

Modernizing Medicare Risk Adjustment and Performance Measurement:

*Moving Beyond Fee-for-Service for Payment Accuracy,
Care Improvement, and Burden Reduction*



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EXECUTIVE SUMMARY

Risk adjustment of person-level payments are foundational for Medicare Advantage (MA), the Medicare Shared Savings Program (SSP), and other accountable care organization (ACO) programs in Traditional Medicare. However, these payments remain based on claims data from beneficiaries in fee-for-service (FFS) care, resulting in fundamental challenges and biases in their use for payment:

- FFS claims data do not accurately capture many diagnoses and risk factors, and reflect care patterns not necessarily representative of care in accountable health care organizations; and
- The resulting payment incentives lead to additional administrative costs and clinician burdens related to capturing diagnoses where payments significantly exceed beneficiary costs of care, and potentially diminish investments in improving clinical care for health risks that are underdiagnosed and undertreated in FFS

These concerns about risk adjustment are not new, but addressing them is increasingly urgent:

- A majority of Medicare beneficiaries are enrolled in MA or attributed to SSP organizations, which continue to grow with bipartisan support, creating greater impact on spending and quality of care;
- Clinical documentation requirements related to risk adjustment and performance measurement in value-based arrangements are imposing additional costs and burdens; and
- The Centers for Medicare & Medicaid Services (CMS) are implementing a strategy to reduce burden and improve clinical data use for performance measurement and quality improvement based on certified electronic health record (EHR) standards, but these reforms are not aligned with risk adjustment reforms

We propose a pathway to address the challenges to effective risk adjustment in MA, SSP, and other CMS person-based payment and care reforms. The core principle is that accountable care payment should rely on reliable, clinically meaningful data used by providers in accountable care to improve care and lower costs for their beneficiaries – not FFS claims:

- Set a clear vision and strategy for modernizing accountable care payments and reporting for both risk and quality based on reliable data derived from EHR systems used to support and improve care delivery
- Implement a transition path for aligning risk adjustment and performance reporting from electronic health record systems that are the “source of truth” for care management to improve outcomes and lower costs
- Implement a transition path for using accurate and representative MA and SSP data sources to calibrate risk adjustment models
- Identify initial focus areas for phasing in risk adjustment reforms alongside performance measurement reforms, starting in areas of high need and expanding over time
- Develop routine audit systems designed to work directly with electronic health source data to validate risk adjustment and performance measurement reporting
- Build on the modernized data framework for risk adjustment and performance measurement to drive further improvements in payment accuracy and performance, while continuing to reduce administrative burdens

INTRODUCTION

From the beginning of the MA and Traditional Medicare (TM) ACO programs, risk adjustment has played a critical role in adjusting capitated payments at the person level to reflect a beneficiary's expected spending relative to a set benchmark.¹ These risk-adjusted payments aim to encourage accountable health plans and provider organizations to attract and retain beneficiaries regardless of their health status. Higher-risk beneficiaries should not be disadvantaged in terms of access to the more costly providers and treatments needed to address their health needs. Indeed, risk adjustment should encourage more investment in capabilities to provide innovative care that reduces costs associated with exacerbations or complications of these conditions, and the use of unnecessary or duplicative services, compared to FFS payment. The resulting savings from a better care model made possible by the flexibilities in person-level payment should enable both more generous services and higher net revenues.

Other policies, including regulatory standards, performance measurement, and plan and provider competition also significantly influence the quality and cost of care for beneficiaries, and in turn their health risks. But risk adjustment has a particularly consequential impact on plan and provider payment in Medicare Advantage and advanced Medicare ACO models—risk-adjusted payments can vary tenfold or more across beneficiaries.²

The services received by two-thirds or more of Medicare beneficiaries now depend in full or in part on risk-adjusted, person-level payment, including more than half of Medicare beneficiaries enrolled in MA, and close to one-third of TM beneficiaries in SSP, ACO Realizing Equity, Access, and Community Health (REACH), and similar accountable care arrangements.^{3,4} As CMS aims to provide access to coordinated, accountable care for all Medicare beneficiaries by 2030, and as accurate diagnostics and targeted therapeutics continuing to advance, risk adjustment will become even more important.⁴

Yet current risk adjustment methods remain based on the Hierarchical Categorical Conditions (HCC) model, which uses diagnoses and Medicare payments from claims data for beneficiaries in TM FFS care in a statistical model to determine an expected spending risk score for a

beneficiary relative to a beneficiary with average expected risk.⁵ The HCC model was developed in response to a key policy question around the implementation of Medicare Advantage (formerly Medicare+Choice): what are the best available electronic data sources and modeling techniques to implement person-level payments that accurately reflect risk, and to encourage plans to invest in care and benefits that reflect the needs of all beneficiaries, particularly those with higher predictable risk? In the early- to mid-2000s, the answer was electronic claims data, which are still being constructed and used according to evolving CMS standards.

