Improving Oncology Quality Measurement in Accountable Care: Filling Gaps with Cross-Cutting Measures

Tom Valuck, MD, JD, MHSA; David Blaisdell, BA; Donna P. Dugan, PhD, MS; Kimberly Westrich, MA; Robert W. Dubois, MD, PhD; Robert S. Miller, MD, FACP, FASCO; and Mark McClellan, MD, PhD

SUMMARY

Payment for health care services, including oncology services, is shifting from volume-based fee-for-service to value-based accountable care. The objective of accountable care is to support providers with flexibility and resources to reform care delivery, accompanied by accountability for maintaining or improving outcomes while lowering costs. These changes depend on health care payers, systems, physicians, and patients having meaningful measures to assess care delivery and outcomes and to balance financial incentives for lowering costs while providing greater value.

Gaps in accountable care measure sets may cause missed signals of problems in care and missed opportunities for improvement. Measures to balance financial incentives may be particularly important for oncology, where high cost and increasingly targeted diagnostics and therapeutics intersect with the highly complex and heterogeneous needs and preferences of cancer patients. Moreover, the concept of value in cancer care, defined as the measure of outcomes achieved per costs incurred, is rarely incorporated into performance measurement. This article analyzes gaps in oncology measures in accountable care, discusses challenging measurement issues, and offers strategies for improving oncology measurement.

Discern Health analyzed gaps in accountable care measure sets for 10 cancer conditions that were selected based on incidence and prevalence; impact on cost and mortality; a diverse range of high-cost diagnostic procedures and treatment modalities (e.g., genomic tumor testing, molecularly targeted therapies, and stereotactic radiotherapy); and disparities or performance gaps in patient care. We identified gaps by comparing accountable care set measures with high-priority measurement opportunities derived from practice guidelines developed by the National Comprehensive Cancer Network and other oncology specialty societies. We found significant gaps in accountable care measure sets across all 10 conditions. For each gap, we searched for available measures not already being used in programs. Where existing measures did not cover gaps, we recommended refinements to existing measures or proposed measures for development.

We shared the results of the measure gap analysis with a roundtable of national experts in cancer care and oncology measurement. During a web meeting and an in-person meeting, the roundtable reviewed the gap analysis and identified priority opportunities for improving measurement. The group determined that overreliance on condition-specific process measures is problematic because of rapidly changing evidence and increasing personalization of cancer care. The group's primary recommendation for enhancing measure sets was to prioritize and develop effective cross-cutting measures that assess clinical and patient-reported outcomes, including shared decision making, care planning, and symptom control. The group also prioritized certain safety and structural measures to complement condition-specific process measures. Further, the group explored strategies for using clinical pathways and devising layered measurement approaches to improve measurement for accountable care. This article presents the roundtable's conclusions and recommendations for next steps.

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Delivery of health care services, including oncology care, is shifting from a volume-based system to value-based accountability models for delivery and payment, such as accountable care organizations, patient-centered medical homes, and bundled payment approaches. Public- and private-sector payers have driven the adoption of these models with an increasing focus on value-based payment (VBP),¹ which rewards high-quality, patient-centered care and promotes flexibility and resources for provider quality improvement, with greater accountability for patient-level results.

VBP models are of particular interest in oncology because of high variability in care delivery; opportunities for improved care planning, coordination, and patient-centered management; and significant costs. Payment reforms relevant to oncology include bundled payments for episodes of care,^{2,3} oncology medical homes and accountable care organizations that link transformation to enhanced payments,⁴ and clinical pathways that define treatment courses for stage-specific cancer diagnoses.⁵

Quality measures are regarded as a key element of accountable care payment reforms. Measures help providers identify improvement opportunities and track the effectiveness of improvement efforts over time. Measures also help balance financial incentives by ensuring that providers maintain high-quality care while decreasing costs.

Previous work by the Institute of Medicine,⁶ National Quality Forum (NQF),⁷⁻⁹ and Core Quality Measure Collaborative (CQMC)¹⁰ has identified an array of oncology measure gaps. These efforts found gaps in specific clinical areas (e.g., pediatric, hematologic, and lung cancers); process measures that are closely linked to outcomes and that account for patient preferences; outcome measures focused on whole-person care, particularly patient-reported outcomes (PROs); structural measures for the use of electronic health records; access measures of availability, timeliness, and disparities in care; and efficiency and resource use measures.

