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Overview of Current Performance Measures Included in Selected Medicare Payment Programs

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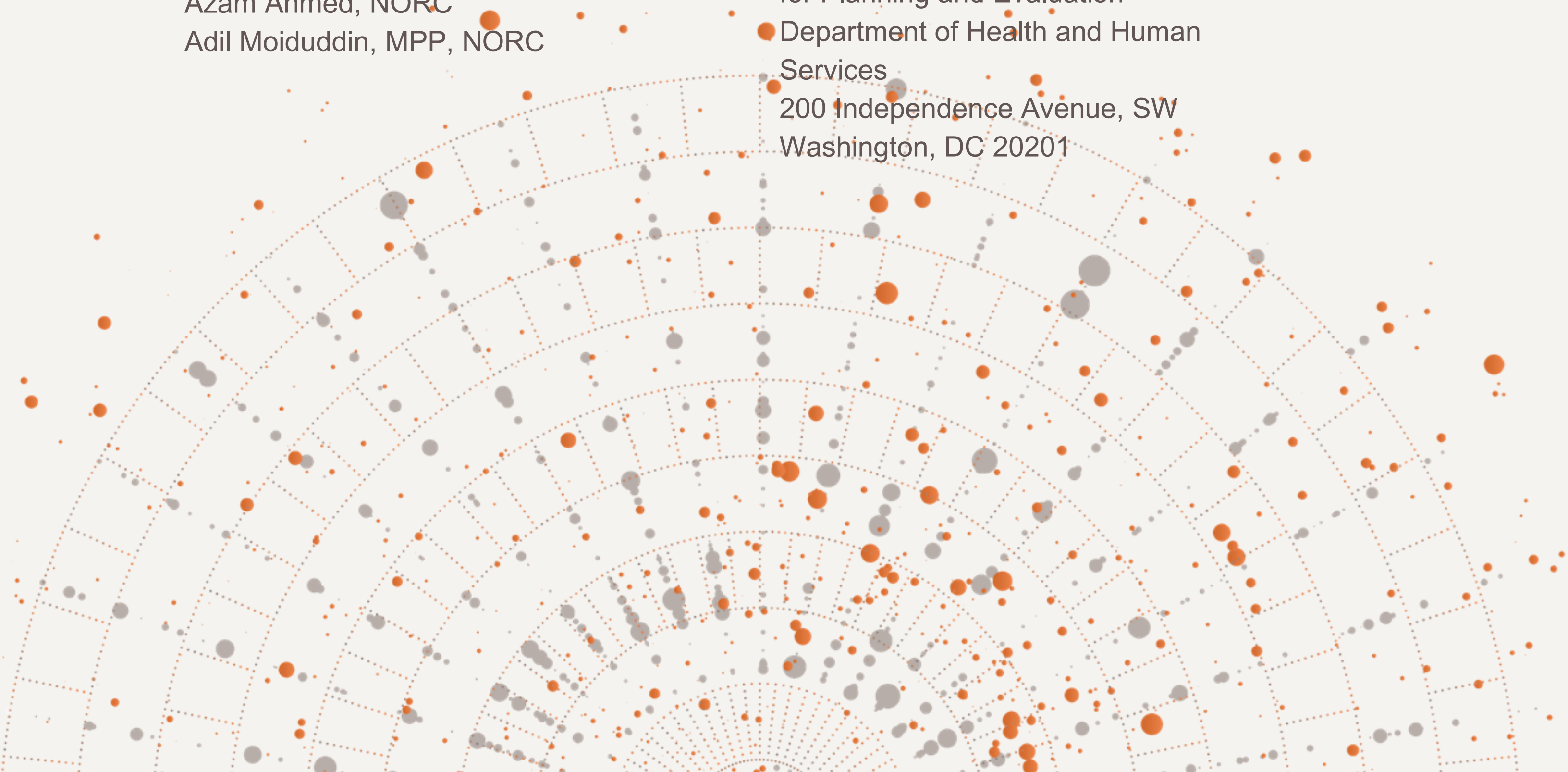

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Overview of Current Performance Measures Included in Selected Medicare Payment Programs

The Physician-Focused Payment Model Technical Advisory Committee (PTAC) conducted a theme-based discussion on developing and implementing performance measures for population-based total cost of care models during the Committee's March 25-26, 2024, public meeting. Prior to the March 2024 public meeting, the Office of the Assistant Secretary for Planning and Evaluation (ASPE) requested an analysis on the "Overview of Current Performance Measures Included in Selected Medicare Payment Programs" to provide an overview of the number and characteristics of the performance measures that are currently being used in **31** selected Centers for Medicare & Medicaid Services (CMS) Medicare payment programs and Center for Medicare and Medicaid Innovation (CMMI) models This analysis was prepared under Contract Number HHSP233201500048I75P00123F37023 between the Department of Health and Human Services' Office of Health Policy of the 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 in March 2024.

Executive Summary

Introduction

This report was prepared at the request of the Office of the Assistant Secretary for Planning and Evaluation (ASPE) as background information to assist the Physician-Focused Payment Model Technical Advisory Committee (PTAC) in preparing for a theme-based discussion on developing and implementing performance measures for population-based total cost of care (PB-TCOC) models.

This report provides an overview of the number and characteristics of the performance measures that are currently being used in **31** selected Centers for Medicare & Medicaid Services (CMS) Medicare payment programs and Center for Medicare and Medicaid Innovation (CMMI) models.

Methods

Analyses and Data Sources

Three types of analyses were conducted using the following data sources: 1) a high-level analysis of performance measure data for 24 selected programs/models using the CMS Measures Inventory Tool (CMIT); 2) information on how performance is linked with payment using information from CMS program and CMMI Innovation Models websites for 18 selected programs/models; and 3) an assessment of potential gaps in current performance measures using publicly available evaluation reports for 18 selected programs/models.

Program Selection

A total of 31 Medicare models and programs were selected for these analyses, including: 17 Medicare payment programs (nine CMS value-based care programs and eight CMS pay-for-reporting programs), and 14 CMMI models. The CMS programs **(17)** were selected to ensure the inclusion of a variety of Medicare performance reporting programs (e.g., pay-for-performance, pay-for-reporting, quality reporting, and other approaches). The CMMI models **(14)** were selected based on the following criteria: 1) the model must have been active in the last five years; 2) the model must include at least one quality measure and at least one utilization or spending measure in implementation and/or monitoring; and 3) the model must be or have been operational in more than one state.

Results

Analysis 1: Performance Measure-Level Analysis Using CMIT Data

Total Current Performance Measures

There are 618 active, in-development, pending, or suspended performance measures (hereinafter referred to as "current performance measures" or "performance measures") in the CMIT for the 24 selected programs and models included in this analysis. The Merit-based Incentive Payment System (MIPS) Program included the most performance measures among the 24 programs/models with 309 performance measures (50% of the 618 measures).[1]

The number of measures included in the other 23 programs/models ranged from 3-33. The Medicare Advantage (MA) Star Ratings Program included the second most performance measures with 33 performance measures (5% of the 618 measures).

Distinct Performance Measures

Of the 618 current performance measures used by the 24 selected Medicare programs/ models, there are 455 "distinct" or unduplicated measures.[2] This includes 375 measures that are only used by one program/model (61% of the 618 current performance measures). The most common current performance measure is COVID-19 Vaccination Coverage Among Healthcare Personnel (measure ID: 180) which is used by eight of the 24 programs/models in this analysis (33%).

Additionally, there are 163 measures (26%) that are used by more than one program. These 163 measures may use different numerators, denominators, or denominator exclusions.

Distinct Measures Focused on Similar Aspects of Care

In addition to measures that are repeated across programs, some programs/models include performance measures that are distinct, but similar to other measures. The top three performance measure groupings for measures focused on similar aspects of care across the 455 distinct measures for the 24 programs/models are 1) screening measures (31 measures, 6.8% of the distinct measures); 2) therapy-related measures for certain chronic conditions (29 measures, 6.4%); and 3) medication-related measures (21 measures; 4.6%).

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[1] Participants in MIPS choose at least six quality measures (one must be an outcome measure) from the full list of measures, and CMS calculates and scores each participant on four administrative claims measures. Participants are not scored on all measures.

[2] The number of distinct measures represents the number of current performance measures with distinct names (i.e., if each measure name is counted one time).

Types of Performance Measures

The CMIT includes seven types of performance measures: process, outcome, intermediate outcome, patient-reported, cost/resource use, structure, and composite measures. Of the 618 performance measures included across the 24 programs/models, more than half of the performance measures (323 measures or 52%) were process measures. Outcome measures were the second most common measure type (26%, n=163).

Sources of Performance Measures

The CMIT includes eight performance measure data sources: registries, claims data, electronic clinical data (non-EHR), electronic health records (EHRs), paper medical records, standardized patient assessments, administrative data (non-claims), and patient-reported data and surveys. Of the 618 performance measures included among the 24 programs/models, data sources were spread across the eight different sources. Registry data are the most common performance measure data source used among the 24 models/programs accounting for 24% of measures (n=229).

About half (54%) of the 618 existing performance measures are from electronic sources, including claims data (21%, n=202), EHR data (16%, n=150), and non-EHR electronic clinical data (17%, n=161), Meanwhile, 246 of the 618 measures (40%) use multiple data sources for a given performance measure.

Measure Reporting Level

Of the 618 performance measures included among the 24 programs/models, 31% (n=191) of the measures are reported at the facility, hospital, or agency level; 28% (n=176) are reported at the clinician group practice level. About 28% (n=173) of performance measures do not specify level of reporting.

Performance Measure Endorsement Status

The CMIT includes information on whether the performance measure is endorsed by the CMS Consensus-Based Entity (CBE)[3]. About 34% (n=209) of performance measures are endorsed, 59% (n=366) of measures are not endorsed, and endorsement has been removed for 7% (n=42). Twenty-three of the programs/models have at least one endorsed measure; the MA Star Ratings is the only program without any endorsed measures. For two programs – Hospital Acquired Condition (HAC) Reduction Program and Hospital Readmission Reduction Program (HRRP) – all of the active performance measures are endorsed (six measures each).

[3] The CMS consensus-based entity provides endorsement and maintenance of healthcare performance measures that are used throughout CMS programs, recommendations during CMS' pre-rulemaking consideration of measures, and input on integrated national strategies for performance measurement across payers.

Whether Performance Measures are Tied to Payment

The 24 selected programs/models were categorized as pay-for-performance, pay-for-reporting, or not related to payment based on information from the CMS program and CMMI Innovation Models websites. Fifteen of the 24 programs/models (63%) were characterized as pay-for-performance, defined as programs/models that are focused on providing payment to providers based on outcomes of patients; providing better outcomes results in higher payments. Eight of the 24 programs/models (33%) were characterized as pay-for-reporting, defined as programs/models that are required to report quality measure data to CMS and result in a decrease to Medicare payments for nonperformance. One of the selected programs (4%), the Prospective Payment System (PPS)-Exempt Cancer Hospital Quality Reporting (CHQR), does not currently tie performance measures to payment.

We also examined the distribution of the 618 performance measures based on how the 24 programs/models are linked with payment. Seventy-seven percent (n=476) of the measures correspond with the 15 pay-for-performance programs/models (50% [n=309] are MIPS performance measures, while the remaining 27% [n=167] correspond to the other 14 pay-for-performance programs/models). Twenty percent (n=126) of the measures correspond with the eight pay-for-reporting programs, and three percent of the measures correspond with the one program (PPS-Exempt CHQR) that is not linked with payment.

Analysis 2: How Performance Measures are Tied to Payment

This second analysis focuses on 18 selected programs/models (14 CMMI models and four CMS value-based payment programs) where information on whether and how performance measures are tied to payment was obtained by reviewing CMS program and CMMI Innovation Models websites. All 18 of these models and programs adjust payment based on performance. Thirteen (72%) of the models and programs employ both upside and downside risk for participants. The Making Care Primary (MCP) Model, Independence-at-Home (IAH) Demonstration, Comprehensive Primary Care Plus (CPC+) Model, Oncology Care Model (OCM), and Medicare Advantage (MA) Star Ratings Program employ upside risk only.

A detailed review of the BPCI-A model was performed to provide an example of how performance measures are tied to payment. Participants in the BPCI-A model have the option of selecting either the Administrative Quality Measure (QM) set, or the Alternative QM set for a given clinical episode category. Reconciliation is based on comparing actual Medicare FFS expenditures for all items and services included in a clinical episode with the final total price for that episode. At reconciliation, CMS determines whether participants receive a payment or are required to pay a repayment amount.

Participants receive a Composite Quality Score (CQS) based on the applicable quality measures for the clinical episode. CMS uses the CQS to apply an adjustment amount of up to 10% for the total reconciliation amounts.

Analysis 3: Potential Gaps in Current Performance Measures

This third analysis also focuses on the 18 selected programs/models (14 CMMI models and four CMS value-based payment programs) that adjust payment based on performance. Information on potential gaps in current performance measures was obtained by reviewing publicly available evaluation reports. In the evaluations of the programs and models, various performance measure gaps have been identified. Concerns that have been identified range from the need to have increased financial incentives linked to performance measures to challenges related to the lack of specificity in certain measures. Additionally, few CMMI models incorporated guardrails to prevent unintended consequences, such as worsening disparities.

Introduction

This report was prepared at the request of the Office of the Assistant Secretary for Planning and Evaluation (ASPE) as background information to assist the Physician-Focused Payment Model Technical Advisory Committee (PTAC) in preparing for a theme-based discussion on developing and implementing performance measures for population-based total cost of care (PB-TCOC) models. Key findings from this report will be included in an environmental scan being prepared for this theme-based discussion.

This report provides an overview of the number and characteristics of performance measures currently used by **31** selected Centers for Medicare & Medicaid Services (CMS) Medicare payment programs (including 9 CMS value-based care programs and 8 CMS pay-for-reporting programs), and 14 Center for Medicare and Medicaid Innovation (CMMI) models based on the results of three types of analyses (**see Exhibit 1**).[4] Of the 31 selected programs/models, 24 are included in an analysis of data from the CMS Measures Inventory Tool (CMIT) and seven models are not part of the CMIT (details on program/model selection are provided below).

Exhibit 1. Programs and Models Included in the Three Types of Analyses

Program / Model Name	Type of Analysis Conducted		
	CMS Measures Inventory Tool (CMIT) Analysis	Information on How Payment Is Linked with Performance	Assessment of Potential Gaps in Current Performance Measures
TOTAL NUMBER OF SELECTED PROGRAMS / MODELS (31)	**24**	**18**	**18**
CMS PROGRAMS (17)	**17**	**4**	**4**
• Ambulatory Surgical Center (ASC) Quality Reporting Program (QRP)	✓		
• End-Stage Renal Disease (ESRD) Quality Incentive Program (QIP)	✓		
• Home Health Quality Reporting (QR)	✓		

[4] CMMI models are pilot programs that test new payment and service delivery methods in accordance with the requirements of section 1115A of the Social Security Act (https://www.cms.gov/priorities/innovation/models#views=models). CMMI models may go through several iterations and transitions to new or expanded models before formal implementation. CMS programs are already implemented programs that are part of the Medicare fee-for-service payment policy.

Program / Model Name	Type of Analysis Conducted		
	CMS Measures Inventory Tool (CMIT) Analysis	Information on How Payment Is Linked with Performance	Assessment of Potential Gaps in Current Performance Measures
• Hospice Quality Reporting Program (HQRP)	✓		
• Hospital Acquired Condition (HAC) Reduction Program	✓		
• Hospital Outpatient Quality Reporting (OQR) Program	✓		
• Hospital Readmission Reduction Program (HRRP)	✓		
• Hospital Value-Based Purchasing (VBP)	✓	✓	✓
• Inpatient Psychiatric Facility (IPF) Quality Reporting Program (QRP)	✓		
• Inpatient Rehabilitation Facility (IRF) Quality Reporting Program (QRP)	✓		
• Long-Term Care Hospital (LTCH) Quality Reporting Program (QRP)	✓		
• Medicare Advantage (MA) Star Ratings Program	✓	✓	✓
• Medicare Shared Savings Program (MSSP)	✓	✓	✓
• Merit-based Incentive Payment System (MIPS) Program	✓	✓	✓
• Prospective Payment System (PPS)-Exempt Cancer Hospital Quality Reporting (CHQR) Program	✓		
• Skilled Nursing Facility (SNF) Quality Reporting Program (QRP)	✓		
• Skilled Nursing Facility (SNF) Value-Based Purchasing (VBP)	✓		

Program / Model Name	Type of Analysis Conducted		
	CMS Measures Inventory Tool (CMIT) Analysis	Information on How Payment Is Linked with Performance	Assessment of Potential Gaps in Current Performance Measures
CMS CENTER FOR MEDICARE AND MEDICAID INNOVATION (CMMI) MODELS (14)	**7**	**14**	**14**
• Accountable Care Organization (ACO) Realizing Equity, Access, and Community Health (REACH) Model	✓	✓	✓
• Bundled Payment for Care Improvement Advanced (BPCI-A) Model	✓	✓	✓
• Comprehensive ESRD Care (CEC) Model		✓	✓
• Comprehensive Primary Care Plus (CPC+) Model		✓	✓
• Enhancing Oncology Model (EOM)		✓	✓
• ESRD Treatment Choices (ETC) Model		✓	✓
• Expanded Home Health Value-Based Purchasing (HHVBP) Model		✓	✓
• Home Health Value-Based Purchasing (HHVBP) (original)	✓	✓	✓
• Independence at Home (IAH) Demonstration	✓	✓	✓
• Kidney Care Choices (KCC) Model	✓	✓	✓
• Making Care Primary (MCP) Model		✓	✓
• Next Generation ACO (NGACO) Model		✓	✓
• Oncology Care Model (OCM)	✓	✓	✓
• Primary Care First (PCF) Model	✓	✓	✓

Methods

Analyses and Data Sources

Three types of analyses were conducted using the following data sources:

1) Performance measure-level analysis for 24 selected programs/models using data from the CMS Measures Inventory Tool (CMIT). This analysis provides the following descriptive information about the performance measures included in these programs/models:

- Total performance measures
- Distinct performance measures
- Measures focused on similar aspects of care
- Types of performance measures
- Sources of performance measures
- Measure reporting level
- Performance measure endorsement status
- Whether performance measures are tied to payment[5]

The CMIT is a repository of performance measure information that includes 46 CMS value-based care programs, CMS pay-for-reporting programs, or CMMI models (as of October 2023 when CMIT data were pulled for this analysis). For each measure, the CMIT includes program/model name, measure name, measure definition, measure type, and measure source.[6] Information from the CMIT was available for 24 of the 31 selected programs/models; seven models are not part of the CMIT.[7] The supplemental Excel file (2023 Performance Measure Data for 24 CMS Models and Programs) contains three tabs. The first tab provides a description of the data included in the second tab of the supplemental Excel file. The second tab provides performance measure-level data obtained for the 24 programs/models pulled from the CMIT or from CMS/CMMI websites; the third tab provides a data dictionary that includes the column name, data sources, column name from the CMIT, definition, and whether the column is a CMIT required field. See Appendix B for additional information on the 2023 Performance Measure Data for 24 CMS Models and Programs supplemental Excel file.

[5] The CMIT variable related to identifying if performance on a given measure is tied to payment for the applicable program/model is not a required field, and CMIT does not specify if performance is tied to payment for 60% (n=373) of the 618 performance measures identified in this analysis. This is a limitation of CMIT. Therefore the 24 selected programs/models were categorized as pay-for-performance, pay-for-reporting, or not related to payment based on information from the CMS website or the CMMI Innovation Models webpage.

[6] Centers for Medicare and Medicaid Services Measures Inventory Tool, https://cmit.cms.gov/cmit/#/MeasureInventory

[7] The seven models not included in the CMIT are the Comprehensive End Stage Renal Disease (ESRD) Care (CEC) Model, Comprehensive Primary Care Plus (CPC+) Model, Enhancing Oncology Model (EOM), ESRD Treatment Choices (ETC) Model, Expanded Home Health Value-Based Purchasing (HHVBP) Model, Making Care Primary (MCP) Model, and the Next Generation Accountable Care Organization (NGACO) Model.

2) The second analysis focuses on assessing whether and how performance measures are linked with payment using information obtained from CMS program and CMMI Innovation Models websites. The report includes tables for the 14 selected CMMI models and four CMS value-based payment programs (out of the 17 programs referenced in Exhibit 1) that describe how performance measures are linked with payment.

3) The third analysis provides information on potential gaps in current performance measures using information obtained from publicly available evaluation reports for the 14 CMMI models and four programs.

Appendix C and Appendix D provide detailed payment information and potential gaps in current performance measures, as applicable, for the 18 programs/models (compiled in October 2023).

See Appendix E for a complete list of the 31 programs/models included in this analysis.

Program Selection

A total of 31 models and programs were selected for these analyses: 17 CMS Medicare value-based care programs (including 9 CMS value-based care programs and 8 CMS pay-for-reporting programs) and 14 CMMI models. The CMS programs **(17)** were selected to ensure a variety of Medicare performance reporting programs (e.g., pay-for-performance, pay-for-reporting, quality reporting, and other approaches). The CMMI models **(14)** were selected based on the following criteria: 1) the model must have been active in the last five years; 2) the model must include at least one quality measure and at least one utilization or spending measure in implementation and/or monitoring; and 3) the model must be or have been operational in more than one state. Information on the methods is also included in Appendix A.

Results

Analysis 1: Performance Measure-Level Analysis Using Data from the CMS Measures Inventory Tool (CMIT)

Total Current Performance Measures

The CMIT includes information on performance measures for a total of 46 CMS programs and models. **Exhibit 2** summarizes the total number of performance measures included in CMIT, and the number of performance measures in CMIT for the 24 selected programs/models included in this analysis.

Exhibit 2. Number of Current Performance Measures in the CMIT for Selected Programs/Models

Description	Number of Programs/ Models	Number of Performance Measures		
		Total Number of Current Measures	Number of Active Measures	Number of Measures in Development, Pending, or Suspended
Selected Programs/Models Included in This Analysis	24	618[1]	523	89

Note: All data are as of October 2023, when CMIT data was pulled. Inactive measures, although available in the CMIT, were not included in the analysis, with the exception of the OCM.
The OCM has six measures; because the OCM is not an active model, the six measures are inactive. To include this model in this analysis, NORC included the six inactive measures associated with the OCM.

There are 618 active, in-development, pending, or suspended[8] performance measures[9] (hereinafter referred to as "current performance measures" or "performance measures") in the CMIT for the 24 selected programs and models included in this analysis. Of these 618 measures, 523 (84.6%) are actively being used in CMS programs, and 89 (14.4%) are in development, pending, or suspended. It is important to note that the 618 measures are not all unique as some measures are being used by multiple programs/models (see further discussion below).

Exhibit 3 provides a breakdown of the number of current performance measures by program/model. The Merit-based Incentive Payment System (MIPS) Program includes the most performance measures among the 24 programs/models with 309 performance measures (50%) of the 618 measures.[10] The number of measures included in the other 23 programs/models ranges from 3-33. The Medicare Advantage (MA) Star Ratings Program included the second most performance measures with 33 performance measures (5% of the 618 measures).

Of the seven CMMI models[11] included in the CMIT, the Bundled Payment for Care Improvement Advanced (BPCI-A) Model includes the most performance measures with 29 measures (5% of the 618 measures); the remaining six CMMI models use five to seven performance measures each.

