Evolution of the Oncology Landscape: An Overview of Value, Quality, and Quality Measurements

Thomas A. Gallo
Executive Director
Virginia Cancer Institute
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Presentation Objectives

• Gain an understanding of quality measurement and reporting

• Attain greater knowledge of quality in current and innovative payment delivery systems

• Distinguish the influence of quality measures as they are integrated into cancer care

• Understand the various stakeholders in the oncology landscape and their roles in defining value
# Executive Summary: Value and Quality in Oncology

## Why Are Value and Quality Important?
- Cancer is a major public health issue and represents a significant burden of disease\(^1\)
- The US healthcare system has been evolving toward a value-based model as the fee-for-service model of reimbursement is not sustainable\(^2,3\)

## Who Is Involved in Oncology Quality Measure Development?
- The National Comprehensive Cancer Network\(^\text{®}\) (NCCN\(^\text{®}\)) and American Society of Clinical Oncology (ASCO) are examples of organizations that generate evidence and develop clinical practice guidelines\(^4,5\)
- There are many organizations involved in oncology quality measure development\(^4-8\)

## Who Is Affected by Oncology Quality Measures?
- Medicare and Medicaid programs use quality measures to encourage reporting on, and performance improvement in, oncology treatment\(^9-13\)
- Patients, caregivers, providers, payers, employers that sponsor health insurance, professional societies, patient advocates, and state and federal agencies are key stakeholders that benefit from oncology quality measures\(^14\)

## What Does the Future of Oncology Quality Look Like?
- As value-based programs mature, the financial impact may be greater for stakeholders who fail to report or perform\(^10,12,15\)
- As clinical pathways continue to gain more traction in the oncology space, stakeholders are expressing interest in the evidence sources used to inform the development and update processes of the pathways\(^16\)
Focus on Value and Quality in Oncology
Several Drivers Have Led to an Increased Focus on the Value of Oncology Drugs

Increasing prevalence of cancer and increasing costs ignite the need for a greater understanding of quality and value-based cancer care.

**The Number of Newly Diagnosed Cancers**
- Increased by **35%**
  - From 1.25 million in 1995 to 1.6 million in 2016

**The Number of People Living After a Cancer Diagnosis in the United States**
- Increased by **100%**
  - From 7 million in 1992 to 14 million in 2014
  - Expected to rise to nearly **19 million by 2024**

The role of personalized medicine grew:
- From **13 products** in 2006
- To **113 products** in 2014
- **35% of novel new oncology drugs approved in 2015 were personalized medicines.**

Once diagnosed, cancer patients are living longer than in the past, which is a driver of cost.

The continual innovation of targeted therapies contributes to the rising cost of cancer care.

The growing and aging population is a key driver of the demand for oncology services.

**Cancer Costs Continue to Rise**
- **$89 billion** in 2007
- **$173 billion** in 2020
- **+94%**

*Including personalized medicines, treatments, and diagnostics.*
• The healthcare system is changing from a volume-based to a value-based paradigm\textsuperscript{2}

• An aging and growing population and increasing numbers of cancer survivors have led to an increased focus on the value of oncology drugs\textsuperscript{19,20,22}
Quality in Oncology
System Inefficiencies Are Driving the Demand to Deliver Quality Care\textsuperscript{14}

<table>
<thead>
<tr>
<th>Issue</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>Unsustainable Payment Option</td>
<td>Fee-for-service system is volume-driven, which creates inflation pressure\textsuperscript{3,28,29}</td>
</tr>
<tr>
<td>Misaligned Treatment</td>
<td>Care often is not patient-centered; in addition, not following established guidelines or pathways may be costly and not best practice\textsuperscript{29,30}</td>
</tr>
<tr>
<td>Lack of Information</td>
<td>Decisions about care are often not based on the latest scientific evidence\textsuperscript{29}</td>
</tr>
<tr>
<td>Rising Costs</td>
<td>Increased burden on all stakeholders including payers, providers, patients, employers, and taxpayers\textsuperscript{3}</td>
</tr>
<tr>
<td>Pace of Innovation</td>
<td>Clinicians struggle to remain current with the volume of innovation\textsuperscript{4}</td>
</tr>
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</table>
As a leader in patient care, the Institute of Medicine (IOM) has identified 6 aims of high-quality care that have been widely adopted by other organizations active in improving the quality of healthcare.\textsuperscript{31}
Quality, Quality Improvement, and Quality Measurement Are Discrete Yet Interrelated Concepts

<table>
<thead>
<tr>
<th>Quality</th>
<th>The IOM defines <strong>healthcare quality</strong> as: “The degree to which health care services for individuals and populations increase the likelihood of desired outcomes and are consistent with current professional knowledge”(^{31})</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality Improvement</td>
<td><strong>Healthcare quality improvement</strong> can be defined as an interdisciplinary process designed to raise the standards of care delivery to maintain, restore, or improve health outcomes for individuals and populations(^{32})</td>
</tr>
<tr>
<td>Quality Measurement</td>
<td><strong>Healthcare quality measurement</strong> is the process of using scientifically sound tools to assess the extent to which individuals are receiving quality healthcare in any of the IOM quality domains(^{33})</td>
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</tbody>
</table>
Although Not a New Concept, Quality Continues to Be a Key Area of Focus Within Healthcare Reform


- NQF established
- IOM study: “To Err Is Human”
- President’s Advisory Commission report on quality
- Quality Oncology Practice Initiative (QOPI®) established
- PQRS established through the Tax Relief and Health Care Act (TRHCA)
- IOM study: “Preventing Medication Errors”
- AHRQ National Quality Strategy released
- NQF/NPP releases National Priorities and Goals
- MAP pre-rulemaking report released
- Affordable Care Act signed into law
- HHS launches Healthy People 2020
- The Core Quality Measure Collaborative (including CMS, AHIP, NQF) releases Core Quality Measure
- Medicare Access and CHIP Reauthorization Act of 2015 (MACRA) signed into law
- IOM released “VITAL SIGNS: Core Metrics for Health and Health Care Progress”

NQF=National Quality Forum; PQRS=Physician Quality Reporting System; AHRQ=Agency for Healthcare Research and Quality; NPP=National Priorities Partnership; CMS=Centers for Medicare & Medicaid Services; VBP=Value-Based Purchasing; MAP=Measures Application Partnership; HHS=Health and Human Services; AHIP=America’s Health Insurance Plans.
Guidance on Improving Quality

**PRIORITIES**
- Patient safety
- Person- and family-centered care
  - Effective communication and care coordination
  - Prevention and treatment for the leading causes of mortality
- Health and well-being
- Affordable care

**NQS**

**IHI “Triple Aim”**

**Improve Patient Experience of Care**
- Standard questions from patient surveys
- Set of measures based on key dimensions

**Improve Health of Populations**
- Health/functional status
- Risk status
- Disease burden
- Mortality

**Reduce Per Capita Costs**
- Total cost per member of the population
- Hospital and ED utilization rate

**Optimized Health System Performance**

NQS=National Quality Strategy; IHI=Institute for Healthcare Improvement; ED=emergency department.
Potential Implications of Quality Improvement in Oncology for Payers and Providers

**IMPACT ON PAYERS**

- Large influx of new but potentially higher-risk members may lead payers to create slimmer benefit designs with narrower provider networks in an attempt to manage cost.
- To manage costs while maintaining quality of care, payers may be likely to continue to seek ways to tie quality to payment in value-based purchasing models.
- The administrative costs of quality measurement may cause payers to look for external partnerships to facilitate measurement.

