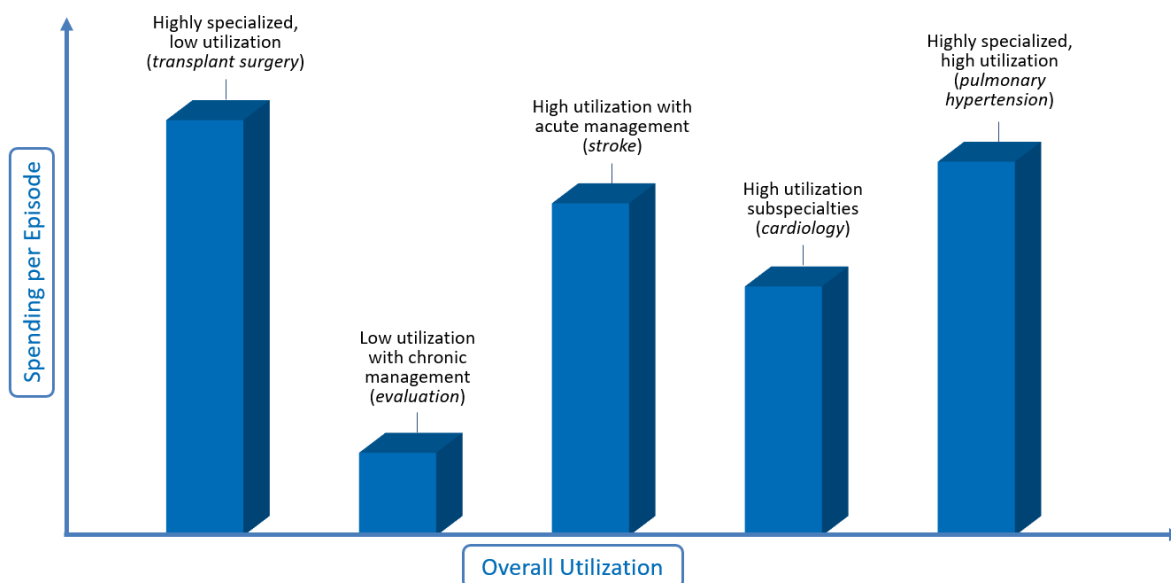
Section V. Enhancing Specialty Participation in Team-Based Models Through Capitation

Population-based TCOC models are built on a foundation of accountable, team-based care and effective coordination among members of the care delivery team. Most often, PCPs serve as the quarterback of the care team, although the locus of the care relationship may shift for patients with more complex needs who would benefit from a specialist-led care team.¹⁴⁷ In both circumstances, the care team's ability to effectively deliver and coordinate care hinges on specialist participation. This section outlines various financial and non-financial methods that are used to enhance specialist participation in team-based population-based TCOC models, paying particular attention to factors that may influence each approach's suitability based on the provider type and context in which care is delivered.¹⁴⁸

V.A. Determining Specialties or Conditions for Nesting in PB-TCOC Models

Approaches to specialty integration, such as nesting specialty episodes, may vary by the degree of specialization, spending per episode, and overall utilization related to a particular condition or procedure, as shown in Exhibit 2 below.

Exhibit 2. Specialization, Spending per Episode, and Overall Utilization Characteristics of Specialties Requiring Different Levels of Provider Management



Given differences in degree of specialization, spending per episode, and overall utilization across specialties, the amount of flexibility accountable entities in PB-TCOC models should have in deciding which conditions and episodes should be nested and the structure of financial incentives for participating providers may need to be tailored to the condition or procedure. For example, certain financial incentives (e.g., episode-based, PBPM, or capitated payments) may be better suited to support value-based care for specific conditions or procedures. Additionally, certain conditions or procedures, such as those with predictable care trajectories and low variability in spending, may be more appropriate for nesting in population-based TCOC models.

V.B. Capitation Approaches for Different Areas of Specialty Care

Many care management and coordination activities are not well suited for payment in an FFS paradigm. To be reimbursable within the current FFS system, services must be able to be captured as a discrete service with a corresponding price.¹⁴⁹ Through capitated payments, APMs offer the potential to cover care management and coordination activities without simply adding a separate FFS-based charge for non-procedural services.¹⁵⁰ Despite the potential for capitation to encourage team-based care, moving away from FFS could incentivize providers to under-treat their patients to maximize profit.¹⁵¹ To date, research exploring the relationship between capitation and participation in team-based APMs has predominantly focused on primary care. Although limited, there is, however, a body of research that explores capitation within the context of specialty care, much of which centers around chronic

conditions and oncology care.^{152, 153, 154} This section explores capitation with respect to CKD, chronic gastroenterology care, and oncology.

Chronic conditions and capitation. Existing research has examined the relationship among various capitated payment arrangements, FFS, and outcomes related to CKD. Research suggests that, compared to FFS, partial capitation is associated with certain improvements in health outcomes among Medicare beneficiaries with CKD.¹⁵⁵ For example, one study observed a decrease in hospitalizations due to fluid overload and an intended increase in outpatient visits to offset the decrease in hospitalizations.¹⁵⁶ The same study also identified advantages of partial capitation compared to full capitation with respect to several quality metrics, including decreased hospital readmissions for fluid overload and improved dialysis outcomes.¹⁵⁷ Despite these quality improvements, partial capitation for chronic kidney care was not associated with improvements in patient or clinician satisfaction and was also correlated with reductions in home dialysis use.¹⁵⁸

In addition to CKD, researchers have explored the suitability of capitation for gastroenterology care. Some researchers have argued that capitated per-beneficiary per-month (PBPM) payments are the most appropriate payment arrangement for addressing chronic gastroenterological care management.¹⁵⁹ In certain circumstances, such as management of complex chronic gastroenterological conditions like inflammatory bowel disease, patients may be best served by a gastroenterologist-led care team.¹⁶⁰ In the case of less complex conditions, such as hepatitis C, when gastroenterologists are more likely to support the internist-led care team as a consultant, PBPM payments can also provide an effective method for ensuring that care coordination and consultancy activities are covered.¹⁶¹

However, some researchers have indicated that procedural-based care may be better supported via bundled payments, especially for more predictable procedures that have a clear start and end, such as colonoscopies.¹⁶² Researchers suggest that bundled payment models may be more attractive to specialists with a relatively narrow clinical focus who would otherwise be less inclined to participate in a population-based TCOC model.¹⁶³ To avoid having bundle-based care occur in isolation, bundled payments could include additional payments for care coordination activities.¹⁶⁴ Additionally, establishing bundles for these types of procedures may help reduce variation in the treatment costs by introducing a “reference price” and also requiring that all clinicians providing care within a specified bundle are covered by the patient’s insurance.¹⁶⁵

Oncology care and capitation. There is evidence that partial capitation with respect to oncology care may not improve care outcomes. A 2018 study examined one oncology clinic’s transition from an FFS arrangement with an affiliated primary care group to a partial capitation arrangement.¹⁶⁶ The study included two groups: a treatment group consisting of Medicare Advantage patients with a health maintenance organization (HMO) prescription drug plan, and a comparison group of Medicare Advantage patients with a non-HMO FFS plan with the same health plan provider.¹⁶⁷ Following the transition to partial capitation, there was a statistically significant increase in the use of ambulance services and chemotherapy-related complications among the treatment group.¹⁶⁸ The researchers noted that it is possible that these outcomes may have masked the fact that morbidity rates were higher among the FFS comparison group; however, evidence to further support this claim was not presented in the study.¹⁶⁹ The researchers also highlighted that the payment arrangement between the primary care

group and the oncology clinic did not include financial incentives based on quality of care, which may help explain the failure of the capitated arrangement to improve (or maintain) patient outcomes.¹⁷⁰

Section VI. Nesting Specialty Episodes within PB-TCOC Models

One strategy for increasing specialist participation in APMs while also striving toward more comprehensive PB-TCOC models is to design SCMs that could be nested within a comprehensive APM like an ACO.¹⁷¹ Specialty care spending is an important target for more comprehensive payment and care delivery approaches because these conditions account for a significant share of Medicare spending, and specialists play a critical role in condition management beyond acute episodes. This section outlines considerations for the design of these nested SCM models.

VI.A. Care Episode Factors to Consider During the Episode's Different Stages

Initiation and duration. For nested care episodes that are acute in nature, the episode may be initiated by a major procedure or hospital admission. These clinical events, such as a specific diagnosis-related group (DRG), serve as a relatively clear demarcation of the beginning of an acute episode, which could last for 30 or more days.¹⁷² For nested care episodes that are condition-based and oriented more toward management of chronic conditions, the initiation of the episode is more likely linked to diagnostic information, such as a new diagnosis or increase in disease severity. Beginning the condition-based episode with a diagnosis encourages coordination and management across providers, as well as efficient diagnostic testing, aimed at improving outcomes and reducing costs over the long term. One group of experts at Duke University explained that an SCM could be initiated by diagnostic information linked with indicators of condition severity.¹⁷³

The duration of the chronic care episode may vary depending on the clinical condition. The Duke Margolis Center framework suggests that the SCM may no longer be necessary as the patient moves from more active management of the condition to maintenance care. Experts recommend establishing conditions and procedures for extending clinical episodes after an initial period.

Acute episodes could be nested within the SCMs to create condition- or procedure-level accountability. A duration of 30 days for a nested acute episode would include the major procedure or admission and associated short-term follow-up care. Applying a bundled payment for 30 days to an acute event would support the usual DRG costs, as well as short-term improvements in care coordination, efforts to avoid readmissions, and related post-acute care (PAC) in the time period directly following the acute event. The Bundled Payments for Care Improvement Advanced (BPCI-A) Model includes anchor stays and procedures and uses a longer 90-day episode duration covering immediate post-discharge recovery, as well as rehabilitation. Many CMMI models use episodes with a duration of 90 days or less.

Included services. Literature to date does not specify which specific services should be included in SCMs but does provide guidelines for the types of services that might be appropriate for a given condition. One proposed approach is to create an “inclusive” bundle of services in which only expenditures related to overall care for the condition and known complications of procedures routinely performed in the care

of the condition are included when calculating a target price.¹⁷⁴ This approach is informed by claims-based analyses of costs and clinical understanding of complications.

The process CMMI adopted in the development of its condition-specific APMs is instructive for the development of future nested SCMs. For the Oncology Care Model (OCM), CMMI engaged RAND and MITRE to conduct analyses to inform design decisions, including analyses of Medicare claims data related to the definition of the initiation of an episode of chemotherapy, patterns of spending during and surrounding chemotherapy, and attribution of chemotherapy episodes to physician practices.¹⁷⁵ This claims-based information can complement clinical practice guidelines and condition-specific clinical evidence in the development of SCMs, as can environmental scans and expert panels.

Determining the associated conditions/services within an episode of care. Several broad questions emerge in the determination of scope of an episode of care, including the number of settings involved in care and the heterogeneity within episodes.¹⁷⁶ Medicare patients have many comorbidities on average, and often receive care in multiple settings from different providers. An examination of data about the number of settings involved in the management of a condition—and its common comorbidities— can help determine which conditions and services to include in an episode of care. The definition could also focus simply on one condition, excluding services and spending for comorbidities, but this approach may not be ideal for care coordination and lead to a narrow perspective on clinical management of complex patients. However, a broader approach to episode definition leads to more heterogeneity across episodes and greater financial risk for participating providers.

VI.B. Prospective vs. Retrospective Attribution

Attribution of patients to providers is an important consideration as it drives accountability for care quality and costs as well as determining which provider is at risk for receiving lower payments for any given patient. In general, prospective and retrospective attribution have distinct advantages and disadvantages for administration and care delivery when assigning patients to practices for accountability.¹⁷⁷ Active, prospective attribution in traditional FFS Medicare in which the provider and/or patient affirms the care relationship may be difficult because beneficiaries have unrestricted access to providers.¹⁷⁸ Passive, prospective alignment using claims from a previous year to attribute beneficiaries in a subsequent year can lead to “leakage,” or beneficiaries receiving care outside of the entity to which they are aligned. Prospective alignment can also result in a lower proportion of overlap between attributed patients and patients treated during the performance year relative to performance-year (or retrospective) attribution.¹⁷⁹ Retrospective attribution may also encourage greater care for all of a practice’s patients, not just attributed Medicare beneficiaries. However, prospective attribution enables providers to know their attributed panel in advance and to target limited resources to improving care for those patients.

Many attribution methods were designed for application in a primary care or medical home setting and may not be ideal for a specialty care model.¹⁸⁰ These primary care methods often use the plurality of non-hospital evaluation and management visits to attribute beneficiaries, while utilization of condition-specific specialty care services may be more appropriate in an SCM.

VI.C. Approaches for Defining Conditions and Services Included by Specialty

Various specialties have different approaches for defining a condition as episodic or chronic and who is responsible for the patient’s care coordination, as shown in Exhibit 3 below.

Exhibit 3. Existing Models' Episode Definition, Duration and Care Coordination by Specialty

Specialist type	Associated model	Episode or chronic condition	Episode/ care pathway trigger	What defines episode/ pathway duration?	Included services	Who is responsible for patient care coordination
Cardiologist	Acute Myocardial Infarction Model	Episode	Inpatient admission for acute myocardial infarction	90 days following inpatient stay	All Parts A and B expenditures with exclusions for unrelated services not related to inpatient procedure	Primary Care
Gastroenterologist	Bundled Payments for Care Improvement	Episode	Inpatient admission or start of an outpatient procedure for select group of clinical episodes (e.g., bariatric surgery)	Inpatient stay or outpatient procedure through the 90 days following the procedure	All Parts A and B expenditures with exclusions, including certain inpatient admission/readmissions, contralateral procedures, technology add-on payments, and cardiac rehab services	Primary Care
Oncologist	Enhancing Oncology Model	Episode	Receipt of initial cancer therapy	Six-month period following triggering event	Medicare expenditures for all items and services provided during the episode	Specialist
Nephrologist	Kidney Care Choices	Condition	Chronic kidney disease (CKD) stage 4 or 5	From diagnosis of CKD to end of life, post-successful transplant, or patient's health improves through dialysis	Medicare expenditures for all items and services provided during the episode	Specialist
Orthopedics	Comprehensive Care for Joint Replacement	Episode	Diagnosis of hip or knee joint replacement needed	Surgery through the 90 days following discharge from the inpatient hospitalization or the date of the outpatient procedure	All Medicare Parts A and B expenditures during the episode with exceptions for acute clinical conditions not arising from joint replacement complications	Primary Care
Mental Health Provider	Psychiatric Collaborative Care Model	Condition	Patient's mental health assessment (i.e., PHQ-9) taken during routine visit with PCP indicates risk	Possibly when patient indicates improved mental health for prolonged period of time; however, many patients require perennial care.	Medication assignment, patient assessment, referral to other BH specialists, and monitoring patients' treatment adherence	Primary care

Additionally, there are various approaches for identifying specialty conditions that may be appropriate for episode-based payments. Specialty disease conditions vary by the way that the condition is managed, the extent to which there is shared management with a PCP, and the amount of variation in spending.

- Criteria for identifying specialty conditions that may be more appropriate for bundled episode-based payments include whether the condition is: specialty-driven, generally managed procedurally, and has low variation in spending.
- Criteria for identifying specialty conditions that may be more appropriate for per member per month (PMPM) chronic disease management payments include whether the condition is: generally managed cognitively/non-procedurally, and may involve shared management with a PCP.^{vi}

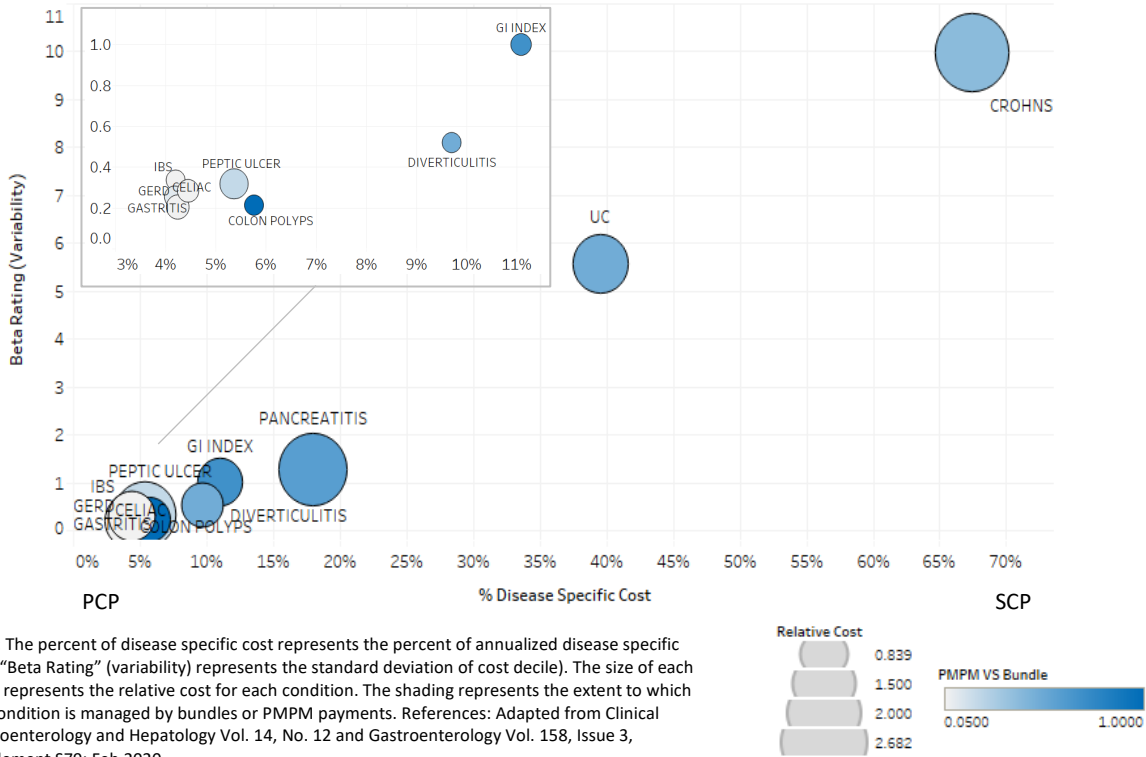
Exhibit 4 shows an example of a cost attribution approach that has been used to identify which gastroenterology (GI) disease conditions may be appropriate for episode-based or PMPM payments. The following methodology was used to conduct this analysis:

- Identify GI ICD-10 codes;
- Calculate % of Annualized Disease Specific Cost;
- Calculate Cost/Decile;
- Calculate “Beta Rating” or Variability (standard deviation of Cost/Decile); and
- Profile each condition by the Cognitive/Procedure ratio (Per Member Per Month (PMPM)/Bundle ratio).^{vi}

^{vi} Adapted from Clinical Gastroenterology and Hepatology Vol. 14, No. 12, and Gastroenterology Vol. 158, Issue 3, Supplement S79: Feb 2020.

Exhibit 4. Example of a Cost Attribution Approach to Identify Which Gastroenterology (GI) Disease Conditions May Be Appropriate for Episode-Based or PMPM Payments

Beta Rating vs Annualized Disease Specific Cost – GI Example



Note: The percent of disease specific cost represents the percent of annualized disease specific cost. "Beta Rating" (variability) represents the standard deviation of cost decile). The size of each circle represents the relative cost for each condition. The shading represents the extent to which the condition is managed by bundles or PMPM payments. References: Adapted from Clinical Gastroenterology and Hepatology Vol. 14, No. 12 and Gastroenterology Vol. 158, Issue 3, Supplement S79: Feb 2020.

Section VII. Incentivizing Specialist Participation and Engagement within PB-TCOC Models

Specialty care is often associated with higher costs, due to a higher volume and intensity of services for medically complex patients.^{181,182} High-value specialty care may comprise not only certain billable services and treatments, but also activities that are reimbursed at a lower level under FFS structures.¹⁸³ Overall spending reductions in population-based TCOC models may be achieved through incentivizing high-value specialist practices, including increasing specialist visit duration, frontloading care, standardizing and tailoring guidelines, and reshaping utilization.

VII.A. Approaches for Reducing Spending

Increasing specialist visit duration. FFS environments may encourage specialty providers to increase patient volume, see more patients per day, and spend less time with patients at each visit. Volume-based growth has not been associated with improved cost, utilization, or quality outcomes. In contrast,

seeing fewer patients, and spending more time with each patient, could support measurable care improvements across several dimensions.¹⁸⁴ With longer visits, specialists may gain knowledge to support diagnostic decision-making, enabling specialists to decrease spending by reducing the need for some laboratory tests.^{185,186} Longer visits may also augment provider-patient relationships and patient trust, which are associated with improved clinical and patient-reported outcomes and improved health equity.^{187,188} Additionally, with longer visits, specialists can spend more time on care management and patient education, which may contribute to decreases in complications for both acute and chronic conditions and help delay disease progression.^{189,190,191}

Frontloading care. Frontloading care may involve higher frequency or intensity of medical or surgical interventions earlier in the care episode or at earlier stages of disease. Initially, this strategy may be more expensive, but it may generate cost savings and improve outcomes in the long term. For example, dialysis is initiated via catheterization for most ESRD patients. Other options to initiate dialysis include a fistula or a graft, which are costlier and of higher clinical intensity than catheterization. Research demonstrates that cost, utilization, and quality outcomes over time are better for ESRD patients when dialysis is initiated with a fistula or a graft, as compared to a catheter.¹⁹²

When providing care to post-institutional or community-referred patients, home health agencies (HHAs) may also frontload care by scheduling more skilled nursing or therapy visits during the first week of a home health episode. Under the Home Health Value-Based Purchasing Model, this approach was associated with better outcomes, such as lower risk of unplanned hospitalizations.¹⁹³

Standardizing and tailoring guidelines. Entities participating in APMs can use both specialist performance and patient-reported data to implement guidelines to improve outcomes, targeting individual specialties.¹⁹⁴ For example, under the Comprehensive Care for Joint Replacement (CJR) Model, some hospitals revised guidelines pertaining to length of stay, pain management, and anesthesia. Participating surgeons were surveyed, and most responded that changes in these hospital guidelines contributed to practice improvements in the same areas.¹⁹⁵ In addition, under the Bundled Payments for Care Improvement (BPCI) Initiative Model 1, improvements in hospital readmission, length of stay, and cost were observed in awardees who implemented an evidence-based sepsis care protocol; sepsis-related mortality also decreased.¹⁹⁶

Guidelines may target certain types of spending within specialties. The Johns Hopkins Medicine Alliance for Patients (JMAP), a Medicare Shared Savings Program (MSSP) ACO, identified two key areas that were drivers of specialty care spending: outpatient imaging and Part B drugs.¹⁹⁷ Reducing unnecessary or low-value outpatient imaging can result in cost savings. One JMAP hospital realized cost savings by reducing low-value imaging for three conditions: 1) lumbar magnetic resonance imaging (MRI) for low back pain; 2) MRIs for headache; and 3) sinus computed tomography (CT) scans for sinusitis.¹⁹⁸

Lower-cost alternatives may not be available for all drugs, and highly specialized clinical protocols, such as those for specific cancers, may not allow prescribing flexibilities or substitutions. In other cases, drugs may be substituted with little or no trade-offs in efficacy and substantial cost savings. For example, researchers estimated that substituting a lower-cost drug with similar efficacy used to treat diabetic macular edema and neovascular age-related macular degeneration would reduce Part B spending by \$18 billion over 10 years.¹⁹⁹

Additional utilization issues. As value is often defined as the relationship between quality and cost,²⁰⁰ higher-value services may be those with the same cost and higher quality, or the same quality and lower cost. Specialist engagement in APMs may support transformations in care processes, care teams, and infrastructure to substitute high-value for low-value services.

Care processes for surgical specialties may include stepdown care (e.g., an interim level of care between the intensive care unit and the general ward) or PAC (“care that is provided to individuals who need additional help recuperating from an acute illness or serious medical procedure”) in their episode design.^{201,202} As part of the post-surgical care process, patients are often discharged to skilled nursing facilities (SNFs) and inpatient rehabilitation facilities (IRFs), which are higher-cost settings than home health. For lower-acuity patients who can receive care in the community, shifting post-surgical discharges may contribute to overall cost savings while maintaining quality of care. Entities in several CMMI Models, including CJR, BPCI, and the BPCI-A Model, realized cost savings via this care process transformation.^{203,204,205}

Another example of shifting to lower-intensity care settings comes from the Comprehensive ESRD Care (CEC) Model, which reduced total gross spending through reshaping utilization. Under the CEC Model, utilization shifted from inpatient hospitalizations to outpatient dialysis, providing more efficient, cost-effective care while maintaining quality.²⁰⁶

Infrastructure changes may also support utilization improvements. Health systems may not appropriately balance resources, including equipment, staff, and space.²⁰⁷ For example, under BPCI Model 1, one awardee found that it was not providing MRIs on weekends. By providing this service on weekends, this hospital was able to reduce length of stay; related cost savings were not reported.²⁰⁸ Additionally, in a study of joint replacement surgical care processes, researchers found that differences in surgeon productivity (measured by the number of joint replacement surgeries per surgeon per day) were attributable to the number of operating rooms available. In this example, the surgical team’s idle time while waiting for the operating room to be turned over between patients was costlier than providing an additional operating room.²⁰⁹

Individual ACOs’ practices that can incentivize reductions in spending for services provided by specialists include:

- Recruiting more specialists, which encourages cost- and quality-based competition within ACOs²¹⁰ and, with optimal saturation, may reduce costs;²¹¹
- Sharing savings or sharing savings and losses with specialists, and requiring specialists to progressively assume risk; and^{212,213}
- Sharing performance data, enabling specialists to respond to clinical and patient-reported outcomes by changing care processes.^{214,215,216,217,218,219,220}

Additionally, ACO models could specify level of specialist engagement (e.g., ratio of specialists to beneficiaries, percentage of office visits provided by a specialist) as a condition of participation.^{221,222,223}

VII.B. Specialists and End-of-Life Care in PB-TCOC Models

End-of-life care can be delivered by PCPs or specialists, including cardiologists and oncologists. There are well-defined standards for improving the quality, cost, and safety of end-of-life care that apply to both

PCPs and specialists. In its 2015 report, “Dying in America,” the Institute of Medicine (now the National Academy of Medicine) proposed several core components of quality end-of-life care, including:

- Frequent assessment of the patient’s physical, emotional, social, and spiritual wellbeing and needs;
- Referral to expert-level palliative care;
- Referral to hospice if patients have a prognosis of six months or fewer;
- Management of care and direct contact with patients and families;
- Round-the-clock access to coordinated care and services;
- Management of pain and other symptoms;
- Counseling of patient and family, especially for those with emotional distress;
- Family caregiver support; and
- Regular personalized revision of care plans.²²⁴

In terms of maintaining patient safety in end-of-life care, evidence supports using valid pain rating scales;²²⁵ timely e-documentation, including discharge summaries, referrals, and other communications among providers; standardized electronic health records (EHRs) that are controlled by patients and available across settings; increased documentation and communication of advance care planning decisions and preferences; and increased anticipatory prescribing of key medications.²²⁶

Palliative care is a key element of end-of-life care. According to a 2020 systematic review and meta-analysis, palliative care is associated with lower acute care utilization and lower symptom burden.²²⁷ Another systematic review demonstrated that palliative care interventions, including home-based components, were associated with reductions in health care costs and resource use, as well as improved patient and caregiver outcomes.²²⁸ Palliative care specialists have increasingly been involved in end-of-life care since the establishment of palliative care as its own medical specialty.

Researchers have emphasized the need to incorporate palliative care into population-based TCOC models to detect the need for palliative care earlier in a patient’s disease progression.²²⁹ Most Americans die from complications of chronic diseases, and many do not access palliative care until hospitalized or referred to hospice. Integrating primary and palliative care can improve continuity of care throughout the life cycle. Recommendations to improve palliative care in population-based TCOC models include adequate training in symptom management and advance care planning; educating patients about palliative care; integrating nurse practitioners and physician assistants into primary care practices; establishing referral networks with hospitals, nursing facilities, and hospices; and creating clear referral guidelines. At the policy level, researchers call for reimbursement for advanced care planning; home visits and telephonic care management; reiterating palliative care competencies among all health care providers and trainees; and defining palliative care to cover any age or stage of illness. An example of an approach to improve palliative care is CMS’ Medicare Care Choices Model. Through this model, patients receive supported care services from selected hospice provider concurrently while continuing to receive services provided by other Medicare providers, including care for their terminal condition.²³⁰ This model was found to reduce Medicare spending and resource-intensive services for patients, while improving the quality of their end-of-life care.²³¹

Certain conditions may be better candidates for TCOC models that include palliative care. A systematic review of studies on patient and caregiver outcomes in end-of-life care found that patients with cancer, congestive heart failure (CHF), chronic obstructive pulmonary disease (COPD), and dementia are

especially responsive to palliative care.²³² Effective interventions included nurse and/or social worker support and home-based approaches, particularly programs with home visits.²³³

VII.C. Incentivizing Appropriate Clinical Referrals

Referrals are a key means of engaging specialists in population-based TCOC models and other APMs. PTAC's June 2022 [*Supplement to the Environmental Scan on Issues Related to the Development of Population-Based Total Cost of Care \(TCOC\) Models in the Broader Context of Alternative Payment Models \(APMs\) and Physician-Focused Payment Models \(PFPMs\)*](#) discussed how a hierarchical system with ACOs functioning as “umbrellas of accountability” could promote a system in which “care delivered by a specialist to whom a PCP referred an attributed beneficiary becomes an extension of the PCP’s care.”²³⁴ Research suggests that such a system may be effective in more competitive markets (e.g., urban settings) where specialist supply is more likely to exceed referral demand.²³⁵ However, ACOs may experience challenges in less competitive markets, such as in rural settings, where specialists have less incentive to compete for referrals.²³⁶

Section VIII. Unintended Consequences from Provider Consolidation within Population-Based TCOC Models

As discussed during PTAC's 2022 theme-based discussions on population-based TCOC models and PFPMs, provider consolidation can provide certain benefits related to care delivery. However, policy makers and model participants should be aware that increased consolidation can lead to unintended consequences, as well as benefits.

VIII.A. Market Dominance and Improved Collaboration and Integration Relevant to PB-TCOC Models

The market dominance generated by mergers and integration of health care delivery systems can affect quality of care, and may affect incentives for organizations to join population-based TCOC models and their impact within these models. A study on the competitive landscape of hospitals, health insurers, and physician services found that hospital and health insurer markets have become more concentrated since the 1990s.²³⁷ Hospitals and multi-hospital systems are enveloping medical groups and physician practices to build integrated delivery systems providing the full range of facility, laboratory, and pharmaceutical services to patients.^{238,239} However, conclusive evidence on how these hospital acquisitions affect quality of care is limited.²⁴⁰ Acquisitions can lead to either improvements or decreases in care quality.²⁴¹ One study²⁴² found that hospital acquisition by another hospital or hospital system was associated with slightly worse patient experiences and no significant changes in readmission or mortality rates.

There are potential benefits of market consolidation, especially for newer, population-based TCOC model participants. Previous research suggests that larger physician organizations have better capacity for care management and quality improvement.^{243,244,245} Consolidation may lead to improved care coordination²⁴⁶ and reduce duplication of tests and treatments, leading to lower TCOC. Health care spending can also be reduced by the substitution of lower-cost for higher-cost settings within integrated systems.²⁴⁷ Large organizations may be better able to take on risk in population-based TCOC models

compared to small organizations. A study²⁴⁸ comparing larger and smaller provider groups found that spending was lower and quality of care better for Medicare beneficiaries served by larger, independent physician groups with robust primary care locations and with health care providers accepting greater risk. Additionally, physician-based, integrated care models had higher quality and were less costly than those among hospitals.

VIII.B. Trade-Offs Between Gains in Efficiency Due to Integration vs. Adverse Effects Due to Market Power

Gains in efficiency due to integration can have negative consequences as well. Previous research suggests that larger physician organizations demonstrate better capacity for managing care and quality improvement,²⁴⁹ but organizational consolidation may raise costs.²⁵⁰ For example, one study found that, across geographic markets, hospital consolidation generally results in higher prices.²⁵¹ Ultimately, consolidation may lead to higher patient out-of-pocket costs due to preferential use of higher-priced hospitals for inpatient admissions, substitution of hospital-affiliated outpatient departments for ambulatory surgery and imaging facilities, unilateral market power, and lower incentives for innovation. Consolidation can also result in increased prices to insurers for laboratory services, medicines, and other supplemental services.^{252,253} Research suggests that continued consolidation of specialists may contribute to higher Medicare spending in FFS environments.^{254,255}

The type of organizations among which consolidation occurs can also affect the merger's outcomes. When hospitals gain market power by employing more physicians, this does not necessarily ensure clinical integration.²⁵⁶ A study in the *Annals of Internal Medicine* found no association between hospitals employing more physicians and changes in 30-day readmissions, mortality rates, length of stay, or patient satisfaction rates.²⁵⁷ Increases in hospital-employed physicians can also lead to higher hospital and physician commercial insurance payment rates. There is potential for hospitals to pressure acquired physicians to provide more expensive care, which could lead to increased costs.²⁵⁸ Market concentration can impact how physician organizations participate in models.²⁵⁹ The evaluation of the Next Generation Accountable Care Organization (NGACO) Model found that NGACOs were more likely to form in markets with greater competition among physician practices.²⁶⁰

Trade-offs between the benefits of integration and the adverse impacts of market concentration have not been widely studied and are difficult to fully assess at this time. Additional research is needed to examine the implications of integration and higher market concentration on population-based TCOC models and their participants. However, certain checks can be placed on organizations to prevent adverse consequences, such as unilateral market power or increased prices to insurers for laboratory services, such as transparency and public reporting with the use of resources like all-payer claims databases (APCDs).²⁶¹ Federal regulations (e.g., the Stark Law) can also prevent fraud and abuse, such as physician self-referral, although the Stark Law is generally waived in ACO models.^{vii, 262}

^{vii} The Stark Law “prohibits physicians from referring patients to receive “designated health services” payable by Medicare or Medicaid from entities with which the physician or an immediate family member has a financial relationship, unless an exception applies.” U.S. Department of Health and Human Services: Office of Inspector General. <https://oig.hhs.gov/compliance/physician-education/fraud-abuse-laws/>

Section IX. Health Information Technology and Data Analytics

HIT, particularly EHRs and Health Information Exchanges (HIEs), are key to enabling care coordination between primary care and specialty providers. Integration among systems can facilitate information sharing across the continuum of care. Moreover, sharing specialist cost and quality data allows practices to understand their patterns and spending.²⁶³ In this section, various approaches and challenges related to HIT capacity and data integration are discussed.

The use of HIT has been associated with improvements in patient outcomes. A study reviewing the effect of EHRs and HIEs found that these systems can reduce the number of seven-day readmissions and one-day admissions into hospitals. EHRs enable physicians to make more informed decisions about their patients and thus improve the care they provide and potentially reduce any costs related to extra tests and procedures.²⁶⁴ One study demonstrated that HIEs can reduce the length of stay at an ED and the number of readmissions. However, it is also important to consider that there are many types of HIEs used in the United States that vary in sophistication.

An emerging option for augmenting HIT is mobile health (M-health) technology, which can improve health outcomes through providing text messages to support patients' chronic disease, substance use, and prescription management, as well as appointment reminders.²⁶⁵ Text message reminders have been found to improve clinical attendance and enhance communication between surgeons and nurses.²⁶⁶

IX.A. Strategies for Communication/Notification and Data Exchange

Hospitals, physician offices, and health centers engage in data sharing to maintain comprehensive health records and improve the quality of care. Data exchange can be very complicated and requires communication and coordination. A study looking at Beacon Community Cooperative Program, a three-year initiative focused on leveraging health IT, concluded that data use agreements (DUAs) are a minimum necessary for data sharing within communities.²⁶⁷ Creating policies to facilitate DUAs would benefit community organizations wanting to participate in safe and necessary data sharing.²⁶⁸

Another recent study evaluated HIEs among hospitals participating in APMs. The study evaluated hospitals within the American Hospital Association (AHA) survey database and found that hospitals in APMs tended to use HIEs for three dimensions defined in the study as diversity (the number of transmitted data types), breadth (the number of exchange partner types), and depth (the number of technical approaches). However, the hospitals were less likely to use HIEs to measure the "percent of discharges in which a summary care record was transmitted electronically," indicating that there are still significant barriers to data exchange.²⁶⁹

The Health Care Payment Learning Action Plan released a report in 2016 on data exchange in population-based payment models, outlining principles that should be followed when developing data exchange systems. These include:

1. Providing patients with price information for different providers and procedures;
2. Creating policies that allow for quick and easy information transfer between organizations; and
3. Creating patient identifiers and maps while working with other providers and stakeholders.²⁷⁰

Improving the existing systems of connectivity between providers can also improve the quality of data being collected, which is vital for any future research or development of care models. A 2018 systematic review on HIT and its impact on patient care found that 81 percent of studies reported an improvement in efficiency when integrating HIT.²⁷¹

IX.B. Approaches for Improving Data Quality and/or Sharing Between Primary and Specialty Providers

While HIT and HIE systems are necessary to facilitate care coordination between primary care and specialty providers, it is equally important to ensure that data are shared effectively, and that data are of high quality to guide patient care. There are several approaches to improve data quality and sharing between providers with the goal of creating a more efficient and synthesized system for transferring information and improving patient experience.

One commonly used approach is to focus on ensuring data shared as part of a referral is high quality and complete.²⁷² In a recent analysis, CMMI found that there is a data gap related to costs and quality performance for specialty care making collaboration and effective referrals between providers challenging. To close this gap, CMMI has recommended improving electronic consultation to efficiently access specialists' expertise using collaborative care agreements, a formal agreement between PCPs and specialists that designates referral protocols, care expectations, and care management responsibilities.²⁷³ Use of collaborative care agreements would improve electronic consultation by requiring that the appropriateness of the referral be confirmed, the patient is referred, and information is shared between the PCP and specialist.²⁷⁴ Making these improvements could help facilitate data flow, establish accountability, and support a team-based system of data sharing in the referral process.

A critical barrier to data sharing between primary and specialty providers is the high cost of data integration and expansion. One approach to addressing this barrier is to use payment incentives to address financial challenges and support EHR implementation and expansion, as well as address key challenges such as interoperability and bidirectionality between systems.²⁷⁵ The implementation of payment incentives to target these key challenges could especially help smaller providers with limited resources to obtain the tools necessary to implement and expand data sharing systems.²⁷⁶

In terms of the quality of data, there are many gaps in communication among specialists, PCPs, and other health care professionals that may result in lower quality of care. Researchers developed an eight-dimensional model using a "socio-technical" approach to better facilitate the use of EHRs in referrals. A group of researchers established the following 10 recommendations to improve the use of HIT for electronic outpatient referral communication and, ultimately, successful data sharing:

1. Include real-time clinician-to-clinician communication features as part of the referral system;
2. Design and use electronic standardized referral templates that include both structured and free-text fields;
3. Enforce electronic capture of the reason for the referral;
4. Bring PCPs and specialists together to collaboratively develop referral guidelines for inclusion into the electronic referral system;
5. Integrate patient communication into the electronic referral process;
6. Use automation to pre-populate electronic referral requests with patient-specific data;

7. Include the capability of electronic consultations (information-only referrals);
8. Close the communication loop by providing referral status tracking and feedback capabilities and integrating these tools into providers' workflows;
9. Standardize and maintain up-to-date institutional policies and procedures for electronic referrals; and
10. Monitor electronic referral communication performance.²⁷⁷

These guidelines provide a basis to help ensure that HIT is being used effectively and facilitate care coordination. If underutilized or misused, HIT's potential to improve patient care is limited.

IX.C. Strategies for Improving Access to and Optimizing Utilization of Clinical and Administrative Data

Another consideration in implementing and expanding HIT systems to support care coordination is ensuring access to and integration of clinical and claims data. One strategy is for hospitals to merge their existing complex databases so that they become a series of automated or customizable readable reports.²⁷⁸ The creation of such a database could track a patient's encounters throughout the health care system, making access to clinical and administrative data easily accessible. An example of such a system is SOCRATES, "Systems Outcomes and Clinical Resources AdministraTive Efficiency Software."²⁷⁹ SOCRATES would house clinical and administrative data, as well as run analysis on the data to identify gaps in care and opportunities for improvement.²⁸⁰

A second approach is to use clinical and administrative data for deeper analysis and identify patients with high clinical risk. A 2022 report from the Urban Institute, Healthtech Solutions, and the American Institutes for Research highlighted ways that clinical and administrative data can be integrated and analyzed to 1) identify patients who are at risk for several diseases, and 2) determine patient eligibility for health programs.²⁸¹ This integration would occur through the creation of registries to share data and combining multiple data sources made available to all providers.²⁸² The registries and combining of data could improve access to data and make patient care more efficient and effective.

Another option for creating strategies to improve access to and use of data is to address integration issues between different vendor products.²⁸³ Low interoperability between data systems often impedes data sharing and can result in costly mistakes. For example, if data systems cannot communicate with one another, providers might not have access to previous lab results and order a repeat test, thus increasing cost and burden to the patient. To increase interoperability, health systems often need to purchase and implement additional products to make their data systems compatible with others.²⁸⁴ Providers, especially smaller providers, may not have the time or resources to make such investments.

To address this issue of interoperability between data systems, supportive public policy is needed surrounding interoperability standards. Two important existing policies are the 21st Century Cures Act and Blue Button 2.0. The 21st Century Cures Act focuses in part on addressing interoperability; the Act calls for "all electronically accessible health information" to be accessed, exchanged, and used "without special effort on the part of the user."²⁸⁵ Since its passage in 2016, standards-based application programming interfaces (APIs) such as Blue Button 2.0 have been created to assist providers in achieving the standards set by the Cures Act.^{286, 287, 288} Created by CMS, Blue Button 2.0 delivers Medicare Part A, B, and D data for over 60 million Medicare beneficiaries.²⁸⁹ Blue Button 2.0 gives Medicare

beneficiaries the ability to allow organizations that have integrated with Blue Button 2.0 access to their data, which can result in efficient more accurate data as no manual entry is needed.²⁹⁰

Section X. Enhancing Performance Metrics

A key goal of performance measurement in APMs is to encourage innovation in care delivery structures and processes by incentivizing positive outcomes. Sharing performance and patient-reported data with specialists may help them modify care processes and better integrate patient care goals.^{291,292,293,294,295,296,297} Given existing differences in practice patterns, economic incentives, and markets between specialty and primary care, specialty care performance metric design may warrant additional consideration.

