

POLICY ANALYSIS

A Review of Proposed Models Deliberated and Voted on by the Physician- Focused Payment Model Technical Advisory Committee (PTAC) as of December 2020

DATE:
DECEMBER 2025

PRESENTED TO:
Marsha Clarke
Office of the Assistant Secretary
for Planning and Evaluation
Department of Health and Human Services
200 Independence Avenue, SW
Washington, DC 20201

ORIGINAL REPORT MARCH 2020:
Kelly Devers, PhD, NORC
Adele Shartzer, PhD, Urban Institute
Gretchen Williams Torres, NORC
Robert Berenson, MD, Urban Institute

REVISION UPDATED JULY 2025:
MacKenzie Hughes, PhD, NORC
Jennifer Welch, MPH, NORC
Audrey Weiss, PhD, NORC
Acknowledgement: Kelsey Shields

This analysis was prepared under contract #HHSP233201500048I-HHSP23337014T between the Department of Health and Human Services' Office of Health Policy of the Assistant Secretary for Planning and Evaluation (ASPE) and NORC at the University of Chicago. The opinions and views expressed in this analysis are those of the authors. They do not reflect the views of the Department of Health and Human Services, the contractor, or any other funding organizations. This analysis was completed and submitted in July 2025.

 **NORC** at the University of Chicago

 **URBAN**
INSTITUTE

Table of Contents

Executive Summary	4
Findings	4
Summary	5
Purpose and Overview	6
Background	7
Data and Methods	9
Findings	13
Entities Submitting Proposals.....	13
Areas of Focus: Providers, Settings, and Conditions.....	13
Proposed Models: Origins and History	15
Issues Targeted: Care Delivery.....	16
Issues Targeted: Payment	19
Proposed Models for Care Delivery	21
Proposed Payment Models	24
Proposed Approaches to Risk Adjustment	31
Proposed Performance Measures for Quality and Cost.....	31
Conclusion	34
Appendix 1: Detailed Overview of PFPMs Deliberated and Voted on by PTAC, December 2016–December 2020	35
Appendix 2: Detailed Summary of Content Related to Selected Themes in Proposals Reviewed By PTAC, December 2016–December 2020	38
Palliative Care.....	38
Primary Care.....	42
Acute Care.....	45
Bridging Acute Care with Community-Based Care.....	49
Chronic Wound Care	52

List of Exhibits

Exhibit 1:	Who are Eligible Clinicians in PFPMs?	8
Exhibit 2:	PFPMs Reviewed in PTAC Reports to the Secretary as of December 2020	9
Exhibit 3:	Status of Models Proposed to PTAC December 2016–December 2020	11
Exhibit 4:	Types of Entities Submitting Proposals to PTAC, December 2016–December 2020	13
Exhibit 5:	Focus Areas of Proposed Models Reviewed by PTAC, December 2016–December 2020.....	14
Exhibit 6:	Care Delivery and Payment Issues Targeted in PFPMs Deliberated and Voted on by PTAC, December 2016–December 2020	19
Exhibit 7:	Types of Care and Delivery Issues and Examples of Proposed Solutions in PFPMs Deliberated and Voted on by PTAC, December 2016–December 2020 ...	23
Exhibit 8:	Approaches to Payment for Service Delivery in PFPMs Deliberated and Voted on by PTAC, December 2016–December 2020	24
Exhibit 9:	Payment Methodologies Associated with Proposed PFPM Focus Areas in PFPMs Deliberated and Voted on by PTAC, December 2016–December 2020 ...	25
Exhibit 10:	Overview of PBPM Models Deliberated and Voted on by PTAC, December 2016– December 2020	26
Exhibit 11:	CMS Waivers to Medicare Payment Rules in PBPM Models Deliberated and Voted on by PTAC, December 2016–December 2020.....	28
Exhibit 12:	Approaches to Financial Risk in PFPMs Deliberated and Voted on by PTAC, December 2016–December 2020	29
Exhibit 13:	Considerations for Assessing the Role of Quality Measures in APMs	32

Executive Summary

Under the bipartisan Medicare Access and CHIP Reauthorization Act (MACRA) of 2015, Congress significantly changed Medicare fee-for-service (FFS) physician payment methods. The law also specifically encouraged 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). To highlight themes and common elements across proposals regarding issues targeted and proposed solutions, this report reviews all proposed payment models submitted to PTAC and deliberated and voted on as of December 31, 2020. This report updates a March 2020 analysis to incorporate reports to the Secretary (RTS) submitted between December 2019 and December 2020.¹

Findings

As of December 2020, 35 proposed models had been submitted to PTAC for review, and PTAC had deliberated and voted on 28 proposals, and concluded that the criteria for PFPMs established by the Secretary are not applicable to two of the 28 proposals. The remaining 7 proposals (of the original 35 submissions) were withdrawn prior to PTAC deliberation and voting.

Submitter types. The 35 submissions span a range of submitter types, most commonly national provider associations or specialty societies (11 submitters) and regional/local single-specialty physician practices (7 submitters).

Areas of focus. The 28 proposed models deliberated and voted on by PTAC fall into three main categories:

- **Health Conditions:** Targeting care delivery for beneficiaries with a particular health condition, such as chronic obstructive pulmonary disease (COPD) or cancer (16 proposals)
- **Providers or Settings:** Addressing a particular provider type or setting, such as primary care clinicians or inpatient hospital services (11 proposals, which includes two proposals that also focused on a health condition, and thus are included in the health conditions category as well)
- **Broadly Applicable:** Covering a range of conditions or providers (3 proposals)

Origins and history. Most of the proposed models deliberated and voted on by PTAC proposed to either build on existing payment reform efforts or pilot new approaches. Six proposed models leveraged existing APMs, and six were based on Health Care Innovation Awards (HCAs) or Transforming Clinical Practices Initiatives (TCPIs) administered by the Center for Medicare & Medicaid Innovation (Innovation Center) at the Centers for Medicare & Medicaid Services (CMS). In addition, five proposed models explicitly sought to pilot a new payment concept on a small scale.

¹ Devers K, Shartzner A, Williams Torres G, Berenson R. A Review of Proposed Models Deliberated and Voted on by the Physician-Focused Payment Model Technical Advisory Committee (PTAC) as of December 2019. Office of the Assistant Secretary for Planning and Evaluation, Department of Health and Human Services; 2020.

<https://aspe.hhs.gov/sites/default/files/private/pdf/252376/ProposedModelsDeliberatedandVotedonasofDec2019.pdf>

Gaps targeted. Many of the proposed models identified a number of care delivery and payment gaps in the current Medicare FFS program. Care delivery gaps clustered around a few themes: suboptimal care management; limited access to services; utilization of unnecessary services; and lack of integrated care across providers, settings, and disease phases. Submitters linked these gaps with adverse outcomes, including unnecessary hospitalizations, excess spending, poor quality care, and reduced satisfaction among beneficiaries and providers. Payment gaps centered on areas where submitters believed the Medicare physician fee schedule (MPFS) directly or indirectly contributed to those care delivery gaps, such as non-covered services.

Proposed payment models. To address these previously described issues, submitters proposed payment models in the following categories:

- Models that **continued FFS payments**, plus provided additional payments for new activities or services
- Models with **per beneficiary per month (PBPM)** payments
- Models that defined an **episode of care** where the provider had financial incentives to meet performance targets: some with continued FFS billing and some with fixed episode payments replacing FFS payments

Financial risk and incentives. In addition to proposing changes in provider payment, many of the proposed models included different ways of putting providers at financial risk for patient care. Almost all proposed models included a two-sided performance incentive where providers share savings under the model and bear some financial risk for expenditures exceeding a target amount. Some proposals provided different participation tracks with different levels of risk. Some proposals phased in greater risk over time. The proposed models differed in whether Medicare FFS payments would be at risk or just the additional proposed payments were at risk.

Quality and cost measurement. The proposed models incorporated cost and quality performance measurement and accountability in a number of ways. In some models, minimum performance on a quality measure was a requirement for initial or continued model participation. Some proposed models required providers to achieve specific benchmarks for quality measures to receive any shared savings. In addition, some models linked performance on quality measures to the size of shared savings or shared losses. Models also proposed different approaches to rewarding performance on cost metrics, such as total cost of care, condition-specific cost of care, or health care utilization measures.

Summary

A review of the proposed PFPMs deliberated and voted on by PTAC as of December 31, 2020, finds that the proposed models submitted to PTAC address care for a variety of health conditions and clinical settings. About half of the models (12) proposed PBPM payments. These PBPM payment models, as well as episode-based payment models, varied in the extent to which proposed payments replaced (versus supplemented) existing fee schedule payments. Almost all models included shared risk for providers for performance against spending targets, and the majority linked financial incentives to performance on quality outcomes.

This review is intended to assist in assessing common elements and variations across the models that have been deliberated and voted on by PTAC as of December 31, 2020.

Purpose and Overview

This report reviews and analyzes the PTAC reports that were submitted to the Secretary as of December 31, 2020, relating to models that have been deliberated and voted on by PTAC. This analysis aims to synthesize and describe the range and diversity of payment issues identified by proposed PFPMs and key features of proposed care models and payment solutions. An objective of this analysis is to assess common elements and variations in proposed PFPMs. In particular, the proposed models submitted to PTAC may help identify gaps in payment and care delivery policies that health care providers believe need attention.

The research questions guiding the analysis are as follows:

- Do proposed models address gaps in payment for common provider types?
- What Medicare payment and service delivery gaps are most commonly identified by proposal submitters?
- Do the proposed PFPMs submitted to date address gaps in Medicare payment or care delivery for Medicare beneficiaries?
- What payment policy solutions did submitters most frequently propose?

In addressing these questions, this report begins by describing the types of individuals and organizations that submitted 35 proposed models to PTAC. Next, the report provides a substantive review of the 28 models deliberated and voted on by PTAC, beginning with the focus of the proposed models, such as the targeted subpopulation of Medicare beneficiaries or care settings addressed. The report then reviews the origins of the proposed models and discusses care delivery and payment issues targeted by the proposed models. The report also describes proposed care delivery and payment approaches, including: the level of financial risk providers assume based on performance on cost and quality metrics; risk-adjustment methods that account for differences in patients' health status and other factors; and quality and cost performance measures. The report complements published analyses of proposals submitted to PTAC.ⁱ

Background

Since 1992, Medicare has used a fee schedule to pay physicians and other clinicians for providing thousands of individual medical services. Many experts believe the FFS payment contributes to fragmented and inefficient care delivery. By incentivizing providers to deliver more services regardless of quality, FFS payment can increase costs without improving patient outcomes and can even diminish quality of care.ⁱⁱ

In recent years, policy changes in Medicare have emphasized moving from volume-based FFS payment to value-based payment through APMs. APMs encourage physicians and other providers to be more accountable for the quality and cost of care and patient experiences of care. Under the bipartisan MACRA of 2015, Congress significantly changed Medicare FFS physician payment methods. Key MACRA changes included streamlining three existing Medicare FFS physician quality reporting programs into the Merit-based Incentive Payment System (MIPS) and establishing incentives for physicians to participate in APMs.

APMs are designed to encourage high-quality and cost-efficient care by rewarding providers for better outcomes and lower costs. They can apply to a specific clinical condition such as cancer, a discrete care episode such as a hip replacement, or a patient population such as people with end-stage renal disease (ESRD).ⁱⁱⁱ Depending on the approach, providers might share in any savings gained through more efficient care delivery (shared savings or upside-only risk); share in both savings and losses (shared, two-sided, or downside risk); or receive a fixed per-person monthly payment to provide specified care for a defined population of patients (full risk or capitation).

Background on PTAC

MACRA also specifically encouraged development of APMs known as PFPMs and created PTAC to review stakeholder-proposed PFPMs. In Medicare PFPMs, physicians or other eligible professionals (see Exhibit 1 below), such as nurse practitioners or physician assistants, must play a core role in implementing the payment methodology, and the APM must target the quality and costs of services that participating eligible professionals provide, order, or significantly influence.^{iv} The creation of PTAC gave stakeholders the opportunity to develop APMs for public review and consideration by PTAC and HHS.

Exhibit 1: Who are Eligible Clinicians in PFPMs?

Federal Statute: Section 1848(k)(3) of the Social Security Act defines “eligible professional” as any of the following:

1. A physician
2. A practitioner described in section 1842(b)(18)(C). A practitioner described in this subparagraph is any of the following:
 - i. A physician assistant, nurse practitioner, or clinical nurse specialist (as defined in section 1861(aa)(5))
 - ii. A certified registered nurse anesthetist (as defined in section 1861(bb)(2))
 - iii. A certified nurse-midwife (as defined in section 1861(gg)(2))
 - iv. A clinical social worker (as defined in section 1861(hh)(2))
 - v. A clinical psychologist (as defined by the Secretary for purposes of section 1861(ii))
 - vi. A registered dietitian or nutrition professional.
 - vii. A physical or occupational therapist or a qualified speech-language pathologist
 - viii. Beginning with 2009, a qualified audiologist (as defined in section 1861(II)(3)(B))

Federal Regulations (42 CFR §414.1305) define “eligible clinicians” as an “eligible professional” (as defined in section 1848(k)(3) of the Social Security Act), as “identified by a unique TIN and NPI combination and includes any of the following:

1. A physician
2. A practitioner described in section 1842(b)(18)(C) of the Act
3. A physical or occupational therapist or a qualified speech-language pathologist
4. A qualified audiologist (as defined in section 1861(II)(3)(B) of the Act)

Note: NPI= National Provider Identifier; TIN = Tax Identification Number.

The 11-member PTAC, composed of individuals with national recognition for their expertise in PFPMs and related delivery of care under the Medicare program, begins review of PFPM proposals through preliminary review teams (PRTs) typically consisting of three PTAC members, including at least one physician.^v PRTs prepare a preliminary analysis of the proposed model for use in the full PTAC’s review and deliberation on the proposal. Frequently, PRTs send written questions or hold follow-up conversations with submitters to clarify aspects of proposed models. PRTs also can request additional quantitative or qualitative analyses, consult with clinical experts, obtain information on aspects of current Medicare programs that intersect with the proposal under review, and obtain actuarial consultation on the implications of a proposed model. Once PRTs have gathered all the information the PRT believed is needed to evaluate the proposal, they write a report to the full PTAC assessing the extent to which the proposal meets the regulatory criteria for PFPMs. PRTs may also provide initial feedback to the submitter in advance of sending a report to the full PTAC on the extent to which the proposal meets the Secretary’s criteria.

PTAC evaluates and deliberates on the proposed PFPMs at a public meeting where the PRT presents its findings to the full Committee, the submitter has an opportunity to make a public statement and respond to questions from Committee members, and there is an opportunity for public comment. PTAC then summarizes its comments and recommendations in a report to the Secretary of HHS. The report to the Secretary also includes a description of the model; PTAC’s rationale for its recommendation to the Secretary; an evaluation of the proposed model relative to the Secretary’s 10 criteria; and a summary of PTAC members’ voting distributions for the proposed model, relative to the 10 criteria and the overall PTAC recommendation.

Data and Methods

Between December 2016 and December 2020, 35 proposed PFPMs were submitted to PTAC for review (see Appendix 1 for more details). This report focuses on the 28 proposed models that were deliberated and voted on by PTAC and for which reports had been submitted to the Secretary as of December 31, 2020. The remaining 7 proposals submitted as of that date were withdrawn from consideration. PTAC concluded that the criteria for PFPMs established by the Secretary are not applicable to two of the 28 proposals. The first of these two proposals, submitted by Mercy Accountable Care Organization (ACO), requested “relatively minor changes to existing regulations and billing guidance in a well-developed and frequently updated payment methodology.”^{vi} The second of these proposals, from Dr. Yang, outlined a fundamental restructuring of the Medicare program, including substantial redesign of Medicare benefits and use of defined contribution plans; PTAC determined the proposal did not include an approach to physician payment and the Secretary’s criteria for PFPMs did not apply to the proposal. Because these two proposals differ substantially from the other 26, they are excluded from some aspects of review where noted (e.g., approaches to financial risk). This report refers to proposed PFPMs by their abbreviated names as shown in Exhibit 2.