**IMPACT ON PROVIDERS**

- Increased number of payer contracts likely to be driven by quality measurement and shifting financial risk, making care decisions more centered around value, including both quality and cost.
- Increased quality measurement may drive data infrastructure demands, requiring investment in technology to facilitate compliance with value-based purchasing programs.
- Increased consolidation of providers driven by the need to manage costs—including both technology costs and personnel infrastructure needed to manage this population—as well as the ability of larger provider groups to better negotiate payer reimbursement contracts.

The information on this slide was developed from MHS Market Research Insights.
Summary

- Unsustainable payment options, misaligned treatment, lack of information, rising costs, and pace of innovation have spurred the need for payment reform and improved quality care.3,4,28-30

- According to the IOM, quality healthcare should be safe, effective, patient-centered, timely, efficient, and equitable.31

- Quality has been a major theme in health policy since the President’s Advisory Commission report on quality was published in 1998.35-37,39,41,43,44,47,49

- Both the U.S. Department of Health and Human Services (HHS) “NQS” and the IHI’s “Triple Aim” seek to optimize health system performance by improving patient health, providing better care, and reducing healthcare costs to make healthcare affordable for patients.50-52
Understanding Quality Measures
Quality measures quantify the quality of a selected aspect of care by comparing it to an evidence-based criterion:\footnote{53}

- **Clinical performance measures**, a subtype of quality measures, assess the degree to which a provider competently and safely delivers the appropriate care.

**Quality measures are used for four general purposes:**\footnote{54,55}

- **Quality Improvement**
- **Accountability**
- **Reimbursement**
- **Research**

Within these measure types, measures can be further classified:\footnote{53}:

- **Process**: Measures a provider’s application of recommended practices when interacting with a patient.
- **Structure**: Assesses the provider organization’s capacity, technologies, and infrastructure to deliver healthcare services.
- **Outcome**: Reflects changes (desirable or undesirable) in a patient or population due to new healthcare processes.
- **Patient Experience**: Measures a patient’s experience through surveys based on a patient’s values and preferences.
Measures Continue to Be Refined and Are Becoming More Sophisticated\textsuperscript{56}

Measures are evaluated for their suitability based on standardized criteria in the following order\textsuperscript{56}:

<table>
<thead>
<tr>
<th>Importance to Measure and Report</th>
<th>Scientific Acceptability of Measure Properties</th>
<th>Feasibility</th>
<th>Usability and Use</th>
<th>Related and Competing Measures</th>
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</thead>
<tbody>
<tr>
<td>Clinical evidence</td>
<td>Reliability</td>
<td>Required data elements</td>
<td>Accountability and transparency</td>
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<tr>
<td>Performance gap</td>
<td>Validity</td>
<td>Demonstration</td>
<td>Improvement</td>
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<tr>
<td>Priority</td>
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<td></td>
<td>Benefits outweigh risks</td>
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<td></td>
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<td></td>
<td>Harmonization</td>
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<td></td>
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<td></td>
<td>Superiority</td>
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</table>
### Patient-Level Outcomes (Better Health)
- Morbidity and mortality
- Functional status
- Health-rated quality of life
- Patient experience of care
- Strengthening the patient’s role in the management of their healthcare

### Process of Care (Better Care)
- Clinical processes tightly linked to outcomes
- Care coordination and transitions
- Patient engagement and alignment with patient preferences

### Cost (Affordable Care)
- Per capita cost
- Total cost of care
- Patient out-of-pocket cost

Quality Measure Concepts Are Also Aligned With Guidance on Quality Improvement\(^{57}\)
• Quality measures can be classified as process, structure, outcome, or patient experience, depending on what is being measured\textsuperscript{54}

• Measures are evaluated for their suitability based on the following standardized criteria in the following order\textsuperscript{56}:
  – Importance to measure and report
  – Scientific acceptability of measure properties
  – Feasibility
  – Usability and use
  – Related and competing measures

• Measures in the public domain are aligned with the 3 aims of the NQS: better health, better care, and affordable care\textsuperscript{57}
New Payment and Delivery Models
The Evolving Healthcare Landscape Is Facilitating a Paradigm Shift in Care Delivery and Payment\textsuperscript{59,60}

<table>
<thead>
<tr>
<th>CURRENT: Rewards Volume\textsuperscript{59,60}</th>
<th>Implementation of Payment and Delivery Reforms\textsuperscript{61,62}</th>
<th>FUTURE: Rewards Quality\textsuperscript{60,62}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fee-for-service reimbursement</td>
<td>\textbf{Commercial payers} have been experimenting with these models for a number of years</td>
<td>Value-based purchasing</td>
</tr>
<tr>
<td>Volume-based rewards</td>
<td>\textbf{Medicare} is enabled to test payment models through the Innovation Center, which was created by the Affordable Care Act in 2010</td>
<td>ACOs</td>
</tr>
<tr>
<td>Misaligned treatment</td>
<td></td>
<td>Medical Neighborhoods (PCMH and PCSPs)</td>
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<tr>
<td>Lack of coordination</td>
<td></td>
<td>Bundled payments/capitation</td>
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<tr>
<td>Incentive for overtreatment and overbilling</td>
<td></td>
<td>Direct link between payment and outcomes</td>
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</tbody>
</table>

**Evolution**

ACO=accountable care organization; PCMH=patient-centered medical home; PCSP=patient-centered specialty practice.
While Many Payment Models Have Been Tested in Primary Care, Models for Specialties Are Becoming More Common\textsuperscript{63}