What is the answer to that question now, for MA, Medicare ACOs, and other accountable payment programs in the 2020s and beyond? Instead of traditional FFS insurance claims, the best data seems to be from increasingly standardized electronic health-related data used to support care delivery, including associated financial and utilization data related to resource use. Electronic health records (EHRs) have become nearly universal, with increasing adoption of standardized formats, interoperability, and experience to support validity and comparability, including the incorporation of new sources of care-relevant data such as patient-generated data and social and economic data.

Dashboards and tools integrating clinical, financial, patient-generated health, utilization, and spending data are at the heart of care management programs in effective accountable organizations. While increasingly powerful, the data and features required in this sophisticated infrastructure to support person-focused clinical care differ from the administrative infrastructures and data required for reporting and documenting beneficiary health risks for risk adjustment payments.

Below, we describe how this misalignment stems from relying on FFS claims data and analytic models to determine payments in a program that is increasingly driven by non-FFS payments. First, the claims data for TM FFS beneficiaries used to determine risk-adjusted payments have less complete data on reported diagnoses. Second, the resource costs associated with many of these diagnoses may differ for FFS beneficiaries versus those in accountable care programs.

The mismatch between incomplete reported diagnoses and associated spending in FFS claims versus increasingly sophisticated analytic capabilities of accountable health care providers and plans is a growing source of misalignment between the goals and the realities of payment mechanisms for “value-based” or accountable care. As a result, payment policies may lead to higher administrative burdens and higher Medicare spending for finding and reporting diagnoses when the FFS-based risk adjustment factors lead to excessive predictions of patient resource needs in accountable care systems.^{6,7} They also may lead to underinvestment in clinical and supporting infrastructure for early disease detection and management, for conditions that are not detected and treated adequately in FFS practices.

CMS is taking short-term steps to address areas of higher “coding intensity” in MA and SSP programs and other risk-based models. These steps do not, however, address the fundamental and growing misalignment between the data and care capabilities in accountable care versus the legacy payment structure based on FFS claims and care models.

Addressing this misalignment is challenging, but the costs and distortions of inaction will continue to rise. We build on previous work by Duke-Margolis, our collaborators, and others to describe key considerations for a modernized risk adjustment system. Our approach reflects the general principle that accurate, fit-for-purpose data are a foundation for analytic models to achieve policy goals—in this case, assuring appropriate payment adjustments for important beneficiary health risks to discourage favorable risk selection, while encouraging high-quality, efficient and equitable care with fewer administrative burdens. Concerns about risk adjustment modernization are not new. However, progress on electronic standards and interoperability in data infrastructure and analytics enables risk adjustment to align with data that clinicians need to deliver care in accountable organizations, allowing for streamlined reporting mechanisms rather than costly add-ons to clinical workflows. Based on this review, we propose a pathway for the future of risk adjustment to advance the goals of Medicare’s accountable care models for health plans and providers.

The Challenges of Fee-for-Service-Based Risk Adjustment as Accountable Care Grows

Unrepresentative and Inaccurate Risk Adjustment Measures Complicate the Reality and Perception of Accountable Care

Because diagnosis coding generally is not linked to activity-based FFS reimbursement in TM, diagnoses are not coded as completely as in MA and SSP, where diagnoses matter for both longitudinal care management and HCC-based plan and provider payment. Medicare beneficiaries who receive more covered services in FFS TM have higher medical spending, as well as more claims and more associated diagnoses. Some reported diagnoses may consequently be associated with higher spending, not because of the condition per se but because more claims exist. That is, the conditions would appear to be less prevalent and more expensive according to FFS claims.

Even if diagnoses were as accurately captured in FFS as in MA and accountable practices, associated spending estimates from claims for TM FFS beneficiaries mostly reflect FFS care, not care in accountable practices.⁸

As a result, risk adjustment methods may persistently bias practices toward FFS spending and utilization patterns, and discourage practice reforms that accountable care payments might encourage if risk adjustment were based on utilization in more representative practices.