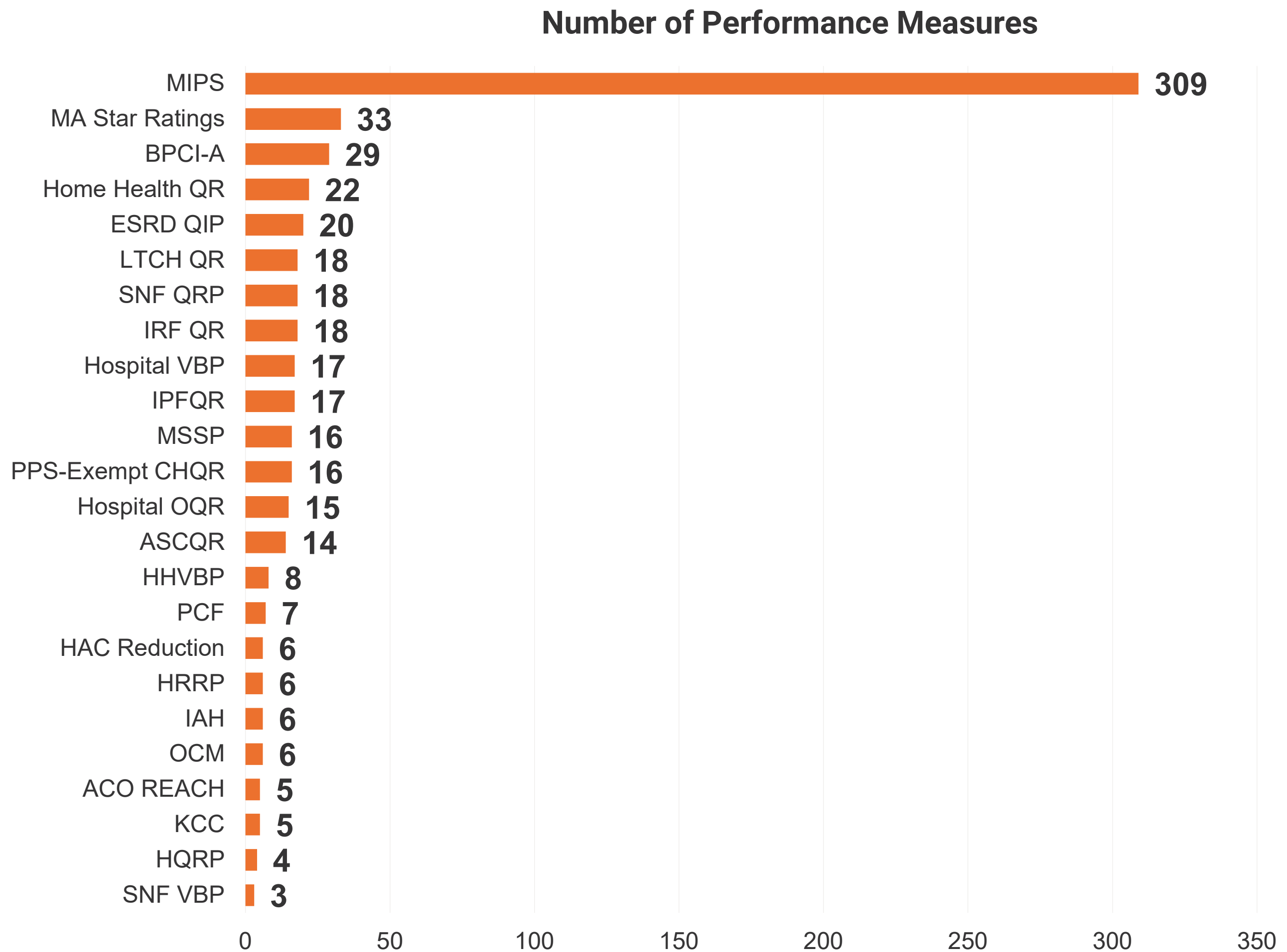
[8] Suspended measures may include measures that were temporarily suspended due to the Public Health Emergency (PHE). One example is the Skilled Nursing Facility (SNF) Value-Based Purchasing (VBP) measure, which uses the 30-day all-cause readmission measure; this measure is currently listed in the CMIT as suspended.

[9] Inactive measures are not included with the exception of the Oncology Care Model (OCM); because this program is not active, all measures were also inactive. To include this model in this analysis, NORC included the six inactive measures tied to the OCM, which are a part of the 618 measures used in this analysis.

[10] Participants in MIPS choose at least six quality measures (one must be an outcome measure) from the full list of measures, and CMS calculates and scores each participant on four administrative claims measures. Participants are not scored on all measures.

[11] The seven models included are the Bundled Payment for Care Improvement Advanced (BPCI-A) Model; Accountable Care Organization (ACO) Realizing Equity, Access, and Community Health (REACH) Model; Home Health Value-Based Purchasing (HHVBP) Model; Independence at Home (IAH) Demonstration; Kidney Care Choices (KCC) Model; Oncology Care Model (OCM); and the Primary Care First (PCF) Model.

Exhibit 3. Number of Current Performance Measures by Program/Model



Note: Current performance measures include active, in-development, pending, and suspended measures listed in the CMIT as of October 2023. Further, the OCM is an inactive model; the six measures associated with the OCM are inactive measures.

Distinct Performance Measures

Most (75%) of the 618 current performance measures in the 24 programs/models included in this analysis are distinct or "unduplicated" measures (n=455).[12] This number includes active measures, as well as measures that are in development, pending, or suspended.

Further, 375 of the performance measures (61% of the 618 total current performance measures) are used for only one program or model.

[12] The number of distinct measures represents the number of current performance measures with distinct names (i.e., if each measure name is counted one time).

Additionally, there are 163 measures (26% of the 618 total current performance measures) that are used by more than one program. These 163 measures may use different numerators, denominators, or denominator exclusions. Exhibit 5 provides two examples of measures that are used by more than one program but are defined in slightly different ways.

Exhibit 4. Two Examples of Measures Where Programs/Models Apply Different Criteria to the Same Measure

Measure	Program/Model	Differences in Measure
Colorectal Screening (Measure ID: 139)	Medicare Advantage (MA) Star Ratings Program; Medicare Shared Savings Program (MSSP); Merit-Based Incentive Payment System (MIPS); Primary Care First (PCF) Model	MIPS uses a denominator that includes patients 50-75 years of age while the three other programs/models use a denominator that includes patients 45-75 years of age.
Controlling Blood Pressure (Measure ID: 167)	MSSP; MIPS; PCF	PCF differs in its denominator exclusion criteria from the other two programs: its denominator excludes pregnant women and does not exclude patients 81 years of age or older with an indication of frailty beyond those with advanced illness.

Exhibit 5 lists the eight[13] performance measures that are most often used across the 24 programs/models. The most common performance measure is COVID-19 Vaccination Coverage Among Healthcare Personnel (measure ID: 180) used by eight different programs (33%). The top eight measures listed in Exhibit 5 include four outcome measures, three process measures, and one cost/resource use measure.

Exhibit 5. Top Eight Performance Measures by Number of Programs/Models

Measure ID	Measure Name	Measure Type	Number of Programs/ Models	Included Programs[14]
180	COVID-19 Vaccination Coverage Among Healthcare Personnel	Process	8	LTCH QRP; PPS-Exempt CHQR; ASCQR; ESRD QIP[1]; Hospital OQR; IPF QR; IRF QR; SNF QRP

[13] Top eight performance measures were chosen because it was a clean break from five to four programs; there were 13 performance measures with four programs each.

[14] See Appendix E for the full names of each program/model.

Measure ID	Measure Name	Measure Type	Number of Programs/ Models	Included Programs[14]
434	Medicare Spending Per Beneficiary (MSPB)	Cost/Resource Use	6	Hospital VBP[2]; IRF QR; MIPS; LTCH QRP; SNF QRP; Home Health QR
210	Discharge to Community-Post Acute Care (PAC)	Outcome	6	Home Health VBP; Home Health QR; IRF QR; LTCH QR; SNF QRP; SNF VBP[3]
462	National Health Safety Network (NHSN) Facility-Wide Inpatient Hospital-Onset Clostridium Difficile Infection (CDI) Outcome Measure	Outcome	5	HAC Reduction; Hospital VBP[4]; IRF QR; LTCH QRP; PPS-Exempt CHQR
459	NHSN Catheter-Associated Urinary Tract Infection (UTI) Outcome Measure	Outcome	5	HAC Reduction; Hospital VBP[5]; IRF QR; LTC QRP; PPS-Exempt CHQR
356	Hospital-Wide All-Cause Unplanned Readmission Measure (HWR)	Outcome	5	IAH Demonstration; ACO REACH; BPCI-A; MSSP; MIPS
727	Transfer of Health Information to the Patient Post-Acute Care (PAC) / Transition Record with Specified Elements Received by Discharged Patients (Discharges from an Inpatient Facility to Home/Self-care or Any Other Site of Care)[6]	Process	5	Home Health QR; LTCH QR; SNF QRP; IRF QR; IPF QR
728	Transfer of Health Information to the Provider PAC / Timely Transmission of Transition Record (Discharges from an Inpatient Facility to Home/Self-care or Any Other Site of Care)[7]	Process	5	Home Health QR; LTCH QR; SNF QRP; IRF QR; IPF QR

Note: All data are as of October 2023, when CMIT data was pulled. Unless otherwise indicated, measures included in this table are active within each program/model.

[1] The COVID-19 Vaccination Coverage Among Healthcare Personnel Measure (measure ID 180) is a pending measure for the ESRD QIP.

[2] The MSPB Measure (measure ID 434) is a suspended measure for the Hospital VBP Program.

[3] The Discharge to Community-PAC Measure (measure ID 210) is a pending measure for the SNF VBP Program.

[4] The NHSN Facility-Wide Inpatient Hospital-Onset CDI Outcome Measure (measure ID 462) is a suspended measure for the Hospital VBP Program.

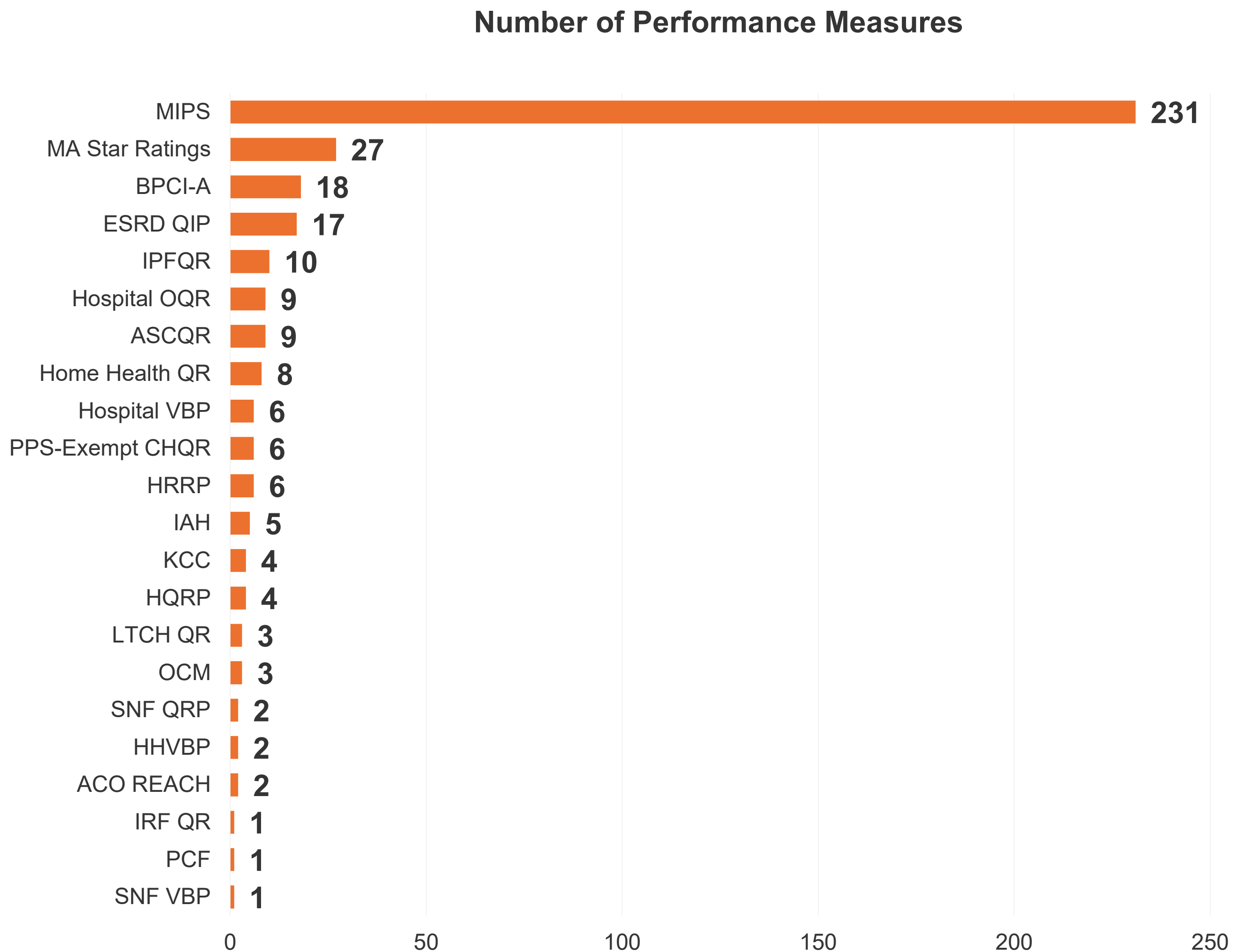
[5] The NHSN Catheter-Associated UTI Outcome Measure (measure ID 459) is a suspended measure for the Hospital VBP Program.

[6] For measure ID 727, the IPF QR Program uses the measure name of Transition Record with Specified Elements Received by Discharged Patients (discharges from an inpatient facility to home/self-care or any other site of care); all other listed programs use the measure name of Transfer of Health Information to the Patient PAC.

[7] For measure ID 728, the IPF QR Program uses the measure name of Timely Transmission of Transition Record (Discharges from an Inpatient Facility to Home/Self-care or Any Other Site of Care); all other listed programs use the measure name of Transfer of Health Information to the Provider PAC.

Of the 618 total measures examined across the 24 programs/models, 375 measures (61%), involving 22 programs, are used by only one program/model. The Measure ID column from the CMIT was used to identify these measures. **Exhibit 6** provides the counts of performance measures used for only one program/model listed by program/model. Of the 375 performance measures used by only one program, 231 measures (62%) are used in only the MIPS Program. Other programs/models range from one to 27 measures that are specific only to that program or model. All except two programs/models (Medicare Shared Savings Program [MSSP] and Hospital Acquired Condition [HAC] Reduction Program) include measures exclusive to their programs/model.

Exhibit 6. Number of Performance Measures Used for Only One Program/Model



Note: Performance measures include active, in-development, pending, and suspended measures listed in the CMIT as of October 2023. Further, the OCM is an inactive model; the six measures associated with the OCM are inactive measures.
Note: Two programs do not have measures exclusive to their programs (MSSP and HACRP).

Measures Focused on Similar Aspects of Care

In addition to measures that are repeated across programs, some programs include performance measures that are distinct, but similar to other measures. **Exhibit 7** provides a summary of distinct measures focused on similar aspects of care. These groupings do not capture all performance measures but offer a look at common measures used among these 24 programs/models.

Exhibit 7. Performance Measure Groupings for Measures Focused on Similar Aspects of Care Across the 24 Programs/Models

Performance Measure Grouping	Number of Performance Measures	Percentage of Performance Measures (Total n=455)
Screening Measures	31	6.8%
Therapy-Related Measures for Certain Chronic Conditions	29	6.4%
Medication-Related Measures	21	4.6%
Measures Related to Number/Rate of Admissions/Visits	20	4.4%
Follow-up-Related Measures after Hospitalizations or ED Visits	15	3.3%
Measures Related to Readmissions	14	3.1%
Surgery-Related Measures	13	2.9%
Immunization-Related Measures	12	2.6%
Pain-Related Measures	11	2.4%
Measures Related to Infections	10	2.2%
Cost of Care Measures	7	1.5%
Measures Related to Mortality Rates	6	1.3%
Measures Related to Care Coordination	4	0.9%

Note: All data are as of October 2023, when CMIT data was pulled.

Types of Performance Measures

This analysis focuses on the 618 total performance measures across the 24 programs/models (not the 455 distinct performance measures) in order to assess performance measures at the program level.

The CMIT includes seven types of performance measures: process, outcome, intermediate outcome, patient-reported, cost/resource use, structure, and composite measures. **Exhibit 8** provides CMS definitions for these seven measure types, as well as examples of each measure type as listed in the CMIT.

Exhibit 8. CMS Definitions of the Seven Performance Measure Types

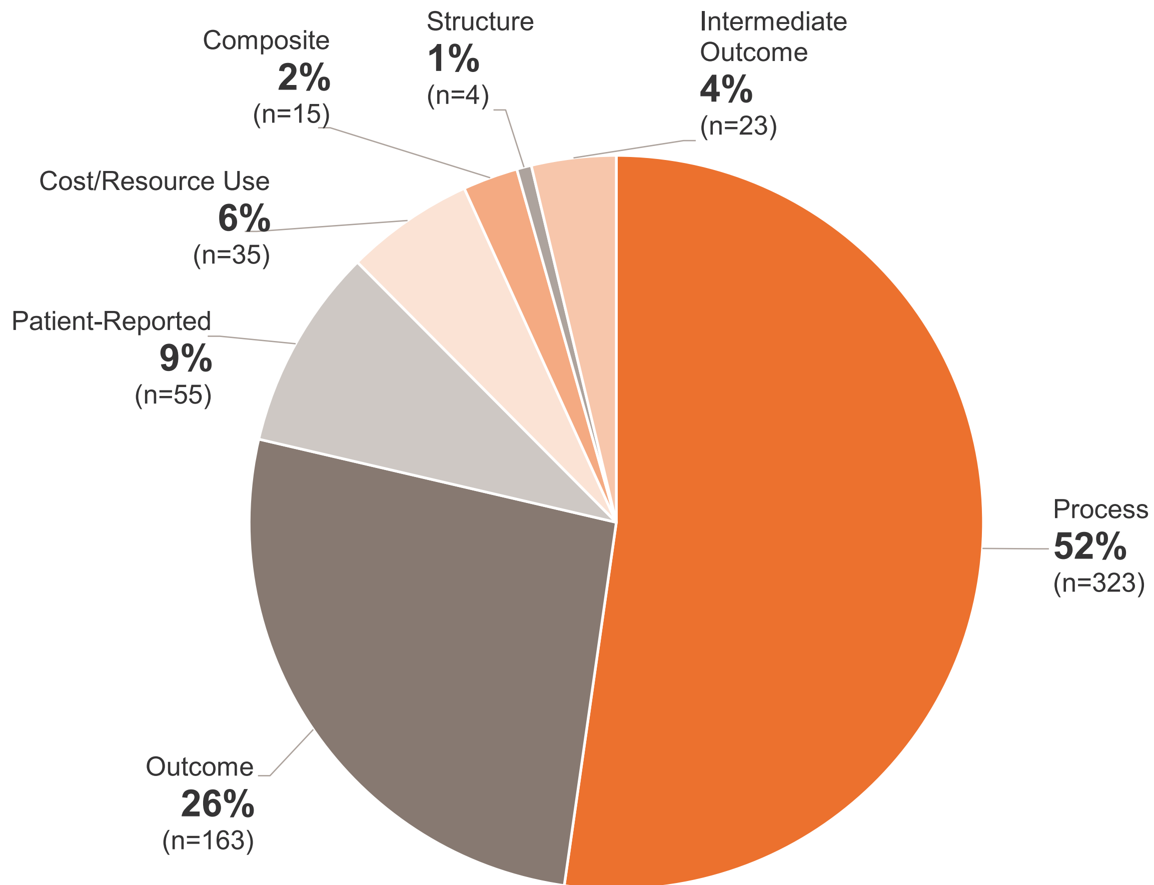
Measure Type	Definition[15]	Examples
Composite Measure	Two or more measures that form a combined measure	Severe Sepsis/Septic Shock: Management Bundle; Patient Safety and Adverse Events Composite; Substance Use Screening and Intervention Composite
Cost/Resource Use Measure	Measures the cost or frequency of health care services provided	Asthma/Chronic Obstructive Pulmonary Disease (COPD) Episode-Based Cost Measure; Medicare Spending per Beneficiary (MSPB); Total Per Capita Cost
Intermediate Outcome Measure	Assesses the change that occurs from treatment resulting in a long-term outcome	Controlling High Blood Pressure; Diabetes: Hemoglobin A1c (HbA1c) Poor Control (> 9%); Kidney Transplant Referral Rate
Outcome Measure	Focuses on the health status of a patient that changes due to care or treatment received	Acute Care Hospitalization; Unplanned Readmissions for Cancer Patients; Patient Fall
Patient-Reported Outcome-Based Performance Measure (PRO-PM)	Based on patient-reported outcome measure (PROM) data aggregated for the responsible health care entity	Consumer Assessment of Healthcare Providers and Systems (CAHPS); Functional Status Change for Patients with Hip Impairments; Patient-Reported Overall Physical Health Following Chemotherapy
Process Measure	Focuses on the actions to be followed to provide adequate care	Advance Care Plan; Adult Immunization Status; Osteoporosis Management in Women Who Had a Fracture
Structure Measure	Evaluates health care organizations related to its ability to provide adequate health care	Health Screening Rate; Continuity of Care Recall System; Patients Left Without Being Seen

Note: All data are as of October 2023, when CMIT data was pulled.

[15] https://mmshub.cms.gov/about-quality/new-to-measures/types

Exhibit 9 displays the distribution of performance measures by measure type. Of the 618 performance measures included across the 24 programs/models, more than half of the performance measures (323 measures or 52%) were process measures. Outcome measures were the second most common measure type (26%, n=163); patient-reported measures constitute 9% (n=55); and cost/resource use measures are 6% (n=35). Intermediate outcome, composite, and structure measures constitute only 4%, 2%, and 1% of performance measures, respectively.

Exhibit 9. Distribution of Performance Measures by Measure Type for the 24 Programs/Models



Note: Performance measures include active, in-development, pending, and suspended measures listed in the CMIT as of October 2023. Further, the OCM is an inactive model; the six measures associated with the OCM are inactive measures.

Exhibit 10 provides a breakdown of the 618 total performance measures by program/model and measure type. Most of the 24 programs/models use about three to four different performance measure types. The Merit-based Incentive Payment System (MIPS) Program is the only program that uses six measure types (all except composite measures). No program/model uses all seven measure types. Twenty-two programs/models (92%) – all except KCC and Hospice QR – use outcome or intermediate outcome measures. Nineteen programs/models (79%) use process measures; 15 (63%) use at least

one patient-reported outcome measure; five programs/models (21%) use composite measures.[16] Only three programs/models (12%) use structure measures.[17]

Exhibit 10. Distribution of Performance Measures by Program/Model and Measure Type

Program/ Model	Composite	Cost/ Resource Use	Intermediate Outcome	Outcome	Patient-Reported	Process	Structure	Total
Merit-based Incentive Payment System (MIPS) Program	0 (0%)	24 (8%)	8 (3%)	43 (14%)	31 (10%)	201 (65%)	2 (1%)	309
Medicare Advantage (MA) Star Ratings	0 (0%)	0 (0%)	1 (3%)	1 (3%)	7 (21%)	24 (73%)	0 (0%)	33
Bundled Payment for Care Improvement Advanced (BPCI-A)	7 (24%)	0 (0%)	0 (0%)	8 (28%)	1 (3%)	13 (45%)	0 (0%)	29
Home Health Quality Reporting (QR)	0 (0%)	1 (5%)	0 (0%)	12 (54%)	1 (5%)	8 (36%)	0 (0%)	22
End Stage Renal Disease (ESRD) Quality Incentive Program (QIP)	0 (0%)	0 (0%)	6 (30%)	5 (25%)	1 (5%)	7 (35%)	1 (5%)	20
Long-Term Care Hospital (LTCH) QR	0 (0%)	1 (6%)	0 (0%)	9 (50%)	0 (0%)	8 (44%)	0 (0%)	18
Skilled Nursing Facility (SNF) Quality Reporting Program (QRP)	0 (0%)	1 (6%)	0 (0%)	9 (50%)	0 (0%)	8 (44%)	0 (0%)	18

[16] BPCI-A (n=7), IPF QR (n=3), HHVBP (n=2), HQRP (n=2), and HAC Reduction Program (n=1) use composite measures.