Exhibit 2: PFPMs Reviewed in PTAC Reports to the Secretary as of December 2020

Full Proposal Name	Submitter	Abbreviated Name
Advanced Primary Care: A Foundational Alternative Payment Model (APC-APM) for Delivering Patient-Centered, Longitudinal, and Coordinated Care	American Academy of Family Physicians	AAFP
Patient and Caregiver Support for Serious Illness	American Academy of Hospice and Palliative Medicine	AAHPM
Patient-Centered Asthma Care Payment (PCACP): An Alternative Payment Model for Patient-Centered Asthma Care	American College of Allergy, Asthma & Immunology	ACAAI
Acute Unscheduled Care Model (AUCM): Enhancing Appropriate Admissions	American College of Emergency Physicians	ACEP
The “Medical Neighborhood” Advanced Alternative Payment Model	The American College of Physicians and the National Committee for Quality Assurance	ACP/NCQA
The ACS-Brandeis Advanced APM	American College of Surgeons	ACS
Patient-Centered Oncology Payment Model	American Society of Clinical Oncology	ASCO
Intensive Care Management in Skilled Nursing Facility Alternative Payment Model (ICM SNF APM)	Avera Health	Avera Health
Advanced Care Model (ACM) Service Delivery and Advanced Alternative Payment Model	Coalition to Transform Advanced Care	C-TAC
Alternative Payment Model for Improved Quality and Cost in Providing Home Hemodialysis to Geriatric Patients Residing in Skilled Nursing Facilities	Dialyze Direct	Dialyze Direct

Full Proposal Name	Submitter	Abbreviated Name
An Innovative Model for Primary Care Office Payment	Jean Antonucci, MD	Dr. Antonucci
Medicare 3 Year Value Based Payment Plan (Medicare 3VBPP)	Zhou Yang, PhD, MHP	Dr. Yang
Oncology Bundled Payment Program Using CNA-Guided Care	Hackensack Meridian Health and Cota	HMH/Cota
Community Aging in Place – Advancing Better Living for Elders (CAPABLE) Provider-Focused Payment Model	Johns Hopkins School of Nursing and Stanford Clinical Excellence Research Center	Hopkins/Stanford
Project Sonar	Illinois Gastroenterology Group and SonarMD	IGG/SonarMD
Making Accountable Sustainable Oncology Networks (MASON)	Innovative Oncology Business Solutions	IOBS
LUGPA APM for Initial Therapy of Newly Diagnosed Patients with Organ-Confined Prostate Cancer	Large Urology Group Practice Association	LUGPA
Annual Wellness Visit Billing at Rural Health Clinics	Mercy Accountable Care Organization	Mercy ACO
HaH Plus (Hospital at Home Plus) Provider-Focused Payment Model	Icahn School of Medicine at Mount Sinai	Mount Sinai
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	New York City Department of Health and Mental Hygiene	NYC DOHMH
The COPD and Asthma Monitoring Project	Pulmonary Medicine, Infectious Disease and Critical Care Consultants Medical Group	PMA
Home Hospitalization: An Alternative Payment Model for Delivering Acute Care in the Home	Personalized Recovery Care	PRC
Incident ESRD Clinical Episode Payment Model	Renal Physicians Association	RPA
Bundled Payment for All Inclusive Outpatient Wound Care Services in Non-Hospital Based Setting	Seha Medical and Wound Care	Seha
Comprehensive Care Physician Payment Model	University of Chicago Medicine	UChicago
Eye Care Emergency Department Avoidance (EyEDA) Model	University of Massachusetts Medical School	UMass
ACCESS Telemedicine: An Alternative Healthcare Delivery Model for Rural Cerebral Emergencies	University of New Mexico Health Sciences Center	UNMHSC
CMS Support of Wound Care in Private Outpatient Therapy Clinics: Measuring the Effectiveness of Physical or Occupational Therapy Intervention as the Primary Means of Managing Wounds in Medicare Recipients	Upstream Rehabilitation	Upstream

Note: Sorted alphabetically by abbreviated name.

Exhibit 3 shows the status of all 35 proposals submitted to PTAC as of December 31, 2020. The remaining 7 proposed PFPMs submitted but not deliberated and voted on by PTAC were withdrawn as of that date. This report includes these 7 additional proposed models in the assessment of submitter types (Exhibit 4) but not in the substantive review of proposed models.

Exhibit 3: Status of Models Proposed to PTAC December 2016–December 2020²

Deliberated and Included in a Report to the Secretary (N=28)	Withdrawn* (N=7)	
<ul style="list-style-type: none"> ■ AAFP ■ AAHPM ■ ACAAI ■ ACEP ■ ACP/NCQA ■ ACS ■ ASCO ■ Avera Health ■ C-TAC ■ Dialyze Direct ■ Dr. Antonucci ■ Dr. Yang ■ HMH/Cota ■ Hopkins/Stanford ■ IGG/SonarMD 	<ul style="list-style-type: none"> ■ IOBS ■ LUGPA ■ Mercy ACO ■ Mount Sinai ■ NYC DOHMH ■ PMA ■ PRC ■ RPA ■ Seha ■ UChicago ■ UMass ■ UNMHSC ■ Upstream 	<ul style="list-style-type: none"> ■ AAHKS ■ AAN ■ CCC ■ COA ■ DHN ■ MBC ■ Dr. Sobel

Notes: *These proposals were officially withdrawn as of December 31, 2020. Full submitter names for proposals deliberated and included in a Report to the Secretary: AAFP=American Academy of Family Physicians; AAHPM=American Academy of Hospice and Palliative Medicine; ACAAI=American College of Allergy, Asthma, & Immunology; ACEP=American College of Emergency Physicians; ACP/NCQA=American College of Physicians/ National Committee for Quality Assurance; ACS=American College of Surgeons; ASCO=American Society of Clinical Oncology; C-TAC=Coalition to Transform Advanced Care; HMH/Cota=Hackensack Meridian Health/Cota; IGG/SonarMD=Illinois Gastroenterology Group/SonarMD; IOBS=Innovative Oncology Business Solutions; LUGPA=Large Urology Group Practice Association; Mercy ACO=Accountable Care Organization; NYC DOHMH>New York City Department of Health and Mental Hygiene; PMA= Pulmonary Medicine, Infectious Disease and Critical Care Consultants Medical Group; PRC=Personalized Recovery Care; RPA=Renal Physicians Association; UMass=University of Massachusetts Medical School; UNMHSC=University of New Mexico Health Sciences Center. Full submitter names for withdrawn proposals: AAHKS=American Association of Hip and Knee Surgeons; AAN=American Academy of Neurology; CCC = Clearwater Cardiovascular and Interventional Consultants; COA=Community Oncology Alliance; DHN= Digestive Health Network; MBC= Minnesota Birth Center.

Methods

An RTS summarizes key information about proposed models in a consistent and efficient way. Using the reports as the primary data source, qualitative software (NVivo v12) was used to code descriptions of proposed PFPMs using the following domains:

²For an updated summary of proposal status (including proposals submitted or reviewed after production of this report), please see the Proposal Tracker on the PTAC website maintained by ASPE, available at <https://aspe.hhs.gov/proposal-submissions-physician-focused-payment-model-technical-advisory-committee>.

- Proposal overview, including submission date, submitter, background
- Target condition or patient population
- Provider type
- FFS payment and care delivery issues targeted
- Care delivery model proposed
- Payment model proposed
- Quality

Coded text was reviewed, and themes were synthesized across our review of the proposed PFPMs. These themes were shared with ASPE for input and refined through an iterative process. In some cases, the RTS did not include enough detail to fully describe a particular aspect of a proposed model. When questions about a model's approach remained after reading the RTS, the proposal submission was reviewed for additional information. For example, if an RTS mentioned that the model proposed quality measures and linked those measures to payment, the proposal submission was assessed to see which quality measures were proposed and how those measures were linked to payment.

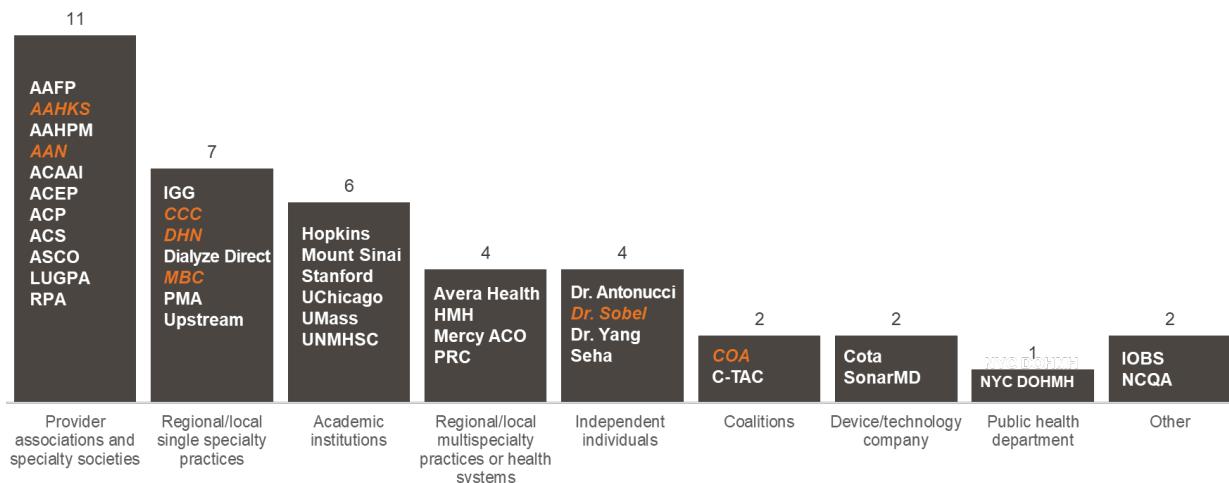
Findings

This Findings section includes descriptive background information about the proposed models, the key issues presented, and major elements of the proposed solutions offered. The first section describes the types of submitters who provided PFPM ideas for PTAC deliberation and characteristics of the proposed models. Next is a substantive review of the 28 models deliberated and voted on by PTAC, including a description of areas of focus and background on the origins and history of the proposed models. Following is an assessment of the delivery system issues and payment issues addressed by the PFPMs and their proposed payment approaches.

Entities Submitting Proposals

A range of stakeholders and individuals have submitted proposed PFPMs for PTAC review, including physician societies, academic institutions, physician group practices, medical device makers, private individuals, and a public health department. National provider organizations and physician specialty societies were the most common submitter type, followed by regional/local single-specialty physician practices or organizations. Exhibit 4 shows the types of organizations and individuals that have submitted proposals as of December 31, 2020, including those proposals under active review or withdrawn (shown in orange italicized font color). Some of the proposals that have been withdrawn may be under revision to be resubmitted to PTAC at a later date for further review.

Exhibit 4: Types of Entities Submitting Proposals to PTAC, December 2016–December 2020



Source: Authors' analysis of 35 proposals submitted to PTAC as of December 2020.

Notes: The total number of submitters (N=39) exceeds the number of submitted proposals (N=35) due to joint submissions. Withdrawn proposals are noted in dark orange italicized font.

Areas of Focus: Providers, Settings, and Conditions

Proposed models included a wide range of providers, including specialty physicians, primary care clinicians, physical and occupational therapists, and other care team members such as nutritionists, patient

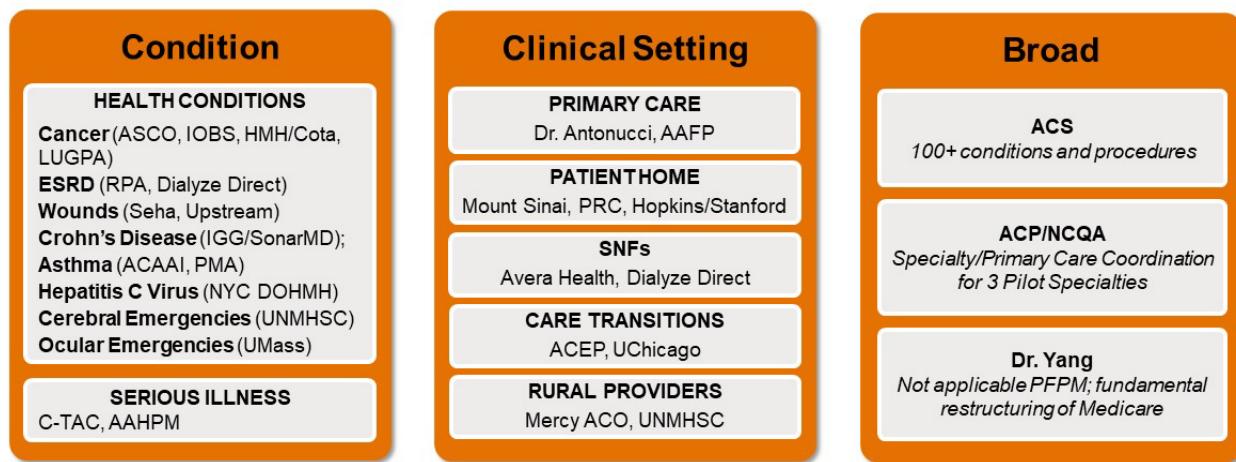
educators, and counselors. For example, proposed models addressed specialty care provided by cardiologists, gastroenterologists, allergists and pulmonologists, oncologists, nephrologists, neurologists, urologists, optometrists and ophthalmologists, and physical and occupational therapists. Primary care clinicians—general internal medicine, family medicine, and geriatricians—were the explicit focus of three proposals and were referenced in many others. Hospital-based clinicians, including emergency medicine physicians, hospitalists, and surgeons, were targeted by several proposed models. Finally, several proposed PFPMS suggested creating interdisciplinary care teams.

For the most part, the 28 models deliberated and voted on by PTAC may be grouped by area of focus, as follows:

- **Condition:** focused on beneficiaries with a particular health condition, such as cancer or COPD.
- **Clinical Setting:** focused on a particular provider type or setting, such as primary care clinicians or inpatient hospital services; these models may address care for a variety of health conditions
- **Broad:** more broadly applicable to a range of conditions or providers rather than a particular setting or condition

See Exhibit 5 below.

Exhibit 5: Focus Areas of Proposed Models Reviewed by PTAC, December 2016–December 2020



Source: Authors' analysis of 28 proposals deliberated and voted on by PTAC as of December 2020.

Note: Dialyze Direct and UNMHSC are included in two categories, as these proposals focus on both a specific health condition (ESRD and cerebral emergencies, respectively) and a clinical setting (skilled nursing facilities, or SNFs, and rural providers).

Condition Focus

More than half of the proposed models deliberated and voted on by PTAC (N=16) focused on a particular health condition or phase of care delivery and the providers associated with care for that condition. Fourteen of these 16 models addressed specific health conditions, such as cancer, ESRD, and wounds; two addressed care for patients with serious illness. Serious illness that may be suitable for palliative care and other support services can include a variety of health conditions (e.g., diseases of the heart, kidney, liver, lungs, or

cancer). As a result, the two proposed models pertaining to serious illness were somewhat distinct because they addressed care delivery for a disease phase across multiple conditions, providers, and settings.

Clinical Setting Focus

Nine proposed models focused on a specific clinical setting rather than a particular health condition, and two proposed models focused on both a particular clinical setting and a health condition (Dialyze Direct and UNMHSC). As shown in Exhibit 5, these proposals covered care in primary care settings, inpatient institutions, outpatient facilities and clinics, post-acute care facilities, rural providers, and patients' homes. Even if two given proposals focused on the same clinical setting, they may have each addressed different care or payment issues in that setting or differed in the details of the proposed care and payment model. For example, the two proposed skilled nursing facility (SNF) models addressed different issues (hemodialysis versus access to a geriatrician via telehealth). Also, the two models focused on care transitions between inpatient and outpatient settings addressed different types of in-hospital care: ACEP focused on the emergency department (ED), whereas UChicago covered services for admitted patients. The two primary care models and two hospital-at-home models had similarities in the care and delivery payment issues they addressed. These models differed more in the specific details of the proposed approach.^{vii} The UNMHSC and Mercy ACO proposal focused on rural providers. However, PTAC determined that the Mercy ACO submission was not an applicable PFPM because it presented relatively minor changes to a well-established and frequently updated payment methodology.^{viii}

Broader Applicability to Medicare FFS

Three models deliberated and voted on by PTAC went beyond a particular health condition or clinical setting and had broad applicability within Medicare FFS. The ACS proposal would establish APM episodes for more than 100 conditions or procedures across a variety of settings, using an episode grouper algorithm^{ix} that organized FFS claims into a preset package or bundle of services for a particular condition or procedure within a specified time period. The ACP/NCQA proposal focused on improving coordination between specialists and primary care physicians. The proposal initially targeted three specialties but intended for the model to include additional specialties over time. The third proposed model (Dr. Yang) was distinct in recommending a fundamental restructuring of the Medicare program, including substantial redesign of Medicare benefits and use of a defined contribution plan; however, for this proposal, PTAC determined that the criteria for PFPMs established by the Secretary were not applicable because the proposal did not contain an approach to physician payment.

Proposed Models: Origins and History

Generally, the 28 proposed PFPMs expanded or built on existing payment reform efforts or proposed piloting new payment approaches on a small scale. Six proposed models built on existing APMs, and seven were based on HCAs administered by the Innovation Center at CMS. In addition, three proposed models explicitly sought to pilot a new payment concept on a small scale.

At least five of the proposed models—ASCO, IOBS, Dialyze Direct, HMH/Cota, and LUGPA—focused on a clinical specialty addressed to some degree by an existing APM, including the Innovation Center's Oncology Care Model (OCM) and Comprehensive ESRD Care Model. Another two proposed models with a primary care focus (AAFP and Dr. Antonucci) also drew upon the longer history of APMs focused

on improving primary care delivery. These proposals addressed perceived shortcomings in existing APMs, such as gaps in eligible providers, geographic limitations, or episode definition. These models also capitalized on the work done to develop the existing APMs, experiences of providers with these models in the field, and available literature about the impact of the existing APMs. The ACP/NCQA proposal leveraged the Innovation Center’s Comprehensive Primary Care Plus (CPC+) model, using participating primary care practices as the building block for improving care coordination with specialists.