Conditions associated with higher costs in FFS relative to accountable care practices create persistent risk adjustment incentives to provide additional benefits or treatments to attract beneficiaries with those conditions, even if accountable practices can take steps to eliminate low-value care, reduce complications, and lower spending—or even reverse or eliminate the condition itself. Conversely, depression and other behavioral health conditions, hypertension and cardiometabolic syndrome, and other common risk factors for chronic disease complications are undertreated in FFS, especially in milder or asymptomatic cases. This results in risk adjustment that provides less support for early detection and management. Indeed, such underdiagnosis and undertreatment may result in the conditions not being included in the risk adjuster at all.

Similarly, substantial evidence suggests that utilization is a biased measure of underlying health needs for individuals in historically underserved racial, ethnic, and socioeconomic groups.⁹ CMS has acknowledged that FFS data has undesirable consequences for risk adjustment as a result of this kind of underprediction, by increasing risk-adjusted benchmarks in major ACO programs (SSP and REACH) for ACOs that have a larger share of patients expected to have greater social barriers to access to care.^{10,11} CMS is using a regionally-based Area Deprivation Index measure and measure of the share of beneficiaries with dual eligibility status, and is considering similar payment adjustments in Medicare Advantage.¹² These geographic adjustments are needed because FFS claims data do not support reliable measurement of such differences in risk. Better data for more reliable measures that accurately reflect these risks and the costs of addressing them in accountable organizations will need to come from those organizations.

Incomplete or inaccurate diagnosis data, and unrepresentative utilization and spending measures associated with these diagnoses, was a relatively minor issue when MA and SSP were less prevalent, and when health plans and providers had limited electronic capabilities and paper records. But data and analytic technology to support clinical and financial decisions in health care have moved far beyond the core data and analytic technology of traditional risk adjustment. One consequence is higher MA spending, not because reported diagnoses from MA plans are inaccurate (subject to effective documentation and auditing, as we describe below), but because the underlying inaccurate FFS data create biased incentives for reporting.¹³ Another consequence is likely underinvestment in conditions and populations that are undertreated in FFS care and thus underrecognized in risk adjustment.

This intrinsic misalignment at the core of using FFS data to determine accountable care payment is hard to address using current data and statistical models, despite notable efforts. CMS has implemented broad cap on payment increases related to diagnosis coding in SSP, and calls for “rebasin” ask to correct the higher resulting average MA payments for beneficiaries compared to FFS Medicare. However, these steps do not change the fundamentally misaligned incentives to invest in capabilities to report diagnoses and attract beneficiaries that lead to more favorable net reimbursement, and not to invest in

capabilities to report diagnoses and attract beneficiaries whose spending risks are underpredicted. Capping risk adjustment factors (RAFs) or increasing conversion factors does not reduce administrative burden caused by FFS-based payment. This instead leads to less overall financial support, which would likely reduce overall spending and net revenues, but also investments in electronic infrastructure to support better accountable care.

CMS has taken steps to drop misaligned diagnoses to address MA overpayments, but this too has secondary consequences while risk adjustment remains based on FFS claims.¹⁴ Because of higher reported rates in MA and questionable applicability of FFS spending, the final 2024 CMS MA Rate Notice took steps to address some of the most prominent diagnoses that lead to higher MA payments relative to FFS spending by phasing out many common diagnoses from the HCC model.¹⁵ The risk adjustment model now relies on less of the increasingly sophisticated diagnosis data used to identify and intervene with at-risk patients, potentially creating consequences for such patient groups and contributing to risk selection differences between TM and MA.^{16,17} As noted above, CMS aimed to offset the potential impact on many beneficiaries at higher risk for these conditions using geographic measures of social risk, but such measures are imprecise. The next steps on risk adjustment after phase-in of these short-term reforms are unclear.

Distinct Infrastructure for RAF and Other Risk-Related Data Reporting Complicates Investments to Improve Care

EHRs have become the principal vehicles not only for supporting clinical care, but also to collect the needed clinical documentation for risk adjustment. Accountable health care organizations have invested substantial resources in an infrastructure to capture diagnoses from EHRs for more favorable RAF scores, particularly diagnoses that are most consequential for RAF calculation, just as FFS organizations have developed infrastructure for capturing FFS billing and coding data from EHRs. This infrastructure aims to engage clinicians in accurately reporting the patient factors that count toward RAF scores, while complying with Medicare regulations for accurate coding documentation. It amounts to a billing infrastructure that enables clinical care data to support the FFS claim-like “encounter” data used in the HCC model.

This might not be excessively burdensome if the data required for RAF were well aligned with the clinical data required for effective and efficient care management. But, as we have described, the misalignment between modern electronic health data capabilities and reporting incentives based on FFS data is likely increasing, adding to clinician workloads in organizations moving into value-based care.

