NATIONAL ACADEMY OF MEDICINE

NAM Leadership Consortium
Collaboration for a Learning Health System

Value Incentives & Systems Action Collaborative

Meeting Highlights: May 22, 2025

Operational Pre-requisites for Outcome-based Payment

Value Incentives & Systems Action Collaborative (VISAC) Aim: System funding, payment, and accountability to achieve health goals and outcomes

Meeting Focus: Operational pre-requisites for outcome-based payment

Motivating Questions:

1. **Profile:** What are the defining features of outcome-based performance measurement systems that could drive real progress in health care quality, outcomes, and affordability? How can we move beyond rigid measure sets to more dynamic, clinically relevant approaches that better reflect what matters to patients and care teams?
2. **Barriers:** What technical, regulatory, and operational barriers are impeding the development and deployment of clinically sourced, low-burden outcome measures?
3. **Progress:** What promising innovations, policy shifts, or alignment agreements are helping to advance outcome-based performance measurement? How can the National Academy of Medicine (NAM), its partners, and other key stakeholders accelerate progress?

Desired Outcomes:

- Requirements and standards for outcome-based payment identified and described
- Important transitions in quality reporting acknowledged and explored
- Potential applications for artificial intelligence discussed
- A path forward for securing alignment agreements, technological infrastructure, and governance for outcome-based payment illuminated

Background

Performance measurement is at the heart of a Learning Health System and value-based care models that seek to improve health outcomes, patient care experiences, and health care affordability for all. Yet, few believe that performance measurement is living up to that promise today. Nearly 25 years ago, the NAM (then known as the Institute of Medicine) released *To Err is Human* and *Crossing the Quality Chasm*, which catapulted the health care industry towards quality measurement to improve the safety and quality of American health care. Ten years ago, the NAM published *Vital Signs: Core Metrics for Health and Health Care Progress* to identify a streamlined group of performance measures that could reflect system efficiency and effectiveness to diminish the burden of unnecessary measurement and reporting and to concentrate attention and action on issues that matter most. Since then, the field has continued work toward four specific and interrelated quality measurement aims: achieving measure parsimony, measuring outcomes rather than processes, utilizing clinically sourced data, and achieving alignment in measures developed and deployed.

In May 2025, the NAM's Value Incentives & Systems Action Collaborative (VISAC) brought together over 40 leaders from payer, provider, purchaser, regulatory, and technology organizations to identify and discuss prerequisites for payment tied to clinically sourced data and low-burden performance measures, buoying collaboration on funding, payment, and accountability for health outcomes. The four sessions explored participants' perspectives on aligning requirements and standards for outcome-based payment, important and needed transitions in quality reporting technology and policy, potential applications for artificial intelligence, and a path forward for securing alignment agreements, technological infrastructure, and governance for outcome-based payment. The convening also served as a forum for cross-sector dialog to inform organizational responses to a Centers for Medicare & Medicaid Services (CMS)/Assistant Secretary for Technology Policy (ASTP)/Office of the National Coordinator for Health Information Technology (ONC) Request for Information (RFI).[1] and a proposed CMS rule[2] on quality measurement and interoperability. The meeting's key insights and recommendations, summarized below, look to advance our capabilities and support for measurement systems that ultimately enable outcome-based payment structures, building off the strong foundations and progress made since the *Vital Signs* report.

Stakeholder Perspectives: What We Measure, What We Miss, and Why It Matters

This session surfaced multi-stakeholder perspectives on barriers to and facilitators of meaningful performance measurement. CMS's Universal Foundation and California's Quality Transformation Initiative (QTI) were discussed as models of measure alignment, outcomes orientation, and parsimony. However, in general, payer customization and measure proliferation remain the norm in markets nationwide, adding to provider frustration with measurement burden and undercutting the gains that might be achieved with more aligned measurement approaches. Participants emphasized the importance of concise, outcome-focused measure sets reflecting "what matters most" to patients and their clinicians.