Methodology

Our analysis built on these gap analyses and a previous effort by Discern Health to review important quality measure gaps in specialty care that could affect appropriate care delivery under accountable care incentives.¹¹ To assess for measure gaps, we reviewed the clinical practice guidelines and quality measure landscapes for 10 high-priority cancers: breast, chronic

myelogenous leukemia (CML), colon, kidney, melanoma, non-Hodgkin's lymphoma (NHL), non-small cell lung (NSCLC), ovarian, pancreatic, and prostate.

We prioritized conditions with significant incidence and prevalence, notable effect on cost and mortality, a diverse range of high-cost treatment modalities, and disparities or performance gaps in patient care.

For each cancer type, we identified measure gaps based on discrepancies between high-evidence recommendations from the National Comprehensive Cancer Network (NCCN) physician treatment guidelines and the available quality measures. We reviewed measures in use under oncology-focused accountable care programs and more broadly available in the NQF Quality Positioning System and from leading professional organizations, including the American Society of Clinical Oncology (ASCO),¹² American College of Surgeons,¹³ and American Society for Radiation Oncology (ASTRO).¹⁴

We presented the preliminary results of our gap analysis to national experts in cancer care and oncology measurement during a 1-day roundtable meeting. The roundtable participants included patient advocates, providers, payers, employers/purchasers, and quality organization representatives.

■ Oncology Measure Gap Analysis Findings

Through our initial gap analysis, we identified the following key issues and gaps:

1. Accountable care programs demonstrate an imbalance in quality measures, with disproportionate representation of certain high-prevalence cancers (i.e., breast, colorectal, and prostate) and an underrepresentation of measures for other priority conditions (e.g., NHL and NSCLC).
2. Despite the historical focus on condition-specific process measures, numerous condition-specific measure gaps persist. Patterns include measure gaps for appropriate mutational and biomarker testing; appropriate imaging use in the diagnosis and monitoring of treatment effectiveness, and posttreatment surveillance for specific cancers; initiating and monitoring adherence to appropriate stage-specific targeted or hormonal therapies; and initiating appropriate stage-specific radiation therapy.
3. While some important cross-cutting measures are in use—for example, pain quantification and treatment planning in the Oncology Care Model (OCM) and PPS-Exempt Cancer Hospital Quality Reporting Program (PCHQR); depression screening and rates of emergency room and hospital visits in OCM; and radiation dose limits and use of radiotherapy for bone metastases in PCHQR—many important gaps remain. Patterns include measure gaps for access to providers and treatment, particularly multidisciplinary care, palliative and hospice care, clinical trials, genetic testing and counseling, nutritional counseling, and psychosocial distress screening and treatment; standardized care planning and

coordination, including understanding clinical findings, shared decision making, inclusive of all phases from diagnosis to treatment to survivorship planning and beyond; monitoring and addressing safety events associated with the use of systemic therapy and radiation therapy; and patient-reported outcomes, especially for pain control and global patient and caregiver satisfaction.

The roundtable determined that oncology quality measures currently used for accountable care are inadequate to assess processes and outcomes of care associated with the increasing sophistication of cancer-, stage-, and individual tumor-specific therapies. More work is needed to ensure that measure sets include meaningful measures to evaluate accountable care performance.

Why Are Important Oncology Measures Missing?

The roundtable explored numerous barriers obstructing the path forward for addressing important oncology measure gaps. Methodological issues in developing accountability and performance improvement measures, including individualized care, availability of data, assignment of accountability for measure results through provider attribution, and rapidly changing evidence are not unique to cancer but are magnified by its prevalence and the complexity of its diagnosis and management.

The issue of small numbers in cancer populations is also problematic for measure reporting. Cancer is a disease of the genome, and its classification is rapidly evolving from a largely anatomic (organ-specific) basis to a molecular one. Consequently, cancer is becoming a collection of rare diseases, each requiring customized diagnostics and therapeutics. This phenomenon presents formidable challenges to valid and reliable standardized quality measurement and increasingly yields small numbers for measure denominators.

The health care data infrastructure has not yet built capacity to support collection and reporting of information for patient-centered and clinical outcome measures and for robust risk adjustment. However, even with enhanced data capabilities, many outcomes for cancer populations may be difficult to measure, since even large cancer centers may treat too few patients during a performance period to register valid, reliable, and timely results. Finally, the tremendous progress in identifying innovative, personalized cancer treatments also works against standardization.

A Call for Cross-Cutting Measures

The complexities of cancer biology and care, the methodological issues associated with measuring performance for increasingly personalized treatments, and the small numbers of cases for even medium to large practices call for a shift toward meaningful cross-cutting measures. The Centers for Medicare & Medicaid Services (CMS) defines cross-cutting measures as broadly applicable across multiple clinical settings and

FIGURE 1 High-Priority Cross-Cutting Measurement Opportunities for Cancer Care

^aMeasure available or in federal or commercial VBP model use.