Compounding these burdens, EHRs are the clinical data source for a growing set of reporting requirements that also relate to underlying beneficiary health risks but create avoidable reporting burdens because they are not aligned with risk adjustment reporting.¹⁸ Since the early days of the accountable care programs like MA and SSP, participating organizations have been required to report performance measures based on appropriately-documented underlying clinical data, both for payment incentives related to quality and public transparency to enable more informed choices. For the MA Stars program, measures generally applicable to beneficiaries (e.g., care experiences) continue to be reported through separate data mechanisms, such as surveys of beneficiaries through the Consumer Assessment of Health Plans (CAHPS).¹⁹ Meanwhile, measures related to quality of care for particular conditions, such as HEDIS measures or similar SSP ACO measures, require data collection from clinical data sources, and often are not aligned across health plans.²⁰

To reduce burden and improve integration with electronic records, CMS is moving these measures to standard electronic Quality Measure (eQM) formulations that are intended to be easier to derive from EHRs. In collaboration with the Office of the National Coordinator for Health Information Technology, CMS also is advancing requirements for “bulk Fast Healthcare Interoperability Resources (FHIR)” standards in EHRs to enable ACO aggregation of clinical and administrative data for purposes of calculating and reporting quality for any payer. This performance measurement infrastructure remains administratively separate from the diagnosis reporting requirements for determining a beneficiary’s RAF score, even though the diagnoses captured in EHR systems and used in Medicare’s performance measures also generally contribute to risk adjustment factors.

Because of the administrative burdens associated with non-aligned data systems, accountable organizations have pushed for streamlining standardized quality measures. They also have highlighted the burden of reporting additional proposed measures—such as functional status or patient-reported outcomes for common conditions—even though the measures are clinically meaningful for high-quality care and are often included in their own clinical care management systems, and even as they continue to invest in meeting documentation requirements for hundreds of diagnoses to support higher risk adjustment payments.

Similarly, as CMS has added requirements for documenting and addressing social determinants of health (SDOH), technology systems are being layered onto EHRs for performance reporting and collection of compliant data for SDOH-related reporting and payment. For example, CMS is supporting standards through updates in its inpatient prospective payment system rule for reporting on screening and resolution of common social needs, potentially through “Z-codes.”²¹ While clearly important, these add-on reporting requirements will add to administrative complexity. Similar implementation challenges may occur if CMS incorporates more functional status measures—as is currently done in a FFS claims-based approach for post-acute care payment.

The multiple and distinct infrastructures for risk adjustment and other measures related to patient risk and care management, all requiring distinct additional data infrastructures that add to clinician workflows, have resulted in administrative burdens that many clinicians had hoped to leave behind as their organization moves from FFS to value-based care. The absence of an integrated system for capturing modern electronic health data relevant to patient care management and coordination, and the need to document additional diagnoses that may not be relevant to a patient’s care plan, exacerbates the challenges of implementing accountable care. It creates the foundation for a new kind of clinician burnout. It also impedes the ability to move to more accurate and efficient models of risk prediction and performance measurement, which can be supported by modern EHRs that integrate richer and more diverse patient-relevant data, and leverage increasingly sophisticated analytics and artificial intelligence (AI). Some of the early applications of generative AI tools aim to reduce administrative compliance burdens and further optimize RAF scores.