<table>
<thead>
<tr>
<th>Model Type</th>
<th>Accountable Care Organizations (ACOs)</th>
<th>PCMH/Oncology Medical Home</th>
<th>Bundled Payments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definition</td>
<td>A group of providers who agree to deliver a range of coordinated services and share the savings made from better-coordinated, higher-quality, and lower-cost care (eg, lower hospitalization rates and ED use)</td>
<td>“Integrated care delivery model” with a physician-led approach that aims to reduce ED visits and hospital admissions while delivering coordinated and patient-centered care</td>
<td>A single fee provided for a cluster of services that are delivered over a pre-defined period, or “episode” of care</td>
</tr>
<tr>
<td>Examples in Oncology</td>
<td>Commercial: Florida Blue Oncology ACO</td>
<td>Medicare: Community Oncology Medical Homes Commercial: United Healthcare Oncology Bundle</td>
<td>Medicare: Oncology Care Model Commercial: United Healthcare Oncology Bundle</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Commercial: Aetna and Texas Oncology\textsuperscript{64}</td>
<td></td>
</tr>
</tbody>
</table>
Oncology Practices Can Now Receive Medicare Performance-Based Bonus Payments for Cancer Care Through the Oncology Care Model (OCM)

<table>
<thead>
<tr>
<th>What is the OCM?</th>
<th>An episode-based payment model designed to align financial incentives to drive high-quality, coordinated care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payment Mechanism</td>
<td>–Fee-for-service (FFS) with retroactive performance-based payment; upfront monthly care management payment</td>
</tr>
<tr>
<td></td>
<td>–Upside-only risk arrangements with the option for downside risk in year 3</td>
</tr>
<tr>
<td>Episode Length</td>
<td>Six months following initiation of Part B or Part D chemotherapy* (renewable)</td>
</tr>
<tr>
<td>Service Inclusion and Exclusion</td>
<td>Most cancers (triggered by most chemotherapy, immunotherapy, or hormonal therapy); total cost of care during episode (including Part A, B, and some D); no exclusions or carve-out provisions</td>
</tr>
<tr>
<td>Provider Participation</td>
<td>Active—only physician practices that applied and were approved are able to participate; physician practices that provide chemotherapies and are enrolled in Medicare were eligible to apply</td>
</tr>
<tr>
<td>Patient Participation</td>
<td>Inactive—Medicare patients (not Medicare Advantage) that have a qualifying cancer diagnosis and receive a qualifying treatment (patients do not need to enroll)</td>
</tr>
<tr>
<td>Performance-Based Payment (PBP)</td>
<td>Medicare Part A, B, and D expenditures are totaled to calculate a target amount. The PBP is the (Target – Actual Spend) and then adjusted for factors such as geographic adjustment and sequestration. The final calculation of the PBP requires application of a performance multiplier that is determined on the practice’s performance on quality measures.</td>
</tr>
<tr>
<td>High-Cost Outliers</td>
<td>Gains and losses are capped at 20 percent; extreme outlier costs are mitigated</td>
</tr>
<tr>
<td>Quality Measures</td>
<td>Will be based on seven domains: practice requirements; communication and care coordination (performance-based payment); person- and caregiver-centered experience and outcomes; communication and care coordination (quality monitoring); clinical quality of care; population health; efficacy and cost reduction</td>
</tr>
</tbody>
</table>

*CMMI currently only excludes topical formulations from the OCM.
Although the OCM Is a Step Towards Value-Based Payments in Oncology, Participants Will Still Be Paid Based on FFS

FFS payments continue as usual to the participating practice

Monthly Enhanced Oncology Services (MEOS) payment of $160 Per-Beneficiary Per Month (PBPM)\(^66\)

- Enhanced services include 24/7 clinician access, patient navigation, care planning, and use of clinical guidelines\(^69\)
- OCM practices can bill for MEOS each of the 6 months of the episode\(^69\)
- OCM practices can bill for MEOS for nearly all cancer types and focuses on chemotherapy treatment (topical chemotherapy is excluded)\(^68,69\)
- MEOS is subject to recoupment at reconciliation\(^69\)

OCM practitioners cannot bill for\(^69\):

- Chronic Care Management (CCM)
- Transitional Care Management (TCM)
- Home Health Care Supervision
- Hospice Care Supervision
- End Stage Renal Disease (ESRD)

Semi-annual potential for performance-based payment for savings on total cost of care compared with a risk-adjusted target amount (one-sided and two-sided risk arrangements available)\(^70\)
Case Study: Florida Blue Oncology
Florida Blue Cross, the Largest Commercial Payer in Florida, Has Established One of the First Specialty ACOs in the US

Florida Blue Cross Blue Shield
2.9 million members in 2013
17th-largest commercial payer in the US

Problem
Oncology accounted for 25% of total spend in 2012 with significant annual increases
Needed to find a way to control costs while maintaining quality

Solution
Developed accountable care contracts with 2 of their largest providers of oncology care for common cancer types (breast, female reproductive, male reproductive, digestive, respiratory, lymphatic, blood)

Baptist Health South Florida/Advanced Medical Specialties (AMS)
• AMS has 46 oncologists in Miami that admit to Baptist Health South Florida
• AMS is historically a high-cost practice but recognized that a change was needed

Moffitt Cancer Center
• 330 oncologists throughout Florida
• Historically provides more efficient care, but room for improvement
• Physicians salaried

*In December 2015, Florida Blue announced an additional contract with Lee Memorial Health System.

The information on this slide was based on a presentation developed by Boston Healthcare Associates, Inc.
Case Study: Florida Blue Oncology
While Both Institutions Saw Cost Savings in the First Year, Moffitt Excelled and the Baptist/AMS Partnership Initiated an Entire Cultural Overhaul

<table>
<thead>
<tr>
<th>Baptist Health South Florida/Advanced Medical Specialties (AMS)</th>
<th>Moffitt Cancer Center</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Experienced difficulty adapting to the accountable care environment</td>
<td>• Structural necessities were in place to achieve success</td>
</tr>
<tr>
<td>• An overall culture change needed to be had in both institutions (historically fee-for-service and focused on chemotherapy margins to drive revenue)</td>
<td>• All physicians are salaried, and there is an ingrained culture of providing efficient, quality care, making improved care management an easier task</td>
</tr>
<tr>
<td>• Different IT systems between AMS/Baptist Health made care coordination difficult</td>
<td>• <strong>Projected to be able to recognize 7-figure savings in the first year of the program (2013)</strong></td>
</tr>
<tr>
<td>• <strong>Small improvement in cost trend in the first performance year of the program</strong></td>
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- Florida Blue is still trying to identify specifically where cost savings were derived, although they do know that some cost savings came from reduced chemotherapy use
- Florida Blue recognized that the easiest way to achieve savings is by reducing the quantity of services rendered, but they hoped to drive an overall culture change where physicians understand their risk and financial responsibility while working to achieve the highest-quality care

The information on this slide was based on a presentation developed by Boston Healthcare Associates, Inc.
At-risk providers may have to focus on reducing care costs and increasing care efficiencies to be successful under a bundled payment system.