The session opened with insights from senior and executive leaders of private payer, purchaser, government payment model developer, and provider organizations to provide the group assembled with a well-rounded review of the issues and opportunities. The speaker representing a payer noted that challenges lie primarily in high stakes measurement (i.e., payment for measure outcomes or public reporting), provider measurement burden, and data accuracy/validity. Despite these obstacles, the speaker highlighted patient-reported measures and measures of shared decision-making as avenues for improved care quality, offering opportunities for payers to collaborate with patients to better meet their needs. The speaker representing a purchaser's perspectives described successful coordination among California's three public purchasers—CalPERS, Covered California, and the California Department of Health Care Services (Medicaid)—which focused incentives on four population health-based measures to drive care improvements statewide. The speaker described how use of their collective influence and substantial financial incentives moved the market in California toward a focus on the four agreed upon measures of population health. A representative from the Center for Medicare and Medicaid Innovation (CMMI) described the agency's evolving measurement strategy, efforts to promote alignment, and challenges designing effective incentives. The final speaker channeled a provider perspective, underscoring the difficulties that stem from a lack of absolute benchmarks signaling

[1] Federal Register: Request for Information; Health Technology Ecosystem (CMS-0042-NC). https://public-inspection.federalregister.gov/2025-08701.pdf

[2] Medicare Program; Hospital Inpatient Prospective Payment Systems for Acute Care Hospitals and the Long-Term Care Hospital Prospective Payment System and Policy Changes and Fiscal Year 2026 Rates; Requirements for Quality Programs; and Other Policy Changes. https://www.federalregister.gov/d/2025-06271/p-2372

good quality care and the transformative power of measure simplification on behavior change and operational efficiency. He credited payer-provider partnerships, proper policy incentives, and thoughtful benefit design with driving quality improvements and addressing disparities.

During subsequent group discussion, participants agreed that meaningful measurement hinges on data liquidity—the ability for health data to be accessed, reused, and integrated across systems without extra preparation. Enhanced data liquidity opens doors to measuring what truly matters to patients while equipping providers with the information required to improve care and outcomes. The discussion underscored the need for clinical data rather than claims-based data to promote a focus on outcomes, with participants agreeing that limited data liquidity hampers progress in this area. Consensus emerged that aligning measurement efforts across markets will lead to more focused and demonstrable improvements while reducing the significant burden of current measurement practices. Participants also noted that quality measures typically reflect the data available rather than metrics reflective of better health, measuring processes over outcomes. They agreed that the inability to seamlessly capture data that is comprehensive enough to illustrate the complexity of care, quality, and the patient experience remains a barrier to outcome-based payment.

Infrastructural Requirements for Outcomes Reporting

The shift from claims-based data to clinically sourced data holds promise in improving our ability to measure quality in a more agile, valid, and impactful way. However, in the current state of technology standards adoption, use of clinical data imposes a significant administrative burden on health care providers. CMS is transitioning towards automated, digital quality measure reporting to aggregate clinical records across a broad network of providers; normalize data to increase the consistency, comparability, and accuracy of quality calculations; and receive the results. These actions are meant to improve CMS's ability to compare quality across institutions more quickly and seamlessly, however, current policies utilize several methodologies for data packaging and transfer, some of which impose heavy administrative burdens on providers and reporting organizations. This session focused on the quality reporting experience of Accountable Care Organizations (ACOs)—groups of clinicians, hospitals, and other health care providers who come together voluntarily to coordinate care for a designated group of patients.

The session began with remarks from three ACO representatives, who described their organizations' experiences with quality measurement and reporting to demonstrate operational challenges created by federal policies currently in place. They described the tremendous effort expended to report measures: working with Electronic Health Record (EHR) vendors measure by measure and facility by facility to implement the data collection, and spending time and resources to validate data through chart review rather than directing those resources to improving patient care. Although shifting to Electronic Clinical Quality Measures (eCQMs) via Quality Reporting Data Architecture (QRDA) has reduced the need for manual abstraction, ACOs continue to face technical and financial hurdles, particularly those using multiple EHRs. Speakers and others urged CMS to adopt Fast Healthcare Interoperable Resources (FHIR) standards to automate data collection, enhance interoperability, and improve measure reporting, in part because FHIR is a data standard free from intellectual property constraints as determined by the global standards organization Health Level Seven International (HL7). EHR vendors in attendance confirmed that FHIR standard adoption would reduce the manual effort required for packaging, sending, encrypting, decrypting, downloading, and extracting data. The group simultaneously urged CMS to avoid policies that promote competing data formats and promote policies that ensure seamless, symmetric data sharing between all system stakeholders, including payers and providers.