Seven of the proposed models built on interventions funded as Innovation Center HCAs—Mount Sinai, IOBS, UChicago, Avera Health, NYC DOHMH, Hopkins/Stanford, and UNMHSC. The Innovation Center announced the HCAs in 2012, awarding three years of funding for 107 projects that aimed to deliver better health, improved care, and lower costs to people enrolled in Medicare, Medicaid, and the Children’s Health Insurance Program (CHIP), particularly those with the greatest health care needs.^x Because HCAs tested and evaluated these care delivery models, some evidence existed in evaluation reports about the link between the care model and cost and quality outcomes. In addition, the UMass proposal was based on a project that was funded through the Innovation Center’s Transforming Clinical Practices Initiative (TCPI).

Five submitters offered models to pilot a new APM approach—PMA, HMH/Cota, IOBS, and Upstream. These submitters all included provider practices that were actively engaged in care delivery; the proposed pilot frequently identified physician practices or providers that would participate and test the model, including but not limited to the submitter. For example, IOBS proposed to initially include 16 practice sites, and the Upstream proposal stated its intention to include 200 physical or occupational therapists. The ACP/NCQA submission proposed to pilot the model in a subset of CPC+ regions with an initial subset of specialties that could be expanded over time. These proposals illustrated a desire among providers to test new care delivery and payment models that may not be ready for full implementation.

Issues Targeted: Care Delivery

By proposing a PFPM, submitters inherently targeted care delivery gaps or opportunities in Medicare FFS and the associated payment gaps under FFS that relate to the care delivery gap, directly or indirectly. Care delivery issues identified in proposed models cluster around several broad themes: suboptimal care management, limited access to services, utilization of unnecessary services, and lack of care coordination during care transitions. Submitters linked these issues with adverse outcomes, including unnecessary hospitalizations, excess spending, and reduced beneficiary and provider satisfaction.

Proposed models sometimes addressed more than one care delivery issue, and care delivery could overlap considerably with payment issues targeted by proposals. In the view of submitters, issues in current FFS payments did not support optimal care delivery (see discussion in the next section). Exhibit 6 summarizes the care delivery and payment issues targeted by proposals.

Suboptimal Care Management

Evidence shows that improved primary care and better care coordination and management of certain chronic conditions can help avoid unnecessary hospitalizations.^{xi} Some proposed models submitted to PTAC have identified fragmented and duplicative care resulting from suboptimal care coordination as an

issue. “Integration and Care Coordination” is one of the Secretary’s 10 regulatory criteria for PFPMs (specified in federal regulations at 42 CFR § 414.1465).

In their proposals, submitters suggested that the Medicare physician payments generally did not support care management activities that would improve patient care. The primary care proposals (AAFP and Dr. Antonucci) would direct resources aimed at closing gaps in primary care management for patients. Managing the variety of health conditions and medications for patients and communicating with other providers is time consuming for primary care practices. The fee schedule has historically incentivized face-to-face visits that can place a burden on patients and providers. The ACP/NCQA proposal would create “medical neighborhoods” of primary care and specialty practices to improve care coordination and data sharing for Medicare beneficiaries with chronic conditions. Similarly, the Avera Health proposal identified care management gaps for Medicare beneficiaries receiving care in SNFs between onsite SNF staff and medical consultants. For example, a beneficiary might need care that exceeds onsite capabilities or potential hospitalization but a readily accessible and timely consultation with a geriatrician is not always available. In the face of clinical uncertainty, SNF staff may be inclined to send the beneficiary to the hospital.

Limited Access

Closely linked with suboptimal care management were limitations in beneficiary access to services; limited access for patients can adversely affect good care management. Improving access to care could improve care management and reduce hospitalizations by reducing barriers to timely consultations with providers. In addition, patient choice and satisfaction could improve when access improves. Barriers to access can take many forms, such as travel distance to providers and facilities, limited hours for medical visits or consultations, or treatment plans requiring frequent visits.

Several of the proposals pointed out access challenges associated with conditions that require patients to travel to a central facility for frequent follow-up care. Examples of these treatments include in-center dialysis for patients with ESRD or hospital-based wound care. The UMass proposal sought to increase access to appropriate care for ocular emergencies, incentivizing optometrists and ophthalmologists to expand access so that patients could avoid visiting an emergency department. The two wound care proposals (Seha and Upstream) would shift the locus of wound care from hospital-based clinics to providers and settings more convenient to beneficiaries, including private freestanding clinics and physical and occupational therapists. Similarly, in the Dialyze Direct proposal, submitters proposed offering onsite dialysis services for beneficiaries in SNFs. In the UNMHSC proposal, telehealth consultations for patients with cerebral emergencies with neurologists and neurosurgeons could reduce the need for these patients to be transferred to a hospital further from home for treatment. Moreover, travel to a hospital for an acute care procedure represented a burden for patients, along with follow-up visits after the procedure during the patient’s recovery. Some services typically delivered in hospitals could be provided safely at home, as suggested by the two hospital-at-home proposal submitters (PRC and Mount Sinai).

Unnecessary or Harmful Care

While some submitters focused on increasing use of high-value services, others focused on reducing overuse of certain services that may be avoidable, provide little value to patients, or may actually cause

harm. For example, the LUGPA proposal sought to shift care patterns away from active intervention for patients with localized prostate cancer toward active surveillance. Active intervention could cause adverse physical and social outcomes for patients and provide little clinical benefit. Despite this, barriers—including payment incentives and also a lack of shared decision-making and patient engagement—prevent more widespread adoption of active surveillance. The ACAAI proposal focused on improving care delivery for patients with poorly controlled asthma, who are often misdiagnosed and placed on an inappropriate treatment regimen. The ACAAI proposal provided increased resources and flexibility to physicians specializing in asthma treatment to better diagnose and manage asthma patients. The Hopkins/Stanford model sought to improve the functional ability of frail adults living in their homes by delivering services that could avoid further functional decline and future use of high-cost services. Some of the services (e.g., home modifications, motivational interviewing, assessing individual goals and person-environment fit) in the Hopkins/Stanford proposed model are not currently reimbursed by the MPFS. Other proposals also aimed to reduce unnecessary hospitalizations or ED visits stemming from inadequate care management.

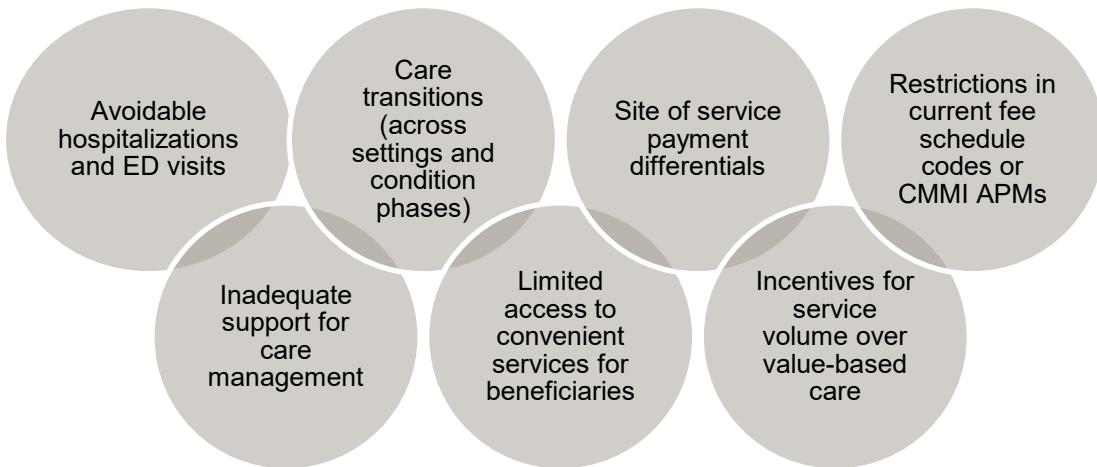
Lack of Integrated Care across Providers and Settings

In the course of a treatment episode, patients can encounter a number of health care providers. These providers may have different clinical specialties or practice in different settings. Without integrated care and effective communication across providers, patients may encounter conflicting medical guidance, receive duplicative services, or receive contraindicated treatments with potentially harmful effects.

The two care transition-focused models mentioned previously addressed care coordination challenges when a patient moves from one care setting to another. For example, the ACEP proposal addressed transitions between the ED and home, while the UChicago proposal targeted transitions between inpatient and ambulatory care. Transitions between care settings typically require handoffs among multiple providers caring for the patient, and these proposals would give providers additional flexibility to deliver services across settings and improve continuity of care.

Other submitters addressed improving integration of care throughout disease progression. For example, the RPA proposal focused on beneficiaries with chronic kidney disease whose conditions are advancing to ESRD. Generally, a surgical procedure to prepare an access site (e.g., a fistula) for the dialysis machine several weeks before beginning dialysis helps to avoid unnecessary hospitalizations, infections, and other adverse events during initial ESRD. However, this would require an integrated approach with patient education and counseling regarding patient prognosis as well as coordination among primary care providers, nephrologists, surgeons, and hospital-based clinicians who may care for a patient advancing to ESRD. The ASCO proposal created oncology steering committees comprised of multiple payers, employers, oncology practices, and other stakeholders that would identify partners to facilitate successful implementation of the multidisciplinary care model.

Exhibit 6: Care Delivery and Payment Issues Targeted in PFPMS Deliberated and Voted on by PTAC, December 2016–December 2020



Source: Authors analysis of 26 proposals deliberated and voted on by PTAC as of December 31, 2020.

Note: Two proposals (Dr. Yang and Mercy ACO) were not included because the Committee could not apply the criteria for PFPMS established by the Secretary to these two proposals.

Issues Targeted: Payment

Proposals focused on payment issues linked directly to specific care delivery challenges; in essence, submitters often appeared to believe that the MPFS does not support high-quality and efficient care delivery for a variety of reasons.^{xii} This section reviews submitters' perceived issues with Medicare payment contributing to the care delivery gaps described above.

Noncovered Services

In some cases, proposals highlighted gaps in the services Medicare covers that submitters believed would improve care. Without Medicare payment, providers must choose between delivering patient care they believe is less than ideal or absorb the cost of additional care. These noncovered services highlighted in proposals spanned *who*, *what*, and *where* issues related to billable Medicare services for beneficiaries. The *who* referred to interdisciplinary care team members who could provide useful services—such as therapists, nutritionists, or social workers—but were unable to bill Medicare or bill for certain types of services. The *what* included services like remote monitoring and telehealth consultations between patients and providers, though Medicare added telehealth benefits in the 2019 MPFS.^{xiii} The *where* referenced limitations on settings where services could be delivered and reimbursed, such as hospital-level acute care services delivered in the home.

Insufficient Payment for Care Management

Many submitters stated that current Medicare payment policy inadequately supports care management, which could lead to unnecessary hospitalizations and other poor outcomes. Though CMS introduced chronic care management (CCM) and transitional care management (TCM) codes in the MPFS to address this issue, submitters noted barriers to the codes' widespread use. More broadly, there has been longstanding criticism of the MPFS for undervaluing the time physicians spend on care management,

particularly for primary care physicians, and instead incentivizing a high volume of intensive services and procedures.^{xiv} Providers cite lack of time and compensation as a barrier to coordinating care, which can be compounded by staff shortages.^{xv} Payment for coordinating with resources outside the health system is challenging, particularly for patients with complex health and social needs. As an example of perceived limitations in the chronic care management codes, submitters of the IGG/SonarMD model noted that while Medicare pays for chronic care management services, the required elements (e.g., minutes of clinical staff time, number of chronic conditions, etc.) to bill the existing codes do not align with the proposed intervention.

Misaligned Incentives

The MPFS has been criticized for incentivizing the delivery of a high volume of services over high-value services due to its reliance on FFS payment, in which providers are paid more for delivering more services. For example, one of the proposed models (LUGPA) addressed payment incentives in the MPFS that are at odds with recommended care for patients. The LUGPA proposal stated that providers had a financial incentive to pursue more aggressive treatment for patients with localized prostate cancer because they were paid more for performing procedures on these patients. Even though active surveillance was an accepted and even recommended standard of care for certain patients, the submitters believed that the MPFS did not adequately compensate providers for the time and effort required to follow that care plan.

Limitations In Existing APMs

For proposals building on an existing Innovation Center APM, the submitters expressed concerns about limits on providers' ability to participate, including eligibility criteria, limited geographic penetration of existing models, episode definition, or model focus.

Four proposed models addressed types of cancer, a clinical area where the Innovation Center operates the OCM. In the LUGPA prostate cancer model, the submitters noted that the focus on chemotherapy in the OCM limits its applicability to localized prostate cancer, a condition where other therapies such as radiation, hormone therapy, prostatectomy, or active surveillance typically are initiated rather than chemotherapy. Two of the other proposed PFPMs focusing on cancer sought a more granular and flexible approach to cancer payment than is feasible under the OCM, including episode lengths that varied with the prognosis for different cancers and precision medicine treatment pathways. The IOBS model proposed to hold providers responsible for cancer-related expenditures rather than the total cost of care target used in the OCM. While PTAC noted that ASCO's proposed payment model was similar to OCM and other cancer-related Innovation Center models in development, the ASCO proposal emphasized community engagement as well as providing a glide path for more oncology practices to participate in PFPMs and take on more risk over time.

There was also an existing APM focused on ESRD, the Comprehensive ESRD Care Model. The RPA proposal stated that it was distinct from the existing model for several reasons, including a broader geographic scope. The RPA proposal also focused directly on improving the transition to dialysis, while the existing model took a more comprehensive payment approach to an episode of ESRD care once dialysis begins. The Dialyze Direct proposal also addresses ESRD, with a particular focus on providing dialysis in skilled nursing facilities to improve patient access.

Differential Payments Based on Site of Service

Several proposed models addressed site-of-service issues in Medicare payment that submitters believed lead to unnecessary costs. Medicare pays providers different amounts for the same services delivered in different settings, adjusting physician labor, practice expense, and facility fees based on estimated costs of providing the service in different settings. These differential payments could create financial incentives to shift care delivery toward one setting over another. In addition, hospital ownership of physician practices has historically enabled the practice to receive higher payments, but CMS has taken steps to make payments more site-neutral.^{xvi}

Both wound care proposed models (Seha and Upstream) focused on perceived inequities in payments for wound care services, with Seha focused primarily on differences between services provided in the inpatient or hospital outpatient settings relative to freestanding provider clinics and Upstream focused on payments to physical and occupational therapists practicing in private outpatient settings relative to hospital-based care. The hospital-at-home models, likewise, adopted the idea that inpatient stays and associated hospital facility payments were unnecessary for certain services that could be delivered more efficiently and conveniently at a patient's home.

Proposed Models for Care Delivery

Many of the proposed models reviewed by PTAC articulated a care model that essentially maps pathways for optimal care delivery and communication across providers and settings. Some of the proposed care models featured an interdisciplinary team approach, while others focused on a subset of providers. Three models proposed a population health approach to care. However, PTAC comments indicated that five of the proposed models lacked a clearly articulated vision of how care would be delivered.

Interdisciplinary Teams

The serious illness proposals (C-TAC and AAHPM) envisioned development of an interdisciplinary care team. This team would share information and meet the range of patient care needs as well as share the financial obligations and rewards of the proposed model. The cancer-focused HMH/Cota and IOBS proposals also featured interdisciplinary care teams, with the added feature of precision medicine. These two proposals would use large datasets and sophisticated analytics to define clusters of patients with similar characteristics and evidence-based treatment protocols. The two models would then tailor more precise care plans based on a range of patient factors, and incentivize providers to adhere to the applicable care plans.

Specialty Care Management

For a number of proposals—generally the health condition-focused proposals—the care model targeted a particular condition or setting and related providers. The specialty practice treating the condition would take on a greater role coordinating care: educating the patient, and monitoring disease progression. Proposals added same-day scheduling slots for urgent visits, increased nurse triage support, and used technology to collect and share information with patients and other providers.

Telehealth was a common element of the proposed care management approach in these models; the ACEP, PMA, IGG/SonarMD, and Avera Health proposals all included a telehealth component to improve

care management. Elements of telehealth included remote monitoring through mobile devices, televisits facilitated by technology that expand geographic access as well as create around-the-clock access to care, and software-supported outreach to patients to monitor and support adherence with treatment regimens.

Population Health

Three of the proposed models adopted a population health approach for care delivery: the two primary care models (AAFP and Dr. Antonucci) and the UChicago model. In these models, providers were responsible for managing and delivering a range of services for their panel of patients. In the two primary care models, monthly payments provided additional flexibility to enable primary care practices to provide e-visits, telehealth, care coordination, infrastructure improvements, and other innovations not allowed by the MPFS. The UChicago proposal similarly established panels of medically frail patients and put providers—generally internists and hospitalists—at financial risk for their care.