^bMeasure in development.

ER=emergency room; VBP=value-based payment.

providers within a variety of specialties.¹⁵ Our analysis identified a need for measures specific to, but also applicable across, different types of cancers. Condition-specific appropriate care is critically important to patients. However, the limited utility and potentially short shelf lives of condition-specific process measures, and the small number challenges associated with condition-specific outcome measures, point toward measures for accountable care programs that more broadly assess performance across cancer populations. Further, use of cross-cutting measures simplifies performance assessment by reducing the overall number of measures, limiting effort and attention required for reporting and potentially reducing practice- or system-level cost of data collection.

Priority Cross-Cutting Measures

From the cross-cutting measures identified in the initial gap analysis, the roundtable participants prioritized and recom-

mended certain types of measures, including patient-reported outcomes, evaluation and management, clinical outcome, safety, and structural measures. These measures included existing measures used in VBP models, measures under development, and measure concepts recommended for development by the roundtable (Figure 1).

Use of cross-cutting measures in VBP models is a practical path forward for assessing cancer care. Aggregating data across diagnoses helps to overcome the problem of small numbers where performance can be correlated at the provider level. While some VBP models, including OCM and PCHQR, use cross-cutting measures for pain and depression screening, other patient-centered measures that are common across types of cancers can be leveraged or developed. The roundtable discussed the importance and challenges of each of the following categories of cross-cutting measures.

Patient-Reported Measures. Patient-reported measures that assess patient experiences of care and understanding of treatment goals and processes, especially the outcomes that are most important to them, such as symptom control and quality of life, are particularly promising cross-cutting measures. Patient-reported measures should assess patient understanding of the goals of care at key pivot points: at time of diagnosis, at time of recurrence, and when further tumor-directed therapy becomes ineffective. Misalignment between provider explanation and patient interpretation works against patient engagement in their care and can affect outcomes. Research has shown that “activated” patients incur lower health care costs and experience fewer adverse health events.¹⁶

The roundtable identified opportunities for a comprehensive set of patient-reported measures that are tied to care planning and cover the course of the illness. These measures should assess for shared decision making and goal setting. While treatment decisions and selection of appropriate therapy may vary, a patient-reported measure confirming that providers create a meaningful care plan incorporating patient preferences and assessing whether individualized preferences and goals were met should be developed for accountability.

The care plan should define key dimensions of care that are likely to matter for individual patients, including patient-reported symptoms such as nausea and vomiting, breathlessness, and fatigue. Selection and use of patient-sensitive measures should depend on the issues prioritized by patients in the care planning process. For example, a patient may articulate in a care plan that nausea is an expected and accepted part of the treatment, given the downstream outcome benefits expected. In this scenario, control of nausea may be a lower priority for some.

While assessing performance on PROs is a priority,¹⁷ more research is needed to ensure that PRO-Performance Measures (PRO-PMs) are meaningful, and work to improve PRO-PMs is continuing. The National Committee for Quality Assurance (NCQA) is testing an oncology PRO-PM for symptom control during chemotherapy treatment.¹⁸ The NQF Measure Incubator presents a new option for facilitating development and testing of PRO-PMs and is currently working on PRO-PMs for complex conditions, such as multiple sclerosis.^{19,20}

While these measures are being developed, further work is needed to facilitate timely pilot testing of PRO-PMs in accountable care programs,²¹ for example, by highlighting such measures for use in CMS quality improvement incentive payments or in pilot testing of alternative payment models. This is important to undertake now because data collection for PROs is also a challenge. Few providers currently have the infrastructure to efficiently collect patient-reported data, and use of various PRO tools among providers confounds comparisons. Increasingly sophisticated electronic health data and patient reporting platforms may provide more efficient PRO data collection options over time. Payers, including CMS, should further support

development and adoption by requiring PRO reporting in the future, with the expectation that PRO-PMs will eventually be tied to payment, as with the Comprehensive Joint Replacement model.²²

Treatment and Clinical Outcome Measures. Cancer treatment is typically based on pathologic diagnosis, cancer stage, and biomarkers, with tumor genomic factors rapidly growing in importance. However, some general aspects of care may be broadly appropriate for an aggregated population of cancer patients and should be prioritized for cross-cutting measurement. For example, patient adherence to prescribed oral therapies is a critical requirement for successful treatment for many cancers, given the shift away from traditional parenteral cytotoxic drugs to more targeted, small-molecule agents. Organizations such as the Pharmacy Quality Alliance have worked to develop adherence measures that could also be developed as cross-cutting cancer measures.²³ In addition, appropriate chemotherapy and radiation therapy dosing, particularly toward the end of life, are important measurement opportunities that could be assessed across cancer conditions. Assessing adherence to clinical pathways is another way of rolling up appropriate treatment measures. Use of pathways for this purpose may be an alternative to individual measures of appropriate treatment for a given type of cancer.

