

Appendices:

Supporting Real-Time Quality Insights Through HL7[®] FHIR[®]

A Federal Policy and Industry Roadmap to
Modernize Digital Quality Measurement
Reporting for ACOs

OCTOBER 2026

APPENDIX A. PROPOSED FHIR ENDPOINT QUALIFICATION FRAMEWORK

FHIR endpoints should be evaluated against the following qualification domains before it is used to support population-level digital quality reporting.

Table A-1. Proposed FHIR Endpoint Qualification Framework

Qualification Domain	Proposed Requirement	Purpose
Standards	Implement applicable HL7® Fast Healthcare Interoperability Resources (FHIR®), US Core, Bulk Data, SMART, and Centers for Medicare & Medicaid Services (CMS) implementation guide requirements	Establish a standards-based foundation for authorized exchange and population-level reporting
Conformance	Successfully complete applicable Inferno tests or other Centers for Medicare & Medicaid Services (CMS)-approved conformance testing	Demonstrates that the endpoint implements the required technical capabilities
Data quality	Use Patient Information Quality Improvement (PIQI)-based assessment against CMS-approved evaluation rubrics	Assesses whether the data are complete, accurate, timely, and fit for the intended quality measurement use case
Performance	Meet defined response time, throughput, and availability benchmarks	Confirms that the endpoint can support population-scale queries and sustained operational demand
Security	Maintain appropriate authentication, authorization, encryption, logging, and cybersecurity controls	Protects patient information and ensures that access is limited to authorized users and permitted purposes
Accountability	Support provenance, auditability, reproducibility, and CMS validation	Enables CMS and ACOs to trace source data, validate measure calculations, and reproduce reported results

APPENDIX B. THE COST OF FULL POPULATION REPORTING USING FHIR

Overview

CMS's move to full population digital quality measurement is the correct policy direction. A sampling methodology does not support the population health management the quality program is intended to drive, and FHIR is the only standards-based mechanism mature enough to make full population reporting operationally feasible.

For most ACOs, however, exchanging and calculating the scale of data required for population health management calls for a cloud-based infrastructure and advanced calculators, which are inadequately accounted for in the current program design. Although cloud computing does have many advantages, most ACOs do not have enough scale or staff with cloud engineering skills to account for optimization of “storage” and “compute”—critical elements for ACOs to perform extraction, cross-source matching, normalization, and calculation.

In addition, the cost to extract the data (known in cloud computing terms as “egress”) to both CMS and to payers for the Healthcare Effectiveness Data and Information Set (HEDIS) becomes very expensive, costing **\$1.37–\$1.73 per member per year**, exclusive of the cost of any software tools needed to perform the extraction or calculation. This expense scales directly with population size and recurs annually regardless of program outcome. That cost falls disproportionately on organizations too small to individually negotiate the volume pricing both cloud vendors and calculator vendors reserve for their largest customers.

CMS needs to provide policy guidance that will enable ACOs to work with major cloud vendors to support the transition to cloud-based computing. Two options would relieve this without requiring CMS to hold ACO clinical data.

- 1. Facilitate shared infrastructure.** Computation could run through channels that already operate FHIR infrastructure at scale, including HIEs, the CMS Health Technology Ecosystem (and eventually TECCA).

Individual organizations would not provide standing capacity of their own, and the volume that qualifies for enterprise tier pricing would accumulate at the shared layer rather than for each participant.

- This option uses existing Federal authorities; however, there are open questions about whether HIEs have the bulk-FHIR maturity because their technical capabilities vary by market.

2. Facilitate volume pricing.

An alternative to shared infrastructure would be to work with cloud vendors to allow ACOs and their technology partners to buy storage and compute at a voluntary federal rate rather than at individually negotiated rates, which would close the gap for small entities without building new infrastructure.

- Through CMS health tech ecosystem, CMS could encourage cloud vendors to create a pathway for ACO use of cloud computing for CMS quality reporting.

The detailed cost model, methodology, and full option analysis are below.

1. Cloud Billing Explained

Cloud usage is metered across three separate dimensions, not one—a distinction as consequential here as the input/output token split is for AI pricing. Cloud providers price these very differently:

1. **Storage:** Data in the cloud, billed by the GB per month.
2. **Compute:** The system actively processing that data, billed by the hour or by unit of work.
3. **Ingress/Egress:** Data being transferred; ingress is typically free, whereas egress is billed by the GB transferred out.

Compute includes all processing (e.g., matching records that came from different providers, resolving which records belong to the same patient, removing duplicates, etc.). **Egress** includes any time data is moved (e.g., pulling a record out of a provider's system, moving it into an ACO's environment, sending it again to a payer for HEDIS calculation, etc.). Quality measurement requires both several stages of egress and compute to get from raw records to a reportable result. Additionally, they are run for every required measure, every reporting year, and again for every downstream party. **Table B-1** shows the current costs by each major vendor.

Table B-1. Storage, Compute, and Egress List Pricing by Provider (2026)

Cloud Provider	Data Storage (\$/GB per Month)	Compute/Processing (\$/hour)	Data Transfer (Egress, \$/GB)
AWS	\$0.023	\$0.19	\$0.09
Azure	\$0.018–0.023	\$0.19	\$0.087
GCP	\$0.020	\$0.13–0.19	\$0.12
Oracle (OCI)	\$0.0255	\$0.075	\$0.0085
Average¹	\$0.023	~\$0.038/vCPU-hr	\$0.09

2. What An ACO Actually Spends, by Population Size

The pricing components described above establish how cloud vendors charge for infrastructure. The next step is estimating the cost to ACOs for what they would need to spend to support population-level reporting using FHIR-based data exchange on the cloud. Our analysis, shown in **Table B-2**, provides a range based on ACO size with low and high assumptions.

Three factors drive those costs:

- **Patient health status.** This affects the amount of data that must be stored, exchanged, reconciled, and evaluated, which, in turn, affects all three cost drivers.
- **Measure complexity.** This affects the amount of processing required to calculate quality measures, affecting primarily “compute” costs, but also some egress costs.
- **Data exchange requirements** (i.e., number of organizations that must provide and receive data), which affects both “egress” and “compute” costs.

This cost does not include any calculator or resources needed to perform or report. This is infrastructure alone. The assumptions for these estimates are described in more detail below.

¹ WS, Azure, GCP, Oracle public cloud pricing pages (storage, compute, egress list prices), 2026 — compiled via Holori/CloudZero/egresscost.com pricing aggregators and Oracle's own published price list (<https://www.oracle.com/cloud/price-list/>).

Table B-2. Total Modeled Cloud Cost by ACO Covered Population Size (Range, Reserved Pricing)

ACO Size	Low (\$1.37/Member)	High (\$1.73/Member)
25,000	\$35,000	\$45,750
50,000	\$70,000	\$91,500
100,000	\$140,000	\$183,000
500,000	\$700,000	\$915,000
1,000,000	\$1,400,000	\$1,830,000
5,000,000	\$7,000,000	\$9,150,000

3. Assumptions and Calculation Approach

Patient Health Status

Patient health status is one of the primary drivers of cloud infrastructure cost.

Beneficiaries with multiple chronic conditions receive care from more providers, generate more clinical information, and require more data to be exchanged and reconciled across systems. As a result, they increase storage requirements, processing requirements, and data transfer costs. To estimate these effects, the model uses a beneficiary distribution derived from CMS chronic care management guidance and groups beneficiaries into four health status tiers based on the number of chronic conditions.²

Table B-3. Patient Population by Health

Patient Tier (Health Level)	Chronic Conditions	Population Share
Low-burden (healthy)	0–1	32%
Moderate	2–3	32%
High-burden	4–5	23%
Complex/frail	6+	14%

² Comagine Health. Medicare Chronic Care Management Coding. Available at: <https://comagine.org/sites/default/files/resources/sqi-qin-cc-medicare-chronic-care-management-coding.pdf>.

Each health status tier was assigned an estimated clinical data volume based on published benchmarks from Google Cloud, SMILE CDR, and Medplum. Applying those assumptions to an illustrative 100,000-member ACO demonstrates how patient health status translates into total data volume and an infrastructure cost.

Table B-4. Sample ACO Cost (100,000 Members)

Patient Group	Data Volume per Patient	Patients (Illustrative 101,000-Member ACO)	Total Data Volume for Group	Annual Storage Cost for Group
Low-burden (healthy)	0.6 GB	32,000	19,200 GB	\$5,299
Moderate	1.3 GB	32,000	41,600 GB	\$11,482
High-burden	2.2 GB	23,000	50,600 GB	\$13,966
Complex/frail	3.5 GB	14,000	49,000 GB	\$13,524
Total		101,000	160,400 GB	\$44,270

Measure Complexity for MSSP

A primary driver of computational cost is the complexity of measures. Some quality measures can be evaluated using a small number of clinical observations, while others require multiple inclusion criteria, exclusions, exceptions, lookback periods, and logical pathways. As measure complexity increases, the amount of processing required to determine whether a patient meets the measure also increases.

We classified measure complexity as simple, moderate, or complex based on the overall length of the specification as well as whether it included elements such as exclusions, exceptions, and sub-population requirements. The resulting complexity categories were used to estimate the relative computational effort required to calculate measures across a population. Each individual EHR's actual implementation may vary.