More Accessible Care

The proposed Upstream, Seha, UMass, and Dialyze Direct models emphasized making care more convenient for beneficiaries. By reducing access barriers, these proposals sought to facilitate frequent visits to help optimize patient outcomes while reducing preventable ED visits or hospital admissions. The Upstream model also included a personnel substitution, emphasizing and expanding the role of physical and occupational therapists in treating wounds and relying less on hospital-based physicians. The two hospital-at-home proposal submitters (PRC and Mount Sinai) outlined the delivery of certain higher-intensity acute care services typically provided in an inpatient setting in patients' homes, as a way to improve health outcomes and make care more convenient and potentially safer for beneficiaries by increasing compliance and avoiding hospitalization. Similarly, the Hopkins/Stanford proposed model would provide patients with home visits with occupational therapists and registered nurses and minor home adaptations to improve functional ability, prevent falls, and avoid high-cost service use.

In addition to improving care management, telehealth services also can improve access to care by reducing substantial burden and time for beneficiaries and providers, such as frequent in-person visits to monitor chronic conditions (IGG/SonarMD, PMA), reducing unnecessary hospitalizations (Avera Health), and reducing transfers to other hospitals for specialty services (UNMHSC).

Exhibit 7 describes types of solutions submitters have proposed to address the care delivery and payment issues targeted in their proposed models. Examples of proposals that include such an approach follow the general description of the proposed solution.

Exhibit 7: Types of Care and Delivery Issues and Examples of Proposed Solutions in PFPMS Deliberated and Voted on by PTAC, December 2016–December 2020

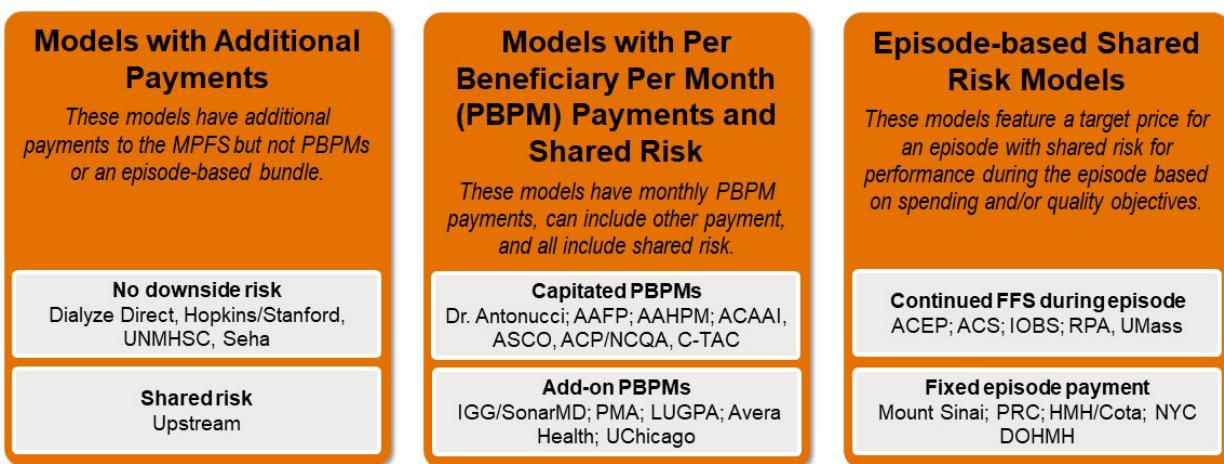
Types of Care Delivery and Payment Issues	Types of Proposed Solutions (Examples of Proposed Models)
Suboptimal care management/Insufficient payment for care management	<ul style="list-style-type: none"> ■ Monthly add-on payments that could be used to enhance care management for eligible beneficiaries (PMA, IGG/SonarMD, LUGPA, Avera Health, UChicago) ■ Monthly capitated payments to support care management for a panel of Medicare beneficiaries (AAFP, ACP/NCQA, ASCO, Dr. Antonucci, C-TAC, AAHPM) ■ Episode-based payments that could be used to enhance care management (NYC DOHMH, HMH/Cota, PRC) ■ Accountability for performance on outcomes associated with care management during an episode (ACEP, ACS, IOBS, RPA)
Limited access	<ul style="list-style-type: none"> ■ Episode-based payments for care delivered in a more convenient setting (Mount Sinai, PRC) ■ New payments to shift care to providers and settings more convenient to beneficiaries (Seha, Upstream) ■ Enhanced support for telehealth services (Avera Health, PMA, IGG/SonarMD, UNMHSC) ■ Payments and flexibility for additional providers to conduct home visits during an episode (ACEP, Hopkins/Stanford) ■ Payments and incentives to support same-day scheduling, triage lines, and other tools to enhance access to timely care (Avera Health, UMass)
Overutilization of potentially unnecessary or harmful care/Misaligned incentives	<ul style="list-style-type: none"> ■ Performance incentives with shared risk for spending above a target amount (LUGPA, RPA, ACAAI)
Lack of integrated care across providers, settings, and disease phases	<ul style="list-style-type: none"> ■ Episode-based models with performance incentives to encourage integration (ACS, UChicago, ACEP, HMH/Cota, IOBS) ■ Monthly payments to support interdisciplinary team-based care (C-TAC, AAHPM) ■ Financial incentives to encourage better coordination and upstream preparation for advancing illness (RPA)
Noncovered services	<ul style="list-style-type: none"> ■ Monthly payments with flexibility to support services not currently covered in FFS Medicare (IGG/SonarMD, C-TAC, AAHPM) ■ Episode-based payments with flexibility to support services not currently covered in FFS Medicare (ACEP, Mount Sinai) ■ Explicit one-time payments for currently uncovered services (Upstream, Dialyze Direct, Hopkins/Stanford)
Restrictions in current APMs	<ul style="list-style-type: none"> ■ Episode definition that differs from existing APM to focus on phase of treatment (RPA) ■ Episode definition that differs from existing APM to focus on type of condition or providers generally excluded from existing APM (LUGPA) ■ Payment model incorporating large datasets and algorithms to more precisely classify patients and treatment pathways (HMH/Cota, IOBS) ■ Shift away from “payer-centric” models to increase community engagement and streamline performance measurement (ASCO)
Site of service payment differentials	<ul style="list-style-type: none"> ■ New payments to shift care away from costlier settings (Seha, Upstream)

Proposed Payment Models

The proposed payment models are summarized in Exhibit 8 and include additional payments, PBPM payments, and episode-based payments. Additional payments would supplement existing FFS payments and are intended to support the proposed model. PBPM payments include capitated approaches to replace existing payment for evaluation and management services, as well as add-on PBPM payments to facilitate disease management for an existing condition. Episode-based payments would include approaches where providers continue to receive FFS payments during the episode and those in which providers would be paid a fixed rate per episode based on a bundle of services and would incur downside risk.

Capitated PBPMs were the most commonly proposed payment approach (N=7), but add-on PBPMs (N=5) and episode-based models with fixed episode payments (N=4) and without fixed episode payments (N=5) also were proposed. A number of proposed models adopted an approach that includes two or more tracks for physician participation, with slightly different payment methodologies across tracks. In this analysis, we categorize proposed models according to the track that includes the highest level of risk-bearing or value-based strategies for physicians.

Exhibit 8: Approaches to Payment for Service Delivery in PFPMs Deliberated and Voted on by PTAC, December 2016–December 2020



Source: Authors' analysis of 26 proposals deliberated and voted on by PTAC as of December 31, 2020, to which the Secretary's criteria were applicable.

Note: Two proposals (Dr. Yang and Mercy ACO) were not included because the Committee could not apply the criteria for PFPMs established by the Secretary.

Exhibit 9 links the proposed payment methodologies to the areas of focus of proposed models. The health condition-focused proposals ranged across all types of payment models except capitated PBPMs. While the focus of proposed PFPMs' payment approaches were diverse, there were some notable patterns. The serious illness models exclusively proposed capitated PBPM approaches, as did the primary care models. The two hospital-at-home models both proposed a fixed episode payment pegged to the hospital-based diagnosis-related group (DRG) payment for the acute care service. The remaining setting-focused models, including those focused on SNFs, care transitions, and rural clinics, were similar in what they did *not*

propose—full risk models that were part of capitated PBPMs or episode-based models with a fixed episode payment. The following sections highlight features and examples of each payment approach.

Exhibit 9: Payment Methodologies Associated with Proposed PFPM Focus Areas in PFPMs Deliberated and Voted on by PTAC, December 2016–December 2020

	Models with Additional Payments		PBPM Shared-risk Models		Episode-based Models	
	No downside risk	Shared risk	Capitated PBPM	Add-on PBPM	Episode-based FFS with shared risk	Fixed episode payment with shared risk
Condition-specific	1	1	4	3	3	2
Health conditions	Seha	Upstream	ASCO	IGG/SonarMD PMA LUGPA	IOBS RPA UMass	HMH/Cota NYC DOHMH
Serious Illness	--	--	AAHPM C-TAC ACAAI	--	--	--
Setting/Provider-specific	4	0	2	2	1	2
Primary care	--	--	Dr. Antonucci AAFP	--	--	--
Patient Home	Hopkins/ Stanford	--	--	--	--	Mt. Sinai PRC
SNFs	Dialyze Direct	--	--	Avera Health	--	--
Care transitions	--	--	--	UChicago	ACEP	--
Rural Providers	UNMHSC Mercy ACO*	--	--	--	--	--
Broadly focused	0	0	1 (ACP/NCQA)	0	1 (ACS)	0

Notes: *Though Mercy ACO was determined not to meet PFPM requirements, it is included in this summary table because the proposal was part of the assessment. Dr. Yang's proposal is broad in focus and also determined not to be applicable as a PFPM, but it cannot be classified using these categories.

Additional Payments

Five proposed models would continue to use FFS payments plus an additional payment to implement the proposed model (Seha, Dialyze Direct, Upstream, Hopkins/Stanford, and UNMHSC). Dialyze Direct proposed to pay nephrologists a fixed one-time fee to evaluate beneficiaries with ESRD in SNFs and provide education about home hemodialysis as an option to going to a dialysis center. The model also included shared savings based on avoided transportation costs. Seha proposed a bundled payment for wound care services, although the bundle would be paid per visit and did not have an associated definition of an episode. UNMHSC proposed a bundled one-time payment to originating hospitals for telehealth consultations with neurologists and neurosurgeons. The Hopkins/Stanford proposal would pay a flat

bundled payment for 10 therapy sessions and minor home modifications over a four to five month period. Four of the five models (Seha, Dialyze Direct, Hopkins/Stanford, and UNMHSC) included no downside risk for participants, so there were minimal incentives to control volume.

Upstream shared some features of episode-based shared-risk models by including performance measures for quality and cost. However, Upstream included a one-time \$250 supply credit and continued FFS payments during the episode. Upstream also included downside risk if payments for physical and occupational therapy services exceeded a target amount, unlike the Seha and Dialyze Direct proposals.

PBPM Payments

Twelve models proposed to pay providers a fixed PBPM amount to provide certain services to eligible beneficiaries. Exhibit 10 summarizes the services covered in the PBPM payments, the monthly payment rates, and other key features of proposed models with PBPM payments. The models varied in whether the PBPM was a flat fee for all eligible beneficiaries or risk-adjusted to reflect additional resources needed to care for sicker patients.

In four proposed models (AAFP, Dr. Antonucci, C-TAC, and AAHPM), PBPM payments replaced a significant portion of existing MPFS payments for evaluation and management (E&M) services. In the remaining five PBPM models, PBPM payments represented an additional payment to participating providers to support new or enhanced services. Most of these add-on PBPM payment models were structured as a condition-specific, disease management model, or specialty care medical home model. All of the PBPM-based models that were deliberated and voted on by PTAC included two-sided risk as a feature of the payment methodology, with financial incentives linked to performance on cost of quality outcomes during a defined episode of care.

Exhibit 10: Overview of PBPM Models Deliberated and Voted on by PTAC, December 2016–December 2020

	Condition or Clinical Area	PBPM Amount	Replacement of MPFS Codes	PBPM Risk Stratification	Services Covered	Additional New Payments
Dr. Antonucci	Primary care	\$60/\$90	Yes—capitation for services covered	Yes	E&M services, minor procedures, and office-based tests	None
AAFP	Primary care	TBD	Yes—capitation for either office-based E&M services or for all E&M services regardless of site of service	Yes	Office-based or all E&M services, care management	None

	Condition or Clinical Area	PBPM Amount	Replacement of MPFS Codes	PBPM Risk Stratification	Services Covered	Additional New Payments
AAHPM	Serious illness	\$400/\$650	Yes—E&M services	Yes	Palliative care, care coordination, 24/7 access, advanced care planning, spiritual and psychosocial care, home visits, and shared decision-making	None
ACAAI ³ (Phase 1/2/3)	Asthma	\$299/\$247/\$37	Yes/Yes/No	Yes	E&M codes for asthma treatment and select tests	None
ACP/NCQA	Specialists/Primary Care	Estimated MPFS spending (Track 2)	Yes (Track 2)	Risk-adjusted	Care coordination (both Tracks); estimated MPFS spending (Track 2)	None
ASCO	Cancer	Locally determined	Yes (Track 2)	Yes (by patient treatment phase)	Care management (both tracks); hematology/oncology-specific professional services, as well as drug costs (Track 2)	None
C-TAC	Serious illness	\$400	Yes—replaces E&M, CCM, Complex CCM, Transitional Care Management, and Advance Care Planning payments	No	Palliative care, care coordination, 24/7 access, advanced care planning, and shared decision-making	None
IGG/SonarMD	Crohn's Disease	\$70	No	No	Remote monitoring of patients	\$200 for initial visit
PMA	Asthma and COPD	\$175	No	No	Remote monitoring of patients	Bluetooth meter
Avera Health	SNF residents	\$55	No	No	24-7 telemedicine access to Geriatric Care Team	\$252 for initial consultation
UChicago	Frail patients with hospitalizations	Between \$10–\$40	No	No	Internal medicine services across inpatient and outpatient setting	None
LUGPA	Prostate cancer	\$75	No	No	Care management during active surveillance episode	None

³ Payments under the ACAAI proposal model fall into three different categories: bundled monthly payments for up to three months replacing FFS with shared risk; bundled monthly payments replacing some FFS with shared risk; monthly supplemental payment for non-face-to-face visits and physician communication.

Episode-Based Payment

Nine of the proposed PFPMs used episode-based payments and included a target payment for the episode, with retrospective reconciliation based on provider performance on spending targets and/or quality measures. These models were split into two groups based on whether providers would continue to receive FFS payments during the episode or a fixed payment per episode. In the latter approach, participating providers could face full downside risk for spending during an episode that exceeded the episode case rate.

The five models with continued FFS payments were ACEP, ACS, IOBS, RPA, and UMass. In these proposed models, payments would continue via the MPFS during the episode, but reconciliation against a performance target would create an incentive for providers to control costs, improve quality, or do both.

The four models with an upfront episode payment for a set of services during the episode were Mount Sinai, PRC, HMH/Cota, and NYC DOHMH. These models all featured a target payment with retrospective reconciliation, meaning that after the episode, providers could share in savings or be at risk for spending above the target price. The two hospital-at-home models both proposed using a DRG-like payment for care during the episode, but the payments supported post-acute transition services such as home visits and 24/7 clinician access for about 30 days following admission. The Mount Sinai proposed model bundled typical professional services provided during an inpatient stay for the DRG and covered a 30-day post-acute period. The HMH/Cota proposal paid the APM entity a predetermined amount for oncology services based on the Cota Nodal Address, a data-based classification for cancer patient risk and treatment pathways. The APM then disbursed these funds to providers over the course of the episode. The NYC DOHMH proposed model established a bundled payment for phases of hepatitis C care, and the bundle was paid to the participating provider at the beginning of the episode to cover expenditures.