Clinical outcomes, including cancer recurrence and disease- or progression-free survival, should be considered for cross-cutting measurement. Notably, some private-sector health plan oncology accountable care programs incorporate cancer survival measures.² While survival is of interest to providers, policymakers, and—arguably most of all—to patients, survival as a measure outcome can be delayed, noisy, or difficult to interpret.²⁴ Expected or ideal time horizons for survival vary among cancers and stretch well beyond the payment period of accountable care models; comorbidities may affect survival and require adjustment; and some patients may prefer comfort or quality of life over long-term survival.

Use of outcome measure results for comparisons requires risk adjustment for fairness. At a minimum, payers should collect and use data for risk adjustment regarding the stage of the cancer, the grade and status of the tumor, and comorbidities. Providers also want sociodemographic adjustment, although there are important policy reasons for not adjusting away meaningful differences in quality for vulnerable populations,²⁵ while finding other mechanisms to account for the potentially higher cost burden of such patients. Stratification by denominator subpopulations is another way to enhance the fairness of comparisons based on measure results, but stratification may exacerbate small number issues.

Attribution of performance on outcome measures may be challenging, particularly when a patient’s care team includes medical, radiation, and surgical oncologists in multiple

settings. It is important that patients understand how they are attributed to providers in accountable care programs, so that they can be engaged in selecting their providers and confirm that they are correctly attributed. Further, while physicians play a central role in care delivery, health plans, patients, and others share in accountability. For example, physicians contribute heavily to medication adherence through patient education, motivation, and shared decision making to help patients anticipate issues such as toxicity; however, medication adherence also requires plan coverage for access, affordable pricing, and patient cooperation with the treatment regimen. Joint attribution among the provider, health plan, pharmaceutical supplier, and patient should be considered. Programs should encourage transparency and active patient engagement through attribution models defined by organizations such as the NQF²⁶ and the Health Care Payment Learning & Action Network (HCP LAN).²⁷

Safety Measures. Cancer treatment creates the risk for adverse events in care because of treatment toxicity, some of which may be preventable. For example, incorrectly calculated or delivered chemotherapy or radiation may lead to severe morbidity or even mortality. In addition, some treatments may lead to a predictable loss of bodily functions, such as fertility, which should be preceded by appropriate pretreatment counseling and fertility preservation intervention, provided that timely patient notification of the risk was delivered. Because of the serious implications of these complications for patients, they should be considered “never events” for accountable care performance measurement.

Safety measures may ultimately be included in shared decision-making tools that alert providers and patients to risks associated with treatment. Occurrence of preventable complications should be measured and used in accountable care programs.

Structural Measures. Given the gaps in process and outcome measures, structural measures that are clearly related to better processes and outcomes can help ensure that essential functions for appropriate care are in place. For example, patient-centered care benefits from 24-hour a day, 7-day a week access to clinicians who can provide the patient with information or support for issues that would otherwise necessitate an emergency room visit or hospital admission. Assessing essential health information technology functions, such as interoperability and data sharing with patients and other providers, serves as a structural measure of care coordination capabilities. Providers should also be assessed for their capacity to deliver palliative care from the point of diagnosis forward.

Oncology Measurement Strategies Beyond Cross-Cutting Measure Development

Development and use of more meaningful cross-cutting measures is a primary strategy for improving assessment of

oncology care in accountable care programs. Two additional strategies, using clinical pathways and layering measures, are discussed in the following sections.

Using Clinical Pathways. Adherence to clinical pathways may be an efficient alternative to condition-specific process measurement, since pathways inherently drive appropriate testing and treatment. Advantages of using pathways include their ability to be easily updated and disseminated to address evolving evidence, and their use can help ensure appropriate selection of therapy under financial incentives. If used, clinical pathways should be implemented with an expected benchmark well below 100% (e.g., a payer roundtable participant indicated 80%) because adherence to pathways is not appropriate in all patients. A process to deal with exceptions to pathway-recommended care should be part of any high-quality pathway. Furthermore, the development of some clinical pathways is not transparent and lacks input from important stakeholders, including patients. Patient preferences may differ as already noted, and pathways from various developers differ.