X.A. Options for Incentivizing Specialist Performance and Improving Related Measurements

Within and across clinical specialties, condition severity and care goals can vary substantially, with corresponding differences in what and how care is provided. For patients with certain acute conditions, curative care may be available. The desired care outcome may be the complete elimination of symptoms or total restoration of function (e.g., for patients receiving joint replacement surgery). For patients with chronic or degenerative conditions, care goals may be disease maintenance or prevention of disease progression.²⁹⁸

Subsequently, providers who serve special populations – including patients requiring specialty care and rural populations – may need more tailored quality measures targeted to their patient population. Tailored measures yield better information to identify and implement practice improvements and take accountability for providing high-value care.^{299,300,301,302,303} For example, the OCM includes 12 quality measures in its performance-based payment methodology, including measures of communication and care coordination during the care episode (e.g., risk-adjusted proportion of patients with all-cause hospital admissions within the six-month episode) and clinical quality of care measures, including measures specific to prostate cancer (e.g., Adjuvant Hormonal Therapy for High or Very High Risk Prostate Cancer [Physician Quality Reporting System/PQRS 104], National Quality Forum [NQF] 0390) and breast cancer (i.e., Hormonal Therapy for Stage I (T1b)-IIIC Estrogen Receptor/Progesterone Receptor (ER/PR) Positive Breast Cancer [CMS 140v5.0, NQF 0387]).³⁰⁴ Under the Kidney Care First (KCF) Model, a quality threshold (the Quality Gateway) is set based on measures that “...indicate appropriate clinical care and engagement for the patient population; are related to the beneficiary’s kidney disease; and are applicable to both CKD stage 4 and 5 ESRD beneficiaries.”³⁰⁵

Specialty care performance measurement may benefit from metrics designed to address components of how specialty care is integrated, including economic incentives and markets, as compared to primary care. Under existing APMs, primary care practices often increase market share by merging or expanding their operations at the same level (horizontal integration), whereas specialty care integration tends to happen through vertical integration. Health care organizations expand or merge to supply services at different stages of care, such as through a hospital partnership with PAC facilities.³⁰⁶ Through vertical integration, hospitals often purchase specialty practices (e.g., oncology, cardiology).³⁰⁷ To gain a more comprehensive understanding of specialty care quality, measurement frameworks could include 1)

assessment of quality pre- and post-integration, and 2) measure stratification by level of integration (e.g., independent practice associations, open physician-hospital organizations, closed physician-hospital organizations, and fully integrated organizations).^{308,309,310,311,312}

Inclusion in overlapping payment initiatives, such as participation in both ACOs and bundled payment programs or episodic initiatives, may encourage greater quality improvements for specialty care than participation in a single care model. Researchers found that simultaneous participation in both an ACO and a bundled payment program was associated with lower hospital readmission rates for both medical and surgical specialties.³¹³ The number and type of payment initiatives in which a specialist participates may be associated with cost, utilization, and quality of care; when sample sizes allow, a more comprehensive understanding of the specialty care landscape may be gained from stratifying measures by the number and type of payment initiatives.

X.B. Benchmarks for Measuring Models' Impact on Quality, Equity, Utilization, and Spending for Specialty Care

Benchmarking has been used in several CMMI models that are focused on specialty or episodic care, including but not limited to OCM, CJR, and the ESRD Treatment Choices (ETC) Model. The following subsection briefly summarizes benchmarking approaches and results by model.

OCM. In the OCM, benchmark prices were set for six-month episodes of care based on practice-specific and national historical expenditures; different payments were established for different types of cancer and risk level.³¹⁴ Overall, the OCM led to small reductions in total episode payments; reductions were concentrated in higher-risk episodes, with total episode payments increasing in lower-risk episodes.³¹⁵

CJR. Under the CJR Model, procedure-level benchmarks were established based on each procedure's average, three-year cost. In practice, benchmarks have not decreased in accordance with decreases in actual procedure costs for non-participants, contributing to net losses.³¹⁶

ETC. Benchmarks for home dialysis and transplant rates are set using 12 months of non-participant historical performance in similar geographic areas.^{317,318} Early results from the first performance year are not yet publicly available.

X.C. Strategies for Standardizing Measurement Across Care Delivery Models

Some experts have noted that more knowledge of specialty care quality may be gained through tailored quality measures, described above, which provide more targeted information to initiate practice improvements and encourage high-value care.^{319,320,321,322,323} However, measures that are broader in scope can provide population- or entity-level insights into care delivery model efficacy with respect to specialty care. For example, in ACO models, beneficiary-level measures of specialty care may quantify access to specialists, such as the number of specialists within a certain mile radius,³²⁴ patient-reported ability to find a new specialist,³²⁵ and patient-reported access to specialists.³²⁶ ACO-level measures include specialty visits as a percent of all office visits³²⁷ and the ratio of participating specialists to aligned beneficiaries.³²⁸

In a systematic review of specialty care measures, researchers identified cross-cutting domains, measures, and gaps applicable to a wide range of specialties, including asthma, CKD, COPD, Type 1 and Type 2 diabetes, rheumatoid arthritis (RA), human immunodeficiency virus (HIV), hepatitis C,

osteoarthritis (OA), stroke, ischemic heart disease, breast cancer, major depression, chronic low back pain, osteoporosis, hypertension, prostate cancer, attention-deficit/hyperactivity disorder (ADHD), glaucoma, influenza, and multiple sclerosis (MS). The following is a summary of some identified measures and gaps by domain:

- **Prevention/Healthy behaviors.** Measures – body mass index screening/follow-up, tobacco screening/cessation, influenza immunization, pneumococcal vaccination, clinical depression screening, and falls screening. Gaps – diet/nutrition, activity/exercise, genetic testing, hepatitis immunization, risk assessment, and monitoring disease progression.
- **Care coordination.** Measures – readmissions. Gaps – comorbid referral/treatment, behavioral health therapy, occupational therapy, physical therapy, and hospital admissions.
- **Patient safety.** Measures – medication reconciliation. Gaps – high-risk behavior education, alcohol/drug treatment, and disease transmission.³²⁹

X.D. Role of Current Patient Experiences Measures (i.e., Consumer Assessment of Healthcare Providers and Systems [CAHPS]) vs. Newer Patient-Reported Measures in Specialty Care

Measures capturing patient-reported experiences of care provide a more comprehensive view of care quality in population-based TCOC models than cost, utilization, and clinical quality measures alone.^{330,331,332} Patient experience measures often capture different dimensions of quality, and results may diverge from those of cost, utilization, and clinical quality measures. For example, an Office of the Inspector General (OIG) report found that although the ratio of specialists to beneficiaries in MSSP ACOs increased from 2013 to 2015, patient-reported access to specialists decreased over the same time period.³³³

As described above, care goals may vary by condition, disease, or procedure, and associated care goals; subsequently, patient experience with care and components of patient experience may vary across specialties. In a study of Press Ganey scores, researchers found significant differences in patient satisfaction across specialties; compared to patients in internal medicine, patients in plastic surgery, general surgery, dermatology, and family medicine specialties had higher odds of perfect scores, and patients in orthopedics, pediatric medicine, pediatric neurology, neurology, and pain management had lower odds of perfect scores. Significant differences between surgical and medical specialties were not observed. Differences in satisfaction between specialties may reflect inherent differences in the patient populations, as well as prognoses and care trajectories.³³⁴

Patients receiving specialty care may also value different components of care, as compared to patients receiving primary care. In a qualitative study of patient experiences with care, researchers found that patients in specialty care valued “...provider clinical skill acumen/outcomes, being kept informed with timely updates and care instructions, and a stress- and pain-free experience,” whereas patients in primary care valued “...provider listening, time spent with provider, and consistent and effective coordination of care.”³³⁵

Existing measure sets assessing patient experience with care include the CAHPS survey measures, which assess patient experience with different care topics, including getting timely care, appointments, and information; provider communication; access to specialists; health promotion and education; shared decision-making; and health status/functional status.³³⁶ CAHPS measures are used to capture patient

experience in several care delivery initiatives, including state Medicaid ACOs in Maine, Massachusetts, Minnesota, New Jersey, Oregon, Rhode Island, Utah, and Vermont.³³⁷ CAHPS measures have also been or are used in CMMI models, including the Pioneer ACO Model,³³⁸ the Enhancing Oncology Model (EOM), and the Kidney Care Choices (KCC) Model.³³⁹

To better capture patient-reported experience with care in payment initiatives, CMMI has developed two metrics to capture beneficiary-level and model-wide patient-reported experience with care: 1) percent of Medicare beneficiaries in Innovation Center models that responded with best possible response options “always” or “yes, definitely” on Medicare FFS CAHPS care coordination measures; and 2) percent of models using at least two patient-reported measures. For each metric, CMMI has also determined baseline performance in 2022 and goals for 2030.

- Metric 1. At baseline, 72.9 percent of beneficiaries in CMMI models responded “always” or “yes, definitely,” averaged across six questions in the CAHPS care coordination summary survey measure. The 2030 goal is for 75 percent of beneficiaries in CMMI models to respond “always” or “yes, definitely.”
- Metric 2. At baseline, two of seven (29.0 percent) current (i.e., with a start date on or after January 1, 2021) CMMI models report at least two patient-reported measures, with each measure representing a different Meaningful Measures 2.0 domain.³⁴⁰ The 2030 goal is for 75 percent of CMMI Models to report at least two patient-reported measures.³⁴¹

Given challenges in capturing patient experience, including that patient satisfaction may be unrelated to or confounded by health care processes and the burden of data collection, innovative approaches to measure patient-reported experience may offer insights into different domains of patient-reported experience.^{342,343,344} In recent years, researchers have gained health care facility quality information from crowd-sourced or social media data. Studies have found that crowd-sourced or social media ratings are correlated with existing validated measures of quality, including CAHPS ratings and state report cards on patient experience.^{345,346,347,348,349,350} Researchers caution that these approaches provide only a “snapshot” of quality and, although findings may be consistent with validated measures, they are untested, unvalidated, and not risk-adjusted. Given that ratings are provided for one provider or facility, extensions to ACO quality may be limited and prove challenging.

Using specialist performance data in population-based TCOC models. Population-based TCOC models include measures and rate performance on criteria that apply to all participating providers, whether PCP or specialist. Models share performance data with participating providers, both PCPs and specialists, to encourage better quality and efficiency in care. However, tying compensation to specialist performance is less common. In a survey of ACOs collected between 2013 and 2015, one-quarter included cost, 46 percent included clinical quality, 36 percent included patient satisfaction, and a quarter used productivity to help determine specialist compensation.³⁵¹ There were no differences in spending impacts between ACOs that tied specialist compensation to cost performance vs. those that did not. In a mixed-methods study of physician organizations, researchers found that nearly three-quarters of specialists had primary compensation that was volume-based, and that quality and cost performance incentives comprised only five percent of specialists’ total compensation.³⁵²

Standardizing Patient Assessment Data. 2014’s Improving Medicare Post-Acute Care Transformation Act required that standardized patient assessment data elements be collected across post-acute care. Standardized data can improve data collection across settings, outcome accuracy and comparison, and

interoperability of data. These improvements could ultimately lead to improved patient outcomes and coordination of care.³⁵³ There is little research on the impact of this act. An evaluation of providers' assessment tools for CMS's Annual Wellness Visit found wide variation of health assessments employed.³⁵⁴

Section XI. Relevant Features in Selected PTAC Proposals

This section summarizes findings from an analysis of components and themes related to specialty integration in previously submitted PTAC proposals. The analysis begins with a discussion of the criteria that were used to identify PTAC proposals with components related to improving care delivery and specialty integration (Section XI.A); followed by a review of specialty integration-related information in proposals that were submitted to PTAC (Section XI.B); and a summary of comments and recommendations related to specialty integration that were identified by PTAC during the Committee's deliberations on these proposals (Section XI.C).

XI.A. Criteria for Identifying Relevant PTAC Proposals

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. PTAC evaluates 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).

Several of the 10 criteria for proposed PFPMs that PTAC uses to evaluate stakeholder-submitted proposals are especially pertinent to improving care delivery and specialty integration, and nesting specialty episodes within population-based TCOC models. For example, the Secretary of HHS has established "Quality and Cost" and "Integration and Care Coordination" as two of the 10 criteria for proposed PFPMs that PTAC uses to evaluate stakeholder-submitted proposals. 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). The goal of the Integration and Care Coordination criterion is to "encourage greater integration and care coordination among practitioners and across settings where multiple practitioners or settings are relevant to delivering care to the population treated under the PFPM" (Criterion 7).

Given the increased emphasis on developing larger population-based APMs that encourage accountable care relationships, PTAC conducted a series of theme-based discussions in 2022 that examined key care delivery and payment issues related to developing and implementing population-based TCOC models, including potential relationships between larger population-based TCOC models and episode-based or condition-specific models; lessons learned from integrated delivery systems and risk-bearing entities and best practices for incorporating specialty innovations into larger, population-based models; and options for financially structuring population-based TCOC models to incentivize care delivery improvements and provider participation.

A key theme that emerged during the 2022 meeting series was the role of specialty integration in population-based TCOC models, including issues and opportunities related to improving care delivery and integrating specialty care in population-based TCOC models. Within this context, PTAC has assessed previous submitters' use of model design components related to improving coordination between

primary care and specialty providers in population-based and episode-based models while improving quality and reducing TCOC.

Nearly all of the 35 proposals that were submitted to PTAC between 2016 and 2020 addressed the proposed model’s potential impact on quality, costs and care coordination, to some degree. Additionally, at least 16 previous submitters have addressed issues related to improving care delivery and specialty integration in advanced primary care models and episode-based or condition-specific models as part of their proposal submissions, including care coordination between PCPs and specialists, in the payment methodology and performance measures for their proposed models.^{viii} Exhibit 5 includes a list of these proposals, and Appendix D includes additional information about these proposals.

Exhibit 5. List of Proposals Submitted to PTAC for Review That Included Components Related to Improving Care Delivery and Specialty Integration

Submitter Name, and Submitter Type	Proposal Name	Abbreviated Submitter Name
American Academy of Family Physicians <i>(Provider association and specialty society)</i>	Advanced Primary Care: A Foundational Alternative Payment Model (APC-APM) for Delivering Patient-Centered, Longitudinal, and Coordinated Care	AAFP
American Academy of Hospice and Palliative Medicine <i>(Provider association and specialty society)</i>	Patient and Caregiver Support for Serious Illness (PACSSI)	AAHPM
American College of Emergency Physicians <i>(Provider association and specialty society)</i>	Acute Unscheduled Care Model (AUCM): Enhancing Appropriate Admissions	ACEP
American College of Physicians-National Committee for Quality Assurance <i>(Provider association and specialty society/other)</i>	The “Medical Neighborhood” Advanced Alternative Payment Model (AAPM) (Revised Version)	ACP-NCQA
American College of Surgeons <i>(Provider association and specialty society)</i>	ACS–Brandeis Advanced Alternative Payment Model	ACS
American Society of Clinical Oncology <i>(Provider association and specialty society)</i>	Patient-Centered Oncology Payment Model (PCOP)	ASCO
Avera Health <i>(Regional/local multispecialty practice or health system)</i>	Intensive Care Management in Skilled Nursing Facility Alternative Payment Model (ICM SNF APM)	Avera

^{viii} These proposals received a PTAC rating of “Meets” or “Meets and Deserves Priority Consideration” for Criterion 7, Integration and Care Coordination.

Submitter Name, and Submitter Type	Proposal Name	Abbreviated Submitter Name
Coalition to Transform Advanced Care <i>(Coalition)</i>	Advanced Care Model (ACM) Service Delivery and Advanced Alternative Payment Model	C-TAC
Hackensack Meridian Health and Cota Inc. <i>(Regional/local multispecialty practice or health system; Device/technology company)</i>	Oncology Bundled Payment Program Using CAN-Guided Care	HMH/Cota
Icahn School of Medicine at Mt. Sinai <i>(Academic Institution)</i>	HaH Plus (Hospital at Home Plus) Provider-Focused Payment Model	Mount Sinai*
Innovative Oncology Business Solutions, Inc. <i>(For-profit corporation)</i>	Making Accountable Sustainable Oncology Networks (MASON)	IOBS
New York City Department of Health and Mental Hygiene <i>(Public health department)</i>	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	NYC DOHMH
Personalized Recovery Care <i>(Regional/local single specialty practice)</i>	Home Hospitalization: An Alternative Payment Model for Delivering Acute Care in the Home	PRC
Renal Physicians Association <i>(Provider association and specialty society)</i>	Incident ESRD Clinical Episode Payment Model	RPA
University of Chicago Medicine <i>(Academic Institution)</i>	The Comprehensive Care Physician Payment Model (CCP-PM)	UChicago
University of New Mexico Health Sciences Center <i>(Academic Institution)</i>	ACCESS Telemedicine: An Alternative Healthcare Delivery Model for Rural Cerebral Emergencies	UNMHSC

* PTAC determined that Mount Sinai “Meets and Deserves Priority Consideration” for Criterion 7. PTAC determined that all other proposals reviewed in the table above should be assigned the rating of “Meets” for Criterion 7.

XI.B. Summary of Specialty Integration-Related Information in Selected PTAC Proposals

Previously submitted PTAC proposals addressed several themes related to specialty integration, including:

- Approaches for improving specialty integration,
- Delineation of provider roles and responsibilities,
- Provision of specialist consultations,

- Approaches for improving care coordination,
- Provider communication and use of telehealth modalities,
- Managing care transitions, and
- Addressing equity and HRSNs.

Approaches for Improving Specialty Integration. Eight of the proposals that included components related to specialty integration mentioned improving multispecialty integration during or following an acute event or during an episode of advanced illness, and four proposals mentioned improving specialty integration within condition. Additionally, several of these proposals had targeted approaches to improve specialty integration.

- NYC DOHMH’s proposal focused on PCPs’ ability to refer patients to other diagnostic and treatment services within the same hospital-based clinic; telementoring with specialists; and integrating medical (including infectious diseases, gastroenterology, and hepatology) and behavioral health care.
- ACS’ proposal grouped general and specialty surgeons who participate in a single episode of care, a selected set of procedural or condition episodes, or cumulative patient-level aggregations of all outcomes; the proposed episode grouper would automatically identify most of the clinicians who are participating in the care for a patient during a defined episode.
- ACP-NCQA’s proposal improves primary care practice and specialist referral coordination through promoting high-quality coordination guided by Care Coordination Agreements and emphasizing enhanced access to timely, patient-focused care, shared decision-making, continuous improvement, and use of Certified Electronic Health Record Technology.
- ASCO’s proposal included community case conferences that would convene panels of multi-specialty providers, subspecialists, and researchers to discuss cancer cases and determine the most appropriate care.
- RPA’s proposal addressed coordination among medical specialists and with dialysis providers.
- IOBS’ proposal estimated spending and value for internal and external providers using virtual patient accounts developed from Medicare claims.

Delineation of Provider Roles and Responsibilities. The selected proposals that included components related to specialty integration had different clinicians involved in the care team and responsible for patients’ care. A few of the proposals noted that the primary care provider/team is responsible for patient care across domains, as well as for their education and overall care coordination. A couple of the proposals stated that the providers’ roles and responsibilities are delineated through care pathways and/or diagnostic and therapeutic pathways. Additionally, a few proposals articulated the specific tasks for which different members of the care team would hold responsibility. For example, UNMHSC’s proposal stated the ED team would provide care onsite and a neurological expert at a central hub would provide telehealth consultation; and NYC DOHMH’s proposal mentioned that providers would relay patients’ health status via EHRs to care coordinators, who may help document milestones.

Provision of Specialist Consultations. Thirteen of the proposals that included components related to specialty integration mentioned providing specialist consultations. The AAFP and AAHPM proposals stated that the PCP would manage these consultations, and the Mount Sinai and C-TAC proposals noted that the care team would facilitate them. Other submitters’ proposals stated that specialist

consultations would be provided through different care pathways, such as when patients are discharged from the ED. Some proposals, such as the ASCO proposal, discussed providing specialty referrals to a broad range of services:

- ASCO's proposal stated that specialist referrals to oncology practitioners would be provided if the patient's initial contact is not a practitioner from the treating health care setting, and that specialty referrals to psychosocial care and support services would be provided as needed. Referrals would also be made for the following services if not available onsite: rehabilitation, nutrition support/counseling, surgical and radiation oncology, diagnostic imaging, laboratory studies, psychosocial evaluation and support, genetic counseling, palliative care/symptom management, home care, and hospice care.

Approaches for Improving Care Coordination. All 16 of the PTAC proposals that included components related to specialty integration included approaches for improving care coordination. A majority of these included clinical care coordinators who were responsible for transitioning patients from one clinical setting to another. Most of the objectives of these coordinated transitions were related to reducing re-hospitalizations and ED visits. Additionally, some proposals discussed the importance of negotiating and confirming accountability between providers to ensure that there is clear accountability among the provider team.

- The objective of the UNMHSC proposal's care coordination efforts was to improve quality and reduce costs by reducing complications and readmissions while coordinating the missing link of specialty care in underserved areas.
- The objective of the C-TAC proposal's care coordination efforts included delivering evidence-based treatments; aligning care with patient preferences; symptom management; 24/7 access to clinical support; developing a comprehensive care plan; transitional and PAC; ensuring established reliable handoff processes; providing advanced care planning; and reducing unwanted/duplicate visits and interventions.

Provider Communication and Use of Telehealth Modalities. A number of PTAC proposals that included components related to specialty integration also included telehealth components such as synchronous communication via telephone or video with patients and providers as well as between providers. A smaller subset of these proposals suggested the use of telemonitoring and other mobile health tools to facilitate the sharing of patient data with providers outside of a clinical setting. Telemonitoring can offer patients around-the-clock care through a variety of care transitions and settings.

Managing Care Transitions. Thirteen of the proposals that included components related to specialty integration addressed care transitions, with each proposal having a slightly different approach to address care transitions. A few proposals had a set period of time following discharge during which patients receive transitional care support. Some of the proposals noted that the PCP/PCT manages the care transition services. However, UChicago's proposal stated that the same provider treats patients through both inpatient and outpatient settings and can tailor the timing of the transition to the individual patient, and ASCO's proposal stated that care transition services are provided by oncologists. A few proposals also included additional components for care transition.

- ACEP’s proposal stated that physician-physician communication is mandated when patients are discharged from the ED, admitted to the hospital, or placed on observation status.
- RPA’s proposal stated that the organization supports healthy transition to dialysis through planning during mid and late stages of chronic kidney disease, which includes: patient and caregiver education; patient-centered, shared decision-making; coordination among medical specialists; and coordination with dialysis providers.

Addressing Equity and HRSNs. Of the 16 PTAC proposals that included specialty integration components, 14 of the proposals included an equity and/or HRSN component in their proposed model.

- AAFP’s proposal includes providing referrals to address HRSNs, monitoring progress and following up on identified HRSNs, engaging in SDOH-based performance measurement, supporting and sharing information on clinical and non-clinical factors that contribute to health and success of treatment, and improving integration of health care and social services and supports.
- ACP-NCQA’s proposal includes screening for HRSNs, providing referrals to address HRSNs, monitoring progress and following up on identified HRSNs, and improving integration of health care and social services and supports.
- C-TAC’s proposal includes monitoring progress and following up on identified HRSNs, the use of interdisciplinary teams to address HRSNs, and improving integration of health care and social services and supports.

XI.C. PTAC Comments and Recommendations Related to Specialty Integration

This section draws on an analysis of PTAC voting patterns and comments on proposed PFPMs to highlight PTAC’s findings related to specialty integration in the Committee’s Reports to the Secretary, with a particular focus on Integration and Care Coordination in the context of PFPM development (Criterion 7).^{ix}

PTAC Findings Regarding Specialty Integration. The following are key findings from a synthesis of PTAC comments and recommendations regarding the use of specialty integration in PFPMs based on a review of PTAC voting patterns and recommendations for proposals that were deliberated and voted on by the Committee:

- Clear, standardized approaches to inter-provider communication are needed to support integration of specialty care for a wide range of specialties. PTAC identified seven proposals (Mount Sinai, ACP-NCQA, ACS, Avera, RPA, AAHPM, UNMHSC) that included varying mechanisms for coordination with usual care and specialty care providers. However, the mechanisms for facilitating integration varied; some proposals provided more explicit steps or components (e.g., the formation of interdisciplinary care teams, or use of cloud technology to share imaging/lab results), whereas other proposals did not outline steps or specify the threshold for ensuring integration. PTAC also questioned whether the voluntary nature of the

^{ix} For additional PTAC comments on approaches to improve care coordination in PTAC proposals, refer to Appendix F in Environmental Scan on Care Coordination in the Context of Alternative Payment Models (APMs) and Physician-Focused Payment Models (PFPMs), available at <https://aspe.hhs.gov/sites/default/files/private/pdf/261946/Jun-2021-CC-Escan.pdf>.

ACS proposal would lead to less integration of care. Similarly, PTAC commented that coordination between providers was expected, but not explicitly required in the Avera proposal. Committee members also expressed concern regarding the consulting specialist's lack of direct access to the EHR, which may negatively affect extent of specialty integration.

- Without adequate financial incentives, providers may have limited resources to invest in specialty integration. Several proposals included financial incentives to promote communication and coordination between primary care and specialty care providers (e.g., ACP-NCQA) or among specialty care providers (e.g., ACEP). PTAC specifically noted that the ASCO proposal did not provide incentives for greater integration and care coordination across all oncology subspecialties.
- Nesting episodes of care within new or existing APMs may provide opportunities for specialty integration. Several proposals focused on care coordination around an episode of care. For example, PTAC noted that the UChicago proposal focused on care coordination during a near-term period surrounding care transitions between settings, and that the ACEP proposal devoted resources to integration and care coordination during a 30-day episode of care.

Section XII. Areas Where Additional Information Is Needed

This section includes a summary of some areas for consideration to guide future research on specialty integration in the context of APMs. Appendix E includes additional areas for further exploration and research.

Assessing longitudinal impact of nesting specialty episodes on cost and patient outcomes. There is a dearth of research examining the longitudinal impacts of nesting specialty episodes on cost/utilization and patient outcomes. Research could evaluate short-term and long-term impacts through looking at patient outcomes during and immediately post-care, as well as monitoring their disease state at different timepoints post-treatment. Given that there may be certain specialties where nesting is more appropriate, this research could focus on their outcomes.

Empirically evaluating the link between capitated payment arrangements and improved care management and coordination. Under the current FFS system, providers are unable to bill for non-procedural responsibilities like care management and coordination, both of which are considered essential to effective care delivery. Capitated payments are believed to support care management and coordination by paying providers a fixed, risk-adjusted amount per beneficiary that covers both procedural and non-procedural services. Although mixed, there is research to suggest that capitation may enhance patient outcomes and satisfaction. However, there is a lack of research exploring how capitated funds are used to facilitate improved care management and coordination activities. Future research could also identify and refine measures for evaluating care coordination and management implementation and efficacy.

Leveraging other digital health tools to improve specialty care and integration. This environmental scan discusses how certain digital health tools can improve access to care, as well as data sharing and care coordination between specialists and providers. It would be interesting to explore how other digital health tools are being used to enhance specialty services and how they could be leveraged to better integrate these services into primary care.

Evaluating specialty care integration across varying practice settings. Some research exists on different settings' approaches to specialty integration, but it would be useful to have a rigorous evaluation of the approaches used, which ones were effective, and the ultimate patient outcomes. This evaluation could focus on a few specialties and include private and public practices. The findings could then be used as guidance for specific settings' integration of specialty care.

Providing more information on specialist integration. To fully understand how specialists can be integrated into population-based TCOC models, more research is needed on the participation experience, and performance of specialists in these models. While there is ample evidence on specialty-based models, there is limited information on specialists in population-focused ACOs and primary care-based models. Future evaluations of APMs such as ACO REACH should include quantitative and qualitative analysis focused on specialists and best practices for their effective inclusion in population-based TCOC models.

Identifying procedures that are removed from the inpatient only list and are performed on an outpatient basis that may still start an episode that could require a specialist. For example, Total Knee Arthroplasty (TKA) could be removed from the Medicare Inpatient-Only (IPO) list) or could be a community entrant to Medicare home health. It would also be beneficial to identify the anchor events for these procedures.

Further evaluation of issues related to prospective versus retrospective attribution. Understanding the impact of each of these attribution methods and how they relate to payment approaches.

Sharing performance data with specialists versus primary care physicians. Comparing the impact of sharing specialists' performance data with them versus primary care physicians' data sharing as a performance measure, and the implications this has for patient care and outcomes.

Appendix A. Research Questions by Environmental Scan Section

Section	Research Questions
Section IV. Current State of Specialist Integration in Primary Care	<ul style="list-style-type: none"> • How can advanced primary care models and ACOs improve coordination with specialists? • What are examples of care delivery models involving shared and/or cascading responsibility between primary care providers and specialists? Which conditions and/or specialties may be most appropriate for these kinds of models? • What are examples of organizations that have been successful in implementing these approaches? • How can virtual and telehealth services improve care coordination between primary care and specialist providers, and how can PB-TCOC models integrate these services into their models? • What are examples of organizations that have successfully implemented these approaches? • To what extent do current models overlap in markets, providers, and/or patient populations? What is the best way to apply actual episode cost vs. target episode cost to different model entities (e.g., between Bundled Payments for Care Improvement [BPCI] providers and Medicare Shared Savings Program [MSSP] ACOs)?
Section V. Enhancing Rural and Safety-Net Providers' Participation in Population-Based TCOC Models	<ul style="list-style-type: none"> • What are strategies to increase rural care providers' participation in TCOC models? What are best practices with implementing TCOC models in rural areas, and where are there opportunities to address barriers preventing rural provider participation? • What are the barriers for safety-net providers related to participating in PB-TCOC models? How can these barriers be addressed?
Section VI. Enhancing Specialty Participation in Team-Based Models	<ul style="list-style-type: none"> • What are effective payment mechanisms to incentivize coordination between primary care and specialty care providers (e.g., bundled payments, shared savings, nested payments, capitation)? How can bundled payments and other payment mechanisms be used within specialty care services to coordinate with primary care? • What are some capitation approaches (e.g., per-beneficiary per-month [PBPM] payments) and purposes (e.g., care management, technology, supplies) that may be effective for different types of specialty care populations? Which types of specialties would potentially be most appropriate for capitation within a PB-TCOC model (e.g., cognitive vs. procedural specialties)? • What are strategies for transitioning primary care providers and specialists from fee-for-service (FFS) to risk-based payment arrangements? • What are options for improving specialist engagement in the development and implementation of PB-TCOC models? What are examples of organizations that are successfully utilizing these approaches?
Section VII. Nesting Specialty Episodes within PB-TCOC Models	<ul style="list-style-type: none"> • What are some potential options for modification of prospective and retrospective arrangements to manage higher-cost specialty care, such as prospective payment for a bundle of services and retrospective reconciliation based on performance? What are the challenges with model overlap and competing priorities (e.g., attribution of patients who are eligible for multiple models due to multiple chronic conditions and determination of provider

Section	Research Questions
	<p>accountability for these patients in terms of cost, quality of care, and care coordination)?</p> <ul style="list-style-type: none"> • What are options to phase in more comprehensive structures with greater shared savings/losses over time (e.g., moving from pay-for-reporting to pay-for-performance, increasing shared risk)? What are some strategies to engage providers to take on more risk? • Within PB-TCOC models, how is risk shared between the payer, ACOs, providers, and beneficiaries? • What are the implications of nesting on overall cost? • What factors should be considered to determine initiation, duration, and included services in a care episode? • How should associated conditions/services within an episode of care or for bundled payments be determined? • Is there preference for prospective or retrospective attribution, and does the latter include considerations for any adopted, respecified, or de novo measures? • How does nesting fit into accountable care or population-based models? How can nesting be leveraged to improve care delivery and support payment incentives? • To what extent can PB-TCOC models incorporate nested episodes of care focused on specific specialties (e.g., the design of an episode of care for cancer care will differ from renal care)? • How do specialty-based models' design features (e.g., episode definition, care coordination, payment mechanisms) vary for subspecialists (i.e., head and neck oncologists) vs. more universal specialists (i.e., cardiologists)?
<p>Section VIII. Incentivizing Specialist Participation and Engagement within PB-TCOC Models</p>	<ul style="list-style-type: none"> • What are some approaches to reduce cost-shifting and overcome related challenges, such as referrals to more expensive providers and induced utilization? Should models include a wide array of providers to allow for greater market flexibility? • How can the monitoring of disease progression be improved through either disease prevention, disease maintenance, restoration of health/function, or palliative care?
<p>Section IX. Unintended Consequences from Provider Consolidation within PB-TCOC Models</p>	<ul style="list-style-type: none"> • Could better collaboration and integration result in creation of monopolies among PB-TCOC models, which could lead to higher prices in their market and cost sharing among Medicare beneficiaries and other patient populations? What are the trade-offs between gains in efficiency due to integration vs. adverse effects due to market power? • What are the potential benefits and challenges associated with mandatory vs. voluntary participation in advanced primary care models and ACOs? How can models shift from voluntary to mandatory participation as they progress?
<p>Section X. HIT and Data Analytics</p>	<ul style="list-style-type: none"> • How can data quality and sharing be improved to support patient-centered care and coordination between primary care and specialty care (e.g., notifying the model entity when patients have an inpatient admission or readmission to enable more effective care management)? • How can access to clinical data (e.g., electronic health records [EHRs] data across multiple providers) and administrative data (e.g., encounter data used for billing or reconciliation) be improved and used more effectively? What are some challenges with reliance on proprietary technology?

Section	Research Questions
	<ul style="list-style-type: none"> • What are some strategies for communication/notification and data exchange? How can models address resource/infrastructure availability challenges? • What effects does new technology have on patients and providers (e.g., telehealth—uptake, effect on care management, access improvements, reducing transfers to hospitals)? • What are some initial steps for improving data quality and sharing among primary care and specialty care providers that serve a given patient population? What are some organizations that have been successful with these steps?
<p>Section X. Enhancing Performance Metrics</p>	<ul style="list-style-type: none"> • What are appropriate benchmarks to identify model impacts on quality, equity, utilization, and cost outcomes for performance measurement? What are the options for incentivizing measure performance (e.g., achievement) and/or improvement (e.g., relative to a benchmark or to similar providers), and how can the measurement be standardized across care delivery models? • What is the utility of current patient experience measures (such as CAHPS) vs. newer, innovative patient-reported experience or outcome measures? How can the collection of these measures be improved? • What are approaches for ensuring that a model’s distribution of utilization and costs and between specialist-provided services and primary care services is patient-centered (e.g., avoiding cost-shifting across other providers/service types when it does not lead to patient-centered and high-value care)? What are approaches for promoting high-value care (e.g., high-quality, cost-efficient care)? What are some potential lessons from BPCI, the Maryland TCOC Model, or commercial plans? • How should models account for variation in care goals across APMs and the balance between patient-centered care and patient choice with assuring high-value care?

Appendix B. Search Strategy

Research Questions	Search Terms
Section IV. Current State of Specialist Integration in Primary Care	
<ul style="list-style-type: none"> • What are examples of care delivery models involving shared and/or cascading responsibility between primary care providers and specialists? Which conditions and/or specialties may be most appropriate for these kinds of models? • What are examples of organizations that have been successful in implementing these approaches? • How can advanced primary care models and ACOs improve coordination with specialists? • How can virtual and telehealth services improve care coordination between primary care and specialist providers, and how can PB-TCOC models integrate these services into their models? • What are examples of organizations that have successfully implemented these approaches? • What are strategies to increase rural care providers' participation in TCOC models? What are best practices with implementing TCOC models in rural areas, and where are there opportunities to address barriers preventing rural provider participation? • What are the barriers for safety-net providers related to participating in PB-TCOC models? How can these barriers be addressed? 	Specialty integration OR specialists (AND): <ul style="list-style-type: none"> • Population-based • Advanced primary care models • ACOs • Alternative Payment Models • Telehealth • Rural participation • Rural barriers • Rural • Safety net
Section V. Enhancing Specialty Participation in Team-Based Models	
<ul style="list-style-type: none"> • What are effective payment mechanisms to incentivize coordination between primary care and specialty care providers? How can bundled payments and other payment mechanisms be used within specialty care services to coordinate with primary care? • What are some capitation approaches and purposes that may be effective for different types of specialty care populations? Which types of specialties would potentially be most appropriate for capitation within a PB-TCOC model? • What are strategies for transitioning primary care providers and specialists from fee-for-service to risk-based payment arrangements? • What are options for improving specialist engagement in the development and implementation of PB-TCOC models? What are examples of organizations that are successfully utilizing these approaches? 	Specialty care OR specialists AND: <ul style="list-style-type: none"> • Payment • Bundled payment • Coordination • Capitation • Fee-for-service • PB-TCOC model
Section VI. Nesting Specialty Episodes within PB-TCOC Models	
<ul style="list-style-type: none"> • What are some potential options for modification of prospective and retrospective arrangements to manage higher-cost specialty care, such as prospective payment for a 	Nesting OR nested AND Population-based TCOC AND: <ul style="list-style-type: none"> • Savings • Losses

Research Questions	Search Terms
<p>bundle of services and retrospective reconciliation based on performance?</p> <ul style="list-style-type: none"> • What are the challenges with model overlap and competing priorities (e.g., attribution of patients who are eligible for multiple models due to multiple chronic conditions and determination of provider accountability for these patients in terms of cost, quality of care, and care coordination)? • What are options to phase in more comprehensive structures with greater shared savings/losses over time (e.g., moving from pay-for-reporting to pay-for-performance, increasing shared risk)? What are some strategies to engage providers to take on more risk? • Within PB-TCOC models, how is risk shared between the payer, ACOs, providers, and beneficiaries? • What are the implications of nesting on overall cost? • What factors should be considered to determine initiation, duration, and included services in a care episode? • How should associated conditions/services within an episode of care or for bundled payments be determined? • Is there preference for prospective or retrospective attribution, and does the latter include considerations for any adopted, respecified, or de novo measures? • How does nesting fit into accountable care or population-based models? How can nesting be leveraged to improve care delivery and support payment incentives? • To what extent can PB-TCOC models incorporate nested episodes of care focused on specific specialties (e.g., the design of an episode of care for cancer care will differ from renal care)? • How do specialty-based models' design features (e.g., episode definition, care coordination, payment mechanisms) vary for subspecialists (i.e., head and neck oncologists) vs. more universal specialists (i.e., cardiologists)? 	<ul style="list-style-type: none"> • Risk • Prospective • Retrospective • Initiation • Duration • Included services
Section VII. Incentivizing Specialist Participation and Engagement within PB-TCOC Models	
<ul style="list-style-type: none"> • What are some approaches to reduce cost-shifting and overcome related challenges, such as referrals to more expensive providers and induced utilization? Should models include a wide array of providers to allow for greater market flexibility? • How can the monitoring of disease progression be improved through either disease prevention, disease maintenance, restoration of health/function, or palliative care? 	<p>Specialists AND population-based TCOC AND:</p> <ul style="list-style-type: none"> • Referrals • Providers • Palliative care • End-of-life care
Section VIII. Unintended Consequences from Provider Consolidation within PB-TCOC Models	
<ul style="list-style-type: none"> • Could better collaboration and integration result in creation of monopolies among PB-TCOC models, which could lead to 	<p>PB-TCOC AND consolidation AND:</p> <ul style="list-style-type: none"> • Monopolies

Research Questions	Search Terms
<p>higher prices in their market and cost sharing among Medicare beneficiaries and other patient populations?</p> <ul style="list-style-type: none"> • What are the trade-offs between gains in efficiency due to integration vs. adverse effects due to market power? 	<ul style="list-style-type: none"> • Efficiency • Outcomes
Section IX. HIT and Data Analytics	
<ul style="list-style-type: none"> • How can data quality and sharing be improved to support patient-centered care and coordination between primary care and specialty care? • How can access to clinical data (e.g., electronic health records [EHRs] data across multiple providers) and administrative data (e.g., encounter data used for billing or reconciliation) be improved and used more effectively? What are some challenges with reliance on proprietary technology? • What are some strategies for communication/notification and data exchange? How can models address resource/infrastructure availability challenges? • What effects does new technology have on patients and providers (e.g., telehealth—uptake, effect on care management, access improvements, reducing transfers to hospitals)? • What are some initial steps for improving data quality and sharing among primary care and specialty care providers that serve a given patient population? What are some organizations that have been successful with these steps? 	<ul style="list-style-type: none"> • Health information technology AND improve • Electronic health records AND improve OR access • Data quality AND health care • M-health • Data notification AND health care
Section X. Enhancing Performance Metrics	
<ul style="list-style-type: none"> • What are appropriate benchmarks to identify model impacts on quality, equity, utilization, and cost outcomes for performance measurement? What are the options for incentivizing measure performance (e.g., achievement) and/or improvement (e.g., relative to a benchmark or to similar providers), and how can the measurement be standardized across care delivery models? • What is the utility of current patient experience measures (such as CAHPS) vs. newer, innovative patient-reported experience or outcome measures? How can the collection of these measures be improved? • What are approaches for ensuring that a model’s distribution of utilization and costs and between specialist-provided services and primary care services is patient-centered (e.g., avoiding cost-shifting across other providers/service types when it does not lead to patient-centered and high-value care)? What are approaches for promoting high-value care (e.g., high-quality, cost-efficient care)? What are some 	<p>Health care AND:</p> <ul style="list-style-type: none"> • Performance AND measure OR metrics • Benchmarks AND outcome • Consumer Assessment of Healthcare Providers • Patient-reported measures

Research Questions	Search Terms
<p>potential lessons from BPCI, the Maryland TCOC Model, or commercial plans?</p> <ul style="list-style-type: none"> • How should models account for variation in care goals across APMs and the balance between patient-centered care and patient choice with assuring high-value care? 	
<p>Appendix C. Comparison of Relevant Features in Selected CMMI Models and Other CMS Demonstrations and Programs</p>	
<ul style="list-style-type: none"> • How do the features of models and programs that are relevant for developing population-based TCOC models vary on the following dimensions? 	<p>Centers for Medicare & Medicaid Services (CMS), CMS Program Statistics, and CMS and Innovation Center websites and associated evaluation and model overview documents</p>
<p>Section XI and Appendix D. Relevant Features in Selected PTAC Proposals</p>	
<ul style="list-style-type: none"> • How did PTAC proposals include consideration of TCOC measures in designing proposed payment methodologies? 	<p>PTAC proposal documents</p>

Appendix C. Summary of Model and Specialty Integration Characteristics for 24 Selected CMMI Models with Components Related to Specialty Integration, by Specialty Integration Context

The following tables provide specific details on model characteristics (i.e., clinical focus, providers, setting, and patient population); components related to specialty integration (i.e., approaches to improve specialty integration, delineation of provider roles and responsibilities, provision of specialist consultations, approaches to improve care coordination,^x provider communication and telehealth modalities,^{xi} managing care transitions, and addressing equity and HRSNs^{xii}); payment design features (e.g., financial incentives); performance measurement features (i.e., types of performance measures, whether performance is tied to payment, whether the model includes performance measures related to improving coordination, and benchmarking); and the approach to beneficiary alignment (if applicable) for selected CMMI Models that included specialty integration components. The selected CMMI Models are organized into four separate tables by the following specialty integration contexts: CMMI Models with a focus on Advanced Primary Care, CMMI Models with a focus on specialties requiring acute management, CMMI Models with a focus on specialties requiring chronic management, and CMMI Models with a specialty integration focus. Each table is organized in alphabetical order by CMMI Model name.