Table B-5. Measure Complexity for MSSP Measures

Measure Tier	Count (of 8)	Share	Compute-Time Index
Simple	1	13.3%	1.0× (floored)
Moderate	6	80.0%	3.2×
Complex	1	6.7%	12.3×

The model evaluates MSSP quality measures in an end-state architecture where FHIR serves as the transport mechanism for all clinical quality data. Measures that rely on clinical data available through FHIR are included in the calculation model, while measures that are claims-based, survey-based, or otherwise outside the FHIR workflow are excluded. As shown in **Table B-6**, six of the eight (75%) MSSP measure concepts were determined to be FHIR-eligible in the target-state architecture.

Table B-6. MSSP Measure Inventory

Measure	FHIR-Eligible	Complexity Tier	Reason
Breast Cancer Screening	Included	Moderate	Clinical procedure/imaging data—natively FHIR-representable
Colorectal Cancer Screening	Included	Moderate	Clinical procedure/lab data
Controlling High Blood Pressure	Included	Moderate	Vital signs (Observation resource)
Diabetes: Glycemic Status Assessment (HbA1c)	Included	Moderate	Lab result (Observation resource)
Screening for Depression and Follow-Up Plan	Included	Moderate	Structured screening tool result
CAHPS for MIPS Clinician/Group Survey	Excluded	Simple	Sampled patient-experience survey (telephonic/paper)
Hospital-Wide, 30-Day, All-Cause Unplanned Readmission (HWR)	Excluded	Complex	Claims-only; CMS calculates
Clinician/Group Risk-standardized Hospital Admission Rates (MCC)	Excluded	Moderate	Claims-only data source; CMS calculates

The resulting measure complexity profile is used later to estimate the computational resources required for quality measure calculation. More complex measures require additional processing time and therefore contribute disproportionately to cloud computing costs. **It's important to note that "processing time" in cloud computing is a unit of effort/cost. Cloud computing allows "parallel processing" at scale, enabling complex tasks to be completed in a much shorter duration than "single-threaded" processing. There is a cost for all the processing time, even if occurring simultaneously.**

Data Exchange Requirements

Other factors that affect infrastructure costs include the number of patients being reported on, the number of measures that apply to each patient, and the number of organizations that contribute data. Together, these factors determine how much data must be exchanged, reconciled, and evaluated before quality measures can be calculated.

Measures per patient. Not every measure applies to every beneficiary. Patients with more chronic conditions typically qualify for a larger portion of the MSSP measure set, increasing both the amount of data that must be gathered and the amount of processing required for measure calculation.

Table B-7. Measures Triggered and Data Sources by Patient Health

Patient Tier (Health Level)	Measures Triggered per Year	Number of EHRs Where Data Resides
Low-burden (healthy)	6	2.0
Moderate	9	3.5
High-burden	11	4.5
Complex/frail	11	5.7

Number of EHRs Where Data Resides. Patients with more chronic conditions typically see more distinct providers—a primary care physician plus several specialists—each of whom may keep records in a different electronic health record (EHR). All of those distinct records must be located and pulled together in one unified view of the patient. For example, a clinical study of Medicare-age patients, found that patients with multiple chronic conditions saw an average of 5.7 different physicians per year, compared with 3.5 for patients without multiple chronic conditions.³

Processing Model for Measures

The assumptions described above determine how much data must be collected, exchanged, and evaluated. The next step is estimating the processing required to turn those data into a quality measure result.

Population-scale digital quality measurement requires four processing stages:

- **Extraction:** Retrieving data from the systems that contributed information about the patient
- **Matching:** Reconciling records from multiple organizations to create a unified patient view
- **Normalization:** Removing duplicates and translating source-specific codes and formats into a common structure
- **Calculation:** Evaluating quality measure logic against the resulting patient record
- **Processing time (sec):** In cloud computing, “processing time” is a cost measure, not a time measure. Cloud infrastructure typically processes faster because it leverages “parallel processing” and “auto-scaling” (more processing is allocated for complex tasks); however, that effort comes at a cost—every fraction of a second that the instance is running is charged (this is known as “compute”)

The amount of processing required at each stage increases as patient health status, measure complexity, and data exchange requirements increase. Extraction and normalization are driven primarily by the amount of data and the number of contributing sources. Calculation is driven primarily by measure complexity and the number of measures that apply to a patient.

³ van den Bussche H, Schön G, Kolonko T, Hansen H, Wegscheider K, Glaeske G, Koller D. Patterns of Ambulatory Medical Care Utilization in Elderly Patients with Special Reference to Chronic Diseases and Multimorbidity—Results from a Claims Data Based Observational Study in Germany. *BMC Geriatr.* 2011;11:54. doi: 10.1186/1471-2318-11-54. Physician contact frequency by multimorbidity status (36 vs. 16 contacts/year; 5.7 vs. 3.5 distinct physicians/year). Study population: German statutory-insurance patients aged 65+ (n=123,224, 2004 claims data); multimorbidity defined as 3+ chronic conditions from a list of 46—a different population and threshold than this paper's own patient-complexity tiers, used here only for the general contact-frequency-scales-with-complexity relationship, not as a population match.

Table B-8 combines the assumptions from the previous sections to estimate the processing time required for a single patient during one reporting cycle.

Table B-8. Calculation Assumptions

Patient Group	Data Sources	Data Volume, Including Lookback History	Measures per Year	Step 1: Extraction	Step 2: Matching	Step 3: Norm.	Step 4: Calculation	Total Compute Cost
Low-burden	2.0	1,350 records	6	41 sec	2 sec	27 sec	42 sec	112 sec
Moderate	3.5	2,925 records	9	88 sec	5 sec	102 sec	137 sec	332 sec
High-burden	4.5	4,950 records	11	149 sec	7 sec	223 sec	283 sec	662 sec
Com-plex/ frail	5.7	7,875 records	11	236 sec	9 sec	449 sec	451 sec	1,145 sec
The population weighted average for the total process time required is 455 sec								

As expected, processing requirements increase significantly as patient complexity increases. A low-burden patient requires less than two minutes of processing per reporting cycle, while a complex patient requires more than nineteen minutes of compute time. Across the modeled population, the weighted-average processing requirement is approximately **455 seconds per patient per reporting cycle**, which forms the basis for the cloud computing estimates that follow.

Cloud Infrastructure Assumptions

Health care organizations operating recurring, production-scale quality reporting environments typically purchase cloud capacity through reserved commitments rather than on-demand usage. This approach provides predictable performance and lower costs but requires organizations to pay for infrastructure capacity whether it is actively processing data or not. The model assumes an ACO processes quality data quarterly. Quarterly processing is used as the practical minimum necessary to support population health management throughout the year and aligns with CMS's expectation that quality measures be calculated from a full year's worth of data. Because the model assumes dedicated infrastructure capacity, processing costs do not increase with the number of reporting cycles. Additional reporting frequency primarily affects data transfer costs. Infrastructure costs vary based on two factors: the amount of time available to complete processing and the length of the cloud capacity commitment. Shorter processing windows require more computing capacity, while longer commitments generally receive larger pricing discounts.

Table B-9. Cloud Computing Costs

Scenario	Processing Turnaround Required	Capacity Commitment	Processing Cost per Patient per Year
Low-cost	72 hours	3-year commitment	\$0.20
Middle	72 hours	1-year commitment	\$0.38
High-cost	48 hours	1-year commitment	\$0.57

Note: These figures use a base cloud computing rate of \$0.038 per hour, discounted approximately 35% for a one-year commitment and 65% for a three-year commitment, consistent with standard cloud industry discount structures.

Data Transfer Assumptions

Data must not only be stored and processed but also must be exchanged. The model includes two distinct data transfer activities.

- **ACO operational use.** To support population health management, an ACO must periodically collect and refresh data from participating providers. The model assumes quarterly data collection, resulting in an estimated transfer cost of \$0.58 per patient per year. More frequent collection would increase these costs.

- **Payer reporting.** Many ACOs also report quality data to commercial and Medicaid health plans. The model assumes one annual transfer to support HEDIS and similar reporting requirements, adding \$0.14 per patient per year.

Combining storage, processing, and data transfer costs produces the total annual infrastructure cost shown in **Table B-10**.

All scenarios assume reserved capacity cloud pricing rather than standard on-demand rates. As noted above, many ACOs lack the scale necessary to independently obtain these discounted pricing tiers, creating an additional barrier to adoption of population-scale digital quality measurement.

Table B-10. Full Cost Per Patient Per Year

Cost Component	Low-Cost Scenario	Middle Scenario	High-Cost Scenario
Storage	\$0.44	\$0.44	\$0.44
Processing	\$0.20	\$0.38	\$0.57
Data transfer — ACO's own use (quarterly)	\$0.58	\$0.58	\$0.58
Data transfer — to health plan partner (annual)	\$0.14	\$0.14	\$0.14
Total per patient per year	\$1.37	\$1.55	\$1.73

Every figure in **Table B-11** already assumes the ACO has secured discounted, committed-capacity cloud pricing rather than paying standard rates; however many ACOs are not in a position to secure those discounts on their own, which is the problem our recommendations are built to solve.