Potential strategies may include:
- Reduce readmissions
- Utilize lower-cost settings and reduce length of stay in high-cost settings
- Streamline care transitions and standardize care management
- Increase care coordination among providers
- Implement cost-containment strategies

The most impactful strategy to effectively manage bundled payments may depend on the nature of the condition (eg, joint replacement may be best facilitated by standardization and avoiding infection, while oncology bundles may be best facilitated by overall care coordination and management across multiple settings of care).

The slide contains information gathered from Lilly Managed Healthcare Services market research insights.
<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Challenges</th>
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<tbody>
<tr>
<td>Low-cost/high-value products may have more opportunity to be differentiated under bundled payment</td>
<td>Lower target price under bundle may increase the cost pressure on suppliers</td>
</tr>
<tr>
<td>In some instances, products with better long-term outcomes have more opportunity to be differentiated under a bundled payment system</td>
<td>Suppliers may need to prove cost-effectiveness of products over bundle timeframe; need to take into consideration outcomes and follow-up/post–acute care needs</td>
</tr>
<tr>
<td>There may be an increased opportunity for partnerships with providers to achieve goals of bundled payment initiative</td>
<td>Providers may reduce number of suppliers as they begin to develop standardized care pathways to achieve cost efficiencies under the bundle</td>
</tr>
<tr>
<td>High-cost, high-impact products may have increased opportunity to demonstrate long-term value</td>
<td>Products with high costs and/or high utilization may be subject to higher scrutiny than other products</td>
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</table>

The slide contains information gathered from Lilly Managed Healthcare Services market research insights.
Summary

• Payment reform is shifting risk to providers and moving towards bundled payments and capitation-style patients, placing greater importance on measuring quality to ensure patients are receiving evidence-based care in a cost-conscious environment\textsuperscript{59-60}

• Commercial payers have tested multiple model types in payment reform in oncology, while Medicare has only recently launched an Oncology ACO model (the Oncology Care Model)\textsuperscript{60-63}
Integrating Quality Measures With Payment Reform
New Models of Care Such as Pay-for-Performance (P4P) and Value-Based Purchasing (VBP) Tie Quality to Payment

Legend
- Pay for Reporting (P4R)
- P4P/VBP Demos
- VBP Programs
- Other P4P/VBP Programs

Other P4P/VBP Programs
- Hospital Readmissions Reduction Program\(^{60}\)
- Nursing Home VBP Demonstration\(^{91,72}\)
- Medicare Shared Savings Program (Track 1/Track 2 Shared Savings)\(^9\)

Nonpayment for HACs\(^{73}\)
ESRD Bundled PPS With VBP Program\(^74\)
Hospital VBP (1.25% PR as of 2014; 2% by 2017)\(^{10}\)
Physician Value-Based Modifier\(^{75}\)

Premier Hospital Quality Incentive Demo (HQID)\(^{76}\)
PGP Demo\(^{77}\)

Hospital Inpatient Quality Reporting (2% penalty)\(^{11}\)
Physician Quality Reporting System (1.5% PR Starting in 2015)\(^{12,81}\)
CMS Acute Care Episode (ACE) Demo\(^{78}\)


MACRA streamlines PQRS, Value-Based Modifier and Medicare EHR Incentive programs into Merit-Based Incentive Program (MIPS). Performance period starts in 2017 and payment adjustments begin in 2019\(^{80}\)

Next Generation ACO Model began in 2016 with new entrants beginning in 2017, assigning higher amounts of risk and reward than previous ACO models\(^72\)

Oncology Care Model launched in spring 2016\(^{85}\)

PGP=physician group practice; PR=payment reduction—penalties or payment reductions are a result of noncompliance; HAC=hospital-acquired condition; ESRD=end-stage renal disease; PPS=prospective payment system; EHR=electronic health records.
As programs shift more toward VBP, quality measures will have more financial implications in the future.\textsuperscript{82}

### Use of Quality Measures in Public Reporting Programs Can Have Financial Implications

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<tbody>
<tr>
<td><strong>Hospital Inpatient Quality Reporting Program (P4R)\textsuperscript{11}</strong></td>
<td>2%</td>
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<td><strong>Hospital VBP Program\textsuperscript{10+}</strong></td>
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<td>1%</td>
<td>1.25%</td>
<td>1.5%</td>
<td>1.75%</td>
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<td><strong>Medicare Shared Savings Program\textsuperscript{9}</strong></td>
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<td><strong>Track 1/Track 2 Shared Savings</strong></td>
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<td><strong>PPS-Exempt Cancer Hospital Quality Reporting (PCHQR)\textsuperscript{13}</strong></td>
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<td><strong>No Penalty; Required for Cancer Hospitals</strong></td>
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<td><strong>Physician Quality Reporting System\textsuperscript{12,15}</strong></td>
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<td><strong>Physician Value-based Payment Modifier\textsuperscript{83,84}</strong></td>
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</tbody>
</table>

### Notes:
- CMS estimates that roughly half of participating hospitals will receive a net increase in payments as a result of this rule, while the rest will receive a net decrease in payments.
- Possible increases depend on the distribution of hospitals’ performance scores.
## Evolution of Quality Measures and Financial Implications

<table>
<thead>
<tr>
<th>Measure Development*</th>
<th>P4R**†</th>
<th>P4P*</th>
<th>Payment Reform*</th>
</tr>
</thead>
</table>
| Example: Health Reform Provisions<sup>48</sup>  
Measure development: $75 million authorized for each of the fiscal years 2010 through 2014  
Quality measurement and selection of measures: $20 million appropriated for CMS for each of the fiscal years | Example: Medicare Hospital Inpatient Quality Reporting Program<sup>11</sup>  
Started in 2003; under the program, hospitals must report on quality measures to avoid a 2% reduction in annual Medicare payments | Example: Premier Hospital Quality Incentive Demonstration<sup>76</sup>  
Largest hospital-based P4P demo project (2003–2009); tested impact of different financial incentive structures on hospital quality of care | Example: BCBSMA Alternative Quality Contract<sup>85</sup>  
Started in 2009, it includes a global payment, coupled with risk sharing and quality incentives, across multiple care settings. About 25% of BCBSMA network is contracted |

BCBSMA=BlueCross and BlueShield of Massachusetts.  
*An example of a payment reform program.  
†The amount will also decrease over the next few years and eventually become a penalty.
### Quality Performance May Impact Private Payers