Exhibit 11: CMS Waivers to Medicare Payment Rules in PBPM Models Deliberated and Voted on by PTAC, December 2016–December 2020

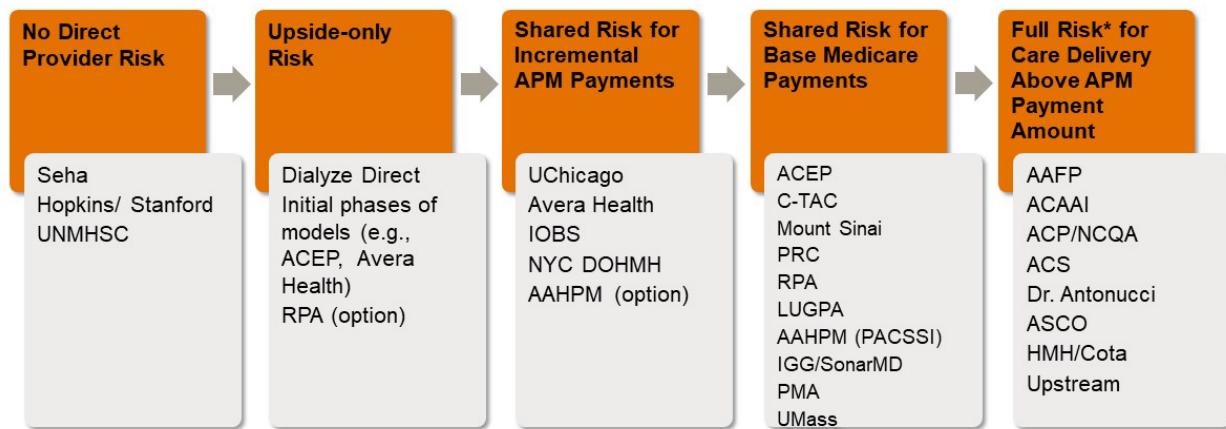
Some of the proposed PFPMs could require CMS waivers to Medicare payment rules. Several proposed models explicitly cited the need for a waiver, while others likely would require a waiver but did not propose a waiver. For example:

- Several proposals requested waivers to the Stark self-referral law, which prohibits physicians from referring Medicare patients for designated health services, such as imaging, to an entity with which the physician (or immediate family member) has a financial relationship, unless an exception applies. This restriction can limit providers' ability to split care-management fees or other financial incentives among care team members.
- The ACEP proposal requested three waivers to: 1) allow emergency physicians to bill for transitional care management codes; 2) allow emergency physicians to provide telehealth services; and 3) allow home visits by registered clinical staff within 30 days of a qualifying ED visit.
- The PMA proposal requested a waiver of beneficiary copayment requirements for remote telemonitoring services.
- Other proposals likely would need waivers of anti-kickback or Stark laws to be implemented, but the waivers were not directly addressed in the proposals or reports to the Secretary.

Financial Risk

The models reviewed by PTAC proposed a variety of approaches to align payment incentives for high-quality, efficient care by putting providers at some degree of financial risk for the cost and quality of patient care, including shared savings and downside risk and the basis for savings or loss calculations (Exhibit 12).

Exhibit 12: Approaches to Financial Risk in PFPMs Deliberated and Voted on by PTAC, December 2016–December 2020



Source: Authors' analysis of 26 proposals deliberated and voted on by PTAC as of December 31, 2020, to which the Secretary's criteria were applicable.

Notes: Two proposals (Dr. Yang and Mercy ACO) were not included because the Committee could not apply the criteria for PFPMs established by the Secretary. *Full risk includes models with capitated PBPM payments as well as models with a fixed episode-based payment or cap on payments. These models can also include performance-based shared risk payments.

Performance Incentives

Almost all of the proposed models had some form of a performance-based payment incentive, with the exceptions of Seha, Hopkins/Stanford, and UNMHSC. Among the proposals with performance-based payment incentives, one proposal included shared savings—Dialyze Direct proposed to give nephrologists a portion of savings from reduced transportation costs. All of the other proposed models with performance-based payment incentives included some form of two-sided or downside risk, where providers stood to share in both savings and losses. Provider acceptance of two-sided risk is one of several criteria for a payment model to be considered an advanced APM by HHS, but PFPMs submitted to PTAC do not need to be advanced APMs.⁴

Accountability Basis

Models differed with respect to the basis of payments that would be at risk. In some cases, such as the NYC DOHMH and the Avera Health proposed models, only the incremental payments provided by the

⁴ An Advanced APM requires participants to use certified electronic health record (EHR) technology; provides payment for covered professional services based on quality measures comparable to those used in the MIPS quality performance category; and is either a medical home model expanded under Innovation Center authority or requires participants to bear significant financial risk. More information is available online at <https://qpp.cms.gov/apms/advanced-apms> (accessed September 15, 2021).

model were affected by performance (e.g., add-on care management PBPM payments) and not the providers' base or core FFS payments.

An additional dimension where several models differed was the basis for estimating shared savings and shared losses. While most models used a measure of health spending—for example, total cost of care, condition-specific cost of care, or payments for the provider's services during an episode—as the unit for determining both shared losses and shared savings, two models proposed using a measure beyond spending on medical care. The NYC DOHMH proposed bonus payments based on an estimate of life years gained with sustained virological response for patients with hepatitis C. The Dialyze Direct proposal provided bonus payments to nephrologists based on avoided transportation costs if SNF patients with ESRD received home hemodialysis instead of in-center dialysis.

Phasing of and Options for Risk

A number of models described a phased approach to provider risk over time or offered different risk tracks for participants, so even within a single model, the methodology could differ. For example, the RPA proposal used both a shared savings and a two-sided risk option for participants. The ASCO proposal includes two payment tracks for participating hematology/oncology practices and associated physicians, both with monthly payments and performance-based adjustments. Distinct from Track 1, Track 2 practices would also assume greater upside and downside risk through bundling of payments for specified services. The ACP/NCQA proposal also includes two tracks with similar care management fees and performance-based payments; in Track 2, practice receive a quarterly prospective payment based on estimated MPFS spending in exchange for a reduction in FFS payments. The ACEP model included three risk tracks for participants: 1) pay for reporting transition to pay for performance, with downside risk starting in performance year three; 2) pay for performance with a stop gain/loss of 10 percent, with downside risk starting in performance year one; and 3) pay for performance with a progressive stop gain/stop loss capped at 20 percent/20 percent, with downside risk starting in performance year one.

This excerpt from the RTS on the AAHPM proposed serious illness model demonstrates the variety of approaches to risk sharing that can exist within one proposed APM:

Under Track 1, PCTs [patient care teams, the APM entity] would be subject to positive and negative payment incentives of up to 4 percent of total PACSSI care management fees received for the year. Track 2 is a voluntary track available to PCTs in Year 3. Under this track, practices would take on shared risk and savings based on total cost of care. Risk would be based on spending above a risk-adjusted benchmark, but would be limited to the lesser of 3 percent of the total cost of care benchmark or 8 percent of each PCT's total Medicare A and B revenues. Shared savings would be based on spending below the benchmark and would be capped at 20 percent of the total cost of care benchmark.

The ACAAI proposal had a slightly different approach to phased risk. The ACAAI proposal included three phases based on a patient's duration in the model and how well the patient's asthma was controlled (e.g. diagnosis and initial diagnosis for poorly controlled asthma, continued care for difficult-to-control asthma, and continued care for well-controlled asthma), with a different payment methodology for each of the three phases.

Proposed Approaches to Risk Adjustment

Risk adjustment helps to enable accurate comparisons of clinician or facility performance by accounting for differences in patient health status and other demographic factors—such as age, gender, and income—that can contribute to higher spending for care. In PFPM proposals, risk adjustment was used two ways: 1) risk adjustment or risk stratification of payments to providers to support care delivery, and 2) risk adjustment of performance targets to calculate shared savings or losses.

Risk-Adjusted Payments

Among proposed models with PBPM payments, only four models (Dr. Antonucci, AAFP, ACAAI, and AAHPM) directly mentioned creating tiered payments for care based on beneficiary risk. In proposed models with an episode-based payment, HMH/Cota proposed to identify 27 payment bundles for the four cancer types, with a goal of ensuring payments matched the care needs of subgroups of similar patients. The two hospital-at-home proposed models (PRC and HMH/Cota) used a DRG-like bundled payment to reflect patient diagnosis. The NYC DOHMH model included two payment levels that differed based on whether the beneficiary was dually eligible for Medicare and Medicaid.

Risk-Adjusted Targets

Nearly all of the proposed models set a performance benchmark related to spending, and the models proposed a variety of approaches for adjusting the benchmark to reflect differences in risk between participating beneficiaries and a comparison population. These approaches included using beneficiary demographics, the number of health conditions, the CMS-HCC model (hierarchical condition categories), patient-reported survey data, a comparison with patients with matching DRGs, and big data approaches that use algorithms to identify patterns in large datasets and associated patient and treatment characteristics. The models also defined different groups to use for comparison, including geographic, historical, site-specific, and peer provider (e.g., academic medical centers) control groups.

Proposed Performance Measures for Quality and Cost

Improving health care quality and reducing cost growth are primary objectives of value-based payment; proposed PFPMs should reduce health care spending, improve health care quality, or accomplish both objectives. As a result, quality, cost, performance measurement, and accountability are important features of PFPMs. There may be proposed payment reforms that could potentially improve quality and reduce spending, but without performance measures these models are not APMs. Importantly for PFPMs, quality can be linked to payment in several different ways, including as minimum requirements for participation, as a threshold for receiving shared savings or being at risk for losses, or as a factor in determining the magnitude of shared savings or losses.

Exhibit 13 outlines major considerations for proposed PFPMs that shape the approach to quality performance measurement. These considerations include the aspect of the model addressed by the quality measure—namely, whether the model is achieving its objectives, is leading to undesirable outcomes, and affecting the experience of participating patients and providers. In addition, quality measures can capture different domains, such as structure, process, and outcomes.^{xvii}

Exhibit 13: Considerations for Assessing the Role of Quality Measures in APMs

What aspect of the APM do the quality measures address?	<ul style="list-style-type: none"> • Is the model achieving objectives? • Does the model have unintended consequences? • What is the patient experience in the model?
What dimension of quality do the measures address?	<ul style="list-style-type: none"> • Structure (e.g. certification requirements) • Process (e.g. number of visits) • Outcome (e.g. health improvement or decline)
How are the quality measures linked to payment?	<ul style="list-style-type: none"> • What is the spectrum of linkages between quality measures and proposed payments in the model? • Does the model include minimum quality standards? • Does the model link performance on quality measures to payments positively, negatively, or neither? • Does quality performance affect base Medicare payments, incremental payments in the model, or incentivize quality in some other way?

Source: Authors' analysis of 26 proposals deliberated and voted on by PTAC as of December 31, 2020. Two proposals (Dr. Yang and Mercy ACO) were not included because the Committee could not apply the criteria for PFPMS established by the Secretary.

Measures Addressing Spending

Almost all of the proposed models included performance-based payments, which require specification of performance measures to determine payments. Cost or spending measures comparing payments for health care services for beneficiaries participating in the model against spending for similar beneficiaries outside the model were common, though the basis for the spending target differed across proposals as described previously.

Several proposals included utilization measures as a related performance measure. For example, the UChicago proposal based bonus payments on whether the provider was responsible for target percentages of internal medicine service provision for eligible beneficiaries in both the inpatient and outpatient settings. Other proposed models included hospitalization rates or ED visits for participating beneficiaries as a performance measure.

Quality Measures

Aside from spending measures, the proposals also incorporated quality measures in several distinct ways. First, a quality measure could serve as a threshold for initial or continued participation in the model. In the Upstream wound care model, practices that did not achieve 80 percent patient satisfaction rates for two consecutive quarters would be dismissed from the program. Other models required that practices document shared decision-making infrastructure, achieve specific training requirements, or meet other baseline provider eligibility criteria to participate, as an indicator of quality.

Secondly, quality measures were used to evaluate program impact in some of the proposals. In these models, submitters described data on quality measures that could be collected and used to evaluate the program, but the quality measures were not linked to payment. Three proposed models included quality measures in this way (IGG/SonarMD, PMA, and Mount Sinai).

Finally, several models proposed to use quality measures to determine performance-based payments. In some proposed models, a minimum quality score was necessary to be eligible for shared savings (e.g., RPA). Some models also proposed to use quality measures to determine the magnitude of shared-savings bonuses—namely, that better performance on quality measures yielded higher shared-savings payments. On the other hand, some models also proposed using poor performance on quality measures to reduce the size of payment bonuses, to increase the size of shared losses to be returned to CMS, or to make it more difficult to achieve spending targets.

The types of quality measures included in proposed models also varied. Some proposed models only required providers to report performance on quality measures, while other models incorporated the level of performance on outcome measures in the payment methodology.

Conclusion

The findings from this analysis are intended to assist in assessing common elements and variation across the models that have been deliberated and voted on by PTAC as of December 31, 2020. Proposed PFPMs deliberated and voted on by PTAC varied across important dimensions. For example, proposals targeted different kinds of provider-types, clinical conditions, and care settings. Proposed PFPMs also addressed different delivery system challenges and tackled these challenges using various payment approaches.

From a delivery system perspective, PFPMs aimed to improve care management, to remove access limitations for specific services, to reduce unnecessary or harmful care, and to integrate care across providers, settings, and disease progression. Proposed changes to payment included adding to the MPFS in different ways, using fixed or episode-based payments, or using PBPM payments. PBPMs as “add-ons” to FFS payments, capitated PBPMs, and episode-based models with and without fixed payments were proposed with similar frequency.

Even when using the same general payment approaches, different PFPMs proposed different scenarios for implementing a given approach. For example, the proposed PFPMs differed in terms of whether the proposed payment change would supplement or replace FFS payments and how the proposed payments addressed risk accountability. Almost all of the models proposed risk accountability approaches that involved two-sided shared risk for participating providers. However, they varied in terms of whether and how cost and quality benchmarks drove financial risk to the provider.

Comparing the population or provider focus of the proposals against their proposed changes to payment systems does not identify clear patterns, but notable observations do emerge. For example, the serious illness models exclusively proposed capitated PBPM approaches, as did the primary care models. The two hospital-at-home models both proposed a fixed episode payment pegged to the hospital-based DRG payment for the acute care service. The other setting-focused proposed models did *not* propose full risk models that were part of capitated PBPMs or episode-based models with a fixed episode payment.

Appendix 1: Detailed Overview of PFPMS Deliberated and Voted on by PTAC, December 2016–December 2020

Proposal Short Name	Provider Type	Clinical Setting	Condition/Target Population	Care Coordination & Integration	Quality	Payment Policy Solution	PTAC Deliberation Date	PTAC Recommendation
AAFP	Primary care	Ambulatory	Primary care	Within specialty (primary care)	Linked to payment	Capitated PBPM with shared risk (options for accountability)	12/19/2017	Limited-scale testing
AAHPM	Palliative care providers	Home health, hospice	Serious illness	Multidisciplinary	Linked to payment	Capitated PBPM with shared risk (options for accountability)	3/26/2018	Limited-scale testing
ACAAI	Allergists, Immunologists, and Pulmonologists	Ambulatory	Asthma	Within specialty	Linked to payment	Capitated and add-on PBPM with shared risk	6/22/2020	Referred for attention
ACEP	Emergency room physicians	Emergency department	Qualifying ED visits	Multidisciplinary	Linked to payment	Episode-based model with continued FFS, with shared risk (options for accountability)	9/6/2018	Recommended
ACP/NCQA	Specialists (cardiology, infectious disease, neurology)	Ambulatory	Chronic illness	Multidisciplinary	Linked to payment	Capitated and add-on PBPM with shared risk	9/15/2020	Recommended for testing to inform model development
ACS	Broad	Inpatient, outpatient & ambulatory	Broad (includes 100+ conditions or procedures)	Not specified	Linked to payment; reporting	Episode-based model with continued FFS and shared risk	4/11/2017	Limited scale testing
ASCO	Oncologists	Inpatient, outpatient, & ambulatory	Cancer	Multidisciplinary	Linked to payment	Capitated and add-on PBPM with shared risk	9/15/2020	Recommended for testing to inform model development
Avera Health	Primary care (geriatricians)	Skilled nursing facilities	SNF residents	Multidisciplinary	Linked to payment	Add-on PBPM with shared risk (options for accountability)	3/27/2018	Recommended
C-TAC	Palliative care providers	Inpatient, outpatient & ambulatory	Serious illness	Multidisciplinary	Linked to payment	Capitated PBPM with shared risk	3/26/2018	Limited-scale testing
Dialyze Direct	Specialists (nephrologists)	Skilled nursing facilities	Chronic condition (ESRD)	Within condition	None	One-time additional payment with shared savings	9/6/2018	Recommend for attention
Dr. Antonucci	Primary care	Ambulatory	Primary care	Not specified	Linked to payment; patient-reported using online survey	Capitated PBPM with shared risk	9/6/2018	Limited-scale testing