4. Recommendations

The \$1.37–\$1.73 per member range in **Table B-12** assumes reserved capacity cloud pricing and quarterly data collection—the practical minimum for an ACO responsible for coordinating care and managing total cost of care against a CMS benchmark. ACOs cannot meet that mission with a single annual data pull.

The model assumes a quarterly pull; however, many ACOs would like to pull data monthly to meet both state waivers and better population management. In fact, some would prefer continuous refresh to allow the ACO to meet their own care management mission. Consequently, it would be better to let ACOs run the cadence their mission calls for, without

each one bearing the full infrastructure cost of doing so alone. Each of the recommended approaches is described below with its existing authority, the action CMS would need to take, and the open questions that remain.

Option A: CMS-Facilitated Shared Infrastructure

How It Could Work

Instead of requiring every ACO to build and operate its own infrastructure for extraction, matching, normalization, and quality measure calculation, CMS could facilitate the use of shared infrastructure operated at scale. This approach would allow multiple organizations to share the costs of cloud capacity, data exchange, and measure calculation while maintaining the ability to support population-level reporting.

Three potential pathways are already in place:

- **HIEs.** Many HIEs already aggregate data from multiple providers and operate FHIR-based infrastructure capable of supporting population-level exchange.
- **CMS Health Technology Ecosystem.** CMS's interoperability initiatives already promote the use of FHIR-based exchange and could be expanded to support digital quality measurement.
- **TEFCA (eventually).** TEFCA may eventually support this role as FHIR capabilities mature across the network, but it should be viewed as a longer-term opportunity rather than a near-term solution.

Why It Matters

The cost model presented in this paper assumes dedicated cloud infrastructure for each reporting entity. Shared infrastructure distributes those costs across many participants and allows organizations to benefit from scale that would otherwise be unavailable to most ACOs. It also makes more frequent data refreshes economically feasible, supporting monthly or near-real-time quality measurement rather than quarterly reporting.

Existing Authority

Several components of this approach are available today:

- HIEs already operate data-sharing infrastructure and bulk data exchange capabilities.
- CMS already operates the Health Technology Ecosystem and related interoperability initiatives.
- TEFCA provides a governance framework that could support future expansion of quality measurement use cases.
- CMS already operates compute-to-the-data environments through programs such as the Virtual Research Data Center.

Potential CMS Actions

In the near term, CMS could encourage use of existing HIE infrastructure and expand the CMS Health Technology Ecosystem to support digital quality measurement. As TEFCA's FHIR capabilities mature, CMS could evaluate whether quality measurement should become a supported exchange purpose.

Open Questions

Several implementation considerations remain:

HIE capabilities vary significantly across markets.

The role of TEFCA in quality measurement remains unresolved.

Governance, funding, and operational responsibility for a shared quality measurement environment would need to be defined.

Option B: CMS-Facilitated Volume Pricing

How It Could Work

Rather than requiring each ACO to negotiate cloud pricing independently, CMS could help create pathways that allow ACOs and their technology partners to access pricing more comparable to that available to large enterprise customers. The goal is to reduce the infrastructure costs associated with population-scale digital quality measurement while preserving flexibility in how organizations implement and operate their reporting environments.

Three approaches could be considered:

- **Collective purchasing models** in which eligible ACOs or qualified reporting intermediaries obtain access to negotiated cloud pricing through a common purchasing vehicle
- **Preferred pricing programs** in which cloud vendors voluntarily offer discounted pricing to ACOs participating in CMS-recognized digital quality measurement initiatives
- **CMS Health Technology Ecosystem Voluntary Commitment** in which cloud vendors would commit to providing favorable pricing, technical assistance, or implementation support to organizations undertaking Medicare DQM reporting as part of the CMS Health Technology Ecosystem

Reducing infrastructure costs would also make more frequent data refreshes economically feasible, allowing ACOs to move beyond annual or quarterly reporting cycles toward more timely quality measurement and population health management.

Why It Matters

The cost model presented in this paper assumes access to reserved capacity pricing. Many ACOs, particularly smaller organizations, lack the scale necessary to independently negotiate the volume discounts routinely available to large enterprise customers. As a result, organizations with the fewest covered lives often face the highest per member infrastructure costs. Facilitating access to enterprise tier pricing could help reduce this disparity without requiring CMS to operate the underlying infrastructure or hold ACO clinical data.

Existing Authority

Federal agencies already obtain cloud services through negotiated purchasing vehicles that provide discounts beyond standard commercial pricing.⁴ These programs demonstrate that aggregated purchasing can produce substantial savings when demand is coordinated across multiple organizations. CMS also has experience designating qualified entities and technology participants through existing interoperability and data-sharing programs, providing a potential precedent for recognizing organizations that support digital quality reporting.

Potential CMS Actions

CMS could explore several approaches:

- Encourage cloud vendors participating in the CMS Health Technology Ecosystem to offer voluntary preferred pricing programs for organizations undertaking Medicare DQM reporting
- Recognize qualified intermediaries that aggregate demand across multiple ACOs and negotiate pricing on their behalf
- Evaluate whether future statutory or regulatory authority could support broader access to negotiated federal cloud pricing mechanisms

⁴ GSA's Multiple Award Schedule, IT Category, Cloud Special Item Number (<https://www.gsa.gov/technology/it-contract-vehicles-and-purchasing-programs/multiple-award-schedule-it/cloud-and-cloud-related-services>) has produced documented negotiated discounts of 15–38% off list price plus 5–15% additional volume-tiered discounts (GSA ITVMO, see Strategic Cloud (IaaS) Contracting Best Practices at: https://itvmo.gsa.gov/assets/files/2349_GPSSIT_CloudAcquisitions_b.pdf). The newer **OneGov Pricing Model** has produced named agreements at deeper discounts: Oracle (50% off compute, 70% off storage, 80% off networking, zero egress on migration. Go to: <https://www.oracle.com/government/federal/gsa-contracts/>), ServiceNow (up to 70% off list, GSA press release, September 3, 2025), and Tenable (65% off list, GSA press release, December 11, 2025). **However, no existing authority currently makes ACOs, calculator vendors, or any non-federal-agency purchaser eligible under these vehicles**, which are built for federal agencies as the customer of record. Extending eligibility would require new statutory or regulatory authority; this option should be presented as a longer-horizon direction pending an identified legal pathway, not as immediately actionable.

Open Questions

Several policy and implementation questions remain:

Many federal purchasing programs limit eligibility to government entities.

Additional statutory or regulatory authority may be needed to extend negotiated pricing to private-sector reporting organizations.

The structure, governance, and eligibility requirements for any preferred pricing program would need to be defined.

The extent to which voluntary vendor participation could achieve meaningful savings remains uncertain.

APPENDIX C. PROPOSED REGULATORY CHANGES

The following regulatory changes could be used to implement the recommendations. . Each row identifies the specific CFR citation and the change required. These changes address provisions related to both the Medicare Part B/QPP Reporting Framework (42 CFR Part 414) and the Medicare Shared Savings Program (42 CFR Part 425); the recommended changes are summarized in **Table C-1**. The subsequent pages provided detailed recommendations with rationale and proposed changes in regulatory text in **bold red font**.

Table C-1. Summary of Proposed Regulatory Changes

Medicare Part B/QPP Reporting Framework (42 CFR Part 414)	MSSP (42 CFR Part 425)
§ 414.1305 Definitions Creates NEW Definitions for Standardized FHIR-based API, Medicare DQM, excluded beneficiary for Medicare DQM reporting, makes CHANGES to definitions for CEHRT, collection type, submission type	§ 425.502 Calculating the ACO quality performance score Adds failure of regulated FHIR-based endpoints to examples of extreme and uncontrollable circumstances
§ 414.1325 Data submission requirements Adds FHIR measure bundle submission type	§ 425.507 Incorporating Promoting Interoperability requirements Add an option for meeting Shared Savings Program CEHRT use requirements by reporting objective results for conformance, data quality, and performance of the FHIR APIs (for ACOs using Medicare DQM pathway only)
§ 414.1335 Data submission criteria for the quality performance category Adds Medicare DQM reporting as a collection type	§ 425.510 Application of the APM Performance Pathway and APP Plus measure set to MSSP ACOs <i>No changes needed to this provision – existing regulation provided to illustrate where 425 refers to 42 CFR § 414.</i>
§ 414.1367 APM Performance Pathway Allows reporting Medicare DQMs based on data available in regulated FHIR APIs to satisfy MIPS	§ 425.512 Determining the ACO quality performance standard Allows pay for reporting for Medicare DQMs (refers to § 414.1380)

Medicare Part B/QPP Reporting Framework (42 CFR Part 414)	MSSP (42 CFR Part 425)
§ 414.1380 Scoring Allow pay for reporting for first year and re-evaluate for the subsequent years	§ 425.702 Aggregate Reports CMS to continuously refresh beneficiary data through APIs
§ 414.1390 Data validation and audit documentation Describes audit and use of PIQI	
§ 414.1415 Advanced APM criteria Allows use of regulated FHIR APIs for quality	