Participants noted that because many of the file types and data standards described above can only be used for quality measurement purposes, a move to FHIR could limit the administrative burden and cost of quality measurement. Efforts to optimize data for measurement would also support other uses of FHIR data such as clinical decision support, public health research, care coordination across health systems, and integrating data from medical devices into EHRs. Some asserted that smaller medical practices may particularly benefit from these changes, as the cost of quality measurement consumes a larger portion of their operating budgets. Additionally, a participant suggested that CMS require reciprocal data sharing capabilities between payers and providers via FHIR Application Programing Interfaces (APIs), which can be understood as "an entry point, or 'interface' that allows a computer program or system to access the features and data of a different program or system."[3] Currently, there is a requirement that payers make data available to providers, but not the reverse. Other participants agreed that a reciprocal arrangement might support CMS's goals of increased information sharing, as stated in the proposed rule. Such a requirement could have the added benefits of improving the performance of APIs used at provider facilities (which participants stated are variable in quality), spreading the costs of implementation more evenly throughout the system, and facilitating interoperability of data flowing between providers to improve care coordination.

Although participants agreed that change is needed, many also acknowledged that transitioning to FHIR will require a lead-in period, with early adopters playing a vital role in experimenting and sharing insights with others. Because of this, one participant proposed the formation of an "early adopter coalition;" others—spanning government, payer, ACO, and EHR vendor organizations—expressed interest in participation. Meeting participants also emphasized that a pay-for-reporting approach would help accelerate progress, prompting some participants to propose that CMS use a pay-for-reporting structure for early adopters to foster the flexibility needed for effective integration and innovation with FHIR. CMS and ASTP/ONC representatives in attendance encouraged participants to submit information on areas requiring relief in the short-term and strategies for an improved future state in the long-term in response to the open RFI so CMS can balance current regulations with what might be possible in the future. Ultimately, meeting participants agreed that adopting FHIR will reduce provider burden while improving the use of clinically sourced data for performance measurement.

The AI Advantage: Exploring the Potential for AI to Support Outcome-based Payment

This session examined how artificial intelligence (AI) can address challenges that have, thus far, prevented a shift toward clinically sourced outcome measurement in support of value-based payment and population health. Applications include but are not limited to the use of natural language processing to extract relevant outcomes and care activities from unstructured clinical notes and use of AI to translate, map, and harmonize data across FHIR, QRDA, and legacy formats to integrate clinical and claims data needed for comprehensive outcome measurement.

The session opened with remarks from three panelists who described the transformative potential of AI for quality measurement. The first described how Large Language Models (LLMs) and Natural Language Processing (NLP) can extract insights from clinical notes, automating chart reviews for complex measures (such as the 63-step sepsis measure, SEP-1) with 90% accuracy. He asserted that "notes are all you need" to

[3] The Office of the National Coordinator for Health Information Technology and the Assistant Secretary for Technology Policy. *The FHIR® API Fact Sheet.* Accessed June 2, 2025. https://www.healthit.gov/sites/default/files/page/2021-04/FHIR API Fact Sheet.pdf. Made available on https://www.healthit.gov/topic/standards-technology/standards/fhir.

support quality measurement. The second panelist discussed AI-driven predictive modeling, which has proven effective in reducing readmissions, assessing fall risks, and enhancing chronic disease management by proactively alerting clinicians to potential issues. The panelist also described ways in which AI provides meaningful insights into patient-preferred interventions and patient-centered communications by segmenting populations by likelihood of engagement, preferred communication method, and optimal contact times. With these insights, measurement could become a living, learning system that continuously surfaces meaningful quality improvement opportunities, which could in turn be elevated to accountability measures in payment programs. The final panelist highlighted AI's potential to reduce reliance on structured data fields—predefined fields from which quality measures draw data. These structured fields require extensive labor to maintain and populate and may even limit innovation in quality measurement. As mentioned above, when quality measures are developed primarily to accommodate data that can be accessed, they can become misaligned with patients' care priorities. Using depression screening and follow-up as an example, the panelist illustrated how structured data erroneously suggested low-quality care, compared to a more nuanced picture of performance illuminated by unstructured clinical notes. Collectively, the speakers advocated for AI's role in enhancing flexibility in quality measure calculation, design, and specification. They emphasized that AI-driven approaches could foster more adaptable, patient-centered outcome measures, driving innovation in health care quality assessment.