<table>
<thead>
<tr>
<th>UHC&lt;sup&gt;36,87&lt;/sup&gt;</th>
<th>Aetna&lt;sup&gt;88&lt;/sup&gt;</th>
<th>BCBS Michigan&lt;sup&gt;42,89&lt;/sup&gt;</th>
<th><strong>Anthem Cancer Care Quality Program&lt;sup&gt;90&lt;/sup&gt;</strong></th>
</tr>
</thead>
</table>
| • Began reimbursement initiatives with 5 medical oncology groups in 2009  
  – Evaluated various treatment regimens based on the incidence of complications, side effects, and health outcomes  
  – Focused on breast, colon, and lung cancers | • Collaborated with Innovent Oncology to apply Level I Pathways in Texas  
  – Program launched in 2010  
  – Provided proactive patient support services and advance care planning | • Physician Group Incentive Program (PGIP) was formed in collaboration with ASCO in 2005  
  – Developed to partner with and reward physician organizations for improved healthcare delivery  
  – ASCO’s QOPI® chosen as the foundation for the initiative | • Program implemented through Anthem subsidiary AIM Specialty Health, aimed at rewarding oncologists for providing high-quality cancer care |
| • Marked shift away from “fee-for-service” to a “bundled payment” or “episode payment” | • Centered on Level I Pathways that were independently developed by physicians and other tumor-specific experts in the United Network of US Oncology | • Financial incentive ($3000 annually per physician) based on:  
  – QOPI participation  
    o Core measures  
    o End-of-life care module and a minimum of 1 other module  
  – Quarterly PGIP meeting participation | • Financial incentive ($350 monthly per oncologist):  
  – Oncologists enroll patients and select a treatment regimen on pathway, then file a claim  
  – Oncologists receive an additional one-time $350 payment when initiating therapy for treatment and coordinating care |

QOPI=Quality Oncology Practice Initiative; UHC=UnitedHealthcare; BCBS=Blue Cross Blue Shield.
Medicare Access & CHIP Reauthorization Act (MACRA) Overview

• Permanently repeals the Sustainable Growth Rate (SGR) formula for physician payments under Medicare
  – Since 2003, Congress has enacted 17 temporary patches (known as the “doc-fix”) to avoid payment cuts called for under the SGR
  – Eliminates the annual cross-industry concerns of payment cuts

• Replaces the SGR with a new payment system and merit-based incentive program for eligible professionals
  – Represents major step towards HHS’ goal of moving 50% of Medicare reimbursement into Alternative Payment Models (APMs) by 2018

• Provides for a 2-year extension of the Children’s Health Insurance Program (CHIP) at current funding levels
  – Congress will need another solution for CHIP funding beyond fiscal year 2017

• Includes other cost offsets, such as provider reimbursement cuts and means-testing among higher-income Medicare beneficiaries
Beginning in 2019, MACRA also creates 2 value-based pathways for eligible professionals (EPs) to receive additional payment adjustments (positive and negative):

- **Merit-based Incentive Payment System (MIPS):** merges the Physician Quality Reporting System (PQRS), Value-Based Payment Modifier (VBPM), and the EHR/Meaningful Use Program together and uses a composite score that combines quality measures, resource use, EHR meaningful use, and clinical practice improvement to establish payment adjustments.

- **Alternative Payment Models (APMs):** exempts professionals from MIPS reporting if a certain percentage of their revenue comes from alternative payment models such as ACOs, bundled payment arrangements, and medical homes.

### Physician Payment Update Schedule

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>+0.5%</td>
<td>+0.5% annually</td>
<td>0%</td>
<td>APM: +0.75% Non-APM: +0.25%</td>
</tr>
</tbody>
</table>
MIPS Pathway Streamlines Existing Quality Reporting Programs and Adjusts Payments Based on a Composite Score

• In 2019–2024, uniquely high performers may receive additional positive adjustments (not to exceed 10%)
• MIPS payment adjustments will be revenue-neutral
• New quality/performance measures will be developed for the composite score
• Eligible professional’s (EP’s) composite score and performance by category will be published on the CMS Physician Compare website

### Components of Composite Score

- Clinical Practice Improvements: 15%
- Quality: 25%
- Advancing Care Information: 10%
- Cost: 50%

### Maximum Positive/Negative Adjustment Under MIPS

<table>
<thead>
<tr>
<th>Calendar Year</th>
<th>Maximum Adjustment Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>(+/-) 4%</td>
</tr>
<tr>
<td>2020</td>
<td>(+/-) 5%</td>
</tr>
<tr>
<td>2021</td>
<td>(+/-) 7%</td>
</tr>
<tr>
<td>2022 and beyond</td>
<td>(+/-) 9%</td>
</tr>
</tbody>
</table>
APM Pathway Will Significantly Expand Incentives for Eligible Professionals (EPs) to Enter Into Such Arrangements

Qualifying APMs

- CMS Innovation Center Models (e.g., Pioneer ACOs, bundled payments, medical homes)
- MSSP ACOs
- Healthcare Quality Demonstration Program
- Other demonstrations under federal law

- Medicare providers receiving an established percentage of their revenues from APM arrangements receive a 5% Medicare incentive payment from 2019 to 2024 and an increase in the base rate from 0.25% to 0.75% in 2026 and beyond\(^\text{80,91}\)

- Eligible APM providers do not need to report under MIPS program\(^\text{91}\)

- MACRA will allow APM revenue from other payers to count towards the threshold if Medicare APM options in a given region are limited\(^\text{91}\)

### Percentage of Revenue From APMs Required to Qualify for Bonuses\(^\text{91}\)

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023 and beyond</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medicare APMs</td>
<td>25%</td>
<td>25%</td>
<td>50%</td>
<td>50%</td>
<td>75%</td>
</tr>
<tr>
<td>All Payer APMs</td>
<td>N/A</td>
<td>N/A</td>
<td>50%*</td>
<td>50%*</td>
<td>75%*</td>
</tr>
</tbody>
</table>

*Minimum of 25% must be Medicare payments. EPs receiving 20% of revenue from Medicare APMs in 2019–2020, 40% from all payers in 2021–2022, and 50% from all payers in 2023 and beyond will also be exempt from MIPS reporting but ineligible for APM bonuses.
Summary

- Moving forward, pay-for-reporting initiatives will soon be replaced with more sophisticated value-based purchasing programs\(^9,12,60,61,65,72-82\)

- Many activities now reflect the healthcare environment’s shift from rewarding volume to rewarding value, including measure development, pay for reporting, pay for performance, and payment reform\(^9-13,15,48,76,82,85\)

- Payers have noticed the importance of quality performance and have taken steps to include it in their systems by implementing reimbursement initiatives and quality measures with medical groups and hospitals and reporting on physician and practice performance\(^42,86-90\)
Quality Improvement in Oncology
Quality Improvement in Oncology Has Existed for More Than a Decade