Overview of Methodology Used to Review the Selected CMMI Models

The available information on each of the 24 selected CMMI Model's summary pages on the Innovation Center website was reviewed. This included an overview of the model, financial operating and performance measurement methodologies, 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 themes related to specialty integration and other administrative, payment, and performance measurement characteristics. The categorizations were based on the key information highlighted in these documents and are not exhaustive. Models included in the tables are those that are ongoing, under development, or completed within the last five years, and that operate in more than one state market. The selected models may have elements that fall into additional categories of context, objective, functions, and payment models

^x For additional details on approaches to improve care coordination in CMMI Models, refer to Appendix E in *Environmental Scan on Care Coordination in the Context of Alternative Payment Models (APMs) and Physician-Focused Payment Models (PFPMs)*, available at <https://aspe.hhs.gov/sites/default/files/private/pdf/261946/Jun-2021-CC-Escan.pdf>.

^{xi} For additional details on telehealth in CMMI Models, refer to *Environmental Scan on Telehealth in the Context of Alternative Payment Models (APMs) and Physician-Focused Payment Models (PFPMs)*, available at <https://aspe.hhs.gov/sites/default/files/private/pdf/261946/Sep2020TelehealthEnvironmentalScan.PDF>.

^{xii} For additional details on addressing health equity and SDOH in CMMI Models, refer to Appendix D in *Background Information Related to Optimizing Efforts to Address Social Determinants of Health and Equity in the Context of Alternative Payment Models and Physician-Focused Payment Models*, available at <https://aspe.hhs.gov/sites/default/files/documents/bc3335d23de446d835f6a5617f2cba1e/PTACProposalCMMIModel-Analysis.pdf>.

Exhibit 6. Characteristics of CMMI Models with a Focus on Advanced Primary Care

<i>CMMI Models with Advanced Primary Care Focus</i>					
Model Name	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
Accountable Health Communities (AHC) Model	<p>Clinical Focus: Primary care</p> <p>Providers: Community bridge organizations</p> <p>Setting: Multiple (e.g., hospitals— inpatient and outpatient, clinical delivery sites, community service provider sites)</p> <p>Patient Population: High-risk Medicare and</p>	<p>Approaches to Improve Specialty Integration: Care coordination for high-cost, high-use beneficiaries</p> <p>Delineation of Provider Roles and Responsibilities: Bridge organizations^{xiii} serve as community hubs that connect beneficiaries with social service providers and community-based organizations; however, bridge organizations are not responsible for the actual delivery of these services</p> <p>Provision of Specialist Consultations: Not specified</p> <p>Approaches to Improve Care Coordination: Using</p>	<p>Funds for this model support the infrastructure and staffing needs of bridge organizations, and do not pay directly or indirectly for any community services</p> <p>Assistance track: Funding for screening Medicare and Medicaid beneficiaries for five HRSNs</p> <p>Alignment track: Same as Assistance track plus additional funding to support establishing a governing body of</p>	<p>Types of Performance Measures: Utilization, quality</p> <p>Performance Tied to Payment: No</p> <p>Performance Measures Related to Improving Coordination: Yes</p> <p>Benchmarking: N/A</p>	N/A ^{xiv}

^{xiii} Bridge organizations screen eligible beneficiaries for services and implement the AHC Model through partnerships with clinical care settings, community services organizations, state Medicaid agencies, and other stakeholders.

^{xiv} Beneficiaries identified as having unmet HRSNs can decline services.

CMMI Models with Advanced Primary Care Focus					
Model Name	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
	Medicaid beneficiaries	<p>interdisciplinary teams to address HRSNs; supporting and sharing information on clinical and non-clinical factors that contribute to health and success of treatment</p> <p>Provider Communication and Telehealth Modalities: N/A</p> <p>Managing Care Transitions: Improving integration of health care and social services supports</p> <p>Addresses Equity and HRSNs: Screening for HRSNs; referrals to address HRSNs and monitoring follow-up; SDOH-based performance measures; implementing strategies to advance access to equitable care</p>	community partners/organizations and conducting a gap analysis to determine available resources and additional resources needed		
Comprehensive Primary Care Plus (CPC+)	<p>Clinical Focus: Primary care</p> <p>Providers:</p>	<p>Approaches to Improve Specialty Integration: Utilize primary care to help patients navigate the health care system; primary care</p>	Care management fee; performance-based incentive payments; Medicare Physician Fee Schedule (MPFS)	Types of Performance Measures: Utilization, spending, quality	Prospective, claims-based alignment using a two-year “look back” period; the Centers for

<i>CMMI Models with Advanced Primary Care Focus</i>					
Model Name	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
	<p>Primary care providers (PCPs)</p> <p>Setting: Primary care practices</p> <p>Patient Population: All Medicare and Medicaid beneficiaries in participating regions</p>	<p>behaviorist model integrates behavioral health into the primary care workflow through warm handoffs to a co-located behavioral health professional to address mental illness in the primary care setting and behavioral strategies for management of chronic general medical illnesses, and facilitate specialty care engagement for serious mental illness</p> <p>Delineation of Provider Roles and Responsibilities: Organize care by practice-identified teams responsible for a specific, identifiable panel of patients to optimize continuity; specific, program requirements in domains including access and continuity, care management, comprehensiveness and coordination, patient and caregiver engagement, and planned care and population</p>		<p>Performance Tied to Payment: Yes</p> <p>Performance Measures Related to Improving Coordination: Yes</p> <p>Benchmarking: Yes, using risk-adjusted Patient Experience of Care (PEC) survey scores</p>	<p>Medicare & Medicaid Services (CMS) attributes beneficiaries to practices every quarter</p>

<i>CMMI Models with Advanced Primary Care Focus</i>					
Model Name	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
		<p>health, with varying tasks by track and increasing responsibilities over time</p> <p>Provision of Specialist Consultations: Behavioral health specialist consultations</p> <p>Approaches to Improve Care Coordination: Align resources with patient and population needs; supporting and sharing information on clinical and non-clinical factors that contribute to health and success of treatment</p> <p>Provider Communication and Telehealth Modalities: Synchronous telehealth and e-visits</p> <p>Managing Care Transitions: Facilitate transitions and coordinate care across settings</p> <p>Addresses Equity and HRSNs:</p>			

CMMI Models with Advanced Primary Care Focus					
Model Name	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
		Screening for HRSNs; referrals to address HRSNs and monitoring follow-up; implementing strategies to advance equitable access to care			
Independence at Home (IAH) Demonstration	<p>Clinical Focus: Primary care, chronically ill</p> <p>Providers: Primary care providers^{xv}</p> <p>Setting: Home-based</p> <p>Patient Population: Medicare beneficiaries with multiple chronic conditions</p>	<p>Approaches to Improve Specialty Integration: Minimizes need for consultation and care in institutional settings; broad range of primary care services provided in home setting by primary care practice or multidisciplinary team</p> <p>Delineation of Provider Roles and Responsibilities: Participating practices are responsible for forming in-home assessments and coordinating beneficiaries' care</p>	Quality and financial performance-based incentive payments to provide home-based primary care to chronically ill beneficiaries; practices can earn incentive payments if their patients' Medicare expenditures are below the practice's target expenditures and the practice meets required standards for a set of quality measures	<p>Types of Performance Measures: Spending, quality</p> <p>Performance Tied to Payment: Yes</p> <p>Performance Measures Related to Improving Coordination: Yes</p> <p>Benchmarking: Yes <i>Quality measure target performance:</i> achieve measure-specific achievement thresholds on three or more of six measures</p>	N/A ^{xvi}

^{xv} Participating medical practices included independent practices, members of Visiting Physicians Associations, and academic medical centers.

^{xvi} Participating medical practices screen beneficiaries, who can voluntarily enroll.

CMMI Models with Advanced Primary Care Focus					
Model Name	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
		<p>Provision of Specialist Consultations: Not specified; IAH beneficiaries receive primary and specialty care visits</p> <p>Approaches to Improve Care Coordination: Incentive payments after meeting minimum savings requirements</p> <p>Provider Communication and Telehealth Modalities: Synchronous, telehealth and telephone visits</p> <p>Managing Care Transitions: communication with home health agencies</p> <p>Addresses Equity and HRSNs: Yes</p>		<p><i>Practice-specific PBPM target expenditures:</i> based on historical Medicare FFS per capita expenditures for non-participating beneficiaries in the same counties, adjusted for risk, frailty, and a utilization factor; trended to the PY by the increase in total per capita Medicare FFS expenditures</p>	

CMMI Models with Advanced Primary Care Focus					
Model Name	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
Integrated Care for Kids (InCK) Model	<p>Clinical Focus: Primary care</p> <p>Providers: State Medicaid agencies, Lead Organizations (e.g., health care providers, managed care organizations, and public health departments), and Partnership Councils</p> <p>Setting: Managed care organizations</p> <p>Patient Population: Children under the age of 21 covered by</p>	<p>Approaches to Improve Specialty Integration: Integrate community-based resources to support advanced primary care practices; prevention, early identification, and treatment of behavioral and physical health needs</p> <p>Delineation of Provider Roles and Responsibilities: Not specified</p> <p>Provision of Specialist Consultations: Yes</p> <p>Approaches to Improve Care Coordination: Establish accountability or negotiate responsibility; align resources with patient and population needs</p>	State-specific pediatric APMs that incorporate provider accountability and integrated care coordination, and focus on meaningful improvements in care quality and health outcomes	<p>Types of Performance Measures: Utilization, quality</p> <p>Performance Tied to Payment: Yes</p> <p>Performance Measures Related to Improving Coordination: Yes</p> <p>Benchmarking: Yes, using baseline data submitted by Award Recipients (Ars) during the model pre-implementation period; varies by state</p>	N/A ^{xvii}

^{xvii} Beneficiaries are voluntarily enrolled in the InCK Model through population-based screening.

<i>CMMI Models with Advanced Primary Care Focus</i>					
Model Name	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
	Medicaid; Children’s Health Insurance Program (CHIP) beneficiaries; pregnant women over 21 with Medicaid	<p>Provider Communication and Telehealth Modalities: Pre-implementation period used to establish better information sharing and communication protocols between medical providers and mobile crisis response (MCR) services; applicable virtual services by video and phone</p> <p>Managing Care Transitions: Using telehealth services</p> <p>Addresses Equity and HRSNs: Yes</p>			
Primary Care First Model Options (PCF)	<p>Clinical Focus: Primary care</p> <p>Providers: PCPs</p> <p>Setting: Primary care practices</p> <p>Patient Population:</p>	<p>Approaches to Improve Specialty Integration: Enables primary care practices to offer a broader range of health care services to meet patient needs, including behavioral health integration</p> <p>Delineation of Provider Roles and Responsibilities: Eligibility requirements for PCF practices in each cohort; flexibility to</p>	Total Primary Care Payment paid to deliver advanced primary care in/outside of office; Performance-Based Adjustment to reduce acute hospitalizations to reduce total cost of care, while meeting quality and experience	<p>Types of Performance Measures: Utilization, spending, quality</p> <p>Performance Tied to Payment: Yes</p> <p>Performance Measures Related to Improving Coordination: Because PCF practices are</p>	Prospective voluntary or claims-based alignment using a two-year “look back” period; CMS attributes beneficiaries to practices every quarter

<i>CMMI Models with Advanced Primary Care Focus</i>					
Model Name	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
	Medicare patients with serious illness/chronic conditions	<p>support innovative care delivery</p> <p>Provision of Specialist Consultations: Yes, to behavioral health care providers</p> <p>Approaches to Improve Care Coordination: Aligns resources with patient and population needs</p> <p>Provider Communication and Telehealth Modalities: Synchronous; used to support enhanced patient access, especially during the coronavirus disease 2019 (COVID-19) public health emergency (PHE)</p> <p>Managing Care Transitions: Advanced care planning, episodic care management</p>	of care performance thresholds; separate payment structure for practices that care for Seriously Ill Populations (SIP) beneficiaries, including one-time per beneficiary payment for patient outreach and engagement, as well as monthly per beneficiary payments with an upward or downward adjustment based on quality	<p>expected to deliver advanced primary care at the time they apply to participate in the Model, they will be given flexibility under the Model to use own individualized care delivery approaches if they satisfy a minimum threshold of care delivery requirements. PCF will also have minimal care delivery reporting requirements, reducing administrative burden for participating practices.</p> <p>Benchmarking: Yes, using national benchmarks and regional performance adjustments (based on reference group of practices)</p>	

<i>CMMI Models with Advanced Primary Care Focus</i>					
Model Name	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
		Addresses Equity and HRSNs: Yes, although not an initial goal of the PCF Model			

Exhibit 7. Characteristics of CMMI Models with a Focus on Specialties Requiring Acute Management

<i>CMMI Models with Specialty Focus – Acute Management</i>					
Model Name	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
Bundled Payments for Care Improvement Advanced (BPCI-A) Model	<p>Clinical Focus: Cross-clinical focus</p> <p>Providers: Acute Care Hospitals, Physician Group Practices, Medicare-enrolled providers</p> <p>Setting: Inpatient and outpatient services</p> <p>Patient Population: Medicare beneficiaries with certain clinical episodes (29 inpatient, 3 outpatient)</p>	<p>Approaches to Improve Specialty Integration: Retrospective reconciliation of payments for selected clinical episodes in a bundled payment model with one risk track</p> <p>Delineation of Provider Roles and Responsibilities: The Model Participant facilitates coordination within the health care team</p> <p>Provision of Specialist Consultations: N/A</p> <p>Approaches to Improve Care Coordination: Establishes an “accountable party” and shifts emphasis from individual services to clinical episodes</p>	One risk track; 90-day clinical episodes with retrospective, bundled payments	<p>Types of Performance Measures: Quality</p> <p>Performance Tied to Payment: Yes</p> <p>Performance Measures Related to Improving Coordination: No</p> <p>Benchmarking: Prospective; based on historical expenditures, patient characteristics, and characteristics and trends of the hospital’s peer group for the episode; rebased annually and updated to reflect changes in Medicare FFS payment rates</p>	N/A ^{xviii}

^{xviii} All BPCI-A Clinical Episodes are aligned to participants. Clinical episodes begin with an Anchor Stay (inpatient acute care hospital admission with qualifying MS-DRG code) or Anchor Procedure (start of outpatient procedure with qualifying HCPCS code).

CMMI Models with Specialty Focus – Acute Management					
Model Name	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
		<p>Provider Communication and Telehealth Modalities: Not specified</p> <p>Managing Care Transitions: The BPCI Advanced Participant ensures providers from all health care settings communicate and collaborate on quality and total cost of care</p> <p>Addresses Equity and HRSNs: Not specified</p>			
Comprehensive Care for Joint Replacement (CJR) Model	<p>Clinical Focus: Lower extremity joint replacements (LEJR)</p> <p>Providers: Hospitals, physicians, and post-acute care providers</p> <p>Setting: Inpatient or outpatient</p>	<p>Approaches to Improve Specialty Integration: Financial incentives tied to quality and cost performance; bundled payments</p> <p>Delineation of Provider Roles and Responsibilities: The hospital performing the LEJR is responsible for costs and quality of care</p> <p>Provision of Specialist Consultations: N/A</p>	Retrospective, bundled payment model with prospective, quality-adjusted target prices for each joint replacement episode	<p>Types of Performance Measures: Utilization, spending, quality</p> <p>Performance Tied to Payment: Yes</p> <p>Performance Measures Related to Improving Coordination: Yes</p> <p>Benchmarking: Performance year (PY) target prices based on</p>	Eligible beneficiaries are aligned to participating hospitals based on discharges with qualifying joint replacement Medicare Severity Diagnosis Related Groups (MS DRGs)

CMMI Models with Specialty Focus – Acute Management					
Model Name	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
	<p>Patient Population: Medicare patients undergoing hip, knee, and ankle replacements</p>	<p>Approaches to Improve Care Coordination: Participating hospitals have access to additional tools (e.g., spending and utilization data and sharing of best practices); patient activation, risk stratification to identify high-risk patients</p> <p>Provider Communication and Telehealth Modalities: Collaboration with post-acute care providers, cross-provider data sharing</p> <p>Managing Care Transitions: Physicians, home health agencies, skilled nursing facilities, and other providers are incentivized to communicate/coordinate care; discharge planning, patient follow-up</p> <p>Addresses Equity and HRSNs: Not specified</p>		<p>hospital-specific and regional episode expenditures including a three percent discount</p>	

CMMI Models with Specialty Focus – Acute Management

Model Name	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
<p>Emergency Triage, Treat, and Transport (ET3) Model</p>	<p>Clinical Focus: Emergency care</p> <p>Providers: Medicare-enrolled ambulance service suppliers and hospital-owned ambulance providers</p> <p>Setting: Patient home or alternative setting including, urgent care centers, medical clinics, behavioral health centers, and EDs</p> <p>Patient Population: Medicare beneficiaries</p>	<p>Approaches to Improve Specialty Integration: Distinct care pathways for substance use disorder and behavioral health care</p> <p>Delineation of Provider Roles and Responsibilities: Allows emergency medical services (EMS) team flexibility to transport patients to alternative destinations such as a primary care office, urgent care clinic, or community mental health center, as well as initiate immediate treatment via a designated partner or telehealth</p> <p>Provision of Specialist Consultations: N/A; patients can be transported to community mental health centers or sobering centers as appropriate</p> <p>Approaches to Improve Care Coordination: Decrease avoidable ED utilization and provide person-centered care</p>	<p>Model Participants will bill an amount equivalent to either the ambulance fee schedule Basic Life Support (BLS-E) base emergency rate or the Advanced Life Support, Level 1 (ALS1-E) base emergency rate for emergency ground ambulance services for initiation and facilitation of a Treatment in Place intervention or for Transport to an Alternative Destination; payment for</p>	<p>Types of Performance Measures: Utilization, Quality</p> <p>Performance Tied to Payment: Yes</p> <p>Performance Measures Related to Improving Coordination: No</p> <p>Benchmarking: No</p>	<p>N/A; the Model Participant responding to the 9-1-1 call triages the beneficiary to be transported to the ED, be transported to an alternative destination, or receive treatment in place; beneficiaries can decline ET3 Interventions and be transported to the ED regardless of the triage decision</p>

CMMI Models with Specialty Focus – Acute Management					
Model Name	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
	with medical emergencies	<p>Provider Communication and Telehealth Modalities: Synchronous, used to provide treatment in place</p> <p>Managing Care Transitions: N/A</p> <p>Addresses Equity and HRSNs: Not specified</p>	<p>Transport to an Alternative Destination will include the same mileage rates and adjustments applicable to current Medicare covered transports to the ED; Qualified Health Care Partners providing services either on-site or by telehealth will bill Medicare Part B as normal, based on services provided; Participants may be eligible for up to a three percent upward adjustment to Model</p>		

CMMI Models with Specialty Focus – Acute Management

Model Name	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
			Intervention payments		
<u>Rural Community Hospital Demonstration</u>	<p>Clinical Focus: Inpatient care</p> <p>Providers: Providers at small, rural hospitals</p> <p>Setting: Small, rural hospitals</p> <p>Patient Population: Medicare beneficiaries receiving inpatient care</p>	<p>Approaches to Improve Specialty Integration: Improving access to covered inpatient services</p> <p>Delineation of Provider Roles and Responsibilities: Not specified</p> <p>Provision of Specialist Consultations: As available based on hospital departments</p> <p>Approaches to Improve Care Coordination: Affiliating with larger health systems or operating more collaboratively with potential competitors</p> <p>Provider Communication and Telehealth Modalities: Not specified</p> <p>Managing Care Transitions: Discharge planning</p>	Higher Medicare payments for covered inpatient hospital services	<p>Types of Performance Measures: Spending</p> <p>Performance Tied to Payment: No</p> <p>Performance Measures Related to Improving Coordination: No</p> <p>Benchmarking: Target amounts are based on reasonable costs of providing covered inpatient services in the previous cost reporting period plus the Inpatient Prospective Payment System (IPPS) update factor for that cost reporting period</p>	N/A

CMMI Models with Specialty Focus – Acute Management

Model Name	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
		Addresses Equity and HRSNs: Yes			

Exhibit 8. Characteristics of CMMI Models with a Focus on Specialties Requiring Chronic Management

<i>CMMI Models with Specialty Focus – Chronic Management</i>					
Model Name	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
Comprehensive ESRD Care (CEC) Model	<p>Clinical Focus: End-stage renal disease (ESRD)</p> <p>Providers: Nephrologists; ESRD Seamless Care Organizations (ESCOs)^{xix}</p> <p>Setting: Nephrology clinics</p> <p>Patient Population: Medicare beneficiaries with ESRD</p>	<p>Approaches to Improve Specialty Integration: Use of ESCOs: specialty-oriented ACOs that assume financial responsibility for the quality of care and payments for their aligned beneficiaries</p> <p>Delineation of Provider Roles and Responsibilities: Nephrologist-led care teams with nephrologists often playing role of PCP</p> <p>Provision of Specialist Consultations: Yes (e.g., peer consult on high-risk cases)</p> <p>Approaches to Improve Care Coordination: Model includes staff dedicated to playing the role of care coordinator</p>	<p>Large dialysis organizations (LDOs)^{xx}: Two-sided risk and higher overall risk, compared to non-LDOs</p> <p>Non-LDOs^{xxi}: One-or two-sided risk, depending on resources</p>	<p>Types of Performance Measures: Utilization, spending, quality</p> <p>Performance Tied to Payment: Yes</p> <p>Performance Measures Related to Improving Coordination: Yes</p> <p>Benchmarking: Yes, based on historical Medicare Parts A and B expenditures for beneficiaries who would have been aligned to the ESCO in each of the three years prior to the start of the first PY, trended forward using national data</p>	Based on first dialysis utilization encounter with a participating facility; conducted quarterly

^{xix} ESCOs comprise nephrologists, dialysis facilities, and other providers.

^{xx} LDOs have 200 or more dialysis facilities.

^{xxi} Non-LDOs include fewer than 200 dialysis facilities, independent dialysis facilities, and hospital-based dialysis facilities.

CMMI Models with Specialty Focus – Chronic Management

Model Name	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
		<p>Provider Communication and Telehealth Modalities:</p> <p>Managing Care Transitions: Emphasis on coordination of dialysis as well as primary, specialty, and behavioral health care.</p> <p>Addresses Equity and HRSNs: Many care teams included social workers who were responsible for addressing patients with psychosocial needs</p>			
<p>Enhancing Oncology Model (EOM)</p>	<p>Clinical Focus: Oncology</p> <p>Providers: Oncologists</p> <p>Setting: Oncology practices</p> <p>Patient Population:</p>	<p>Approaches to Improve Specialty Integration: Participants are incentivized to integrate care via Monthly Enhanced Oncology Services (MEOS) payments, and a performance-based payment (PBP) or a performance-based recoupment (PBR)</p> <p>Delineation of Provider Roles and Responsibilities: EOM</p>	<p>Monthly Enhanced Oncology Services (MEOS) payment; retrospective PBP or recoupment (PBR)</p>	<p>Types of Performance Measures: Spending, quality</p> <p>Performance Tied to Payment: Yes</p> <p>Performance Measures Related to Improving Coordination: Yes</p>	<p>Based on first qualifying Evaluation & Management (E&M) service after chemotherapy initiation if that practice provides at least 25 percent of cancer-related E&M services during the episode OR the majority of E&M visits</p>

CMMI Models with Specialty Focus – Chronic Management

Model Name	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
	<p>Medicare beneficiaries with cancer</p>	<p>Participants assume accountability for their patients' health care quality and for their spending</p> <p>Provision of Specialist Consultations: Yes</p> <p>Approaches to Improve Care Coordination: Increases engagement of patients, oncologists, and other payers in value-based care and quality improvement via incentives</p> <p>Provider Communication and Telehealth Modalities: Telehealth benefit enhancement</p> <p>Managing Care Transitions: Each patient receives a detailed care plan, specifying engagement and preferences surrounding prognosis, treatment options, symptom</p>		<p>Benchmarking: Yes, based on predicted episode amounts from trended forward baseline expenditures</p>	

CMMI Models with Specialty Focus – Chronic Management					
Model Name	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
		management, quality of life, and psychosocial health needs Addresses Equity and HRSNs: Yes			
<u>ESRD Treatment Choices (ETC) Model</u>	<p>Clinical Focus: Home dialysis and kidney transplants for patient with ESRD</p> <p>Providers: Nephrologists</p> <p>Setting: ESRD facilities, transplant centers, large donor hospitals, patient home</p> <p>Patient Population:</p>	<p>Approaches to Improve Specialty Integration: Within specialty, benchmark adjustments and benefits for providers that care for dual-eligible beneficiaries</p> <p>Delineation of Provider Roles and Responsibilities: Managing Clinicians^{xxii} (physicians or non-physicians) responsible for managing beneficiaries receiving care via the model</p> <p>Provision of Specialist Consultations: Yes</p> <p>Approaches to Improve Care Coordination:</p>	<p><u>Home Dialysis Payment Adjustment (HDKPA):</u> positive adjustment on home dialysis claims during the first three years of Model</p> <p><u>Performance Payment Adjustment (PPA):</u> positive or negative adjustment based on rates of home dialysis and transplant in a measurement</p>	<p>Types of Performance Measures: Utilization, spending, quality</p> <p>Performance Tied to Payment: Yes</p> <p>Performance Measures Related to Improving Coordination: N/A</p> <p>Benchmarking: Achievement benchmarks are based on historical home dialysis rate and transplant rate of non-participating ESRD facilities and Managing Clinicians who provide</p>	Beneficiaries are attributed on a month-by-month basis. A beneficiary is attributed to the ESRD facility accounting for the most dialysis claims during the month, and the Managing Clinician billing the first MCP for the month.

^{xxii} Medicare-enrolled physicians or non-physician practitioners who furnish and bill the monthly capitation payment for managing one or more adult ESRD beneficiaries.

CMMI Models with Specialty Focus – Chronic Management

Model Name	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
	Patients with ESRD	<p>Involvement of Managing Clinicians</p> <p>Provider Communication and Telehealth Modalities: Not specified</p> <p>Managing Care Transitions: Involvement of Managing Clinicians</p> <p>Addresses Equity and HRSNs: Model policies aim to encourage dialysis facilities and health care providers to decrease disparities in rates of home dialysis and kidney transplants among ESRD patients with lower socioeconomic status; Model Participants who see a high volume of dual-eligible patients are not disproportionately penalized under the model benchmark methodology</p>	<p>year. Adjustment made to the adjusted ESRD Prospective Payment System PPS per treatment base rate under the ESRD PPS for selected ESRD facilities and to the Monthly Capitation Payment for selected Managing Clinicians.</p>	<p>care in Comparison Geographic Areas</p>	

CMMI Models with Specialty Focus – Chronic Management					
Model Name	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
Expanded Home Health Value-Based Purchasing (Expanded HHVBP) Model	<p>Clinical Focus: Home health care</p> <p>Providers: Medicare-certified Home Health Agencies (HHAs)</p> <p>Setting: Home health setting</p> <p>Patient Population: Medicare beneficiaries requiring home health services</p>	<p>Approaches to Improve Specialty Integration: Better coordinated care for beneficiaries with chronic conditions, reducing ED utilization</p> <p>Delineation of Provider Roles and Responsibilities: Not specified</p> <p>Provision of Specialist Consultations: Not specified</p> <p>Approaches to Improve Care Coordination: Incentives to provide better quality care with greater efficiency for beneficiaries who may be at risk for poorly coordinated care</p> <p>Provider Communication and Telehealth Modalities: Not specified</p>	<p>Quality performance^{xxiii}-adjusted Medicare FFS payments; HHAs receive adjustments to their Medicare FFS payments based on their performance against a set of quality measures, relative to their peers' performance; performance in a specified year also impacts payment adjustments in a later year</p>	<p>Types of Performance Measures: Spending, Quality</p> <p>Performance Tied to Payment: Yes</p> <p>Performance Measures Related to Improving Coordination: Yes</p> <p>Benchmarking: For each quality measure, the benchmark is based on the mean of the top decile of all Medicare-certified HHAs' performance scores, calculated separately for larger- and smaller-volume cohorts</p>	N/A ^{xxiv}

^{xxiii} Relative to peers

^{xxiv} All Medicare-certified HHAs from participating states are included in the Expanded HHVBP Model.

CMMI Models with Specialty Focus – Chronic Management					
Model Name	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
		<p>Managing Care Transitions: Measures discharge to community and patient-provider communication</p> <p>Addresses Equity and HRSNs: Yes</p>			
Home Health Value-Based Purchasing (HHVBP) Model	<p>Clinical Focus: Home health care</p> <p>Providers: Medicare-certified Home Health Agencies (HHA)</p> <p>Setting: Home health setting</p> <p>Patient Population: Medicare beneficiaries requiring home health services</p>	<p>Approaches to Improve Specialty Integration: Better coordinated care for beneficiaries with chronic conditions, reducing ED utilization</p> <p>Delineation of Provider Roles and Responsibilities: Not specified</p> <p>Provision of Specialist Consultations: Not specified</p> <p>Approaches to Improve Care Coordination: Financial incentives to improve care coordination tied to quality and efficiency</p>	Performance-based payment adjustment; shared risk	<p>Types of Performance Measures: Utilization, spending, quality</p> <p>Performance Tied to Payment: Yes</p> <p>Performance Measures Related to Improving Coordination: Yes</p> <p>Benchmarking: Yes <i>Achievement threshold:</i> Based on the median measure value for all HHAs in the state during the baseline period</p>	N/A ^{xxv}

^{xxv} All Medicare-certified HHAs from participating states are included in the HHVBP Model.

CMMI Models with Specialty Focus – Chronic Management					
Model Name	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
		<p>Provider Communication and Telehealth Modalities: Not specified</p> <p>Managing Care Transitions: To reduce avoidable institutional care</p> <p>Addresses Equity and HRSNs: No</p>		<i>Benchmark:</i> Based on the mean measure value for the best performing decile of all HHAs in the state during the baseline period	
Medicare Intravenous Immune Globulin (IVIG) Demonstration	<p>Clinical Focus: Primary immune deficiency disease (PIDD)</p> <p>Providers: Providers delivering in-home administration of intravenous immune globulin for the treatment of PIDD</p>	<p>Approaches to Improve Specialty Integration: Within specialty, modified specialty pharmacy billing; at-home services to reduce transportation barriers and risk of infection</p> <p>Delineation of Provider Roles and Responsibilities: Not specified</p> <p>Provision of Specialist Consultations: N/A</p>	Bundled payment under Part B for items and services that are necessary to administer in-home Intravenous Immune Globulin (IVIG) to enrolled beneficiaries who are not otherwise homebound and receiving home	<p>Types of Performance Measures: Utilization, Spending</p> <p>Performance Tied to Payment: No</p> <p>Performance Measures Related to Improving Coordination: No</p> <p>Benchmarking: N/A</p>	N/A ^{xxvi}

^{xxvi} Eligible beneficiaries can voluntarily enroll in the IVIG Demonstration.

CMMI Models with Specialty Focus – Chronic Management

Model Name	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
	<p>Setting: Patient home (or doctor’s office, outpatient setting, infusion center)</p> <p>Patient Population: Patients with PIDD</p>	<p>Approaches to Improve Care Coordination: Coordinating management of medical and pharmacy benefits may improve compliance</p> <p>Provider Communication and Telehealth Modalities: Not specified</p> <p>Managing Care Transitions: N/A</p> <p>Addresses Equity and HRSNs: No</p>	<p>health care benefits</p>		
<p>Kidney Care Choices (KCC) Model</p>	<p>Clinical Focus: ESRD</p> <p>Providers: Accountable care/dialysis facilities, nephrologists, and other health care providers from ESRD-focused ACOs (Kidney</p>	<p>Approaches to Improve Specialty Integration: Empower nephrologists to take the lead for care coordination across the care spectrum</p> <p>Delineation of Provider Roles and Responsibilities: Providers responsible for patients’ kidney care from late-stage chronic kidney disease (stages 4/5) through dialysis, transplant, or end-of-life care</p>	<p><u>Kidney Care First (KCF):</u> Quarterly and adjusted monthly capitation payments and a kidney transplant bonus (KTB)</p> <p><u>Comprehensive Kidney Care Contracting (CKCC)</u></p>	<p>Types of Performance Measures: Spending, quality</p> <p>Performance Tied to Payment: Yes</p> <p>Performance Measures Related to Improving Coordination: Yes</p> <p>Benchmarking: Yes, based on historical</p>	<p>Alignment based on where beneficiary receives the majority of their kidney care; when aligned beneficiary receives kidney transplant, they remain aligned to provider for the following three years (if successful, else they could be re-aligned)</p>

CMMI Models with Specialty Focus – Chronic Management					
Model Name	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
	<p>Contracting Entities^{xxvii} [KCEs])</p> <p>Setting: Dialysis facilities</p> <p>Patient Population: Patients with ESRD</p>	<p>Provision of Specialist Consultations: Not specified</p> <p>Approaches to Improve Care Coordination: KCEs have access to Benefit Enhancements and Beneficiary Engagements Incentives aimed at strengthening care coordination</p> <p>Provider Communication and Telehealth Modalities: Yes, model intends to increase telehealth usage</p> <p>Managing Care Transitions: Flexibilities relative to Medicare FFS in terms of coverage for home health, hospice, and use of SNFs</p>	<p><u>Graduated Option:</u> same as KCF plus one-sided risk</p> <p><u>CKCC Professional Option:</u> same as KCF plus 50% shared savings/losses for all Part A and B services for aligned beneficiaries</p> <p><u>CKCC Global Option:</u> same as KCF plus 100% shared savings/losses for all Part A and B services for</p>	<p>baseline expenditures, prospectively trended forward each performance year (PY) using the projected United States per capita cost (USPCC)</p>	

^{xxvii} Nephrology practices and their nephrologists and nephrology professionals who meet certain eligibility requirements can participate in the Kidney Care First (KCF) Option. KCEs can participate in any of the Comprehensive Kidney Care Contracting (CKCC) Options and are required to include nephrologists or nephrology practices and transplant providers; optional participants in KCEs include dialysis facilities and other suppliers and providers.

CMMI Models with Specialty Focus – Chronic Management					
Model Name	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
		Addresses Equity and HRSNs: N/A	aligned beneficiaries		
Medicare Diabetes Prevention Program (MDPP) Expanded Model	<p>Clinical Focus: Diabetes (Type 2)</p> <p>Providers: MDPP coaches (such as trained community health professionals)</p> <p>Setting: MDPP facility</p> <p>Patient Population: Medicare beneficiaries with Type 2 diabetes or prediabetes</p>	<p>Approaches to Improve Specialty Integration: Not specified; primary care and specialty care providers refer patients to the MDPP</p> <p>Delineation of Provider Roles and Responsibilities: Responsibility falls to MDPP coaches to oversee 6-month group-based, classroom-style setting program and follow-up meetings</p> <p>Provision of Specialist Consultations: Administers preventive/management program and monitors risk reduction</p> <p>Approaches to Improve Care Coordination: Prevention program to prevent/manage Type 2 diabetes</p>	Performance payment per beneficiary based on session attendance and percentage of weight lost	<p>Types of Performance Measures: Utilization, quality</p> <p>Performance Tied to Payment: Yes</p> <p>Performance Measures Related to Improving Coordination: No</p> <p>Benchmarking: N/A</p>	N/A ^{xxviii}

^{xxviii} Eligible Coaches and beneficiaries can voluntarily enroll in the MDPP Expanded Model.

CMMI Models with Specialty Focus – Chronic Management					
Model Name	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
		<p>Provider Communication and Telehealth Modalities: Not specified</p> <p>Managing Care Transitions: Practical training and education, empowering patient self-management</p> <p>Addresses Equity and HRSNs: Yes</p>			
Maternal Opioid Misuse (MOM) Model	<p>Clinical Focus: Pregnancy and post-partum care, opioid use disorder (OUD)</p> <p>Providers: Maternity care and behavioral health providers</p> <p>Setting: Maternity and</p>	<p>Approaches to Improve Specialty Integration: Coordination between care delivery partners (e.g., a health system or managed care plan) and clinical partners</p> <p>Delineation of Provider Roles and Responsibilities: Care delivery partners will provide services, establish relationships with clinical partners, build capacity at service-delivery level to support care delivery</p>	<p>Transition funding: For care delivery services not otherwise covered by Medicaid</p> <p>Implementation funding: To support implementation based on state-specific needs (e.g.,</p>	<p>Types of Performance Measures: Spending, Quality</p> <p>Performance Tied to Payment: Yes</p> <p>Performance Measures Related to Improving Coordination: Yes</p> <p>Benchmarking: N/A</p>	N/A ^{xxix}

^{xxix} Eligible beneficiaries with OUD can voluntarily participate in the MOM Model.

CMMI Models with Specialty Focus – Chronic Management

Model Name	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
	behavioral health provider facilities Patient Population: Pregnant Medicaid and CHIP beneficiaries with OUD and their infants	transformation, and implement a coordinated and integrated care delivery approach Provision of Specialist Consultations: Not specified Approaches to Improve Care Coordination: Integrated data systems to facilitate care coordination; new data systems to support data sharing, collection, and reporting Provider Communication and Telehealth Modalities: Not specified Managing Care Transitions: Peer recovery staff will help coordinate OUD treatment and obstetric care; the Innovation Center will help cover wrap-around coordination, engagement, and referral activities when activities are not adequately covered by	coordinated and integrated care, improved capacity and infrastructure) Milestone funding: Encourage positive outcomes and continued care delivery transformation		

CMMI Models with Specialty Focus – Chronic Management

Model Name	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
		awardees’ state plans during Year 2 of the Model partners (e.g., a health system or managed care plan) Addresses Equity and HRSNs: Yes			
Oncology Care Model (OCM)	Clinical Focus: Cancer care Providers: Oncology providers Setting: Outpatient Patient Population: Patients with cancer	Approaches to Improve Specialty Integration: Payments for per-beneficiary Monthly Enhanced Oncology Services (MEOS) and the potential for a performance-based payment for episodes of chemotherapy Delineation of Provider Roles and Responsibilities: Not specified Provision of Specialist Consultations: Physicians are responsible for determining whether a beneficiary should receive chemotherapy treatment	Per beneficiary MEOS payment for the duration of the episode; PBP for chemotherapy care episodes	Types of Performance Measures: Spending, quality Performance Tied to Payment: Yes Performance Measures Related to Improving Coordination: Yes Benchmarking: Based on risk-adjusted historical expenditures	Chemotherapy care episodes were aligned to the practice that provided the majority of that beneficiary’s cancer-related E&M visits

CMMI Models with Specialty Focus – Chronic Management					
Model Name	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
		<p>Approaches to Improve Care Coordination: Financial incentives for participating physician practices to comprehensively and appropriately address complex patient needs; documented care plan for each beneficiary</p> <p>Provider Communication and Telehealth Modalities: Not specified</p> <p>Managing Care Transitions: Providers must establish documented care plan for each beneficiary</p> <p>Addresses Equity and HRSNs: Yes</p>			
Value in Opioid Use Disorder Treatment (Value in Treatment) Demonstration Program	<p>Clinical Focus: Opioid use disorder (OUD)</p> <p>Providers: Physicians,</p>	<p>Approaches to Improve Specialty Integration: Not specified</p> <p>Delineation of Provider Roles and Responsibilities:</p>	Per beneficiary per month care management fee, performance-based incentive	<p>Types of Performance Measures: Quality</p> <p>Performance Tied to Payment: Yes</p>	N/A ^{xxxi}

^{xxxi} Eligible beneficiaries can voluntarily enroll in the Value in Treatment Demonstration Program.

CMMI Models with Specialty Focus – Chronic Management					
Model Name	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
	<p>hospitals, health centers, treatment programs with OUD services^{xxx}</p> <p>Setting: Outpatient OUD treatment facility</p> <p>Patient Population: Medicare A and B beneficiaries (not Medicare Advantage) with a current diagnosis for an opioid use disorder</p>	<p>Responsibility falls to Participants to administer OUD treatment services under the demonstration</p> <p>Provision of Specialist Consultations: Not specified</p> <p>Approaches to Improve Care Coordination: Uses a per beneficiary per month care management fee and performance-based incentives to reduce hospitalizations and ED visits, utilization of inpatient residential treatment, and incidence of infectious diseases</p> <p>Provider Communication and Telehealth Modalities: Not specified</p> <p>Managing Care Transitions: Not specified</p>		<p>Performance Measures Related to Improving Coordination:</p> <p>Benchmarking: Performance threshold relative to national benchmark</p>	

^{xxx} OUD care teams must participate in Medicare and can comprise the following types of individuals/entities: physicians, physician group practices, hospital outpatient departments, federally qualified health centers (FQHCs), rural health clinics (RHCs), community mental health centers (CMHCs), clinics certified as community behavioral health clinics pursuant to Section 223 of the Protecting Access to Medicare Act of 2014, opioid treatment programs (entities specified by the Secretary), and critical access hospitals (CAHs; entities specified by the Secretary).

CMMI Models with Specialty Focus – Chronic Management

Model Name	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
		Addresses Equity and HRSNs: Not specified			

Exhibit 9. Characteristics of CMMI Models with a Focus on Specialty Integration

<i>CMMI Models with Specialty Integration Focus</i>					
Model Name	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
Frontier Community Health Integration Project Demonstration (Frontier Community)	<p>Clinical Focus: Essential services</p> <p>Providers: Participating Critical Access Hospitals (CAHs)</p> <p>Setting: Participating CAHs</p> <p>Patient Population: Medicare beneficiaries residing in sparsely-populated rural counties in AK, MT, NV, ND, and WY</p>	<p>Approaches to Improve Specialty Integration: Enhanced Medicare payments allow care delivery innovation; for example, some Participants used enhanced Medicare payments for telehealth to establish specialty care access</p> <p>Delineation of Provider Roles and Responsibilities: Not specified</p> <p>Provision of Specialist Consultations: Yes, supported by Model Medicare waivers and enhanced payments to reduce avoidable hospitalizations, admissions, and transfers</p> <p>Approaches to Improve Care Coordination: Increased bed capacity to provide SNF/NF care</p>	Medicare waivers offered to CAHs with low population density; enhanced Medicare payments for telehealth, Part B ambulance, and home health services	<p>Types of Performance Measures: Utilization, spending, quality</p> <p>Performance Tied to Payment: No</p> <p>Performance Measures Related to Improving Coordination: Yes</p> <p>Benchmarking: N/A</p>	N/A ^{xxxii}

^{xxxii} Frontier Community Demonstration claims are furnished by CAHs.