[17] MIPS (n=2), ESRD QIP (n=1), and Hospital OQR (n=1) use structure measures.

Program/ Model	Composite	Cost/ Resource Use	Intermediate Outcome	Outcome	Patient-Reported	Process	Structure	Total
Inpatient Rehabilitation Facility (IRF) QR	0 (0%)	1 (6%)	0 (0%)	11 (61%)	0 (0%)	6 (33%)	0 (0%)	18
Hospital Value-Based Purchasing (VBP)	0 (0%)	4 (24%)	0 (0%)	12 (70%)	1 (6%)	0 (0%)	0 (0%)	17
Inpatient Psychiatric Facility (IPF) QR	3 (18%)	0 (0%)	0 (0%)	1 (6%)	0 (0%)	13 (76%)	0 (0%)	17
Medicare Shared Savings Program (MSSP)	0 (0%)	0 (0%)	4 (25%)	3 (19%)	1 (6%)	8 (50%)	0 (0%)	16
Prospective Payment System (PPS)-Exempt Cancer Hospital Quality Reporting (CHQR)	0 (0%)	0 (0%)	2 (13%)	8 (50%)	1 (6%)	5 (31%)	0 (0%)	16
Hospital Outpatient Quality Reporting (OQR)	0 (0%)	0 (0%)	0 (0%)	3 (20%)	2 (13%)	9 (60%)	1 (7%)	15
Ambulatory Surgical Center (ASC) QR	0 (0%)	0 (0%)	0 (0%)	10 (71%)	2 (14%)	2 (14%)	0 (0%)	14
Home Health VBP (HHVBP) (original)	2 (25%)	0 (0%)	0 (0%)	5 (63%)	1 (12%)	0 (0%)	0 (0%)	8
Primary Care First (PCF) Model	0 (0%)	1 (14%)	2 (29%)	1 (14%)	1 (14%)	2 (29%)	0 (0%)	7

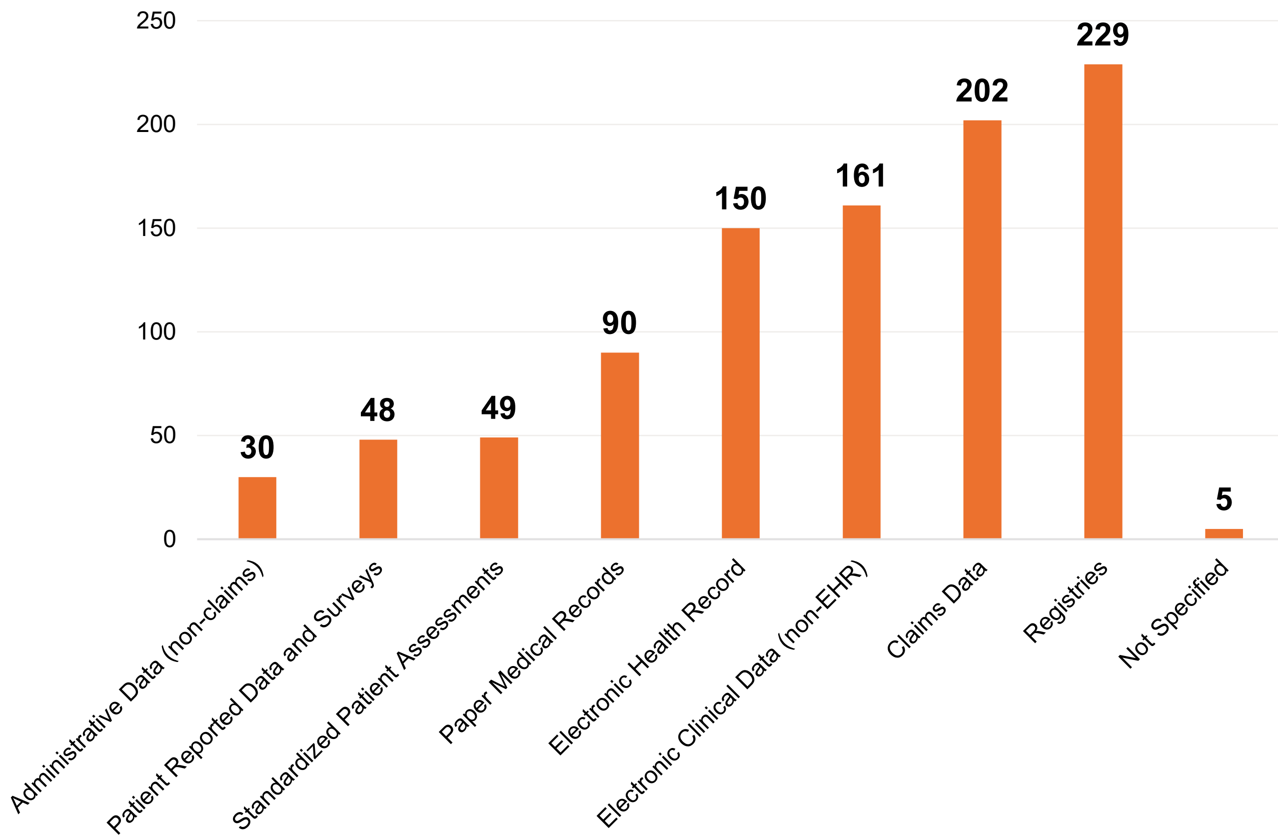
Program/ Model	Composite	Cost/ Resource Use	Intermediate Outcome	Outcome	Patient-Reported	Process	Structure	Total
Hospital Acquired Condition (HAC) Reduction Program	1 (17%)	0 (0%)	0 (0%)	5 (83%)	0 (0%)	0 (0%)	0 (0%)	6
Hospital Readmission Reduction Program (HRRP)	0 (0%)	0 (0%)	0 (0%)	6 (100%)	0 (0%)	0 (0%)	0 (0%)	6
Independence-at-Home (IAH) Demonstration	0 (0%)	0 (0%)	0 (0%)	3 (50%)	0 (0%)	3 (50%)	0 (0%)	6
Oncology Care Model (OCM)	0 (0%)	0 (0%)	0 (0%)	2 (33%)	1 (17%)	3 (50%)	0 (0%)	6
Accountable Care Organization (ACO) Realizing Equity, Access, and Community Health (REACH) Model	0 (0%)	0 (0%)	0 (0%)	3 (60%)	1 (20%)	1 (20%)	0 (0%)	5
Kidney Care Choices (KCC) Model	0 (0%)	2 (40%)	0 (0%)	0 (0%)	2 (40%)	1 (20%)	0 (0%)	5
Hospice QRP (HQRP)	2 (50%)	0 (0%)	0 (0%)	0 (0%)	1 (25%)	1 (25%)	0 (0%)	4
Skilled Nursing Facility (SNF) VBP	0 (0%)	0 (0%)	0 (0%)	3 (100%)	0 (0%)	0 (0%)	0 (0%)	3
Total	**15 (2%)**	**35 (6%)**	**23 (4%)**	**163 (26%)**	**55 (9%)**	**323 (52%)**	**4 (1%)**	**618**

Note: Performance measures include active, in-development, pending, and suspended measures listed in the CMIT as of October 2023. Further, the OCM is an inactive model; the six measures associated with the OCM are inactive measures.

Sources of Performance Measures

The CMIT includes eight performance measure data sources: registries, claims data, electronic clinical data (non-EHR), electronic health records (EHRs), paper medical records, standardized patient assessments, administrative data (non-claims), and patient-reported data and surveys. Of the 618 performance measures included among the 24 programs/models, data sources were spread across the eight different sources. Registry data are the most common performance measure data source used among the 24 models/programs accounting for 24% of measures (n=229). Data sources are not specified in the CMIT for 1% (n=5) of performance measures. **Exhibit 11** provides the distribution of performance measures by data source. There often are multiple data sources used for a given performance measure; accordingly, Exhibit 11 reflects a total n of 964 (as opposed to 618).

Exhibit 11. Distribution of Performance Measures by Data Sources for the 24 Programs/Models



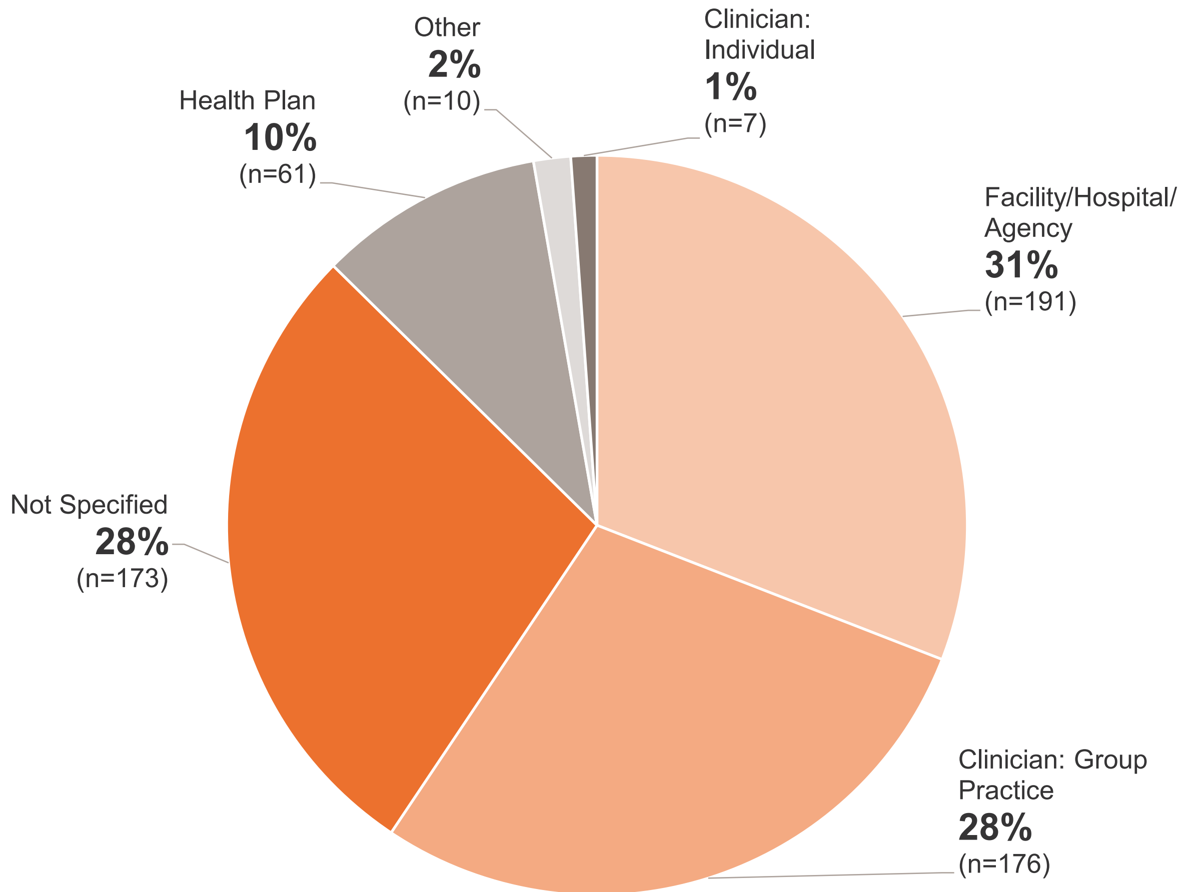
Note: Performance measures include active, in-development, pending, and suspended measures listed in the CMIT as of October 2023. Further, the OCM is an inactive model; the six measures associated with the OCM are inactive measures.

Measure Reporting Level

Of the 618 performance measures included among the 24 programs/models, 31% (n=191) of the measures are reported at the facility, hospital, or agency level; 28% (n=176) are reported at the

clinician group practice level. About 28% (n=173) of performance measures do not specify level of reporting. **Exhibit 12** provides the distribution of performance measures by reporting level. Reporting level was created using the column "Level of Analysis" from the CMIT.

Exhibit 12. Distribution of Performance Measures by Reporting Level for the 24 Programs/Models



Note: Performance measures include active, in-development, pending, and suspended measures listed in the CMIT as of October 2023. Further, the OCM is an inactive model; the six measures associated with the OCM are inactive measures.

Performance Measure Endorsement Status

The CMIT includes information on whether the performance measure is endorsed by the CMS Consensus-Based Entity (CBE).[18] **Exhibit 13** provides the endorsement status for the 618 performance measures associated with the 24 programs/models. About 34% (n=209) of performance measures are endorsed, 59% (n=366) of measures are not endorsed, and endorsement has been removed for 7% (n=42). Twenty-three programs/models have at least one endorsed measure; the MA Star Ratings is

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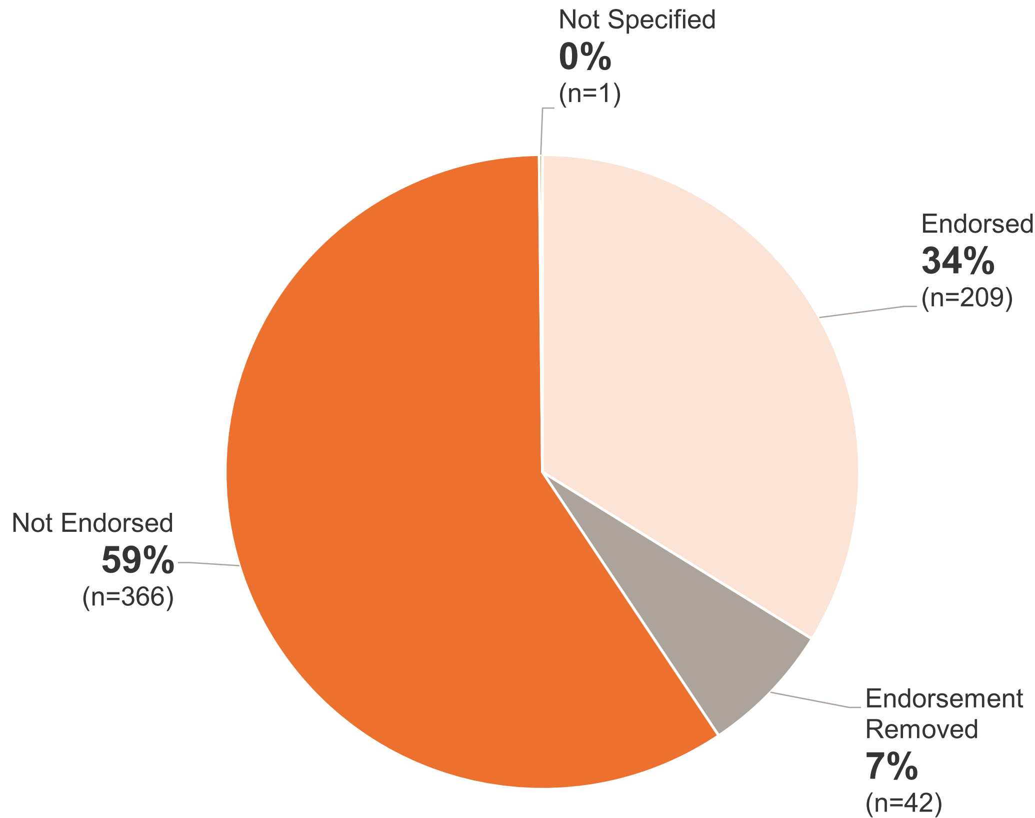
[18] Battelle's Partnership for Quality Measurement (PQM) currently serves as the CMS CBE. See https://mmshub.cms.gov/sites/default/files/Blueprint-CMS-CBE-Endorsement-Maintenance.pdf and https://p4qm.org/about for more information on the CMS CBE process.

the only program without any endorsed measures. For two programs – Hospital Acquired Condition Reduction Program (HACRP) and Hospital Readmission Reduction Program (HRRP) – all active performance measures are endorsed (six measures each).

Exhibit 13. Distribution of Performance Measures by Endorsement Status for 24 Programs/Models



Note: Performance measures include active, in-development, pending, and suspended measures listed in the CMIT as of October 2023. Further, the OCM is an inactive model; the six measures associated with to the OCM are inactive measures.

Whether Performance Measures are Tied to Payment

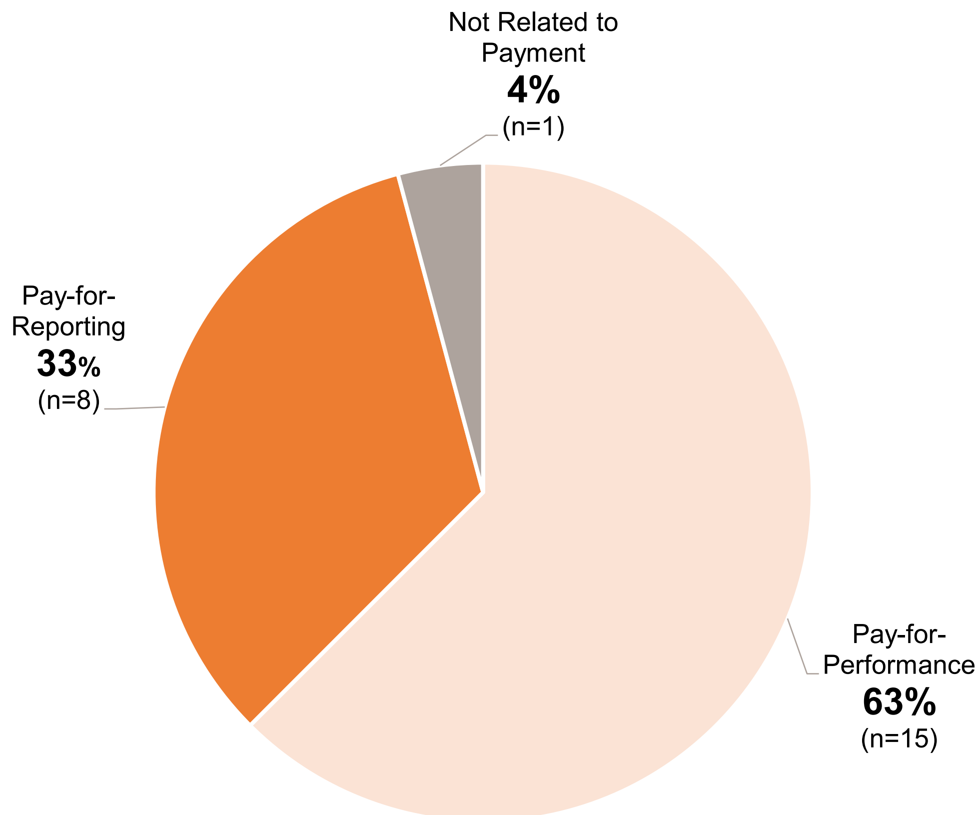
The 24 programs/models were categorized as pay-for-performance, pay-for-reporting, or not related to payment based on information from the CMS program and CMMI Innovation Models websites.[19] **Exhibit 14** provides the program/model type as it relates to payment for the 24 programs/models. Fifteen programs/models (63%)[20] were characterized as pay-for-performance, defined as programs/models whose focus is on providing payment to providers based on outcomes of patients;

[19] https://www.cms.gov/priorities/innovation/models#views=models

[20] Pay-for-performance programs/models include ACO REACH, BPCI-A, ESRD QIP, HACRP, HHVBP, Hospital VBP, HRRP, IAH Demonstration, KCC Model, MA Star Ratings Program, MIPS, MSSP, OCM, PCF Model, and SNF VBP.

providing better outcomes results in higher payments.[21] Eight programs/models (33%)[22] were characterized as pay-for-reporting, defined as programs/models that are required to report quality measure data to CMS and result in a decrease to Medicare payments for nonperformance.[23] One program (4%), the PPS-Exempt CHQR, does not currently tie performance measures to payment.

Exhibit 14. Distribution of the 24 Programs/Models by Relationship to Provider Payment



The 15 pay-for-performance programs/models may also be characterized as another type of program, as defined on CMS program and CMMI Innovation Models websites. For example, four pay-for-performance programs/models were also characterized as disease-specific and episode-based programs/models: BPCI-A, ESRD QIP, HHVBP, and OCM. Also, four pay-for-performance programs/models use the term value-based purchasing to define their program/model: HACRP, Hospital VBP, HRRP, and SNF VBP. Three pay-for-performance models – ACO REACH, KCC, and PCF – are also considered Accountable Care Organizations (ACOs). The IAH Demonstration, a pay-for-performance model, is also defined as a statutory model. The PPS-Exempt CHQR Program, which

[21] https://www.cms.gov/regulations-and-guidance/guidance/faca/downloads/tab_h.pdf

[22] Pay-for-reporting programs include ASCQR, Home Health QR, Hospital OQR, HQRP, IPFQR, IRFQR, LTCH QR, and SNF QRP.

[23] https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/HomeHealthQualityInits/Downloads/Pay-for-Reporting-Quality-Assessments-Only-Methodology.pdf

does not currently tie performance measures to payment, is considered a quality reporting program (as opposed to pay-for-reporting). **Exhibit 15** provides definitions for all programs/model types.

Exhibit 15. Program/Model Type Definitions

Program/Model Type	Definition
Accountable Care	Models in which a doctor, group of health care providers or hospital takes financial responsibility for improving quality of care, including advanced primary care services, care coordination and health outcomes for a defined group of patients, thereby reducing uncoordinated care and unnecessary costs for patients and the health system.[24]
Disease-Specific and Episode-Based	Models which aim to address deficits in care for a defined population with a specific shared disease or medical condition, procedure, or care episode.[25]
Pay-for-Performance	Programs/models whose focus is on providing payment to providers based on outcomes of patients; providing better outcomes results in higher payments.[26]
Pay-for-Reporting	Programs/models that are required to report quality measure data to CMS and result in a decrease to Medicare payments for nonperformance.[27]
Quality Reporting	Programs/models are required to report on certain quality measures; however, measures are not necessarily tied to payment.
Statutory Models	Models and demonstrations requiring testing as determined by Congress and/or the Secretary of Health and Human Services.[28]
Value-Based Purchasing	Programs/models that reward providers with incentive payments for the quality of care they provide to Medicare beneficiaries.[29]

NORC also examined the distribution of the 618 performance measures based on how the 24 programs/models are linked with payment (**Exhibit 16**).[30] Seventy-seven percent (n=476) of the measures correspond with the 15 pay-for-performance programs/models (50% [n=309] are MIPS performance measures, while the remaining 27% [n=167] correspond to the other 14 pay-for-performance programs/models). Twenty percent (n=126) of the measures correspond with the eight

[24] https://www.cms.gov/priorities/innovation/models#views=models

[25] https://www.cms.gov/priorities/innovation/models#views=models

[26] https://www.cms.gov/regulations-and-guidance/guidance/faca/downloads/tab_h.pdf

[27] https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/HomeHealthQualityInits/Downloads/Pay-for-Reporting-Quality-Assessments-Only-Methodology.pdf

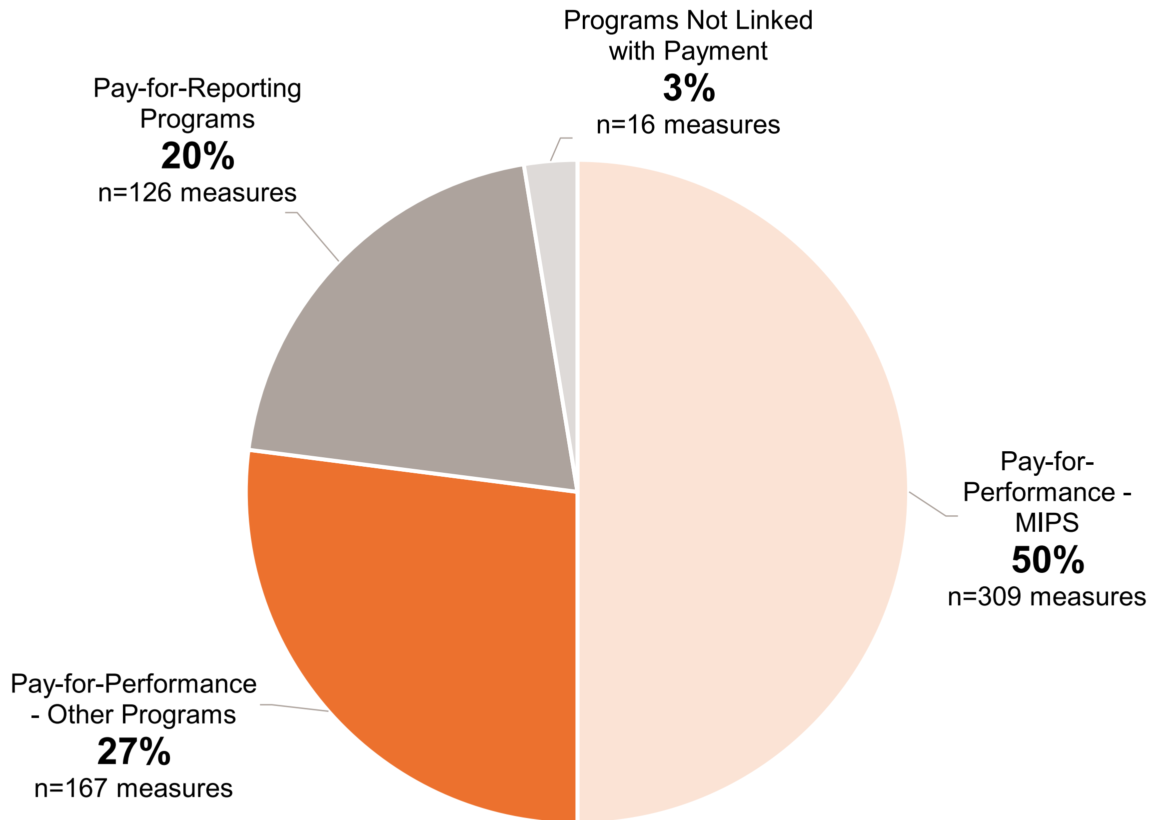
[28] https://www.cms.gov/priorities/innovation/models#views=models

[29] https://www.cms.gov/medicare/quality/value-based-programs

[30] There are some limitations of this analysis, including 1) not all measures for a given program/model are necessarily tied to payment or required to be reported (e.g., some programs/models have many measures from which providers choose a set of measures); 2) measure-specific requirements can change frequently; and 3) measures may be used differently in different programs/models.

pay-for-reporting programs, and three percent of the measures correspond with the one program (PPS-Exempt CHQR) that is not linked with payment.