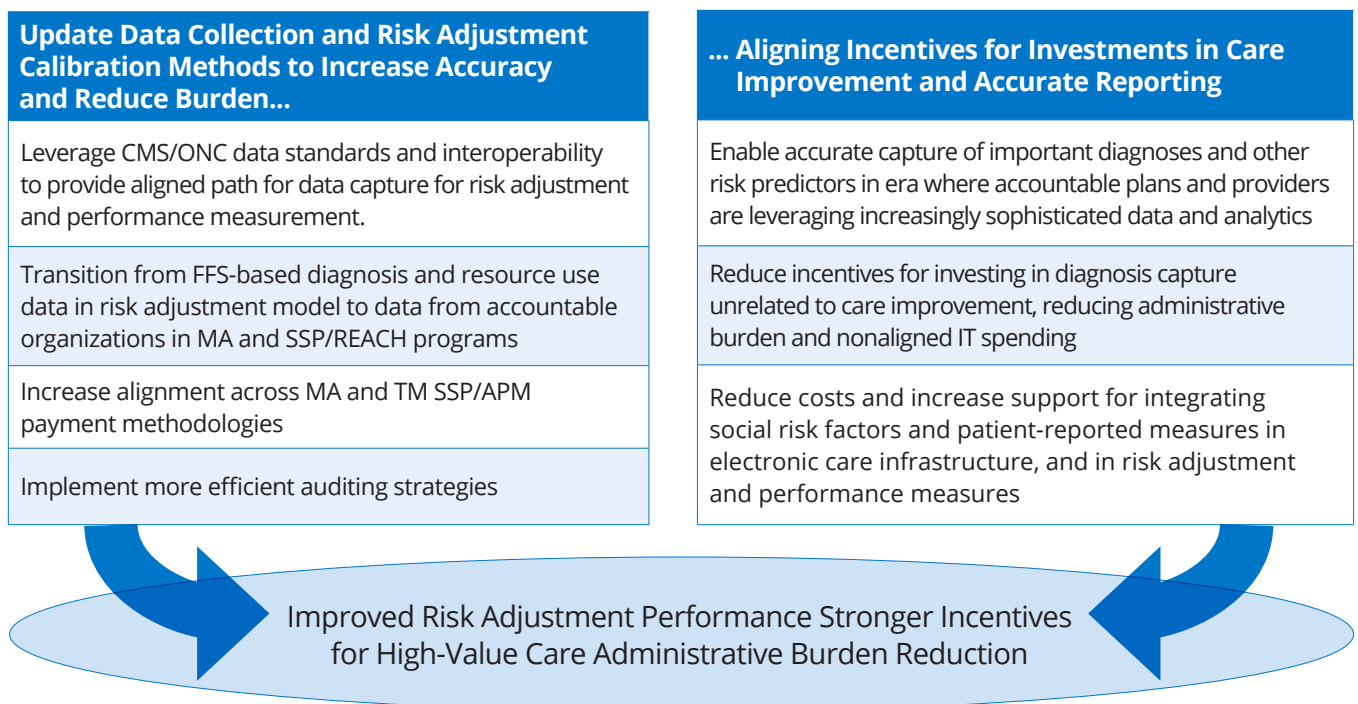
Modernizing Risk Adjustment and Accountable Care Reporting

An evolution of risk adjustment methods and related reporting requirements to reflect modern, accurate data sources in MA and SSP seems inevitable but will be challenging, as many have noted. CMS continues to justify use of FFS claims for MA and SSP risk adjustment calibration in part because of the concerns about the unreliability of claims (“encounter”) data to assess relative resource use in organizations that have moved away from FFS payments.²² With FFS data becoming less representative and facing criticism that its use is driving excess payments and inefficient data investments, a modernization strategy is needed—not just short-term patches, but a pathway from FFS claims-based risk adjustment to risk adjustment data and methods better aligned with those used now and in the future for efficient, less administratively burdensome accountable care.

Figure 1 proposes a strategic path for such reforms, based on previous Duke-Margolis reports on risk adjustment reform and expert convenings and consultations.² To enable accurate risk prediction, the reforms should move toward greater reliance on accurate electronic source

data that is integral to high-quality and efficient patient care, including both clinical and financial data. Avoiding the limitations of relying on traditional FFS claims and claims-like “encounter” data, the strategic path advises aligned use of key clinical and resource use data as a basis for risk adjustment as well as modernized performance measurement to increase the accuracy and efficiency of predicting clinically meaningful health risks. Steps toward alignment also would support the goal of significantly reducing administrative burden. Relying on data needed for efficient care delivery in person-centered care models would encourage further investments in electronic data systems that support both better diagnosis and health risk management at the lowest cost. Indeed, engaging clinicians through a strategic goal of advancing meaningful performance measurement to support better care—by capturing clinical data that is important for risk adjustment of better performance measures and of person-based payments—could alleviate burnout caused by data collection requirements that are not clearly and explicitly aligned with the goal of improving beneficiary care.


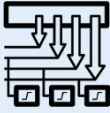
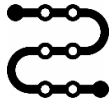
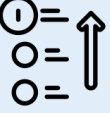


FIGURE 1 | Key Strategies for Transitioning to a Modernized Risk Adjustment System



Given the unresolved challenges in shifting to more complete and accurate diagnosis and/or other risk data, and obtaining reliable resource use data, these reforms will take time and effort to develop and implement

effectively, and should have guardrails to avoid new kinds of measurement errors and excess administrative burden. We propose six steps to implement this reform strategy in **Table 1** and expand upon them below.