In the ensuing discussion, some participants cautioned that AI alone cannot resolve all interoperability challenges and must be implemented with appropriate checks to foster trust. One participant noted that while AI can help identify unstructured data within various data models, it does not facilitate seamless data exchange between systems and therefore cannot fully address interoperability concerns raised in the earlier session. Regarding the assertion that "notes are all you need," some participants disagreed, emphasizing the advantages of structured data fields, which enable continuous monitoring of equity in care and help prioritize clinical processes proven to improve outcomes. Additionally, several participants noted the importance of integrating validation and calibration mechanisms from the outset to ensure fair comparisons, accountability, and confidence in measurement results. Others expressed that solving data liquidity issues will improve AI's capabilities described above by supporting patient data aggregation, leading to more comprehensive and accessible information. One participant noted that in the far future, instead of simply refining existing measures and being constrained by past approaches, AI could help the field rethink what truly defines quality in health care, embracing new concepts of quality and structures for measurement.

Ultimately, meeting participants recommended a phased approach to AI implementation in quality measurement, initially leveraging AI for low-complexity tasks (e.g., data extraction) using open-source toolkits to expand accessibility, foster experimentation, and encourage collaboration. Over time, this foundation could support more advanced AI applications, such as identifying new measurement opportunities oriented towards outcomes that are based on analysis of unstructured clinical notes.

A Path Forward: Securing the Infrastructure and Processes Needed for Success

In this session, participants identified actionable steps to move toward high-value, low-burden, outcome-focused measures and measure sets that can be used to advance value-based payment and population health. Participants considered the full spectrum of issues discussed during the day, including the highest priority areas of measurement currently lacking, the data infrastructure needed to facilitate ease and accuracy of data reporting, and governance processes advisable to support aligned development and deployment of new measures, measure sets, and methods.

Panelists described early results from prospective measure alignment and payer coordination efforts at the state level, efforts to improve population health data interoperability, and potential governance structures to improve measure parsimony and alignment. The first speaker described learnings from the California QTI described earlier in the day, highlighting the role of financial incentives in driving desired outcomes. The speaker described how public payers in California united stakeholders around four core quality measures (controlling high blood pressure, hemoglobin A1c control, colorectal cancer screening, and childhood immunization status) through significant financial accountability structures, placing up to one percent of premium at risk in the first year, rising to four percent in future years.[4,5] The speaker also described the program's early success: elevating quality as a central focus in every meeting and driving some health plans to move from the 25th percentile of performance to above the 66th percentile for three of the four measured indicators (controlling high blood pressure, hemoglobin A1c control, and colorectal cancer screening). The second speaker reiterated that FHIR represents the future of interoperability, echoing earlier assertions about transitioning to the data standard. However, he also emphasized the value of structured data fields (which help ensure clinicians collect essential information) and acknowledged the financial costs associated with capturing unstructured data. He encouraged the group to take advantage of what is currently known and captured in the data, emphasizing that a move to FHIR will increase the amount of usable data, and to be mindful of the need for considering fair comparison in measure design and implementation, given the high stakes associated with payment. The final speaker reflected on the work of the NAM *Vital Signs* Committee in relation to the day's discussions. The speaker advocated for a multi-level approach to quality measure governance, allowing for payers and purchasers operating in state and local markets to define meaningful measures in their unique contexts, while simultaneously aligning with national-level measurement priorities. The speaker also noted that "technical problems get solved when the will to solve them exists," asserting that the success of the California effort was likely due to early agreements on what was valued and what should be measured, and that solutions to technical problems were likely generated to meet the agreed-upon requirements.

Participants echoed support for multiple levels of measure alignment, emphasizing its connection to parsimony. Some suggested that states could serve as testing grounds for more parsimonious measurement models at the national level, with local implementation fostering experimentation to inform national level priorities. One participant invited CMS to participate in the multi-payer alignment effort in his state (Massachusetts). Ultimately, this could reduce the burdens that arise for providers and health systems that must take typically unaligned national and state-level measurement paradigms into account.