Exhibit 16. Distribution of Performance Measures Based on How the 24 Selected Programs/Models are Linked with Payment



Note: Performance measures include active, in-development, pending, and suspended measures listed in the CMIT as of October 2023. Further, the OCM is an inactive model; the six measures associated with the OCM are inactive measures.
Note: There are some limitations of this analysis, including 1) not all measures for a given program/model are necessarily tied to payment or required to be reported (e.g., some programs/models have many measures from which providers choose a set of measures); 2) measure-specific requirements can change frequently; and 3) measures may be used differently in different programs/models.

Analysis 2: How Performance Measures are Tied to Payment

This second analysis focuses on 18 selected programs/models (14 CMMI models and four CMS value-based programs) (refer to Exhibit 1). Information on whether and how performance measures are tied to payment was obtained by reviewing CMS program and CMMI Innovation Model websites.[31]

[31] The available information on each of the 14 selected CMMI models' summary pages on the Innovation Center website was reviewed (https://www.cms.gov/priorities/innovation/models#views=models). Information found in these materials was used to summarize the models' main themes related to performance measurement and other administrative and payment characteristics.

A detailed review of the BPCI-A model was performed to provide an example of how performance measures are tied to payment. Participants in the BPCI-A model have the option of selecting either the Administrative Quality Measure (QM) set, or the Alternative QM set for a given clinical episode category. For each clinical episode, the Administrative QM set includes:

- 1) The following two measures:
  - Hospital-Wide All Cause Readmission (NQF #1789)
  - Advance Care Plan (NQF #0326); and
- 2) Up to two of the following additional measures:
  - Excess days in acute care after hospitalization for AMI (NQF #2881)
  - Risk-Standardized Mortality Rate CABG Surgery (NQF #2558)
  - Hospital-level Risk-Standardized Complication Rate Following Elective Primary THA and/or TKA (NQF #1550)
  - CMS Patient Safety Indicators PSI 90 (NQF#0531).

For each clinical episode, the Alternative QM set includes:

- 1) The following two measures:
  - Hospital-Wide All Cause Readmission (NQF #1789)
  - Advance Care Plan (NQF #0326); and
- 2) Up to three additional measures (including claims-based and registry-based measures).

Reconciliation is based on comparing actual Medicare FFS expenditures for all items and services included in a clinical episode with the final total price for that episode. At reconciliation, CMS determines whether participants receive a payment or are required to pay a repayment amount.

Participants receive a Composite Quality Score (CQS) based on the applicable quality measures for the clinical episode. CMS uses the CQS to apply an adjustment amount of up to 10% for the total reconciliation amounts. **Exhibit 17** summarizes how performance measures are linked with payment in the BPCI-A model.

Exhibit 17. Performance-Based Payment Example: BPCI-A Model

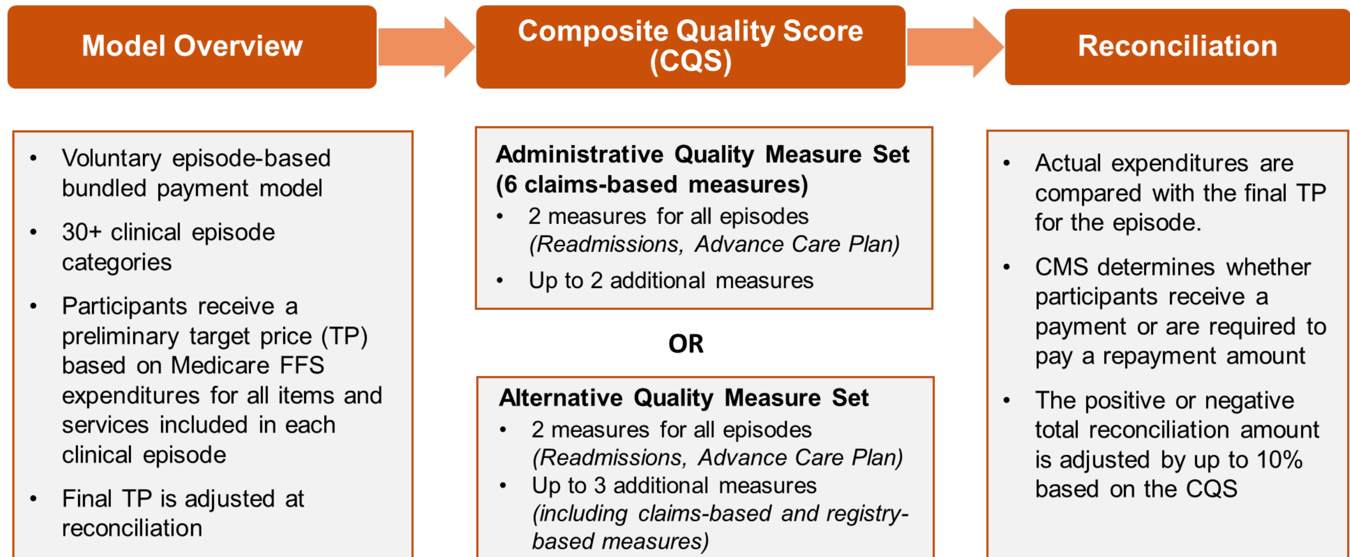


Exhibit 18 provides detailed payment information on the 18 programs/models. All 18 models and programs adjust payment based on performance. Thirteen (72%) models and programs employ both upside and downside risk for participants. The MCP, IAH, CPC+, and OCM models and the MA Star Ratings Program employ upside risk only.

Exhibit 18. Payment Information for 18 Programs/Models

Model	Whether Payment is Tied to Performance	Risk	How Payment is Tied to Performance
Accountable Care Organization (ACO) Realizing Equity, Access, and Community Health (REACH)	Yes	Upside & downside	CMS calculates the total cost of care at the end of the performance year. If the payments and additional fee-for-service (FFS) Medicare expenditures exceed the performance year benchmark, the ACO repays CMS the shared losses according to its risk sharing arrangement; otherwise, CMS pays shared savings to the ACO. Advanced Payment Option (APO) payments are also reconciled in a similar manner. In addition, 2% of an ACO's financial benchmark is held at risk; ACOs can earn part or all depending on their Initial Quality Score (IQS) based on four quality measures.

Model	Whether Payment is Tied to Performance	Risk	How Payment is Tied to Performance
Bundled Payments for Care Improvement Advanced (BPCI-A)	Yes	Upside & downside	Participants receive a retrospective bundled payment or are required to pay a Repayment Amount based on reconciliation against the benchmark/target price. Participants receive a Composite Quality Score (CQS) based on selected quality measures, and payment is adjusted by up to 10% for positive reconciliation amounts (where participant receives a payment) or negative reconciliation amounts (where participant is required to pay back).
Comprehensive ESRD Care (CEC) Model	Yes	Upside & downside	The CEC Operations Contractor calculates the Shared Savings or Shared Losses at the end of each performance year. If the ESCO meets or exceeds the Total Performance Score (TPS) minimum level of attainment and the Total Quality Score (TQS) minimum level of attainment (in PY1) or the TQS minimum performance threshold (in PY2 onward), CMS multiplies the total Medicare savings or losses by the ESCO TQS to determine the preliminary shared savings or preliminary shared losses payments.
Comprehensive Primary Care Plus (CPC+) Model	Yes	Upside only	Practices receive performance-based incentive payments (PBIPs) based on patient experience, clinical quality, and utilization; practices retain all or a portion of the PBIP based on performance. The PBIP is paid prospectively for the entire subsequent year based on the prior year's performance. Practices that do not meet the annual performance thresholds for clinical quality/patient experience or utilization are "at risk" for repaying all or a portion of the PBIP.
Enhancing Oncology Model (EOM)	Yes	Upside & downside	Retrospective performance-based payment (PBP) or performance-based recoupment (PBR) based on quality and savings during the performance period (i.e., six-month episodes of care).
End-Stage Renal Disease (ESRD) Treatment Choices (ETC) Model	Yes	Upside & downside	Participants receive a home dialysis payment adjustment (HDPA) and a performance payment adjustment (PPA). Medicare claim payments are increased for facilities and clinicians supporting dialysis at home, and PPAs are either increased or decreased based on the rate of home dialysis and transplant rate, calculated as the sum of the transplant waitlist rate and the living donor transplant rate.

Model	Whether Payment is Tied to Performance	Risk	How Payment is Tied to Performance
Expanded Home Health Value-Based Purchasing (Expanded HHVBP)	Yes	Upside & downside	Home health agencies receive adjustments to their FFS payments based on their TPS, a composite score of an agency's quality measures, relative to peers' performance. Performance on quality measures impacts payment adjustments in a later year.
Home Health Value-Based Purchasing (HHVBP)	Yes	Upside & downside	Medicare payments are adjusted upward or downward by up to 3%, 5%, 6%, or 7% based on the TPS, a composite score of an agency's quality achievement/improvement on the measure set and the performance year.
Hospital Value-Based Purchasing (Hospital VBP)	Yes	Upside & downside	2% of participants' payments are withheld; this total amount is used to fund value-based incentive payments to hospitals based on their performance. Participants' payments are adjusted based on a total performance score.
Independence at Home (IAH) Demonstration	Yes	Upside only	Practices can receive 50% of shared savings for meeting/exceeding performance requirements on three measures, 66.7% of shared savings for four measures, 83.3% for five measures, and 100% for all six measures.
Kidney Care Choices (KCC) Model	Yes	Upside & downside	The KCC model offers different payment mechanisms, including the Kidney Care First (KCF) Option (i.e., adjusted capitated payments based on performance on quality measures, health outcomes, and utilization; bonus payments for successful kidney transplants); the Kidney Contracting Entities (KCEs) Option (i.e., adjusted capitated payments; shared savings based on spending and quality measures), which includes the Comprehensive Kidney Care Contracting (CKCC) Graduated Option (i.e., one-sided risk track); the CKCC Professional Option (i.e., share in 50% of earnings or losses); and the CKCC Global Option (i.e., share in 100% of earnings or losses).
Making Care Primary (MCP) Model	Yes	Upside only	Participants are eligible to receive upside-only Performance Incentive Payments (PIP) that reward participants for improving patient health outcomes and achieving savings.
Medicare Advantage (MA) Star Ratings Program	Yes	Upside only	Participants receive a performance-based bonus payment if they obtain a 4-, 4.5-, or 5-Star Rating.

Model	Whether Payment is Tied to Performance	Risk	How Payment is Tied to Performance
Medicare Shared Savings Program (MSSP)	Yes	Upside & downside	Participants must meet a series of quality thresholds to receive shared savings; ACOs are subject to quality withholds from their shared savings if they do not meet quality benchmarks.
Merit-based Incentive Payment System (MIPS) Program	Yes	Upside & downside	Performance is measured across 4 domains; participants' final scores determine the payment adjustment applied to their claims.
Next Generation ACO (NGACO)	Yes	Upside & downside	ACOs participate in shared savings or losses based on performance year expenditures. ACOs may receive an Earned Quality Bonus for meeting quality requirements. CMS uses a quality "withhold," in which a portion of an ACO's performance year benchmark is held "at-risk," contingent upon the ACO's quality score.
Oncology Care Model (OCM)	Yes	Upside only	The amount of the performance-based payment is adjusted based on the participant's achievement on a range of quality measures. Once quality points are assigned, an Aggregate Quality Score (AQS) is calculated and translated into a performance multiplier. This performance multiplier is used as part of the performance-based payment calculation.
Primary Care First (PCF) Model	Yes	Upside & downside	A practice's payment amount depends on its performance compared to peer practices and its degree of improvement compared to its historical performance. Performance-based payment can be up to a 50% increase or a 10% decrease in total primary care payment revenue.

Analysis 3: Gaps in Current Performance Measures

This third analysis also focuses on the 18 programs/models (14 models and four programs) (refer to Exhibit 1). Information on potential gaps in current performance measures was obtained by reviewing publicly available evaluation reports. Various performance measure gaps have been identified in the assessment of the evaluation reports relating to for these programs and models. Concerns that were identified range from the need to have increased financial incentives linked to performance measures to challenges related to the lack of specificity in certain measures. The following are some additional highlights of findings from this analysis.

- Few CMMI models incorporated guardrails to prevent unintended consequences, such as worsening disparities. One exception is the ETC Model, which includes a Health Equity Incentive that provides additional improvement points to participants who show improvement in the home dialysis rate or transplant rate for their attributed dual-eligible or Low Income Subsidy (LIS) beneficiaries.
- Evaluation reports identify the importance of guardrails to prevent unintended consequences within models.
- An evaluation identified performance gaps within the Home Health Value-Based Purchasing (HHVBP) Program suggesting potential disparities in health equity. Over time, a pronounced widening gap between patients with and without Medicaid in HHVBP states raised alarms about persisting quality gaps. The report emphasized the need for targeted initiatives to prevent unintended consequences and to address pre-existing disparities.

Appendix C and Appendix D provide additional information on potential gaps, issues, and concerns related to current performance measures across the 18 selected programs/models.

Appendix A. Methodology

Analyses and Data Sources

Three types of analyses were conducted using the following data sources:

1) Performance measure-level analysis for 24 selected programs/models using the CMS Measures Inventory Tool (CMIT). This analysis provides the following descriptive information about the performance measures included in these programs/models:

- Total performance measures
- Unique performance measures
- Measures focused on similar aspects of care
- Types of performance measures
- Sources of performance measures
- Measure reporting level
- Performance measure endorsement status
- Whether performance measures are tied to payment[32]

The CMIT is a repository of performance measure information that includes 46 federal CMS value-based care programs or models (as of October 2023 when CMIT data were pulled). For each measure, the CMIT includes program/model name, measure name, measure definition, measure type, and measure source.[33] Information from the CMIT was available for 24 of the 31 selected programs/models; seven models are not part of the CMIT.[34] The supplemental Excel file (2023 Performance Measure Data for 24 CMS Models and Programs) contains three tabs. The first tab provides a description of the data included in the second tab of the supplemental Excel file. The second tab provides performance measure-level information obtained for the 24 programs/models pulled from the CMIT or from CMS/CMMI websites; the third tab provides a data dictionary that includes the column name, data sources, column name from the CMIT, definition, and whether the column is a CMIT required field. See Appendix B for additional information on the 2023 Performance Measure Data for 24 CMS Models and Programs supplemental Excel file.

[32] The CMIT variable related to identifying if performance on a given measure is tied to payment for the applicable program/model is not a required field, and CMIT does not specify if performance is tied to payment for 60% (n=373) of the 618 performance measures identified in this analysis. This is a limitation of CMIT. Therefore the 24 selected programs/models were categorized as pay-for-performance, pay-for-reporting, or not related to payment based on information from the CMS website or the CMMI Innovation Models webpage.

[33] Centers for Medicare & Medicaid Services Measures Inventory Tool, https://cmit.cms.gov/cmit/#/MeasureInventory

[34] The seven models not included in the CMIT are the Comprehensive End Stage Renal Disease (ESRD) Care (CEC) Model, Comprehensive Primary Care Plus (CPC+) Model, Enhancing Oncology Model (EOM), ESRD Treatment Choices (ETC) Model, Expanded Home Health Value-Based Purchasing (HHVBP) Model, Making Care Primary (MCP) Model, and the Next Generation Accountable Care Organization (NGACO) Model.

2) The second analysis focuses on assessing whether and how performance measures are linked with payment using information obtained from CMS program and CMMI Innovation Model websites. The report includes tables for the 14 selected CMMI models and four CMS programs (out of the 17 programs referenced in Exhibit 1) that describe how performance measures are linked with payment.

3) The third analysis provides information on potential gaps in current performance measures using information obtained from publicly available evaluation reports for the 14 CMMI models and four programs.

Appendix C and Appendix D provide detailed payment information and potential gaps in current performance measures, as applicable, for the 18 programs/models (compiled in October 2023).

Appendix E provides a full list of all programs/models included in the analyses.

Program Selection

A total of 31 models and programs were selected for these analyses: 17 CMS federal value-based care programs (including 9 CMS value-based care programs, 8 CMS pay-for-reporting programs) and 14 CMMI models. The CMS programs **(17)** were selected to ensure a variety of federal reporting programs (e.g., pay-for-performance, pay-for-reporting, quality reporting and other approaches). The CMMI models **(14)** were selected based on the following criteria: 1) the model must have been active in the last five years; 2) the model must include at least one quality measure and at least one utilization or spending measure in implementation and/or monitoring; and 3) the model must be or have been operational in more than one state.

Appendix B. Detailed Performance Measure-Level Information Based on an Analysis of Data from the CMIT for 24 Selected Medicare Programs/Models

A detailed performance measure-level analysis was conducted for 24 selected programs/models using data from the CMS Measures Inventory Tool (CMIT). The following is a list of the 24 Medicare programs/models that are included in this analysis.

- Accountable Care Organization (ACO) Realizing Equity, Access, and Community Health (REACH) Model
- Ambulatory Surgical Center (ASC) Quality Reporting Program (QRP)
- Bundled Payment for Care Improvement Advanced (BPCI-A) Model
- End-Stage Renal Disease (ESRD) Quality Incentive Program (QIP)
- Home Health Quality Reporting (QR)
- Home Health Value-Based Purchasing (HHVBP) (original)
- Hospice Quality Reporting Program (HQRP)
- Hospital Acquired Condition (HAC) Reduction Program
- Hospital Outpatient Quality Reporting (OQR) Program
- Hospital Readmission Reduction Program (HRRP)
- Hospital Value-Based Purchasing (VBP)
- Independence at Home (IAH) Demonstration
- Inpatient Psychiatric Facility (IPF) Quality Reporting Program (QRP)
- Inpatient Rehabilitation Facility (IRF) Quality Reporting Program (QRP)
- Kidney Care Choices (KCC) Model
- Long-Term Care Hospital (LTCH) Quality Reporting Program (QRP)

- Medicare Advantage (MA) Star Ratings Program
- Medicare Shared Savings Program (MSSP)
- Merit-Based Incentive Payment System (MIPS) Program
- Oncology Care Model (OCM)
- Primary Care First (PCF) Model
- Prospective Payment System (PPS)-Exempt Cancer Hospital Quality Reporting (CHQR) Program
- Skilled Nursing Facility (SNF) Quality Reporting Program (QRP)
- Skilled Nursing Facility (SNF) Value-Based Purchasing (VBP)

Exhibit B.1 lists the information that is included for each performance measure in the supplemental Excel File. The Supplemental Excel File (2023 Performance Measure Data for 24 CMS Models and Programs) can be accessed on the PTAC Resources webpage.

Exhibit B1. Detailed Information for Each Performance Measure in the 2023 Performance Measure Data for 24 CMS Models and Programs Supplemental Excel File

Column Name	Data Source	Column Name from CMIT	Definition[a]
Program/Model Name	CMIT	Program	The CMS Program which uses this program-specific version as designated by legislation, rule or policy.
Program/Model Type as it Relates to Payment	non-CMIT	--	The 24 programs/models were categorized as pay-for-performance, pay-for-reporting, or not related to payment based on information from the CMS website or the CMMI Innovation Models webpage.
Measure ID	CMIT	Measure ID	Unique ID attached to a measure.
Measure Variation ID	CMIT	Measure Variation ID	ID representing a form of a measure with a specification that differentiates it from others that are similar.[b]
Measure Name	CMIT	Program-Specific Measure Titles	The title of a program-specific version derived from a measure.
Measure Type	CMIT	Measure Type	Refers to the domain of quality that a measure assesses.
Measure Reporting Status	CMIT	Reporting Status	Indicates if a program is active, pending, in development, suspended, or inactive.
Measure Definition	CMIT	Description	Briefly describe the type of score (e.g., percentage, percentage rate, proportion, number), target population, and focus of measurement in this format: “The percentage of [gender qualifier] if applicable (e.g., “female”) patients or individuals during visit or event [environment qualifier](e.g., admitted to a post-anesthesia care unit[PACU]) [age qualifier] (e.g., aged 18 years and older) [denominator definition] (e.g., who are under the care of an anesthesia practitioner) [numerator criteria] (e.g., in which a formal post-anesthetic transfer of care protocol or checklist is used that includes key transfer of care elements).”
Measure Data Source	CMIT	Data Sources	Data sources are the primary source document(s) used for data collection (e.g., billing or administrative data, encounter form, enrollment forms, patient medical record).

Column Name	Data Source	Column Name from CMIT	Definition[a]
Measure Reporting Level	CMIT	Level of Analysis	The level of analysis is a performance measurement level (e.g., clinician, health plan, county populations).
Measure Only Used for One Program/Model	non-CMIT	--	This column was categorized by identifying measures in the CMIT for the 24 programs/models that were used exclusively by only one of the 24 programs/models (based on an analysis of measure names).
Measure Specific Conditions	CMIT	Conditions	A disease, illness or injury including physiologic, mental or psychological disorder (e.g., Cardiovascular Disease, Malignant Neoplasm).
Additional Program/Model Type	non-CMIT	--	Program/model type was created using classifications for the 24 programs/models as described on the CMS website or the CMMI Innovation Models webpage (https://www.cms.gov/priorities/innovation/models#views=models).
CMS CBE Endorsement Status	CMIT	CBE Endorsement Status	Identifies if the program-specific version has been endorsed by a Consensus Based Entity.