Table C-2. Proposed Changes to 42 CFR Part 414: Medicare Part B/QPP Reporting Framework

Regulation	Suggested Changes	Current Regulation with Red-Lined Changes
42 CFR § 414.1305 (collection type definitions)	Establish the Medicare DQM as a recognized collection type with its own specification framework, calculation expectations, and submission requirements.	(3) For purposes of determinations under ~~§§ 414.1415 and 414.1420~~, beginning for CY 2024, EHR technology (which could include multiple technologies) certified under the ONC Health IT Certification Program that meets— (i) The 2015 Edition Base EHR definition, or subsequent Base EHR definition (as defined in 45 CFR 170.102); and (ii) Any such ONC health IT certification criteria adopted or updated in 45 CFR 170.315 that are determined applicable for the APM, for the year, considering factors such as clinical practice area, promotion of interoperability, relevance to reporting on applicable quality measures, clinical care delivery objectives of the APM, or any other factor relevant to documenting and communicating clinical care to patients or their health care providers in the APM. (3) For purposes of determinations under §§ 414.1415 and 414.1420, beginning for CY 2026, certified electronic health record technology (CEHRT) includes any application programming interface (API) certified under the ONC Health IT Certification Program to the standards adopted at 45 CFR 170.215. Add Standardized FHIR-based API means an application programming interface (API) that uses HL7® Fast Healthcare Interoperability Resources® (FHIR® as its base standard and is required by federal or state law to be implemented and maintained. Regulated FHIR APIs include any of the following: (1) Certified EHR Endpoints: Health information technology certified under the ONC Health IT Certification Program to the criterion at 45 CFR 170.315(g)(10) (Standardized API for patient and population services) (2) Data Provider Endpoints. APIs required by federal or state law (including those hosted by HIEs and HDUs) to exchange clinical or payer-sourced data to the criteria at § 170.215 (a) through (j), including patient and population data access, authorization, authentication, bulk data exchange, and where applicable, payer data exchange specifications (3) Payor Endpoints. APIs required by federal regulation at § 170.215 (k) to make adjudicated claims and encounter data, including prescription drug claims and dispensing data, available to patients, their authorized representatives, or providers with a treatment relationship with the patient.

Table C-2. Proposed Changes to 42 CFR Part 414: Medicare Part B/QPP Reporting Framework

Regulation	Suggested Changes	Current Regulation with Red-Lined Changes
		(4) CMS Endpoints. FHIR-based APIs operated by CMS to support 42 CFR § 425.704 and conformant with 45 CFR 170.215 that deliver Medicare fee-for-service (FFS) claims data to MSSP ACOs; and (5) Patient-Facing APP Endpoints. FHIR-based APIs from applications included on the CMS Medicare App Library and conformant with 45 CFR 170.215 that capture patient-generated data, including survey responses and data from wearable devices. <i>Digital quality measure (DQM)</i> means a quality measure used by Accountable Care Organizations (ACOs) participating in the Medicare Shared Savings Program that: (1) Is calculated from individual patient-level data (2) Is reported on beneficiaries eligible for the DQM as defined at § 425.20 of this chapter (3) Uses Standardized FHIR-based APIs, as defined in this section, as its primary data sources <i>Excluded beneficiary for Medicare DQM reporting</i> means a beneficiary who is excluded from the denominator of any Medicare DQM for the applicable performance period because, as of the last day of the performance period, the beneficiary is attributed or assigned to any of the following: (1) An eligible clinician whose Medicare enrollment in the Provider Enrollment, Chain, and Ownership System (PECOS) was voluntarily terminated, deactivated, or revoked during the performance period, or who is deceased as reflected in CMS records during the performance period; (2) An eligible clinician who was removed from the ACO's Participant List under § 425.118 of this chapter, with an effective date of removal occurring during the performance period, unless attribution or assignment to another eligible clinician or ACO participant Taxpayer Identification Number (TIN) within the ACO is maintained as of the last day of the performance period; (3) An ACO participant TIN that experienced a change of ownership, as defined at § 489.18 of this chapter, during the performance period; or * (4) An ACO participant TIN that ceased operations, or that was merged or consolidated with another TIN, during the performance period, as reflected by termination of the TIN's Medicare enrollment in PECOS or by removal from the ACO's Participant List, unless attribution or assignment

Table C-2. Proposed Changes to 42 CFR Part 414: Medicare Part B/QPP Reporting Framework

Regulation	Suggested Changes	Current Regulation with Red-Lined Changes
		to a continuing ACO participant TIN within the ACO is maintained as of the last day of the performance period. <i>Collection type</i> means a set of quality measures with comparable specifications and data completeness criteria, as applicable, including, but not limited to: Electronic clinical quality measures (eCQMs); MIPS clinical quality measures (MIPS CQMs); QCDR measures; Medicare Part B claims measures; CMS Web Interface measures (except as provided in paragraph (1) of this definition, for the CY 2017 through CY 2022 performance periods/2019 through 2024 MIPS payment years); the CAHPS for MIPS survey measure; administrative claims measures; Medicare Clinical Quality Measures (CQMs) for Accountable Care Organizations Participating in the Medicare Shared Savings Program (Medicare CQMs); and Digital Quality Measures for ACOs Participating in the Medicare Shared Savings Program (MSSP) DQMs <i>Submission type</i> means the mechanism by which the submitter type submits data to CMS, including, but not limited to (1) Direct; (2) Log in and upload; (3) Log in and attest; (4) Medicare Part B claims; (5) CMS Web Interface (except as provided in paragraph (5)(i) of this definition, for the CY 2017 through CY 2022 performance periods/2019 through 2024 MIPS payment years). and(i) For the CY 2021 through CY 2024 performance periods/2023 through 2026 MIPS payment years, submission types include the CMS Web Interface for APM Entities reporting through the APM Performance Pathway in accordance with § 414.1367. (ii) [Reserved] (6) FHIR measure bundle submission, for Medicare DQM reporting under the APM Performance Pathway Plus, beginning with the [CY 2026 performance period/2028 MIPS payment year], submitted through a CMS-designated endpoint in the form and manner specified by CMS.

Table C-2. Proposed Changes to 42 CFR Part 414: Medicare Part B/QPP Reporting Framework

Regulation	Suggested Changes	Current Regulation with Red-Lined Changes
42 CFR § 414.1325(c) (data submission requirements)	Align submission requirements to support standardized FHIR Bundle/MeasureReport submission, including source provenance, exception records, and correction indicators.	(c) Data submission types for groups, virtual groups, subgroups, and APM Entities. Groups, virtual groups, subgroups, and APM Entities may submit their MIPS data using: (1) For the quality performance category, the direct; login and upload; Medicare Part B claims (beginning with the CY 2019 MIPS performance period/2021 MIPS payment year, for small practices only); CMS Web Interface (for groups consisting of 25 or more eligible clinicians, a third party intermediary submitting on behalf of a group) submission type; and, beginning with the CY 2026 MIPS performance period/2028 MIPS payment year, FHIR measure bundle submission (for APM Entities reporting Medicare DQMs under the APM Performance Pathway Plus; (2) For the improvement activities or Promoting Interoperability performance categories, the direct, login and upload, or login and attest submission types. (d) Use of multiple data submission types. Beginning with the 2021 MIPS payment year as applicable to MIPS eligible clinicians, groups, and virtual groups, beginning with the 2023 MIPS payment year as applicable to APM Entities, and beginning with the 2025 MIPS payment year as applicable to subgroups, MIPS eligible clinicians, groups, virtual groups, APM Entities, and subgroups may submit their MIPS data using multiple data submission types for any performance category described in paragraph (a)(1) of this section, as applicable; provided, however, that the MIPS eligible clinician, group, virtual group, APM Entity, or subgroup uses the same identifier for all performance categories and all data submissions.
42 CFR § 414.1335(a) (data submission criteria)	Establish Medicare DQM reporting as an APP Plus-specific collection type under § 414.1335(a)(5), parallel to the existing Medicare CQM provision at (a)(4). Limit the reporting population to beneficiaries eligible for Medicare DQMs as defined at § 425.20, exclusive of excluded beneficiaries for Medicare DQM reporting as defined at § 414.1305. Require	(a) <i>Criteria. Except as provided in paragraph (b) of this section, a MIPS eligible clinician, group, virtual group, subgroup, or APM Entity must submit data on MIPS Quality measures in one of the following manners, as applicable:</i> (1) <i>For Medicare Part B claims measures, MIPS CQMs, eCQMs, or QCDR measures.</i> <i>(i) Except as provided in paragraph (a)(1)(ii) of this section, submits data on at least six measures, including at least one outcome measure. If an applicable outcome measure is not available, reports one other high priority measure. If fewer than six measures apply to the MIPS eligible clinician, group, virtual group, or APM Entity, reports on each measure that is applicable.</i> (A) For eCQMs, the submission of data requires the utilization of CEHRT, as defined at § 414.1305; (ii) [Reserved] (4) For Medicare DQMs.