- **1998**: IOM report: “Ensuring Quality Cancer Care”
- **2000**: National Initiative on Cancer Care Quality established
- **2002**: Quality Oncology Practice Initiative Established
- **2004**: ASCO/NCCN develops quality measures: breast, colon, and rectal cancer
- **2006**: CancerLinQ™ development begins
- **2008**: PPS-Exempt Cancer Hospital Quality Reporting Program
- **2010**: NQF report: "National Voluntary Consensus Standards for Quality of Cancer Care"
- **2012**: QOPI launched its eQOPI initiative, a reporting pathway that allows practices to extract data electronically from their EMR
- **2014**: 2016
Several Organizations Are Involved in Oncology Quality Improvement

**Oncology Quality Measures in Public Reporting Programs**: CMS Public reporting programs (e.g., PQRS, OQR, PCHQR)

**Use of Oncology Quality Measures to Help Improve Outcomes**: UnitedHealthcare oncology bundle; VBP demonstrations (e.g., PGP demo)

**NQF Endorsement Is the Gold Standard for Healthcare Quality**: 8

**Organizations That Develop Clinical Guidelines for Oncology**: ASCO; NCCN

**Evidence-Based Quality Measures**

**Key Quality Measure Developers in the Oncology Space**: ASCO; QOPI; COA; CoC; NCQA; STS; QIP

COA = Community Oncology Alliance; CoC = Commission on Cancer; NCQA = National Committee for Quality Assurance; STS = Society of Thoracic Surgeons; QIP = Quality Insights of Pennsylvania; PQRS = Physician Quality Reporting System; OQR = Outpatient Quality Reporting Program.

*Examples of oncology quality improvement programs/organizations.
Oncology Practices Are Measured by a Range of PQRS Oncology-Specific Measures to Promote Evidence-Based Practice

Performance will be publicly reported and affects Medicare reimbursements.

**Physician Quality Reporting System**

- Prostate
- Lung
- Melanoma
- Hematology
- Esophageal
- Colorectal
- Cervical
- Breast

Number of Measures*

From 2017 to 2018, physicians will face a 2% reduction from their annual payment for non-reporting of PQRS quality measures.\(^\text{12}\)

*Measures not necessarily inclusive of all existing oncology measures for quality improvement as a result of ongoing updates and revisions.
Community Oncology Alliance (COA) was founded to support community cancer care settings

- Stakeholder leader in oncology patient-centered medical homes
- Some measures designed specifically for evaluating oncology medical homes

Selected measures include:

<table>
<thead>
<tr>
<th>Patient Information</th>
<th>Survivorship</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Percent of patients with pathology staging pre-chemotherapy</td>
<td>• Percent of patients receiving survivorship plan within 90 days of completion of treatment</td>
</tr>
<tr>
<td>• Percent of patients receiving pre-chemotherapy treatment plan</td>
<td>• Percent of patients receiving at least one psychosocial distress screening</td>
</tr>
<tr>
<td>• Percent of chemotherapy treatments adherent to NCCN Guidelines®</td>
<td>• Survival rate of colorectal, lung, and breast cancer patients (all stages)</td>
</tr>
<tr>
<td>• Antiemetic appropriateness</td>
<td></td>
</tr>
<tr>
<td>• Percent of patients receiving G-CSF with &gt;20% risk of febrile neutropenia</td>
<td></td>
</tr>
<tr>
<td>• Percent of patients with stage I or II breast cancer undergoing advanced imaging</td>
<td></td>
</tr>
<tr>
<td>• Presence of patient performance status prior to treatment</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Resource Utilization</th>
<th>End of Life</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Number of ED visits/patient/year</td>
<td>• Percent of stage IV patients with end-of-life discussion documented</td>
</tr>
<tr>
<td>• Number of hospital admits/patient/year</td>
<td>• Average number of days on hospice</td>
</tr>
<tr>
<td></td>
<td>• Percentage of deaths in the acute care setting</td>
</tr>
<tr>
<td></td>
<td>• Chemotherapy given within 30 days of end of life</td>
</tr>
</tbody>
</table>

G-CSF=granulocyte colony-stimulating factor.
In 2009, the HHS tasked the NQF to prioritize 20 high-impact Medicare conditions identified by CMS as accounting for 95% of Medicare costs\textsuperscript{105,106}

- NQF commissioned work to develop a methodology for scoring the evidence and performance measures associated with each condition to aid in prioritizing the conditions
- Conditions were scored and assessed based on cost, prevalence, variability, improvability, and disparities

### Prioritization of 20 High-Impact Medicare Conditions\textsuperscript{107}

<table>
<thead>
<tr>
<th>#</th>
<th>Condition</th>
<th>#</th>
<th>Condition</th>
<th>#</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Major Depression</td>
<td>6</td>
<td>AD</td>
<td>11</td>
<td>Hip/Pelvic Fracture</td>
</tr>
<tr>
<td>2</td>
<td>Congestive HF</td>
<td>7</td>
<td>Breast Cancer</td>
<td>12</td>
<td>Chronic Renal Disease</td>
</tr>
<tr>
<td>3</td>
<td>Ischemic HD</td>
<td>8</td>
<td>COPD</td>
<td>13</td>
<td>Prostate Cancer</td>
</tr>
<tr>
<td>4</td>
<td>Diabetes</td>
<td>9</td>
<td>Acute MI</td>
<td>14</td>
<td>RA/OA</td>
</tr>
<tr>
<td>5</td>
<td>Stroke/TIA</td>
<td>10</td>
<td>Colorectal Cancer</td>
<td>15</td>
<td>AF</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>20</td>
</tr>
</tbody>
</table>

HF=heart failure; HD=heart disease; TIA=transient ischemic attack; AD=Alzheimer’s disease; COPD=chronic obstructive pulmonary disease; MI=myocardial infarction; RA=rheumatoid arthritis; OA=osteoarthritis; AF=atrial fibrillation.
# Case Study: Use of Quality Measures in NSCLC

## Program Overview

<table>
<thead>
<tr>
<th>Design</th>
<th>Results</th>
<th>Conclusion</th>
</tr>
</thead>
</table>
| • Four specific quality measures were investigated for eligible patients with Stage IIIA NSCLC who underwent surgery† | • Overall median survival for those who did not receive any of the measures, to those who received all 4 measures:  
  - 0 measures: 12.7 months  
  - 1 measure: 25.0 months  
  - 2 measures: 31.4 months  
  - 3 measures: 36.6 months  
  - 4 measures: 43.5 months  
• Despite the benefits of receiving all 4 quality measures as part of patient care, the investigators found that only 12.8% of individuals with clinical stage IIIA NSCLC received all four interventions | • While this study demonstrated that achieving these selected quality measures, both individually and collectively, was associated with improved overall survival, patient, institutional, and tumor factors independently influenced whether patients received these key quality measures |

## Snapshot

- **Sponsors:** The National Cancer Database (NCDB)* (a joint collaboration between the American College of Surgeons and the American Cancer Society)
- **Sector:** Private
- **Size:** Analysis of 8000 eligible NSCLC patients
- **Timing:** 2006–2011
- **Presented at:** American Association for Thoracic Surgery 96th Annual Meeting in May 2016

*Contains patient, tumor, and treatment data for approximately 70% of cancer patients receiving care at Commission on Cancer–accredited centers.