ASCO has published a policy statement describing guiding principles for oncology clinical pathway development to ensure that pathways are created using evidence-based methodology to promote high-value care that incorporates input from all stakeholders.²⁸ An independent entity, which includes member representatives from oncology professional societies such as ASCO, NCCN, ASTRO and others, should be established to objectively review and validate clinical pathways, similar to the role of the NQF for measure endorsement. Oncology accountable care programs can incentivize adherence to clinical pathways as a complement to cross-cutting measurement and as an alternative to more burdensome process measure reporting.

Layering Measures. Defining cohesive sets of oncology measures for various purposes is important for promoting alignment among accountable care programs, which can reduce reporting burden and provide patients and other stakeholders with clear and comparable results. Accountability program implementers can build on the work the CQMC has done to develop a useful base of core oncology measures for multistakeholder efforts. As noted by the CQMC, more advanced measures are needed to enhance the initial sets. These efforts should continue to be combined with the work of the HCP LAN, which seeks to accelerate the transition to alternative payment models and serves as a platform to build consensus and alignment for measure prioritization.²⁹

Once parsimonious measure sets are defined, payers and providers can use measures at different levels, or layers, of accountability, with each layer serving a unique, but related, purpose. At the provider level, clinicians want condition-specific process measures to guide appropriate care; at the system level, cross-cutting measures give management a broader “dashboard” view of system performance; and at the external

FIGURE 2 Layered Approach for Oncology Measure Sets

PRO=patient-reported outcome; VBP=value-based payment.

accountability level, cross-cutting measures can be used to roll-up outcomes, including patient-reported outcomes, for the cancer population. To the extent possible, the higher-level dashboards should be based on data and measures available in patient care, enabling drill-down and better alignment between payment reforms and the goals of care improvement. Ultimately, a layered approach to using different but related measures that are “fit for purpose” at various levels of accountability could rationalize reporting under accountable care programs and significantly reduce burdensome and costly quality data collection and reporting through better measure alignment (Figure 2).

Recommendations: Where Do We Go from Here?

The roundtable participants reached general agreement on the following near-term action steps for improving oncology measurement in accountable care:

1. VBP models should leverage the best available measures, beginning with those identified by the CQMC, as well as monitor adherence to pathways and incentivize PRO data reporting.
2. Payers and providers should use a layered measurement approach for performance improvement, monitoring, and accountability measures, aligned across the physician, system, and external accountability levels.
3. Measure developers (e.g., ASCO, ASTRO, and NCQA); program implementers (e.g., CMS, state Medicaid agencies, Medicaid managed care organizations, and commercial health plans); and industry should continue to support,

fund, and develop cross-cutting measures, including clinical outcomes and PRO-PMs, leveraging collaborative processes such as the NQF Incubator.

4. Public- and private-sector payers, measure developers, and industry should incorporate best practices to improve measure specifications, evaluate the impact of measures used in accountable care programs, and address measurement methodological issues in model design and measurement (e.g., risk adjustment and stratification and provider attribution), as identified by groups such as HCP LAN and NQF.
5. Research organizations, such as the Agency for Healthcare Research and Quality and Patient-Centered Outcomes Research Institute, and industry should fund measurement science, including PRO-PM design and implementation.

Conclusions

Health care delivery, including treatment for oncology, is rapidly shifting to patient-centered accountable care models that include VBP incentives. The meaningful and feasible quality measures that are needed for these models are lacking, and cross-cutting measures that aggregate performance results across cancer populations could provide the measures we need. Methodological challenges remain, and the ideas presented in this article for how to overcome the barriers will need to be addressed by collaboration among providers, payers, patient advocates, and measurement experts.

Authors

TOM VALUCK, MD, JD, MHSA; DAVID BLAISDELL, BA; and DONNA P. DUGAN, PhD, MS, Discern Health, Baltimore, Maryland. KIMBERLY WESTRICH, MA, and ROBERT W. DUBOIS, MD, PhD, National Pharmaceutical Council, Washington, DC. ROBERT S. MILLER, MD, FACP, FASCO, American Society of Clinical Oncology, Alexandria, Virginia, and MARK MCCLELLAN, MD, PhD, Duke-Margolis Center for Health Policy, Durham, North Carolina.

AUTHOR CORRESPONDENCE: Tom Valuck, MD, JD, MHSA, Discern Health, 1120 N. Charles St., Baltimore, MD 21201. E-mail: tvaluck@discernhealth.com.

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