[a] With the exceptions of the Measure Only Used for One Program/Model and Program/Model Type columns, definitions are from the CMIT Data Dictionary (file: 'Simplified CMIT Data Dictionary Shared' provided by the CMIT helpdesk [mmssupport@battelle.org])

[b] Measure Variation ID was not included in the CMIT Data Dictionary supplied; this information was derived from the CMIT Quick Start Guide on their website (https://cmit.cms.gov/cmit/assets/CMIT-QuickStartPublicAccess.pdf)

Appendix C. Detailed Information on Current Performance Measures for 14 Selected CMMI Models

Exhibit C1. Program Description, Technical Issues, and Gaps Related to Current Performance Measures

Program/ Model Name	Clinical Focus, Providers, Setting, Patient Population	Components Relevant to Performance Measurement	Technical Issues Related to Performance Measurement	How Measurement is Used to Determine Success	Gaps Related to Current Performance Measures, as applicable
Bundled Payments for Care Improvement Advanced (BPCI-A) *Ongoing* Years active: 2018-present	**Clinical Focus:** Cross-clinical focus **Providers:** Acute care hospitals, physician group practices, Medicare-enrolled providers, ACOs **Setting:** Inpatient and outpatient services **Patient Population:** Medicare beneficiaries with certain clinical episodes (29 inpatient, 3 outpatient)	**Utilization measure(s):** N/A **Quality measure(s):** Administrative Quality Measures Set: All-Cause Unplanned Hospital Readmission; Advance Care Plan; CMS Patient Safety and Adverse Events Composite (CMS PSI 90); Excess Days in Acute Care after Hospitalization for Acute Myocardial Infarction; Hospital-Level Risk-Standardized Complication Rate Following Elective Primary Total Hip Arthroplasty; Risk-Standardized Mortality Rate Following Coronary Artery Bypass Graft Surgery (CABG)	**How payment is adjusted for performance:** Participants, called Episode Initiators (IEs), receive a retrospective bundled payment or are required to pay a Repayment Amount based on reconciliation against the benchmark/target price. Further, EIs receive a Composite Quality Score (CQS) based on selected quality measures and payment is adjusted by up to 10% for positive reconciliation amounts (where EI receives a payment) or negative reconciliation amounts (where EI is required to pay back). **Requirements:** Participants are required to select the Administrative Quality Measures Set or the Alternate Quality Measures Set at the beginning of each Model Year.	**Measures used for implementation:** Administrative or Alternate Quality Measures Sets based on the EI selections **Measures used for monitoring:** All listed measures, as applicable **How achievement is measured:** Payment is adjusted by up to 10% based on the CQS **How improvement is measured**: Each Participant's performance is scored based on the Participant's placement in the performance distribution from the baseline year.	N/A

Program/ Model Name	Clinical Focus, Providers, Setting, Patient Population	Components Relevant to Performance Measurement	Technical Issues Related to Performance Measurement	How Measurement is Used to Determine Success	Gaps Related to Current Performance Measures, as applicable
		Alternate Quality Measures Set: All-Cause Unplanned Hospital Readmission; Advance Care Plan; Hospital-Level Risk-Standardized Complication Rate Following Elective Primary Total Hip Arthroplasty; 3-Item Care Transition Measure (CTM-3); Atrial Fibrillation and Atrial Flutter; Bariatric Surgery Standards for Successful Programs Measure; Cardiac Rehabilitation Patient Referral from an Inpatient Setting; Defect Free Care for Acute Myocardial Infarction; Discharge Medications in Eligible Implantable Cardioverter-Defibrillator/Cardiac Resynchronization Therapy Defibrillators Implant Patients; Heart Failure: ACE Inhibitor or ARB or ARNI Therapy for Left Ventricular Systolic Dysfunction (LVSD); Heart Failure: Beta-Blocker Therapy for LVSD; Risk-	Two measures (All-Cause Hospital Readmission and Advance Care Plan) apply to both Measures Sets and are required; participants must select two additional quality measures from the Administrative Quality Measures Set or three additional measures from the Alternate Quality Measures Set to be scored on. Scores result in a CQS which is tied to payment. **Attribution:** CMS attributes a Clinical Episode to one EI. Clinical Episodes are attributed to EIs based on the PGP that submits a claim that includes the physician's NPI or the Acute Care Hospital (ACH) where the services that triggered the Clinical Episode were rendered. A Clinical Episode begins at the start of an inpatient admission or outpatient procedure (MS-DRG codes are used to identify qualifying inpatient admissions and HCPCS codes are used to identify qualifying procedures) and ends 90 days after the day		

Program/ Model Name	Clinical Focus, Providers, Setting, Patient Population	Components Relevant to Performance Measurement	Technical Issues Related to Performance Measurement	How Measurement is Used to Determine Success	Gaps Related to Current Performance Measures, as applicable
		Standardized Mortality Rate Following Pneumonia Hospitalization; Hospital Risk-Standardized Complication Rate following Implantation of ICD Composite Measure; In-Person Evaluation Following Implantation of a Cardiovascular Implantable Electronic Device; Patient-Centered Surgical Risk Assessment and Communication; Preventive Care and Screening: Tobacco Use Screening and Cessation Intervention; Risk Standardized Bleeding for Patients Undergoing Percutaneous Coronary Intervention; Severe Sepsis and Septic Shock: Management Bundle Measure; Discharged on Statin Medication; STS Coronary Artery Bypass Graft Composite Score; Substance Use Screening and Intervention Composite; Therapy with Aspirin, P2Y Inhibitor, and Statin at Discharge	of discharge from hospital or completion of outpatient procedure. **Volume:** An entity (EI) must have a minimum of 10 attributed Clinical Episodes to generate a quality score **Risk stratification or adjustment:** CMS employs a risk adjustment model that adjusts target prices based on hierarchical condition categories (HCC), HCC interactions, HCC severity, recent resource use, demographics, long-term institutional care, dementia, MS-DRGS/APCs, clinical episode category specific adjustments, and COVID-19 infection rate. **Benchmarking:** CMS calculates a Benchmark Price based on historical data to account for variation in costs.		

Program/ Model Name	Clinical Focus, Providers, Setting, Patient Population	Components Relevant to Performance Measurement	Technical Issues Related to Performance Measurement	How Measurement is Used to Determine Success	Gaps Related to Current Performance Measures, as applicable
		Following Percutaneous Coronary Intervention in Eligible Patients; Time to Intravenous Thrombolytic Therapy; Volume Weighted Aortic Valve Replacement and Aortic Valve Replacement + CABG Composite Measures; Volume Weighted Mitral Valve Repair and Replacement and Mitral Valve Repair and Replacement + CABG Composite Measures **Spending measure(s):** All costs of care provided to a Medicare beneficiary during a clinical episode **Patient experience measure(s):** Patient-reported care experiences and satisfaction with care			
Comprehensive ESRD Care (CEC) Model *No longer active* Years active: 2015-2021	**Clinical Focus:** End-stage renal disease (ESRD) **Providers:** Nephrologists; ESRD Seamless Care	**Utilization measure(s):** N/A **Quality measure(s):** diabetes care (eye exam & food exam), advance care plan, medication reconciliation post-discharge, influenza	**How payment is adjusted for performance:** the CEC Operations Contractor calculates the Shared Savings or Shared Losses at the end of each performance year. If the ESCO met or exceeds the TPS minimum levels of attainment	**Measures used for implementation:** CEC total quality score (TQS) and ESRD QIP total performance score (TPS)	Benchmarks for future models can be reexamined to increase likelihood of net savings.

Program/ Model Name	Clinical Focus, Providers, Setting, Patient Population	Components Relevant to Performance Measurement	Technical Issues Related to Performance Measurement	How Measurement is Used to Determine Success	Gaps Related to Current Performance Measures, as applicable
	Organizations (ESCOs)[35] **Setting:** Nephrology clinics **Patient Population:** Medicare beneficiaries with ESRD	immunization for the ESRD population, pneumococcal vaccination status, screening for clinical depression and follow-up plan, tobacco use: screening and cessation, falls: screening, risk assessment and plan of care to prevent future falls, bloodstream infection in hemodialysis outpatients, hemodialysis adequacy, proportion of patients with hypercalcemia, peritoneal dialysis adequacy: delivered dose of peritoneal dialysis above minimum, hemodialysis vascular access: maximizing placement of arterial venous fistula, hemodialysis vascular access: minimizing use of catheters as chronic dialysis access, standardized hospitalization ratio for admissions, standardized	and the TQS minimum level of attainment (in PY1) or the TQS minimum performance threshold (in PY2 onward), CMS multiplies the total Medicare savings or losses by the ESCO TQS to determine the preliminary shared savings or preliminary shared losses payments **Requirements:** ESCOs must successfully report CEC measure set with satisfactory reporting for data quality measures **Attribution:** Based on first dialysis utilization encounter with a participating facility; conducted quarterly **Volume:** N/A **Risk stratification or adjustment:** Organizations are categorized as either large dialysis organizations (LDOs; with 200+ dialysis facilities) and small dialysis organizations **Benchmarking:** Based on historical Medicare Parts A and B expenditures for beneficiaries	**Measures used for monitoring:** Same as for implementation **How achievement is measured:** Using a sliding scale, ESCO performance is ranked and points are awarded if being in the 30-99% percentile of national performance **How improvement is measured:** The improvement scale connects the percentile of national performance, quality points earned, and the percentage change from the prior year	

[35] ESCOs comprise nephrologists, dialysis facilities, and other providers.

Program/ Model Name	Clinical Focus, Providers, Setting, Patient Population	Components Relevant to Performance Measurement	Technical Issues Related to Performance Measurement	How Measurement is Used to Determine Success	Gaps Related to Current Performance Measures, as applicable
		readmission ratio, standardized mortality ratio, standardized first kidney transplant waitlist ratio for incident dialysis patients, percentage of prevalent patients waitlisted **Spending measure(s):** Total Medicare Parts A and B spending **Patient experience measure(s):** In Center Hemodialysis; CAHPS (ICH CAHPS) score based on six sub-measures: nephrologists' communication and care, quality of dialysis center care and operations, providing information to patients, rating of kidney doctors, rating of dialysis center staff, and rating of dialysis Center; Kidney disease quality of life (KDQOL) survey	who would have been aligned to the ESCO in each of the three years prior to the start of the first PY, trended forward using national data		
Comprehensive Primary Care Plus (CPC+)	**Clinical Focus:** Primary care	**Utilization measure(s):** Emergency Department Utilization, Acute Hospital Utilization	**How payment is adjusted for performance:** Practices receive performance-based incentive payments (PBIPs)	**Measures used for implementation:** Emergency Department Utilization; Acute Hospital	At the start of CPC+, PBIP scores differed markedly by

Program/ Model Name	Clinical Focus, Providers, Setting, Patient Population	Components Relevant to Performance Measurement	Technical Issues Related to Performance Measurement	How Measurement is Used to Determine Success	Gaps Related to Current Performance Measures, as applicable
No longer active Years active: 2017-2021	**Providers:** Primary care providers (PCPs) **Setting:** Primary care practice **Patient Population:** All Medicare and Medicaid beneficiaries in participating regions	**Quality measure(s):** Diabetes: Hemoglobin A1c (HbA1c) Poor Control (>9%); and Controlling High Blood Pressure. Both quality measures are reported as electronic clinical quality measures (eCQMs). **Spending measure(s):** Total Medicare Parts A and B spending **Patient experience measure(s):** Patient Experience of Care Survey, measured by response to questions from the Consumer Assessment of Healthcare Providers and Systems Clinician and Group (CG-CAHPS) Survey and the Patient-Centered Medical Home Survey Supplement	based on patient experience, clinical quality, and utilization; practices retain all or a portion of the PBIP based on performance. The PBIP is paid prospectively for the entire subsequent year based on the prior year's performance. Practices that do not meet the annual performance thresholds for clinical quality/patient experience or utilization are "at risk" for repaying all or a portion of the PBIP. **Requirements:** To retain quality and utilization components of the PBIP, CPC+ practices must: -Report two eCQMs and receive a Patient Experience Survey score; practices failing to meet this requirement are not eligible to keep the quality or utilization component of the PBIP -Meet the 30th percentile on 1 out of 3 quality measures; practices failing to meet this requirement are not eligible to keep the quality or utilization component of the PBIP	Utilization; Diabetes: Hemoglobin A1c (HbA1c) Poor Control (>9%); Controlling High Blood Pressure; Medicare Parts A and B spending; Patient Experience of Care Survey **Measures used for monitoring:** Same as for implementation **How achievement is measured:** The PBIP retained is calculated by comparing a CPC+ practice's performance with benchmark thresholds derived using a reference population. CPC+ practices may set goals by comparing their performance with benchmark performance thresholds on measures of utilization, spending, and quality of care. **How improvement is measured:** Practices may use these benchmarks to track their performance over time.	practice ownership status, with independent practices outperforming system-owned practices, especially on utilization, but this performance gap narrowed steadily over time. By PY 4, the performance gap had largely disappeared, with system-owned practices attaining a median overall score of 95 percent, compared to 97 percent for independent practices. Some practices also noted that financial incentives were not always viewed as large enough to compensate for the effort required to participate in

Program/ Model Name	Clinical Focus, Providers, Setting, Patient Population	Components Relevant to Performance Measurement	Technical Issues Related to Performance Measurement	How Measurement is Used to Determine Success	Gaps Related to Current Performance Measures, as applicable
			-Meet the 30th percentile on 2 out of 3 quality measures (utilization gate); practices failing to meet this requirement are not eligible to keep the utilization component of the PBIP, and the percent of the quality component retained is the combined dollar amount based on individual performance that meets or exceeds the 30th percentile for the quality measures -Meet the 70th percentile on 2 out of 3 quality measures and meet the 30th percentile on all 3 quality measures. For practices failing to meet this requirement, the percent of the quality component retained is the combined dollar amount based on individual performance that meets or exceeds the 30th percentile for the quality measures and the percent of the utilization component retained is the combined dollar amount based on the individual performance for each of the 2 utilization measures. Practices that meet this requirement retain 100% of the quality component and the percent of		the model. Deep-dive practices noted that they deprioritized proactive outreach to patients about gaps in care and routine screenings because they had limited capacity to see patients in person. These practices reported that they expect their performance on quality metrics to suffer, especially for measures that require in-person measurements such as the controlling high blood pressure electronic Clinical Quality Measure (eCQM), which affects CPC+ practices' Performance-based Incentive Payment. Most deep-dive

Program/ Model Name	Clinical Focus, Providers, Setting, Patient Population	Components Relevant to Performance Measurement	Technical Issues Related to Performance Measurement	How Measurement is Used to Determine Success	Gaps Related to Current Performance Measures, as applicable
			the utilization component retained is the combined dollar amount based on the individual performance for each of the 2 utilization measures. **Attribution:** Beneficiaries are prospectively attributed to CPC+ practice sites, rather than individual practitioners, under both voluntary alignment and claims-based attribution for each payment quarter. Voluntary: Process by which beneficiaries specify the health care practitioner and practice that they consider to be responsible for providing and coordinating their health care. Attestations made by the end of the lookback period are used for attribution to pay practices prospectively (using historical data to perform attribution before each payment quarter). Claims-based: Prospective, using a two-year “look back” period to identify eligible primary care visits (e.g., evaluation and management [E&M], welcome and annual wellness visits, advance care planning, collaborative care		practices reported that episodic care management was useful in educating patients about their health, providing practitioners and staff with detailed admission and discharge information, identifying gaps in care, and ultimately reducing readmissions.

Program/ Model Name	Clinical Focus, Providers, Setting, Patient Population	Components Relevant to Performance Measurement	Technical Issues Related to Performance Measurement	How Measurement is Used to Determine Success	Gaps Related to Current Performance Measures, as applicable
			model, cognition and functional assessment for patients with cognitive impairment, outpatient clinic visit for assessment and management (CAHs only), transitional care management (TCM), chronic care management (CCM), complex CCM, assessment/care planning for patients requiring CCM services, and care management services for behavioral health attribution) based on HCPCS codes. Beneficiaries are attributed to practices based on CCM-related services first, followed by annual wellness visits or welcome to Medicare visits, and then using the plurality of eligible primary care visits. **Volume:** At least 20 reporting practitioners or groups must meet the MIPS eligible clinician criteria for contributing to MIPS benchmarks for a benchmark to be created. These practitioners or groups must also each have a minimum case size of 20 beneficiaries. **Risk stratification or adjustment:** All Medicare FFS		

Program/ Model Name	Clinical Focus, Providers, Setting, Patient Population	Components Relevant to Performance Measurement	Technical Issues Related to Performance Measurement	How Measurement is Used to Determine Success	Gaps Related to Current Performance Measures, as applicable
			beneficiaries attributed to a CPC+ practice are assigned to one of four risk tiers for Track 1 or one of five risk tiers for Track 2. Risk score tier thresholds are defined separately for each CPC+ region. Each risk tier corresponds to a specific monthly CMF payment. Higher risk tiers are associated with higher beneficiary risk and higher CMFs. Beneficiary risk is generally determined by the CMS HCC risk adjustment model. For Track 2 beneficiaries, risk tier is also based in part on a diagnosis of dementia. **Benchmarking:** The PBIP retained is calculated by comparing a CPC+ practice's performance with benchmark performance thresholds derived using a reference population. The benchmarks establish the minimum thresholds that CPC+ practices must reach to retain a portion of the incentive payment and the maximum thresholds that practices must achieve to retain the full incentive payment. Benchmarks are based on		

Program/ Model Name	Clinical Focus, Providers, Setting, Patient Population	Components Relevant to Performance Measurement	Technical Issues Related to Performance Measurement	How Measurement is Used to Determine Success	Gaps Related to Current Performance Measures, as applicable
			quality (patient experience of care and clinical quality) and utilization (Medicare acute care utilization).		
Enhancing Oncology Model (EOM) *Ongoing* Years active: 2022-present	**Clinical Focus:** Oncology **Providers:** Oncologists **Setting:** Oncology practices **Patient Population:** Medicare beneficiaries with cancer	**Utilization measure(s):** Admissions and Emergency Department Visits for Patients Receiving Outpatient Chemotherapy **Quality measure(s):** Proportion of Patients who Died who Were Admitted to Hospice for 3 Days or More; Percentage of Patients who Died from Cancer Receiving Chemotherapy in the Last 14 Days of Life; Pain Assessment and Management Set: a) Oncology: Medical and Radiation - Pain Intensity Quantified, b) Oncology: Medical and Radiation - Plan of Care for Pain; Preventative Care and Screening: Screening for Depression and a Follow-Up Plan	**How payment is adjusted for performance:** Retrospective performance-based payment (PBP) or performance-based recoupment (PBR) based on quality and savings during the performance period (i.e., 6-month episodes of care). **Requirements:** Participants report participant-level quality measure data, beneficiary-level clinical and staging data, and beneficiary-level sociodemographic data to CMS no more than once a performance period. The PBP or PBR is calculated as a percentage of the benchmark amount for an attributed episode. An EOM Participant could earn a PBP if actual expenditures for attributed episodes are below the target amount. **Attribution:** CMS attributes an episode to an eligible EOM Participant if the Participant	**Measures used for implementation:** All listed measures. **Measures used for monitoring:** Not specified. **How achievement is measured:** To calculate quality performance, CMS will compare participants' performances on each quality measure to the measure benchmark and calculate the participant's aggregate quality score (AQS). CMS will crosswalk the participant's AQS to the PBP or PBR performance multiplier to arrive at the payment amount. **How improvement is measured:** Not specified.	N/A

Program/ Model Name	Clinical Focus, Providers, Setting, Patient Population	Components Relevant to Performance Measurement	Technical Issues Related to Performance Measurement	How Measurement is Used to Determine Success	Gaps Related to Current Performance Measures, as applicable
		Spending measure(s): Total cost of care **Patient experience measure(s):** Patient-Reported Experience of Care Survey based on the Consumer Assessment of Healthcare Providers and Systems (CAHPS) for cancer drug therapy and other validated surveys to assess end-of-life and hospice care (e.g., CAHPS Hospice Survey)	provided the first qualifying E&M service during the episode if that Participant provided at least 25% of all qualifying E&M services for the episode. Otherwise, CMS attributes the episode based on plurality of qualifying E&M services and the episode is attributed to the Participant providing the largest proportion of qualifying E&M services during the episode. **Volume:** If a Participant does not have enough episodes to meet the minimum denominator for a measure, the measure is excluded from the calculation of the Aggregate Quality Score (AQS) for the performance period. **Risk stratification or adjustment:** Cost benchmarks/target amounts are adjusted based on cancer type, dual eligible status and Low-Income Subsidy eligibility. **Benchmarking:** The benchmark amount is the total projected costs of attributed episodes. CMS creates a separate price prediction model for each cancer type. After		

Program/ Model Name	Clinical Focus, Providers, Setting, Patient Population	Components Relevant to Performance Measurement	Technical Issues Related to Performance Measurement	How Measurement is Used to Determine Success	Gaps Related to Current Performance Measures, as applicable
			using these models to establish predicted expenditures for each EOM episode, CMS applies a series of adjustments to obtain the benchmark price for each episode.		
ESRD Treatment Choices (ETC) Model *Ongoing* Years active: 2021-present	**Clinical Focus:** Home dialysis and kidney transplants for patient with ESRD **Providers:** Nephrologists **Setting:** ESRD facilities, transplant centers, large donor hospitals, patient home **Patient Population:** Patients with ESRD	**Utilization measure(s):** N/A **Quality measure(s):** Home Dialysis Rate; Transplant Rate **Spending measure(s):** Per treatment payments for dialysis **Patient experience measure(s):** N/A	**How payment is adjusted for performance:** Participants receive a home dialysis payment adjustment (HDPA) and a performance payment adjustment (PPA). Medicare claim payments are increased for facilities and clinicians supporting dialysis at home and PPAs are either increased or decreased based on the rate of home dialysis and transplant rate, calculated as the sum of the transplant waitlist rate and the living donor transplant rate. **Requirements:** All participants receive positive adjustments for home dialysis during the first three years of the model. The direction and magnitude of the PPA adjustment is determined based on the Modality Performance Score (MPS), which is assigned by CMS based on performance on the	**Measures used for implementation:** Home Dialysis Rate, Transplant Rate **Measures used for monitoring:** Not specified **How achievement is measured:** CMS compares Participants' rates to the percentile-based benchmarks and assigns points using an achievement score scale ranging from 0 to 2 points. **How improvement is measured:** CMS calculates percent improvement as the difference between the model and base year rates divided by the base year rate, multiplied by 100. Points are assigned using an improvement score scale ranging from 0 to	Future model evaluations should account for possible effects of the related Kidney Care Choices (KCC) Model due to model overlap

Program/ Model Name	Clinical Focus, Providers, Setting, Patient Population	Components Relevant to Performance Measurement	Technical Issues Related to Performance Measurement	How Measurement is Used to Determine Success	Gaps Related to Current Performance Measures, as applicable
			home dialysis rate and transplant rate. **Attribution:** A beneficiary is attributed to the ESRD facility with the most dialysis claims during the month, and the Managing Clinician billing the first monthly capitated payment for the month. Attribution occurs on a month-by-month basis **Volume:** N/A **Risk stratification or adjustment:** Benchmarks are stratified by dual eligible or Low Income Subsidy (LIS) beneficiaries. Further, the transplant waitlist rate is risk-adjusted based on beneficiary age **Benchmarking:** Achievement – CMS calculates benchmark year home dialysis rate and transplant rate and then calculates the 30th, 50th, 75th, and 90th percentiles of the distributions. Improvement – CMS assesses the home dialysis rate and transplant rate against the base year rates to calculate an improvement score.	1.5. Participants are evaluated according to whether their percent improvement falls within >10%, >5%, >0%, and 0 or <0% improvement. Further, there is a Health Equity Incentive to the improvement scoring methodology: participants who show improvement in the home dialysis rate or transplant rate for their attributed dual-eligible or Low Income Subsidy (LIS) beneficiaries can earn additional improvement points.	