Proposal Short Name	Provider Type	Clinical Setting	Condition/Target Population	Care Coordination & Integration	Quality	Payment Policy Solution	PTAC Deliberation Date	PTAC Recommendation
Dr. Yang	Not specified	Broad	Community-dwelling Medicare beneficiaries	NA	NA	Medicare benefit restructuring through health accounts	12/18/2017	NA
HMH/Cota	Specialist (oncologists)	Inpatient, outpatient & ambulatory	Cancer (breast, colon, rectal, and lung)	Multidisciplinary	Linked to payment	Bundled episode-based payment replacing FFS, with shared risk	9/8/2017	Limited-scale testing
Hopkins/Stanford	Occupational therapists and registered nurses	Patient home	Community-dwelling patients with chronic conditions and functional limitations	Not specified	Not linked to payment	Additional one-time bundled payment without shared risk	6/17/2019	Recommended for testing to inform payment model development
IGG/SonarMD	Specialist (gastroenterologist)	Ambulatory	Chronic disease (Crohn's Disease)	Within condition	Not linked to payment	Add-on PBPM with two-sided risk, plus a payment to support remote monitoring	4/10/2017	Limited scale testing
IOBS	Specialists (oncologists)	Ambulatory, inpatient & outpatient	Cancer	Primarily within condition	Linked to payment	Episode-based model with continued FFS, with shared risk	12/10/2018	Referred for further development and implementation
LUGPA	Specialist (urologists)	Ambulatory	Cancer (prostate cancer)	Within condition	Linked to payment	Add-on PBPM with shared risk	12/19/2017	Not recommended
Mercy ACO	Rural health clinics	RHCs	Rural Medicare beneficiaries	NA	NA	Separately payable annual visit for RHCs	12/18/2017	NA
Mount Sinai	Broad	Inpatient services in home setting	Acute conditions (eligible patients in one of 44 DRGs)	Multidisciplinary within episode	Not linked to payment	Episode-based payment replacing FFS, with shared risk	9/7/2017	Recommended
NYC DOHMH	Specialist (gastroenterologist)	Outpatient & ambulatory	Chronic condition (Hepatitis C Virus)	Multidisciplinary	Linked to payment	Bundled episode-based payment replacing FFS, with shared risk	12/18/2017	Not recommended
PMA	Specialist (pulmonologist)	Ambulatory; telemedicine	Chronic disease (COPD and asthma)	Within condition	Measures and link to payment not specified	Add-on PBPM with shared risk, plus payment to support Bluetooth meter	4/11/2017	Not recommended
PRC	Broad	Inpatient services in home setting	Acute conditions (patients within ~150 DRGs)	Multidisciplinary	Linked to payment	Bundled episode-based payment replacing FFS, with shared risk	3/26/2018	Recommended
RPA	Specialist (nephrologists)	Ambulatory; dialysis centers	Chronic condition (incident ESRD)	Primarily within condition	Linked to payment	Episode-based model with shared risk and transplant bonus	12/18/2017	Recommended (without transplant bonus)
Seha	Not specified	Ambulatory	Chronic condition (wounds)	Within condition	Not linked to payment	Additional visit-based payment (no episode)	3/11/2019	Not recommended
UChicago	Primary care (including hospitalists)	Inpatient & outpatient	Frail/complex patients with hospitalizations		Linked to payment; utilization measures	Add-on PBPM with shared risk	9/8/2018	Limited-scale testing

Proposal Short Name	Provider Type	Clinical Setting	Condition/Target Population	Care Coordination & Integration	Quality	Payment Policy Solution	PTAC Deliberation Date	PTAC Recommendation
UMass	Optometrists and Ophthalmologists	Ambulatory	Ocular emergencies	Within condition	Linked to payment	Episode-based payment with shared risk	6/22/2020	Not recommended
UNMHSC	Neurologists, Neurosurgeons	Emergency department	Neurological emergencies	Within condition	Not linked to payment	Additional one-time payment without shared risk	9/16/2019	Recommended for further development and testing
Upstream	Physical and occupational therapists	Ambulatory	Chronic condition (wounds)	Within condition	Linked to payment	Additional one-time payment with shared risk, plus expanded billing capacity for providers	3/11/2019	Not recommended

Source: Authors' analysis of 28 proposals deliberated and voted on by PTAC as of December 31, 2020.

Note: PBPM=per beneficiary per month; DRG=diagnosis-related group.

Appendix 2: Detailed Summary of Content Related to Selected Themes in Proposals Reviewed By PTAC, December 2016–December 2020

This section highlights detailed information relating to the following selected themes in proposals reviewed by PTAC:

- Palliative Care
- Primary Care
- Acute Care
- Bridging Acute Care with Community-Based Care
- Wound Care

Information included relating to each of these themes includes: introduction, selected proposals submitted to PTAC, key challenges, approaches in proposals submitted to PTAC, and perspectives for developing APMs/PFPMs based on PTAC's review of the proposals.

Palliative Care

Introduction

Palliative care is an interdisciplinary care approach focused on improving the quality of life among patients with advanced illness through symptom management, shared planning and decision-making related to care goals, and care coordination among settings. It spans a continuum of service needs through disease progression for the patient and family.

Selected Proposals Submitted to PTAC

- Advanced Care Model (ACM) Service Delivery and Advanced Alternative Payment Model,⁵ submitted by the Coalition to Transform Advanced Care (C-TAC) on October 4, 2017.
- Patient and Caregiver Support for Serious Illness (PACSSI), submitted by the American Academy of Hospice and Palliative Medicine (AAHPM) on August 15, 2017.

Key Challenges and Approaches

Challenges in Palliative Care

Scope. PTAC explored the need for palliative care and requested analyses on the number of Medicare beneficiaries who may benefit from such services. The data analysis that was done as part of PTAC's review of one of the proposals estimated the numbers of Medicare beneficiaries who might benefit from

⁵ This proposal is a resubmission of a previously submitted proposal. This previous submission and associated materials can be found on the [Proposals & Materials](#) page of the ASPE PTAC website.

palliative care services by identifying beneficiaries with: at least one of a list of diagnoses (e.g., metastatic cancer); and/or those with at least three chronic conditions (such as congestive heart failure). The analysis indicated that more than nine million Medicare beneficiaries have at least one of the diagnoses targeted in the proposed PACSSI model.

Payment. Existing payment policies for palliative care services for Medicare beneficiaries—including FFS and existing APMs—are not sufficient to meet the population’s needs.

Medicare’s current benefit structure only covers some services and visits associated with the broader spectrum of palliative care. The traditional Medicare FFS payment structure provides limited reimbursement for many aspects of palliative care, including interdisciplinary team-based care, patient-provider communication, and coordinating care. A large portion of costs for end-of-life care are clinician-driven. Under Medicare FFS arrangements, physicians are incentivized to pursue intensive treatment options, rather than palliative care options that some patients would prefer.

Care delivery. The proposal submitters discussed gaps in the current Medicare FFS palliative care landscape that were addressed by the proposed models, such as meeting needs of patients with advanced illness before they qualify for hospice; providing nursing, social work, and spiritual services not reimbursed under Medicare FFS; and addressing fragmented care by taking patient wishes into account and referring to hospice at a time when patients are ready.

There is a shortage of qualified palliative care providers despite growth in palliative care training programs. A workforce shortage remains a significant barrier to access to palliative care services. A 2010 study estimated that 6,000 to 18,000 additional physicians are needed to meet the current demand in inpatient palliative care settings alone.^{xviii} Meier (2011) also noted that the shortage of medical and nursing workforce with expertise in palliative care is a large barrier to patient access.^{xxix}

The literature notes that the most common setting for non-hospice palliative care services in the United States is the acute care hospital, not community-based settings.

Model design. Although the Innovation Center’s Medicare Care Choices Model (MCCM) allows for the provision and payment of comprehensive palliative care, it is only available to individuals certified by their physicians as being in the last six months of life and diagnosed with certain conditions. The literature notes that it is crucial to identify the resources and activities that should be covered by any value-based payment model (such as a per diem rate or bundled payment due to the high needs and high costs of this population).

Approaches in Proposals Submitted to PTAC

Both the ACM and PACSSI proposed models would:

- 1) Target palliative care services to individuals with serious health conditions;
- 2) Deliver palliative care through multidisciplinary palliative care teams;
- 3) Provide per beneficiary per month (PBPM) care management payments as part of the payment methodology (Category 4 in the Common APMs Reference Guide);
- 4) Allow different types of entities to receive palliative care payments; and

5) Financially incentivize and reward the delivery of high-quality care.

In addition, the proposals distinguish palliative care from hospice care and identify the components of palliative care models.

PTAC Perspectives for Developing APMs/PFPMS Based on PTAC's Review of the Proposals

Despite finding merit in both the ACM and PACSSI proposals and recommending both of the proposed models for limited scale testing with high priority, PTAC also identified areas for improvement in the proposals.

Enrollment. PTAC questioned the accuracy of end-of-life prognosis to identify patients for enrollment in a palliative care model, particularly with regard to the ACM proposal. Additionally, numerous sources in the literature have suggested that eligibility for palliative care services should be independent of the patient's prognosis and outside of traditional disease-specific diagnoses. With regard to enrollment, PTAC had questions and concerns about how patients would be notified of an end-of-life prognosis and how proposed models would assume accountability for patients who survive longer than 12 months or cover costs for high-cost patients. There is a need to determine and develop specific triggers for palliative care consultation.

PTAC discussed communicating information about prognosis to patients and families in a sensitive way, received public comments stressing the importance of patient- and family-centeredness in palliative care, and concluded that strong shared decision-making should be a component of any palliative care model. PTAC pointed out in the RTS that studies consistently favor communicating prognosis generally or at least offering the opportunity for this conversation; however, there is less agreement in the literature on the specific approach to conveying prognostic information. More work to understand patient perspectives and preferences on learning disease prognosis would be useful. In addition, patient engagement in care goals can improve quality of life and reduce health care utilization, lending support to the proposed models' emphasis on the importance of shared decision-making and patient-centered care planning.

Care delivery. PTAC noted that a strength of both the PACSSI and ACM proposed models is that they provide flexibility in care delivery so that different types of practitioners can receive payments. A flexible interdisciplinary team model would also allow systems to innovate, as discussed at the public meeting. Multiple stakeholders at the public meeting spoke of and referenced literature in support of the use of interdisciplinary teams to deliver palliative care. PTAC discussed the provision of care by palliative care teams and the importance of care coordination between palliative care teams, patients, and other providers.

Payment. PTAC deliberated on multiple aspects of the proposed payment models, including use of pay for performance versus fee-at-risk models, use of PBPM mechanisms, payment calculations and benchmarking, and assumption of risk by participating entities. PTAC concluded in the combined RTS that strengths of the two proposals related to providing bonus payments based on the accountable entity's performance on specified quality and cost metrics.

Though there was eventual consensus that the PBPM amounts proposed by both submitters were sufficient to cover costs, PTAC discussed this topic at length.

- PTAC had concerns that payment tiers would result in adverse selection in the proposed PACSSI model and create complexity if patients moved between tiers.
- Though PTAC weighed the alternative of using blended rates to mitigate adverse tiered payment incentives, PTAC concluded in the RTS that blended rates also suffer from adverse selection.

PTAC found weaknesses in both proposals' payment methodologies related to payment calculations and benchmarking. In PTAC's review of the proposed approaches, PTAC addressed:

- Accounting for random variation, suggesting a comparison of model participants who died with people who died outside of the proposed model as a benchmarking methodology;
- Prospective risk adjustment, suggesting that this approach might be a preferable way to calculate costs and is consistent with CMS practices;
- Regional adjustment, mentioning that models are shifting away from site-specific payments; and
- Accountability for the last 12 months of life, which may not align with the period APM entities are providing care to enrollees.

Risk. PTAC discussed whether shared risk was necessary for palliative care models and whether downside financial risk is already in place for entities providing palliative care as a result of the infrastructure investments that these entities must make to provide such care.

PTAC also discussed the amount of risk assumed by participating entities under the proposed models, identifying the relationship between the strength of performance measures and the risk level and questioning whether a uniform risk corridor across participants is ideal. Additionally, PTAC discussed whether asymmetric risk, which favors upside gains, noting potential challenges of payment models that incentivize large financial gains for end-of-life care.

Cost. In discussing proposed cost measures, PTAC generally concluded that using total cost of care measures for a patient population with a high risk of dying could create perverse incentives or unintended consequences related to providing care.

Quality. Regarding quality measures for palliative care, PTAC discussed the following issues:

- Greater inclusion of tested quality measures
- Measuring patient experience at multiple points in time
- Greater inclusion of patient-oriented quality measures
- Developing and testing new measures
- Connecting measures to life rather than death
- Use of hospice measures

Strong quality assurance measures are needed, such as clear standards regarding minimum level of contact with beneficiaries and more definition of virtual visits.

Primary Care

Introduction

Primary care providers are often the first doctors that patients may see and serve the widest section of the population while treating and diagnosing a diverse range of conditions. By some measures, primary care constitutes the largest proportion of the United States health care system. While there is some gray area around the definition of primary care specialties, the proposed models focus on family medicine, general practice, geriatric medicine, pediatric medicine, and internal medicine as the primary care specialties of interest.

Research shows that good access to primary care is associated with better preventive care, avoided unnecessary treatment, improved costs, and lower mortality. Payment models that encourage spending on primary care may provide better support for practices, enabling them to deliver higher-quality, more efficient care that ultimately improves patient health outcomes and reduces overall healthcare spending.

PTAC noted an urgent need to preserve and strengthen primary care and supported the development of additional opportunities for primary care providers to participate in APMs.

Selected Proposals Submitted to PTAC

- The “Medical Neighborhood” Advanced Alternative Payment Model (AAPM) Proposal (MNM),⁶ submitted by the American College of Physicians and the National Committee for Quality Assurance on July 30, 2019.
- An Innovative Model for Primary Care Office Payment (IMPC-APM), submitted by Jean Antonucci, MD on March 18, 2018.
- Advanced Primary Care: A Foundational Alternative Payment Model for Delivering Patient-Centered, Longitudinal, and Coordinated Care (APC-APM), submitted by the American Academy of Family Physicians on April 14, 2017.

Key Challenges and Approaches

Challenges in Primary Care

Payment. Both the APC-APM and IMPC-APM proposals address the inadequacy of the current Medicare FFS payment landscape for primary care providers. Both proposals highlighted that current FFS billing practices disadvantage primary care providers by disproportionately reimbursing procedural care, resulting in lower compensation for primary care physicians than physicians in subspecialty disciplines. While current Medicare payment guidelines allow for billing for CCM, E&M services, and TCM services, many independent primary care providers do not possess the documentation ability or knowledge to take advantage of these codes, making appropriate compensation inaccessible.

Although CMS has launched models focusing on primary care, the APC-APM and IMPC-APM proposals, as well as most primary care providers, do not have the opportunity to participate in APMs. Existing CMS models like the Comprehensive Primary Care (CPC) and CPC+ initiatives are limited to

⁶ This proposal is a resubmission of a previously submitted proposal. This previous submission and associated materials can be found on the [Proposals & Materials](#) page of the ASPE PTAC website.

specific markets and geographic regions, limiting patient and provider ability to access their associated improvements in care. In its analysis of both proposals, PTAC asserted that there is an urgent need to preserve and strengthen primary care and highlighted the possible benefits of developing more inclusive alternative payment models.

The MNM model focuses on the challenges in compensating specialists for engaging in care coordination with primary care providers. PTAC noted that, in addition to supporting effective primary care, the proposal also addresses the dearth of available APMs for specialists.

Care delivery. Primary care providers are the most visited medical providers in the country, serving the widest section of the population while treating and diagnosing a diverse range of conditions. At the same time, research shows that the United States primary care system is struggling to keep up with increasing demands and expectations, attributable in part to diminishing economic margins and decreasing numbers of primary care providers. While approximately one-third of physicians are currently practicing in primary care, less than one-fourth of current medical school graduates intend on practicing in primary care. Significant workforce attrition, coupled with documented diminished recruitment, has led to a shortage of primary care providers in the United States.

Primary care providers can play a critical role in improving care delivery and health outcomes by providing care coordination and TCM services. However, both proposals note that the administrative requirements and technological systems undergirding effective care coordination and TCM services can be difficult for small, independent providers—who employ over half of physicians in America—to navigate and track.

Referrals and reporting among primary care and specialty practices are key components of care coordination, yet studies show that up to 50 percent of referring physicians do not know if specialist visits actually occur. Current methods of expanding payment for care coordination can be difficult for primary care providers to navigate, and there are weak financial incentives for specialists to partner with primary care to establish sustainable care coordination routines. Poor care coordination contributes to worse outcomes, unnecessary procedures, and wasteful medical spending.

Model design. The diverse nature of primary care practices and needs across those practices poses challenges when developing APMs. Many practices are ineligible to participate in existing APMs due to geographic and logistical limitations.

Approaches in Proposals Submitted to PTAC

All three proposals—MNM, APC-APM, and IMPC-APM—incorporate PBPM payments coupled with performance-based payments. Each proposal includes slightly different requirements.

The IMPC-APM proposed model presents the simplest payment methodology, proposing the introduction of risk-stratified monthly primary care payments in place of virtually all current fees (except services with significant supply costs, like an intrauterine device [IUD] insertion, vaccines, and injections of medications over a specified cost threshold). The performance-based payment consists of a 15 percent withholding of the PBPM payment that is distributed only if the practice meets a quality performance standard.

The APC-APM model provides a risk-adjusted primary care global payment (PBPM) for direct patient care, a risk-adjusted care management fee, a FFS payment limited to services not otherwise included in the primary care global fee, and performance-based incentive payments that hold physicians accountable for quality and costs.