CMMI Models with Specialty Integration Focus					
Model Name	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
		<p>Provider Communication and Telehealth Modalities: Synchronous</p> <p>Managing Care Transitions: Not specified</p> <p>Addresses Equity and HRSNs: Yes</p>			
<p>Global and Professional Direct Contracting (GPDC)/Accountable Care Organization Realizing Equity, Access, and Community Health (ACO REACH)^{xxxiii}</p>	<p>Clinical Focus: Primary and specialty care</p> <p>Providers: Direct Contracting Entities (DCEs) under GPDC, ACOs under ACO REACH; Participating and Preferred Providers</p> <p>Setting: Broad applicability</p>	<p>Approaches to Improve Specialty Integration: Higher risk sharing arrangements and risk-adjusted monthly payments for all covered costs under Global and Total Care Capitation option</p> <p>Delineation of Provider Roles and Responsibilities: Share administrative burden, allowing for more physician-patient time</p> <p>Provision of Specialist Consultations: Yes</p>	<p>Professional: Risk-adjusted, monthly Primary Care Capitation payment; 50% shared risk</p> <p>Global: Risk-adjusted, monthly Primary Care Capitation payment or Total Care Capitation Payment (for all covered services, including</p>	<p>Types of Performance Measures: Utilization, spending, quality</p> <p>Performance Tied to Payment: Yes</p> <p>Performance Measures Related to Improving Coordination: Yes</p> <p>Benchmarking: Yes, based on historical baseline expenditures</p>	<p>Prospective, voluntary: Beneficiaries confirm care relationships with participating providers (annual)</p> <p>Prospective Plus, voluntary: Beneficiaries confirm care relationships with participating providers (quarterly)</p>

^{xxxiii} The Centers for Medicare & Medicaid Services (CMS) redesigned the GPDC Model, renaming it the ACO REACH Model. Participation in the ACO REACH Model began January 1, 2023.

CMMI Models with Specialty Integration Focus					
Model Name	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
	<p>Patient Population: Medicare FFS beneficiaries; patients with complex chronic diseases and serious illnesses</p>	<p>Approaches to Improve Care Coordination: Tying payments to improvements in quality of care provided; benefit enhancements; demonstrated experience as requirement of participation</p> <p>Provider Communication and Telehealth Modalities: Synchronous</p> <p>Managing Care Transitions: Focus on greater transparency and data sharing</p> <p>Addresses Equity and HRSNs: Yes</p>	<p>specialty care); 100% shared risk</p>	<p>and/or DC/KCC Rate Book OR a blend of historical and regional expenditures OR regional expenditures, depending on DCE/ACO type and alignment</p>	<p>Prospective, claims-based, primary care providers: Based on Primary Care Qualified E&M (PQEM) services furnished by primary care providers^{xxxiv} if 10% or more of the allowable charges incurred on PQEM services are billed by primary care providers (annual)</p> <p>Prospective, claims-based, non-primary care providers: Based on PQEM services furnished by non-primary care providers^{xxxv} if less</p>

^{xxxiv} Primary care providers include physicians in general practice, family medicine, internal medicine, pediatric medicine, and geriatric medicine, as well as nurse practitioners, clinical nurse specialists, and physician assistants.

^{xxxv} Eligible non-primary care providers include physicians in cardiology, gastroenterology, osteopathic manipulative medicine, neurology, obstetrics/gynecology, hospice and palliative care, sports medicine, physical medicine and rehabilitation, psychiatry, geriatric psychiatry, pulmonology, nephrology, infectious disease, endocrinology, rheumatology, multispecialty clinic or group practice, addiction medicine, hematology, hematology/oncology, preventative medicine, medical oncology, gynecological/oncology, and neuropsychiatry.

CMMI Models with Specialty Integration Focus					
Model Name	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
					than 10% of the allowable charges incurred on PQEM services are billed by primary care providers (annual)
<u>Million Hearts®</u>	<p>Clinical Focus: Heart disease and stroke</p> <p>Providers: Cardiologists</p> <p>Setting: Outpatient</p> <p>Patient Population: Medicare beneficiaries at risk for heart disease and stroke</p>	<p>Approaches to Improve Specialty Integration: Within specialty population management; focus, coordinate, and enhance disease prevention activities; coordination among primary and specialty care providers, health centers, and hospital outpatient departments</p> <p>Delineation of Provider Roles and Responsibilities: Oversight and day-to-day operations</p> <p>Provision of Specialist Consultations: Yes</p> <p>Approaches to Improve Care Coordination: Risk stratification,</p>	PBPM payments for enrolling beneficiaries, reducing cardiovascular disease risk, and providing cardiovascular care management (PY1 only)	<p>Types of Performance Measures: Spending, quality</p> <p>Performance Tied to Payment: Yes</p> <p>Performance Measures Related to Improving Coordination: Yes</p> <p>Benchmarking: N/A^{xxxvi}</p>	Voluntary

^{xxxvi} Eligible beneficiaries can voluntarily enroll in the Million Hearts®: CVD Risk Reduction Model.

CMMI Models with Specialty Integration Focus					
Model Name	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
		cardiovascular care management, and risk reduction Provider Communication and Telehealth Modalities: Applicable virtual services by video and phone Managing Care Transitions: Medication management Addresses Equity and HRSNs: Yes			
Next Generation Accountable Care Organization (NGACO)	Clinical Focus: Primary and specialty care Providers: Participating PCPs and specialists Setting: Primary and specialty care practices, hospitals, inpatient and	Approaches to Improve Specialty Integration: Enable provider groups to assume higher levels of financial risk and reward Delineation of Provider Roles and Responsibilities: Not specified Provision of Specialist Consultations: Yes Approaches to Improve Care Coordination: Tools to support	FFS payments with fixed per beneficiary per month (PBPM) infrastructure payments, population-based payments (PBPs), AIPBPs; shared risk	Types of Performance Measures: Spending, quality Performance Tied to Payment: Yes Performance Measures Related to Improving Coordination: Yes Benchmarking: Yes, prospectively set, based on historical	Voluntary: Beneficiaries confirm care relationships with participating providers (annual) Prospective, claims-based: Beneficiaries are aligned to the participating provider that provided the majority of that beneficiary's E&M visits (annual)

<i>CMMI Models with Specialty Integration Focus</i>					
Model Name	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
	outpatient settings Patient Population: Original Medicare FFS beneficiaries	patient engagement and care management, embedded and centralized care managers, shared access to electronic health records (EHRs), communication protocols Provider Communication and Telehealth Modalities: Asynchronous and synchronous; modality not specified Managing Care Transitions: Care managers, monitoring beneficiaries at risk of hospital readmission Addresses Equity and HRSNs: Yes		expenditures and national trends	

Appendix D. Summary of Model and Specialty Integration Characteristics of Proposals Reviewed by PTAC as of September 2020 with Components Related to Specialty Integration, by Specialty Integration Context

The following tables provide specific details on model characteristics (i.e., clinical focus, providers, setting, and patient population); components related to specialty integration (i.e., approaches to improve specialty integration, delineation of provider roles and responsibilities, provision of specialist consultations, approaches to improve care coordination,^{xxxvii} provider communication and telehealth modalities,^{xxxviii} managing care transitions, and addressing equity and HRSNs^{xxxix}); payment design features (e.g., financial incentives); performance measurement features (i.e., types of performance measures, whether performance is tied to payment, whether the model includes performance measures related to improving coordination, and benchmarking); and the approach to beneficiary alignment (if applicable) for selected PTAC proposals that received a rating of “Meets and Deserves Priority Consideration” (one proposal) or “Meets” (15 proposals) on Criterion 7, Integration and Care Coordination. The selected PTAC proposals are organized into four separate tables by the following specialty integration contexts: proposals with a focus on Advanced Primary Care, proposals with a focus on specialties requiring acute management, proposals with a focus on specialties requiring chronic management, and proposals with a specialty integration focus. Each table is organized in alphabetical order by the proposal name.

Overview of Methodology Used to Review the Proposals

The following information was reviewed for each submitter’s proposal, where available: proposal and related documents, Preliminary Review Team (PRT) Report, and Report to the Secretary (RTS). Information found in these materials was used to summarize the proposals’ main themes related to specialty integration and other administrative, payment, and performance measurement characteristics. The categorizations were based on the key information highlighted in these documents and are not exhaustive. Proposals may have elements of their proposed models that fall into additional categories of context, objective, functions, and payment models.

^{xxxvii} For additional details on approaches to improve care coordination in PTAC proposals, refer to Appendix F in *Environmental Scan on Care Coordination in the Context of Alternative Payment Models (APMs) and Physician-Focused Payment Models (PFPMs)*, available at <https://aspe.hhs.gov/sites/default/files/private/pdf/261946/Jun-2021-CC-Escan.pdf>.

^{xxxviii} For additional details on telehealth in PTAC proposals, refer to *Environmental Scan on Telehealth in the Context of Alternative Payment Models (APMs) and Physician-Focused Payment Models (PFPMs)*, available at <https://aspe.hhs.gov/sites/default/files/private/pdf/261946/Sep2020TelehealthEnvironmentalScan.PDF>.

^{xxxix} For additional details on addressing health equity and SDOH in PTAC proposals, refer to Appendix E in *Background Information Related to Optimizing Efforts to Address Social Determinants of Health and Equity in the Context of Alternative Payment Models and Physician-Focused Payment Models*, available at <https://aspe.hhs.gov/sites/default/files/documents/bc3335d23de446d835f6a5617f2cba1e/PTACProposalCMMIModel-Analysis.pdf>.

Exhibit 10. Characteristics of PTAC Proposals with a Focus on Advanced Primary Care

<i>PTAC Proposals with Advanced Primary Care Focus</i>					
Submitter, Submitter Type, Proposal Name, and PTAC Recommendation and Date	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
<p>American Academy of Family Physicians (AAFP)</p> <p><i>(Provider association/ specialty society)</i></p> <p>Advanced Primary Care: A Foundational Alternative Payment Model (APC-APM) for Delivering Patient-Centered, Longitudinal, and Coordinated Care</p> <p>Recommended for limited-scale testing, 12/19/2017</p>	<p>Clinical Focus: Primary Care</p> <p>Providers: All physicians with a primary specialty of family medicine, general practice, geriatric medicine, pediatric medicine, or internal medicine</p> <p>Setting: Primary care practices</p> <p>Patient Population: PCPs' patient panels</p>	<p>Approaches to Improve Specialty Integration: PCPs thought to be best positioned to coordinate care across settings; promoting behavioral health diagnosis and treatment; collaboration with condition-specific models</p> <p>Delineation of Provider Roles and Responsibilities: Led by PCP</p> <p>Provision of Specialist Consultations: Managed by PCP</p> <p>Approaches to Improve Care Coordination: Fulfilling five key functions of CPC+ (access and continuity, planned care and population health, care management, patient and caregiver engagement, and coordination)</p> <p>Provider Communication and Telehealth Modalities: Synchronous</p>	<p>Capitated per beneficiary per month (PBPM) payment with shared risk options for accountability</p>	<p>Types of Performance Measures: Utilization, spending, patient experience, quality</p> <p>Performance Tied to Payment: Yes</p> <p>Performance Measures Related to Improving Coordination: Yes</p> <p>Benchmarking: Yes, based on historical performance and reassessed after two or more years</p>	<p>Prospective, hierarchical process based on patient choice, wellness visits, Evaluation & Management (E&M) visits, and primary care prescription and order events</p>

PTAC Proposals with Advanced Primary Care Focus					
Submitter, Submitter Type, Proposal Name, and PTAC Recommendation and Date	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
		(telephone) Managing Care Transitions: Led by PCP Addresses Equity and HRSNs: Yes			
Avera Health (Avera) <i>(Regional/ local multispecialty practice or health system)</i> Intensive Care Management in Skilled Nursing Facility Alternative Payment Model (ICM SNF APM) Recommended for implementation, 3/27/2018	Clinical Focus: Primary care (geriatricians) in skilled nursing facilities (SNFs) Providers: Geriatrician Care Teams (GCTs) Setting: SNFs and NFs Patient Population: SNF residents	Approaches to Improve Specialty Integration: Addresses multidisciplinary care in SNFs following an acute event, establishing accountability or negotiating responsibility Delineation of Provider Roles and Responsibilities: Geriatrician-led, multidisciplinary team; GCT responsible for medication reconciliation, and medication management is handled in coordination with the primary care provider (PCP) Provision of Specialist Consultations: Telemedicine consultations	Add-on PBPM with shared risk options for accountability	Types of Performance Measures: Utilization, spending, patient experience, quality Performance Tied to Payment: Yes Performance Measures Related to Improving Coordination: Yes Benchmarking: Yes, with measure-specific performance criteria for achievement and improvement	Based on trigger event being the beneficiary's admission to a participating SNF/NF; beneficiaries are aligned to the facility throughout their stay and the alignment period ends 30 days following facility discharge

<i>PTAC Proposals with Advanced Primary Care Focus</i>					
Submitter, Submitter Type, Proposal Name, and PTAC Recommendation and Date	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
		<p>Approaches to Improve Care Coordination: Participants must articulate strategy for PCP care coordination, with goals to reduce avoidable ED visits and hospitalizations; monitoring and follow-up; developing a care plan; assess patient needs and goals</p> <p>Provider Communication and Telehealth Modalities: Remote monitoring through mobile devices, televisits facilitated by technology that expands geographic access as well as creates around-the-clock access to care, and software-supported outreach to patients to monitor and support adherence with treatment regimens</p> <p>Managing Care Transitions: Transitional care support from the hospital into the nursing facility within 48 hours and transitional care follow-up with</p>			

PTAC Proposals with Advanced Primary Care Focus					
Submitter, Submitter Type, Proposal Name, and PTAC Recommendation and Date	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
		<p>patients within 72 hours of SNF/NF discharge</p> <p>Addresses Equity and HRSNs: No</p>			
<p>University of Chicago Medicine (UChicago) <i>(Academic Institution)</i></p> <p>The Comprehensive Care Physician Payment Model (CCP-PM)</p> <p>Recommended for limited-scale testing, 9/7/2018</p>	<p>Clinical Focus: Frequently hospitalized patients</p> <p>Providers: Inpatient and outpatient providers</p> <p>Setting: Home care and rehabilitation</p> <p>Patient Population: Frail/complex patients with hospitalizations</p>	<p>Approaches to Improve Specialty Integration: Multispecialty care around an acute event, during episode</p> <p>Delineation of Provider Roles and Responsibilities: Participating provider is responsible for both inpatient and ambulatory care</p> <p>Provision of Specialist Consultations: Not specified</p> <p>Approaches to Improve Care Coordination: Clinic coordinators proactively connect with admitted patients</p> <p>Provider Communication and Telehealth Modalities: Not specified</p>	<p>Add-on PBPM with shared risk</p>	<p>Types of Performance Measures: Utilization; subject to spending and quality measures under their umbrella payment model (e.g., Merit-based Incentive Payment System [MIPS] or Medicare Shared Savings Program [MSSP])</p> <p>Performance Tied to Payment: Yes</p> <p>Performance Measures Related to Improving Coordination: Not specified</p> <p>Benchmarking: Yes, based on percent</p>	<p>Eligible physicians can enroll a panel of CCP-PM patients for which they intend to provide an increased proportion of inpatient and outpatient general medical care, and eligible patients join the program by enrolling in the CCP-PM panel of a participating physician; alignment can continue for up to six years, with pathways based on whether the patient has had an additional hospitalization</p>

<i>PTAC Proposals with Advanced Primary Care Focus</i>					
Submitter, Submitter Type, Proposal Name, and PTAC Recommendation and Date	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
		<p>Managing Care Transitions: Same provider treats patient in inpatient and outpatient settings and can tailor timing of transition to individual patient</p> <p>Addresses Equity and HRSNs: Yes</p>		provision of inpatient care and outpatient general medicine care for their enrolled patients	

Exhibit 11. Characteristics of PTAC Proposals with a Focus on Specialties Requiring Acute Management

<i>PTAC Proposals with Specialty Focus – Acute Management</i>					
Submitter, Submitter Type, Proposal Name, and PTAC Recommendation and Date	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
<p>American College of Emergency Physicians (ACEP)</p> <p><i>(Provider association/specialty society)</i></p> <p>Acute Unscheduled Care Model (AUCM): Enhancing Appropriate Admissions</p> <p>Recommended for implementation, 09/06/2018</p>	<p>Clinical Focus: Emergency department (ED) services</p> <p>Providers: ED physicians</p> <p>Setting: ED</p> <p>Patient Population: Patients with qualifying ED visits</p>	<p>Approaches to Improve Specialty Integration: Ensure follow-up care when barriers exist to primary or specialty care access</p> <p>Delineation of Provider Roles and Responsibilities: Not specified</p> <p>Provision of Specialist Consultations: As needed on discharge from the ED</p> <p>Approaches to Improve Care Coordination: Facilitate appropriate discharge; inform patients of treatment options; manage unscheduled care episodes by protocol; arrange post-discharge home visit</p> <p>Provider Communication and Telehealth Modalities:</p>	<p>Episode-based model with continued FFS, with shared risk options for accountability</p>	<p>Types of Performance Measures: Patient engagement, process of care coordination, post-discharge outcomes</p> <p>Performance Tied to Payment: Yes</p> <p>Performance Measures Related to Improving Coordination: Yes</p> <p>Benchmarking: Yes, based on participant’s historical performance, risk-adjusted for factors that impact the admission decision</p>	N/A ^{xI}

^{xI} Episodes are attributed to the ED physician.

PTAC Proposals with Specialty Focus – Acute Management					
Submitter, Submitter Type, Proposal Name, and PTAC Recommendation and Date	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
		<p>Synchronous (telephone); modality not specified</p> <p>Managing Care Transitions: Mandated physician-physician communication when patients are discharged from the ED, or admitted or placed on observation status</p> <p>Addresses Equity and HRSNs: No</p>			
<p>Icahn School of Medicine at Mount Sinai</p> <p><i>(Academic Institution)</i></p> <p>HaH Plus (Hospital at Home Plus) Provider Focused Payment Model</p> <p>Recommended for implementation, 9/17/2017</p>	<p>Clinical Focus: Inpatient services in home setting</p> <p>Providers: Physicians; HaH Plus providers</p> <p>Setting: Patient home</p>	<p>Approaches to Improve Specialty Integration: Multidisciplinary care around an acute care event providing pre-acute, acute, and transition services</p> <p>Delineation of Provider Roles and Responsibilities: care teams include physicians, nurse practitioners, social workers, skilled therapists, and home health aides, and accommodate</p>	<p>Prospective, episode-based^{xli} payment replacing FFS and with flexibility to support non-covered services; shared risk through retrospective reconciliation</p>	<p>Types of Performance Measures: Care processes, spending, patient experience, quality</p> <p>Performance Tied to Payment: No</p>	N/A ^{xlii}

^{xli} Episodes of care were based on an inpatient stay and 30-days post-discharge.

^{xlii} Claims with qualifying diagnosis-related groups (DRGs) are aligned to the furnishing provider.

PTAC Proposals with Specialty Focus – Acute Management

Submitter, Submitter Type, Proposal Name, and PTAC Recommendation and Date	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
	<p>Patient Population: Eligible patients in one of 44 diagnosis-related groups (DRGs) for acute conditions</p>	<p>varying mixes of physician specialties</p> <p>Provision of Specialist Consultations: care team initiates referral to appropriate services as needed</p> <p>Approaches to Improve Care Coordination: Establish accountability/negotiate responsibility; facilitate transitions and coordinate care across settings</p> <p>Provider Communication and Telehealth Modalities: Hospital-level acute care services in the home (telephonic follow-up during transition, physician video televisits as needed)</p>		<p>Performance Measures Related to Improving Coordination: Yes</p> <p>Benchmarking: Separate achievement thresholds for each of ten quality metrics linked to payment</p>	

PTAC Proposals with Specialty Focus – Acute Management					
Submitter, Submitter Type, Proposal Name, and PTAC Recommendation and Date	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
		<p>Managing Care Transitions: Transition services provided for 30 days, beginning upon acute episode discharge</p> <p>Addresses Equity and HRSNs: Yes, by disproportionately serving historically underserved populations and addressing disparities by providing culturally and ethnically sensitive health care</p>			
<p>Personalized Recovery Care (PRC)</p> <p><i>(Regional/local single specialty practice)</i></p> <p>Home Hospitalization: An Alternative Payment Model for Delivering Acute Care in the Home</p>	<p>Clinical Focus: Inpatient services in home setting</p> <p>Providers: Admitting physician at facility receiving PRC payments; On-Call Physician;</p>	<p>Approaches to Improve Specialty Integration: Multidisciplinary care around an acute care event</p> <p>Delineation of Provider Roles and Responsibilities: Care team including primary care physicians, specialists, mid-level practitioners, pharmacists, nurses, social workers, therapists, home health</p>	Bundled episode-based payment ^{xliii} replacing FFS, with shared risk	<p>Types of Performance Measures: Spending, quality</p> <p>Performance Tied to Payment: Yes</p> <p>Performance Measures Related to Improving Coordination: Yes</p>	N/A ^{xliv}

^{xliii} DRGs for professional fee claims are based on the last home hospitalization acute-phase physician rounding activity in the rounding physician’s electronic medical record (EMR).

^{xliv} Claims with qualifying DRGs are aligned to the furnishing provider.

PTAC Proposals with Specialty Focus – Acute Management					
Submitter, Submitter Type, Proposal Name, and PTAC Recommendation and Date	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
Recommended for implementation, 3/26/2018	<p>Recovery Care Coordinator</p> <p>Setting: Patient home</p> <p>Patient Population: Commercial and Medicare Advantage patients with acute conditions, based on approximately 150 DRGs</p>	<p>resources, and other allied health professionals</p> <p>Provision of Specialist Consultations: Through the PRC operator</p> <p>Approaches to Improve Care Coordination: Primary care coordinators responsible for logistics related to acute, post-acute, and transitional care</p> <p>Provider Communication and Telehealth Modalities: Synchronous (telephonic; videoconferencing), Optional Mobile Health, Remote patient monitoring</p> <p>Managing Care Transitions: Supported by primary care coordinators; care transition services included in episodic payment</p> <p>Addresses Equity and HRSNs: Yes</p>		Benchmarking: Yes, based on historical, episodic expenditures for each condition plus a three percent discount to derive target prices	

PTAC Proposals with Specialty Focus – Acute Management					
Submitter, Submitter Type, Proposal Name, and PTAC Recommendation and Date	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
<p>University of New Mexico Health Sciences Center (UNMHSC)</p> <p><i>(Academic Institution)</i></p> <p>ACCESS Telemedicine: An Alternative Healthcare Delivery Model for Rural Cerebral Emergencies</p> <p>Recommended for further development and implementation, 9/16/2019</p>	<p>Clinical Focus: Cerebral emergent care; telemedicine</p> <p>Providers: Neurologists and neurosurgeons; providers in rural and community systems</p> <p>Setting: Inpatient; outpatient; or emergency department</p> <p>Patient Population: Patients with neurological emergencies</p>	<p>Approaches to Improve Specialty Integration: Within condition specialty care around an acute care event, including emergency medicine, hospitalists, family medicine, primary care, and internal medicine physicians in the rural setting, and telemedicine physician specialists in disciplines such as neurosurgery, neurology, and critical care</p> <p>Delineation of Provider Roles and Responsibilities: ED team at underserved rural hospital location providing care onsite and neurological expert at central hub providing telehealth consultation</p> <p>Provision of Specialist Consultations: By design, neurological expert at central hub</p>	<p>Additional one-time payment without shared risk</p>	<p>Types of Performance Measures: Spending, quality</p> <p>Performance Tied to Payment: Not specified</p> <p>Performance Measures Related to Improving Coordination: Yes</p> <p>Benchmarking: Not specified</p>	<p>N/A</p>

<i>PTAC Proposals with Specialty Focus – Acute Management</i>					
Submitter, Submitter Type, Proposal Name, and PTAC Recommendation and Date	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
		<p>Approaches to Improve Care Coordination: Improve quality and reduce costs by reducing complications and readmissions; connect/coordinate missing link of specialty care in underserved areas</p> <p>Provider Communication and Telehealth Modalities: Synchronous (live videoconferencing)</p> <p>Managing Care Transitions: Not specified</p> <p>Addresses Equity and HRSNs: Yes</p>			

Exhibit 12. Characteristics of PTAC Proposals with a Focus on Specialties Requiring Chronic Management

PTAC Proposals with Specialty Focus – Chronic Management					
Submitter, Submitter Type, Proposal Name, and PTAC Recommendation and Date	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
<p>American Academy of Hospice and Palliative Medicine (AAHPM)</p> <p><i>(Provider association and specialty society)</i></p> <p>Patient and Caregiver Support for Serious Illness (PACSSI)</p> <p>Recommended for limited-scale testing, 3/26/2018</p>	<p>Clinical Focus: Serious illness and palliative care</p> <p>Providers: Palliative care teams</p> <p>Setting: Inpatient; outpatient; other palliative care settings</p> <p>Population: Patients with serious illness</p>	<p>Approaches to Improve Specialty Integration: Multispecialty during episode of advanced illness; interdisciplinary team with 24/7 access</p> <p>Delineation of Provider Roles and Responsibilities: PCTs responsible for education, assessment, care planning, care coordination, and delivery of palliative care services; PCT is primary provider of care management, and coordinates and communicates with the patient’s other physicians and providers and arranges services from other providers</p> <p>Provision of Specialist Consultations: As needed, managed by PCT</p> <p>Approaches to Improve Care Coordination: PCTs as care</p>	<p>Capitated PBPM with shared risk options for accountability</p>	<p>Types of Performance Measures: Spending, quality</p> <p>Performance Tied to Payment: Yes</p> <p>Performance Measures Related to Improving Coordination: Yes</p> <p>Benchmarking: Quality performance: based on historical trends</p> <p>Financial performance: based on risk-adjusted historical trends, adjusted at the regional level and weighted toward more recent episodes</p>	<p>N/A^{xlv}</p>

^{xlv} Model entities identify eligible patients based on serious illness, functional limitation, and health care utilization; enrollment is voluntary.

PTAC Proposals with Specialty Focus – Chronic Management					
Submitter, Submitter Type, Proposal Name, and PTAC Recommendation and Date	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
		<p>managers, communication, establishing accountability/negotiating responsibility</p> <p>Provider Communication and Telehealth Modalities: Synchronous (live-video, telephone); remote patient monitoring</p> <p>Managing Care Transitions: PCT develops a care plan in coordination with patient’s primary care and/or primary treating providers</p> <p>Addresses Equity and HRSNs: No</p>			
<p>American Society of Clinical Oncology (ASCO)</p> <p><i>(Provider association and specialty society)</i></p>	<p>Clinical Focus: Cancer care</p> <p>Providers: Providers delivering</p>	<p>Approaches to Improve Specialty Integration: Community case conferences allow a panel of multi-specialty providers to discuss cancer cases and determine the most</p>	<p>Episode-based payment with two tracks; add-on payments worth 2-3 percent of total</p>	<p>Types of Performance Measures: Care processes, spending, quality, and patient satisfaction</p>	N/A ^{xlvi}

^{xlvi} Episodes aligned to providers or practice groups based on billing provider for the Cancer Treatment Care Management Payment (CMP) or the billing of an antineoplastic, endocrine therapy, or select immunosuppressive agent.

PTAC Proposals with Specialty Focus – Chronic Management					
Submitter, Submitter Type, Proposal Name, and PTAC Recommendation and Date	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
<p>Patient-Centered Oncology Payment Model (PCOP)</p> <p>Referred for other attention by the Department of Health and Human Services (HHS), 9/15/2020</p>	<p>hematology/oncology services; partners</p> <p>Setting: Inpatient, outpatient</p> <p>Patient Population: Cancer patients</p>	<p>appropriate care, bringing together participating providers, subspecialists, and researchers</p> <p>Delineation of Provider Roles and Responsibilities: Built into team-based care policies and practices</p> <p>Provision of Specialist Consultations: Yes, to experienced oncology practitioners if the patient’s initial contact is not a practitioner from the treating health care setting; for psychosocial care and support services as needed; for the following services if not available onsite – rehabilitation, nutrition support/counseling, surgical and radiation oncology, diagnostic imaging, laboratory studies, psychosocial evaluation and support, genetic counseling, palliative</p>	<p>cost of care, including FFS payments; add-on performance payments</p>	<p>Performance Tied to Payment: Yes</p> <p>Performance Measures Related to Improving Coordination: Yes</p> <p>Benchmarking: Yes, based on percentile of metric adherence</p>	

PTAC Proposals with Specialty Focus – Chronic Management					
Submitter, Submitter Type, Proposal Name, and PTAC Recommendation and Date	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
		<p>care/symptom management, home care and hospice care</p> <p>Approaches to Improve Care Coordination: Reduce utilization for conditions that could be averted; reduce total ED visits and observation stays; establish accountability or negotiate responsibility; monitoring and follow-up</p> <p>Provider Communication and Telehealth Modalities: Team huddles, communication processes led by patient’s medical oncologist, clear and standardized documentation in the electronic medical record (EMR)</p> <p>Managing Care Transitions: Transitional care management provided as part of care management services provided by oncology providers</p> <p>Addresses Equity and HRSNs: Yes</p>			

PTAC Proposals with Specialty Focus – Chronic Management					
Submitter, Submitter Type, Proposal Name, and PTAC Recommendation and Date	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
<p>Coalition to Transform Advanced Care (C-TAC)</p> <p>(Coalition)</p> <p>Advanced Care Model (ACM) Service Delivery and Advanced Alternative Payment Model</p> <p>Recommended for limited-scale testing, 3/26/2018</p>	<p>Clinical Focus: Serious illness and palliative care</p> <p>Providers: ACM care team; other ancillary collaborator organizations</p> <p>Setting: Patient home</p> <p>Patient Population: Patients with serious illness</p>	<p>Approaches to Improve Specialty Integration: Multidisciplinary during episode of advanced illness; across major clinical dimensions of space (from inpatient through ambulatory to home settings), time (from onset of advanced illness through disease progression to the end of life), and treatment (from intensive, disease-modifying treatment through palliation to hospice)</p> <p>Delineation of Provider Roles and Responsibilities: Patient’s primary care provider and specialists can relate to the program as participating or non-participating providers with no changes to provision of services; interdisciplinary care team is responsible for the</p>	<p>Capitated PBPM with shared risk</p>	<p>Types of Performance Measures: Spending, quality</p> <p>Performance Tied to Payment: Yes</p> <p>Performance Measures Related to Improving Coordination: Yes</p> <p>Benchmarking: Yes, quality performance based on historical trends; financial performance based on risk-adjusted^{xlviii} historical trends, adjusted at the regional level and weighted toward more recent episodes</p>	<p>Based on the participating entities full Medicare population or only those that are ACM-eligible (those with advanced illness^{xlix})</p>

^{xlviii} Risk adjustment factors include clinical risk, prior utilization, and Medicare-Medicaid dual-eligibility.

^{xlix} Identification of advanced illness is based on *International Classification of Diseases, 10th Revision* (ICD-10) primary diagnosis codes in the diagnosis category that appeared on the majority of a patient’s claims in their last twelve months of life.

PTAC Proposals with Specialty Focus – Chronic Management					
Submitter, Submitter Type, Proposal Name, and PTAC Recommendation and Date	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
		<p>implementation of the ACM care delivery services</p> <p>Provision of Specialist Consultations: Yes, as needed, facilitated by care team</p> <p>Approaches to Improve Care Coordination: Evidence-based treatments; align with patient preferences; symptom management; 24/7 access to clinical support; comprehensive care plan; transitional and post-acute care; established reliable handoff processes; advanced care planning; reduce unwanted/duplicate visits and interventions</p> <p>Provider Communication and Telehealth Modalities: Synchronous (live-video, telephone), mobile health^{xlvi}</p>			

^{xlvi} Includes wireless communication infrastructure and mobile devices.

PTAC Proposals with Specialty Focus – Chronic Management					
Submitter, Submitter Type, Proposal Name, and PTAC Recommendation and Date	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
		<p>Managing Care Transitions: comprehensive transitional and post-acute care</p> <p>Addresses Equity and HRSNs: Yes</p>			
<p>Hackensack Meridian Health and Cota, Inc. (HMH/Cota)</p> <p><i>(Regional/ local multispecialty practice or health system; Device/ technology company)</i></p> <p>Oncology Bundled Payment Program Using CNA-Guided Care</p> <p>Recommended for limited-scale testing, 9/8/2017</p>	<p>Clinical Focus: Oncology</p> <p>Providers: Eligible professionals in HMH health system with attributed Medicare cancer patients</p> <p>Setting: Inpatient and outpatient care</p> <p>Patient Population: Cancer (breast, colon, rectal, and lung)</p>	<p>Approaches to Improve Specialty Integration: Within condition; multidisciplinary; recommendations for standardization across specialties</p> <p>Delineation of Provider Roles and Responsibilities: Yes, in care pathways</p> <p>Provision of Specialist Consultations: Yes, in care pathways, subject to appropriate timeframes</p> <p>Approaches to Improve Care Coordination: Care coordinators; treatment pathways and corresponding quality metrics; shared access to electronic health records (EHRs)</p>	Prospective, bundled episode-based payments with retrospective reconciliation, replacing FFS; shared risk	<p>Types of Performance Measures: Spending, quality</p> <p>Performance Tied to Payment: Yes</p> <p>Performance Measures Related to Improving Coordination: Yes</p> <p>Benchmarking: Yes, based on data-driven classification system for cancer patient risk and treatment pathways</p>	N/A

PTAC Proposals with Specialty Focus – Chronic Management					
Submitter, Submitter Type, Proposal Name, and PTAC Recommendation and Date	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
		<p>Provider Communication and Telehealth Modalities: Face-to-face, telephone, telehealth, ad messaging; mobile health; modality not specified</p> <p>Managing Care Transitions: Reallocation of care management staff to improve outpatient and transitional care coordination</p> <p>Addresses Equity and HRSNs: Yes</p>			
<p>Innovative Oncology Business Solutions (IOBS)</p> <p><i>(For-profit corporation)</i></p> <p>Making Accountable Sustainable Oncology Networks (MASON)</p> <p>Referred for further development and implementation, 12/10/2018</p>	<p>Clinical Focus: Cancer care</p> <p>Providers: Oncology physicians</p> <p>Setting: Outpatient</p> <p>Patient Population: Patients with cancer</p>	<p>Approaches to Improve Specialty Integration: Virtual patient accounts using Medicare claims to estimate spending and value for internal and external providers</p> <p>Delineation of Provider Roles and Responsibilities: Based on diagnostic and therapeutic pathways (DTP)</p>	<p>Episode-based model with continued FFS payments; shared risk for cancer-related expenditures</p>	<p>Types of Performance Measures: Spending, quality</p> <p>Performance Tied to Payment: Yes</p> <p>Performance Measures Related to Improving Coordination: Not specified</p>	N/A

PTAC Proposals with Specialty Focus – Chronic Management					
Submitter, Submitter Type, Proposal Name, and PTAC Recommendation and Date	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
		<p>Provision of Specialist Consultations: Referrals to other specialties based on DTP</p> <p>Approaches to Improve Care Coordination: Triage pathways, DTPs, cognitive computing platform, and data science processes</p> <p>Provider Communication and Telehealth Modalities: Synchronous (telephone); mobile health; modality not specified</p> <p>Managing Care Transitions: Based on DTP</p> <p>Addresses Equity and HRSNs: Yes</p>		Benchmarking: Yes, based on distribution of expenditures, as opposed to a point estimate	
New York City Department of Health and Mental Hygiene (NYC DOHMH)	Clinical Focus: Hepatitis C virus (HCV)	Approaches to Improve Specialty Integration: Within condition; multidisciplinary; hospital-based clinics (with	Bundled episode-based payment replacing FFS, with shared risk	Types of Performance Measures: Spending, quality	N/A ¹

¹ Qualifying episodes are identified using *International Classification of Diseases, 10th Revision* (ICD-10) codes, Current Procedural Terminology (CPT) codes, and HCPCS codes.

PTAC Proposals with Specialty Focus – Chronic Management					
Submitter, Submitter Type, Proposal Name, and PTAC Recommendation and Date	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
<p>(Public health department)</p> <p>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</p> <p>Not recommended, 12/18/2018</p>	<p>Providers: Primary care physicians (trained by hepatologists/gastroenterologists); specialists; nurse practitioners; physician assistants; and non-clinician staff</p> <p>Setting: Primary care and specialty</p> <p>Patient Population: Patients with chronic condition (HCV)</p>	<p>PCPs able to refer to other diagnostic and treatment services within the same facility); telementoring with specialists; integrating medical (including infectious diseases, gastroenterology, and hepatology) and behavioral health care</p> <p>Delineation of Provider Roles and Responsibilities: Physicians and other specialists note in the EHR clinical observations of patient health status; providers relay this information to care coordinators, who then may help document milestones in treatment of HCV</p> <p>Provision of Specialist Consultations: Yes, for both medical specialty and behavioral health care</p>		<p>Performance Tied to Payment: Yes</p> <p>Performance Measures Related to Improving Coordination: Yes</p> <p>Benchmarking: Yes, based on risk-adjusted, facility-based sustained virologic response rate, compared against other model participants (e.g., compared to the average among all participants)</p>	

PTAC Proposals with Specialty Focus – Chronic Management					
Submitter, Submitter Type, Proposal Name, and PTAC Recommendation and Date	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
		<p>Approaches to Improve Care Coordination: Reduce handoffs through telementoring, care coordinators support the development of a care coordination plan with all members of the care management team</p> <p>Provider Communication and Telehealth Modalities: telementoring; synchronous (live-video); mobile health</p> <p>Managing Care Transitions: Not specified</p> <p>Addresses Equity and HRSNs: Yes</p>			
<p>Renal Physicians Association (RPA)</p> <p><i>(Provider association and specialty society)</i></p> <p>Incident ESRD Clinical Episode Payment Model</p>	<p>Clinical Focus: End-stage renal disease (ESRD)</p> <p>Providers: Nephrologists, PCPs</p> <p>Setting: Dialysis Centers</p>	<p>Approaches to Improve Specialty Integration: Within condition, single specialty within episode; coordination among medical specialists and with dialysis providers</p> <p>Delineation of Provider Roles and Responsibilities: Not specified</p>	<p>Episode-based model with continued FFS payments and an additional payment for transplant; one- and two-sided risk options</p>	<p>Types of Performance Measures: Spending, quality</p> <p>Performance Tied to Payment: Yes</p> <p>Performance Measures Related to</p>	N/A

PTAC Proposals with Specialty Focus – Chronic Management					
Submitter, Submitter Type, Proposal Name, and PTAC Recommendation and Date	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
Recommended for implementation, 12/18/2017	Patient Population: Patients with chronic condition (incident ESRD)	<p>Provision of Specialist Consultations: Yes</p> <p>Approaches to Improve Care Coordination: Hospital admission and readmission avoidance; supporting patient self-management goals</p> <p>Approaches to Improve Care Coordination: Support Self-Management Goals; Facilitate Transitions and Coordinate Care Across Settings; Patient-Reported Outcomes Measurement Information System (PROMIS) measures</p> <p>Provider Communication and Telehealth Modalities: As part of care delivery and monitoring structure; flexibility to choose the HIT infrastructure most appropriate for geography and practice</p> <p>Provider Communication and Telehealth Modalities: N/A</p>		<p>Improving Coordination: Yes</p> <p>Benchmarking: Yes, based on risk-adjusted target expenditures</p>	

<i>PTAC Proposals with Specialty Focus – Chronic Management</i>					
Submitter, Submitter Type, Proposal Name, and PTAC Recommendation and Date	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
		<p>Managing Care Transitions: Supporting healthy transition to dialysis through planning during mid and late stages of chronic kidney disease (CKD), including: patient and caregiver education; patient-centered, shared decision-making; coordination among medical specialists; and coordination with dialysis providers</p> <p>Addresses Equity and HRSNs: NoN/A</p>			

Exhibit 13. Characteristics of PTAC Proposals with a Focus on Specialty Integration

<i>PTAC Proposals with Specialty Integration Focus</i>					
Submitter, Submitter Type, Proposal Name, and PTAC Recommendation and Date	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
<p>American College of Physicians-National Committee for Quality Assurance (ACP-NCQA)</p> <p><i>(Provider association and specialty society/other)</i></p> <p>The “Medical Neighborhood” Advanced Alternative Payment Model (AAPM) (Revised Version)</p> <p>Recommended for testing to inform payment model development, 09/15/2020</p>	<p>Clinical Focus: Coordination between specialists and PCPs</p> <p>Providers: Primary Care Practices in Comprehensive Primary Care Plus (CPC+) and Primary Care First (PCF), specialty practices meeting clinical transformation and care coordination criteria for Medicare Access and Children’s Health Insurance Program (CHIP) Reauthorization Act of 2015 (MACRA)-recognized Patient Centered Specialty Practices (PCSPs)</p>	<p>Approaches to Improve Specialty Integration: Incorporate criteria from the Medical Neighborhood Model (MNM) and Merit-based Incentive Payment System (MIPS)-eligible PCSPs</p> <p>Delineation of Provider Roles and Responsibilities: Establish accountability or negotiate responsibility</p> <p>Provision of Specialist Consultations: Maintain referral agreements and care plans with primary care practices</p> <p>Approaches to Improve Care Coordination: Align resources with patient and population needs; criteria comparable to the Transforming Clinical Practice Initiative and MIPS-eligible PCSPs</p>	<p>Add-on PBPM with shared risk</p>	<p>Types of Performance Measures: Utilization, behavioral health, patient-reported outcomes, patient experience, and care coordination</p> <p>Performance Tied to Payment: Yes</p> <p>Performance Measures Related to Improving Coordination: Yes</p> <p>Benchmarking: Yes, based on practice’s historical spending and trended forward based on regional growth rates</p>	<p>Patients must be appropriately referred by CPC+ participating primary care clinicians and have an office visit billed through the participating MNM specialist; attribution conducted on quarterly basis</p>

PTAC Proposals with Specialty Integration Focus					
Submitter, Submitter Type, Proposal Name, and PTAC Recommendation and Date	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
	<p>Setting: Primary care and specialty practices</p> <p>Patient Population: Patients with multiple chronic conditions</p>	<p>Provider Communication and Telehealth Modalities: Modality not specified</p> <p>Managing Care Transitions: Incorporate MNM criteria (e.g., exchange clinical information with admitting hospitals, obtain discharge summaries)</p> <p>Addresses Equity and HRSNs: Yes</p>			
<p>The American College of Surgeons (ACS)</p> <p><i>(Provider association and specialty society)</i></p> <p>The ACS-Brandeis Advanced Alternative Payment Model (APM)</p> <p>Recommended for limited-scale testing, 4/11/2017</p>	<p>Clinical Focus: Cross-clinical focus</p> <p>Providers: Single/multispecialty practices; groups of small provider practices</p> <p>Setting: Inpatient, outpatient, ambulatory</p>	<p>Approaches to Improve Specialty Integration: Multispecialty of general and specialty surgeons during an episode of care defined by a selected set of procedural/condition episodes; grouping general and specialty surgeons who participate in a single episode of care, a selected set of procedural or condition episodes, or cumulative</p>	Episode-based model with continued FFS and shared risk	<p>Types of Performance Measures: Care process, spending, patient experience, quality</p> <p>Performance Tied to Payment: Yes</p> <p>Performance Measures Related to</p>	N/A ^{li}

^{li} Episodes of care that are either procedural or condition-based and both acute and chronic are aligned to the team of clinicians providing care, with responsibility for any savings or losses during the risk period attributed to each participating Qualified Participant based on the episodes they are involved in and their specific role in that care.