Program/ Model Name	Clinical Focus, Providers, Setting, Patient Population	Components Relevant to Performance Measurement	Technical Issues Related to Performance Measurement	How Measurement is Used to Determine Success	Gaps Related to Current Performance Measures, as applicable
Expanded Home Health Value-Based Purchasing Model (Expanded HHVBP) *Ongoing* Years active: January 2022-present	**Clinical Focus:** Home health care **Providers:** Medicare-certified Home Health Agencies (HHAs) **Setting:** Home health setting **Patient Population:** Medicare beneficiaries requiring home health services	**Utilization measure(s):** Acute Care Hospitalization During the First 60 Days of Home Health Use; ED Use without Hospitalization During the First 60 Days of Home Health/ED Use **Quality measure(s):** Improvement in Dyspnea; Discharged to Community; Improvement in Management of Oral Medications; Total Normalized Composite Change in Self-Care; Total Normalized Composite Change in Mobility **Spending measure(s):** Home health Medicare claims payments **Patient experience measure(s):** HHCAHPS Care of Patients/Professional Care; Communication between Providers and Patients; Specific Care Issues/Team Discussion; Overall Rating of Home Health Care; Willingness	**How payment is adjusted for performance:** Home health agencies receive adjustments to their FFS payments based on their Total Performance Score (TPS), a composite score of an agency's quality measures, relative to peers' performance. Performance on quality measures impacts payment adjustments in a later year. **Requirements:** CMS will apply a payment adjustment of a maximum of 5% upward or downward in the performance year based on an HHAs performance in the baseline year. When calculating the TPS, quality and utilization measures are weighted 35% and patient experience measures are weighted 30%. **Attribution:** N/A **Volume:** To qualify for payment adjustments, an HHA must have 20 home health quality episodes, 20 home health stays, and 40 completed HHCAHPS surveys, along with sufficient data to calculate at	**Measures used for implementation:** All listed measures **Measures used for monitoring:** Same as for implementation **How achievement is measured:** TPS compared to the achievement threshold, which is the 50th percentile of all HHAs' performance scores for that quality measure within the cohort during the baseline year, with achievement points being assigned for values that are greater than the threshold **How improvement is measured:** Measure values are compared to the improvement threshold, with achievement points being assigned for values that are greater than the threshold	N/A (Model has not been evaluated yet)

Program/ Model Name	Clinical Focus, Providers, Setting, Patient Population	Components Relevant to Performance Measurement	Technical Issues Related to Performance Measurement	How Measurement is Used to Determine Success	Gaps Related to Current Performance Measures, as applicable
		to Recommend the Agency	least five of the 12 quality measures in the baseline and performance years **Risk stratification or adjustment:** Cohorts are determined by the HHAs beneficiary count in the prior calendar year: large-volume (HHAs with 60+ beneficiaries in the calendar year prior to the performance year) or small-volume (HHAs with <60 beneficiaries); cohorts group HHAs of similar size and likelihood to receive scores on the same set of measures **Benchmarking:** Achievement thresholds and benchmarks are calculated as the 50th and 90th percentiles for each quality measure by cohort, based on all HHAs' performance data in the designated baseline year.		
Accountable Care Organization Realizing Equity, Access, and Community Health	**Clinical Focus:** Primary and specialty care **Providers:** ACOs; Participating and	**Utilization measure(s):** N/A **Quality measure(s):** Days at home for patients with complex, chronic Conditions (for high-needs DCEs only); timely follow-up (TFU) after acute	**How payment is adjusted for performance:** CMS calculates the total cost of care at the end of the performance year. If the payments and additional FFS Medicare expenditures exceed the performance year benchmark, the ACO repays	**Measures used for implementation:** Initial quality score (IQS), a percentage determined by the four quality measures (ACR, UAMCC, TFU, CAHPS) out of a total of 40 points	Not specified

Program/ Model Name	Clinical Focus, Providers, Setting, Patient Population	Components Relevant to Performance Measurement	Technical Issues Related to Performance Measurement	How Measurement is Used to Determine Success	Gaps Related to Current Performance Measures, as applicable
(ACO REACH) *Participants Announced* Years active: 2021-present[36]	Preferred Providers **Setting:** Broad applicability **Patient Population:** Medicare FFS beneficiaries; patients with complex chronic diseases and serious illnesses	exacerbations of chronic conditions (for Standard and New Entrant DCEs only); risk-standardized all condition readmission (ACR) measure; all-cause unplanned admissions for patients with multiple chronic conditions (UAMCC) **Spending measure(s):** Total cost of care **Patient experience measure(s):** Patient experience measures from CAHPS, patient/caregiver experience	CMS the shared losses according to its risk sharing arrangement; otherwise, CMS pays shared savings to the ACO. Advanced Payment Option (APO) payments are also reconciled in a similar manner. **Requirements:** To earn shared savings, participants must exceed the benchmark. **Attribution:** Prospective voluntary; Prospective Plus voluntary; Prospective, claims-based, primary care providers; Prospective, claims-based, non-primary care[37] **Volume:** N/A **Risk stratification or adjustment:** Participants are organized into three types: Standard ACOs, New Entrant ACOs, and High Needs ACOs. Risk adjustment is used to adjust expenditures for beneficiary health risk and	**Measures used for monitoring:** Same as for implementation **How achievement is measured:** Performance on each of the four quality measures (ACR, UAMCC, TFU, CAHPS) on a scale of 10 compared to the relevant benchmark **How improvement is measured:** CMS determines whether REACH ACOs exhibit improvement, no change, or a decline in performance on measure scores for each quality measure	

[36] The transition from the GPDC Model to the ACO REACH Model was announced on February 24, 2022. The ACO REACH Model began on January 1, 2023.

[37] For additional details on attribution, refer to *Environmental Scan on Improving Management of Care Transitions in Population-Based Models*, available at https://aspe.hhs.gov/sites/default/files/documents/61e603e1beb3f5eb4d528b1e91fadf12/PTAC-Jun-12-Escan.pdf.

Program/ Model Name	Clinical Focus, Providers, Setting, Patient Population	Components Relevant to Performance Measurement	Technical Issues Related to Performance Measurement	How Measurement is Used to Determine Success	Gaps Related to Current Performance Measures, as applicable
			establish performance year benchmarks. **Benchmarking:** Based on historical baseline expenditures and/or KSS rate book or a blend of historical and regional expenditures or regional expenditures, depending on ACO type and alignment		
Home Health Value-Based Purchasing (HHVBP) Model *No Longer Active* Years active: 2016-2021	**Clinical Focus:** Home health care **Providers:** Medicare-certified Home Health Agencies (HHA) **Setting:** Home health setting **Patient Population:** Medicare beneficiaries requiring home health services	**Utilization measure(s):** Acute care hospitalization during the first 60 days of home health; ED use without hospitalization during the first 60 days of home health **Quality measure(s):** Discharge to community; total normalized composite change in self-care; total normalized composite change in mobility; improvement in management of oral medications; improvement in dyspnea	**How payment is adjusted for performance:** Medicare payments were adjusted upward or downward by up to 3%, 5%, 6%, or 7% based on the Total Performance Score, a composite score of an agency's quality achievement/improvement on the measure set and the performance year. **Requirements:** Payment adjustments were based on prior TPS (I.e., adjustments began in CY 2018 based on 2016 TPS for up to +/- 3% while CY 2021 is based on 2019 TPS for up to +/- 7%) **Attribution:** N/A[38]	**Measures used for implementation:** Total Performance Score **Measures used for monitoring:** Same as for implementation **How achievement is measured:** Total performance score compared against the benchmark **How improvement is measured:** Percent relative change among total performance score and total normalized composite scores	An evaluation report found that the model had performance gaps among agencies within individual states or regions that may have implications for health equity. A larger gap between patients with and without Medicaid emerged over time in HHVBP states compared with non-HHVBP states, which translated to a

[38] All Medicare-certified HHAs from participating states are included in the HHVBP Model.

Program/ Model Name	Clinical Focus, Providers, Setting, Patient Population	Components Relevant to Performance Measurement	Technical Issues Related to Performance Measurement	How Measurement is Used to Determine Success	Gaps Related to Current Performance Measures, as applicable
		Spending measure(s): Home health Medicare claims payments **Patient experience measure(s):** Patient experience measures from CAHPS surveys	**Volume:** N/A **Risk stratification or adjustment:** N/A **Benchmarking:** Achievement thresholds are based on the median measure value for all HHAs in the state during the baseline period. Benchmarks are based on the mean measure value for the best performing decile of all HHAs in the state during the baseline period.		slightly larger widening in the disparity over time in HHVBP states. evidence of persisting quality gaps based on Medicaid status as well as race and ethnicity under the original HHVBP Model suggests a need for more targeted initiatives to reduce these pre-existing inequities among home health patients and to align with CMS' Framework for Health Equity.
Independence at Home (IAH) Demonstration *Ongoing* Years Active: 2011-present	**Clinical Focus:** Primary care, chronically ill **Providers:** Primary care providers **Setting:** Home-based	**Utilization measure(s):** Hospital admissions for ambulatory care sensitive conditions; ED visits for ambulatory care sensitive conditions **Quality measure(s):** Follow-up contact within 48 hours of a hospital	**How payment is adjusted for performance:** Practices can receive 50% of shared savings for meeting/exceeding performance requirements on three measures, 66.7% of shared savings for four measures, 83.3% for five	**Measures used for implementation:** All listed measures **Measures used for monitoring:** All listed measures **How achievement is measured:** CMS compares practices'	Few practices met the threshold for the 48-hour follow-up visit measure. This could be due to a variety of factors, such as whether the practice receives timely notification

Program/ Model Name	Clinical Focus, Providers, Setting, Patient Population	Components Relevant to Performance Measurement	Technical Issues Related to Performance Measurement	How Measurement is Used to Determine Success	Gaps Related to Current Performance Measures, as applicable
	Patient Population: Medicare beneficiaries with multiple chronic conditions	admission, hospital discharge, or ED visit; Medication reconciliation in the home within 48 hours of a hospital discharge or ED visit; Annual documentation of patient preferences; All-cause hospital readmissions within 30 days **Spending measure(s):** Medicare Part A and Part B FFS expenditures **Patient experience measure(s):** N/A	measures, and 100% for all six measures. **Requirements:** Practices actual expenditures must be at least 5% below the target and they must meet or exceed performance requirements on at least three of the six quality measures to share in savings through an incentive payment. **Attribution:** N/A **Volume:** Must serve at least 200 eligible beneficiaries **Risk stratification or adjustment:** Benchmarks are adjusted to reflect the average Hierarchical Condition Category (HCC) risk score, the average frailty score, and a utilization factor for the IAH population in each practice. **Benchmarking:** Use a revised actuarial methodology that generates practice-specific per beneficiary per month (PBPM) target expenditures based on historical Medicare FFS per capita expenditures for the Medicare FFS population in the same counties as IAH beneficiaries.	performance for each quality measure against the thresholds **How improvement is measured:** CMS compares practices' performance on quality measures across years	of a beneficiary having a hospital admission or ED visit and whether the practice had clinicians who made after-hours and weekend visits.

Program/ Model Name	Clinical Focus, Providers, Setting, Patient Population	Components Relevant to Performance Measurement	Technical Issues Related to Performance Measurement	How Measurement is Used to Determine Success	Gaps Related to Current Performance Measures, as applicable
Kidney Care Choices (KCC) Model *Ongoing* Years active: 2020-present	**Clinical Focus:** ESRD **Providers:** Accountable care/dialysis facilities, nephrologists, and other health care providers form ESRD-focused ACOs (Kidney Contracting Entities[39] [KCEs]) **Setting:** Dialysis facilities **Patient Population:** Patients with ESRD	**Utilization measure(s):** N/A **Quality measure(s):** Gains in Patient Activation Scores at 12 Months; Depression Remission at 12 Months; Optimal ESRD Starts **Spending measure(s):** CKD Cost of Care; ESRD Cost of Care **Patient experience measure(s):** N/A	**How payment is adjusted for performance:** Kidney Care First (KCF) Option – adjusted capitated payments for managing care of aligned beneficiaries and for those on dialysis based on health outcomes and utilization relative to both the participants' own experience and national standards, and performance on quality measures. KCF Practices can also receive bonus payments for successful kidney transplants; Comprehensive Kidney Care Contracting (CKCC) Graduated, Professional and Global Options – Kidney Contracting Entities (KCEs) receive adjusted capitation payments and can receive a portion or all of the Medicare savings they achieve based on their total cost of care compared to the benchmark as well as their performance on a set of quality measures. CKCC	**Measures used for implementation:** relative performance on quality and cost measures **Measures used for monitoring:** Relative and continuous improvement performance on quality and cost measures **How achievement is measured:** KCEs are subject to quality withholds; KCEs earn back the withhold based on their quality score (compared to a relevant benchmark). KCEs that achieve a 100% quality score earn back the full quality withhold. **How improvement is measured:** Continuous improvement performance on cost and utilization measures is defined when KCE participants outperform their own past performance.	N/A (Model has not been evaluated yet)

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

Program/ Model Name	Clinical Focus, Providers, Setting, Patient Population	Components Relevant to Performance Measurement	Technical Issues Related to Performance Measurement	How Measurement is Used to Determine Success	Gaps Related to Current Performance Measures, as applicable
			Graduated Option is a one-sided risk track; CKCC Professional Option provides an opportunity to earn 50% of shared saving or be liable for 50% of shared losses; CKCC Global Option participants are eligible to share in 100% of earnings or losses. **Requirements:** Transplant bonuses are contingent on success; Level 1 KCEs are subject to a minimum savings rate determined by the volume of beneficiaries needed for statistical confidence. **Attribution:** Alignment based on where beneficiary receives the majority of their kidney care. When an aligned beneficiary receives a kidney transplant, they will remain aligned to participant for the following three years (if successful; otherwise, they could be re-aligned). **Volume:** KCF Practices must have a minimum of 350 aligned Medicare beneficiaries with CKD Stages 4 or 5 and 200 aligned ESRD beneficiaries. For the CKCC Model Options,		

Program/ Model Name	Clinical Focus, Providers, Setting, Patient Population	Components Relevant to Performance Measurement	Technical Issues Related to Performance Measurement	How Measurement is Used to Determine Success	Gaps Related to Current Performance Measures, as applicable
			KCEs must have a minimum of 750 beneficiaries with CKD Stages 4 or 5 and 350 ESRD beneficiaries. **Risk stratification or adjustment:** The KCF Option does not risk adjust. The CKCC Options use the CMS-HCC prospective risk adjustment model for beneficiaries with late-stage CKD and the CMS-HCC ESRD risk adjustment model for beneficiaries with ESRD to establish benchmarks. For KCEs, a KCE-level symmetric cap on risk score growth is applied. **Benchmarking:** Based on historical baseline expenditures, prospectively trended forward each performance year (PY) using the projected U.S. per capita cost (USPCC).		
Making Care Primary (MCP) Model *Accepting Applications*	**Clinical Focus:** Primary care **Providers:** PCPs **Setting:** Primary care practices	**Utilization measure(s):** Emergency Department Utilization **Quality measure(s):** Controlling High Blood	**How payment is adjusted for performance:** Participants are eligible to receive upside-only Performance Incentive Payments (PIP) that reward participants for improving	**Measures used for implementation:** TPCC Continuous Improvement (CI) measure for non-FQHCs and non-Indian Health Programs;	Given the length of the model (10.5 years), CMS may update the measure set in future

Program/ Model Name	Clinical Focus, Providers, Setting, Patient Population	Components Relevant to Performance Measurement	Technical Issues Related to Performance Measurement	How Measurement is Used to Determine Success	Gaps Related to Current Performance Measures, as applicable
Years active: Launching in July 2024	**Patient Population:** All Medicare beneficiaries in participating regions	Pressure; Diabetes Hba1C Poor Control; Colorectal Cancer Screening; Screening for Depression and Follow Up; Depression Remission within 12 months; Screening for Social Drivers of Health **Spending measure(s):** Total Per Capita Cost (TPCC), reported as an observed-to-expected ratio for each participant, dividing the observed cost by the expected cost **Patient experience measure(s):** Person-Centered Primary Care Measure (PCPCM)	patient health outcomes and achieving savings. **Requirements:** Participants must report all quality measures for their Track (Tracks 1, 2, and 3) to receive a PIP adjustment. Once in Tracks 2 and 3, participants must meet or exceed the 30th percentile nationally for TPCC. **Attribution:** Eligible beneficiaries are prospectively attributed to a participant. Attribution is first determined by CMS based on the beneficiary's chosen alignment to a clinician. Otherwise, CMS will attribute the beneficiary to the participant if one or more of the participant's eligible clinicians provided the plurality of the beneficiary's primary care visits and/or eligible Chronic Care Management (CCM) services, or if one of the participant's eligible clinicians billed the beneficiary's most recent claim for an Annual Wellness Visit or a Welcome to Medicare Visit during the most recently available 24-month period.	Emergency Department Utilization CI for FQHCs and Indian Health Programs as well as the quality and patient experience measures listed. **Measures used for monitoring:** CMS will use self-reported participants care delivery and financial information, MCP Clinician Lists, Specialty Care Partner Lists, claims, utilization, and quality data in its monitoring strategy. This information is collected through annual participant reporting. **How achievement is measured:** Scoring and benchmarking structure allows participants to achieve tiered levels of success by providing stepped incentives via lower and upper thresholds for receipt of PIPs. Lower thresholds (to receive partial credit) and upper thresholds (to receive full credit) are set	performance years as new and innovative ways to measure quality and performance become available.

Program/ Model Name	Clinical Focus, Providers, Setting, Patient Population	Components Relevant to Performance Measurement	Technical Issues Related to Performance Measurement	How Measurement is Used to Determine Success	Gaps Related to Current Performance Measures, as applicable
			Volume: N/A **Risk stratification or adjustment:** Some measures within the MCP performance measure set are risk-adjusted; however, the model does not employ additional adjustments to inform the PIP. **Benchmarking:** Continuous Improvement Measures assess performance against participants' own historical performance; Other measures use regional or national benchmarks	for the clinical quality, cost, and utilization measures. **How improvement is measured:** Measures of participant-level CI carry significant weight in the PIP for Tracks 2 and 3. For the TPCC CI measure, participants are measured against their own TPCC performance in the previous year.	
Next Generation Accountable Care Organization (NGACO) *No Longer Active* Years active: 2016-2021	**Clinical Focus:** Primary and specialty care **Providers:** Participating PCPs and specialists **Setting:** Primary and specialty care practices, hospitals, inpatient and outpatient settings	**Utilization measure(s):** N/A **Quality measure(s):** Risk Standardized, All Condition Readmissions; Risk-Standardized Acute Admission Rates for Patients with Multiple Chronic Conditions; Days at Home **Spending measure(s):** Total Medicare Parts A and B spending **Patient experience measure(s):** CAHPS	**How payment is adjusted for performance:** The benchmarking methodology rewards NGACOs for favorable financial performance on spending relative to historical or regional benchmarks. NGACOs participate in shared savings or losses based on performance year expenditures. NGACOs may receive an Earned Quality Bonus for meeting quality requirements. CMS uses a quality "withhold," in which a portion of an ACO's	**Measures used for implementation:** The quality score is based on three measures: hospitalizations for ambulatory care sensitive conditions (ACSCs), 30-day hospital readmissions, and 30-day hospital readmissions from a SNF. **Measures used for monitoring:** Quality and patient experience measures	An EHR meaningful use measure was dropped from the model: it was expected that ACOs who were ready and able to take on high levels of risk under the NGACO Model were already using Electronic Health Records (EHR) and already

Program/ Model Name	Clinical Focus, Providers, Setting, Patient Population	Components Relevant to Performance Measurement	Technical Issues Related to Performance Measurement	How Measurement is Used to Determine Success	Gaps Related to Current Performance Measures, as applicable
	Patient Population: Original Medicare FFS beneficiaries	measures, including Getting Timely Care, Appointments, and Information; How Well Your Doctors Communicate; Patients' Rating of Doctor; Access to Specialists; Health Promotion and Education; Shared Decision Making; Health Status/Functional Status; Stewardship of Patient Resources; Courteous and Helpful Office Staff	performance year benchmark is held "at-risk," contingent upon the ACO's quality score. An ACO that achieves a 100% quality score (a function of the ACO meeting quality measure benchmarks and reporting requirements) will have the full withhold re attributed to its performance year benchmark at settlement, while an ACO that achieves less than a 100% quality score will have a proportionate amount discounted from the withhold and re-attributed to its performance year benchmark. **Requirements:** NGACOs must meet minimum quality requirements to participate in shared savings and the Earned Quality Bonus. If an NGACO does not meet the minimum requirements, they are still required to pay losses. **Attribution:** Voluntary: Beneficiaries confirm care relationships with participating providers (annual). Prospective, claims-based: Beneficiaries are aligned to the	**How achievement is measured:** CMS utilized quality scores and measured spending against a benchmark based on historical and regional trends. **How improvement is measured:** The Model offers financial arrangements with higher levels of risk and reward, using refined benchmarking methods that reward both attainment of and improvement in cost containment.	had robust systems in place.

Program/ Model Name	Clinical Focus, Providers, Setting, Patient Population	Components Relevant to Performance Measurement	Technical Issues Related to Performance Measurement	How Measurement is Used to Determine Success	Gaps Related to Current Performance Measures, as applicable
			participating provider that provided the majority of that beneficiary's evaluation and management (E&M) visits (annual). **Volume:** N/A **Risk stratification or adjustment:** Risk scores are used to adjust PY benchmarks, accounting for health status differences between beneficiaries from the baseline period and performance period. The discount that is applied to risk-adjusted baselines is dependent on whether the ACO selects a full or partial risk arrangement. Changes were made to the risk adjustment methodology as a result of COVID-19. **Benchmarking:** Yes, prospectively set based on historical expenditures and national trends		
Oncology Care Model (OCM) *No Longer Active*	**Clinical Focus:** Cancer care **Providers:** Oncology providers	**Utilization measure(s):** N/A **Quality measure(s):** Screening for Depression and Follow-up Plan;	**How payment is adjusted for performance:** The amount of the performance-based payment is adjusted based on the participant's achievement on a range of quality measures.	**Measures used for implementation:** Risk-adjusted proportion of patients with all-cause hospital admissions within the 6-month episode; Risk-	Some practices raised concerns related to the lack of specificity in the validated measures for

Program/ Model Name	Clinical Focus, Providers, Setting, Patient Population	Components Relevant to Performance Measurement	Technical Issues Related to Performance Measurement	How Measurement is Used to Determine Success	Gaps Related to Current Performance Measures, as applicable
Years active: 2016-2022	**Setting:** Outpatient **Patient Population:** Patients with cancer	Oncology: Medical and Radiation – Plan of Care for Pain; Oncology: Medical and Radiation – Pain Intensity Quantified; Proportion of Patients who Died who Were Admitted to Hospice for 3 Days or More; Risk-adjusted Proportion of Patients with All-Cause ED Visits or Observation Stays that did not Result in a Hospital Admission within the 6-month Episode; Risk-adjusted proportion of patients with all-cause hospital admissions within the 6-month episode; Closing the Referral Loop: Receipt of Specialist Report; Documentation of Current Medications in the Medical Record; Prostate Cancer: Adjuvant Hormonal Therapy for High or Very High Risk Prostate Cancer; Adjuvant chemotherapy is recommended or administered within 4 months (120 days) of diagnosis to patients under	OCM quality measure data derived from claims, aggregate measure results reported to the OCM Data Registry, and patient experience survey data, are utilized to determine the quality score used in calculation of the performance multiplier. Scoring, or the process of assigning quality points to each quality measure, is based on the OCM Participants' reporting of quality measure data and/or quality performance relative to set thresholds. Once quality points are assigned, an Aggregate Quality Score (AQS) will be calculated and translated into a performance multiplier. This performance multiplier is used as part of the performance-based payment calculation. **Requirements:** To be eligible for performance-based payment, practices opted-in for the performance period must have a target amount that exceeds actual episode expenditures of the episodes attributed to the practice. The practice or pool will also need	adjusted proportion of patients with all-cause emergency department visits or observation stays that did not result in a hospital admission within the 6-month episode; Proportion of patients who died who were admitted to hospice for 3 days or more; Care Plan; Closing the Referral Loop: Receipt of Specialist Report; Pain Assessment and Management Composite; Preventive Care and Screening: Screening for Depression and Follow-Up Plan; Patient-Reported Experience of Care; Prostate Cancer: Adjuvant Hormonal Therapy for High or Very High Risk Prostate Cancer; Adjuvant chemotherapy is recommended or administered within 4 months (120 days) of diagnosis to patients under the age of 80 with AJCC III (lymph node positive) colon cancer; Combination chemotherapy is	depression. Further, practices with multiple EHRs across clinics/sites reported difficulty reporting quality measures at the practice level.