†The four quality measures investigated were neoadjuvant multiagent chemotherapy, lobar (or greater) resection, sampling of at least 10 lymph nodes, and R0 resection, which means that the tumor has been removed to the extent that the margins are free of cancerous cells.
Summary

- Since quality became a major theme in health policy, organizations have been shaping how it relates to oncology\(^42,93-98\)

- Programs and organizations such as the PQRS and the NQF are dedicated to improving quality in the oncology space\(^{12,101-103,105-107}\)
Clinical Pathways in Oncology
Clinical pathways are care plans that detail the essential steps in the care of patients with a specific clinical problem and describe the expected progress of the patient.¹¹⁰

**Model Description¹⁰⁹,¹¹⁰**

- Pathways offer a structured means of developing and implementing local protocols of care based on evidence-based clinical guidelines
  - The most commonly used guidelines are those from the NCCN and ASCO
- Pathways aim to improve patient care, existing quality standards, and patient satisfaction

**Role of Oncologist¹¹¹**

- Oncologists and oncology practices directly contract with payers
  - Pathways are not standardized across the industry; each system’s method for developing evidence-based pathways differs
  - Pathway programs may assess provider adherence and clinical outcomes associated with pathways
Clinical Pathways Are Designed to Improve Quality of Care

High-level overview of the quality considerations in a clinical pathway model

**Process Map Key**
- **Typical origin of quality standards**
- **Expected process**
- **Potential process**
Evolution in the Clinical Pathway Space

Legend
- Partnership/strategy
- Implementation
- Endorsement
- Impact
- Acquisition

UPMC founds Via Oncology spinoff[^114]

UPMC implements pathways[^114]

Cancer Care Northwest/Premera Blue Cross report savings due to clinical pathways[^121]

P4 and Innovent Oncology founded[^118,119]

CareFirst BCBS/P4 collaboration begins multistate pathways program[^122]

Michigan Oncology Clinical Pathways program launches[^123]

Innovent Oncology (US Oncology/Aetna publish cost savings with equivalent clinical outcomes in NSCLC[^112])

CareFirst BCBS/P4 report at ASCO cost savings in breast, lung, and colon cancer[^113]

NCCN, US Oncology, and McKesson announce value pathways collaboration[^116]

ITA Partners, an independent decision-support provider, changes name to eviti[^120]

Anthem BlueCross BlueShield launches its Cancer Care Quality Program[^117]

Humana partners with New Century Health and Oncology Analytics to administer their Oncology Quality Management Program[^117]


Association of Northern California Oncologists endorses pathways and recommends front-end compliance models such as Innovent Oncology and Via Oncology[^125,126]

Innovent Oncology/Aetna publish cost savings with equivalent clinical outcomes in colon cancer[^127]

[^112]: CPT#20217
[^113]: CPT#90201
[^114]: CPT#90201
[^116]: CPT#90201
[^117]: CPT#90201
[^120]: CPT#90201
[^125]: CPT#90201
[^126]: CPT#90201
[^127]: CPT#90201

NSCLC = non-small cell lung cancer.
Clinicopathological Considerations: Assessing Clinical Pathways

**Clinical Pathways**

**Who?**
- Who developed the pathways?

**What?**
- Do the pathways define preferred treatments for each state and stage of disease?
- Are the pathways detailed and comprehensive?
- Are clinical trials supported by pathways?
- Are the pathways regularly updated?
- Are the pathways available and accessible in real time at the point of care?

**How?**
- How were the pathways developed, and are they firmly grounded in evidence-based clinical information?

**Decision-support Solution**
- Has the decision-support solution been tested in the real-world care setting by oncologists?

---

**There are 2 types of pathways and utilization initiatives that are typically used**

**Front-end compliance**
- Supports evidence-based medical decision making by physicians at the point of care
- Companies that have used this tool include Innovent Oncology and Via Oncology

**Back-end compliance**
- Tracks care through post-treatment claims data against multiple approved preferred treatment choices to demonstrate compliance retroactively
- For example, one company that has used this tool is P4 Healthcare (Cardinal)
Summary

- Clinical pathways are designed to offer a structured means of developing and implementing local protocols of care, while aiming to improve patient care, existing quality standards, and patient satisfaction\textsuperscript{109-111}
  - Clinical pathways are often driven by evidence-based guidelines\textsuperscript{109-111}
Trends in Oncology Quality
Future Initiatives Seek to Address Multiple Drivers of Cancer Care Costs

Declining Cancer Death Rates
- Early detection
- Prevention
- Treatment advancements
- Increased lifespan
- Cancer as a chronic disease

Increased Cancer Diagnosis
- Aging population
- New innovations
- Improvements in technology
- Obesity epidemic

System Inefficiencies
- Unrealistic expectations
- Inappropriate financial incentives
- Overuse and misuse of medical resources
- Lack of access to timely care
- Lack of evidence for informed decision making

Increased Costs
Quality measures can be harmonized to streamline reporting efforts and address gaps in cancer care.

New Measures to Address Gaps
- Disease-specific
- Appropriateness of care
- Patient outcomes
- Next-generation
- Quality of care
- Unique patient population
- Assessment of value in cancer care delivery

Harmonization of cancer measures may help reduce reporting burden on providers and address measurement gaps.
### Key Issues

- Establishing a definition of quality and a system for measuring it
- Developing an informatics system that integrates the available patient information to evaluate care more efficiently
- Translating quality measures into best practices for use by community oncologists

### Recommendations

- Make care more coordinated and efficient
- Prioritize cancer prevention
- Reduce or eliminate use of procedures with little or no value
- Promote greater use of and adherence to treatment guidelines
- Improve functionality of electronic medical records (EMRs)
- Gather more clinically relevant information about interventions
- Provide patients with valid, reliable, and readily available information to help them find the best clinician, treatment, and hospital for their condition
Three major organizations and a top cancer hospital each launched their own approach to measuring and determining value:

- **NCCN Guidelines® with NCCN Evidence Blocks™**
- **ASCO Value Framework**
- **Memorial Sloan Kettering Cancer Center (MSK) Drug Abacus**
- **Institute for Clinical and Economic Review (ICER) Value Framework**
While Their Aim Is to Define Value, the Frameworks Have Disparate Approaches to Design and Intended Use