The MNM model differs from the APC-APM and IMPC-APM proposals by focusing on improving coordination between specialists and primary care physicians for patients with multiple chronic conditions. The MNM provides a PBPM fee for care coordination and performance-based incentives based on spending relative to an annual benchmark and adjusted for quality and utilization metrics for eligible specialists. The MNM is also distinct in proposing two different payment tracks for participation. The first track maintains regular FFS payments, and the second track reduces FFS payments by 75 percent in exchange for prospective quarterly payments based on projected spending.

PTAC Perspectives for Developing APMs/PFPMS Based on PTAC's Review of the Proposals

Expanding provider participation. PTAC lauded all three proposals for their innovations that could encourage greater APM participation among primary care practices and improve care quality and access. PTAC noted that the IMPC-APM proposal had particular potential for expanding to small and rural primary care practices. PTAC highlighted the potential of the APC-APM model to encourage broader participation by primary care providers in APMs and deliver high-value patient services. PTAC commended the MNM model for expanding to specialists, and encouraging coordination across specialists and primary care, but also noted that additional specialties such as endocrinology and nephrology could benefit from enhanced efforts in care coordination and inclusion in the pilot.

Care coordination. All three proposals assert that the inclusion of PBPM payments will enable providers to more readily engage in care coordination efforts. PTAC praised the MNM model for encouraging coordination of care between specialists and primary care providers; however, the committee also noted that the proposal lacks specific suggestions for improving care coordination. Similarly, in its comments on APC-APM and IMPC-APM, PTAC suggested the development of additional specific requirements or measures for care coordination.

Quality and outcome measurement. In its assessment of all three of the proposals, PTAC emphasized the importance of developing and maintaining appropriate quality and outcome measures.

PTAC identified IMPC-APM's innovative approach for using patient-reported data collected through an online tool for quality measurement and performance benchmarking as a potentially effective element of primary care payment models. PTAC noted the approach could also potentially enable increased use of patient-reported outcomes in other payment models. Despite the potential value of using patient-reported data, PTAC expressed concerns that the significantly different quality measurement components of the model would make it difficult to ensure that quality of care was being maintained or improved. PTAC stressed the necessity of consistent and comparable results and recommended the development of a standardized sampling frame and mode of administration for collecting patient-reported quality and risk stratification data.

In its analysis of both the IMPC-APM and APC-APM proposals, PTAC expressed concern over the possibility of capitation models encouraging "stinting," or reduced access to care. PTAC proposed the

inclusion of encounter data and more robust performance metrics to ensure adequate accountability under the models proposing monthly payments for primary care.

In reviewing the MNM model, PTAC emphasized the importance of developing a comprehensive set of required quality measures while accommodating differences in appropriate quality metrics by condition or specialty. Committee members expressed concern about the cost and accessibility of the proprietary NCQA patient-centered specialty practice (PCSP) certification as the model's included quality assessment mechanism. To overcome these concerns, members suggested the incorporation of technical implementation support for obtaining NCQA PCSP certification and/or the development of an alternative CMS certification.

Payment and payment methodology. When evaluating models, PTAC acknowledged that both the APC-APM and IMPC-APM models would likely result in increased spending on primary care. While PTAC supports the proposals' intended goals of spending more on primary care to achieve total cost savings, the Committee expressed concern about the lack of adequate measures included in the models to assess their impact on overall cost saving. PTAC recommended the development of more robust performance and evaluation measures that might serve as proxies for total cost of care to ensure that proportionate savings will take place. PTAC expressed concerns about the capitation payment levels of the IMPC-APM and APC-APM proposals and suggested further specification and refinement of actual PBPM payment amounts prior to implementation of the model. PTAC also recommended that the APC-APM model simplify its proposed payment model, suggesting that the model use only one PBPM payment and a single track for E&M services.

PTAC lauded the MNM proposal for compensating specialists engaging in care coordination with primary care providers and noted that the MNM's proposed integration into existing payment models (i.e., CPC+ and PCF) was a valuable strategy for leveraging existing APMs to achieve important objectives. PTAC expressed a desire to calculate the proposed care coordination fee during the proposed model pilot period to ensure that the proposed model's increased payments are offset by downstream savings and are consistent with overall cost savings under the model. PTAC also suggested the use of a robust attribution methodology to ensure that payments are not duplicated for participating specialists and referring primary care providers treating the same beneficiaries.

Acute Care

Introduction

Acute care includes the health system components that are used to treat urgent or emergent episodes of injury and illness that can lead to death or disability without rapid intervention. It encompasses a range of clinical health-care functions, including emergency medicine, trauma care, pre-hospital emergency care, acute care surgery, critical care, urgent care, and short-term inpatient stabilization.

Selected Proposals Submitted to PTAC

- ACCESS Telemedicine: An Alternative Healthcare Delivery Model for Rural Emergencies (ACCESS), submitted by The University of New Mexico Health Sciences Center on February 13, 2019.

- Acute Unscheduled Care Model (AUCM): Enhancing Appropriate Admissions, submitted by American College of Emergency Physicians on June 12, 2018.
- ACS-Brandeis Advanced Alternative Payment Model (ACS-Brandeis), submitted by American College of Surgeons on December 13, 2016.

Key Challenges and Approaches

Challenges in Acute Care

Payment. Medicare payments made under the acute inpatient prospective payment system (IPPS) totaled \$110 billion and accounted for about 25 percent of Medicare spending in 2014.

ED services for acute unscheduled care represent a segment of Medicare expenditures that has not received focused attention by CMS as it attempts to drive payment models that reward physicians for providing value over volume. Medicare payment also does not focus on the provision of acute care within the context of discharge placement decisions, such as inappropriate hospitalizations and increased ED usage.

In addition to the lack of effective incentives for appropriate discharge placement by ED physicians, access to the level of acute care also varies significantly across geographic regions. Rural hospitals have limited ability to provide acute specialty care. Although innovative measures such as two-way online consultations with neurologists have allowed rural hospitals to diagnose and treat urgent neurological conditions in a timely fashion, limited Medicare telehealth reimbursement historically has been a major impediment to cover the full cost of delivering services for neurological emergencies.

Acute care inpatient stays account for nearly one-third of health care costs, and, similar to acute emergent care, the current Medicare payment for inpatient stays does not include incentives for reducing cost or improving outcomes. The new APMs enable better post-inpatient care by rewarding adoption of quality and economic stewardship initiatives. However, Medicare FFS payment does not cover supplemental fees for care coordination, waivers for telehealth and payment for post discharge visits by non-home health agency (HHA) providers.

Care delivery. Despite the lack of coordination between emergency care physicians and community-based providers, the AUCM proposal notes that EDs can play an essential and complementary role to robust primary care systems to effectively manage care for Medicare beneficiaries with potentially complex and severe medical conditions.

Given the importance of acute emergency care, the ACCESS proposal states that limited access to specialist care for neurological emergencies in rural areas is an impediment to timely diagnosis and treatment of neurological conditions, such as stroke and traumatic brain injury (TBI). The ACCESS proposal notes that, even when consulting specialists are available, they typically do not have direct access to information in the patient medical record to inform diagnosis and treatment.

Model design. Although acute inpatient services and emergency care together contribute to more than one-third of Medicare expenditures, there are no APMs focused on acute emergency care. There are several challenges to the creation of such acute care models because it requires coordination between

emergency providers and multiple specialists paid separately. All these providers are important contributors to acute care but have varying levels of readiness to participate in these risk-bearing models.

Approaches in Proposals Submitted to PTAC

All three proposed models focus on the provision of acute care through bundled payments. The proposed ACCESS model connects rural or underserved primary hospitals (spoke hospitals) to neurological clinical experts from an academic medical system for emergent and urgent neurological consultations using telehealth. Patients requiring neuro-emergent care undergo neurological consultation via telemedicine, which allows the care team at the spoke hospital to accurately and rapidly identify emergent cerebral conditions and plan for subsequent treatment. The proposed bundled payment covers cost of the consultation by a neurologist or neurosurgeon, the cost of the telehealth technology to enable the remote physician to communicate with the facility where the patient is located, the cost the entity providing the consultation services incurs for ensuring provider availability, the provision of education to local staff, and quality assurance.

Like the proposed ACCESS model, the proposed AUCM also focuses on acute emergency care but is not targeted specifically to neurological consultation. The proposed model addresses a range of conditions typically present at an ED. The proposed AUCM model focuses on incentivizing improved quality and decreased cost associated with the discharge disposition decisions made by ED physicians. The proposed AUCM model is designed around episodes initiating from ED visits and bundles payment for all Medicare services provided within 30 days following the ED visit. Reconciling the payment to a target price based on historical payments yields net savings if the actual spending is below the facility-specific, historical cost of the episode for the condition. This payment mechanism assigns the physician group as a risk bearing entity. The proposed AUCM model is similar to the Bundled Payments for Care Improvement (BPCI) Advanced Model and includes payment waivers for ED acute care transition services, telehealth services, and post-discharge home visits for 30 days from the initial ED visits. The proposed model includes three options for participants to select different paths for quality reporting versus performance, which correspond to different options for risk-sharing, limits to gains or losses, applicable conditions for qualifying episodes, and the inclusion of Medicare FFS beneficiaries and dual eligible beneficiaries in a given performance year.

The proposed ACS-Brandeis model focuses on procedure-specific episodes that could be expanded to include periods of acute care and treatment of chronic conditions. Providers enter into risk-based contracts with CMS to achieve the quality and cost goals for episodes defined in the contract. The ACS-Brandeis payment model also includes a risk sharing component. Each covered episode is assigned an expected cost that reflects both a pre-determined standard cost and patient-specific risk factors. The difference between observed and expected costs represents the net difference for the episode that is “earned” or “lost” by each qualified participant. This amount is weighted by the clinical role played by each qualified participant. A tiered quality model creates a minimum quality standard that must be met to receive shared savings and the opportunity to earn higher shared saving with superior quality.

PTAC Perspectives for Developing APMs/PFPMS Based on PTAC’s Review of the Proposals

Expanding provider participation. The three proposed models assign risk to acute care providers and empower them to engage in clinical decision making that can eventually improve access to care, reduce

health care expenditures and result in better patient outcomes. The proposed AUCM model initially includes the treatment of four conditions in the ED in the first two years and then adds more conditions over time. Additional conditions would be added in subsequent performance years, if fewer than 90 percent of patients with those conditions are being admitted to the hospital. Among the three proposed models, the ACS-Brandeis model aims to provide a “broad-scope” Medicare payment approach where multiple types of clinicians currently not able to participate in APMs could identify episodes of care and be responsible for reduction in health care expenditures and improve quality of care.

Since its inception, there has been continued interest among physicians and participating rural hospitals regarding the ACCESS program. ACCESS initially recruited, onboarded, and trained 17 hospitals in rural New Mexico. By the end of 2018, an additional 13 hospitals were in the process of onboarding the program. The proposed ACCESS model could potentially contribute to the financial viability of rural hospitals by helping those providers retain Medicare payments for rural beneficiaries.

Care coordination. PTAC commended the proposed ACCESS model in its effort to improve coordination between rural acute care hospitals and specialists based in tertiary care hospitals. In this proposed model, a neurologist relies on the clinical information provided by rural physicians, audiovisual video examination, and the imaging or lab results shared online.

The proposed AUCM model specifically incentivizes enhanced communication and coordination between the ED and all community-based providers who treat the patients after ED discharge. In addition, it strives to achieve the goal of discharging the patient to the most appropriate care settings after they have been assessed, and the care plan has been outlined.

By design, the proposed ACS-Brandeis model provides an innovative way to support multiple clinicians working together as part of clinical affinity groups. However, it does not include any element of coordination with providers who are not part of the APM entity. PTAC also opined that relying on voluntary involvement of members of the care team may result in less integration and care coordination than would be desirable or necessary to successfully reduce spending and ensure quality.

Payment and payment methodology. At the time of the Committee’s review of the AUCM proposal, PTAC mentioned that there were no APMs primarily focused on acute emergency care to help counter the underlying incentive in FFS to increase volume. ED visits for acute unscheduled care represent a segment of Medicare expenditures that has not yet received attention.

PTAC opined that all three proposed models met the criteria for payment methodology as they aligned with the payment objectives and provided sufficient detail. Among the three proposals for acute care, AUCM and ACS-Brandeis are episodic, bundled payments for multiple conditions spanning emergency care and inpatient hospitalization whereas the ACCESS model’s proposed payment mechanism is bundled payment for emergent care for neurological consultation only. For the proposed ACCESS model, PTAC noted that further refinement of the set of services included in the bundle and determination of appropriate payment amounts is warranted.

The proposed AUCM model is an episodic model with retrospective reconciliation, target price, and a quality performance component for eligible participants. This is the only proposed model that provides options for participants to select quality reporting versus performance metrics based on different options for downside risk, stop gain/loss thresholds, eligible conditions, and other parameters. In its review,

PTAC raised concerns about holding the ED physician accountable for total cost of care risk in a 30-day post discharge period. PTAC also encouraged the submitter to explore alternatives for establishing a target price beyond using site-specific historical benchmarks, such as identifying peer facilities for a blended or regional approach.

In its review of the ACS-Brandeis proposed model, PTAC noted that a uniform methodology is proposed for large number of conditions and procedures. This approach would require a series of detailed specifications before it can be implemented across additional conditions and procedures. PTAC also suggested that the proposed model specify clinical roles for providers and that the share of “savings” be pre-determined based on their designated role. Unlike other models, the proposed ACS-Brandeis model is dependent on updates from the episode grouped over time. PTAC also expressed concern that the comparison of a normative spending target with risk to the provider for any cost or savings does not account for cost variation in settings.

Quality and cost. In its assessment of the ACCESS proposal, PTAC emphasized consideration of measures to evaluate long term costs and benefits. The proposal measures include patient experience, total cost of care, readmissions, transfer rates, and timeliness of care (e.g., imaging, Tissue Plasminogen Activator [tPA] administration for stroke patients). However, PTAC raised concerns about the ability of the originating site, as the APM entity, to track and report on these measures, given the low volume of consults at each facility.

The proposed AUCM model focuses on improving quality of care by avoiding inpatient hospitalizations in low-risk populations, deploying care models for the treatment of medium-risk populations, and avoiding post discharge events in high-risk populations. Based on their preliminary quantitative analysis as part of proposal review, PTAC found an opportunity for cost savings based on the risk-adjusted variation in admission/observation stays across hospitals at the national level for three high-frequency, high-cost diagnoses. PTAC also noted that monitoring of quality measures in different settings could present a challenge.

The proposed ACS-Brandeis model assumes that providing information on the Medicare expenditures by episode to clinical affinity groups would incentivize them to improve team-based care processes and reduce utilization of resources. However, the model does not stipulate the process for achieving improvement or specify associated patient outcomes. There are also no subsequent penalties for reductions in quality of care.

Bridging Acute Care with Community-Based Care

Introduction

Patients often receive care from different teams in acute and community-based settings. The resulting fragmentation can lead to poor care coordination, higher costs, and lower quality. Payment models that seek to streamline acute and community-based care may help lower costs and improve quality.

Selected Proposals Submitted to PTAC

- Comprehensive Care Physician Payment Model (CCP-PM), submitted by the University of Chicago Medicine on March 1, 2018.

- Home Hospitalization: An Alternative Payment Model for Delivering Acute Care in the Home (HH-APM), submitted by Personalized Recovery Care, LLC on October 27, 2017.
- “HaH Plus” (Hospital at Home Plus) Provider-Focused Payment Model (HAH Plus), submitted by the Ichsan School of Medicine at Mount Sinai on May 17, 2017.

Key Challenges and Approaches

Challenges in Bridging Acute Care with Community-Based Care

Payment. As Medicare beneficiaries transition between inpatient and community-based care, Medicare FFS providers must use different Medicare payment systems to receive reimbursement for care provided in each care delivery setting (e.g., inpatient hospital, home health, office-based). These separate payment systems make it difficult to align incentives for care coordination across providers and settings and present a challenge to achieving low-cost, high-quality care, including TCM.

Care delivery. The transition from acute to community-based care settings poses challenges to health systems seeking to provide high-quality care at low cost. Handoffs between acute care providers and community-based providers require coordination to avoid expensive and potentially harmful duplicative services, and to ensure timely post-acute follow-up. For example, a patient may receive conflicting prescriptions from acute and community-based providers. Poorly coordinated care during this critical time in a patient’s treatment can lead to expensive complications and readmissions.

Model design. It is important for APMs that bridge acute and community-based care to unify reimbursement approaches across multiple payment systems, determine the most appropriate setting for delivery of each service, and establish patient protocols and safeguards to ensure that appropriate care is delivered in the appropriate setting.

Approaches in Proposals Submitted to PTAC

The HaH Plus and HH-APM proposals attempt to bridge acute and community-based care through programs that would provide home-based hospital-level care—with a consistent provider team providing some care in a lower cost setting. Both proposals include proposed new payments designed to allow Medicare beneficiaries with acute illness or exacerbated chronic disease (otherwise requiring hospitalization) to receive hospital-level acute care services plus transition services (akin to post-acute care) in the home. In both proposals, care in both the acute and post-acute phases would be provided by the same care team, and all care would be provided in the patient’s home, thus eliminating transitions between providers and settings.