Program/ Model Name	Clinical Focus, Providers, Setting, Patient Population	Components Relevant to Performance Measurement	Technical Issues Related to Performance Measurement	How Measurement is Used to Determine Success	Gaps Related to Current Performance Measures, as applicable
		the age of 80 with AJCC III (lymph node positive) colon cancer; Combination chemotherapy is recommended or administered within 4 months (120 days) of diagnosis for women under 70 with AJCC T1cN0M0, or Stage IB - III hormone receptor negative breast cancer; Trastuzumab administered to patients with AJCC stage I (T1c) - III and human epidermal growth factor receptor 2 (HER2) positive breast cancer who receive adjuvant chemotherapy; Breast Cancer: Hormonal Therapy for Stage I (T1b)-IIIC Estrogen Receptor/Progesterone Receptor (ER/PR) Positive Breast Cancer **Spending measure(s):** All Medicare Part A and Part B expenditures, certain Part D expenditures	to meet or exceed an AQS minimum threshold of 30%. Further, the practice or pool must report aggregate measure results for practice-reported measures, and implement all Practice Redesign Activities to receive a PBP. **Attribution:** Each episode is attributed to an individual practice. Visits are credited to the TIN or OCM ID (for OCM practices) with the majority of the beneficiary's cancer-related E&M visits during the 6-month episode. For pooled participants, episodes are still attributed to individual practices within the pool. **Volume:** N/A; performance-based payments will be made only for higher-volume cancer types for which it is possible to calculate accurate benchmarks. Benchmarks will not be calculated for lower-volume cancer types. **Risk stratification or adjustment:** Benchmark prices are risk-adjusted for factors that affect episodic expenditures and that are available in	recommended or administered within 4 months (120 days) of diagnosis for women under 70 with AJCC T1cN0M0, or Stage IB - III hormone receptor negative breast cancer; Trastuzumab administered to patients with AJCC stage I (T1c) - III and human epidermal growth factor receptor 2 (HER2) positive breast cancer who receive adjuvant chemotherapy; Breast Cancer: Hormonal Therapy for Stage I (T1b)-IIIC Estrogen Receptor/Progesterone Receptor (ER/PR) Positive Breast Cancer; Documentation of Current Medications in the Medical Record **Measures used for monitoring:** Shared Decision Making composite measure; claims data and practice-reported quality measure and clinical data.	

Program/ Model Name	Clinical Focus, Providers, Setting, Patient Population	Components Relevant to Performance Measurement	Technical Issues Related to Performance Measurement	How Measurement is Used to Determine Success	Gaps Related to Current Performance Measures, as applicable
		Patient experience measure(s): Patient-Reported Experience of Care	Medicare claims data, including age, sex, dual eligibility for Medicaid and Medicare, selected non-cancer comorbidities, receipt of selected cancer-directed surgeries, receipt of bone marrow transplant, receipt of radiation therapy, type of chemotherapy drugs used during episode (for breast, prostate, and bladder cancers only), institutional status, participation in a clinical trial, history of prior chemotherapy use, episode length, and hospital referral region. The risk-adjusted ED visit and observation stay measure is risk-adjusted using a hierarchical logistic regression model that incorporates many of the same risk adjustment variables used in setting episode spending benchmarks, including cancer type, demographics, institutional status, geographic location, and comorbidities. **Benchmarking:** CMS calculates benchmark episode expenditures for OCM practices	**How achievement is measured:** Practices earn quality points that contribute to an Aggregate Quality Score (AQS) to measure performance. Practice-reported expenditure and quality measures are compared against thresholds. **How improvement is measured:** N/A	

Program/ Model Name	Clinical Focus, Providers, Setting, Patient Population	Components Relevant to Performance Measurement	Technical Issues Related to Performance Measurement	How Measurement is Used to Determine Success	Gaps Related to Current Performance Measures, as applicable
			based on historical data. Benchmarks are adjusted for risk (e.g., patient sociodemographics, clinical characteristics) and geographic variation, trended to the applicable performance period, and include a novel therapies adjustment. A discount is applied to the benchmark to determine a target price for OCM-FFS episodes. Pay-for-performance measures are assigned quality points based on the practice's or pool's performance as compared to set thresholds, called quality benchmarks.		
Primary Care First (PCF) Model Options *Ongoing* Years active: 2021-present	**Clinical Focus:** Primary care **Providers:** PCPs **Setting:** Primary care practices **Patient Population:** Medicare patients with serious illness/chronic conditions	**Utilization measure(s):** Acute hospital utilization (the overall observed-to-expected ratio of acute inpatient and observation stay discharges) **Quality measure(s):** Diabetes: Hemoglobin A1c (HbA1c) Poor Control (> 9%); Controlling High Blood Pressure; Colorectal Cancer Screening; Advance Care Plan	**How payment is adjusted for performance:** A practice's payment amount depends on its performance compared to peer practices and its degree of improvement compared to its historical performance. Performance-based payment can be up to a 50% increase or a 10% decrease in total primary care payment revenue. **Requirements:** To be eligible for a performance-based	**Measures used for implementation:** Acute hospital utilization, HbA1c poor control, controlling high blood pressure, colorectal cancer screening, advance care plan, total per capita cost, and CAHPS **Measures used for monitoring:** Same as for implementation	Among the 13 PCF participants assessed in the first evaluation report, only 5 of the 13 payer partners offered financial incentives tied to outcome measures, using cost and utilization metrics. Several practices

Program/ Model Name	Clinical Focus, Providers, Setting, Patient Population	Components Relevant to Performance Measurement	Technical Issues Related to Performance Measurement	How Measurement is Used to Determine Success	Gaps Related to Current Performance Measures, as applicable
		Spending measure(s): Total per capita cost **Patient experience measure(s):** Patient Experience of Care Survey (Consumer Assessment of Healthcare Providers and Systems [CAHPS])	payment, practices must meet minimum performance thresholds for quality measures and their practice performance must be above 50th percentile of the National Benchmark. Performance thresholds and measures vary by risk group. **Attribution:** CMS identifies eligible beneficiaries using Medicare administrative data and conducts voluntary alignment. CMS also uses a claims-based attribution approach to identify other eligible beneficiaries. **Volume:** N/A **Risk stratification or adjustment:** CMS assigns practices to 4 risk groups using average CMS-HCC risk scores of their attributed beneficiaries. **Benchmarking:** Benchmarks are based on the 30th percentile and use either the 2022 MIPS benchmark population or a CMS-derived 2021 national benchmark population for performance year 2023	**How achievement is measured:** The practice's utilization measure (for risk groups 1 and 2) or spending measure (for risk groups 3 and 4) performance is compared to that of its peer region group, leading to a rating of 1-7 that corresponds to its performance-based payment percentage adjustment. To pass the Quality Gateway, risk group 1 and 2 practices must exceed the 30th percentile for all quality and patient experience measures. Risk group 3 and 4 practices must exceed the 30th percentile for the advance care plan and CAHPS measures to pass the Quality Gateway. **How improvement is measured:** Practices can also receive an improvement bonus for improving their performance over time (percent improvement).	expressed concerns about the timeliness and quality of beneficiary data provided through PCF.

Exhibit C2. Lessons Learned

Program/Model Name	Clinical Focus, Providers, Setting, Patient Population	Lessons Learned Related to Performance Measurement
Bundled Payments for Care Improvement Advanced (BPCI-A) *Ongoing* Years active: 2018- Present	**Clinical Focus:** Cross-clinical focus **Providers:** Acute care hospitals, physician group practices, Medicare-enrolled providers **Setting:** Inpatient and outpatient services **Patient Population:** Medicare beneficiaries with certain clinical episodes (29 inpatient, 3 outpatient)	The model reduced total episode payments, institutional post-acute care (PAC) payments, discharges to institutional PAC settings, and the number of skilled nursing facility (SNF) days among patients who received SNF care relative to the comparison group.
Comprehensive ESRD Care (CEC) Model *No longer active* Years active: 2015-2021	**Clinical Focus:** End-stage renal disease (ESRD) **Providers:** Nephrologists; ESRD Seamless Care Organizations (ESCOs)[40] **Setting:** Nephrology clinics **Patient Population:** Medicare beneficiaries with ESRD	An evaluation after performance year 5 (evaluation through December 31, 2020)[41] found there was a 3% decrease in the number of hospitalizations and a 0.4% increase in the number of outpatient dialysis sessions. Additionally, CEC beneficiaries experienced 5% fewer hospitalizations from ESRD complications and were 5% less likely to use a catheter compared to non-CEC beneficiaries. The Model also improved phosphate binder adherence by 9%. From PY1-PY5, the model reduced Medicare spending by $217 million (1.3%) prior to shared savings payments, however most of this was attributed to Wave 1 ESCOs.

[40] ESCOs comprise nephrologists, dialysis facilities, and other providers.

[41] https://www.cms.gov/priorities/innovation/data-and-reports/2022/cec-annrpt-py5-fg

Program/Model Name	Clinical Focus, Providers, Setting, Patient Population	Lessons Learned Related to Performance Measurement
Comprehensive Primary Care Plus (CPC+) *No longer active* Years active: 2017-2021	**Clinical Focus:** Primary care **Providers:** Primary care providers (PCPs) **Setting:** Primary care practice **Patient Population:** All Medicare and Medicaid beneficiaries in participating regions	The fourth annual report[42] found a reduction in acute care utilization and improvement in some quality-of-care measures over the first four years of implementation. However, CPC+ did not reduce Medicare expenditures without enhanced payments; expenditures including enhanced payments increased by 1.5% in Track 1 and 2.6% in Track 2. There was a 1.5% reduction in total Medicare expenditures in PY4 for Track 1 Shared Savings Program practices. Although 95% of practices reported an improvement in care quality, there was little evidence that CPC+ improved continuity, fragmentation, comprehensiveness of care, 30-day unplanned readmissions, or mortality; average rates of emergency department (ED) and hospital follow-up increased from 2017 to 2019. CPC+ practices engaged in transformation activities to improve quality of care. Transformation activities may be in domains of access and continuity (e.g., 24/7 patient access), care management (e.g., care plans for high-risk chronic disease patients), comprehensive and coordinated care (e.g., behavioral health integration), patient and caregiver engagement (e.g., convening a patient and family advisory council), and data-driven population health management (e.g., weekly care team review of population health data). Other contextual factors, such as SDOH and patient preferences, could limit the degree that patients engage with improved primary care and therefore alter their behavior and outcomes.
Enhancing Oncology Model (EOM) *Ongoing* Years active: 2022-present	**Clinical Focus:** Oncology **Providers:** Oncologists **Setting:** Oncology practices **Patient Population:** Medicare beneficiaries with cancer	EOM builds on lessons learned from the Oncology Care Model (OCM) and shares certain features with the OCM, including a similar quality measure set. The EOM model performance period began in July 2023. Model evaluations have not been completed yet. Thus, there are no lessons learned related to performance measurement.

[42] Independent Evaluation of Comprehensive Primary Care Plus: Fourth Annual Report (cms.gov)

Program/Model Name	Clinical Focus, Providers, Setting, Patient Population	Lessons Learned Related to Performance Measurement
ESRD Treatment Choices (ETC) Model *Ongoing* Years active: 2021-present	**Clinical Focus:** Home dialysis and kidney transplants for patient with ESRD **Providers:** Nephrologists **Setting:** ESRD facilities, transplant centers, large donor hospitals, patient home **Patient Population:** Patients with ESRD	Year 2 results[43] showed 66% of ESRD facilities and 78% of managing clinicians had higher home dialysis rates, and 48% of facilities and 51% of managing clinicians had higher transplant rates than the respective benchmarks (defined as the 50th percentile). Additionally, 80% of facilities and 70% of managing clinicians improved their home dialysis rate and 61% of facilities and 62% of managing clinicians improved their transplant rates from benchmark year 2 (January 1, 2020 – December 31, 2020) to measurement year (July 1, 2021 – June 30, 2022). Approximately half of ESRD facilities (46%) and managing clinicians (54%) received a positive performance payment adjustment.
Expanded Home Health Value-Based Purchasing Model (Expanded HHVBP) *Ongoing* Years active: January 2022-present	**Clinical Focus:** Home health care **Providers:** Medicare-certified Home Health Agencies (HHAs) **Setting:** Home health setting **Patient Population:** Medicare beneficiaries requiring home health services	Model evaluations have not been completed yet.

[43] https://www.cms.gov/priorities/innovation/media/document/etc-my2-aag

Program/Model Name	Clinical Focus, Providers, Setting, Patient Population	Lessons Learned Related to Performance Measurement
Global and Professional Direct Contracting (GPDC)/Accountable Care Organization Realizing Equity, Access, and Community Health (ACO REACH) Participants Announced Years active: 2021-present[44]	**Clinical Focus:** Primary and specialty care **Providers:** Direct Contracting Entities (DCEs) under GPDC, ACOs under ACO REACH; Participating and Preferred Providers **Setting:** Broad applicability **Patient Population:** Medicare FFS beneficiaries; patients with complex chronic diseases and serious illnesses	A summary of GPDC model performance of the first performance year and first three quarters of the second PY[45], last updated April 2023, compared all-condition readmissions (ACR) and unplanned admissions for patients with multiple chronic conditions (UAMCC) per 100 beneficiaries with multiple chronic conditions per year. The UAMCC score showed GPDC Model participants performed better than practices who did not participate in the model (30.65 versus 32.54), but the ACR scores among participants and non-participants were similar (15.21% versus 15.18%). The total dollars under risk (the sum of the performance year benchmark across the 99 PY2022 DCEs) was consistent with the average per-beneficiary-per-month benchmark of approximately $1,117. Across the 99 DCEs that participated in PY2022, they saw roughly a 1.6% reduction in Medicare spending compared to their combined benchmarks in PY2022. As of the first evaluation report, DCEs' most highly prioritized strategies for population health management focused on avoidable utilization (90%), complex or population-specific care management (90%), and investments in primary care (63%). While there was no significant impact on gross or net expenditures for Standard or New Entrant DCEs in PY2021, Standard DCEs significantly reduced acute care hospitalizations and skilled nursing facility days, and both Standard and New Entrant DCEs significantly reduced ED visits. Standard DCEs also reduced hospitalizations for ambulatory care sensitive conditions.

[44] The transition from the GPDC Model to the ACO REACH Model was announced on February 24, 2022. The ACO REACH Model began on January 1, 2023.

[45] https://www.cms.gov/priorities/innovation/innovation-models/gpdc-model

Program/Model Name	Clinical Focus, Providers, Setting, Patient Population	Lessons Learned Related to Performance Measurement
Home Health Value-Based Purchasing (HHVBP) Model *No Longer Active* Years active: 2016-2021	**Clinical Focus:** Home health care **Providers:** Medicare-certified Home Health Agencies (HHA) **Setting:** Home health setting **Patient Population:** Medicare beneficiaries requiring home health services	The seventh annual report[46] found HHVBP led to decreases in unplanned hospitalizations (-1.2%), skilled nursing facility use (-8.2%), and ED use followed by inpatient admissions (-1.5%), but an increase in outpatient ED visits (2.1%). In all model years (2016-2021), Home health agencies in participating states received higher TPS scores than agencies in non-HHVBP states and throughout the four payment years. The model also resulted in small improvements in patients' mobility, management of oral medicine, and self-care, and a greater proportion of patients were discharged to the community rather than institutional care. However, patient experience with professional care, communication, and discussion of care decreased during the model. The HHVBP model led to savings in Part A and Part B spending in all model years for a total of $1.38 billion in savings. Reductions were attributed reduced spending on skilled nursing facility services, inpatient hospital stays, and home health spending but increased spending for outpatient ED and observational stays.
Independence at Home (IAH) Demonstration *Ongoing* Years Active: 2011-present	**Clinical Focus:** Primary care, chronically ill **Providers:** Primary care providers **Setting:** Home-based **Patient Population:** Medicare beneficiaries with multiple chronic conditions	An evaluation of performance years 1-7[47] found the majority of practices reported they were already providing care that was largely consistent with the demonstration requirements and quality measures before participating in the program. Several practices also reported these guidelines became their standard of care for all patients. Nearly all 10 practices met the required threshold for claims-based measures (hospital admissions, ED visits, all-cause hospital readmissions), making them eligible for incentive payments, but most fell short of the threshold for site-reported measures (documenting patient preferences, follow-up within 48 hours, medication reconciliation within 48 hours). There was some improvement in practices documenting patient preferences between years 6 and 7, however performance remained low for the two measures requiring timely follow-up.

[46] https://www.cms.gov/priorities/innovation/innovation-models/home-health-value-based-purchasing-model

[47] https://www.cms.gov/priorities/innovation/data-and-reports/2023/iah-year7-eval-report

Program/Model Name	Clinical Focus, Providers, Setting, Patient Population	Lessons Learned Related to Performance Measurement
Kidney Care Choices (KCC) Model *Ongoing* Years active: 2020-present	**Clinical Focus:** ESRD **Providers:** Accountable care/dialysis facilities, nephrologists, and other health care providers form ESRD-focused ACOs (Kidney Contracting Entities[48] [KCEs]) **Setting:** Dialysis facilities **Patient Population:** Patients with ESRD	Model evaluations have not been completed yet.
Making Care Primary (MCP) Model *Accepting Applications* Years active: Launching in July 2024	**Clinical Focus:** Primary care **Providers:** PCPs **Setting:** Primary care practices **Patient Population:** All Medicare beneficiaries in participating regions	MCP is a new, 10.5-year CMMI advanced primary care model that aims to reduce program expenditures and improve key measures of patient outcomes through more coordinated and integrated care. The model is currently accepting applications and does not yet have participants. Model evaluations have not been completed yet. Thus, there are no lessons learned related to performance measurement.

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

Program/Model Name	Clinical Focus, Providers, Setting, Patient Population	Lessons Learned Related to Performance Measurement
Next Generation Accountable Care Organization (NGACO) *No Longer Active* Years active: 2016-2021	**Clinical Focus:** Primary and specialty care **Providers:** Participating PCPs and specialists **Setting:** Primary and specialty care practices, hospitals, inpatient and outpatient settings **Patient Population:** Original Medicare FFS beneficiaries	An evaluation after the fifth performance year[49] found that the NGACO model was associated with $1.05B in gross savings, or 1.5%, compared to FFs beneficiaries in the comparison group. In PY5, the NGACO model reduced gross spending by 3.1%. However, cumulative net Medicare spending increased by $386.5M after taking into consideration shared savings and payments to the NGACOs. Additionally, some NGACOs reported increased resilience and improved response to the COVID-19 Public Health Emergency as a result of infrastructure, partnerships, and resources developed from participation in the NGACO model. The NGACOs also saw a reduction in hospital spending and utilization, SNF stays and days, and spending in institutional post-acute care (PAC) settings. Larger spending and utilization reductions in PY5 are likely to have been a result of the selection effect of less successful NGACOs exiting the model. The NGACOs continuing in the model earned shared savings throughout the Model implementation, resulting in larger payouts and continuous improvement. Annual wellness visits (AWVs) were measured under the evaluation; NGACO leadership reported using AWVs and IT infrastructure to identify and address gaps in care.
Oncology Care Model (OCM) *No Longer Active* Years active: 2016-2022	**Clinical Focus:** Cancer care **Providers:** Oncology providers **Setting:** Outpatient **Patient Population:** Patients with cancer	An evaluation after the ninth performance period found that OCM was associated with a reduction in TEP by 1.7%. However, net losses for Medicare exceeded $500M. OCM increased the use of high-value supportive therapies. In terms of health equity, the report did not find evidence of improved care quality for Black, Hispanic, or dual-eligible beneficiaries across the measures included in the analysis. There was no effect on the timeliness of post-chemotherapy surgery, patient adherence to oral cancer regiments, or provision of higher-value palliative radiation.

[49] Fifth Evaluation Main Report (cms.gov)

Program/Model Name	Clinical Focus, Providers, Setting, Patient Population	Lessons Learned Related to Performance Measurement
Primary Care First (PCF) Model Options *Ongoing* Years active: 2021-present	**Clinical Focus:** Primary care **Providers:** PCPs **Setting:** Primary care practices **Patient Population:** Medicare patients with serious illness/chronic conditions	As of the first annual evaluation report,[50] most practices met benchmarks for diabetes control, high blood pressure control, and colorectal cancer screening. In addition, qualitative work showed that practices found advanced care plans to be burdensome and costly. Some practices noted that their previous success in reducing preventable hospital utilization could make it difficult to achieve further reductions. On average, PCF payments were higher than expected FFS payments.