TABLE 1 | Proposed Steps for Modernizing Risk Adjustment and Performance Measurement

	<p>Set a clear vision and strategy for modernizing accountable care payments and reporting for both risk and quality, based on reliable data derived from EHR systems used to support and improve care delivery.</p>
	<p>Implement a transition path for increasingly aligned risk adjustment and performance reporting from electronic health record systems that are the “source of truth” for care management to improve outcomes and lower costs.</p>
	<p>Implement a transition path for using accurate and representative MA and SSP data sources to calibrate risk adjustment models.</p>
	<p>Identify initial focus areas for phasing in risk adjustment reforms alongside performance measurement reforms, starting in areas of high need and expanding over time.</p>
	<p>Develop routine audit systems designed to work directly with electronic health source data to validate risk adjustment and performance measurement reporting.</p>
	<p>Build on the modernized data framework for risk adjustment and performance measurement to drive further improvements in payment accuracy and performance, while continuing to reduce administrative burdens.</p>

Set a clear vision and strategy for modernizing accountable care payments and reporting for both risk and quality, based on reliable data derived from EHR systems used to support and improve care delivery

In particular, CMS could outline a unified approach toward enabling application access for Medicare Advantage plans and accountable providers to bulk FHIR/United States Core Data for Interoperability (USCDI) standards in order to capture data required for risk adjustment through the same modernized standards being used to produce performance measures (and risk adjusters) for public reporting and payments related to quality. The aim is to

support and reward accountable plans and providers that make the most progress toward implementing effective and efficient strategies for improving risk trajectories for Medicare beneficiaries, while imposing the least administrative burden possible and thus encouraging further investments in such integrated care management systems. The resulting specifications for both reporting risk factors and performance measures would extend CMS’ National Quality Strategy toward more straightforward and automated data collection and reporting of standard performance measures.²³ Ideally, the strategy would engage clinicians by focusing

on important measures of performance and reliable risk adjusters for those accountability measures, which also could be used for financial risk adjustment.

This could be accompanied by an empirical strategy to identify and develop pilot databases that include MA- and SSP-based practice data on health risks, utilization, and resource use (e.g., staff activity, facilities use, durable medical equipment use, etc.) to develop reliable data for calibrating HCC and future models to predict relative resource needs. Over time, this pathway would enable more accurate and less burdensome data reporting for better predictive models of risk trajectories for resource use and clinical outcomes, such as LLM-based models.

Implement a transition path for increasingly aligned risk adjustment and performance reporting from electronic health record systems that are the “source of truth” for care management to improve outcomes and lower costs

This step involves developing an implementation pathway for achieving the goal of aligned, accurate electronic data for modernized risk adjustment and performance measurement. EHRs, integrated clinical registries, and other decision support systems are currently the indirect “source of truth” for the claims-based risk adjustment and clinical performance measurement. As we have noted, CMS is working to phase in an eCQM submission system.²⁴ For three SSP performance measures, CMS’ current regulations build upon existing EHR requirements to support bulk export of clinical data to provider-authorized FHIR-based applications that aggregate data sufficient to calculate performance measures (e.g., USCDI use cases and CMS-supported application programming interfaces designed to reduce the cost of data reporting).

Although available in all certified EHRs, such “bulk FHIR” application programming interface (API) capabilities have yet not been utilized much for applications that perform quality measurement and reporting. It is relatively new and has not yet demonstrated real-world viability to scale efficiently, though efforts like the Bulk FHIR Coalition from the National Committee for Quality Assurance aim to advance real-world testing.²⁵ Bulk FHIR also is not yet part of a broader strategy to lower overall administrative burden for accountable care payment. Consequently, special administrative effort is still the norm for most

performance measures, even though the same or similar diagnoses also are used in risk adjustment measures.

As a transitional step, keeping with the CMS claims/encounter data submission structure, CMS could designate a “FHIR encounter” structure using already certified USCDI standards that is accessible via the same type of certified bulk FHIR servers for automatic data export, to calculate both a patient’s RAF score as well as relevant performance measures. The applications that link access to the designated FHIR encounter resource from EHRs and clinical care management systems would produce the equivalent of the encounter data that plans and accountable providers are required to submit now, along with providing a pathway to align performance reporting for the same patient populations. Over time, this approach could evolve from the encounter structure toward a “FHIR health risk” structure that more directly reflects important beneficiary health risks and measurable progress on addressing them.

Measurable, significant administrative savings over time would be an explicit implementation goal, coming from reducing the need for substantial investments in a distinct RAF infrastructure and a separate performance reporting infrastructure on top of the clinical care infrastructure. The same or similar clinical data used to calculate a patient’s risk adjuster could be used to provide the relevant patient population (denominator) for a performance measure or set of measures.

In turn, this would reduce the cross-program barriers to developing and implementing more meaningful and predictive risk prediction and performance measurement systems. As we describe next, this step should be aligned with a pathway toward use of representative MA and SSP data sources for calibrating risk adjustment relative payments.