Table C-2. Proposed Changes to 42 CFR Part 414: Medicare Part B/QPP Reporting Framework

Regulation	Suggested Changes	Current Regulation with Red-Lined Changes
	submission through Standardized FHIR-based APIs and, where necessary, file-based sources as defined at § 414.1305, enabling aggregation from qualified environments outside CEHRT.	(i) A MIPS eligible clinician, group, and APM Entity reporting on Medicare DQMs (reporting quality data on beneficiaries eligible for dDQMs as defined at § 425.20, exclusive of excluded beneficiaries for Medicare DQM reporting as defined at § 414.1305) within the APP Plus measure set in accordance with § 414.1367. The submission of Medicare DQM data requires the utilization of Standardized FHIR-based APIs as defined at § 414.1305. (b) <i>Special rule for the APM Performance Pathway (APP) Plus measure set. A MIPS eligible clinician, group, or APM Entity that reports the APP Plus measure set via the APP must report on all measures included in the APP Plus measure set, except for administrative claims-based quality measures as provided in § 414.1325(a)(2)(i).</i> [81 FR 77537, Nov. 4, 2016, as amended at 82 FR 53953, Nov. 16, 2017; 83 FR 60079, Nov. 23, 2018; 84 FR 63195, Nov. 15, 2019; 88 FR 79534, Nov. 16, 2023; 89 FR 98561, Dec. 9, 2024; [FR citation for this rulemaking]]
42 CFR § 414.1367 (APM Performance Pathway reporting requirements — MIPS conforming amendment)	Beginning with the 2026 performance year (2028 MIPS payment year), an APM Entity participating in the MSSP that elects to report quality via the Medicare DQMs is considered to have satisfied the MIPS Quality performance category requirements under the APM Performance Pathway.	§ 414.1367 APM Performance Pathway. (a) General. Beginning with the 2023 MIPS payment year, the APM Performance Pathway is a MIPS scoring methodology available to MIPS eligible clinicians identified on the Participation List or Affiliated Practitioner List of an APM Entity participating in a MIPS APM. (b) Criteria for MIPS APMs. MIPS APMs are those in which: (1) APM Entities participate in the APM under an agreement with CMS or through a law or regulation; and (2) The APM bases payment on quality measures and cost/utilization. (c) MIPS performance category scoring in the APM Performance Pathway — (1) Quality. Except as provided in paragraphs (c)(1)(i) and (ii) of this section, the quality performance category score is calculated for a MIPS eligible clinician, group, or APM Entity group in accordance with § 414.1380(b)(1) based on the quality measure set applicable to the MIPS eligible clinician, group, or APM Entity group under paragraph (c)(1)(iii) of this section and established by CMS through rulemaking for a MIPS payment year.

Table C-2. Proposed Changes to 42 CFR Part 414: Medicare Part B/QPP Reporting Framework

Regulation	Suggested Changes	Current Regulation with Red-Lined Changes
		(i) Each submitted measure that does not have a benchmark or meet the case minimum requirement is excluded from the MIPS eligible clinician, group, or APM Entity group's total measure achievement points and total available measure achievement points. (ii) Any measure that is identified as topped out is not subject to the scoring cap described at § 414.1380(b)(1)(iv). (iii) (A) For performance periods beginning prior to CY 2025 and MIPS payment years beginning prior to 2027, a MIPS eligible clinician, group, or APM Entity group must report the APM Performance Pathway quality measure set. (B) Beginning with the CY 2025 performance period/2027 MIPS payment year, a MIPS eligible clinician, group, or APM Entity group may choose to report either the APM Performance Pathway quality measure set or the APP Plus quality measure set (iv) Beginning where the APM Entity is an MSSP ACO that has elected to report Medicare DQMs that are supported by data available in the current regulated APIs is considered to satisfy the MIPS Quality performance requirement. (2) Cost. The cost performance category weight is zero percent (0%) for MIPS eligible clinicians who are scored through the APM Performance Pathway. (3) Improvement activities. The improvement activities performance category score is calculated for a MIPS eligible clinician, group, or APM Entity group in accordance with § 414.1380(b)(3) based on the activities required by the MIPS APM that are included in the MIPS final inventory of improvement activities described in § 414.1355(a) (excluding any such activities that the MIPS eligible clinician, group, or APM Entity group does not perform). MIPS eligible clinicians, groups, or APM Entities may report additional improvement activities in accordance with § 414.1360. (4) Promoting interoperability. The promoting interoperability performance category will be scored for the MIPS eligible clinician, group, or APM Entity as described in § 414.1375. (d) APM Performance Pathway performance category weights — (1) Performance category weights. Subject to paragraph (d)(2) of this section, the performance category weights used to calculate the final score for a MIPS eligible clinician, group, or APM Entity reporting through the APM Performance Pathway are:

Table C-2. Proposed Changes to 42 CFR Part 414: Medicare Part B/QPP Reporting Framework

Regulation	Suggested Changes	Current Regulation with Red-Lined Changes
		(i) Quality: 50% (ii) Cost: 0% (iii) Improvement Activities: 20% (iv) Promoting Interoperability: 30% (2) Reweighting MIPS performance categories. If CMS determines, in accordance with § 414.1380(c)(2), that a different scoring weight should be assigned to the quality or promoting interoperability performance category, CMS will redistribute the performance category weights as follows: (i) If CMS reweights the quality performance category to 0%: Promoting Interoperability performance category is reweighted to 75%, and Improvement Activities performance category is reweighted to 25%. (ii) If CMS reweights the Promoting Interoperability performance category to 0%: Quality performance category is reweighted to 75%, and Improvement Activities performance category is reweighted to 25%. (e) Final score. The final score is calculated for a MIPS eligible clinician, group, or APM Entity in accordance with § 414.1380(c). [85 FR 85031, Dec. 28, 2020, as amended at 89 FR 98562, Dec. 9, 2024]
42 CFR § 414.1380 (scoring methodology and transition relief)	Add transition protections for ACOs reporting through the Medicare DQMs, including transitional benchmarking against a separate Medicare DQM-specific cohort and methodologies as new data sources are added (Protection 2). Defer direct comparison to legacy methods until source data, tooling, and validation practices have reached operational maturity.	(ii) Benchmarks. Except as provided in paragraphs (b)(1)(ii)(B) through (F) of this section, benchmarks will be based on performance by collection type, from all available sources, including MIPS eligible clinicians and APMs, to the extent feasible, during the applicable baseline or performance period. (A) Each benchmark must have a minimum of 20 individual clinicians or groups who reported the measure meeting the case minimum requirement at paragraph (b)(1)(iii) of this section and the data completeness requirement at § 414.1340 and having a performance rate that is greater than zero. (B) CMS Web Interface collection type uses benchmarks from the corresponding reporting year of the Shared Savings Program. (C) Beginning with the 2022 MIPS payment year, for each measure that has a benchmark that CMS determines may have the potential to result in inappropriate treatment, CMS will set benchmarks using a flat percentage for all collection types where the top decile is higher than 90% under the methodology at paragraph (b)(1)(ii) of this section.

Table C-2. Proposed Changes to 42 CFR Part 414: Medicare Part B/QPP Reporting Framework

Regulation	Suggested Changes	Current Regulation with Red-Lined Changes
		(D) Administrative claims-based quality measure benchmark. (1) Beginning with the CY 2023 performance period/2025 MIPS payment year, CMS calculates a benchmark for an administrative claims quality measure using the performance on the measures during the current performance period. (2) Beginning with the CY 2025 performance period/2027 MIPS payment year, for each administrative claims-based quality measure, CMS determines 10 benchmark ranges based on the median performance rate of all MIPS eligible clinicians scored on the measure, plus or minus standard deviations. (i) CMS awards achievement points based on which benchmark range a MIPS eligible clinician's performance rate for an administrative claims-based quality measure corresponds; and (ii) CMS awards achievement points equivalent to 10% of the performance threshold for a MIPS eligible clinician whose performance rate is equal to the median performance for all MIPS eligible clinicians scored on the measure. (E) Beginning with the CY 2025 performance period/2027 MIPS payment year, CMS will publish a list in the Federal Register of topped out measures determined to be impacted by limited measure choice on a yearly basis. Measures included in the list are scored from 1 to 10 measure achievement points according to defined topped out measure benchmarks calculated from performance data in the baseline period in which a performance rate of 97% corresponds to 10% of the performance threshold for the corresponding performance year. (F) Beginning in the CY 2025 performance period/2027 MIPS payment year, measures of the Medicare CQM collection type use flat benchmarks for their first two performance periods in MIPS. (G) Beginning in the CY 2026 performance period/2028 MIPS payment year, measures of the Medicare DQMs use pay for reporting for the first performance periods in MIPS. CMS retains authority to extend the pay for reporting for Medicare DQMs beyond the first performance periods through sub-regulatory guidance if CMS determines that source data, tooling, or validation practices have not sufficiently stabilized to support meaningful comparison, as specified by CMS in the form and manner designated by CMS.