[50] https://innovation.cms.gov/data-and-reports/2022/pcf-first-eval-aag-rpt

Appendix D. Detailed Information on Current Performance Measures for Four Selected Medicare Payment Programs

Exhibit D1. Program Description, Technical Issues, and Gaps Related to Current Performance Measures

Program/Model Name	Clinical Focus, Providers, Setting, Patient Population	Components Relevant to Performance Measurement	Technical Issues Related to Performance Measurement	How Measurement is Used to Determine Success	Gaps Related to Current Performance Measures, as applicable
Hospital Value-Based Purchasing Program (Hospital VBP) *Ongoing* Years Active: 2013 – Present	**Clinical Focus:** Hospital care **Providers:** Acute care hospitals **Setting:** Inpatient services **Patient Population:** Medicare beneficiaries requiring inpatient hospital services	**Utilization measure(s):** N/A **Quality measure(s):** Acute Myocardial Infarction 30-Day Mortality Rate; Coronary Artery Bypass Graft Surgery 30-Day Mortality Rate; Chronic Obstructive Pulmonary Disease 30-Day Mortality Rate; Heart Failure 30-Day Mortality Rate; Pneumonia 30-Day Mortality Rate; Total Hip Arthroplasty/ Total Knee Arthroplasty Complication Rate **Spending measure(s):** Medicare-severity diagnosis-related group (MS-DRG) payment amounts for Medicare FFS claims **Patient experience measure(s):** N/A	**How payment is adjusted for performance:** Under the Inpatient Prospective Payment System (IPPS), payments are adjusted based on a total performance score that reflects relevant benchmarks, for each performance measure. **Requirements:** The program withholds participants' payments by 2% percent; this amount is used to fund value-based incentive payments to participants based on performance. **Attribution:** N/A **Volume:** N/A	**Measures used for implementation:** All listed quality measures **Measures used for monitoring:** Not specified **How achievement is measured:** Participants earn 2 scores on each performance measure, one for achievement, based on how well they perform compared to all hospitals, and one for improvement, based on how much they improve their own performance compared to their	The hospital total performance score (TPS) is skewed and shows a large gap between top-performing hospitals and all others. The highest performing hospitals tend to maintain their position over time, which may discourage lower-performing hospitals from program participation and improvement.[51]

[51] doi: 10.1111/1475-6773.13608

Program/Model Name	Clinical Focus, Providers, Setting, Patient Population	Components Relevant to Performance Measurement	Technical Issues Related to Performance Measurement	How Measurement is Used to Determine Success	Gaps Related to Current Performance Measures, as applicable
			Risk stratification or adjustment: Participants who treat a high percentage of low-income patients receive a disproportionate share hospital (DSH) adjustment, which is a percentage increase in Medicare payments to hospitals that serve a disproportionate amount of low-income patients. Further, participants who are approved teaching hospitals receive an indirect medical education (IME) adjustment. Lastly, for substantially costly/outlier cases, IPPS payment is increased. **Benchmarking:** Historical national data	performance during baseline. The final score awarded for each measure is the higher of these 2 scores. **How improvement is measured:** See how achievement is measured.	
Medicare Advantage Star Ratings Program (MA Star Ratings Program) *Ongoing*	**Clinical Focus:** Total care **Providers:** Medicare Advantage Health Plan Contracts **Setting:** Broad	**Utilization measure(s):** N/A **Quality measure(s):** Special Needs Plan (SNP) Care Management; Statin Therapy for Patients with Cardiovascular Disease; Medication Reconciliation Post-Discharge; Improving	**How payment is adjusted for performance:** Star ratings (based on performance) are used to determine 1) whether a plan is eligible for a bonus payment; and 2) the percentage increase in	**Measures used for implementation:** Quality and patient experience measures listed **Measures used for monitoring:** Quality and patient	A report from McKinsey found that investments in patient-experience improvements have been low.[52]

[52] https://www.mckinsey.com/industries/healthcare/our-insights/assessing-the-medicare-advantage-stars-ratings

Program/Model Name	Clinical Focus, Providers, Setting, Patient Population	Components Relevant to Performance Measurement	Technical Issues Related to Performance Measurement	How Measurement is Used to Determine Success	Gaps Related to Current Performance Measures, as applicable
Years Active: 2009 – Present	**Patient Population:** Medicare Advantage beneficiaries	Bladder Control; Reviewing Appeals Decisions; Annual Flu Vaccine; Care Coordination; Plan makes Timely Decision about Appeals; Reducing the Risk of Falling; Call Center-Foreign Language Interpreter and TTY Availability; Colorectal Cancer Screening; Monitoring Physical Activity; Care for Older Adults – Pain Assessment; Care for Older Adults – Medication Review; Breast Cancer Screening; Diabetes Care – Blood Sugar Controlled; Diabetes Care – Eye Exam; Osteoporosis Management for Women who had a Fracture; Controlling Blood Pressure; Plan All-Cause Readmissions; Transitions of Care; Follow-up after Emergency Department Visit for People with Multiple High-Risk Chronic Conditions; Health Plan Quality Improvement **Spending measure(s):** Medicare FFS spending **Patient experience measure(s):** Getting Appointments and Care	payment benchmarks and rebate amounts. **Requirements:** To be eligible for a performance-based bonus payment, health plan contracts must obtain a 4, 4.5, or 5 Star Rating. **Attribution:** N/A **Volume:** N/A; Plans without ratings due to low enrollment receive a small benchmark increase. **Risk stratification or adjustment:** CMS includes a coding intensity adjustment that accounts for potential increases in the average risk score of MA beneficiaries. Adjustments to Star Ratings may also be made based on impacts due to public health emergencies (PHEs), such as COVID-19. **Benchmarking:** Benchmarks are calculated separately for each county and are based on historic fee-for-service Medicare spending. Benchmarks are then adjusted by plan	experience measures listed and measures that were removed (not listed) **How achievement is measured:** MA Health Plan Contracts receive a numeric measure score for each measure (up to 40 measures). Measures come from four sources: Healthcare Effectiveness Data and Information Set (HEDIS), Consumer Assessment of Healthcare Providers and Systems (CAHPS), Health Outcomes Survey (HOS), and CMS administrative data. Measures are weighted to reflect CMS priority in scoring MA plans. Process measures receive a weight of 1; patient experience measures receive a	

Program/Model Name	Clinical Focus, Providers, Setting, Patient Population	Components Relevant to Performance Measurement	Technical Issues Related to Performance Measurement	How Measurement is Used to Determine Success	Gaps Related to Current Performance Measures, as applicable
		Quickly; Customer Service; Complaints about the Plan; Rating of Health Plan; Rating of Health Care Quality; Getting Needed Care; Members Choosing to Leave the Plan	quality (star rating). Benchmarks are capped at pre-ACA levels.	weight of 1.5; outcomes and intermediate outcomes a weight of 3; quality improvement measures a weight of 5. CMS calculates Star Ratings scores for each measure as well as a summary Star Rating score based on their performance in five domains: use of screenings, tests, and vaccines; management of chronic conditions; member experience with plans (CAHPS); member complaints and changes in plan's performance; and customer service/appeals. The numeric measure scores are converted to a Star Rating (from 1- 5) based on one of two methods: clustering or relative distribution and significance testing.	

Program/Model Name	Clinical Focus, Providers, Setting, Patient Population	Components Relevant to Performance Measurement	Technical Issues Related to Performance Measurement	How Measurement is Used to Determine Success	Gaps Related to Current Performance Measures, as applicable
				CMS previously defined quality threshold values that a plan would need to achieve to receive four stars on certain measures. Because analysis determined that plans showed more improvement on measures without pre-determined thresholds, CMS eliminated pre-defined thresholds beginning in 2016. **How improvement is measured:** Although not tied to payment, improvement is measured by comparing the health plan contract's current and prior year measure scores.	
Merit-Based Incentive Payment System (MIPS) *Ongoing*	**Clinical Focus:** Total care **Providers:** Clinicians, practices	**Utilization measure(s):** Hospital-Wide, 30-Day, All-Cause Unplanned Readmission (HWR) Rate for MIPS Eligible Groups; Clinician and Clinician Group	**How payment is adjusted for performance:** Payment adjustment applied to Medicare Part B claims based on performance. Performance is measured	**Measures used for implementation:** From the measures listed, participants select 6 measures or a complete specialty	Few MIPS measures relate to aspects of access, patient experience, or physician interpersonal skills,

Program/Model Name	Clinical Focus, Providers, Setting, Patient Population	Components Relevant to Performance Measurement	Technical Issues Related to Performance Measurement	How Measurement is Used to Determine Success	Gaps Related to Current Performance Measures, as applicable
Years Active: 2017 – Present	**Setting:** Broad **Patient Population:** Medicare FFS beneficiaries	Risk-standardized Hospital Admission Rates for Patients with Multiple Chronic Conditions; Risk-Standardized Acute Unplanned Cardiovascular-Related Admission Rates for Patients with Heart Failure for MIPS **Quality measure(s):** The 2023 MIPS Quality Measure List includes over 200 measures,[53] including Risk-Standardized Complication Rate (RSCR) Following Elective Primary Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty (TKA) for MIPS **Spending measure(s):** Total per capita cost; Medicare spending per beneficiary clinician; episode-based costs for 23 specific conditions **Patient experience measure(s):** CAHPS for MIPS Survey	across 4 areas; quality, improvement activities, promoting interoperability, and cost. Participants receive a MIPS final score based on the four performance categories, which determines the payment adjustment. **Requirements:** Participants must submit collected data for at least 6 quality measures and achieve at least 70% data completeness for each quality measure. **Attribution:** N/A **Volume:** Beginning in 2023, reporting a measure that does not meet the case minimum will result in 0 out of 10 points (3 points for small practices). **Risk stratification or adjustment:** Expected costs for each episode use the CMS Hierarchical Condition Category (HCC) risk adjustment	measure set. CAHPS for MIPS Survey can count as 1 of the 6 minimum required quality measures. **Measures used for monitoring:** Not specified. **How achievement is measured:** Participants submit data for quality, improvement activities, and promoting interoperability; CMS calculates cost for participants. CMS automatically calculates and scores four administrative claims measures. Measures are scored by comparing to measure-specific benchmarks. A maximum of 10 points can be earned for each measure.	which could contribute to or worsen health disparities.[54]

[53] For the full 2023 MIPS Quality Measure List, see https://qpp-cm-prod-content.s3.amazonaws.com/uploads/2217/2023%20MIPS%20Quality%20Measures%20List.xlsx.

[54] https://www.annfammed.org/content/annalsfm/15/3/255.full.pdf

Program/Model Name	Clinical Focus, Providers, Setting, Patient Population	Components Relevant to Performance Measurement	Technical Issues Related to Performance Measurement	How Measurement is Used to Determine Success	Gaps Related to Current Performance Measures, as applicable
			methodology; it adjusts for 12 age categorical variables and individual indicator variables for history of ESRD, long-term care status, comorbidities, and whether beneficiary qualifies for Medicare through disability or age. **Benchmarking:** For each performance measure collection type, CMS establishes a benchmark based on historical data.	Scores from 75-100 points will receive a payment adjustment ranging from 0-9% (e.g., MIPS score of 100 receives positive payment adjustment of 9%). **How improvement is measured:** Participants are eligible to earn up to 10 additional percentage points based on improvement in performance from the previous year.	
Medicare Shared Savings Program (MSSP) *Ongoing* Years Active: 2012-Present	**Clinical Focus:** Total care **Providers:** Providers and suppliers (e.g., physicians, hospitals, and others involved in patient care) that create an Accountable Care Organization (ACO)	**Utilization measure(s):** Not specified **Quality measure(s):** Depression remission at twelve months; falls: screening for future fall risk; hospital-wide, 30-day, all-cause unplanned readmission (HWR) rate for the MIPS Groups; preventive care and screening: influenza immunization; breast cancer screening; colorectal cancer screening; clinician and	**How payment is adjusted for performance:** ACOs are subject to an annual spending target (benchmark) and a series of quality thresholds. ACOs that spend less than the benchmark share the savings with CMS. There is a penalty for spending more than the threshold under the enhanced track. ACOs are subject to quality withholds from their shared savings if	**Measures used for implementation:** All quality, spending, and patient experience measures **Measures used for monitoring:** CMS reports ACO-level setting-specific spending and utilization, including but not limited to categories of inpatient (e.g., short-	In recent years, CMS has proposed changes to the program to promote equity, especially in rural and underserved areas. Access to ACOs appeared inequitable, based on data indicating that Black (or African American), Hispanic, Asian/Pacific Islander, and American

Program/Model Name	Clinical Focus, Providers, Setting, Patient Population	Components Relevant to Performance Measurement	Technical Issues Related to Performance Measurement	How Measurement is Used to Determine Success	Gaps Related to Current Performance Measures, as applicable
	Setting: Broad **Patient Population:** Medicare FFS beneficiaries	clinician group risk-adjusted hospital admission rates for patients with multiple chronic conditions; statin therapy for the prevention and treatment of cardiovascular disease; preventive care and screening: tobacco use: screening and cessation intervention; diabetes hemoglobin A1c (HbA1c) poor control (>9%); preventive care and screening: screening for depression and follow-up plan; controlling high blood pressure. MSSP ACOs are also given a quality score based on their performance on three quality measures related to care coordination/patient safety, preventive health, and control of diabetes, depression, and hypertension. **Spending measure(s):** Medicare Part and Part B FFS claims **Patient experience measure(s):** CAHPS for MIPS Clinician/Group Survey	they do not meet quality benchmarks. **Requirements:** Participating ACOs must report quality data to CMS after the close of every performance year to be eligible to share in any earned shared savings and to avoid sharing losses at the maximum level. **Attribution:** Voluntary: Beneficiaries confirm care relationships with a primary clinician who is an ACO professional participating in the ACO. Prospective and retrospective claims-based: Based on receiving the plurality of primary care services from primary care physicians, nurse practitioners, physician assistants, clinical nurse specialists, or specialist physicians in the participating ACOs. **Volume:** Not specified; as of 2020, average number of beneficiaries in an MSSP ACO is 20,700, with the	term acute care hospital) and outpatient (e.g., outpatient facility) expenditures as well as types of inpatient (e.g., hospital discharges) and outpatient (e.g., primary care services) utilization. **How achievement is measured:** ACOs earn quality points on a sliding scale based on level of performance for each measure. The higher the level of performance, the higher the number of quality points earned. The total points earned are summed and divided by the total points available to determine the ACO's quality score. The percentage of shared savings varies based on the ACO's quality score. Additionally, ACOs	Indian/Alaska Native beneficiaries were less likely to be assigned to a Shared Savings Program ACO than their Non-Hispanic White counterparts. CMS proposed assigning more people who receive care from nurse practitioners, physician assistants, and clinical nurse specialists to ACOs in order to increase the number of people receiving high-quality, accountable care. CMS also proposed changes to the benchmark methodology to encourage ACOs caring for medically complex, high-cost beneficiaries to join the program. CMS previously established advance investment payments for ACOs in rural and underserved communities, made changes to the benchmark

Program/Model Name	Clinical Focus, Providers, Setting, Patient Population	Components Relevant to Performance Measurement	Technical Issues Related to Performance Measurement	How Measurement is Used to Determine Success	Gaps Related to Current Performance Measures, as applicable
			program including approximately 10.6 million attributed beneficiaries, or around 28% of Medicare fee-for-service beneficiaries. **Risk stratification or adjustment:** When establishing the historical benchmark, CMS uses the hierarchical condition category (HCC) scores to adjust for changes in severity of the population assigned to the ACO between the first and third benchmark years and between the second and third benchmark years. CMS risk-adjusts the county-level expenditures used in calculating the regional component of the national-regional blend growth rate used to trend the first and second benchmark years to the third benchmark year. Under the two-sided risk model, shared losses are adjusted for the percentage of beneficiaries in counties affected by an extreme and uncontrollable	are assessed based on a combination of both reporting and quality performance requirements. **How improvement is measured:** Beginning in Performance Year 2015, CMS introduced a Quality Improvement Reward that allows ACOs to earn up to four additional points in each quality domain if they show statistically significant improvement in their performance on quality measures from one year to the next.	methodology, increased the time for ACOs to transition to downside risk, and implemented a health equity adjustment that rewards excellent care delivered to underserved communities.

Program/Model Name	Clinical Focus, Providers, Setting, Patient Population	Components Relevant to Performance Measurement	Technical Issues Related to Performance Measurement	How Measurement is Used to Determine Success	Gaps Related to Current Performance Measures, as applicable
			circumstance. Individual measures are risk-adjusted, as applicable.[55] **Benchmarking:** Yes, based on spending for beneficiaries who would have been assigned to the ACO in the baseline years and the region. When establishing the historical benchmark, CMS uses the HCC scores to adjust for changes in severity of the population assigned to the ACO. CMS risk-adjusts the county-level expenditures used in calculating the regional component of the national-regional blend growth rate.		

[55] The HWR measure can assign each admission to multiple eligible clinician groups; thus, a two-step approach is used to account for clustering of patients in which five specialty cohort models are used to adjust for case mix differences among providers by risk adjusting for patients' comorbid conditions. The unplanned hospital admissions for patients with multiple chronic conditions measure uses a hierarchical statistical model that accounts for the clustering of patients within MIPS providers/ACOs and accommodates the varying patient sample sizes of different providers. The model adjusts for 47 demographic and clinical and two social risk factors.

Exhibit D2. Lessons Learned

Program/Model Name	Clinical Focus, Providers, Setting, Patient Population, and Attribution	Lessons Learned Related to Performance Measurement
Hospital Value-Based Purchasing Program (Hospital VBP) *Ongoing* Years Active: 2013 – Present	**Clinical Focus:** Hospital care **Providers:** Acute care hospitals **Setting: I**npatient services **Patient Population:** Medicare beneficiaries requiring inpatient hospital services	A review of studies that evaluated Hospital VBP between 2013-2019 found that Hospital VBP does not lead to meaningful improvements in quality of care or patient outcomes. According to this review, safety-net hospitals' outcomes may be negatively affected by participation in Hospital VBP.[56] More recent studies also did not observe associations between Hospital VBP program participation and improvements in health care quality or patient outcomes.[57,58] An analysis of data from California hospitals participating in the Hospital VBP program suggested that increasing the weight given to outcome measures may increase the quality of care delivered and reduce costs.[59]
Medicare Advantage Star Ratings Program (MA Star Ratings Program) *Ongoing* Years Active: 2009 – Present	**Clinical Focus:** Total care **Providers:** Health plans **Setting:** Broad **Patient Population:** Medicare Advantage beneficiaries	A report from McKinsey[60] found that health plans can improve their Medicare Advantage (MA) Star Ratings scores in two areas: • Outcome and process measures: as cut points for measures evolve, health plan contracts will have to continue to make improvements which could require long-term investments. • Patient experience and access scores: health plan contracts will need to increase their focus on patient-experience and access measures as scores for these measures have seen less improvement than other domains. Further, improvements in digitization and analytics could help health plans engage beneficiaries and providers and decrease administrative burden. A report from Urban Institute[61] concluded that the star rating system and the quality bonus program (QBP) has many limitations: • score inflation (generous bonuses and no downside risk/penalties for programs with low star ratings)

[56] https://doi.org/10.1097/MLR.0000000000001354
[57] https://doi.org/10.2147/JMDH.S358733
[58] https://link.springer.com/article/10.1186/s12913-019-4562-7
[59] https://doi.org/10.1007/s40258-017-0357-3
[60] https://www.mckinsey.com/industries/healthcare/our-insights/assessing-the-medicare-advantage-stars-ratings
[61] https://www.urban.org/sites/default/files/2023-06/The%20Medicare%20Advantage%20Quality%20Bonus%20Program.pdf

Program/Model Name	Clinical Focus, Providers, Setting, Patient Population, and Attribution	Lessons Learned Related to Performance Measurement
		• limitations in underlying data sets, which lead to measures focused on the needs of younger and healthier beneficiaries • performance is measured at the contract level and not plan level • many beneficiaries do not use star ratings when selecting plans
Merit-Based Incentive Payment System (MIPS) *Ongoing* Years Active: 2017 – Present	**Clinical Focus:** Total care **Providers:** Clinicians, practices **Setting:** Broad **Patient Population:** Medicare FFS beneficiaries	Around half of clinicians only partially participated in the program (reporting data for only one or two of the three categories), including one quarter of clinicians who did not report quality measures. The average performance for each measure was very high, potentially due to selective participation and/or unambitious targets. Approximately 74% of clinicians who partially participated during the first year of MIPS received a positive payment adjustment. There are concerns that the design of MIPS may be too flexible to effectively incentivize clinicians to improve quality.[62] In addition, participation in MIPS was associated with increased after-hours documentation for physicians, suggesting that physicians may need resources to help reduce the reporting burden.[63]
Medicare Shared Savings Program (MSSP) Ongoing Years Active: 2012-Present	**Clinical Focus:** Total care **Providers:** Providers and suppliers (e.g., physicians, hospitals, and others involved in patient care) that create an Accountable Care Organization (ACO) **Setting:** Broad **Patient Population:** Medicare FFS beneficiaries	Early performance results from CMS' Medicare Shared Savings Program Pathways to Success final rule suggest that ACOs with greater financial accountability (e.g., more accurate financial benchmarks, downside risk) are more likely to deliver better coordinated and efficient care for Medicare patients. As of 2022, MSSP had generated overall savings and high-quality performance results for six consecutive years. In the same year, ACOs had a higher average performance on quality measures they are required to report in order to share in savings, including statistically significant higher performance for quality measures related to diabetes and blood pressure control, breast cancer and colorectal cancer screening, tobacco screening and smoking cessation, and depression screening and follow-up, compared to other similarly sized clinician groups not in the program. ACOs that earned more shared savings tended to be low revenue, which may mainly be made up of physicians and may include a small hospital or serve rural areas.

[62] doi: 10.1377/hlthaff.2019.01648

[63] https://doi.org/10.1111/jep.13796

Appendix E. Programs and Models Included in the CMIT Table, Detailed Tables, or Both

Program/Model	Program / Model Type	Inclusion	Appendix
Medicare Shared Savings Program (MSSP)	• CMS Value-Based Payment Program	• CMIT Table • Detailed Tables	• Appendix B • Appendix D
Medicare Advantage (MA) Star Ratings Program	• CMS Value-Based Payment Program	• CMIT Table • Detailed Tables	• Appendix B • Appendix D
Merit-Based Incentive Payment System (MIPS) Program	• CMS Value-Based Payment Program	• CMIT Table • Detailed Tables	• Appendix B • Appendix D
Hospital Value-Based Purchasing (VBP)	• CMS Value-Based Payment Program	• CMIT Table • Detailed Tables	• Appendix B • Appendix D
Bundled Payment for Care Improvement Advanced (BPCI-A) Model	• CMMI Model	• CMIT Table • Detailed Tables	• Appendix B • Appendix C
Accountable Care Organization (ACO) Realizing Equity, Access, and Community Health (REACH) Model	• CMMI Model	• CMIT Table • Detailed Tables	• Appendix B • Appendix C
Independence at Home (IAH) Demonstration	• CMMI Model	• CMIT Table • Detailed Tables	• Appendix B • Appendix C
Kidney Care Choices (KCC) Model	• CMMI Model	• CMIT Table • Detailed Tables	• Appendix B • Appendix C
Home Health Value-Based Purchasing (HHVBP)	• CMS Value-Based Payment Program	• CMIT Table • Detailed Tables	• Appendix B • Appendix C
Oncology Care Model (OCM)	• CMMI Model	• CMIT Table • Detailed Tables	• Appendix B • Appendix C

Program/Model	Program / Model Type	Inclusion	Appendix
Primary Care First (PCF) Model	• CMMI Model	• CMIT Table • Detailed Tables	• Appendix B • Appendix C
End-Stage Renal Disease (ESRD) Quality Incentive Program (QIP)	• CMS Value-Based Payment Program	• CMIT Table	• Appendix B
Long-Term Care Hospital (LTCH) Quality Reporting Program (QRP)	• CMS Pay-For Reporting Program	• CMIT Table	• Appendix B
Skilled Nursing Facility (SNF) Quality Reporting Program (QRP)	• CMS Pay-For Reporting Program	• CMIT Table	• Appendix B
Skilled Nursing Facility (SNF) Value-Based Purchasing (VBP)	• CMS Value-Based Payment Program	• CMIT Table	• Appendix B
Inpatient Rehabilitation Facility (IRF) Quality Reporting Program (QRP)	• CMS Pay-For Reporting Program	• CMIT Table	• Appendix B
Inpatient Psychiatric Facility (IPF) Quality Reporting Program (QRP)	• CMS Pay-For Reporting Program	• CMIT Table	• Appendix B
Prospective Payment System (PPS)-Exempt Cancer Hospital Quality Reporting (CHQR) Program	• CMS Pay-For Reporting Program	• CMIT Table	• Appendix B
Hospital Outpatient Quality Reporting (OQR) Program	• CMS Pay-For Reporting Program	• CMIT Table	• Appendix B
Ambulatory Surgical Center (ASC) Quality Reporting Program (QRP)	• CMS Pay-For Reporting Program	• CMIT Table	• Appendix B
Hospital Acquired Condition (HAC) Reduction Program	• CMS Value-Based Payment Program	• CMIT Table	• Appendix B

Program/Model	Program / Model Type	Inclusion	Appendix
Hospital Readmission Reduction Program (HRRP)	• CMS Value-Based Payment Program	• CMIT Table	• Appendix B
Hospice Quality Reporting Program (HQRP)	• CMS Pay-For Reporting Program	• CMIT Table	• Appendix B
Home Health Quality Reporting (QR)	• CMS Pay-For Reporting Program	• CMIT Table	• Appendix B
Making Care Primary (MCP) Model	• CMMI Model	• Detailed Tables	• Appendix C
Enhancing Oncology Model (EOM)	• CMMI Model	• Detailed Tables	• Appendix C
ESRD Treatment Choices (ETC) Model	• CMMI Model	• Detailed Tables	• Appendix C
Expanded Home Health Value-Based Purchasing (HHVBP) Model	• CMMI Model	• Detailed Tables	• Appendix C
Next Generation ACO (NGACO) Model	• CMMI Model	• Detailed Tables	• Appendix C
Comprehensive ESRD Care (CEC) Model	• CMMI Model	• Detailed Tables	• Appendix C
Comprehensive Primary Care Plus (CPC+) Model	• CMMI Model	• Detailed Tables	• Appendix C