<i>PTAC Proposals with Specialty Integration Focus</i>					
Submitter, Submitter Type, Proposal Name, and PTAC Recommendation and Date	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
	<p>Patient Population: Broad (includes 100+ conditions or procedures)</p>	<p>patient-level aggregations of all outcomes; episode grouper automatically identifies most of the clinicians who are participating in the care for a patient during a defined episode</p> <p>Delineation of Provider Roles and Responsibilities: Clinical affinity group whose decisions and services jointly affect the way patients are treated for that type of episode; clinical roles defined based on provider type (e.g., primary, principal, episodic, supporting, ancillary)</p> <p>Provision of Specialist Consultations: Yes</p> <p>Approaches to Improve Care Coordination: Increase integration across specialties by grouping general and specialty surgeons who participate in a single episode of care, a selected set of procedural or condition</p>		<p>Improving Coordination: Yes Benchmarking: Yes, based on risk-adjusted expected spending per episode</p>	

<i>PTAC Proposals with Specialty Integration Focus</i>					
Submitter, Submitter Type, Proposal Name, and PTAC Recommendation and Date	Clinical Focus, Providers, Setting, and Patient Population	Components Related to Specialty Integration	Payment Design Features	Performance Measurement Features	Beneficiary Alignment
		<p>episodes, or cumulative patient-level aggregations of all outcomes; Establish Accountability or Negotiate Responsibility</p> <p>Provider Communication and Telehealth Modalities: Care redesign could include communication protocols among clinicians in team-based care</p> <p>Managing Care Transitions: Not specified</p> <p>Addresses Equity and HRSNs: Yes</p>			

Appendix E. Areas for Future Exploration and Research

Please note the items listed below may be better addressed through the RFI, SME discussions or listening sessions, roundtable panel discussions, or another research approach. They are captured here for further exploration.

- Assessing longitudinal impact of nesting specialty episodes on cost and patient outcomes
- Empirically evaluating the link between capitated payment arrangements and improved care management and coordination
- Leveraging other digital health tools to improve specialty care and integration
- Evaluating specialty care integration across varying practice settings
- Providing more information on specialist integration.
- Identifying procedures that are removed from the inpatient only list and are performed on an outpatient basis that may still start an episode that could require a specialist.
- Further evaluation of issues related to prospective versus retrospective attribution.
- Sharing performance data with specialists versus primary care physicians.

Appendix F. Annotated Bibliography

Aboagye JK, Kaiser HE, Hayanga AJ. Rural-Urban Differences in Access to Specialist Providers of Colorectal Cancer Care in the United States: A Physician Workforce Issue. *JAMA Surgery*. 2014;149(6):537-543. doi:10.1001/jamasurg.2013.5062

Subtopic(s): Current State of Specialist Integration in Primary Care

Type of Source: Journal article

Objective: To examine the extent of the disparities that may exist in colorectal cancer screening and treatment.

Main Findings: There is a significantly higher density of gastroenterologists, general surgeons, and radiation oncologists per 100,000 people living in urban vs. rural counties. This might affect access to necessary services and may adversely influence outcomes for colorectal cancer in rural areas.

Strengths/Limitations: This study does not account for service providers with multiple practice locations, which may lead to an overestimation of provider densities in some areas and an underestimation of provider densities in other areas. In addition, the cross-sectional nature of this study and the use of ecologic data preclude any causal inferences.

Generalizability to Medicare Population: Moderate; while these findings are not specific to Medicare populations, they are relevant to Medicare populations.

Methods: Retrospective population-based study.

Abt Associates. Evaluation of the Oncology Care Model: Performance Periods 1-6. 2021.

<https://innovation.cms.gov/data-and-reports/2021/ocm-ar4-eval-payment-impacts>

Subtopic(s): Enhancing Performance Metrics

Type of Source: Report

Objective: This report focuses on updating payment-related impacts and examines Medicare payments to practices that volunteered to participate in the Oncology Care Model (OCM) and compare changes over time in this group versus a comparison group.

Main Findings: The study found that OCM led to increased total episode payments (TEP) for lower-risk episodes by \$130. OCM did not appear to have an impact on Part A payments for acute care hospitalizations, hospice services, or post-acute care.

Strengths/Limitations: The difference-in-difference designs allows for more robust assertions with respect to program causal effects.

Generalizability to Medicare Population: Moderate; the report serves as an evaluation of the OCM, which provides enhanced services for eligible Medicare beneficiaries with cancer diagnoses.

Methods: Difference-in-differences evaluation approach is used to help measure any changes over the course of the model in the comparison group or the OCM group.

Accelerating and Aligning Population-based Payment Models: Data Sharing. The MITRE Corporation.

Published 2016. Accessed April 25, 2022. <http://hcp-lan.org/workproducts/ds-whitepaper-final.pdf>

Subtopic(s): Health Information Technology and Data Analytics

Type of Source: White paper

Objective: To outline principles and recommendations that should guide approaches to data sharing in population-based payment models.

Main Findings: The high-level principles identified include data sharing in population-based payment needs to be different than data sharing in fee-for-service (FFS) models; personal data

should follow the patient; population-level data should be treated as a public good; and widespread data sharing may necessitate third-party intermediates.

Strengths/Limitations: The white paper considers five use cases for data sharing, which provides concrete examples of who will share which types of data and with whom.

Generalizability to Medicare Population: Strong; the paper considers data sharing differences from traditional Medicare FFS.

Methods: N/A

Accelerating and Enhancing Behavioral Health Integration Through Digitally Enabled Care: Opportunities and Challenges. Manatt Health and the American Medical Association (AMA); 2022. Accessed February 22, 2023. <https://www.ama-assn.org/system/files/bhi-return-on-health-report.pdf>

Subtopic(s): N/A

Type of Source: Report

Objective: To define the opportunities and limitations to incorporating technologies to advance behavioral health integration, define the practical solutions that stakeholders can pursue to advance digitally enabled behavioral health integration, and to demonstrate how to use the AMA's Return on Health framework to measure the value of digitally enabled behavioral health integration models.

Main Findings: The behavioral health integration, specifically the Collaborative Care Model produces positive patient outcomes, improves patient experience and access to care, and can generate cost savings. Incorporating technology into behavioral health integration models can accelerate behavioral health integration and help alleviate behavioral health issues in the US.

Strengths/Limitations: This report primarily relies upon the AMA's Return to Health report.

Generalizability to the Medicare Population: Moderate; while this study does not specifically focus on Medicare populations, the findings are relevant to Medicare populations.

Methods: Report was informed by the AMA's Return on Health framework and a working group convened by AMA and Manatt.

Ahmed F, Burt J, Roland M. Measuring Patient Experience: Concepts and Methods. *Patient*. 2014;7(3):235-241. doi:10.1007/s40271-014-0060-5

Subtopic(s): Enhancing Performance Metrics

Type of Source: Journal article

Objective: To explain the importance of patient experience and its relationship to other quality domains as well as methods for measuring patient experience.

Main Findings: This study defines patient experience as patients' experiences of care and feedback received from patients about those experiences. Additionally, this study explains that patient experience can be measured using questionnaire surveys as well as interviews and focus groups, and that there is a positive association between patient experience, clinical effectiveness, and patient safety.

Strengths/Limitations: This article does not specify literature search methodology.

Generalizability to Medicare Population: Moderate; although the paper does not focus on the Medicare population, patient experience and methods to measure patient experience are widely applicable to Medicare beneficiaries and providers.

Methods: Systematic literature review.

Ahreum Han, Keon-Hyung Lee, Jongsun Park. The Impact of Price Transparency and Competition on Hospital Costs: a Research on All-Payer Claims Databases. *BMC Health Services Research*. 2022;22(1):1-10. doi:10.1186/s12913-022-08711-x

Subtopic(s): Unintended Consequences from Provider Consolidation within PB-TCOC Models

Type of Source: Journal article

Objective: To analyze how hospital costs are impacted by transparency policy and competition using full-payer claims databases (APCDs) as a case of interest.

Main Findings: States with APCDs generally have hospitals with higher average operating expenses. These higher operating costs are often associated with weak market competition. In states without APCDs weak competition was linked to lower hospital operating costs. Market consolidation helped hospitals coordinate care more effectively and economize operating costs in non-ACPD adopted states.

Strengths/Limitations: Quality of care and patient satisfaction were not included in the scope of the study; the scope was limited to operating costs.

Generalizability to Medicare Population: Moderate; Medicare claims data was utilized in the study, but it is not the focus.

Methods: Fixed-effects regression generating hospital-specific effects. Study sample consists of nonprofit and for-profit general acute care hospitals in the United States for 2011–2017.

Allen C, Des Jardins TR, Heider A, et al. Data Governance and Data Sharing Agreements for Community-Wide Health Information Exchange: Lessons from the Beacon Communities. *EGEMS (Wash DC)*. 2014;2(1):1057. doi:[10.13063/2327-9214.1057](https://doi.org/10.13063/2327-9214.1057)

Subtopic: Health Information Technology and Data Analytics

Type of Source: Journal article

Objective: To share experience and guidance on navigating data governance issues and developing data sharing agreements (DSAs).

Main Findings: DSAs are necessary to satisfy legal and market-based concerns. There are six promising approaches to effective DSA development: stakeholder engagement; identification and effective communication of value; adoption of a parsimonious approach; attention to market-based concerns; flexibility in adapting and expanding existing agreements and partnerships; and anticipation of required time and investment.

Strengths/Limitations: DSAs and governance policies depend heavily on state laws and partners involved, therefore drawing generalizations may be difficult.

Generalizability to Medicare Population: Moderate; while this study does not specifically focus on Medicare populations, the findings are relevant to Medicare populations.

Methods: Analysis of lessons learned from three years of providing technical assistance to the six Beacon communities.

American Academy of Family Physicians. Advanced Primary Care: A Foundational Alternative Payment Model (APC-APM) for Delivering Patient-Centered, Longitudinal, and Coordinated Care. April 14, 2017. <https://www.aafp.org/dam/AAFP/documents/advocacy/payment/apms/PR-PTAC-APC-APM-41417.pdf>

Subtopic(s): Current State of Specialist Integration in Primary Care

Type of Source: Report

Objective: To propose an Alternative Payment Model for delivering patient-centered, longitudinal, and coordinated care to the Payment Model Technical Advisory Committee.

Main Findings: The Advanced Primary Care-Alternative Payment Model (APC-APM) is a multi-year model that aims to improve clinical quality through the delivery of coordinated and longitudinal care. The APC-APM payment structure includes a prospective, risk-adjusted, primary care global payment for direct patient care, FFS limited to services not included in the primary care global fee, a prospective, risk-adjusted, population-based payment, and performance-based incentive payments that hold physicians appropriately accountable for

quality and costs. Other features of the program include being fully flexible to accommodate differences in clinical settings and patient subgroups covered by primary care, attributing patients based primarily on patient choice, and adopting certified health information technology.

Strengths/Limitations: N/A

Generalizability to Medicare Population: Strong; this program is specific to Medicare populations.

Methods: N/A

American College of Physicians. The Patient-Centered Medical Home Neighbor: The Interface of the Patient-Centered Medical Home with Specialty/Subspecialty Practices. (2010).

https://www.acponline.org/sites/default/files/documents/advocacy/current_policy_papers/assets/pcm_h_neighbors.pdf

Subtopic(s): Current State of Specialist Integration in Primary Care

Type of Source: White paper

Objective: To discuss the relationship between a Patient-Centered Medical Home (PCMH) care model and specialty/subspecialty practices, define the PCMH Neighbor (PCMH-N) concept, and recommend policy decisions to facilitate the relationship.

Main Findings: Collaboration between primary care, specialty, and subspecialty practices within the PCMH care delivery model is important. Specialty and subspecialty practices can serve as PCMH-N practices and can interact with the PCMH through consultation and co-management, guided through the development of specific care coordination agreements. Both non-financial and financial incentives, when aligned, can help PCMH-N and PCMH practices align for better outcomes.

Strengths/Limitations: As a position paper, the piece offers aspirational recommendations but no results regarding the outcomes or impact of the PCMH-N framework.

Generalizability to Medicare Population: Moderate; although the paper does not specifically focus on the Medicare population, the PCMH-N concept can be applied to the Medicare population.

Methods: N/A

American Medical Association. Medicare Alternative Payment Models. Accessed December 4, 2022.

<https://www.ama-assn.org/practice-management/payment-delivery-models/medicare-alternative-payment-models>

Subtopic(s): Incentivizing Specialists to Drive Down Costs within PB-TCOC Models; Enhancing Performance Metrics

Type of Source: Webpage

Objective: To explain the American Medical Association's (AMA's) position on the value of APMs, integrating specialty models into ACOs, and designing patient-centered APMs.

Main Findings: The AMA noted that well-designed, patient-centered APMs can provide significant opportunities to improve quality of care and patient outcomes while also reducing health care spending. The AMA indicated that it is essential for physicians, including specialty physicians, to be involved in the design of APMs. For that reason, the AMA has held educational seminars about APMs for physicians in a number of states and organized several workshops in which physicians have shared their experiences in designing and implementing APMs.

Strengths/Limitations: N/A

Generalizability to Medicare Population: Strong; this article focuses on Medicare-specific APMs.

Methods: N/A

Andrawis JP, McClellan M, and Bozic KJ. Bundled Payments are Moving Upstream. *N Eng J Catalyst*. <https://catalyst.nejm.org/doi/full/10.1056/CAT.19.0008>

Subtopic(s): Nesting Specialty Episodes within PB-TCOC Models

Type of Source: Journal article

Objective: To discuss the Musculoskeletal Institute (MSKI) and bundled payment program for the management of hip and knee arthritis at Dell Medical School.

Main Findings: Physicians at Dell Medical School are finding initial success in with their bundled payment program for the management of degenerative musculoskeletal disease and have improved care outcomes while controlling the cost of care for degenerative musculoskeletal disease. Positive results from the program include double-digit improvement in functional status of the patients at the first follow-up visit, and a decrease of more than 25 percent in the utilization of elective surgical procedures.

Strengths/Limitations: The article discusses promising opportunities and initial results for a new bundled payment model; however, the program was only 18 months old at the publishing of the article, limiting the conclusions that can be drawn from the article. Similarly, the article does not provide details on the evaluation methodologies.

Generalizability to Medicare Population: Strong; the article discusses a bundled payment model that can be used in the Medicare population.

Methods: N/A

Anhang Price R, Elliott MN, Zaslavsky AM, et al. Examining the Role of Patient Experience Surveys in Measuring Health Care Quality. *Med Care Res Rev*. 2014;71(5):522-554.
doi:10.1177/1077558714541480

Subtopic(s): Enhancing Performance Metrics

Type of Source: Journal article

Objective: To explore and explain the association between patient experiences and other measures of health care quality.

Main Findings: Overall, literature reported positive associations between reported patient experiences and patient outcomes, safety, and quality of care. Therefore, literature suggests that patient experience measures are an appropriate complement to clinical quality measures.

Strengths/Limitations: All reviewed literature was observational, limiting the ability for the study to make causal inferences between patient experience measures and quality of care. Additionally, variation among patient survey responses is typically high, limiting the accuracy of study conclusions. However, the article focuses on studies that report results from Consumer Assessment of Healthcare Providers and Systems (CAHPS) surveys, the most widely used source of patient experience measures in the US.

Generalizability to Medicare Population: Moderate; although the paper does not focus on the Medicare population, patient experience and methods to measure patient experience are widely applicable to Medicare beneficiaries and providers.

Methods: Literature review.

Arora S, Kalishman S, Dion D, et al. Partnering Urban Academic Medical Centers and Rural Primary Care Clinicians to Provide Complex Chronic Disease Care. *Health Aff (Millwood)*. 2011;30(6):1176-1184.
doi:10.1377/hlthaff.2011.0278

Subtopic(s): Key Highlights; Current State of Specialist Integration in Primary Care

Type of Source: Journal article

Objective: To describe the Extension for Community Outcomes (ECHO) Project.

Main Findings: Project ECHO is an innovative model of health care education and delivery in New Mexico that provides high-quality primary and specialty care using new telehealth technology and case-based learning. This model allows specialists at the University of New Mexico Health Sciences Center to partner with primary care clinicians in underserved areas to deliver complex specialty care. As of March 2011, 298 Project ECHO teams across New Mexico have collaborated on more than 10,000 specialty care consultations.

Strengths/Limitations: The study timeframe is only 12 months. Additionally, the survey received only 34 responses.

Generalizability to Medicare Population: Weak; this article is specific to New Mexico and patient population with certain chronic conditions.

Methods: The study administered and analyzed a survey.

Beattie M, Lauder W, Atherton I, Murphy DJ. Instruments to Measure Patient Experience of Health Care Quality in Hospitals: a Systematic Review Protocol. *Syst Rev.* 2014 Jan 4;3:4. doi:10.1186/2046-4053-3-4.

Subtopic(s): Enhancing Performance Metrics

Type of Source: Journal article

Objective: To review and assess survey instruments used to measure adult patient experience in an inpatient hospital setting.

Main Findings: This study included 26 papers that evaluated patient experience measurement instruments. The study found that available patient experience measurement tools covered similar domains to capture the patient experience, including both technical and interpersonal aspects of care. The study also found that patient experience instruments varied in the scope of patient experience domains included, ranging from instruments focused on capturing the stages of the patient's journey to instruments focused on dimensions of hospital quality.

Strengths/Limitations: The literature search conducted in this study did not include the EMBASE database, but did include a thorough search of MEDLINE, CINHALL and PsychINFO. Given that the review does not include papers published after 2012, some of the instruments reviewed may be outdated; likewise, newer instruments may not be covered in the review.

Generalizability to Medicare Population: Moderate; although the paper did not specifically address the Medicare population, the instruments highlighted in the review may be relevant tools for measuring the inpatient experience of Medicare beneficiaries.

Methods: Systematic literature review.

Beaulieu ND, Dafny LS, Landon BE, Dalton JB, Kuye I, McWilliams JM. Changes in Quality of Care after Hospital Mergers and Acquisitions. *N Engl J Med.* 2020;382(1):51-59. doi:10.1056/NEJMsa1901383

Subtopic(s): Unintended Consequences from Provider Consolidation within PB-TCOC Models

Type of Source: Journal article

Objective: To analyze the changes in hospital quality of care, readmissions, and patient outcomes following a hospital merger.

Main Findings: The study found that mergers and acquisitions lead to worse outcomes. Patient experience worsens and other factors such as readmissions remain the same. The study concludes that mergers and acquisitions do not necessarily lead to improved care for patients.

Strengths/Limitations: The study did not account for any spillover effects of mergers and acquisitions.

Generalizability to Medicare Population: Moderate; while this study does not specifically focus on Medicare populations, the findings are relevant to Medicare populations.

Methods: Difference-in-difference analysis of Medicare Claims data.

Ben-Assuli O, Shabtai I, Leshno M. The Impact of EHR and HIE on Reducing Avoidable Admissions: Controlling Main Differential Diagnoses. *BMC Med Inform Decis Mak.* 2013;13:49. doi:10.1186/1472-6947-13-49

Subtopic(s): Health Information Technology and Data Analytics

Type of Source: Journal article

Objective: To examine the effect of EHR IS use on the physicians' admission decisions.

Main Findings: The study found a negative relationship between the number of possibly redundant admissions and viewing medical history via EHR systems. It also found that interoperability contributed to reductions in admission more so than local files.

Strengths/Limitations: Several factors were not considered in the study, such as type of medical conditions, justified vs unjustified admissions, and historical medical information components on admission decisions.

Generalizability to Medicare Population: Moderate; while this study does not specifically focus on Medicare populations, the findings are relevant to Medicare populations.

Methods: This study evaluated the impact of EHR IS and health information exchange (HIE) systems through comparing decisions on patients classified by five main differential diagnoses. The study obtained data d a track log-file analysis of a database containing emergency department data from seven main hospitals in Israel.

Berenson RA, Bodenheimer T, Pham HH. Specialty-Service Lines: Salvos In The New Medical Arms Race. *Health Affairs.* 2006;25:w337-w343. doi:10.1377/hlthaff.25.w337

Subtopic(s): Unintended Consequences from Provider Consolidation within PB-TCOC Models

Type of Source: Journal article

Objective: To explain the trends signaling a return to the physician-hospital dynamics that predated the rise of managed care.

Main Findings: Health care delivery is increasingly organized through specialty service lines. According to the article, this is contributing to increased health care costs and potential threats to quality of care.

Strengths/Limitations: The article states that little is known about the impact of specialty-service competition on quality and only references it as something to watch out for in the future.

Generalizability to Medicare Population: Moderate; although not the primary focus of the article, Medicare is addressed.

Methods: Review of relevant literature and trends.

Berkowitz SA, Baggett TP, Wexler DJ, Huskey KW, Wee CC. Food Insecurity and Metabolic Control Among U.S. Adults with Diabetes. *Diabetes Care.* 2013;36(10):3093-3099. doi:10.2337/dc13-0570

Subtopic(s): Strategies for Addressing Health-Related Social Needs and Variation in Access to Specialty Care in Population-Based TCOC models

Type of Source: Journal Article

Objective: To determine whether food insecurity is associated with worse glycemic, cholesterol, and blood pressure control in adults with diabetes.

Main Findings: Food insecurity was significantly associated with poor glycemic control and poor LDL control before and after adjustment for age, sex, educational attainment, household

income, insurance status and type, smoking status, BMI, duration of diabetes, diabetes medication use and type, and presence of a usual source of care.

Strengths/Limitations: Despite controlling for many confounding variables, several confounders remain, such as neighborhood effects and physical activity and inactivity. Additionally, analysis of cross-sectional data limits the possibility for causal conclusion; therefore, the study cannot establish that food insecurity causes poor glycemic and LDL control.

Generalizability to Medicare Population: Moderate; the study does not specifically focus on the Medicare population but includes data covering Medicare enrollees.

Methods: Analysis of pooled cross-sectional data from the National Health and Nutrition Examination Survey.

Bernell S, Howard SW. Use Your Words Carefully: What Is a Chronic Disease? *Front Public Health*. 2016;4:159. doi:10.3389/fpubh.2016.00159

Subtopic(s): Research Approach

Type of Source: Journal article

Objective: To explain the current definition and state of chronic disease and chronic disease care in the United States.

Main Findings: There is a large degree of variation in the use of the term chronic disease. Public information on chronic disease is also variable. Reframing and redefining chronic diseases could create a larger community of individuals working toward improving the health of those who suffer from chronic health problems.

Strengths/Limitations: Authors provide an analysis of a wide range of definitions for chronic disease, and an analysis that does not rely on academic health care terminology.

Generalizability to Medicare Population: Moderate; while this study does not specifically focus on Medicare populations, findings are relevant to Medicare populations.

Methods: Literature review.

Berntsen G, Høyem A, Lettrem I, Ruland C, Rumpsfeld M, Gammon D. A Person-Centered Integrated Care Quality Framework, based on a Qualitative Study of Patients' Evaluation of Care in Light of Chronic Care Ideals. *BMC Health Serv Res*. 2018;18(1):479. doi:10.1186/s12913-018-3246-z

Subtopic(s): Enhancing Performance Metrics

Type of Source: Journal article

Objective: To assess a 4-stage goal-oriented person-centered integrated care (PC-IC) evaluation framework and findings from evaluations that used this framework.

Main Findings: This study found that the application of the PC-IC framework to patient experiences allowed researchers to identify several shortcomings with event-based frameworks previously used to assess quality of care. For example, the review observed that providers did not record or share goals, operated in varied care settings, employed different approaches for monitoring care delivery, and failed to evaluate goals tied to persons with multimorbidity across the care system. Additionally, the study explained that refinements to the PC-IC process include formulation of open and closed questions to assist evaluation of the presence/absence of desired attributes for each evaluation.

Strengths/Limitations: The combination of EHR derived summaries and interviews used by this study was an effective way of gaining insights into patient experiences. However, the study included perspectives of general practitioners, hospital, and nursing service health records only, not of all health service providers.

Generalizability to Medicare Population: Moderate; although the framework discussed in this review does not uniquely target the Medicare population, it may be employed to evaluate

patient outcomes and experiences among the Medicare population, especially given the framework's emphasis on patients with multiple long-term and complex conditions.

Methods: Qualitative evaluation review of the individual Patient Pathways (iPP) experiences of 19 persons with multimorbidity.

Blackmore CC, Mecklenburg RS, Kaplan GS. Effectiveness of Clinical Decision Support in Controlling Inappropriate Imaging. *Journal of the American College of Radiology*. 2011;8(1):19-25.

Subtopic(s): Incentivizing Specialists to Drive Down Costs within PB-TCOC Models

Type of Source: Journal article

Objective: To identify changes in imaging utilization associated with the initiation of an imaging management program.

Main Findings: This study found significant decreases in utilization rates for targeted procedures, including a 23.4 percent rate reduction for low back pain lumbar MRIs, following the initiation of the imaging management program.

Strengths/Limitations: The study capitalizes on a natural-experimental set-up to assess the staged implementation of evidence-based clinical decision support—the ability of the study to isolate intervention exposure from time-specific trends improves the robustness of the study design. However, this analysis was based on administrative data without patient identifiers, making it challenging to evaluate the appropriateness of imaging for each subject.

Generalizability to Medicare Population: Moderate; while this study focuses on evidenced-based imaging utilization, findings are related to Medicare spending and Medicare beneficiaries.

Methods: Retrospective cohort study that employed regression models to assess intervention effects using a quasi-experimental design.

Blavin F, Ramos C, Ozanich G, Smith LB, Horn A. Opportunities to Improve Data Interoperability and Integration to Support Value-Based Care. The Urban Institute. July 2022.

<https://www.aspe.hhs.gov/sites/default/files/documents/700d388ad0c7887c4ed7bb41adc73a2b/data-interoperability-value-based-care.pdf>

Subtopic(s): Health Information Technology and Data Analytics

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 level of integration vary by organization.

Generalizability to Medicare Population: Moderate; while this study does not specifically focus on Medicare populations, the findings are relevant to Medicare populations.

Methods: Qualitative case study interviews.

Bourbeau B. Considerations for Nested vs. Carveout Specialty Care Episode. Presented as part of Physician-Focused Payment Model Technical Advisory Committee: Listening Session 3: Financial Incentives and Performance Metrics Related to Primary Care and Specialty Integration. September 20, 2022.

<https://aspe.hhs.gov/sites/default/files/documents/473b37417ca2bd07bb2649495144bb0d/PTAC-Sep-20-SME-LS-Slides.pdf>

Subtopic(s): Research Approach

Type of Source: PTAC Presentation

Objective: To describe the differences between nested and carveout episodes.

Main Findings: Nested episodes have a defined duration, predictable financial impact, care management that remains with primary care, and an opportunity to reduce data collection, measurement, and reporting. Carveout episodes have an indefinite duration, financial impact that varies within and over time, specialty care management, and the need for distinct data collection, measurement, and reporting. Considerations for nested episodes include simplifying payment methodologies, reducing duplicate and conflicting quality measures, and reducing duplicate data reporting and other administrative burden. Considerations for carveout episodes include selecting disease episodes that justify a shift in responsible provider, a need for differing quality measures and performance scoring, and a need for additional demographic or disease data as well as disease episodes that focus on “hand-offs” between primary care providers and specialists. Both model types could be used for specialty care episodes.

Strengths/Limitations: N/A

Generalizability to Medicare Population: Strong; analysis focuses on Medicare populations.

Methods: N/A

Burt CW, Sisk JE. Which Physicians and Practices are Using Electronic Medical Records? *Health Aff (Millwood)*. 2005;24(5):1334-1343. doi:10.1377/hlthaff.24.5.1334

Subtopic(s): Unintended Consequences from Provider Consolidation within PB-TCOC Models

Type of Source: Journal Article

Objective: To examine physicians’ offices and analyze the relationship between the use of electronic medical records (EMRs) and physician and practice characteristics.

Main Findings: According to national probability surveys, the use of EMRs among physicians’ office-based practices did not change from 2001 through 2003 and factors related to organizational and financial characteristics of the practice rather than characteristics of individual physicians were associated with differential use of EMRs.

Strengths/Limitations: A possible limitation of this study is a 56 percent survey response rate to the phase with the question on use of EMRs.

Generalizability to Medicare Population: Moderate; the study does review the association between use of EMRs and the practice’s reported sources of revenue (percentage from Medicare, Medicaid, private insurance, other) and involvement with managed care.

Methods: Authors combined and analyzed data from the questionnaire used to initiate physicians into the National Ambulatory Medical Care Survey (NAMCS) for 2001, 2002, and 2003. The National Center for Health Statistics (NCHS) of the Centers for Disease Control and Prevention (CDC) annually surveys a probability sample of physicians classified by the AMA’s or the American Osteopathic Association as engaged primarily in office-based patient care.

California Health Care Foundation. Managing Cost of Care: Lessons from Successful Organizations. 2016. <https://www.chcf.org/wp-content/uploads/2017/12/PDF-ManagingCostofCare.pdf>

Subtopic(s): Incentivizing Specialists to Drive Down Costs within PB-TCOC Models

Type of Source: Report

Objective: To gain insights from organizations that have successfully managed total cost of care.

Main Findings: The study found that to succeed in reducing costs, organizations should assess their cultural and leadership foundation, decide between primary care-based versus organizationally-based strategies, target inpatient and facility costs, and initiate the work from a strong foundation.

Strengths/Limitations: Qualitative interviews may be subject to social desirability bias. Additionally, although not a statistically representative sample of providers, the providers interviewed were diverse with respect to size, organizational structure, and experience with patient management.

Generalizability to Medicare Population: Moderate; Although most of the organizations interviewed served Medicare populations, the study also addressed Medicaid and commercial insurance.

Methods: Qualitative interviews were conducted after assessment of Medicare and Integrated Healthcare Association (IHA) data to select organizations for participation. The study includes interviews with 15 health care organizations around the country with demonstrated results in reducing the TCOC.

Campbell L, Li Y. Are Facebook User Ratings Associated with Hospital Cost, Quality and Patient Satisfaction? A Cross-Sectional Analysis of Hospitals in New York State. *BMJ Qual Saf.* 2018;27(2):119-129. doi:10.1136/bmjqs-2016-006291

Subtopic(s): Enhancing Performance Metrics

Type of Source: Journal article

Objective: To test if there is an association between Facebook user ratings of hospitals, measures of patient satisfaction, cost, and quality from Center for Medicare & Medicaid Services (CMS) surveys, the 30-day all-cause readmission rate, and the Medicare spending per beneficiary ration (MSPB).

Main Findings: Facebook satisfaction ratings were moderately correlated with CMS' Hospital Consumer Assessment of Healthcare Providers and Systems' (HCAHPS) measures of patient satisfaction ratings. Facebook star ratings were associated with statistically significant increases in the majority of HCAHPS measures. The number of 'likes' a hospital receives on Facebook was not a measure of patient satisfaction and more attributed to community support. The associations between Facebook ratings and 30-day all-cause readmission rate and MSPB ratio were not statistically significant.

Strengths/Limitations: This study is limited to hospitals in New York State; thus, the findings may not be generalizable to other states and/or health care settings.

Generalizability to Medicare Population: Moderate; the analysis included MSPB, yet the findings were not statistically significant.

Methods: Multivariate linear regression of CMS Hospital Compare data, Hospital Inpatient Prospective Payment system files and Area Health Resource File for 2015.

Carlin CS, Dowd B, Feldman R. Changes in Quality of Health Care Delivery after Vertical Integration. *Health Services Research*. 2015;50(4):1043-1068. doi:10.1111/1475-6773.12274

Subtopic(s): Enhancing Performance Metrics

Type of Source: Journal article

Objective: To examine changes in quality of care measures that occurred while multispecialty clinic systems were acquired by hospital-owned, vertically integrated health care delivery systems in the Twin Cities area.

Main Findings: Vertical integration was correlated with increased rates of colorectal and cervical cancer screening and more appropriate emergency department use. Disruption in admitting patterns linked to the acquisition resulted in an increased likelihood of ambulatory care-sensitive admissions.

Strengths/Limitations: This study conducted numerous strength tests to confirm robustness of results.

Generalizability to Medicare Population: Moderate; while this study is not specific to Medicare beneficiaries, findings are relevant to Medicare beneficiaries given the study's emphasis on ACOs and integrated care systems.

Methods: This study employed a difference-in-differences model to evaluate variation in quality measures between acquired clinics and a comparison group of none-acquired clinics.

Cea ME, Reid MC, Inturrisi C, Witkin LR, Prigerson HG, Bao Y. Pain Assessment, Management, and Control Among Patients 65 Years or Older Receiving Hospice Care in the U.S. *J Pain Symptom Manage*. 2016 Nov;52(5):663-672. doi: 10.1016/j.jpainsymman.2016.05.020. Epub 2016 Sep 29. PMID: 27693900; PMCID: PMC5473027.

Subtopic(s): Incentivizing Specialists to Drive Down Costs within PB-TCOC Models

Type of Source: Journal article

Objective: To evaluate pain management outcomes among patients over 65 in the US

Main Findings: A high percentage (71 percent) of patients reported that their pain levels improved or that their pain was controlled during their hospice stay. Additionally, patients over 65 have high pain medication use while having lower levels of non-pharmaceutical interventions to manage pain.

Strengths/Limitations: There could have been biases in the pain assessments leading to biases.

Generalizability to Medicare Population: Strong; the results of this study directly impact Medicare populations.

Methods: Researchers conducted multivariate logistic regressions on data from the 2007 National Home Health and Hospice Care Survey.

Center for Health Care Strategies. Quality Measurement Approaches of Medicaid Accountable Care Organizations. 2017. https://www.chcs.org/media/QM_Medicaid-ACOs_matrix_050217.pdf

Subtopic(s): Enhancing Performance Metrics

Type of Source: Report

Objective: To provide an overview of Medicaid ACO quality measures in eight states.

Main Findings: The report found that the quality measures varied significantly across the eight states. The states studied in this report each had between seven and 35 quality measures, many of which were tied to payment.

Strengths/Limitations: This report focused on eight states, limiting the generalizability of these programs and findings.

Generalizability to Medicare Population: Weak; this report focuses on Medicaid ACOs.

Methods: Literature synthesis and document review.

Centers for Medicare and Medicaid Services. Post Acute Care Reform Plan. Published online September 28, 2006. https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/SNFPPS/post_acute_care_reform_plan

Subtopic(s): Incentivizing Specialists to Drive Down Costs within PB-TCOC Models

Type of Source: Report

Objective: To provide an overview of CMS' Post Acute Care Reform Plan for Medicare.

Main Findings: The report identified key features guiding the Reform Plan, which aim to facilitate patient-centered care. These features included: increasing beneficiary control over post-acute care (PAC) services; delivering PAC in the most appropriate care setting; establishing process and outcomes measures to evaluate PAC delivery; and, enhancing care coordination. The report also noted that the Reform Plan mandated a PAC payment reform demonstration.

Strengths/Limitations: The report was published in 2006 and therefore may not accurately represent more recent modifications to PAC delivery and payment practices.

Generalizability to Medicare Population: Strong; the post-acute reform plan directly pertains to Medicare.

Methods: N/A

Clarke RMA, Jeffrey J, Grossman M, Strouse T, Gitlin M, Skootsky SA. Delivering On Accountable Care: Lessons From A Behavioral Health Program To Improve Access And Outcomes. *Health Affairs*. 2016;35(8):1487-1493. doi:10.1377/hlthaff.2015.1263

Subtopic(s): Current State of Specialist Integration in Primary Care

Type of Source: Journal article

Objective: To outline the development and evaluate an evidence-based, all-payer collaborative care behavioral health program: the Behavioral Health Associates (BHA), which is part of the UCLA integrated health center.

Main Findings: Thirty-two months after BHA's launch, the program treated nearly 13 percent of the approximately 44,000 patients with behavioral health conditions in the patient population, more than tripling the number of patients receiving care to address their behavioral health needs. Additionally, the program reduced emergency department (ED) visits by 13 percent and an approximately 400,000-dollar reduction in total cost of care for UCLA Health's accountable care organization (ACO) population.

Strengths/Limitations: This BHA model was delivered within a single academic medical center; the findings may not be generalizable to other systems. Additionally, the evaluation did not include a control group therefore limiting the internal validity of the findings.

Generalizability to Medicare Population: Moderate; Although the BHA program served multiple payers, 21 percent of BHA patients were Medicare beneficiaries.

Methods: This study calculated caseload by provider type, wait time by behavioral health service, and length of stay by the percentage of referred patients reaching certain thresholds for number of behavioral health program visits. This study also tracked ED visits.

Conway SJ, Himmelrich S, Feeser SA, et al. Strategic Review Process for an Accountable Care Organization and Emerging Accountable Care Best Practices. *Population Health Management*. 2018;21(5):357-365. doi:10.1089/pop.2017.0149

Subtopic(s): Current State of Specialist Integration in Primary Care; Incentivizing Specialists to Drive Down Costs within PB-TCOC Models

Type of Source: Journal article

Objective: To review and assess Johns Hopkins Medicine Alliance for Patients' (JMAP) current strategic planning process and implementation.

Main Findings: Opportunities were grouped into three broad categories: optimizing care coordination for at-risk patients, PAC, and specialty care integration. Many proposed initiatives sought to align their efforts with state-based initiatives or outlined best practices, such as Maryland's state-based initiative for home-based primary care. Other initiatives proposed exploring additional opportunities, such as the potential for high-cost drug substitutions to lower Part B drug expenditures.

Strengths/Limitations: This study does not offer a robust methodology through which the review occurred.

Generalizability to Medicare Population: Strong; this article focuses on the review of a Medicare ACO.

Methods: This review was based on JMAP 2016 performance data relative to ACO best practices in each area.

Cummings JR, Wen H, Ko M, Druss BG. Geography and the Medicaid Mental Health Care Infrastructure: Implications for Health Care Reform. *JAMA Psychiatry*. 2013;70(10):1084-1090.

doi:10.1001/jamapsychiatry.2013.377

Subtopic(s): Current State of Specialist Integration in Primary Care

Type of Source: Journal article

Objective: To examine the availability of outpatient mental health facilities that accept Medicaid across US counties, and whether some counties are more likely to lack this infrastructure.

Main Findings: More than one-third of counties do not have any outpatient mental health facilities that accept Medicaid. Communities with a larger percentage of residents who are Black, Hispanic, or living in a rural area are more likely to lack these facilities. Many counties may face constraints on the mental health safety-net system as Medicaid is expanded.

Strengths/Limitations: Due to the cross-sectional nature of study data, causality cannot be established. Additionally, this study was not able to incorporate facility capacity in our regression models as a high percentage of facilities are missing data on the related survey measure. Also, the data measuring Medicaid enrollees per county was not available for the same year in which the dependent variable was assessed.

Generalizability to Medicare Population: Weak; this study focuses on the Medicaid population.

Methods: Logistic regression analysis.

Cyr ME, Etchin AG, Guthrie BJ, Benneyan JC. Access to Specialty Healthcare in Urban versus Rural US Populations: a Systematic Literature Review. *BMC Health Services Research*. 2019;19(1):974.

doi:10.1186/s12913-019-4815-5

Subtopic(s): Key Highlights; Current State of Specialist Integration in Primary Care

Type of Source: Journal article

Objective: To summarize recent literature on access to specialty care in urban versus rural settings.

Main Findings: The review found that many studies identified system-centric dimensions as barriers to access across both urban and rural geographies, such as approachability, acceptability, and affordability. Many barriers to access were common to both urban and rural geographies. This study also identified four new barriers to specialty care: government and insurance policy, health organization and operations influence, stigma, and primary care and specialist influence.

Strengths/Limitations: The systematic literature review was limited to articles in five electronic databases published within a limited time frame.

Generalizability to Medicare Population: Moderate; while this study did not specifically focus on Medicare populations, findings are relevant to Medicare populations.

Methods: Systematic literature review.

Dafny LS, Lee TH. The Good Merger. *New England Journal of Medicine*. 2015;372(22):2077-2079.
doi:10.1056/NEJMp1502338

Subtopic(s): Unintended Consequences from Provider Consolidation within PB-TCOC Models

Type of Source: Opinion/editorial

Objective: To describe what constitutes a “good” merger

Main Findings: Often mergers occur with aims of reducing costs for patients and improving care, however that is not necessarily what happens. These “cognizable efficiencies” are often not achieved in health care mergers. Specifying plans for these efficiencies are important to achieving goals and creating “good” mergers.

Strengths/Limitations: N/A

Generalizability to Medicare Population: Moderate; while this study does not specifically focus on Medicare populations, the findings are relevant to Medicare populations.

Methods: N/A

Darves-Bornoz AL, Resnick MJ. The evolution of financial incentives in the U.S. health care system. *Urologic Oncology: Seminars and Original Investigations*. 2017;35(1):1-4.
doi:10.1016/j.urolonc.2016.09.011

Subtopic(s): Incentivizing Specialists to Drive Down Costs within PB-TCOC Models; Enhancing Performance Metrics

Type of Source: Op-ed

Objective: To summarize the context of U.S. health care reform and offer insights into innovations in alternative payments, with considerations for urologic oncology.

Main Findings: Historically, ACOs have focused on primary care, without much consideration for urologists. However, supply-side innovations, like bundled payments, may increase the number of urologists participating in ACOs. The paper also notes the likelihood of the design and implementation of a bundled payment model for urologic care in the future.

Strengths/Limitations: N/A

Generalizability to Medicare Population: Moderate; while this commentary does not specifically focus on Medicare beneficiaries, it does review findings related to specific Medicare ACO models.

Methods: N/A

Department of Health and Human Services: Office of Inspector General. Medicare Shared Savings Program Accountable Care Organizations Have Shown Potential for Reducing Spending and Improving Quality. OEI-02-15-00450; 08-17. :43. <https://oig.hhs.gov/oei/reports/oei-02-15-00450.pdf>

Subtopic(s): Enhancing Performance Metrics

Type of Source: Report

Objective: To describe ACO spending, quality, and utilization in the first 3 years of the Medicare Shared Savings Program (MSSP) and compare spending and utilization between high-performing ACOs to other shared savings program ACOs and the national average for FFS providers.

Main Findings: In the first 3 years of the MSSP, a total of 428 ACOs served 9.7 million beneficiaries. Most ACOs were able to reduce Medicare spending over the first 3 years of the program. The net reduction in spending across all ACOs was about \$1 billion. The majority of

ACOs also improved the quality of care overall. The study also observed a positive association between time spent in the Model and increased reductions in spending.

Strengths/Limitations: This study used a narrow definition of high-performing ACOs and measured changes in spending relative to each ACO's benchmark, which may not accurately reflect what Medicare would have paid in the absence of the Shared Savings Program.

Additionally, this study did not risk adjust data on spending and utilization based on beneficiaries' health status.