Another participant stressed the importance of rallying around a single theory of change to ensure that quality measurement progresses cohesively across the health system. The group agreed that defining measurement priorities should not be constrained by current measurement capabilities, but should instead be guided by patient priorities, which policy and technological advancements can support.

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[4] Covered California Announces Initial Results of Its Quality Transformation Initiative Aimed at Improving Health Care Disparities Across the State

[5] Dollars collected from plans that do not meet the performance metrics established by the program will be used to fund targeted population health initiatives to benefit plan enrollees. For more information, see: Covered California Announces Launch Of Population Health Investments In Conjunction With Its Quality Transformation Initiative

Conclusion and Next Steps

This meeting generated multi-stakeholder collaboration and alignment on operational pre-requisites for outcome-based payment and surfaced guidance on next steps for CMS, ASTP/ONC, and the NAM. The meeting opened and concluded with a wide lens, examining the state of quality measurement and opportunities for high-level alignment, while the middle sessions delved into implementation challenges and opportunities.

Participants broadly agreed that current quality measurement practices and structures fall short of achieving national goals for measure parsimony, outcomes orientation, clinically sourced data, and measure alignment across the system. Almost all participants expressed a willingness to adopt FHIR-based standards rather than relying on the existing proliferation of data standards, each built for a single purpose. Many were optimistic about AI's potential to streamline and enhance clinically sourced quality measurement, if implemented with transparency. Several also suggested that, while using AI to extract data from unstructured EHR data can significantly enhance clinically sourced quality measures, it would best be used in conjunction with, not instead of, data from structured EHR fields. Calls emerged for stable measure sets, stronger and multi-level governance models, and improved data access and liquidity for purposes beyond quality measurement alone. These discussions generated numerous opportunities to advance the field of quality measurement and thereby strengthen system funding, payment, and accountability for improving health outcomes.

Participants reinforced the importance of continued dialogue and collaboration to both address the challenges described above and seize opportunities, agreeing that open communication is essential for collective progress. Several participants agreed to be part of a coalition of early adopters of a FHIR-based approach to quality measurement if required by CMS, recommending that the transition begin with pay-for-reporting initiatives to ensure participants can share information, learn from each other, and adapt based on early insights. Simultaneously, CMS and ASTP/ONC representatives emphasized their interest in engaging with implementers and the Action Collaborative more generally to ensure that policy decisions better support workflows and keep attention focused on the shared objective: improving health outcomes for all patients.

Meeting Agenda

8:30 am **Coffee/Tea and Light Breakfast**

9:00 am **Welcome and Introductions**

9:20 am **Opening Remarks and Meeting Overview**

9:30 am **Stakeholder Perspectives: What We Measure, What We Miss, and Why It Matters**

Performance measurement is central to a Learning Health System and value-based care models aiming to improve outcomes, patient experiences, and affordability. Yet few believe it's meeting that potential. Panelists will highlight barriers to and facilitators of effective measurement from different stakeholder perspectives, followed by a group discussion to align on the most important challenges and enablers.

10:40 am **10-Minute Break**

10:50 am **Infrastructural Requirements for Outcomes Reporting**

Administrative burden remains a major obstacle in the shift from claims-based to clinical data reporting despite broad stakeholder support. This session will explore how data infrastructure and standards can be optimized to enable low-burden reporting, using Accountable Care Organizations as a use case.

12:00 pm **Networking Lunch**

12:40 pm **The AI Advantage: Exploring the Potential for AI to Support Outcome-based Payment**

This session will examine how AI can address challenges that have, thus far, prevented a shift toward clinically sourced outcome measurement in support of value-based payment and population health. Applications include the use of natural language processing to extract relevant outcomes and care activities from unstructured clinical notes and use of AI to translate, map, and harmonize data across FHIR, QRDA, and legacy formats to integrate clinical and claims data needed for comprehensive outcome measurement.

1:50 pm **A Path Forward: Securing the Infrastructure and Processes Needed for Success**

In this session, participants will identify actionable steps to advance high-value, low-burden, outcome-focused measures for value-based payment and population health. The discussion will address prospective alignment on measures developed and deployed, technological infrastructure for outcome reporting, and governance processes to drive coordination and progress. The session will conclude with participant guidance on accelerative activities that can be undertaken by the NAM.

3:20 pm **Closing Comments**

3:30 pm **Adjourn**

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