Implement a transition path for using accurate and representative MA and SSP data sources to calibrate risk adjustment models

MA and SSP data on diagnoses and other risk predictors will be more accurate than FFS claims-based diagnoses, but the challenges of linking these data to reliable measures of relative spending are well-known.²⁶ No well-established data standards exist for estimating the spending associated with valid clinical diagnoses for beneficiaries in non-FFS care delivery systems within the current HCC model.

Nonetheless, given the growing importance of this problem for advancing Medicare spending and beneficiary health in accountable care, CMS should prioritize the development and implementation of a pathway to shift to such data sources for risk adjustment calibration. One interim approach is to build on Medicare’s existing claims and “encounter”-based system, focusing on MA plans and SSP providers that still use claims-based transactions for payment (e.g., those that are not in LAN category 4 payment models; between MA and SSP, more beneficiaries fall under such models in Medicare than in FFS-only payment).²⁷ Standard Medicare payment rates, as well as key activities and personnel not reimbursed under FFS, could be imputed to these claims, and the resulting dataset could be used to determine potential impacts on risk adjustment weights. Such data also could guide further efforts to address the most clinically important areas of misalignment. A range of commercial databases include longitudinal data on MA and SSP beneficiaries that could provide a basis for adjusting HCC risk factors that are not accurate in FFS-calibrated models.

CMS also could implement a pilot program through one or more independent contractors to use electronic health data from a range of accountable care providers in MA and SSP to develop more representative measures of beneficiary resource use. This program might build on data from accountable organizations to identify beneficiaries at high risk of progressing to more costly complications, and to assess and evaluate care models to reduce costs and improve their outcomes.

In conjunction with these initial steps, CMS could issue a Request for Information (RFI) or a challenge.gov request to solicit input on better ways of obtaining reliable data and more efficient estimates for spending and health risk prediction in accountable care models.

Identify initial focus areas for phasing in risk adjustment reforms alongside performance measurement reforms, starting in areas of high need and expanding over time

To help assure that these steps avoid unintended consequences, and to identify and address implementation challenges along the way, CMS should use the initial analyses to inform a plan for phasing in the new payment adjustments and data collection mechanisms. One approach, as CMS already does with many of its payment

modifications, is to gradually shift the affected payments by blending the existing model with the new model while monitoring data quality, care impact, and beneficiary and provider complaints along the way.

This transition approach could include a focus on diagnoses or HCCs where bias and misalignment in both directions seem greatest in Medicare’s current FFS-based risk adjustment. For example, in moving from v.24 to v.28 of the MA risk adjustment system, CMS eliminated some common diagnoses such as mild diabetes and depression that appeared to be associated with payment adjustments substantially larger than associated costs. Instead of eliminating such diagnoses, especially for conditions where there is considerable evidence of undertreatment in FFS, methods like those described here—or expert simulations or other analyses with public comment—could be used to reduce the relative payment adjustments for undertreated conditions that have some additional costs when diagnosed and managed appropriately. This method would be more in line with expected relative spending in accountable organizations, where richer clinical data sources could also help identify less burdensome and more accurate ways to assure that those diagnoses are clinically meaningful. This approach could provide a bridge to modernized risk adjustment methods while encouraging early diagnosis and intervention for undertreated conditions. It could be accompanied by a more systematic analysis, building on CMS’ existing analysis done when moving to v.28, to identify additional areas where reported diagnoses are growing quickly due to misalignment with FFS-based relative spending estimates.

As a complementary step, CMS should develop more systematic mechanisms to identify health risks that are undertreated in FFS, resulting in estimates of relative spending that are too low. Such health risks may include other behavioral health conditions, cardiometabolic conditions, and earlier-stage chronic kidney disease where valid performance measures are already in use in practices with longitudinal care management for these patients. Linking such data to risk adjustment reform could limit the administrative burden and increase transparency and accountability for such conditions.

CMS’ recent steps toward adjusting risk scores based on beneficiaries’ social risk factors—associated with expected underspending—highlight the benefits of moving to a similar approach for obtaining more accurate, reliable data and measures of health-related

social needs. More accurate and reliable data for adjusting RAF scores for important risks unmeasured in the current HCC system could be drawn from the data increasingly used by health care organizations for identifying and addressing health-related social needs.