Table C-2. Proposed Changes to 42 CFR Part 414: Medicare Part B/QPP Reporting Framework

Regulation	Suggested Changes	Current Regulation with Red-Lined Changes
42 CFR § 414.1390 data validation and audit adding documentation standards for Medicare DQM exclusions	Specify that data validation and audit documentation for multi-source reporting under Medicare DQMs are produced as a byproduct of measure processing and calculation, including source inventory and manifest, matching and deduplication logic, provenance, validation rules applied, and known gaps with remediation steps. Recognize the Patient Information Quality Improvement (PIQI) framework as a structural validation mechanism (Protection 3). Establish a separate good-faith remediation pathway for documented semantic and data integrity issues at source.	§ 414.1390 Data validation and auditing. (a) General. CMS will selectively audit MIPS eligible clinicians and groups on a yearly basis. If a MIPS eligible clinician or group is selected for audit, the MIPS eligible clinician or group will be required to do the following in accordance with applicable law and timelines CMS establishes: (1) Comply with data sharing requests, providing all data as requested by CMS or our designated entity. All data must be shared with CMS or our designated entity within 45 days of the data-sharing request, or an alternate timeframe that is agreed to by CMS and the MIPS eligible clinician or group. Data will be submitted via email, facsimile, or an electronic method via a secure website maintained by CMS. (2) Provide substantive, primary source documents as requested. These documents may include: Copies of claims, medical records for applicable patients, or other resources used in the data calculations for MIPS measures, objectives, and activities. Primary source documentation also may include verification of records for Medicare and non-Medicare beneficiaries where applicable. (3) For Medicare DQMs, data validation and audit documentation for multi-source reporting are produced as a byproduct of measure processing and calculation, including source inventory and manifest, matching and deduplication logic, provenance, validation rules applied, and known gaps with remediation steps. APM Entities should use the Patient Information Quality Improvement (PIQI) framework, or other frameworks designated by CMS, as a structural validation mechanism. (b) Certification. All MIPS eligible clinicians and groups that submit data and information to CMS for purposes of MIPS must certify to the best of their knowledge that the data submitted to CMS is true, accurate, and complete. Such certification must accompany the submission and be made at the time of submission. (c) Reopening. CMS may reopen and revise a MIPS payment adjustment in accordance with the rules set forth at §§ 405.980 through 405.986 of this chapter. (d) Record retention. All MIPS eligible clinicians and groups that submit data and information to CMS for purposes of MIPS must retain such data and information for 6 years from the end of the MIPS performance period.

Table C-2. Proposed Changes to 42 CFR Part 414: Medicare Part B/QPP Reporting Framework

Regulation	Suggested Changes	Current Regulation with Red-Lined Changes
		[81 FR 77537, Nov. 4, 2016, as amended at 82 FR 53959, Nov. 16, 2017]
§ 414.1415 Advanced APM criteria.		§ 414.1415 Advanced APM criteria. (a) <i>Use of certified electronic health record technology (CEHRT)</i> — (1) <i>Required use of CEHRT.</i> To be an Advanced APM, an APM must: (i) For Qualifying APM Participant (QP) Performance Periods ending with 2018, require at least 50%, or for QP Performance Periods beginning with 2019 and ending with 2024, 75% of eligible clinicians in each participating APM Entity group, or for APMs in which hospitals are the APM Entities, each hospital, to use CEHRT to document and communicate clinical care to their patients or health care providers; (ii) For QP Performance Periods prior to 2019, for the Shared Savings Program, apply a penalty or reward to an APM Entity based on the degree of the use of CEHRT of the eligible clinicians in the APM Entity; and (iii) For QP Performance Periods beginning with 2025, require use of CEHRT as defined at paragraph (3) under CEHRT at § 414.1305 to document and communicate clinical care to their patients or health care providers and allow the use of Regulated FHIR APIs as defined in § 414.1305 for collection of data for quality measures. (2) [Reserved].

Table C-3. Proposed Changes to 42 CFR Part 425: MSSP Core Framework & Data Certification

Regulation	Suggested Changes	Current Regulation with Red-lined Changes
Subpart F — Quality Performance Standards and Quality Reporting		
§ 425.502 Calculating the ACO quality performance score for performance years (or a performance period) beginning on or before January 1, 2020.		(c) <i>Extreme and uncontrollable circumstances.</i> For performance year 2021 and subsequent performance years, including the applicable quality data reporting period for the performance year, CMS uses an alternative approach to calculating the quality score for ACOs affected by extreme and uncontrollable circumstances instead of the methodology specified in paragraph (a) of this section as follows: (1) CMS determines the ACO was affected by an extreme and uncontrollable circumstance based on any of the following: (i) 20% or more of the ACO's assigned beneficiaries reside in an area identified under the Quality Payment Program as being affected by an extreme and uncontrollable circumstance. (A) Assignment is determined under subpart E of this part. (B) In making this determination, CMS uses the quarter four list of assigned beneficiaries. (ii) The ACO's legal entity is located in an area identified under the Quality Payment Program as being affected by an extreme and uncontrollable circumstance. An ACO's legal entity location is based on the address on file for the ACO in CMS' ACO application and management system. (iii) For performance year 2025 and subsequent performance years, the ACO, as defined at § 425.20, is affected by an extreme and uncontrollable circumstance due to a cyberattack, including ransomware/malware, or when the implementation of the Standardized FHIR-based API (defined at § 414.1305) is inconsistent with the specification as determined by the Quality Payment Program. (2) If CMS determines the ACO meets the requirements of paragraph (c)(1) of this section, CMS calculates the ACO's quality score as follows: (i) For performance years 2021, 2022, and 2023, the ACO's minimum quality score is set to the equivalent of the 30th percentile MIPS Quality performance category score across all MIPS Quality

Table C-3. Proposed Changes to 42 CFR Part 425: MSSP Core Framework & Data Certification

Regulation	Suggested Changes	Current Regulation with Red-lined Changes
		performance category scores, excluding entities/providers eligible for facility-based scoring, for the relevant performance year. (ii) For performance year 2024 and subsequent performance years, the ACO's minimum quality score is set to the equivalent of the 40th percentile MIPS Quality performance category score across all MIPS Quality performance category scores, excluding entities/providers eligible for facility-based scoring, for the relevant performance year. (3) If CMS determines the ACO meets the requirements of paragraph (c)(1) of this section and the ACO reports quality data on the APP quality measure set or the APP Plus quality measure set (as applicable), CMS calculates the ACO's quality score as follows: (i) For performance years 2021 and 2022, if the ACO reports quality data via the APP and meets data completeness and case minimum requirements, CMS will use the higher of the ACO's quality score or the equivalent of the 30th percentile MIPS Quality performance category score across all MIPS Quality performance category scores, excluding entities/providers eligible for facility-based scoring, for the relevant performance year. (ii) For performance year 2023, if the ACO reports quality data via the APP and meets data completeness and case minimum requirements, CMS will use the higher of the ACO's quality score or the equivalent of the 30th percentile MIPS Quality performance category score across all MIPS Quality performance category scores, excluding entities/providers eligible for facility-based scoring, for the relevant performance year. (iii) For performance year 2024, if the ACO reports quality data via the APP and meets the data completeness requirement at § 414.1340 of this subchapter and receives a MIPS Quality performance category score under § 414.1380(b)(1) of this subchapter, CMS will use the higher of the ACO's quality score or the equivalent of the 40th percentile MIPS Quality performance category score across all MIPS Quality performance category scores, excluding entities/providers eligible for facility-based scoring, for the relevant performance year.

Table C-3. Proposed Changes to 42 CFR Part 425: MSSP Core Framework & Data Certification

Regulation	Suggested Changes	Current Regulation with Red-lined Changes
		(iv) For performance year 2025 and subsequent performance years, if the ACO reports the APP Plus quality measure set and meets the data completeness requirement at <u>§ 414.1340 of this subchapter</u> and receives a MIPS Quality performance category score under <u>§ 414.1380(b)(1) of this subchapter</u>, CMS will use the higher of the ACO's quality score or the equivalent of the 40th percentile MIPS Quality performance category score across all MIPS Quality performance category scores, excluding entities/providers eligible for facility-based scoring, for the relevant performance year. (4) CMS applies determinations made under the Quality Payment Program with respect to— (i) Whether an extreme and uncontrollable circumstance has occurred; and (ii) The affected areas. (5) CMS has sole discretion to determine the time period during which an extreme and uncontrollable circumstance occurred, the percentage of the ACO's assigned beneficiaries residing in the affected areas, and the location of the ACO legal entity. [<u>85 FR 85041</u>, Dec. 28, 2020; <u>86 FR 65685</u>, Nov. 19, 2021, as amended at <u>87 FR 70234</u>, Nov. 18, 2022; <u>88 FR 79546</u>, Nov. 16, 2023; <u>89 FR 98568</u>, Dec. 9, 2024; <u>90 FR 50016</u>, Nov. 5, 2025; <u>91 FR 12080</u>, Mar. 12, 2026]
§ 425.507 Incorporating Promoting Interoperability requirements related to the Quality Payment	Add an option for meeting Shared Savings Program CEHRT use requirements at 42 CFR § 425.507 by reporting objective results for conformance, data quality, and performance of the FHIR APIs in Certified Health IT	(a) For performance years beginning on or after January 1, 2025, unless otherwise excluded under paragraph (b) of this section, an ACO participant, ACO provider/supplier, and ACO professional that is a MIPS eligible clinician, QP, or Partial Qualifying APM Participant (Partial QP) (each as defined at § 414.1305 of this chapter) must satisfy all of the following: (1) Report the MIPS Promoting Interoperability performance category measures and requirements to MIPS according to 42 CFR part 414 subpart O at the individual, group, virtual group, or APM Entity level. (2) Earn a performance category score for the MIPS Promoting Interoperability performance