The HaH Plus and HH-APM proposed models provide payment for several types of home-based services that either are not currently or are not sufficiently reimbursed under the MPFS or other Medicare payment systems. Both HaH Plus and HH-APM propose two-part payment mechanisms: bundled payments with added performance-based incentives. The performance-based payment proposed in HH-APM is based on both total spending during the 30-day episode and quality measures relevant to care provided during the episode. The performance-based payment proposed in HaH Plus is based on total spending during the acute care and transition phases relative to target price and quality measures. These two proposed models are designed to deliver care for inpatient-eligible patients at a cost below under typical Medicare inpatient

mechanisms, including professional fees, the IPPS, and DRGs, though they adopt slightly different payment methodologies.

The CCP-PM proposed model seeks to bridge acute and community-based care by enabling physicians to oversee a patient's care in both the inpatient and outpatient settings. Having the same physician overseeing patient care in both settings is likely to promote coordinated care. The payment model proposed in CCP-PM consists of a monthly PBPM payment in addition to typical fee schedule payments to participating physicians who provide a high percentage of their patients' inpatient and outpatient care. A monthly penalty is imposed if physicians are insufficiently involved, on average, for care across settings for their patient panel.

PTAC Perspectives for Developing APMs/PFPMS Based on PTAC's Review of the Proposals

Patient eligibility. In its review of these proposed models, PTAC noted that the financial pressures in both the HaH Plus and HH-APM proposed models could result in poorer patient outcomes, if participating physicians enroll patients who would be better served in an inpatient unit or receive care in the home setting that is less intensive than clinically necessary. The proposed models depend on sufficient patient volume to make the programs financially viable; thus there may be incentives to enroll patients who would be better served in inpatient settings.

Payment. PTAC indicated that no current Medicare payments or APMs support the types of care delivery models proposed in CCP-PM, HaH Plus, or HH-APM. Additionally, while Medicare FFS includes TCM codes to reimburse providers for coordinating care around transitions, the codes have not been widely used; Committee members noted insufficient reimbursement rates that do not cover the costs of providing care coordination services as a factor contributing to low uptake.

Additionally, PTAC noted the need for a Medicare payment model to support home-based, hospital-level acute care for appropriate patients, such as those proposed in HaH Plus and HH-APM. In the Committee's comments on the CCP-PM proposal, PTAC noted that current payment models do not adequately address the clinical needs of the medically complex patient population, particularly during care transitions.

PTAC commended the bundled payments proposed by HaH Plus and HH-APM. Bundled payments mitigate cost shifting from the acute to post-acute phase, helping to avoid readmissions and unnecessary post-acute care. Bundled payments also allow providers to tailor services to the needs of each beneficiary, including services not currently covered by the MPFS. In the Committee's comments on the HaH Plus and HH-APM proposals, PTAC recommended that proposed models use benchmarking to account for the likely differences in post-acute care costs between patients appropriate for care at home and the overall inpatient population.

PTAC expressed concern about whether the PBPM add-on payment model proposed in CCP-PM would support the proposed clinical model. The Committee indicated that the proposed model lacks consideration of varying financial risks across a patient panel, which could result in a weak linkage between the payment methodology and intended outcomes.

Care coordination. PTAC commended all three proposals highlighted in this brief for promoting care coordination. Committee members indicated that the HaH Plus and HH-APM proposed models encourage

coordinated care by delivering acute and post-acute care in the home and using the same team of providers to direct care in both phases, while the CCP-PM care delivery model promotes care coordination by encouraging the same physician to provide care in the inpatient and outpatient settings.

Patient safety. In the Committee's comments on the home hospitalization proposals (HAH Plus and HH-APM), PTAC emphasized safety as a primary concern for patients requiring hospital-level care who are being treated at home. PTAC noted that the financial incentives and risks of the proposed models require safeguards to ensure enrollment of the patients who both need a higher-level of care (typically associated with an inpatient stay) and for whom that care can be provided safely at home. Committee members made several suggestions for enhancing patient safety, including formal monitoring and review of frequency of home visits and rate of inpatient admissions; a formal adverse event reporting mechanism; a requirement for 24/7 availability of care; a training program for home care professionals; and stronger ties between payments and quality measures.

For the CCP-PM proposal, PTAC noted that a proposed model that consolidates a patient's care under a single physician or group of physicians during a transition following hospital discharge is inherently likely to improve patient safety, particularly for patients who do not already have strong relationships with a primary care provider.

Chronic Wound Care

Introduction

Chronic wound care is defined as the care of non-healing wounds. Chronic wounds are wounds that do not heal in a timely or progressive manner versus an acute wound that would heal or show signs of healing. Within the population of Medicare beneficiaries, roughly 15 percent of beneficiaries will experience a wound or wound-related infection in a given year.

Selected Proposals Submitted to PTAC

- CMS Support of Wound Care in Private Outpatient Therapy Clinics: Measuring the Effectiveness of Physical or Occupational Therapy Intervention as the Primary Means of Managing Wounds in Medicare Recipients,⁷ submitted by Upstream Rehabilitation on November 20, 2018.
- Bundled Payment for All-Inclusive Outpatient Wound Care Services in Non-Hospital-Based Setting (Seha), submitted by Seha Medical and Wound Care on October 11, 2018.

Key Challenges and Approaches

Challenges in Chronic Wound Care

Payment. Both the Seha and Upstream proposals highlight the potential for achieving savings in Medicare by delivering wound care treatment outside of hospital-based settings. Payment differentials across delivery settings encourage the delivery of wound care in hospital outpatient departments. For example, in 2018, the national payment rate for debridement of up to 20 square centimeters of

⁷ This proposal is a resubmission of a previously submitted proposal. This previous submission and associated materials can be found on the [Proposals & Materials](#) page of the ASPE PTAC website.

subcutaneous tissue (Current Procedural Terminology [CPT] code 11042) was approximately \$375 if provided in a hospital outpatient department but approximately \$121 if provided in an office-based setting. In some cases, there is no payment mechanism for office-based wound care services and products leaving expensive hospital-based settings as the only option.

In addition to payment differences based on setting, the Seha and Upstream proposals and the public comments received by PTAC indicate that current payments may be insufficient to support current and evolving standards of care in the treatment of wounds. The MPFS assigns global periods to many wound care procedures. The Seha proposal illustrates that payments based on global periods, intended to reflect care typically provided before, during, and after a given procedure, can prevent providers from billing for multiple wound care procedures within the global period while providing payments that may not be sufficient to cover the cost associated with providing optimal care.

The Seha proposal includes a bundled payment model in which Medicare would pay office-based providers a flat fee per visit for all services provided.

The Seha and Upstream proposals and the public comments received by PTAC indicate current payments may be insufficient to support current and evolving standards of care in the treatment of wounds.

Care delivery. A key challenge in delivering wound care is regional variations in coverage by Medicare Administrative Contractor, so the extent to which wound care services can be delivered in office-based settings varies across the country. Such site-of service differentials for similar services pose a challenge in Medicare payment more broadly.

The Seha and Upstream proposals indicate that patients in rural communities often must drive long distances to access the nearest hospital-based wound clinic. Increasing options for patients to be treated locally could also result in more timely care.

A specific example raised by the Seha proposal noted providers are unable to bill for compression on the same day as debridement due to an applicable zero-day global period. In such situations, providers are faced with absorbing the additional cost or asking the patient to come back the next day requiring patients to potentially travel long distances multiple times a week. Both Seha and Upstream proposals indicate that patients in rural communities often must drive long distances to access the nearest hospital-based wound clinic. Improving options for patients to be treated locally could also result in more timely care.

Model design. Chronic wounds can stem from a variety of underlying health conditions, which leads to variation in the treatments needed and variation in costs when multiple or differing specialties and settings are involved in the provision of wound care for a given patient.

Approaches in Proposals Submitted to PTAC

Both proposals aim to provide more access and convenience to patients, especially in rural settings. The proposed Seha and Upstream models seek changes in Medicare payment policy that would make it more feasible for office-based providers to deliver wound care services. Office-based providers would be more likely to supply evidence-based wound care services if they have sufficient resources to cover the costs of those services. Higher payments for office-based services have the potential to reduce the number of patients referred to more expensive hospital-based clinics, and to provide better access to wound care services in rural areas.

The proposed Upstream model attempts to make changes in Medicare payment policy to address barriers to physical therapists (PTs) and occupational therapists (OTs) delivering wound care services. The proposed model provides additional payments for PTs/OTs to provide wound care services and products. It would require return of payments if functional outcomes are not achieved.

The proposed Seha model provides a flat-fee bundled payment per visit for wound care provided in office-based settings.

PTAC Perspectives for Developing APMs/PFPMS Based on PTAC's Review of the Proposals

Expanding access. PTAC noted both Seha and Upstream proposals would alter Medicare payment policy to make it easier for the office-based providers to deliver wound care services. This could be particularly beneficial for rural beneficiaries who would no longer have to drive long distances to hospital-based wound care clinics.

Provider flexibility. Both Seha and Upstream proposed models contain features that attempt to offer providers greater flexibility in the delivery of wound care. At this time, payment for some wound care services is not available in an office-based setting or does not adequately account for evolving standards of care.

Quality and outcome measures. In addition to broadening the settings of wound care delivery, PTAC appreciated that the Upstream proposal included PTs/OTs providing wound care services in an office-based setting with outcome measures tied to patient functional status. In this model, PTs and OTs that did not maintain high patient satisfaction scores could be removed from the program. PTAC noted there are state-level guidelines on PT/OT scope of practice related to wound care that would prevent PT/OTs from delivering wound care services in specific states.

Clarity with regard to cost and quality metrics, such as measurement methodology and risk stratification, is important and has implications for the ability of the proposed model to be evaluated.

Care coordination. Given the multidisciplinary team approach needed to provide wound care, it is important that health information technology be appropriately used to coordinate care with the patient's other providers.

Given that wound care is a complex disease requiring a multidisciplinary approach, it is important that payment models focused on wound care address potential barriers to appropriate referrals.

Payment methodology. As of 2019, there was no comprehensive APM available to support improvements in chronic wound care services. In reviewing the two chronic wound care proposals, PTAC concluded that tools for supporting a more comprehensive, multidisciplinary approach to wound care are needed, given the varying and often complicated causes of wounds and the multidisciplinary team involved.

PTAC identified the straightforward and simple payment methodology in the proposed Seha model as a strength. The proposed \$400 all-inclusive bundled payment to office-based providers for wound care services has the potential to reduce costs if some patients can shift from more costly hospital-

based/outpatient facility settings, while maintaining quality and avoiding increases in utilization. However, it is unclear how many wound care visits could be moved to this model.

PTAC members found the outcome-based payment in the Upstream proposal was unique and desirable. In this model, PTs/OTs delivering wound care services in office-based settings would be held accountable for an outcome measure related to functional status. If clinicians failed to meet minimal clinically important differences on the functional status measure, it could result in the provider having to repay amounts it had already received for services delivered to the patient. In addition, PTs/OTs that fail to maintain high patient satisfaction scores could be removed from the program.

PTAC found both the Seha and Upstream proposals provided insufficient incentives for cost containment or reduction in the volume of services.

Risk adjustment. PTAC expressed concerns that the bundled payment model did not include any form of risk adjustment since there can be wide variation in acuity in the patient population. PTAC further noted both Seha and Upstream models lack clarity regarding their cost and quality metrics, and their ability to be evaluated.

References

ⁱ Gondi S, Ferris TG, Patel KK, Song Z. Physician-initiated payment reform: A new path toward value. *American Journal of Managed Care*. 2019;25(9):431-437.

ⁱⁱ USC-Brookings Schaeffer Initiative for Health Policy. The Medicare Physician Fee Schedule. Likely to serve as foundation for alternative payment models. Washington, DC: Brookings Institution; 2017. <https://www.brookings.edu/wp-content/uploads/2017/08/medicare-pfs-conference-brief-event-summary.pdf>. Accessed July 8, 2019.

ⁱⁱⁱ Centers for Medicare & Medicaid Services, Quality Payment Program. APM Overview. <https://qpp.cms.gov/apms/overview>. Accessed July 4, 2019.

^{iv} Centers for Medicare & Medicaid Services, Quality Payment Program. Alternative Payment Model Design Toolkit. https://qpp-cm-prod-content.s3.amazonaws.com/uploads/36/CMS%20QPP%202017%20APM%20Toolkit_2017%2010%2018%20Reme diated.pdf. Accessed July 4, 2019.

^v Assistant Secretary for Planning and Evaluation. FAQS: Physician-Focused Payment Model Technical Advisory Committee. ASPE.HHS.gov. <https://aspe.hhs.gov/faqs-physician-focused-payment-model-technical-advisory-committee>. Accessed online July 8, 2019.

^{vi} PTAC Report to the Secretary of Health and Human Services. Recommendation and Comments on Annual Wellness Visit Billing at Rural Health Clinics. <https://aspe.hhs.gov/system/files/pdf/255906/PTACRecommendationsCommentsMercyACO.pdf>. Published February 28, 2018. Accessed February 26, 2020.

^{vii} In the course of its review, PTAC may compare proposed models with similar existing APMs or other previously proposed PFPM models and may include this comparison in its report to the Secretary. We point the reader to the following reports on the PTAC website that provide detailed side-by-side comparisons: wound care proposals (Seha and Upstream, available in the joint report to the Secretary and linked under each submission); serious illness proposals (C-TAC and AAHPM, available in the joint report to the Secretary and linked under each submission); primary care proposals (AAFP and Dr. Antonucci, available in the Dr. Antonucci report); and hospital-at-home models (PRC and Mount Sinai, available in the PRC report).

^{viii} PTAC Report to the Secretary of Health and Human Services. Recommendation and Comments on Annual Wellness Visit Billing at Rural Health Clinics. <https://aspe.hhs.gov/system/files/pdf/255906/PTACRecommendationsCommentsMercyACO.pdf>. Published February 28, 2018. Accessed July 8, 2019.

^{ix} Health Care Transformation Task Force. Episode groupers: Key considerations for implementing clinical episode models. https://hcttf.org/wp-content/uploads/2019/01/HCTTF_Episode-Groupers_Key-Considerations.pdf. Published January 2019. Accessed July 8, 2019.

^x CMS Innovation Center. Health Care Innovation Awards. CMS.gov. <https://innovation.cms.gov/initiatives/Health-Care-Innovation-Awards/>. Accessed July 8, 2019.

^{xi} Agency for Healthcare Research and Quality. Chartbook on care coordination: Potentially avoidable hospitalizations. AHRQ.gov. <https://www.ahrq.gov/research/findings/nhqrdr/chartbooks/carecoordination/measure3.html>. Accessed July 8, 2019.

^{xii} The MPFS and other Medicare payment systems are updated annually and change over time. Therefore, payment issues targeted by the proposals all reflect submitters' perceived limitations the MPFS or other payment systems when they submitted proposals.

^{xiii} Centers for Medicare & Medicaid Services (CMS). CMS proposes historic changes to modernize Medicare and restore the doctor-patient relationship." Press release. <https://www.cms.gov/newsroom/press-releases/cms-proposes-historic-changes-modernize-medicare-and-restore-doctor-patient-relationship>. Published July 12, 2018. Accessed July 8, 2019.

^{xiv} USC-Brookings Schaeffer Initiative for Health Policy. The Medicare Physician Fee Schedule. Likely to serve as foundation for alternative payment models. Washington, DC: Brookings Institution; 2017.

<https://www.brookings.edu/wp-content/uploads/2017/08/medicare-pfs-conference-brief-event-summary.pdf>. Accessed July 8, 2019.

^{xv} Office of the Assistant Secretary for Planning and Evaluation, “Environmental Scan on Care Coordination in the Context of Alternative Payment Models (APMs) and Physician-Focused Payment Models (PFPMs)”. Published May 25, 2021. <https://aspe.hhs.gov/sites/default/files/private/pdf/261946/Jun-2021-CC-Escan.pdf> Accessed September 15, 2021.

^{xvi} Centers for Medicare & Medicaid Services (CMS). 42 CFR Parts 416 and 419. <https://s3.amazonaws.com/public-inspection.federalregister.gov/2018-15958.pdf>. Accessed July 8, 2019.

^{xvii} Ayanian JZ, Markel H. Donabedian's lasting framework for health care quality. *New England Journal of Medicine*. 2016;375:205-207.

^{xviii} Lupu D, Force PM. Estimate of current hospice and palliative medicine physician workforce shortage. *Journal of pain and symptom management*. 2010 Dec 1;40(6):899-911. <https://doi.org/10.1016/j.jpainsymman.2010.07.004>

^{xix} Meier DE. Increased access to palliative care and hospice services: opportunities to improve value in health care. *The Milbank Quarterly*. 2011 Sep;89(3):343-80. <https://doi.org/10.1111/j.1468-0009.2011.00632.x>