Develop routine audit systems designed to work directly with electronic health source data to validate risk adjustment and performance measurement reporting

Aligning CMS payment and reporting systems with less burdensome reliance on electronic health data used for care improvement and cost reduction still requires assurance that the data derived from these care systems are accurate and consistent with CMS reporting standards. CMS must continue to provide clear definitions of relevant diagnoses or improved risk factor measures, including appropriate supporting clinical documentation that should aim to align with data needed to support clinical risk assessment and care management. As part of its risk adjustment and performance measurement modernization, CMS should update its audit strategy to reflect clinical validity and relevance, rather than whether health care organizations are matching traditional FFS coding and visit practices.

Many ways exist to ensure accurate clinical provenance of submitted risk adjustment and performance data. For example, CMS could transition to a routine system of third-party certified audits to assure that the data are sufficiently reliable and well-documented for payment, and align with a patient's care plan. Auditors could help refine standards for certifying that the underlying EHR and care management systems facilitate accurate and complete data capture for payment and reporting. Alternatively, CMS could rely on third-party collection of "objective" data on diagnoses and other risk measures, including utilization or other patient-reported data. Such data are likely to be less costly to collect and more likely to align with data relevant to clinical care if they build on the same standards for exchange of risk and quality data used to improve care. Third-party audit or other independent data review or collection of has a significant cost. However, a well-designed reliable system building on source clinical data used for both risk adjustment and performance measurement could substantially reduce current documentation and reporting burdens, and

provide greater confidence that Medicare payments are accurate. Systematic analyses of audit results also might inform further refinements in risk adjustment methods, and in detecting issues and inconsistencies that could be corrected through improved CMS guidance or payment reforms.

Build on the modernized data framework for risk adjustment and performance measurement to drive further improvements in payment accuracy and performance, while continuing to reduce administrative burdens

A modernized data foundation for risk adjustment and performance measurement better aligns risk and performance measures with advances in clinical care and supporting electronic data capabilities and standards, which in turn enable more progress in effective payment incentives and clinical care. Today, patient registries and other care management systems incorporate more patient-generated data (e.g., standard functional status measures and passively collected data), objectively captured data such as use of certain medications or test results, and an increasing array of digital data sources. The reform directions proposed here would facilitate refinements in both risk adjustment and performance measurement using more efficient and effective data and methods. Data used in risk adjustment measures could be increasingly aligned with performance measures. For example, the same clinical data on a beneficiary's diabetes or prediabetes risk factors could be used for standard measures of control or prevention of complications that could be tracked as part of care management. Over time, better and more efficient models of clinical risk prediction could be developed, and data on changes in a beneficiary's risk prediction could be used in performance measures that reward significant improvements in a beneficiary's health risk trajectory.

As part of the risk adjustment transition path, CMS should implement a mechanism for assessing the impact of the incremental risk adjustment reforms on enabling more efficient data collection and better risk predictors compared to the traditional claims-based model, and the impact on overall administrative burden. Coupled with assessments of evidence of impact on quality of care and spending, ongoing evaluation would help assure that risk adjustment reform is achieving its intended goals.

This aligned approach will help assure that appropriate payment for higher-risk beneficiaries and payment incentives keep up with evolving clinical opportunities to improve care and lower costs. For example, it provides a platform for developing risk and performance measures based on natural language models, which become less administratively burdensome in improving clinical care models. Our approach provides a pathway for applying emerging data science methods to risk adjustment and performance measurement, including those based

on artificial intelligence and machine learning. The effectiveness of these tools depends critically on the accuracy of the underlying data and whether these data are “fit for purpose,” which is not the case for current FFS-based data.

Time to Move Forward

We have described the growing need and pathway for a stepwise but fundamental shift in Medicare’s risk adjustment methods and data sources, with implications for other critical payment policies including performance measurement that rely on similar underlying clinical data. Such modernization is challenging, but overdue in an era when person-based Medicare payment reforms have already become predominant and continue to grow, and the FFS-based data and methods do not fit. Inaccurate underlying data and incorrect estimates of risk are resulting in growing administrative burdens, misaligned incentives, higher Medicare spending, and inadequate support and transparency for accountable care opportunities to address problems of undertreatment and disparities in FFS care. It is past time to begin the shift to aligned risk adjustment and performance measurement systems that reflect the electronic systems and data used to support innovative, patient-centered, prevention-oriented care today and in the future. All of these steps build on existing policy directions and improving electronic data capabilities and standards.

Duke-Margolis is responsible for the analysis and risk adjustment reform framework presented here, but we have sought input and guidance from a wide range of stakeholders to find a path forward. Further work is needed. Given the importance of these payment issues for the future of accountable care, we will continue to seek to encourage insights and practical proposals for modernizing these foundational accountable care programs to achieve the goal of efficient, longitudinal, coordinated care for all Medicare beneficiaries.

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