Table C-3. Proposed Changes to 42 CFR Part 425: MSSP Core Framework & Data Certification

Regulation	Suggested Changes	Current Regulation with Red-lined Changes
Program for performance years beginning on or after January 1, 2025.	used for quality measurement and reporting to support reporting of at least one of the five ACO-reported measures in the APP Plus measure set. This option would only be available to ACOs electing the Medicare DQM reporting pathway.	category at the individual, group, virtual group, or APM Entity level. (b) An ACO participant, ACO provider/supplier, or ACO professional is excluded from the requirements specified in paragraph (a) of this section in accordance with applicable policies that exclude or otherwise exempt eligible clinicians from reporting the MIPS Promoting Interoperability performance category as set forth in 42 CFR part 414 subpart O, provided however, that an ACO participant, ACO provider/supplier, or ACO professional cannot be excluded from the requirements specified in paragraph (a) solely on the basis of being a QP or Partial QP. Applicable exclusions may include: (1) Low volume threshold as set forth at § 414.1310(b)(1)(iii) of this chapter. (2) Eligible clinician as defined at § 414.1305 of this chapter who is not a MIPS eligible clinician as set forth in § 414.1310(b)(2) of this chapter. (3) Reweighting of the MIPS Promoting Interoperability performance category to 0% of the final score in accordance with applicable policies set forth at § 414.1380(c)(2) of this chapter. [From the CMS-1848-P, the CY 2027 PFS proposed rule] For PY 2027 onward, ACOs complete one of the following three activities: 1. Completely report at least one of the five ACO-reported measures in the APP Plus quality measure set through the eQMs or Medicare eQMs collection type; or 2. Use CEHRT (as defined above) support complete reporting of at least one of the five ACO-reported measures¹ in the APP Plus quality measure set and attest to using data collected from an HL7® FHIR®-based API to support quality measurement using a certified Health IT Module 3. Select and attest to one of the Shared Savings Program ACO CEHRT use metrics from the list of metrics we would establish for each performance year. - o Use CEHRT to support complete reporting of the APP Plus quality measures through the Medicare DQM reporting pathway or collection type, using data collected from a Standardized FHIR-based API that meets the criteria in the three-part framework described in this document (conformance, data quality, and API performance).

Table C-3. Proposed Changes to 42 CFR Part 425: MSSP Core Framework & Data Certification

Regulation	Suggested Changes	Current Regulation with Red-lined Changes
42 CFR Part 425, Subpart F & G — Quality Reporting Framework & Shared Savings		
42 CFR § 425.510 (Application of the APM Performance Pathway and APP Plus measure set to MSSP ACOs)	Permit ACOs reporting through the Medicare DQMs to satisfy APP/APP Plus measure set reporting obligations using FHIR-native collection methods. Recognize Medicare DQMs as an authorized submission mechanism for the APP measure set alongside currently authorized collection types (eCQMs via CEHRT, Medicare CQMs, MIPS CQMs).	§ 425.510 Application of the APM Performance Pathway (APP) quality measure set or the APP Plus quality measure set (as applicable) to Shared Savings Program ACOs for performance years beginning on or after January 1, 2021. (a) General. (1) CMS establishes quality performance measures to assess the quality of care furnished by the ACO. If the ACO demonstrates to CMS that it has satisfied the quality performance requirements in this subpart, and the ACO meets all other applicable requirements, the ACO is eligible to receive shared savings. (2) CMS seeks to improve the quality of care furnished by ACOs over time by specifying higher standards, new measures, or both. (b) Quality reporting. (1) For performance years beginning in 2021-2024, ACOs must report quality data on the APP quality measure set established under § 414.1367 of this chapter, according to the method of submission established by CMS. (2) For performance years beginning on or after January 1, 2025, ACOs must report quality data on the APP Plus quality measure set established under § 414.1367 of this chapter, according to the method of submission established by CMS.

Table C-3. Proposed Changes to 42 CFR Part 425: MSSP Core Framework & Data Certification

Regulation	Suggested Changes	Current Regulation with Red-lined Changes
		[No changes needed to this provision – existing regulation provided to illustrate where 425 refers to 414.] (c) Audit and validation of data. CMS retains the right to audit and validate quality data reported by an ACO under paragraph (b) of this section according to § 414.1390 of this chapter. [85 FR 85041, Dec. 28, 2020, as amended at 89 FR 98568, Dec. 9, 2024]
42 CFR § 425.512 (Determining the ACO quality performance standard for performance years beginning on or after January 1, 2021)	Allow for pay for reporting scoring for Medicare DQM participants during the transition period to encourage early adoption and offset the operational investment required to stand up FHIR-based reporting (Protection 2).	§ 425.512 Determining the ACO quality performance standard for performance years beginning on or after January 1, 2021. (a) Establishing a quality performance standard — (1) Overall standard. The quality performance standard is the overall standard the ACO must meet in order to be eligible to receive shared savings for a performance year. An ACO will not qualify to share in savings in any year it fails to meet the quality performance standard. (2) For the first performance year of an ACO's first agreement period under the Shared Savings Program, the ACO will meet the quality performance standard if it meets the requirements under this paragraph (a)(2). (i) For performance years 2022 and 2023. If the ACO reports data via the APP and meets the data completeness requirement at § 414.1340 of this subchapter and the case minimum requirement at § 414.1380 of this subchapter on the ten CMS Web Interface measures or the three eCQMs/MIPS CQMs, and the CAHPS for MIPS survey, for the applicable performance year. (ii) For performance year 2024. If the ACO reports data via the APP and meets the data completeness requirement at § 414.1340 of this subchapter on the ten CMS Web Interface measures or the three eCQMs/MIPS CQMs/Medicare CQMs, and the CAHPS for MIPS survey (except as specified in § 414.1380(b)(1)(vii)(B) of this

Table C-3. Proposed Changes to 42 CFR Part 425: MSSP Core Framework & Data Certification

Regulation	Suggested Changes	Current Regulation with Red-lined Changes
		<u>subchapter</u>), and receives a MIPS Quality performance category score under <u>§ 414.1380(b)(1) of this subchapter</u>, for the applicable performance year. (iii) For performance years 2025 and 2026. If the ACO reports the APP Plus quality measure set and meets the data completeness requirement at <u>§ 414.1340 of this subchapter</u> on all eQMs/MIPS CQMs/Medicare CQMs, and the CAHPS for MIPS survey (except as specified in <u>§ 414.1380(b)(1)(vii)(B) of this subchapter</u>), and receives a MIPS Quality performance category score under <u>§ 414.1380(b)(1) of this subchapter</u>, for the applicable performance year. (iv) For performance year 2027 and subsequent performance years. If the ACO reports the APP Plus quality measure set and meets the data completeness requirement at <u>§ 414.1340 of this subchapter</u> on all eQMs/Medicare CQMs, and the CAHPS for MIPS survey (except as specified in <u>§ 414.1380(b)(1)(vii)(B) of this subchapter</u>), and receives a MIPS Quality performance category score under <u>§ 414.1380(b)(1) of this subchapter</u>, for the applicable performance year. (3) For performance year 2021. (i) Except as specified in <u>paragraph (a)(2) of this section</u>, CMS designates the quality performance standard as the ACO reporting quality data via the APP established under <u>§ 414.1367 of this subchapter</u>, according to the method of submission established by CMS and achieving a quality score that is equivalent to or higher than the 30th percentile across all MIPS Quality performance category scores, excluding entities/providers eligible for facility-based scoring. (ii) If an ACO does not report any of the ten CMS Web Interface measures or any of the three eQMs/MIPS CQMs and does not administer a CAHPS for MIPS survey under the APP, the ACO will not meet the quality performance standard. (4) For performance years 2022 and 2023.

Table C-3. Proposed Changes to 42 CFR Part 425: MSSP Core Framework & Data Certification

Regulation	Suggested Changes	Current Regulation with Red-lined Changes
		(i) Except as specified in paragraph (a)(2) of this section, CMS designates the quality performance standard as the ACO reporting quality data via the APP established under § 414.1367 of this subchapter according to the method of submission established by CMS and either: (A) Achieving a quality score that is equivalent to or higher than the 30th percentile across all MIPS Quality performance category scores, excluding entities/providers eligible for facility-based scoring, or (B) If the ACO reports the three eQMs/MIPS CQMs in the APP measure set, meeting the data completeness requirement at § 414.1340 of this subchapter and the case minimum requirement at § 414.1380 of this subchapter for all three eQMs/MIPS CQMs, achieving a quality performance score equivalent to or higher than the 10th percentile of the performance benchmark on at least one of the four outcome measures in the APP measure set and a quality performance score equivalent to or higher than the 30th percentile of the performance benchmark on at least one of the remaining five measures in the APP measure set. (ii) For performance year 2023, CMS designates an alternative quality performance standard for an ACO that does not meet the criteria described in paragraphs (a)(2) or (a)(4)(i) of this section, but reports quality data via the APP established under § 414.1367 of this subchapter according to the method of submission established by CMS and achieves a quality performance score equivalent to or higher than the 10th percentile of the performance benchmark on at least one of the four outcome measures in the APP measure set.