Generalizability to Medicare Population: Strong; study focused on MSSP.

Methods: This study used various existing CMS benchmarks and quality measures to assess spending, utilization, and quality outcomes for MSSP ACOs. For each domain, they calculated improvement over time, average and/or median scores, and the proportion of ACOs with a high score (overall score of 90 or above). The study also compared these MSSP ACOs to Medicare FFS providers.

Doherty W, McDaniel S, Baird M. Five Levels of Primary Care/Behavioral Healthcare Collaboration. *Behavioral healthcare tomorrow*. 1996;5:25-27.

Subtopic(s): Current State of Specialist Integration in Primary Care

Type of Source: White paper

Objective: To design a model that delineates the degree of collaboration achievable in different kinds of health care settings.

Main Findings: There are five levels of collaboration: minimal collaboration, basic collaboration at a distance, basic collaboration on-site, close collaboration in a partly integrated system, and close collaboration in a fully integrated system. Minimal collaboration is seen in settings where there may be active referral linkages across facilities and cases with moderate biopsychosocial interplay, whereas close collaboration in a fully integrated system is seen mostly at clinical settings, such as hospice centers, and cases that are the most difficult. This study suggests that this model be used by organizations to evaluate their current structures and procedures considering their goals for collaboration.

Strengths/Limitations: This study does not include a methodology.

Generalizability to Medicare Population: Moderate; while findings are not specific to Medicare populations, they are relevant to Medicare populations.

Methods: N/A

Dorn, S. 4 Ways to Improve Specialty Health Care in the U.S. *Harvard Business Review*. June 14, 2022. <https://hbr.org/2022/06/4-ways-to-improve-specialty-health-care-in-the-u-s>

Subtopic(s): Research Approach

Type of Source: Op-ed

Objective: To highlight specialists' core activities and ways to improve specialty health care in the US.

Main Findings: Specialists are problem-focused experts who care for individuals with specific health conditions. Currently, many specialists bundle care. A bundle may sometimes include unnecessary services along with necessary services, thus increasing patient costs. Therefore, unbundling specialty care could improve specialty care delivery.

Strengths/Limitations: N/A

Generalizability to Medicare Population: Moderate; while this study does not specifically focus on Medicare populations, findings are relevant to Medicare populations.

Methods: N/A

Dowd B, Li CH, Swenson T, Coulam R, Levy J. Medicare's Physician Quality Reporting System (PQRS): quality measurement and beneficiary attribution. *Medicare Medicaid Res Rev.* 2014;4(2):10.5600/mmrr.004.02.a04. Published 2014 Jun 25. doi:10.5600/mmrr.004.02.a04

Subtopic(s): Nesting Specialty Episodes Within PB-TCOC Models

Type of Source: Journal article

Objective: To understand the characteristics of PQRS reports and to understand if these systems can provide attribution to existing algorithms.

Main Findings: Of the medical professionals in the study, Physician's Assistants tend to be the group that reports the most into the PQRS. Many of the patients reported to the PQRS tend to have higher hierarchical condition category (HCC) risk scores, are older and male. They are also less likely to be non-white and dually enrolled beneficiaries. Additionally, PQRS attribution is often voluntary attribution, and as PQRS participation increased, unique attribution of beneficiaries also increased.

Strengths/Limitations: The study was conducted at a time of limited participation of the PQRS thus limiting the full scope of the PQRS.

Generalizability to Medicare Population: Strong; this research directly impacts Medicare beneficiaries.

Methods: Researchers analyzed Medicare claims data and PQRS data from California, Colorado, New Jersey, North Dakota, and Florida, and compared provider data.

Econometrica Inc. Annual Report 2015. Evaluation and Monitoring of the Bundled Payments for Care Improvement Model 1 Initiative. Centers for Medicare & Medicaid Services; 2015:119.

<https://innovation.cms.gov/files/reports/bpci-mdl1yr2annrpt.pdf>

Subtopic(s): Key Highlights; Incentivizing Specialists to Drive Down Costs within PB-TCOC Models

Type of Source: Report

Objective: To present interim findings for the first two performance years (PY1 and PY2) of the Bundled Payments for Care Improvement (BPCI) Model.

Main Findings: The evaluation found that awardees struggled to enroll and engage practitioners, which interviews and focus groups attributed to several factors, including physicians skepticism or misinformation about the model. The study did not detect any statistically significant impacts on risk-adjusted Medicare payments per episode. Additionally, the evaluation did not observe any consistent or statistically significant relationship between the model and claims-based health outcomes.

Strengths/Limitations: The evaluation only assessed the first two performance years and therefore does not account for longer term model effects.

Generalizability to Medicare Population: Strong; BPCI is a Medicare APM.

Methods: The evaluation employed a mixed-methods approach, which included awardee and practitioner interviews and focus groups as well as matched, difference-in-differences regression models using Medicare claims and administrative data.

Ems D, Murty S, Loy B, et al. Alternative Payment Models in Medical Oncology: Assessing Quality of Care Outcomes Under Partial Capitation. *Am Health Drug Benefits.* 2018;11(7):371-378.

Subtopic(s): Enhancing Specialty Participation in Team-Based Models Through Capitation

Type of Source: Journal article

Objective: To evaluate the relationship between a contractual, capitated payment model (between a primary care physician group and an oncology clinic) and the quality of care.

Main Findings: There were significant increases observed in the number of chemotherapy complications and the number of ambulance transports between pre-contract and post-contract capitated groups. However, there were no observed differences in quality of care outcome measures between the pre-contract and post-contract FFS population.

Strengths/Limitations: The study did not include controls for differences in baseline clinical risk profiles and lacked risk score data. The study also did not account for the use of radiation therapy meaning that the study could not detect increased use of chemotherapy as a means for offsetting reductions in radiation. Additionally, a large proportion of patients served by the primary care group have low income and sometimes inefficient utilization patterns; thus, findings may not be generalizable to all Medicare beneficiaries.

Generalizability to Medicare Population: Strong; the study focused on the Medicare population, however, the patients included were all insured under a Humana Medicare Advantage Health Maintenance Organization (HMO) prescription drug plan.

Methods: The study used logistic regression to model all-cause hospitalizations, cancer treatment-related complications, and ambulance services. They employed a linear regression model to examine inpatient admissions and ambulance services.

Erfani P, Figueroa JF, Lam MB. Reforms to the Radiation Oncology Model: Prioritizing Health Equity. *International Journal of Radiation Oncology, Biology, Physics*. 2021;110(2):328-330. doi:10.1016/j.ijrobp.2021.01.029

Subtopic(s): Key Highlights; Current State of Specialist Integration in Primary Care

Type of Source: Editorial

Objective: To discuss approaches for improving how the Radiation Oncology Model addresses health equity.

Main Findings: The paper outlines three high-level suggestions for improving the model's ability to protect vulnerable populations and limit the increase of existing disparities. First, CMS could consider piloting the model on fewer disease sites so that CMS is better positioned to use site-specific quality metrics to capture the model's effects on different populations. Second, CMS could establish a longer runway for introducing the peer review mandate in rural settings. Third, CMS could develop more appropriate, nuanced methods for measuring care quality and determining reimbursements for providers who care for socially high-risk populations.

Strengths/Limitations: The paper offers valuable general insights on approaches for APMs to address equity, yet it does not provide detailed methodologies for operationalizing these more general suggestions. This editorial does not include a robust methodology through which it bases its solutions from.

Generalizability to Medicare Population: Strong; the model is a Medicare APM.

Methods: N/A

Esquivel A, Sittig DF, Murphy DR, Singh H. Improving the Effectiveness of Electronic Health Record-Based Referral Processes. *BMC Medical Informatics and Decision Making*. 2012;12(1):107. doi:10.1186/1472-6947-12-107

Subtopic(s): Health Information Technology and Data Analytics

Type of Source: Journal article

Objective: To present a socio-technical health information model to improve and monitor electronic referral communications in outpatient settings.

Main Findings: While EHRs have the capacity to efficiently share patient records between primary care and specialty providers, numerous challenges must be addressed. This article describes ten specific recommendations to improve and standardize the referral process,

encourage primary care physician (PCP) and specialist collaboration, and track provider communications and workflows.

Strengths/Limitations: The article assumes information technology resources and flexibility in referral and communication processes.

Generalizability to Medicare Population: Moderate; while this study does not specifically focus on Medicare populations, the findings are relevant to Medicare populations.

Methods: Literature review.

Evaluation of the Home Health Value-Based Purchasing (HHVBP) Model Fifth Annual Report. 2022.

<https://innovation.cms.gov/data-and-reports/2022/hhvpb-fifthann-rpt>

Subtopic(s): Incentivizing Specialists to Drive Down Costs within PB-TCOC Models

Type of Source: Report

Objective: To evaluate the HHVBP Model to better understand how the shift in financial incentives may influence agency behavior and, in turn, aspects of home health care.

Main Findings: This study found an overall reduction in Medicare spending for Part A and Part B services, modest declines in some but not all aspects of utilization, and modest improvements in most quality measures for the fifth year of the HHVBP Model.

Strengths/Limitations: The study employed a difference-in-differences design allows the study to make more robust causal claims about program efficacy. One limitation to study findings, however, is the potential variation in how Medicaid status is coded across states.

Generalizability to Medicare Population: Strong; this is an evaluation of a Medicare value-based purchasing model.

Methods: This study uses a mixed-methods evaluation approach, including a difference-in-difference framework and interviews with agencies in HHVBP states.

Everett AS, Reese J, Coughlin J, et al. Behavioral Health Interventions in the Johns Hopkins Community Health Partnership: Integrated Care as a Component of Health Systems Transformation. *Int Rev Psychiatry*. 2014;26(6):648-656. doi:10.3109/09540261.2014.979777

Subtopic(s): Current State of Specialist Integration in Primary Care

Type of Source: Journal article

Objective: To describe the design, early implementation, and lessons learned for the behavioral health components of the John Hopkins Community Health Partnership (J-CHiP) program.

Main Findings: This study noted that the J-CHiP intervention facilitated patient engagement, both intentionally and unintentionally, through EMR documentation, which allowed practitioners to access patient medical and mental health treatment history.

Strengths/Limitations: The paper does not include a methodology section outlining how they made their conclusions about the model.

Generalizability to Medicare Population: Moderate; the model pertains to government-funded health insurance programs beyond Medicare.

Methods: N/A

Folger S, O'Connell M, Quinton J, Ritter C, Waldersen B, Rawal P. Pathways for Specialty Care Coordination and Integration in Population-based Models. CMS. 2022.
<https://www.cms.gov/blog/pathways-specialty-care-coordination-and-integration-population-based-models>

Subtopic(s): Research Approach

Type of Source: Blog post

Objective: To summarize the Center for Medicare and Medicaid Innovation's (CMMI) goal to integrate specialty care and primary care in future ACO models.

Main Findings: The study identified four themes from stakeholder interviews that could help facilitate specialty care integration in APM designs: 1) provide data on specialist performance and enhance data sharing across practices; 2) increase the prevalence of episode-based payment models; 3) promote the recognition of the value of specialty care assuming primary responsibility for special populations and beneficiaries with specific conditions; and, 4) include specific benefits for beneficiaries with complex conditions.

Strengths/Limitations: The study included 40 interviews, which, although a substantial sample for qualitative interviews, may not provide an unbiased, representative picture of stakeholder experiences.

Generalizability to Medicare Population: Strong; the blog post focuses on the impact of integration of specialty care with primary care within the context of Medicare APMs.

Methods: Semi-structured interviews with stakeholders

Ford-Gilboe M, Wathen CN, Varcoe C, et al. How Equity-Oriented Health Care Affects Health: Key Mechanisms and Implications for Primary Health Care Practice and Policy. *The Milbank Quarterly*. 2018;96(4):635-671. doi:10.1111/1468-0009.12349

Subtopic(s): Incentivizing Specialists to Drive Down Costs within PB-TCOC Models

Type of Source: Journal article

Objective: To assess the relationship between equity-oriented health care (EOHC) and patient health outcomes.

Main Findings: Higher levels of EOHC were associated with greater patient comfort and increased confidence to prevent and manage health conditions. This, in turn, improved health outcomes such as depressive symptoms, PTSD symptoms, chronic pain, and quality of life. This study also found that financial strain and experiences of discrimination were associated with negative effects on all health outcomes measured by the study.

Strengths/Limitations: The EOHC scale was designed for this study. While it is a promising measure, it requires further testing in varied settings and populations. Further, because the EOHC scale is based on patient self-reporting, it captures patient perspectives of clinical encounters with staff, yet it may not necessarily examine the organizational context in which care was provided.

Generalizability to Medicare Population: Moderate; while this study does not focus on the Medicare population, the findings are relevant to Medicare beneficiaries.

Methods: This study conducted a longitudinal analysis of patients in EOHC participants through structured interviews and descriptive statistics.

Forrest CB. A Typology of Specialists' Clinical Roles. *Arch Intern Med*. 2009 Jun 8;169(11):1062-8. doi: 10.1001/archinternmed.2009.114.

Subtopic(s): Current State of Specialist Integration in Primary Care

Type of Source: Journal article

Objective: To describe the typology of specialist roles and propose innovations at the primary-specialty interface to integrate primary and specialty care.

Main Findings: For a given patient, a specialist's role falls into one of the following categories: cognitive consultant, procedural consultant, comanager with shared care, and PCP. Innovations at the primary-specialty care interface include strengthening primary care, decision support and e-Referral, and telemedicine. However, barriers such as the existing FFS payment system limit progress.

Strengths/Limitations: No methods are outlined in this article.

Generalizability to Medicare Population: Moderate; while this article does not specifically focus on Medicare populations, findings are relevant to Medicare populations.

Methods: N/A

Fortney JC, Pyne JM, Mouden SB, et al. Practice-Based Versus Telemedicine-Based Collaborative Care for Depression in Rural Federally Qualified Health Centers: a Pragmatic Randomized Comparative Effectiveness Trial. *AJP*. 2013;170(4):414-425. doi:10.1176/appi.ajp.2012.12050696

Subtopic(s): Key Highlights; Current State of Specialist Integration in Primary Care

Type of Source: Journal article

Objective: To compare the outcomes of patients assigned to practice-based and telemedicine-based collaborative care.

Main Findings: Patients in the telemedicine-based group experienced greater reductions in depression severity over time. Improvements appeared to be attributable to patients experiencing higher fidelity to the collaborative care evidence base in the telemedicine-based group.

Strengths/Limitations: The study sample analyzed were predominantly rural, unemployed, and uninsured, limiting the generalizability of study results. Additionally, the training and experience of providers between the two study groups were not identical.

Generalizability to Medicare Population: Moderate; while this study does not specifically focus on Medicare populations, findings are relevant to Medicare populations.

Methods: Randomized pragmatic comparative effectiveness trial.

Free C, Phillips G, Felix L, Galli L, Patel V, Edwards P. The Effectiveness of M-health Technologies for Improving Health and Health Services: a Systematic Review Protocol. *BMC Research Notes*. 2010;3(1):250. doi:10.1186/1756-0500-3-250

Subtopic(s): Health Information Technology and Data Analytics

Type of Source: Journal article

Objective: To summarize the evidence for mobile technology interventions as a tool for improving health and health service outcomes.

Main Findings: Mobile computing and communication technologies are found to be effective in improving a broad range of health and health services outcomes.

Strengths/Limitations: There is a wide range of outcomes measured across the small existing number of mobile technology intervention trials, therefore the study has a limited scope.

Generalizability to Medicare Population: Moderate; while this study does not specifically focus on Medicare populations, the findings are relevant to Medicare populations.

Methods: A review of M-Health interventions.

Free C, Phillips G, Watson L, et al. The Effectiveness of Mobile-Health Technologies to Improve Health Care Service Delivery Processes: A Systematic Review and Meta-Analysis. *PLOS Medicine*. 2013;10(1):e1001363. doi:10.1371/journal.pmed.1001363

Subtopic(s): Health Information Technology and Data Analytics

Type of Source: Journal article

Objective: To better understand the relationship between mobile technology-based control trial interventions and health care delivery processes.

Main Findings: The review evaluated 42 studies. Interventions using mobile technology-based photos were associated with decreased accuracy of diagnose. There was no observed difference between text message appointment reminders and other reminder types.

Strengths/Limitations: According to the review, none of the trials reviewed had a low risk of bias. Additionally, the studies included in the review were all carried out prior to 2010 and therefore may not reflect the most up to date research with respect to mobile technology-based health interventions.

Generalizability to Medicare Population: Moderate; while this study does not specifically focus on Medicare populations, the findings may be relevant to Medicare populations.

Methods: A systematic review and meta-analysis of controlled trials of mobile technology-based health interventions.

FSG. Breaking the Barriers to Specialty Care: Practical Ideas to Improve Health Equity and Reduce Cost. June 2016. https://www.fsg.org/wp-content/uploads/2021/08/Equity-in-Specialty-Series-Brief-2_FSG-Increasing-Specialty-Care-Availability.pdf

Subtopic(s): Research Approach

Type of Source: Report

Objective: To illustrate how the health system can increase timely access to high-quality specialty care services for low-income and rural populations.

Main Findings: Low-income, uninsured, and rural patients face disproportionate barriers to accessing specialty care, including significant wait time due to reliable access to a phone to make appointments, transportation time and cost, complex intake forms and insurance requirements, and fear and stress of an unfamiliar setting. The report outlined three emerging solutions for increasing access to and availability of specialty care: PCP provision of specialty care, telemedicine, and coordinated specialist networks.

Strengths/Limitations: This report did not include a robust methodology for its literature review.

Generalizability to Medicare Population: Moderate; while this study did not specifically focus on Medicare populations, findings are relevant to Medicare populations.

Methods: Literature review.

Ganguli I, Lupo C, Mainor AJ, Orav EJ, Blanchfield BB, Lewis VA, Colla CH. Association between Specialist Compensation and Accountable Care Organization Performance. *Health Serv Res*. 2020; 55(5): 722–728. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7518824/>

Subtopic(s): Enhancing Performance Metrics

Type of Source: Journal article

Objective: To evaluate the relationship between MSSP ACOs using cost reduction measures in specialist compensation and specialist performance.

Main Findings: ACOs using cost reduction in specialist compensation had similar savings per beneficiary year, outpatient spending per beneficiary year, and specialist visits per 1000

beneficiary years. Additionally, ACOs using cost reduction in specialist compensation were more likely to be physician-led and serve higher-risk patients.

Strengths/Limitations: This study used a cross-sectional design, which limited its ability to assert causality. Additionally, small sample sizes for the early years of the study resulted in lower statistical power and therefore limited the ability to detect differences in study outcomes.

Generalizability to Medicare Population: Strong; the study focused on Medicare ACOs.

Methods: The study administered the National Survey of ACOs and used t-tests and chi-squared tests to compare ACOs that used cost reduction measures to those that did not. They then employed a panel linear regression models.

Gaynor M, Ho K, Town RJ. The Industrial Organization of Health-Care Markets. *Journal of Economic Literature*. 2015;53(2):235-284. <https://www.aeaweb.org/articles?id=10.1257/jel.53.2.235>

Subtopic(s): Unintended Consequences from Provider Consolidation within PB-TCOC Models

Type of Source: Journal article

Objective: To outline how health care markets are organized and interact with one another by reviewing current literature in the field.

Main Findings: The study is a literature review of the current state of the Health Care markets within the United States. They first discuss provider and insurer market structure. Next, they explore quality determination, price and network determination, health insurance premiums, plan choice and economics of physician treatment and referral decisions. Concluding that there are many more opportunities for research in this field, they recommend that researchers build multistage models, gain a deeper understanding of asymmetric information, and obtain data for consumer/patient choice sets.

Strengths/Limitations: This review provides a very comprehensive and in-depth view of the current health markets.

Generalizability to Medicare Population: Strong; the review explores the Affordable Care Act (ACA), the role Medicare plays in the health care market and the different Medicare plans available.

Methods: N/A

Gaynor M, Town R. *The Impact of Hospital Consolidation —Update*. Robert Wood Johnson Foundation; 2012. Accessed November 21, 2022. <https://www.rwjf.org/en/library/research/2012/06/the-impact-of-hospital-consolidation.html>

Subtopic(s): Unintended Consequences from Provider Consolidation within PB-TCOC Models

Type of Source: Report

Objective: To review subsequent findings to the 2006 Synthesis Project on the impact of hospital mergers on prices, costs, and quality of care.

Main Findings: Generally, hospital consolidation results in price increases. When a merger happens in already concentrated markets the price increase often exceeds 20 percent. In both administered price systems and market determined pricing, hospital competition improves quality of care. Neither improved quality or reduced costs have occurred as a result of physician-hospital consolidation.

Strengths/Limitations: Additional findings detailed in the update reinforce the original findings of the report; hospital competition leads to lower prices.

Generalizability to Medicare Population: Moderate; while this study does not specifically focus on Medicare populations, the findings are relevant to Medicare populations.

Methods: A review and evaluation of relevant literature released since the original 2006 report.

Glover M, Khalilzadeh O, Choy G, Prabhakar AM, Pandharipande PV, Gazelle GS. Hospital Evaluations by Social Media: A Comparative Analysis of Facebook Ratings among Performance Outliers. *J Gen Intern Med*. 2015;30(10):1440-1446. doi:10.1007/s11606-015-3236-3

Subtopic(s): Enhancing Performance Metrics

Type of Source: Journal article

Objective: To identify how hospitals use social media and to test the association between hospitals' Facebook ratings and Hospital Compare metrics.

Main Findings: Eighty-eight percent of hospitals in the study had a Facebook page. More hospitals with low readmission rates had a Facebook page than those with high readmission rates (80.6 percent vs 69 percent, respectively). A one-star increase in Facebook rating was associated with a 5.1-fold greater likelihood that the hospital was one with low readmission rates versus high readmission rates.

Strengths/Limitations: There may be bias in Facebook ratings.

Generalizability to Medicare Population: Weak; this study does not include Medicare populations in the analysis.

Methods: Descriptive statistics, t-tests and multivariate logistic regressions of Facebook ratings and CMS Hospital Compare readmission rates.

Government Accountability Office. Information on the Transition to Alternative Payment Models by Providers in Rural, Health Professional Shortage, or Underserved Areas. GAO-22-104618. 2021.

<https://www.gao.gov/assets/720/717649.pdf>

Subtopic(s): Current State of Specialist Integration in Primary Care

Type of Source: Report

Objective: To describe: 1) participation in Advanced APMs by providers in rural or shortage areas; 2) challenges that providers in rural or underserved areas face when transitioning to APMs, including Advanced APMs; and 3) actions CMS has taken to help these providers transition to APMs.

Main Findings: There were fewer advanced APM participants from rural or health professional shortage areas who participated in APMs each year from 2017 through 2019 compared to providers not located in these areas. Providers in rural or underserved areas face financial, technological, and other challenges when transitioning to APMs, including Advanced APMs.

Strengths/Limitations: The most recent data analyzed were from 2019. However, this report does not explain the specific quantitative analysis conducted nor the methodology of this analysis.

Generalizability to Medicare Population: Strong; Medicare beneficiaries are included in Advanced APMs.

Methods: Mixed-methods analysis, including interviews with CMS officials and representatives from 18 stakeholder organizations

Hawken SR, Ryan AM, Miller DC. Surgery and Medicare Shared Savings Program Accountable Care Organizations (ACOs). *JAMA Surg*. 2016;151(1):5-6. doi:10.1001/jamasurg.2015.2772

Subtopic(s): Incentivizing Specialists to Drive Down Costs within Population-Based TCOC Models; Enhancing Performance Metrics

Type of Source: Journal article

Objective: To explore the composition of physician participation in MSSP ACOs.

Main Findings: At present, participation by specialists in Medicare ACO programs is highly variable. For surgeons who are considering ACO participation, referral opportunities represent

one potential incentive to join such programs. Benefits to joining ACOs for specialists include coordinated workups and a potential increase in the proportion of appropriate referrals.

Strengths/Limitations: The study uses data from 2015 and therefore does not accurately reflect the recent uptick (albeit modest) in specialist participation in APMs.

Generalizability to Medicare Population: Strong; this article focuses on MSSP.

Methods: The study used 2015 data from the ACO public use file to compare the number of specialists participating in the first 220 MSSP ACOs.

Hawkins JB, Brownstein JS, Tuli G, et al. Measuring Patient-Perceived Quality of Care in US Hospitals Using Twitter. *BMJ Qual Saf.* 2016;25(6):404-413. doi:10.1136/bmjqs-2015-004309

Subtopic(s): Enhancing Performance Metrics

Type of Source: Journal article

Objective: To assess hospitals' use of Twitter as well as the association between patient experience posts and hospital characteristics.

Main Findings: Half of the US hospitals have a presence on Twitter, and sentiment toward hospitals was, on average, positive. Hospitals with more patient experience posts on Twitter were more likely to be below the national median of Medicare patients, above the national median for nurse/patient ratio, and be a nonprofit hospital. There was a weak negative correlation between patients' sentiment score (obtained via Twitter post) and the hospital's 30-day readmission rates.

Strengths/Limitations: Both the hospital questionnaire survey and the Twitter posts may be subject to age and care experience biases.

Generalizability to Medicare Population: Weak; the percentage of Medicare patients cared for by the hospital is included in the statistical analyses; however, the study does not analyze the Medicare population specifically.

Methods: Descriptive statistics, t-tests, Pearson correlation, and multivariate regression on Twitter posts scaled using a sentiment calculation, hospital surveys and HCAHPS data.

Heeringa J, Mutti A, Furukawa MF, Lechner A, Maurer KA, Rich E. Horizontal and Vertical Integration of Health Care Providers: A Framework for Understanding Various Provider Organizational Structures. *Int J Integr Care.* 2020; 20(1): 2. doi:10.5334/ijic.4635

Subtopic(s): Enhancing Performance Metrics

Type of Source: Journal article

Objective: To identify and describe core elements of organizational structures for successful integration of care across providers in the U.S. health care system.

Main Findings: The study identified two main organizational structures to integrating care across providers: 1) horizontal and 2) vertical integration. Horizontal integration refers to when organizations acquire or integrate with other organizations that provide the same or similar services, and may be used to achieve economies of scale or gain market share. according to the study, this includes single specialty group practices, independent practice associations, multispecialty group practices, virtual physician networks, and multihospital systems. Vertical integration refers to when an organization acquires or integrates with other organizations offering different levels of care, services, or functions, and may allow organizations to work cooperatively while being governed independently. Vertically integrated organizational structures include physician-hospital organizations, management services organizations, clinically integrated networks, foundation models, and integrated delivery systems.

Strengths/Limitations: The study reviewed literature up until 2016 and therefore may not have included organizational structures implemented more recently.

Generalizability to Medicare Population: Moderate; although the study considered the organizational structure of U.S. health care systems across provider/payer type, the literature review did include Medicare-focused studies.

Methods: Literature review.

Hefele JG, Li Y, Campbell L, Barooah A, Wang J. Nursing Home Facebook Reviews: Who Has Them, and How Do They Relate to Other Measures of Quality and Experience? *BMJ Qual Saf.* 2018;27(2):130-139. doi:10.1136/bmjqs-2017-006492

Subtopic(s): Enhancing Performance Metrics

Type of Source: Journal article

Objective: Test the association between Facebook ratings of nursing home facilities and other measures of patient satisfaction.

Main Findings: Nursing homes with higher levels of certified nursing assistants and those with 81-119 beds were more likely to have a Facebook page, while for-profit nursing homes and those that are part of a chain were less likely to have one. The association between Facebook ratings and other measures of patient satisfaction was not statistically significant.

Strengths/Limitations: The study only evaluated nursing homes in Maryland and Minnesota, limiting the results' generalizability to other states and health care settings.

Generalizability to Medicare Population: Weak; the study included the percentage of Medicare residents as a variable in the analysis, but did not address this population.

Methods: Logistic regression and Pearson correlation of Facebook user ratings of nursing homes in Maryland and Minnesota and CMS 5-star nursing home report card ratings.

Hirshon JM, Risko N, Calvello EJ, et al. Health Systems and Services: the Role of Acute Care. *Bull World Health Organ.* 2013;91(5):386-388. doi:10.2471/BLT.12.112664

Subtopic(s): Research Approach

Type of Source: Journal article

Objective: To define acute care and propose key steps to further the development of acute care.

Main Findings: To date, acute care has been poorly defined. This study defines acute care as health system components, or care delivery platforms used to treat sudden, often unexpected, urgent or emergent episodes of injury and illness that can lead to death or disability without rapid intervention. Key steps to improving acute care include creating an acute care service delivery model for low- and middle-income countries, improving coordination between deliverers of acute care services, developing research methods to quantify the burden of acute care diseases and injuries, and holding national and international discussions to encourage better integration of acute care within local and national health systems.

Strengths/Limitations: The article describes a very broad approach to acute care and, therefore, next steps identified should be tailored to individual health systems and geographic regions.

Generalizability to Medicare Population: Moderate; while this study does not focus on Medicare populations, the findings are relevant to Medicare populations.

Methods: Literature review.

Hostetter M, Klein S. The Perils and Payoffs of Alternative Payment Models for Community Health Centers. The Commonwealth Fund. 2022. doi:10.26099/2ncb-6738
<https://www.commonwealthfund.org/publications/2022/jan/perils-and-payoffs-alternate-payment-models-community-health-centers>

Subtopic(s): Current State of Specialist Integration in Primary Care

Type of Source: Report

Objective: To explain the federally qualified health center's (FQHC's) level of engagement with APMs by profiling FQHCs that are currently engaged with APMs and describing lessons learned.

Main Findings: Adoption of APMs, including APMs with downside risk, among FQHCs has increased. These APMs have allowed FQHCs to invest in preventive care and to the holistic care of patients in and outside of the hospital. Overall, to successfully participate in APMs, FQHCs need reliable partners, the ability to collaborate with other health care providers, and payment models that cover all patients.

Strengths/Limitations: The study profiles several FQHCs, which provides detailed information about the successes and challenges of these FQHCs with respect to APMs; however, these FQHCs may not be representative of all FQHCs.

Generalizability to Medicare Population: Moderate; with this article is not specifically about Medicare beneficiaries, findings are relevant to Medicare beneficiaries.

Methods: N/A

Huckfeldt PJ, Chan C, Hirshman S, et al. Specialty Payment Model Opportunities and Assessment: Oncology Model Design Report. *Rand Health Q.* 2015;5(1):11. Published 2015 Jul 15.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5158244/>

Subtopic(s): Nesting Specialty Episodes within PB-TCOC Models

Type of Source: Journal article

Objective: To describe the design of a payment model for specialty oncology services and related research for possible testing by CMMI and CMS.

Main Findings: CMS moved forward in developing an episode-based oncology model designed for testing in the Medicare FFS. The formative simulations reported in the study observed a wide variation in time between primary cancer diagnosis and the initiation of chemotherapy (one day to seven years with a median of about two and half months). The analyses also found substantial variation in total monthly payments as a function of cancer type with the highest spending for lymphoma (about \$10,000).

Strengths/Limitations: The study used claims data from 2009 and 2010, and therefore may not represent the current costs associated with chemotherapy.

Generalizability to Medicare Population: Strong; this is a Medicare APM for beneficiaries receiving chemotherapy treatment.

Methods: A study of Medicare beneficiaries receiving chemotherapy, with the primary study sample being drawn from a 100-percent sample of national Medicare FFS claims files.

Hussey PS, Sorbero ME, Mehrotra A, Liu H, Damberg CL. Episode-Based Performance Measurement and Payment: Making it a Reality. *Health Aff (Millwood).* 2009;28(5):1406-1417.
doi:10.1377/hlthaff.28.5.1406

Subtopic(s): Nesting Specialty Episodes within PB-TCOC Models

Type of Source: Journal article

Objective: To identify key issues for consideration when defining episodes and determining which provider is accountable for an episode.

Main Findings: Episode-based approaches for payment and performance measurement may better serve patient needs through the creation of a more coordinated and integrated approach to delivery.

Strengths/Limitations: Physicians and other stakeholders have not yet tested the validity of attribution approaches outlined in this article.

Generalizability to Medicare Population: Strong; the analysis focuses on Medicare.

Methods: Symmetry Episode Treatment Groups (ETGs) and the Thomson Medical Episode Groups (MEGs) were used to construct episodes of care.

Hutton D, Newman-Casey PA, Tavag M, Zacks D, Stein J. Switching to Less Expensive Blindness Drug Could Save Medicare Part B \$18 Billion Over a Ten-Year Period. *Health Aff (Millwood)*. 2014;33(6):931-939. doi:10.1377/hlthaff.2013.0832

Subtopic(s): Incentivizing Specialists to Drive Down Costs within PB-TCOC Models

Type of Source: Journal article

Objective: To assess the effect of prescribing a lower cost drug for diabetic macular edema and macular degeneration on patient outcomes and Medicare Part B spending.

Main Findings: The study demonstrated that if all patients were treated with the less-expensive bevacizumab drug instead of the current usage patterns of higher-cost drugs being administered, Medicare Part B, patients and the health care system would save \$18 billion, \$4.6 billion, and \$29 billion respectively. Additionally, according to the study, the usage of bevacizumab would not substantially affect patient outcomes.

Strengths/Limitations: This study conducted a sensitivity analysis, improving the reliability of results. However, the model employed in the study did not include beneficiaries with simultaneous clinically significant diabetic macular edema and neovascular age-related macular degeneration.

Generalizability to Medicare Population: Strong; this study focused its analysis on Medicare Part B spending.

Methods: This study created Markov models to predict overall cost and quality of life years.

Institute of Medicine 2015. Dying in America: Improving Quality and Honoring Individual Preferences Near the End of Life. Washington, DC: The National Academies Press. <https://doi.org/10.17226/18748>.

Subtopic(s): Incentivizing Specialists to Drive Down Costs within PB-TCOC Models

Type of Source: Report

Objective: To assess the state of palliative care in the US.

Main Findings: The report argues that government health insurers and care delivery programs as well as private health insurers should cover the provision of comprehensive care for individuals with advanced serious illness who are nearing the end of life. The report also suggests that professional societies and other organizations establishing quality standards should develop standards for clinician-patient communication and advance care planning that are measurable, actionable, and evidence-based. Lastly, the report maintains that educational institutions, credentialing bodies, accrediting boards, state regulatory agencies, and health care delivery organizations should establish the appropriate training, certification and/or licensure requirements to strengthen palliative care knowledge and skills.

Strengths/Limitations: This report was open to public comment and stakeholder perspective on the study charge. However, it is not clear what analysis techniques were applied to produce qualitative findings.

Generalizability to Medicare Population: Moderate; although this report discussed palliative care for patients of all ages, many of the patient populations addressed in the report were covered by Medicare.

Methods: Literature review.

Japinga M, Jayakumar P, de Brantes F, Bozic K, Saunders C, McClellan M. Strengthening Specialist Participation in Comprehensive Care through Condition-Based Payment Reforms. Duke Margolis Center for Health Policy; 2022:19. Accessed January 12, 2023.

<https://healthpolicy.duke.edu/sites/default/files/2022-11/Strengthening%20Specialist%20Participation%20in%20Comprehensive%20Care%20through%20Condition-Based%20Payment%20Reforms.pdf>

Subtopic(s): Nesting Specialist Episodes within PB-TCOC Models

Type of Source: Report

Objective: To provide recommendations for strengthening specialist participation in comprehensive care through condition-based payment reforms.

Main Findings: The report highlights various steps that can be taken to support 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 levels of readiness to implement condition-based payment reforms and CMS should therefore accommodate providers based on their particular degree of readiness.

Strengths/Limitations: The report does not provide a methodology section detailing their analytic approach.

Generalizability to Medicare Population: Strong; the report focuses on Medicare.

Methods: Economic analyses.

Jurdi ZR, Crosby JFJ, Harris JEJ, Harvey JB. A Closer Examination of the Patient Experience in the Ambulatory Space: a Retrospective Qualitative Comparison of Primary Care With Specialty Care Experiences. The Journal of Ambulatory Care Management. 2020;43(1):89.

doi:10.1097/JAC.0000000000000310

Subtopic(s): Enhancing Performance Metrics

Type of Source: Journal article

Objective: To understand what aspects patients associate with quality care across different practices.

Main Findings: In primary care, patients indicated having the “provider taking time with me,” having the “provider listening to me,” appointment slot lengths and patient panel sizes were important to patients. In specialty care, patients indicated clear and timely communication of available care or treatment options and the care team’s clinical knowledge were important. Both primary and specialty care patients appreciated a patient-centered provider and care team as well as access to and accurate coordination of care.

Strengths/Limitations: There may be reporting bias with patients that submitted survey responses. Patient satisfaction could vary within specialties, instead of looking at specialty care writ large.

Generalizability to Medicare Population: Moderate; while this study does not specifically focus on Medicare populations, the findings are relevant to Medicare populations.

Methods: This study uses data from the Consumer Assessment of Healthcare Providers and Systems survey. The open-ended comments were analyzed to compare the percentage of positive, negative, or neutral responses. Respondents’ likelihood of recommending the practice was stratified into low, median, and high-quality categories.

Kaiser Family Foundation. Section 1115 Waiver Watch: Approvals to Address Health-Related Social Needs. November 15, 2022. <https://www.kff.org/medicaid/issue-brief/section-1115-waiver-watch-approvals-to-address-health-related-social-needs/>

Subtopic(s): Current State of Specialist Integration in Primary Care

Type of Source: Blog post

Objective: To track Section 1115 waivers proposed by states to address health-related social needs.

Main Findings: The post highlights efforts by North Carolina, Washington, and California to address HRSNs through Section 1115 waivers: the Healthy Opportunities Pilots, Accountable Communities of Health, and the CalAIM initiative, respectively. Since the implementation of these programs, eight more states have requested review of waivers or provisions intended to address similar HRSNs.

Strengths/Limitations: The evaluation of existing programs could help inform how waivers and provisions are approved in the future; however, this post does not offer information on the efficacy of the waiver programs discussed.

Generalizability to Medicare Population: Strong, the article addresses social needs for Medicaid patients.

Methods: N/A

Kaplan RS, Haas DA. How Not to Cut Health Care Costs. *Harvard Business Review*. Published online November 1, 2014. Accessed December 4, 2022. <https://hbr.org/2014/11/how-not-to-cut-health-care-costs>

Subtopic(s): Key Highlights; Incentivizing Specialists to Drive Down Costs within PB-TCOC Models

Type of Source: Blog post

Objective: To identify and examine cost-cutting mistakes frequently committed by health care provider organizations.

Main Findings: Five common mistakes made by health care provider organizations include cutting back on support staff, underinvesting in space and equipment, focusing narrowly on procurement prices, maximizing patient throughput, and failing to benchmark and standardize. The article argues that these mistakes are associated with a FFS payment system.

Strengths/Limitations: This is not a peer-reviewed article. Additionally, it is not clear how these five mistakes are identified.

Generalizability to Medicare Population: Moderate; while this article focuses on health care provider organizations in general, findings are applicable to Medicare providers' operations.

Methods: N/A

Kelley E, Lipscomb R, Valdez J, Patil N, Coustasse A. Medicare Access and CHIP Reauthorization Act and Rural Hospitals. *The Health Care Manager*. 2019;38(3):197-205. doi:10.1097/HCM.0000000000000267

Subtopic(s): Current State of Specialist Integration in Primary Care

Type of Source: Journal article

Objective: To review the Medicare Access and CHIP Reauthorization Act (MACRA) of 2015 and its implementation to assess the policy's financial impact on rural hospitals.

Main Findings: The article indicated that the majority of small and independent practices were projected to be impacted negatively by MACRA. They anticipated that MACRA would cause a significant decrease in hospital reimbursement due to the transition from volume-based payment to value-based reimbursement. However, physicians participating in eligible APMs would have the potential to earn favorable reimbursement rates and bonus payment; these

APM eligible physicians would have to take more financial risks than Merit-based Incentive Payment System (MIPS) providers.

Strengths/Limitations: This article thoroughly described literature inclusion requirements. However, long-term effects of MACRA were yet to be analyzed and therefore were not included in the study.

Generalizability to Medicare Population: Moderate; while findings are not specific to Medicare populations, there are substantial findings that examine the impact on Medicare beneficiaries.

Methods: Literature review.

King R. CMMI Aims to Bolster Primary, Specialty Care Coordination Via New Payment Models. Fierce Healthcare. Published November 7, 2022. Accessed December 4, 2022.

<https://www.fiercehealthcare.com/payers/cmmi-aims-bolster-primary-specialty-care-coordination-new-payment-models>

Subtopic(s): Enhancing Performance Metrics

Type of Source: Blog post

Objective: To describe CMS's strategic vision for implementing value-based care.

Main Findings: CMS's strategic vision includes creating greater care coordination between primary care doctors and specialists, improving health equity, and lowering drug costs for Medicare and Medicaid beneficiaries.

Strengths/Limitations: N/A

Generalizability to Medicare Population: Strong; Many of the goals and policies highlighted in this article apply to Medicare.

Methods: N/A

Korenda L, Thomas S. Integrating Specialty Care Into Accountable Care Organizations: Perspectives From The Field. Health Affairs Forefront. Accessed December 5, 2022.

<https://www.healthaffairs.org/doi/10.1377/forefront.20160119.052680/full/>

Subtopic(s): Enhancing Performance Metrics

Type of Source: Blog post

Objective: To understand the challenges and opportunities of integrating specialists by interviewing health care leaders who currently work in value-based organizations.

Main Findings: Health care leaders have developed strategies to help primary care physicians direct patients to specialists by providing practice patterns that are easier to follow. A lack of incentives for specialists has resulted in them not actively searching for ways to reduce costs or develop care models that help address these issues. The article also highlights the importance of engaging primary care physicians in the process redesign as well as using data to help implement data-driven results.

Strengths/Limitations: There are limitations with respect to the generalizability of the findings due to the qualitative nature of the study and small sample size of interviewees.

Generalizability to Medicare Population: Strong; the article addresses concerns surrounding physician participation in ACOs, which is a key question for model overlap in Medicare.

Methods: Qualitative interviews with subject matter experts and stakeholders.

Kosinski LR, Brill JV, Singh S, Singh S, Metcalf L, Dimitrova D. Financial Volatility of Inflammatory Bowel Diseases vs Other Chronic Gastrointestinal Diseases – Using the Beta Coefficient to Categorize GI Disorders. Digestive Disease Week Conference. May 2020.

Subtopic(s): N/A

Type of Source: Presentation

Objective: Indexing gastrointestinal diseases' volatility based on cost.

Main Findings: Crohn's Disease and Ulcerative Colitis have high cost and high variability in cost, whereas other gastrointestinal diseases have lower cost variability.

Strengths/Limitations: N/A

Generalizability to Medicare Population: Weak, does not discuss Medicare beneficiaries.

Methods: Quantitative analysis of Health Care Service Corporation data.