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Regulation	Suggested Changes	Current Regulation with Red-lined Changes
		(iii) If an ACO does not report any of the ten CMS Web Interface measures or any of the three eQMs/MIPS CQMs and does not administer a CAHPS for MIPS survey under the APP, the ACO will not meet the quality performance standard or the alternative quality performance standard. (5) For performance year 2024 and subsequent performance years. (i) Except as specified in paragraphs (a)(2) and (7) of this section, CMS designates the quality performance standard as: (A) For performance year 2024, the ACO reporting quality data on the APP quality measure set established under § 414.1367 of this subchapter, according to the method of submission established by CMS and— (1) Achieving a quality score that is equivalent to or higher than the 40th percentile across all MIPS Quality performance category scores, excluding entities/providers eligible for facility-based scoring, or (2) If the ACO reports the three eQMs/MIPS CQMs in the APP measure set, meeting the data completeness requirement at § 414.1340 of this subchapter for all three eQMs/MIPS CQMs, and achieving a quality performance score equivalent to or higher than the 10th percentile of the performance benchmark on at least one of the four outcome measures in the APP measure set and a quality performance score equivalent to or higher than the 40th percentile of the performance benchmark on at least one of the remaining five measures in the APP measure set.

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Regulation	Suggested Changes	Current Regulation with Red-lined Changes
		(B) For performance years 2025 and 2026, the ACO reporting quality data on the APP Plus quality measure set established under <u>§ 414.1367 of this subchapter</u>, according to the method of submission established by CMS and— (1) Achieving a quality score that is equivalent to or higher than the 40th percentile across all MIPS Quality performance category scores, excluding entities/providers eligible for facility-based scoring; or (2) If the ACO reports all of the eQMs/MIPS CQMs in the APP Plus quality measure set applicable for a performance year, meeting the data completeness requirement at <u>§ 414.1340 of this subchapter</u> for all eQMs/MIPS CQMs, and achieving a quality performance score equivalent to or higher than the 10th percentile of the performance benchmark on at least one of the outcome measures in the APP Plus quality measure set and a quality performance score equivalent to or higher than the 40th percentile of the performance benchmark on at least one of the remaining measures in the APP Plus quality measure set; or (3) For performance year 2026, if the ACO reports quality data through Medicare DQMs as defined at § 414.1305 of this subchapter, (C) For performance year 2027 and subsequent performance years, the ACO reporting quality data on the APP Plus quality measure set established under <u>§ 414.1367 of this subchapter</u>, according to the method of submission established by CMS and—

Table C-3. Proposed Changes to 42 CFR Part 425: MSSP Core Framework & Data Certification

Regulation	Suggested Changes	Current Regulation with Red-lined Changes
		(1) Achieving a quality score that is equivalent to or higher than the 40th percentile across all MIPS Quality performance category scores, excluding entities/providers eligible for facility-based scoring; or (2) If the ACO reports all of the eQMs in the APP Plus quality measure set applicable for a performance year, meeting the data completeness requirement at § 414.1340 of this subchapter for all eQMs, and achieving a quality performance score equivalent to or higher than the 10th percentile of the performance benchmark on at least one of the four outcome measures in the APP Plus quality measure set and a quality performance score equivalent to or higher than the 40th percentile of the performance benchmark on at least one of the remaining measures in the APP Plus quality measure set; or (3) If the ACO reports quality data through Medicare DQMs as defined at § 414.1305 of this subchapter (ii) CMS designates an alternative quality performance standard for an ACO that does not meet the criteria described in paragraph (a)(2) or (a)(5)(i) of this section as the following: (A) For performance year 2024, the ACO reports quality data on the APP quality measure set established under § 414.1367 of this subchapter according to the method of submission established by CMS and achieves a quality performance score equivalent to or higher than the 10th percentile of the performance benchmark on at least one of the four outcome measures in the APP quality measure set. (B) For performance year 2025 and subsequent performance years, the ACO reports quality data on the APP Plus quality measure set established under § 414.1367 of this subchapter according to the method of submission established by CMS and

Table C-3. Proposed Changes to 42 CFR Part 425: MSSP Core Framework & Data Certification

Regulation	Suggested Changes	Current Regulation with Red-lined Changes
		achieves a quality performance score equivalent to or higher than the 10th percentile of the performance benchmark on at least one of the outcome measures in the APP Plus quality measure set. (iii) An ACO will not meet the quality performance standard or the alternative quality performance standard if: (A) For performance year 2024, the ACO does not report any of the 10 CMS Web Interface measures, any of the three eQMs/MIPS CQMs/Medicare CQMs and does not administer a CAHPS for MIPS survey (except as specified in § 414.1380(b)(1)(vii)(B) of this subchapter) under the APP. (B) For performance years 2025 and 2026, the ACO does not report any of the eQMs/MIPS CQMs/Medicare CQMs/Medicare DQMs in the APP Plus quality measure set and does not administer a CAHPS for MIPS survey (except as specified in § 414.1380(b)(1)(vii)(B) of this subchapter). (C) For performance year 2027 and subsequent performance years, the ACO does not report any of the eQMs/Medicare CQMs/ Medicare DQMs in the APP Plus quality measure set and does not administer a CAHPS for MIPS survey (except as specified in § 414.1380(b)(1)(vii)(B) of this subchapter). (6) For performance years 2022, 2023, and 2024, CMS designates a performance benchmark and minimum attainment level for each CMS Web Interface measure and establishes a point scale for the measure as described in § 425.502(b). (7) CMS will use the higher of the ACO's quality score or the equivalent of the 40th percentile MIPS Quality performance category score across all MIPS Quality performance category

Table C-3. Proposed Changes to 42 CFR Part 425: MSSP Core Framework & Data Certification

Regulation	Suggested Changes	Current Regulation with Red-lined Changes
		scores, excluding entities/providers eligible for facility-based scoring, for the relevant performance year when— (i) For performance year 2024, if an ACO reports all of the required measures, meeting the data completeness requirement at § 414.1340 of this subchapter for each measure in the APP quality measure set and receiving a MIPS Quality performance category score as described at § 414.1380(b)(1) of this subchapter and the ACO meets either of the following: (A) The ACO's total available measure achievement points used to calculate the ACO's MIPS Quality performance category score are reduced under § 414.1380(b)(1)(vii)(A) of this subchapter. (B) At least one of the eQMs/MIPS CQMs/Medicare CQMs does not have a benchmark as described at § 414.1380(b)(1)(i)(A) of this subchapter. (ii) For performance year 2025 and subsequent performance years, if an ACO reports all of the required measures in the APP Plus quality measure set, meeting the data completeness requirement at § 414.1340 of this subchapter for each measure in the APP Plus quality measure set, and receiving a MIPS Quality performance category score as described at § 414.1380(b)(1) of this subchapter, for the relevant performance year, and the ACO meets either of the following: (A) The ACO's total available measure achievement points used to calculate the ACO's MIPS Quality performance category score are reduced under § 414.1380(b)(1)(vii)(A) of this subchapter. (B) At least one of the required measures in the APP Plus quality measure set does not have a benchmark as described at § 414.1380(b)(1)(i)(A) of this subchapter.

Table C-3. Proposed Changes to 42 CFR Part 425: MSSP Core Framework & Data Certification

Regulation	Suggested Changes	Current Regulation with Red-lined Changes
42 CFR Part 425, Subpart H — Beneficiary Data Sharing		
42 CFR §§ 425.702 (Beneficiary Data Sharing)	Medicare DQMs depend on continuous, reconcilable beneficiary attribution data from CMS that current data-sharing mechanisms do not provide. CMS could modernize beneficiary data sharing to replace static, point-in-time aggregate reports with API-based delivery of continuously refreshed beneficiary data, inclusive of version history, effective dates, change reasons, and audit trail, enabling ACOs to reconcile attribution changes and align Medicare DQM calculations with current assignment state;	§ 425.702 Aggregate Reports. CMS shares aggregate reports with ACOs as follows: (a) Aggregate reports are shared at the start of the agreement period based on beneficiary claims data used to calculate the benchmark, and each quarter thereafter during the agreement period. (b) These aggregate reports include, when available, the following information, deidentified in accordance with 45 CFR 164.514(b): (1) Aggregated metrics on the assigned beneficiary population. (2) Utilization and expenditure data at the start of the agreement period based on historical beneficiaries used to calculate the benchmark. [....] (iii) For performance year 2024 and subsequent performance years, CMS, upon the ACO's request for the data for purposes of population-based activities relating to improving health or reducing growth in health care costs, protocol development, case management, and care coordination, provides the ACO with information about its fee-for-service population. (iv) For performance year 2027 and subsequent performance years, CMS, upon the ACOs' request for the data for purposes of population-based activities relating to improving health or reducing growth in health care costs, provides API-based delivery of continuously refreshed beneficiary data, inclusive of version history, effective dates, change reasons, and audit trail.