Kosinski LR, Brill JV. The Impact of Cascading Accountability on Specialty Practices: Time for a Nested Solution. *Clinical Gastroenterology and Hepatology*. Published online November 8, 2022.

doi:10.1016/j.cgh.2022.11.001

Subtopic(s): Incentivizing Specialists to Drive Down Costs within PB-TCOC Models; Enhancing Performance Metrics

Type of Source: Editorial

Objective: To describe the current state of APMs available to specialists and strategies to engage specialists to participate in APMs.

Main Findings: Currently, no specialty-focused APMs have been implemented by CMS, 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 that encompass 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

Kruse CS, Beane A. Health Information Technology Continues to Show Positive Effect on Medical Outcomes: Systematic Review. *Journal of Medical Internet Research*. 2018;20(2):e8793.

doi:10.2196/jmir.8793

Subtopic(s): Health Information Technology and Data Analytics

Type of Source: Journal article

Objective: To analyze literature for the impact of health information technology (HIT) on medical outcomes.

Main Findings: Most of the literature points to positive effects of HIT on the effectiveness of medical outcomes and HIT has the potential to improve the quality and safety of health care services.

Strengths/Limitations: This review did not identify any studies showing negative effects of HIT on the effectiveness of medical outcomes. This could potentially be a symptom of publication bias and should be considered when reading the review.

Generalizability to Medicare Population: Moderate; while this study does not specifically focus on Medicare populations, the findings are relevant to Medicare populations.

Methods: Literature review.

LaPointe J. Vertical Integration in Healthcare Doesn't Boost Care Quality. Accessed December 5, 2022. <https://revcycleintelligence.com/news/vertical-integration-in-healthcare-doesnt-boost-care-quality>

Subtopic(s): Enhancing Performance Metrics

Type of Source: News article

Objective: To explain findings from a study on the relationship between vertical integration and quality of care.

Main Findings: According to the article, the study found that vertical integration in health care has little to no impact on care quality. Process adherence, readmission rates, and patient satisfaction mean values were similar across the four levels of organizations outlined in the report. However, the study reported that patient satisfaction was lower as market concentration increased.

Strengths/Limitations: N/A

Generalizability to Medicare Population: Moderate; this article does not focus on Medicare populations, but findings may be relevant to Medicare beneficiaries.

Methods: N/A

Lawrence J, Delaney CP. Integrating Hospital Administrative Data to Improve Health Care Efficiency and Outcomes: "the Socrates Story." *Clin Colon Rectal Surg.* 2013 Mar.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3699139/>

Subtopic(s): Health Information Technology and Data Analytics

Type of Source: Journal article

Objective: To demonstrate the need for improved information technology and advanced data analysis to evaluate and optimize patient care and outcomes and recommends the use of SOCRATES as an effective software tool to do so.

Main Findings: Utilization of advanced software, such as Systems Outcomes and Clinical Resources Administrative Efficiency Software (SOCRATES), allows for effective and efficient data merging, warehousing, analysis and reporting. In particular, it can allow for more rigorous comparisons across patient encounters, such as risk-adjusted length of stays, readmission rates, costs, as well as case and outcome volume. This article describes the need for more advanced technology to aid data quality efforts, measure performance, and optimize cost-efficiency and profit.

Strengths/Limitations: Assumes resources to redesign/improve health infrastructure with more advanced hardware and software.

Generalizability to Medicare Population: Moderate; while this study does not specifically focus on Medicare populations, the findings are relevant to Medicare populations.

Methods: Evaluation of SOCRATES software.

LaVela SL, Gallan AS. Evaluation and Measurement of Patient Experience. *Patient Experience Journal.* 2014; 1(1):28-36. doi: 10.35680/2372-0247.1003.

Subtopic(s): Enhancing Performance Metrics

Type of Source: Journal article

Objective: To present existing patient experience measures, as well as evaluation approaches used to assess patient experience.

Main Findings: There are many ways to measure patient experience through either mixed-methods, quantitative, or qualitative approaches. Mixed-methods may allow for a more comprehensive assessment of the patient experience. Attaining feedback from patients can provide insight to aspects of the health care delivery experience that need improvement as well as monitor health care entities' performance in this domain. Using core patient-reported

measures would allow for better measurement of both the patient experience and health care delivery performance. This could ultimately increase our understanding of patient experience within and across health care delivery sites.

Strengths/Limitations: There may be benefit in understanding patient measures for specific procedures or settings and/or measures that incorporate patient's socio-demographic background.

Generalizability to Medicare Population: Weak; Medicare patients would likely benefit from unique measurements based on their social determinants of health (SDOH) and specific health care needs, which this study does not discuss.

Methods: Environmental scan.

The Lewin Group. CMS BPCI Models 2-4: Year 7 Evaluation and Monitoring Annual Report. 2021.

<https://innovation.cms.gov/data-and-reports/2021/bpci-models2-4-yr7evalrpt>

Subtopic(s): Incentivizing Specialists to Drive Down Costs within PB-TCOC Models

Type of Source: Report

Objective: To provide updated estimates of the impact of BPCI on select outcomes under Models 2, 3, and 4, as well as estimates of net savings to the Medicare program through the end of the BPCI initiative.

Main Findings: The total standardized allowed payments for all models decreased significantly. The quality of care did not change under BPCI for any of the models. Further, while PAC and skilled nursing facility (SNF) utilization decreased under Models 2 and 3, PAC utilization increased under Model 4.

Strengths/Limitations: In some instances, the treatment and comparison groups differed in ways that could have limited the comparison group's ability to serve as an unbiased control group.

Generalizability to Medicare Population: Strong; the BPCI model specifically focuses on Medicare populations.

Methods: Difference-in-differences design.

The Lewin Group. CMS Bundled Payments for Care Improvement Advanced Model: Third Evaluation Report. 2022. <https://innovation.cms.gov/data-and-reports/2022/bpci-adv-ar3>

Subtopic(s): Incentivizing Specialists to Drive Down Costs within PB-TCOC Models

Type of Source: Report

Objective: To evaluate the BPCI Advanced Model.

Main Findings: In Model Years 1 and 2, for pooled clinical episodes, the BPCI Advanced Model had a statistically significant reduction in average standardized episode payments of \$743 per episode. Additionally, BPCI Advanced reduced readmissions for surgical episodes during the 90 days following a discharge or procedure by 4.1 percent of the BPCI Advanced baseline mean. However, the BPCI Advanced Model resulted in a small, estimated net loss to the Medicare program of \$65.7 million.

Strengths/Limitations: Constructing comparison samples for this study was challenging, limiting sample size.

Generalizability to Medicare Population: Strong; the BPCI model specifically focuses on Medicare populations.

Methods: Differences-in-differences design.

The Lewin Group. CMS Comprehensive Care for Joint Replacement (CJR) Model: Performance Year 4 Evaluation Report. 2021. <https://innovation.cms.gov/data-and-reports/2021/cjr-py4-annual-report>

Subtopic(s): Key Highlights; Incentivizing Specialists to Drive Down Costs within PB-TCOC Models; Enhancing Performance Metrics

Type of Source: Report

Objective: To evaluate the impact of the CJR model on Medicare payments and quality of care.

Main Findings: For mandatory CJR hospitals, there were statistically significant reductions in average episode payments during the first four performance years of the CJR model. Additionally, Medicare likely realized savings from mandatory CJR hospitals over the first four performance years. Quality of care measures improved or were maintained under the CJR model.

Strengths/Limitations: In some instances, the treatment and comparison groups differed in ways that could have limited the comparison group's ability to serve as an unbiased control group.

Generalizability to Medicare Population: Strong; the model focuses on Medicare beneficiaries.

Methods: Difference-in-differences design.

The Lewin Group. Comprehensive End-Stage Renal Disease Care (CEC) Model: Fifth Annual Evaluation Report. 2022. <https://innovation.cms.gov/data-and-reports/2022/cec-annrpt-py5>

Subtopic(s): Incentivizing Specialists to Drive Down Costs within PB-TCOC Models

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 a decrease in hospitalizations and readmissions. Additionally, CEC interventions resulted in lower use of a catheter for 90 days or longer, an increase in the number of outpatient dialysis sessions, and a decrease in 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 APM which researchers cannot sufficiently control for with available data.

Generalizability to Medicare Population: Strong; although voluntary, CEC is a Medicare model.

Methods: Difference-in-differences design.

Lewis VA, McClurg AB, Smith J, Fisher ES, Bynum JP. Attributing Patients to Accountable Care Organizations: Performance Year Approach Aligns Stakeholders' Interests. *Health Aff (Millwood)*. 2013;32(3):587-595. doi:10.1377/hlthaff.2012.0489

Subtopic(s): Nesting Specialty Episodes Within PB-TCOC Models

Type of Source: Journal article

Objective: To evaluate two different methods of patient attribution, performance year attribution and prospective attribution.

Main Findings: Performance year attributions allow for more patients to be attributed to a specific ACO and remove the responsibility of patients who do not seek care at an ACO from the provider. On the other hand, prospective attribution methods do not apply their accountable

care methods to their entire patient population thus removing potential patients that seek care at an organization but are not attributed there.

Strengths/Limitations: The study used simulated ACOs instead of real ones, thus leaving a gap in understanding of how these attributions might function in actual ACOs.

Generalizability to Medicare Population: Strong; the study was conducted on Medicare claims data and thus directly impacts the Medicare population.

Methods: Researchers used Medicare claims data and simulated ACOs. Patients were then attributed to either a primary care provider, and if they did not have one, they were attributed to a specialist, nurse practitioner, physician assistant, or clinical nurse specialist.

Li Y, Cai X, Wang M. Social Media Ratings of Nursing Homes Associated with Experience of Care and “Nursing Home Compare” Quality Measures. *BMC Health Services Research*. 2019;19(1):260. doi:10.1186/s12913-019-4100-7

Subtopic(s): Enhancing Performance Metrics

Type of Source: Journal article

Objective: To determine if nursing facilities’ social media ratings was associated with 1) experience-of-care ratings from residents’ family members/responsible parties and 2) Nursing Home Compare (NHC) ratings.

Main Findings: The average consumer ratings from social media sites Facebook, Yelp, Google Consumer Reviews and caring.com were moderately correlated with NHC ratings and strongly correlated with experience-of-care ratings. Average social media ratings that had a four or higher (on a five-point scale) had stronger correlation with both NHC and experience-of-care ratings than those that had less than four.

Strengths/Limitations: The study only evaluated ratings of nursing homes in Maryland, limiting the generalizability of their findings to other states and regions. There may be bias in either the social media or the experience-of-care ratings.

Generalizability to Medicare Population: Moderate; while this study does not specifically focus on Medicare populations, the findings are relevant to Medicare populations.

Methods: Linear regression of data from NHC, Maryland nursing home experience-of-care survey, and online consumer ratings from social media sites.

Lin SC, Hollingsworth JM, Adler-Milstein J. Alternative Payment Models and Hospital Engagement in Health Information Exchange. *Am J Manag Care*. 2019;25(1):e1-e6.

<https://www.ajmc.com/view/alternative-payment-models-and-hospital-engagement-in-health-information-exchange>

Subtopic(s): Health Information Technology and Data Analytics

Type of Source: Journal article

Objective: To determine if hospital participation in APMs is associated with greater engagement in a HIE.

Main Findings: There is an association between APMs and greater HIE diversity, breadth, and depth, and an association between APM participation and lower HIE volume.

Strengths/Limitations: Measure of HIE were only available for 2014-2015.

Generalizability to Medicare Population: Strong; APM participation in Medicare programs was a central consideration to the research.

Methods: A mixed-effects regression was used to estimate the association between APMs and HIE.

Litke J, Spoutz L, Ahlstrom D, Perdew C, Llamas W, Erickson K. Impact of the Clinical Pharmacy Specialist in Telehealth Primary Care. *American Journal of Health-System Pharmacy*. 2018;75(13):982-986. doi:10.2146/ajhp170633

Subtopic(s): Key Highlights; Current State of Specialist Integration in Primary Care

Type of Source: Journal article

Objective: To evaluate a telehealth-based chronic disease management program's impact on primary care outcomes in a population of veterans.

Main Findings: Providing primary care medication management services via telehealth improved disease management and access to health care among a population of rural veterans. Systolic blood pressure and mean absolute HbA1c saw significant reductions. Additionally, significant clinical improvements were seen in the areas of lipid management and tobacco cessation.

Strengths/Limitations: The population studied was very specific—male veterans over 60 years of age—which limited generalizability.

Generalizability to Medicare Population: Strong; the study focused on veterans over the age of 60 (mean age of 62) and were therefore Medicare age or soon to be Medicare age.

Methods: Descriptive statistical analysis.

Livernois C. Comprehensive Care Physician Model Improves Care, Lowers Hospitalization. May 18, 2018. <https://healthexec.com/topics/patient-care/precision-medicine/comprehensive-care-physician-model-improves-care-lowers>

Subtopic(s): Current State of Specialist Integration in Primary Care

Type of Source: Blog post

Objective: To describe results from a University of Chicago evaluation of a comprehensive care physician (CCP) model.

Main Findings: The CCP model centers physicians who care for patients both at clinic and hospital settings. The evaluation study found that hospitalization rates for CCP patients were 15 to 22 percent lower than for non-CCP patients. The goal of this model is to understand patients' needs so that physicians can provide them with more appropriate care.

Strengths/Limitations: N/A

Generalizability to Medicare Population: Strong; study populations are specifically Medicare beneficiaries.

Methods: N/A

Look KA, Kile M, Morgan K, Roberts A. Community Pharmacies as Access Points for Addiction Treatment. *Res Soc Adm Pharm*. 2018:1–6. <https://doi.org/10.1016/j.sapharm.2018.06.006>.

Subtopic(s): Current State of Specialist Integration in Primary Care

Type of Source: Journal article

Objective: To examine the distribution of community pharmacies in Wisconsin and its relationship with the location of addiction treatment facilities and opioid-related overdose events in rural and urban areas.

Main Findings: Rural counties were significantly less likely to have formal substance abuse treatment facilities or community pharmacies compared to urban counties. However, community pharmacies were more prevalent and more likely to be in rural counties with higher rates of opioid-related overdose deaths. 13 of the 14 counties without a formal substance abuse treatment facility had access to one or more community pharmacies.

Strengths/Limitations: The approach employed in this study has a limited ability to address key aspects of medication-assisted treatment and telehealth services.

Generalizability to Medicare Population: Moderate; while this study does not specifically focus on Medicare populations, the findings are relevant to Medicare populations.

Methods: Descriptive statistics and Pearson correlation coefficients.

Luta X, Ottino B, Hall P, et al. Evidence on the economic value of end-of-life and palliative care interventions: a narrative review of reviews. *BMC Palliative Care*. 2021;20(89).

<https://bmcpalliatcare.biomedcentral.com/articles/10.1186/s12904-021-00782-7>

Subtopic(s): Key Highlights; Incentivizing Specialists to Drive Down Costs within Population-Based TCOC Models

Type of Source: Journal article

Objective: To assess the economic value of palliative and end-of-life care interventions across various settings.

Main Findings: Most evidence on cost-effectiveness relates to home-based interventions and suggests that they offer a high potential for health care savings, including decreases in the use of resources and improvements in patient and caregiver outcomes. The evidence for interventions delivered in non-home-based settings was inconsistent. Additionally, the study provided evidence to suggest that there may be benefits of clinical nurse specialist (CNS) interventions for patients with heart disease.

Strengths/Limitations: This study focused on the economic value of a wide range of interventions. However, while a broad inclusion of interventions was a deliberate feature of this study, this was also a limitation as synthesizing a diversity of reported measures was difficult. Further, evidence from retrospective data (e.g., patient preferences) were not available.

Generalizability to Medicare Population: Strong; while the study does not limit its analysis to Medicare beneficiaries, palliative care is highly relevant to Medicare beneficiaries.

Methods: Literature review.

L&M Policy Research. Pioneer ACO Evaluation Findings from Performance Years One and Two. 2015.

<https://innovation.cms.gov/files/reports/pioneeracoevalrpt2.pdf>

Subtopic(s): Enhancing Performance Metrics

Type of Source: Report

Objective: To evaluate the effects of the Pioneer ACO model on Medicare spending, utilization, and quality.

Main Findings: Pioneer ACOs saved a total of \$384 million over the first two performance years; most of these savings accrued in the first performance year. Overall spending performance was mainly accompanied by utilization reductions in acute inpatient settings. Additionally, CAHPS surveys of aligned Pioneer beneficiaries found that Pioneer ACOs exhibited few changes in patient experience between the first and second performance year; there appears to be little relationship between savings and high or low CAHPS scores.

Strengths/Limitations: A key limitation is not controlling for Medicare price differences among providers. Additionally, the time-varying characteristics used to control for selection do not account for all relevant factors.

Generalizability to Medicare Population: High; Medicare beneficiaries are directly impacted by the model.

Methods: The evaluation uses a difference-in-differences design.

L&M Policy Research. Pioneer ACO Final Report. 2016.

<https://innovation.cms.gov/files/reports/pioneeraco-finalevalrpt.pdf>.

Subtopic(s): Incentivizing Specialists to Drive Down Costs within PB-TCOC Models

Type of Source: Report

Objective: To evaluate the effects of the Pioneer ACO model on Medicare spending, utilization, and quality.

Main Findings: Overall spending performance reductions were mainly due to utilization reduction efforts within inpatient settings. There were major savings within the two performance years observed. Ten ACOs saw significant savings in both performance years. Another ten ACOs saw significant 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: High; Medicare beneficiaries are directly impacted by the model.

Methods: The evaluation used a difference-in-differences design as well as conducted interviews, focus groups, and document reviews.

Machta RM, Maurer KA, Jones DJ, Furukawa MF, Rich EC. A Systematic Review of Vertical Integration and Quality of Care, Efficiency, and Patient-Centered Outcomes. *Health Care Management Review*. 2019;44(2):159-173. doi:10.1097/HMR.000000000000197

Subtopic(s): Enhancing Performance Metrics

Type of Source: Journal article

Objective: To compare vertically integrated health systems to nonintegrated hospitals or physician practices.

Main Findings: Vertical integration was associated with increased quality of care, yet demonstrated either no or lower efficiency, as measured by utilization, spending, and prices. Only a few studies evaluated patient-centered outcomes; the majority of these studies focused on mortality.

Strengths/Limitations: Most literature was observational and did not address the issue of selection bias.

Generalizability to Medicare Population: Moderate; while this study did not specifically focus on the Medicare population, findings are relevant to Medicare.

Methods: Systematic literature review.

Manary MP, Boulding W, Staelin R, Glickman SW. The patient experience and health outcomes. *N Engl J Med*. 2013;368(3):201-203. doi:10.1056/NEJMp1211775

Subtopic(s): Enhancing Performance Metrics

Type of Source: Journal article

Objective: To provide approaches to improve assessments of individual providers.

Main Findings: There are five aspects to consider in order to improve consistency of patient experience measures. First, the measure should focus on a specific visit instead of a general evaluation of the health care experience. Second, the survey should focus on patient-provider interactions and include interactions with all providers in the care team instead of focusing just on physicians. Third, the survey should be provided to the patient very soon after their experience with the health care system. Fourth, outcome measures should be closely risk-

adjusted and closely related to the interaction of interest. Last, establishing a definition for patient satisfaction would allow for cross-study comparisons and might reduce confusion.

Strengths/Limitations: This study does not include patient feedback on what they think could be included to improve patient experience measures. This may be helpful to better understand how to improve these measures.

Generalizability to Medicare Population: Weak, article does not mention Medicare population and there may be additional considerations with improving their patient experience measures.

Methods: Brief environmental scan.

McClellan M, Patel K, O'Shea J, et al. Specialty Payment Model Opportunities and Design: Environmental Scan for Gastroenterology. Washington, DC: Brookings Institution: The MITRE Corporation. 2014.

http://www2.mitre.org/public/payment_models/Gastroenterology_Environmental_Scan_14-2325.pdf

Subtopic(s): Enhancing Specialty Participation in Team-Based Models

Type of Source: Report

Objective: To identify and describe potential APM in gastroenterology.

Main Findings: The study found that APMs in gastroenterology include outcomes-oriented and population-focused value-based payment systems. Stakeholders suggested that the most feasible payment methodology for CMS to adopt would be episodic, bundled payments, most notably for colonoscopies. Additionally, stakeholders noted that a properly functioning data sorting system is required for proper reimbursement in a bundled payment system. Finally, the report offers performance measures by type and condition that could be used in future APMs.

Strengths/Limitations: The report included a comprehensive environmental scan of peer-reviewed and gray literature, and integrated findings from the literature review with stakeholder interviews. Although the interviews included stakeholders from across the gastroenterology space, the 30 interview subjects is unlikely to be a representative sample of stakeholders in the field.

Generalizability to Medicare Population: Strong; this study focused on gastroenterology resource allocation and care for Medicare beneficiaries.

Methods: Literature review and stakeholder interviews.

McCoy RG, Bunkers KS, Ramar P, et al. Patient attribution: why the method matters. *Am J Manag Care*. 2018;24(12):596-603. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6549236/>

Subtopic(s): Nesting Specialty Episodes Within PB-TCOC Models

Type of Source: Journal article

Objective: To assess the impact of five commonly used patient attribution methods on measured health care cost, quality, and utilization metrics within an integrated health care delivery system

Main Findings: The different attribution methods resulted in a lot of variation in terms of the cost and utilization, but not the quality of health care. The Dartmouth method attributed the most patients whereas the HealthPartners method attributed the least. Additionally, the HealthPartners, private payer, and Minnesota community measurement methods all attributed patients based on the majority of their visits; these patients were also older and had higher utilization costs.

Strengths/Limitations: Study is only based on a single health care system, which limits generalizability.

Generalizability to Medicare Population: Moderate; while the whole study is not directly related to Medicare Populations the Dartmouth Patient Attribution method relates to ACOs and thus Medicare populations.

Methods: The researchers used five patient attribution methods: 1) Dartmouth Method 2) public health plan method 3) private health plan method 4) HealthPartners method 5) Minnesota Community Measurement method on patient data from Mayo Clinic Rochester and provided descriptive statistics of the data.

McWilliams JM, Chernew ME, Zaslavsky AM, Hamed P, Landon BE. Delivery System Integration and Health Care Spending and Quality for Medicare Beneficiaries. *JAMA Internal Medicine*. 2013;173(15):1447-1456. doi:10.1001/jamainternmed.2013.6886

Subtopic(s): Unintended Consequences from Provider Consolidation within PB-TCOC Models

Type of Source: Journal article

Objective: To compare spending and quality between larger and smaller provider groups and examine how size-related differences vary by two factors considered central to ACO performance: group primary care orientation and financial risk sharing by health care providers

Main Findings: Compared with smaller groups, larger hospital-based groups had higher total per beneficiary spending in 2009 (mean difference: +\$849), higher 30-day readmission rates (+1.3 percentage points), and similar performance on 4 of 5 process measures of quality. In contrast, larger independent physician groups performed better than smaller groups on all process measures and exhibited significantly lower per beneficiary spending in counties where risk sharing by these groups was more common (-\$426). Among all groups sufficiently large to participate in ACO programs, a strong primary care orientation was associated with lower spending, fewer readmissions, and better quality of diabetes care.

Strengths/Limitations: This is an observational study design and additionally, the findings provide no basis for predicting whether hospital-based groups might achieve greater or lesser savings as risk bearing ACOs than independent groups.

Generalizability to Medicare Population: Strong; the study focuses on the Medicare program and its beneficiaries.

Methods: The study compared spending and quality of care between larger and smaller provider groups and examined how size-related differences varied by two factors considered central to ACO performance: group primary care orientation (measured by the primary care share of large groups' specialty mix) and provider risk sharing (measured by county health maintenance organization penetration and its relationship to financial risk accepted by different group types for managed care patients).

Meads G, Thomas P, Moustafa A, Nazareth I, Stange KC, Hess GD. Combined horizontal and vertical integration of care: a goal of practice-based commissioning. 2008;16(6). Accessed December 5, 2022.

<https://primarycare.imedpub.com/abstract/combined-horizontal-and-vertical-integration-of-care-a-goal-of-practicebased-commissioning-1120.html>

Subtopic(s): Enhancing Performance Metrics

Type of Source: Journal article

Objective: To propose three different models for combining vertical and horizontal integration to achieve comprehensive primary health care.

Main Findings: The first proposed model is integration through medical practice, where teams of community workers plan a range of community activities and are housed with primary care practitioners. The second proposed model is integration through multidisciplinary teams (forming multidisciplinary practices). The third model is integration through networks (a managed care model).

Strengths/Limitations: This study includes various applied examples of the principles that guide the ideation of the three models that are proposed in this study.

Generalizability to Medicare Population: Weak; this study examines and proposes models for the National Health Service in the UK.

Methods: N/A

Mehrotra A, Adams JL, Thomas W, Mcglynn E. The effect of different attribution rules on individual physician cost profiles. *Annals of Internal Medicine*. 2010;152:649–654. doi: 10.7326/0003-4819-152-10-201005180-00005. <https://www.acpjournals.org/doi/full/10.7326/0003-4819-152-10-201005180-00005>

Subtopic(s): Nesting Specialty Episodes within PB-TCOC Models

Type of Source: Journal article

Objective: To evaluate how different attribution rules affect physician cost profiles.

Main Findings: The portion of episodes that were able to be assigned to a physician differed greatly between the 12 rules (20 to 69 percent). The mean percentage of costs billed by a physicians also varied substantially (13 to 60 percent). Additionally, depending on the alternate rule employed, between 17 and 61 percent of physicians would be attributed to a different cost category than the category assigned via the default rule.

Strengths/Limitations: Only data from for health plans in Massachusetts were used; the external validity of the results are therefore uncertain.

Generalizability to Medicare Population: Low; the study focused on commercial health plans in Massachusetts.

Methods: A cost profile was created for each of the 12 attribution rules and data from commercial health plans in Massachusetts were used to analyze the effect of the rules.

Meltzer DO, Ruhnke GW. Redesigning Care For Patients at Increased Hospitalization Risk: The Comprehensive Care Physician Model. *Health Aff (Millwood)*. 2014;33(5):770-777. doi:10.1377/hlthaff.2014.0072

Subtopic(s): Current State of Specialist Integration in Primary Care

Type of Source: Journal article

Objective: To describe the rationale for the CCP model and the design and implementation of a study supported by CMMI to assess the model's effects on costs and outcomes.

Main Findings: The CCP model focuses on patients with high risk of hospitalization. This model gives CCPs enough hospitalized patients to have a meaningful daily physical presence in the hospital while still allowing them to provide ambulatory care for their patients, which can provide the same benefits that hospitalists provide. For CMMI's evaluation, authors expect study samples to have higher utilization than non-study samples, and for self-rated health status of patients contain bias.

Strengths/Limitations: No inclusion criteria or robust methodology for the literature review are outlined.

Generalizability to Medicare Population: Strong; the CCP model focuses on Medicare patients.

Methods: Literature review.

Misra A. Centers for Medicare & Medicaid Services. Annual Report. Published online 2015.

<https://innovation.cms.gov/files/reports/bpci-mdl1yr2annrpt.pdf>

Subtopic(s): Key Highlights; Incentivizing Specialists to Drive Down Costs within Population-Based TCOC Models

Type of Source: Report

Objective: To evaluate and monitor the impact of the BPCI Model on Medicare costs and quality of care.

Main Findings: The report found that model participants struggled with physician enrollment and engagement. Medicare savings came were generated via the inpatient prospective payment system (IPPS) discount. Overall, however, the study did not observe any consistent impacts on claims-based health outcomes.

Strengths/Limitations: This report used both quantitative and qualitative analyses to develop a more complete understanding of the model and its effects.

Generalizability to Medicare Population: Strong; the study focuses on a Medicare APM.

Methods: The report used a variety of quantitative and qualitative analyses including interviews, focus groups, and difference-in-differences regression models.

McClellan M, Penso J, Valuck T, Dugan D, Dubois RW, Westrich K. Accountable Care Measures for High-Cost Specialty Care and Innovative Treatment. National Pharmaceutical Council and Discern Health; 2014:124. <https://www.npcnow.org/sites/default/files/media/accountable-care-measures-for-high-cost-specialty2014-final.pdf>

Subtopic(s): Enhancing Performance Metrics

Type of Source: Report

Objective: To identify and provide potential solutions to gaps in measuring and monitoring ACO performance.

Main Findings: Current ACO measurements in the MSSP measure set only apply to eight of the 20 major clinical conditions examined, with the highest numbers of applicable measures pertaining to ischemic heart disease and diabetes. Further, the majority of available measures are process measures—a number of conditions do not have any outcome measures. This report suggests that improvements to accountable care measure sets should include performance indicators and operating programs (case, disease, and population health management programs), filling priority gaps with existing or new measures, and creating alternatives to measuring every condition.

Strengths/Limitations: This report included a detailed methodology of how they conducted a literature search.

Generalizability to Medicare Population: Strong; this study focused on evaluating the MSSP measurement set.

Methods: This study conducted a literature search and applied a logic model.

Navathe AS, Liao JM, Wang E, et al. Association of Patient Outcomes With Bundled Payments Among Hospitalized Patients Attributed to Accountable Care Organizations. *JAMA Health Forum*. 2021;2(8):e212131. doi:10.1001/jamahealthforum.2021.2131

Subtopic(s): Enhancing Performance Metrics

Type of Source: Journal article

Objective: To evaluate whether outcomes in the BPCI program differed depending on whether patients were attributed to ACOs in MSSP.

Main Findings: The association between bundled payments and changes in post-discharge institutional spending was larger among patients attributed to ACOs for medical episodes, but not surgical episodes. Attribution to an ACO also increased the strength of the association between bundled payments and changes in 90-day readmissions for both medical and surgical episodes.

Strengths/Limitations: Findings are subject to residual confounding and selection bias. Additionally, given the lack of ACO attribution in the pre-period and time-varying nature of participation, the study design could not definitively rule out pre-trends, which were more apparent for surgical episodes.

Generalizability to Medicare Population: Strong; this study focused on a Medicare APM.

Methods: Retrospective cohort study.

Nguyen AT, Trout KE, Chen LW, Madison L, Watkins KL, Watanabe-Galloway S. Nebraska's Rural Behavioral Healthcare Workforce Distribution and Relationship Between Supply and County Characteristics. *Rural Remote Health*. 2016;16(2):1–10.

Subtopic(s): Current State of Specialist Integration in Primary Care

Type of Source: Journal article

Objective: To examine the geographic distribution of behavioral health care professionals and the relationship between supply and county characteristics in Nebraska in 2012.

Main Findings: Seventy-one percent of all behavioral professionals in Nebraska were actively practicing in metropolitan areas as compared to 27 percent in rural and 1.5 percent in frontier areas. For all categories of professions, except for physician assistants, Nebraska's urban areas had the highest ratios of provider to 100,000 population as compared to rural and frontier areas in Nebraska. The total supply of behavioral health professionals was positively associated with metropolitan areas and the percentage of populations in poverty.

Strengths/Limitations: Data sources used in this study had limitations to provide accurate estimates of the supply of mental health professionals. Additionally, comprehensive workforce data is limited.

Generalizability to Medicare Population: Moderate; while this study does not specifically focus on Medicare populations, findings are relevant to Medicare populations.

Methods: Descriptive statistics and multivariate Poisson regression analyses.

NORC at the University of Chicago and the Department of Health and Human Services' Office of Health Policy of the Office of the Assistant Secretary for Planning and Evaluation (ASPE). Supplement to the Environmental Scan on Issues Related to the Development of Population-Based Total Cost of Care (TCOC) Models in the Broader Context of Alternative Payment Models (APMs) and Physician-Focused Payment Models (PFPs). 2022.

<https://aspe.hhs.gov/sites/default/files/documents/6baeeaf37d03fd96f79c47c8fdf88f3c/PTAC-TCOC-EScan-Suppl.pdf>

Subtopic(s): Unintended Consequences from Provider Consolidation within Population-Based TCOC Models

Type of Source: Report

Objective: To summarize additional findings and literature surrounding issues related to the development of population-based TCOC Models.

Main Findings: The report represents findings from over 70 pieces of literature regarding the framework for care delivery structures in TCOC models, improving provider accountability, care delivery innovations, and performance metrics and model evaluation. Research noted that remaining challenges in implementing and assessing performance measures in APMs include calculating return on investment, identifying appropriate time periods, addressing disparities, and approaching emerging health care issues.

Strengths/Limitations: This environmental scan is a summary of existing literature and findings, and as such does not introduce any new research findings.

Generalizability to Medicare Population: Strong; the report reviews the context of TCOC for Medicare-focused APMs and PFPs.

Methods: Environmental scan.

NORC at the University of Chicago and the Department of Health and Human Services' Office of Health Policy of the Office of the Assistant Secretary for Planning and Evaluation (ASPE). Second Supplement to the Environmental Scan on Issues Related to the Development of Population-Based Total Cost of Care (TCOC) Models in the Broader Context of Alternative Payment Models (APMs) and Physician-Focused Payment Models (PFPMs). The Office of the Assistant Secretary for Planning and Evaluation (ASPE); 2022. <https://aspe.hhs.gov/sites/default/files/documents/6024c2d9c9d354fab5eb3e7fe000abe7/PTAC-TCOC-Escan-Suppl-Vol2.pdf>

Subtopic(s): Unintended Consequences from Provider Consolidation within Population-Based TCOC Models

Type of Source: Report

Objective: To summarize additional findings and literature surrounding issues related to the development of population-based TCOC Models.

Main Findings: This report provides information on payment issues related to population-based TCOC models, including: Medicare spending patterns, a comparison of FFS with capitated payment models, process measures, options and considerations for establishing benchmarks and risk adjustment, options for establishing accountability and sharing risk, downstream payment models, and options for including accountability for additional services.

Strengths/Limitations: This environmental scan is a summary of existing literature and findings, and as such does not introduce any new research findings.

Generalizability to Medicare Population: Strong; the report reviews the context of TCOC for Medicare-focused APMs and PFPMs.

Methods: Environmental scan.

NORC at the University of Chicago. Evaluation of the Vermont All-Payer Accountable Care Organization Model: First Evaluation Report. 2021. <https://innovation.cms.gov/data-and-reports/2021/vtapm-1st-eval-full-report>

Subtopic(s): Key Highlights; Current State of Specialist Integration in Primary Care

Type of Source: Report

Objective: To describe the evaluation approach and early outcomes of the Vermont All-Payer ACOs Model (VTAPM).

Main Findings: The VTAPM did not meet specified all-payer and Medicare-specific scale targets during PY1 (2018) and PY2 (2019). The model generated significant gross savings, driven mostly by large reductions in PY2. Hospital-based utilization and emergency visits decreased in PY2.

Strengths/Limitations: Insufficient post-implementation data and lags in data availability limit the ability to detect any short-term, statewide impacts. The report included only limited findings on the provider perspective.

Generalizability to Medicare Population: Strong; the report focused on a Medicare APM.

Methods: Mixed-methods design, including difference-in-differences analyses, systematic document review, and semi-structured interviews.

NORC at the University of Chicago. Next Generation Accountable Care Organization Model Evaluation: Fourth Evaluation Report. NORC at the University of Chicago. 2021. <https://innovation.cms.gov/data-and-reports/2021/nextgenaco-fourthevalrpt>

Subtopic(s): Unintended Consequences from Provider Consolidation within Population-Based TCOC Models; Enhancing Performance Metrics

Type of Source: Report

Objective: To evaluate the Next Generation Accountable Care Organization (NGACO) model through performance year four (end of 2019).

Main Findings: As of the fourth performance year, the NGACO model was associated with \$667 million in gross savings in Medicare Parts A and B spending. However, after accounting for \$909 million in shared savings and other payments to model ACOs, the model was found to be associated with \$243 million in net losses. Physician practice affiliated NGACOs reduced acute care spending, though did not reduce spending associated with professional services. NGACOs affiliated with hospitals or integrated delivery systems (IDS), however, reduced spending for professional services.

Strengths/Limitations: The evaluation draws on both quantitative (e.g., diff-in-diffs models) and qualitative methods and effectively synthesizes findings from these different methods. However, the evaluation fails to explore model implementation approaches and highlights the challenge of being able to isolate the relative importance of the various factors identified as being associated with spending.

Generalizability to Medicare Population: Strong; NGACO is a Medicare APM.

Methods: The evaluation employed a range of quantitative and qualitative methods, including regression modeling such as difference-in-differences modeling to assess causal effects of the model, qualitative comparative analysis to examine NGACO's contextual and structural pathways to reduce Medicare spending, and interviews with ACO leaders.

NORC at the University of Chicago. The Pennsylvania Rural Health Model: First Annual Report. 2021.

<https://innovation.cms.gov/data-and-reports/2021/parhm-ar1-full-report>

Subtopic(s): Key Highlights; Current State of Specialist Integration in Primary Care

Type of Source: Report

Objective: To provide an overview of and evaluate the Pennsylvania Rural Health Model (PARHM).

Main Findings: The Rural Health Redesign Center Authority's establishment may improve communication and alignment among stakeholders and participating hospitals and payers. The model contributes to short-term financial stability, but independent rural hospitals still grapple with long-term sustainability.

Strengths/Limitations: The report was published during the early stages of the evaluation, and presents only emerging hypotheses that will be fully tested later as data are collected and analyzed.

Generalizability to Medicare Population: Strong; the PARHM is an APM targeting the Medicare population and can provide insights with respect to rural care delivery for the Medicare population.

Methods: The report included descriptive assessments of financial performance and interim Medicare spending.

North Carolina Department of Health and Human Services. Healthy Opportunities Pilots. 2022.

<https://www.ncdhhs.gov/about/department-initiatives/healthy-opportunities/healthy-opportunities-pilots>

Subtopic(s): Current State of Specialist Integration in Primary Care

Type of Source: Webpage

Objective: To detail the Healthy Opportunities Pilots, the nation's first comprehensive program to test and evaluate the impact of providing select evidence-based, non-medical interventions related to housing, food, transportation, interpersonal safety, and toxic stress to high-needs Medicaid enrollees.

Main Findings: The Healthy Opportunities Pilots work with care managers, network leads, human services organizations, and Medicaid pre-paid health plans to implement the pilots. The

pilots cover the cost of 29 interventions across food services, housing, transportation, and toxic stress services.

Strengths/Limitations: This web page outlines the pilot and describes what will happen in the future; however, it does not include any explicit findings or evaluations.

Generalizability to Medicare Population: Moderate, although Medicaid pilots, these efforts are likely to impact dual-eligible Medicare beneficiaries.

Methods: N/A

O'Malley AS, Bond AM, Berenson RA. Rising Hospital Employment of Physicians: Better Quality, Higher Costs? Issue Brief Cent Stud Health Syst Change. 2011;(136):1-4.

<http://www.hschange.org/CONTENT/1230/1230.pdf>

Subtopic(s): Unintended Consequences from Provider Consolidation within PB-TCOC Models

Type of Source: Journal article

Objective: To examine the trend of hospital-employed physicians and their effects on quality of care and cost of care.

Main Findings: According to the article, hospital employment of physicians is not necessarily correlated with clinical integration, and may also increase costs associated with higher insurance rates and hospital pressure on employed physicians to carry out more costly services.

Strengths/Limitations: The study is from 2011 and therefore may not accurately reflect the current relationship between hospital-employed physicians and costs.

Generalizability to Medicare Population: Moderate; Medicare payments were examined in the article, but Medicare was not the main focus.

Methods: Feedback from hospital site visits across 12 communities.

O'Malley AS, Reschovsky JD, Saiontz-Martinez C. Interspecialty Communication Supported by Health Information Technology Associated with Lower Hospitalization Rates for Ambulatory Care-Sensitive Conditions. *The Journal of the American Board of Family Medicine*. 2015;28(3):404-417.

doi:10.3122/jabfm.2015.03.130325

Subtopic(s): Current State of Specialist Integration in Primary Care

Type of Source: Journal article

Objective: To understand the association between primary care practice capabilities and hospitalization for ambulatory care-sensitive conditions (ACSCs) on a national-level.

Main Findings: Higher rates of communication between primary care and specialist physicians were associated with lower rates of potentially avoidable hospitalizations. Additionally, patients receiving care in practices with both the highest level of interspecialty communication and the highest level of HIT use had lower odds of ambulatory care-sensitive hospitalizations than did those in practices with lower interspecialty communication and high HIT use.

Strengths/Limitations: This study used observational, cross-sectional data. In addition, this study was not able to account for differences between practice structures and care processes.

Generalizability to Medicare Population: Strong; this study population was specific to Medicare beneficiaries.

Methods: Survey analysis.

Pacific Northwest Evidence-based Practice Center. Medication-Assisted Treatment Models of Care for Opioid Use Disorder in Primary Care Settings. 2016.

https://www.ncbi.nlm.nih.gov/books/NBK402352/pdf/Bookshelf_NBK402352.pdf

Subtopic(s): Current State of Specialist Integration in Primary Care

Type of Source: Technical brief

Objective: To describe medication-assisted treatment (MAT) models in primary care settings, barriers to MAT implementation, identify gaps in the evidence base, and guide future research.

Main Findings: Innovations in MAT models of care include the use of nonphysician staff to perform key roles; tiered care models with centralized intake and stabilization of patient; screening and induction performed in ED, inpatient, or prenatal settings with subsequent referral to community settings, and use of Internet-based learning networks. Most trials of MAT in primary care settings focus on comparisons of one pharmacological therapy versus another, rather than on the effectiveness of different MAT models. Key barriers to implementation of MAT models of care include stigma, lack of institutional support, lack of prescribing physicians, lack of expertise, and inadequate reimbursement.

Strengths/Limitations: This report clearly indicated the type of systematic literature review used, inclusion criteria, and the limitations associated with each study included.

Generalizability to Medicare Population: Moderate; while this report does not specifically focus on Medicare populations, the findings are relevant to Medicare populations.

Methods: Systematic literature review and key informant interviews.

Parikh R, Lepp A, Phillips RS. A More Cohesive Home: Integrating Primary And Palliative Care for Seriously Ill Patients. *Health Affairs*.

<https://www.healthaffairs.org/doi/10.1377/forefront.20150803.049733>

Subtopic(s): Incentivizing Specialists to Drive Down Costs within PB-TCOC Models

Type of Source: Blog post

Objective: To describe current gaps in palliative care and how integrating palliative care and primary care could help to fill those gaps.

Main Findings: Primary care-driven patient-centered medical homes (PCMHs) proactively manage populations of patients to coordinate care across settings, which may offer an optimal care framework from which to implement early longitudinal palliative care. Existing models of integrated palliative and primary care suggest that this integration improves quality of life and reduces utilization for seriously ill patients. There are clinician-level, delivery system-level, and policy-level reforms to facilitate integrated primary and palliative care.

Strengths/Limitations: Although an op-ed, the article cites several peer-reviewed studies to support its claims. However, the article does not provide information on search terms or any other methodologies used to develop their argument.

Generalizability to Medicare Population: Moderate; while this study does not focus on Medicare populations, the findings are relevant to Medicare beneficiaries.

Methods: N/A

Patel K, Presser E, George M, McClellan M. Shifting Away From Fee-For-Service: Alternative Approaches to Payment in Gastroenterology. *Clinical Gastroenterology and Hepatology*. 2016;14(4):497-506.

doi:10.1016/j.cgh.2015.06.025

Subtopic(s): Enhancing Specialty Participation in Team-Based Models

Type of Source: Journal article

Objective: To describe examples of delivery reforms and emerging APMs for gastroenterological care.

Main Findings: The article argues that a per-member, per-month (PMPM) payment can improve care management. For complex conditions where a gastroenterologist is the principle care coordinator, like inflammatory bowel disease, the PMPM payment could be given to a gastroenterology medical home. In other cases where a gastroenterologist is a consultant in patient care, a PMPM payment can support effective care coordination in a medical neighborhood delivery model.

Strengths/Limitations: This article does not specify inclusion criteria for literature.

Generalizability to Medicare Population: Moderate; while findings are not specific to Medicare populations, findings are relevant to Medicare populations.

Methods: Literature review.

Payments for Accountable Specialty Care or “PASC.” American Medical Association; 2022:2.

<https://www.ama-assn.org/system/files/apm-payments-accountable-specialty-care-pasc.pdf>

Subtopic(s): Incentivizing Specialists to Drive Down Costs within PB-TCOC Models; Enhancing Performance Metrics

Type of Source: Report

Objective: To describe the PASC model.

Main Findings: In the PASC model, the specialist would take accountability for delivering specific types of services to the patient in a way designed to improve outcomes and/or reduce avoidable spending, and the specialist would receive an enhanced condition services (ECS) payment for the patient from Medicare. Benefits of the PASC model include improved equity in access and outcomes through higher payments for care of patients who have complex conditions and that ACO primary care physicians would be better able to refer patients to specialists who will deliver appropriate, high-quality care.

Strengths/Limitations: This report does not cite any peer-reviewed studies to support descriptions of the PASC model.

Generalizability to Medicare Population: Moderate; while this report does not focus on Medicare beneficiaries, the PASC model is relevant to Medicare populations.

Methods: N/A

Person-Centered Innovation – An Update on the Implementation of the CMS Innovation Center’s Strategy – Supplemental Document. 2022. <https://innovation.cms.gov/data-and-reports/2022/cmimi-strategy-refresh-imp-tech-report>

Subtopic(s): Enhancing Performance Metrics

Type of Source: Report

Objective: To provide technical documentation for the metrics that will be used to measure progress against the five strategic objectives outlined in the Innovation Center Strategy 1-year Status Report.

Main Findings: The strategic objectives are to: drive accountable care; advance health equity; support innovation; address affordability; and partner to achieve system transformation. Each objective has associated metrics to measure the Innovation Center’s progress toward these objectives.

Strengths/Limitations: Some metrics’ numerators are subject to change based on incoming and ending Innovation Center models. Some of the metrics may benefit from the inclusion of additional data sources (quantitative or qualitative) when considering the target goal.

Generalizability to Medicare Population: Strong; these objectives were designed to improve Medicare beneficiaries’ health outcomes.

Methods: A combination of data and literature reviews were used to calculate targets for the different metrics.

Prin M, Wunsch H. The Role of Stepdown Beds in Hospital Care. *Am J Respir Crit Care Med*. 2014;190(11):1210-1216. doi:10.1164/rccm.201406-1117PP

Subtopic(s): Nesting Specialty Episodes Within PB-TCOC Models

Type of Source: Journal article

Objective: To outline the importance and uses of stepdown beds and units in hospitals

Main Findings: Stepdown units (SDUs) provide an intermediary between the intensive care unit (ICU) and a regular ward. Patients in such units may still need some organ-related support and frequent nurse care but not as much as they would need in an ICU, but more than provided in a regular care ward. There needs to be more research surrounding SDUs to provide more data regarding appropriate staffing ratios and patient outcomes. SDUs may be able to decrease days spent in the ICU thus influencing hospital spending and revenues. There is a need for more research on SDUs.

Strengths/Limitations: N/A

Generalizability to Medicare Population: Moderate; while this study does not specifically focus on Medicare populations, the findings are relevant to Medicare populations.

Methods: N/A

Quinn AE, Trachtenberg AJ, McBrien KA, et al. Impact of Payment Model on the Behavior of Specialist Physicians: A Systematic Review. *Health Policy*. 2020;124(4):345-358. doi:10.1016/j.healthpol.2020.02.007

Subtopic(s): Enhancing Specialty Participation in Team-Based Models

Type of Source: Journal article

Objective: To describe the impact of specialist physician payment models across the domains of health care quality, clinical outcomes, utilization, access, costs, and patient and physician satisfaction.

Main Findings: FFS was associated with increased utilization, fewer adverse outcomes, and better access to care. Capitation and salary models led to fewer elective surgical procedures. The episode-based model was associated with an increased use of less costly resources.

Strengths/Limitations: This study identified only 11 literatures from which to draw from. Some literature identified had potentially serious methodological limitations; two literatures had limited descriptions of their methods and results.

Generalizability to Medicare Population: Strong; this study focused on Medicare capitation reform.

Methods: Systematic literature review.

Quinn KL, Shurrab M, Gitau K, et al. Association of Receipt of Palliative Care Interventions With Health Care Use, Quality of Life, and Symptom Burden Among Adults With Chronic Noncancer Illness: A Systematic Review and Meta-analysis. *JAMA*. 2020;324(14):1439-1450. doi:10.1001/jama.2020.14205

Subtopic(s): Incentivizing Specialists to Drive Down Costs within PB-TCOC Models

Type of Source: Journal article

Objective: To measure the association between palliative care and acute health care use, quality of life, and symptom burden in adults with chronic noncancerous illnesses.

Main Findings: Palliative care, compared with non-palliative, usual care, was significantly associated with less ED use, less hospitalization, and modestly lower symptom burden. Palliative care did not have associations with disease generic quality of life.

Strengths/Limitations: The study excluded other relevant conditions such as neurodegenerative disorders, other chronic lung diseases, rheumatologic diseases, and HIV/AIDS. Additionally, many elements of palliative care were also present in usual care, which may underestimate the magnitude of findings. The study also did not assess caregiver outcomes.

Generalizability to Medicare Population: Moderate; while this study was not specific to Medicare populations, the findings are relevant to Medicare beneficiaries.

Methods: Literature review.

Ranard BL, Werner RM, Antanavicius T, et al. Yelp Reviews Of Hospital Care Can Supplement And Inform Traditional Surveys Of The Patient Experience Of Care. *Health Aff (Millwood)*. 2016;35(4):697-705. doi:10.1377/hlthaff.2015.1030

Subtopic(s): Enhancing Performance Metrics

Type of Source: Journal article

Objective: To test the association between Yelp reviews and CAHPS survey domains

Main Findings: Hospitals with at least three Yelp reviews had average Yelp ratings that correlated relatively strongly with an HCAHPS survey about overall hospital rating. The Yelp review topics of caring health care workers, comforting, surgery procedure and perioperative and labor and delivery are all correlated with positive Yelp reviews, yet are not included in the HCAHPS. The Yelp topics that are included in the HCAHPS are clean, private, nice hospital rooms (which has a positive correlation with Yelp reviews); “horrible hospitals” and “rude doctor/nurse” combination (both of which have a negative correlation with Yelp ratings). Yelp topics insurance and billing and cost of hospital visit are both negatively correlated with Yelp reviews and not covered by HCAHPS.

Strengths/Limitations: Yelp reviews have inherent selection bias.

Generalizability to Medicare Population: Weak; there is no information about the demographics of who submitted Yelp reviews.

Methods: Coded Yelp topics using natural language processing and compared to HCAHPS Hospital Compare data set using descriptive statistics and Pearson’s correlation.

Raths D. What Is the New CMMI Strategy for Specialist-Focused APMs? Healthcare Innovation. Published November 11, 2022. Accessed December 4, 2022. <https://www.hcinnovationgroup.com/policy-value-based-care/alternative-payment-models/article/21286854/what-is-the-new-cmmi-strategy-for-specialistfocused-apms>

Subtopic(s): Incentivizing Specialists to Drive Down Costs within PB-TCOC Models; Enhancing Performance Metrics

Type of Source: Webpage

Objective: To describe CMMI’s new strategy for specialist-focused APMs.

Main Findings: In addition to episode-based models, CMMI has made gains through specialty models that focus on conditions, specifically for oncology and kidney disease. CMMI also has four explicit, discrete areas of focus in their specialty care strategy, which include: sharing data to enhance transparency; continuing CMMI’s history of broad, episode-based payment model tests that align with ACOs and primary care; supporting specialist integration in primary-focused models; and creating incentives within population-based models to encourage specialty care integration.

Strengths/Limitations: N/A

Generalizability to Medicare Population: Strong; the CMMI strategy is applicable to Medicare.

Methods: N/A

Reid RO, Tom AK, Ross RM, Duffy EL, Damberg CL. Physician Compensation Arrangements and Financial Performance Incentives in US Health Systems. *JAMA Health Forum*. 2022;3(1):e214634. doi:10.1001/jamahealthforum.2021.4634

Subtopic(s): Incentivizing Specialists to Drive Down Costs within PB-TCOC Models; Enhancing Performance Metrics

Type of Source: Journal Article

Objective: To outline primary care and specialist compensation arrangements across U.S. health system-affiliated physician organizations, and to assess the portion of total physician compensation based on quality and cost performance.

Main Findings: Volume-based compensation structures were the most common base compensation incentive component for primary and specialty practitioners. The percentage of performance-based compensation structures (based on quality and cost) were relatively rare. The most frequently cited method used by physicians to increase compensation was to increase the volume of services, reported as the top action by 22 physician organizations. The study also observed a weak association between the percentage of revenue of physician organizations from FFS and the PCP and specialist volume-based compensation percentage.

Strengths/Limitations: The study examined only four states, which may not be representative of the country at large, thus requiring caution when assessing external validity. Additionally, data collection focused on physician organizations leaders rather than doctors.

Generalizability to Medicare Population: Moderate; while this study does not specifically focus on Medicare populations, the findings are relevant to Medicare populations.

Methods: The study employed a mixed-methods design that included 31 physician organizations and 22 health systems across four states (California, Minnesota, Washington, and Wisconsin). Specific methods used included compensation document review, interviews with physician organizations directors, and survey research.

Rieger EY, Kushner JNS, Sriram V, et al. Primary Care Physician Involvement During Hospitalization: a Qualitative Analysis of Perspectives from Frequently Hospitalized Patients. *BMJ Open*. 2021;11(12):e053784. doi:10.1136/bmjopen-2021-053784

Subtopic(s): Current State of Specialist Integration in Primary Care

Type of Source: Journal article

Objective: To explore frequently hospitalized patients' experiences and preferences related to PCP involvement during hospitalization across two different care models.

Main Findings: Qualitative interviews revealed that frequently hospitalized patients value PCP involvement in hospital settings. Patients participating in a CCP emphasized how an established relationship with their PCP improved interdisciplinary coordination and engagement surrounding decision-making. Additionally, this study found that the potential for in-depth involvement of PCP during hospitalization is often unrealized.

Strengths/Limitations: Patients recruited for this embedded qualitative study may have been healthier and more engaged in their care relative to the general study population. Among CCP patients, those with generally positive experiences may have been more inclined to participate.

Generalizability to Medicare Population: Strong; this study population is specific to Medicare beneficiaries.

Methods: Semi-structured patient interviews within a randomized control trial.

Rittenhouse DR, Shortell S, Gillies R, et al. Improving Chronic Illness Care: Findings from a National Study of Care Management Processes in Large Physician Practices. *Medical Care Research and Review*. 2010;67(3):301-320. doi:10.1177/1077558709353324

Subtopic(s): Unintended Consequences from Provider Consolidation within PB-TCOC Models

Type of Source: Journal article

Objective: To determine the extent to which organizations use evidence-based care management processes (CMPs), and to identify external (market) influences and organizational capabilities associated with CMP use.

Main Findings: The study found that physician organizations use around half of recommended CMPs, most often disease registries, specially trained patient educators, and performance feedback to physicians. Physician organizations used more CMPs when reporting participating in quality improvement programs, having a patient-centered focus, and being owned by a hospital or health maintenance organization. IPAs and larger medical groups used more CMPs than smaller groups. Organizations externally evaluated on quality measures used more CMPs than other organizations.

Strengths/Limitations: Respondents might have overestimated the use of CMPs because either the medical director or administrative leaders were selected to be interviewed, however the authors did attempt to account for this. Additionally, a cross-sectional study design does not allow the authors to draw causal conclusions.

Generalizability to Medicare Population: Moderate; the study population included all physician organizations in the United States with 20 or more physicians which are considered by the authors to have the means to support the implementation of CMPs.

Methods: The study used data from a 2006-2007 national study of large physician organizations, medical groups, and independent practice associations (IPAs) to determine the extent to which organizations use CMPs, and to identify external or market influences and organizational capabilities associated with CMP use.

Rittenhouse DR, Casalino LP, Gillies RR, Shortell SM, Lau B. Measuring the Medical Home Infrastructure in Large Medical Groups. *Health Aff (Millwood)*. 2008;27(5):1246-1258. doi:10.1377/hlthaff.27.5.1246

Subtopic(s): Unintended Consequences from Provider Consolidation within PB-TCOC Models

Type of Source: Journal article

Objective: To inspect the extent of adoption of medical home infrastructure components among large primary care and multispecialty medical groups and their association with medical group size and ownership.

Main Findings: The study found that compared to ownership by physicians, ownership by a larger entity, such as a hospital or an HMO, is also associated with increased PCMH infrastructure. The study's data on the infrastructure components of the PCMH model demonstrate that the model has a long way to go to achieve widespread implementation.

Strengths/Limitations: Authors studied only the infrastructure components of the PCMH model and the NSPO2 data did not include measures of the personal physician or payment reform components. Additionally, their measures for each of the infrastructure components were not comprehensive.

Generalizability to Medicare Population: Moderate; the study population included all physician organizations in the United States with 20 or more physicians which are considered by the authors to have the means to support the implementation of care management processes.

Methods: Authors used data from the 2006-07 National Study of Physician Organizations, a thirty-five-minute phone survey conducted between March 2006 and March 2007 with the

medical director, president, or CEO of all U.S. medical groups and IPAs having 20 or more physicians, to examine the use of medical home infrastructure components.

Robinson JC, Casalino LP. Vertical Integration and Organizational Networks in Health Care. *Health Affairs*. 1996;15(1):7. doi:10.1377/hlthaff.15.1.7

Subtopic(s): Unintended Consequences from Provider Consolidation within PB-TCOC Models

Type of Source: Journal article

Objective: To display the linkages between primary care-centered medical groups and specialists and between physicians and hospitals under managed care.

Main Findings: As capitation has replaced FFS payment, specialists have changed from being medical groups' major source of revenue to being their major potential source of loss. Cooperation between physicians and hospitals can encourage efficient use of services for hospitalized patients and a smooth transition to PAC. Integration can discourage the duplication of clinical services such as radiology and administrative services such as utilization management and discharge planning.

Strengths/Limitations: Article was published in 1996 and may have limited interpretation for the present day.

Generalizability to Medicare Population: Weak; the article does not discuss Medicare.

Methods: The paper evaluates two alternative forms of organizational coordination: "vertical integration," based on unified ownership, and "virtual integration," based on contractual networks.

Robinson JC, Miller K. Total Expenditures per Patient in Hospital-Owned and Physician-Owned Physician Organizations in California. *JAMA*. 2014;312(16):1663-1669. doi:10.1001/jama.2014.14072

Subtopic(s): Unintended Consequences from Provider Consolidation within PB-TCOC Models

Type of Source: Journal article

Objective: To determine whether total expenditures per patient were higher in physician organizations (integrated medical groups and IPAs) owned by local hospitals or multihospital systems compared with groups owned by participating physicians.

Main Findings: Between 2009 and 2012, hospital-owned physician organizations in California incurred higher expenditures for commercial HMO enrollees for professional, hospital, laboratory, pharmaceutical, and ancillary services than physician-owned organizations. Although organizational consolidation may increase some forms of care coordination, it may be linked with higher total expenditures.

Strengths/Limitations: The study's measure excludes payment for mental health care. We were not able to distinguish whether total expenditures reflect differences in unit prices vs differences in the volume of services provided and the measure reflects the point of view of insurers and consumers, for whom expenditures are measured in terms of what is paid to providers and manufacturers. It does not reflect the production costs incurred by the physician organizations, hospitals, pharmaceutical firms, and other providers.

Generalizability to Medicare Population: Weak; the data did not include patients covered by commercial preferred provider organization (PPO) insurance, Medicare, or Medicaid.

Methods: The authors reviewed data on total expenditures for the care provided to 4.5million patients treated by integrated medical groups and IPAs in California between 2009 and 2012.

Roer D, Fukui M, Smith N, Nissenson AR, Becker BN. Current Value-Based Care Models Need Greater Emphasis on Specialty Care. *The American Journal of Accountable Care*. 2019;7(3).

<https://www.ajmc.com/view/current-valuebased-care-models-need-greater-emphasis-on-specialty-care>

Subtopic(s): Enhancing Performance Metrics

Type of Source: Journal article

Objective: To summarize findings from current specialty care models and recommend strategies, such as the utilization of APMs, to more effectively achieve specialty, value-based care.

Main Findings: Currently, the US health care system is failing to adequately achieve the Quadruple Aim of improving patient engagement, the health of a population, and clinical engagement while reducing TCOC. In efforts to better address this goal, the article outlines the benefits of specialty ACO environments and the evidence to show specialty providers and ACO goals can be aligned. Lastly, the article recommends payment reform models or APMs as a tool to more effectively address the Quadruple Aim.

Strengths/Limitations: The article provides specific examples of how specialty providers' goals/interests can be aligned with ACO objectives.

Generalizability to Medicare Population: Strong; the report describes APMs and other vehicles to benefit Medicare populations.

Methods: Literature review.

RTI International. Accountable Health Communities (AHC) Model Evaluation: First Evaluation Report.

2020. <https://innovation.cms.gov/data-and-reports/2020/ahc-first-eval-rpt>

Subtopic(s): Current State of Specialist Integration in Primary Care

Type of Source: Report

Objective: To assess whether connecting Medicare and Medicaid beneficiaries to community resources can improve health outcomes and reduce costs by addressing health-related social needs (HRSNs).

Main Findings: There was a high acceptance of navigation and some utilization reductions among the high-need population targeted by the AHC Model, but evidence at this early evaluation stage that indicates that HRSNs were resolved can be limited. Of all issues, food insecurity was reported the most common HRSN.

Strengths/Limitations: This evaluation only covers the first year of the AHC Model, so the Model's longer-term impacts have not yet been realized.

Generalizability to Medicare Population: Strong; the report directly addresses Medicare beneficiaries and the implementation of the AHC model.

Methods: A variety of methods were used in this report, ranging from in-person and telephone communication to difference-in-differences impact analyses.

Rural Policy Research Institute. February 2012. Humboldt County, California: A Promising Model for Rural Human Services Integration and Transformation. https://rupri.org/wp-content/uploads/HS_Humboldt_Feb2012.pdf

Subtopic(s): Current State of Specialist Integration in Primary Care

Type of Source: Report

Objective: To describe an approach for aligning resources and integrating human service into locally and regionally based systems.

Main Findings: Offering accessible local hubs for service integration and locating essential services near clients were important to the success of the model. The Rural Human Services

Panel identified rural areas where these elements were operational and determined the extent to which these factors could lead to more effective use of resources and improved access to services. Humboldt County, California possessed many of these attributes, as described in the report.

Strengths/Limitations: This report is a case study that may not be generalizable to other communities.

Generalizability to Medicare Population: Moderate; this report does not focus on the Medicare population, but findings may be applicable to the health and wellbeing of older adults.

Methods: The Rural Human Services Panel determined desirable features needed for integrating human services into community health systems. They conducted a national search to identify rural areas where some or all of these elements were operational, which led them to Humboldt County, California.

Scharf DM, Eberhart NK, Schmidt Hackbarth N, et al. Evaluation of the SAMHSA Primary and Behavioral Health Care Integration (PBHCI) Grant Program: Final Report (Task 13). RAND Corporation. 2014.

https://www.rand.org/pubs/research_reports/RR546.html

Subtopic(s): Current State of Specialist Integration in Primary Care

Type of Source: Report

Objective: To evaluate the Substance Abuse and Mental Health Services Administration's (SAMHSA's) PBHCI grant program.

Main Findings: Most consumers in the PBHCI program had some primary and behavioral health care contact during their first year in the program, and more than half accessed a basic package of integrated services, including screening or treatment planning, primary care, and case management. Additionally, PBHCI consumers showed improvements in some, but not all, physical health indicators examined. Overall, several program features had an effect on consumer access to integrated care.

Strengths/Limitations: First, PBHCI programs were not equally represented in web survey data as some programs had more completion rates than others. Additionally, since survey data was self-reported, there may have been systematic respondent bias. Further, disgruntled staff may have been eager to complete the survey and air grievances, thus contributing negative bias to survey results.

Generalizability to Medicare Population: Moderate; while the PBHCI is not Medicare-specific, findings are relevant to Medicare populations.

Methods: Comparative effectiveness study.

Schrager S. Integrating Behavioral Health Into Primary Care. American Academy of Family Physicians. 2021. <https://www.aafp.org/pubs/fpm/issues/2021/0500/p3.html>

Subtopic(s): Current State of Specialist Integration in Primary Care

Type of Source: Commentary

Objective: To explain one way of integrating behavioral health into primary care.

Main Findings: One integration model uses a behavioral health care consultant (BHC)—a psychologist, licensed clinical social worker, or other behavioral health professional—as a member of the health care team to facilitate a team-based approach to supporting the work of the PCP. This model can be summarized with the acronym GATHER: generalist, accessible, team-based, high productivity, education, routine. Barriers to integrated care include billing and coding.

Strengths/Limitations: N/A

Generalizability to Medicare Population: Moderate; while this article does not specifically focus on Medicare populations, the findings are relevant to Medicare populations.

Methods: N/A

Scott KW, Orav EJ, Cutler DM, Jha AK. Changes in Hospital–Physician Affiliations in U.S. Hospitals and Their Effect on Quality of Care. *Ann Intern Med.* 2017;166(1):1-8. doi:[10.7326/M16-0125](https://doi.org/10.7326/M16-0125)

Subtopic(s): Unintended Consequences from Provider Consolidation within PB-TCOC Models

Type of Source: Journal article

Objective: To evaluate changes in US acute care hospitals after switching to employment relationships with their physicians, and to assess how this switch affected quality of care.

Main Findings: Hospitals have increasingly become employers of physicians over the last decade. The study found no association between switching to an employment model and improvement in quality of care.

Strengths/Limitations: The study examined performance up to two years after switching the employment model; however, effects may have taken longer to appear.

Generalizability to Medicare Population: Moderate; although the results may apply to Medicare providers and beneficiaries, Medicare is not the focus of the study.

Methods: Retrospective cohort study of U.S. acute care hospitals between 2003 and 2012 that assessed risk-adjusted hospital-level mortality rates, 30-day readmission rates, length of stay, and patient satisfaction scores for common medical conditions.

Shetty VA, Balzer LB, Geissler KH, Chin DL. Association Between Specialist Office Visits and Health Expenditures in Accountable Care Organizations. *JAMA Network Open.* 2019;2(7):e196796. doi:10.1001/jamanetworkopen.2019.6796

Subtopic(s): Incentivizing Specialists to Drive Down Costs within PB-TCOC Models; Enhancing Performance Metrics

Type of Source: Journal article

Objective: To examine the relationship between ACO specialist encounter proportions (i.e., the ratio of specialist office visits compared to overall office visits) and beneficiary spending.

Main Findings: The authors found that the ACOs with the highest and lowest specialist encounter proportions had the highest expenditure. ACOs with a specialist encounter proportion between 40 and 45 percent demonstrated the lowest per beneficiary spending. ACOs with the lowest specialist encounter proportion had a mean of 14.6 percent higher expenditures and ACOs with the highest specialist encounter proportion had a mean of 11.1 percent higher expenditures. At the same time, ACOs with the lowest specialist encounter proportions had higher ED visits, more hospital discharges, and more SNF discharges, whereas ACOs with the highest specialist encounter group had fewer ED visits, fewer hospital discharges, and fewer SNF discharges.

Strengths/Limitations: Important limitations include the following: the authors analyzed outcomes of MSSP ACOs and may not be able to generalize findings beyond MSSP ACOs; the authors were unable to distinguish office visits from ACO-affiliated and non-ACO-affiliated clinicians and were thus unable to quantify the amount of leakage that occurred; and the authors were unable to account for several possible confounders, including ownership status, market share, and rurality.

Generalizability to Medicare Population: Strong; the study focuses on ACO data from the MSSP.

Methods: Cross-sectional analysis of five years of public use data on ACOs in the MSSP.

Short MN, Ho V. Weighing the Effects of Vertical Integration Versus Market Concentration on Hospital Quality. *Med Care Res Rev.* 2020;77(6):538-548. doi:10.1177/1077558719828938

Subtopic(s): Enhancing Performance Metrics

Type of Source: Journal article

Objective: To test whether vertical integration between hospitals and physicians or if increases in hospital market concentration influence patient outcomes.

Main Findings: The study suggests that vertical integration may significantly improve quality for only a small subset of quality measures. Yet, increased market concentration is strongly associated with reduced quality across all 10 patient satisfaction measures.

Strengths/Limitations: This study analyzes each of the CAHPS satisfaction measures.

Generalizability to Medicare Population: Moderate; while this study does not specifically focus on Medicare populations, findings are relevant to Medicare beneficiaries.

Methods: Probit regression models.

Shrank WH, Chernew ME, Navathe AS. Hierarchical Payment Models—A Path for Coordinating Population- and Episode-Based Payment Models. *JAMA.* 2022;327(5):423-424.

Doi:10.1001/jama.2021.23786

Subtopic(s): Incentivizing Specialists to Drive Down Costs within Population-Based TCOC Models

Type of Source: Blog post

Objective: To articulate how to better coordinate and integrate population- and episode-based APMs.

Main Findings: The post argues that payment reform should be centered around a core population-based model that can serve as an umbrella of accountability. Under this hierarchical system, the population-based model would be accountable for total cost and quality of care as well as other care management and coordination activities. The article also highlights the importance of capturing key features of episodic models and integrating them into the broader population-based models.

Strengths/Limitations: N/A

Generalizability to Medicare Population: Strong; the paper focuses on integrating Medicare APMs.

Methods: N/A

Silcox C, Bhuiyan Khan B, Ray R, Higgins A, Lopez MH, McClellan M. Paying for Value: Improving Outcomes, Costs, and Access through a Condition-Based Bundle Payment Model. Duke Margolis Center for Health Policy; 2020:18. <https://healthpolicy.duke.edu/sites/default/files/2020-10/Paying%20for%20Value%20-%20Case%20study%203%20-%20October%202020%20Final.pdf>

Subtopic(s): Nesting Specialty Episodes within PB-TCOC Models

Type of Source: Report

Objective: To outline a bundled payment model design agnostic to procedure type that improves long term patient outcomes.

Main Findings: The report outlined a condition-based bundle payment model that aligns incentives around shared decision-making, coordination of long-term PAC, and the use of technology to optimize outcomes.

Strengths/Limitations: Further analysis is needed to propose and implement an actionable model.

Generalizability to Medicare Population: Strong; the model is largely based on analyses of Medicare FFS claims data.

Methods: Analysis of FFS claims data.

Singer AE, Goebel JR, Kim YS, et al. Populations and Interventions for Palliative and End-of-Life Care: A Systematic Review. *Journal of Palliative Medicine*. 2016;19(9):995-1008. doi:10.1089/jpm.2015.0367

Subtopic(s): Incentivizing Specialists to Drive Down Costs within Population-Based TCOC Models

Type of Source: Journal article

Objective: To inform how payers and providers should identify patients with “advanced illness” and the specific interventions they should implement.

Main Findings: Most interventions included a nurse, social workers, and home-based approaches. Overall, the intervention improved communication and care planning, psychosocial health, and patient and caregiver experiences. Many interventions reduced hospital use, but economic impacts were poorly characterized.

Strengths/Limitations: The literature review inclusion criteria were limited to randomized control trials, excluding observational and qualitative study designs. Additionally, this study focused on health service interventions only, limiting the extent of interventions analyzed.

Generalizability to Medicare Population: Moderate; while this study does not specifically analyze the impact on Medicare populations, findings are relevant to Medicare populations.

Methods: Systematic literature review.

Smith B. CMS Innovation Center at 10 Years — Progress and Lessons Learned. *N Engl J Med*. 2021;384(8):759-764. doi:10.1056/NEJMs2031138

Subtopic(s): Enhancing Performance Metrics

Type of Source: Journal article

Objective: To describe the achievements and lessons learned from the first ten years of CMMI, and to outline essential next steps and considerations to effectively test innovative payment and service delivery models and transform the American health care system.

Main Findings: CMMI has overseen 54 new health care models and increased awareness and interest in value-based care. However, these models have also shed light on the shortcomings of voluntary participation and the need for reasonable benchmarks. As the Center aims to continue quality improvements and enhance operational capabilities, this article lists eight specific lessons learned that should be considered for future initiatives.

Strengths/Limitations: The article provides detailed examples and evidence from a variety of existing payment models and outlines necessary next steps but does not provide any indication of an anticipated timeline, level of effort, or barriers.

Generalizability to Medicare Population: Strong; the article discusses value-based care for Medicare beneficiaries, specifically referencing the CJR, Comprehensive End-Stage Renal Disease (ESRD), and HHVBP Models.

Methods: Literature review.

Stephens AR, Presson AP, Chen D, Tyser AR, Kazmers NH. Inter-Specialty Variation of the Press Ganey Outpatient Medical Practice Survey. *Medicine (Baltimore)*. 2021;100(12):e25211.

Doi:10.1097/MD.00000000000025211

Subtopic(s): Enhancing Performance Metrics

Type of Source: Journal article

Objective: To evaluate if Press Ganey scores differ between medical specialties.

Main Findings: Patient satisfaction varied considerably among specialties, with patients being the least satisfied with pain management and the most satisfied with radiation oncology (both are statistically significant). Female patients were more likely than men to be satisfied with

their provider and pediatric populations were less satisfied than adult populations with their provider. Patients were slightly more likely to be satisfied with a female provider than a male provider.

Strengths/Limitations: The study used data from one health care system and may not be generalizable to other health care systems.

Generalizability to Medicare Population: Moderate; while this study does not specifically focus on Medicare populations, the findings are relevant to Medicare populations.

Methods: Analyzed patient satisfaction scores between January 2014 and December 2016 from an academic hospital system using odds ratios and chi-squared tests.

Substance Abuse and Mental Health Services' Administration. Minority AIDS Initiative Continuum of Care Pilot - Integration of HIV Prevention and Medical Care into Mental Health and Substance Abuse Treatment Programs for Racial/Ethnic Minority Populations at High Risk for Behavioral Health Disorders and HIV. <https://www.samhsa.gov/grants/grant-announcements/ti-14-013>

Subtopic(s): Current State of Specialist Integration in Primary Care

Type of Source: Grant

Objective: To describe grant opportunity by the SAMHSA, Center for Substance Abuse Treatment (CSAT), Center for Mental Health Services (CMHS), and Center for Substance Abuse Prevention (CSAP) for organizations piloting the integration of HIV medical care into behavioral health programs.

Main Findings: SAMHSA funds will be used by pilot programs for behavioral health screening, primary substance abuse and HIV prevention, substance abuse and mental health treatment, creation of infrastructure to provide integrated care, HIV and hepatitis screening and testing, and hepatitis vaccination. Funds must also be used to serve populations of focus for this program: racial/ethnic minority populations at high risk for or have a mental and/or substance abuse disorder and who are most at risk for or living with HIV. SAMHSA expects increased HIV testing, increased diagnosis of HIV among behavioral health clients, increased number of clients who are linked to HIV medical care, increased number of behavioral health clients who are retained in HIV medical care, increased number of behavioral health clients who are receiving antiretroviral therapy (ART), improved adherence to behavioral treatment and ART, increased number of behavioral health clients who have sustained viral suppression, and increased adherence and retention in behavioral health treatment.

Strengths/Limitations: N/A

Generalizability to Medicare Population: Weak; this pilot program is only relevant to a small subset of Medicare beneficiaries.

Methods: N/A

Grace Terrell, Julian Bobbitt. Value-Based Healthcare and Payment Models: Including Frontline Strategies for 20 Clinical Subspecialties. American Association for Physician Leadership; 2019.

Subtopic(s): N/A

Type of Source: Book

Objective: To provide strategies to aid organizations' transformation to value-based care.

Main Findings: N/A

Strengths/Limitations: N/A

Generalizability to Medicare Population: Strong; while the book is not specific to Medicare value-based care models, the Medicare program tests many payment models that impact beneficiaries.

Methods: N/A

Tilkemeier PL, Hendel RC, Heller GV, Case JA, eds. Quality Evaluation in Non-Invasive Cardiovascular Imaging. Springer International Publishing; 2016:21-28. doi:10.1007/978-3-319-28011-0_3

Subtopic(s): Key Highlights; Incentivizing Specialists to Drive Down Costs within Population-Based TCOC Models

Type of Source: Book chapter

Objective: To describe the relationship between quality and cost, how they influence overall health care value, and mechanisms to achieve value.

Main Findings: In order to improve the overall value of health care, quality must be improved and/or costs must be reduced. The U-shaped curve depicting the relationship between quality and cost is an effective way of identifying and assessing current value and how to modify quality and/or costs to achieve optimal value. Mechanisms to improve quality and lower cost include a value stream analysis, an emphasis on investment for health care tools and technologies, and the use of interdisciplinary health care teams.

Strengths/Limitations: Mechanisms for achieving value suggested in this chapter are broad and, therefore, must be tailored to individual health systems in order to be most effective.

Generalizability to Medicare Population: Moderate; while this chapter does not focus on Medicare populations, findings impact the value of care delivered to Medicare beneficiaries.

Methods: Literature synthesis.

Williams H, Donaldson SL, Noble S, et al. Quality improvement priorities for safer out-of-hours palliative care: Lessons from a mixed-methods analysis of a national incident-reporting database. *Palliat Med.* 2019;33(3):346-356. doi:10.1177/0269216318817692

Subtopic(s): Incentivizing Specialists to Drive Down Costs within Population-Based TCOC Models

Type of Source: Journal article

Objective: To explore the nature and causes of unsafe palliative care delivery to patients receiving primary care services outside of normal working hours.

Main Findings: The study identified the following unsafe palliative care delivery practices: errors in medication provision, securing access to timely care, inefficient information processes, and non-medication-related treatment provision. Actual harm was present in almost two-thirds of patient safety incident reports; many of these harms included emotional and psychological distress to patients, families, and caregivers.

Strengths/Limitations: This study is the largest examination of patient safety incidents involving patients requiring palliative care and the first to analyze unsafe care for this group of patients in the primary care setting. One limitation of this study is that all incident-reporting systems suffer from under-reporting.

Generalizability to Medicare Population: Moderate; this study does not focus on Medicare populations, but the findings are relevant to Medicare populations.

Methods: This study conducted a mixed-methods cross-sectional analysis, including a literature review and a descriptive quantitative analysis.

Williams JS, Walker RJ, Egede LE. Achieving Equity in an Evolving Healthcare System: Opportunities and Challenges. *The American Journal of the Medical Sciences.* 2016;351(1):33-43. doi:10.1016/j.amjms.2015.10.012

Subtopic(s): Incentivizing Specialists to Drive Down Costs within Population-Based TCOC Models

Type of Source: Journal article

Objective: To provide a review of historical perspectives on health-related disparities and describe strategies for health care systems to eliminate these disparities.

Main Findings: Disparities are prevalent in conditions such as diabetes mellitus, cancer, renal diseases and transplantation, mental health, cardiovascular disease, and stroke. Opportunities to eliminate health disparities include comprehensive data collection, increasing workforce diversity, workforce training, and personalized medicine.

Strengths/Limitations: This article does not provide their inclusion criteria for literature.

Generalizability to Medicare Population: Moderate; while this study does not specifically focus on Medicare populations, findings are relevant to Medicare populations.

Methods: Literature review.

Wilson CG, Ramage M, Fagan EB. A Primary Care Response to COVID-19 for Patients with an Opioid Use Disorder. *J Rural Health*. 2021;37(1):169-171. doi:10.1111/jrh.12438

Subtopic(s): Current State of Specialist Integration in Primary Care

Type of Source: Commentary

Objective: To examine the impact of the COVID-19 pandemic on patients treated with buprenorphine/naloxone for an opioid use disorder (OUD) and how organizations are supporting these patients.

Main Findings: Patients with OUD face disproportionate pandemic-related impacts as many rely on hourly employment (which has been reduced or eliminated), primary care providers are rescheduling chronic disease management visits, and many patients have unreliable cell phone service, making telehealth appointments a challenge. During this time, The SAMHSA is providing resources on how to maintain continuity of substance use treatment services while meeting the Centers for Disease Control and Prevention's (CDC) recommendations regarding social distancing. Additionally, the American Society of Addiction Medicines houses a centralized location of resources regarding billing, telehealth regulations, and compliance with state and federal rules.

Strengths/Limitations: N/A

Generalizability to Medicare Population: Moderate; while this article is not specific to Medicare populations, findings are relevant to Medicare populations.

Methods: N/A

Wilson EK, Siegfried NR, Sorensen AV. Patients' and Caregivers' Experiences with the Multi-Payer Advanced Primary Care Practice Demonstration. *J Gen Intern Med*. 2020;35(11):3181-3187. doi:10.1007/s11606-020-06177-3

Subtopic(s): Current State of Specialist Integration in Primary Care

Type of Source: Journal article

Objective: To understand patient and caregiver experiences with PCMHs participating in the Multi-Payer Advanced Primary Care Practice (MAPCP) Demonstration.

Main Findings: Medicaid and dual-eligible beneficiaries generally had less-positive experiences than Medicare beneficiaries. Most participants mentioned that their practices did not solicit feedback from them about their care, but many noticed changes in recent years. Opportunities exist to improve patient awareness of and involvement in PCMH practice transformation.

Strengths/Limitations: Selection criteria for this study led to a sample that was primarily non-Hispanic White, over age 60, and English-speaking; therefore, results may not be generalizable to other groups. Additionally, this study was unable to summarize the experiences of children enrolled in Medicaid.

Generalizability to Medicare Population: Moderate; only a portion of this study population are Medicare beneficiaries.

Methods: Focus group discussions.

Woleben J, Palicpic C, Zipp R. US hospital market concentration is rising as debate over consolidation persists. S&P Global Market Intelligence. Published October 3, 2019. Accessed November 18, 2022. <https://www.spglobal.com/marketintelligence/en/news-insights/trending/gIOfkGcb0OoQt7NeuF9rTw2>

Subtopic(s): Unintended Consequences from Provider Consolidation within PB-TCOC Models

Type of Source: Online article

Objective: To present the debate for the benefits and disadvantages of mergers and acquisitions in the United States.

Main Findings: Between 2010 and 2017 there were 712 merger and acquisitions occurring among hospitals. Researchers argue that these mergers are not necessarily beneficial for patients, as these acquisitions are often associated with rising prices. Meanwhile a report from the American Hospital Association states that mergers are beneficial for both patient care and hospital revenue, however they did also find a positive relationship between price increases and hospital concentration. Lastly the article notes that hospital concentration is significantly lower in metropolitan cities such as New York City or Philadelphia.

Strengths/Limitations: N/A

Generalizability to Medicare Population: Moderate; while this study does not specifically focus on Medicare populations, the findings are relevant to Medicare populations.

Methods: N/A

Appendix G. References

- ¹ American College of Physicians. The Patient-Centered Medical Home Neighbor. The Interface of the Patient-Centered Medical Home with Specialty/Subspecialty Practices. (2010). https://www.acponline.org/sites/default/files/documents/advocacy/current_policy_papers/assets/pcmh_neighbors.pdf
- ² Cyr ME, Etchin AG, Guthrie BJ, Benneyan JC. Access to specialty healthcare in urban versus rural US populations: a systematic literature review. *BMC Health Services Research*. 2019;19(1):974. doi:10.1186/s12913-019-4815-5
- ³ Fortney JC, Pyne JM, Mouden SB, et al. Practice-Based Versus Telemedicine-Based Collaborative Care for Depression in Rural Federally Qualified Health Centers: A Pragmatic Randomized Comparative Effectiveness Trial. *AJP*. 2013;170(4):414-425. doi:10.1176/appi.ajp.2012.12050696
- ⁴ Litke J, Spoutz L, Ahlstrom D, Perdew C, Llamas W, Erickson K. Impact of the clinical pharmacy specialist in telehealth primary care. *American Journal of Health-System Pharmacy*. 2018;75(13):982-986. doi:10.2146/ajhp170633
- ⁵ Arora S, Kalishman S, Dion D, et al. Partnering urban academic medical centers and rural primary care clinicians to provide complex chronic disease care. *Health Aff (Millwood)*. 2011;30(6):1176-1184. doi:10.1377/hlthaff.2011.0278
- ⁶ Hostetter M, Klein S. The Perils and Payoffs of Alternative Payment Models for Community Health Centers. The Commonwealth Fund. Controlling Health Care Costs: Transforming Care. 2022. doi:10.26099/2ncb-6738
- ⁷ Government Accountability Office. Information on the Transition to Alternative Payment Models by Providers in Rural, Health Professional Shortage, or Underserved Areas. GAO-22-104618. 2021. <https://www.gao.gov/assets/720/717649.pdf>
- ⁸ Hostetter M, Klein S. The Perils and Payoffs of Alternative Payment Models for Community Health Centers. The Commonwealth Fund. Controlling Health Care Costs: Transforming Care. 2022. doi:10.26099/2ncb-6738
- ⁹ Erfani P, Figueroa JF, Lam MB. Reforms to the Radiation Oncology Model: Prioritizing Health Equity. *Int J Radiat Oncol Biol Phys*. 2021;110(2):328-330. doi:10.1016/j.ijrobp.2021.01.029
- ¹⁰ Hostetter M, Klein S. The Perils and Payoffs of Alternative Payment Models for Community Health Centers. The Commonwealth Fund. Controlling Health Care Costs: Transforming Care. 2022. doi:10.26099/2ncb-6738
- ¹¹ Hostetter M, Klein S. The Perils and Payoffs of Alternative Payment Models for Community Health Centers. The Commonwealth Fund. Controlling Health Care Costs: Transforming Care. 2022. doi:10.26099/2ncb-6738
- ¹² Hostetter M, Klein S. The Perils and Payoffs of Alternative Payment Models for Community Health Centers. The Commonwealth Fund. Controlling Health Care Costs: Transforming Care. 2022. doi:10.26099/2ncb-6738
- ¹³ Hostetter M, Klein S. The Perils and Payoffs of Alternative Payment Models for Community Health Centers. The Commonwealth Fund. Controlling Health Care Costs: Transforming Care. 2022. doi:10.26099/2ncb-6738
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