The key parameters used by all organizations to define value are:
- Clinical performance
- Cost

Drug Abacus and ICER include other metrics such as:
- Disease burden
- Other economic evaluations

<table>
<thead>
<tr>
<th>ASCO Framework</th>
<th>NCCN Evidence Blocks</th>
<th>MSK Drug Abacus</th>
<th>ICER Value Framework</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developed as tools to assist the <strong>physician and patient</strong> in shared decision making</td>
<td>Developed as methods to determine a <strong>value-based price</strong> for drugs</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Efficacy**
  - ASCO: ✓
  - NCCN: ✓
  - MSK: ✓
  - ICER: ✓

- **Evidence Strength**
  - ASCO: ✓
  - NCCN: ✓
  - MSK: ✓
  - ICER: ✓

- **Side Effects/Toxicity**
  - ASCO: ✓
  - NCCN: ✓
  - MSK: ✓
  - ICER: ✓

- **Treatment Cost**
  - ASCO: ✓
  - NCCN: ✓
  - MSK: ✓
  - ICER: ✓

- **Cost to Patient**
  - ASCO: ✓
  - NCCN: ✓
  - MSK: ✓
  - ICER: ✓

- **Other Benefits**
  - ASCO: ✓
  - NCCN: ✓
  - MSK: ✓
  - ICER: ✓

- **Disease Rarity/Severity**
  - ASCO: ✓
  - NCCN: ✓
  - MSK: ✓
  - ICER: ✓

- **Population Health Burden (QALY)**
  - ASCO: ✓
  - NCCN: ✓
  - MSK: ✓
  - ICER: ✓

- **Treatment Duration**
  - ASCO: ✓
  - NCCN: ✓
  - MSK: ✓
  - ICER: ✓

- **Economic Evaluations**
  - ASCO: ✓
  - NCCN: ✓
  - MSK: ✓
  - ICER: ✓
## Potential Implications of Value Initiatives in Oncology for Payers and Providers

### Impact on Payers
- Coming from respected professional societies (ASCO and NCCN), these frameworks are likely to be considered for informational purposes at Pharmacy & Therapeutics drug reviews and, where applicable, may be used to create step edits or preferred therapies when multiple options and large price differentials exist.
- Neither ASCO’s nor NCCN’s framework is suited—or intended—to serve as the foundation for new, more stringent drug policies or price negotiation.
- In contrast, the framework produced by ICER is designed to identify the clinical rationale for a numerical value price of treatments, and there is some interest from payers, including Medicare, in applying its findings in this way.

### Impact on Providers
- Likely to be restricted to use on a case-by-case basis since there may be a need for the ability to accommodate individual preference and allow for personalization.
- Implementation by health systems or larger hospitals could restrict the ability of individual providers to make flexible therapy selections.
Summary

- Declining cancer death rates, increased cancer diagnoses, and system inefficiencies are driving increased costs in cancer care\textsuperscript{130}

- Various entities have developed conceptual frameworks for assessing the value of oncology drugs based on varying inputs and metrics\textsuperscript{133}

- No single tool is likely to emerge as the determiner of value, as stakeholders need multiple characteristics in a value tool, including flexibility in accommodating any mitigating factors that influence value, evidence support for population health decisions, and ability to personalize based on individual preferences\textsuperscript{133}

- Harmonization of cancer measures may help reduce reporting burden on providers and address measurement gaps\textsuperscript{131}

- Promoting adherence to treatment guidelines and helping patients to become more engaged in their care are some recommended ways to improve the quality of cancer care\textsuperscript{130}
Appendix A:
Additional Information on Quality Measures
Use of Quality Measures in Private and Public Initiatives May Have Financial Impact for HCPs

- **Physicians**
  - Average incentives $457 per individual/$5,736 per practice through PQRS in 2011\(^{134}\)
  - 2.0% to 4.0% reduction in payment to physicians through PQRS starting in 2017\(^{138*}\)

- **Payers**
  - $3.1 billion in bonuses to plans in 2012 through MA Star Rating\(^{135}\)
  - Less than 3 stars on MA Star Ratings could mean **contract termination**\(^{139}\)

- **Hospitals and IDNs**
  - Amount available for hospital value-based incentive payments was **$1.4 billion** in 2015\(^{136*}\)
  - Up to 1.75% reduction in payment for hospital VBP program for 2016\(^{136}\)

- **Pharmacists**
  - Financial incentives through WPQC based on quality measures\(^{137}\)

\(^{*}\)2.0% reduction for solo practitioners and groups of 2 to 9 physicians; 4.0% reduction in payment for groups of 10 or more practitioners.

MA=Medicare Advantage; PQRS=Physician Quality Reporting System; VBP=value-based purchasing; WPQC=Wisconsin Pharmacy Quality Collaborative.
HHS Has Stated a Commitment to Increase Payment Linked to Quality to 90% by 2018

HHS Recently Announced Goals to Increase the Percentage of FFS Payments That Are Linked to Quality or Alternative Payment Models Over the Coming Years

**Historical Performance**

<table>
<thead>
<tr>
<th>Year</th>
<th>2011</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>FFS linked to quality</td>
<td>0%</td>
<td>22%</td>
</tr>
<tr>
<td>Alternative payment models</td>
<td>68%</td>
<td>85%</td>
</tr>
</tbody>
</table>

**Goals**

<table>
<thead>
<tr>
<th>Year</th>
<th>2016</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>FFS linked to quality</td>
<td>85%</td>
<td>90%</td>
</tr>
<tr>
<td>Alternative payment models</td>
<td>30%</td>
<td>50%</td>
</tr>
</tbody>
</table>

FFS=fee-for-service; HHS=US Department of Health and Human Services.
CMS Is Increasing Efforts to Provide Quality Information to Consumers

Hospital Compare will publish Star Ratings scores for hospitals on select quality measures

Star Ratings Will Be Based on a Summary Score; Hospitals Have a Potential to Receive Up to 5 Stars

<table>
<thead>
<tr>
<th>Hospital Quality Star Ratings Program&lt;sup&gt;142&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overview &amp; Purpose</strong></td>
</tr>
<tr>
<td>• CMS proposed the program in early 2015 with a goal of implementation by 2016</td>
</tr>
<tr>
<td>• Star Ratings will improve the usability and interpretability of CMS’s hospital quality Website, Hospital Compare, for patients and consumers</td>
</tr>
<tr>
<td>• CMS added Star Ratings scores for HCAHPS measures in April 2015</td>
</tr>
<tr>
<td><strong>Star Ratings System</strong></td>
</tr>
<tr>
<td>• Star Ratings on Hospital Compare will use a 5-star rating system to summarize performance on multiple domains of care and efficiency</td>
</tr>
<tr>
<td>• Hospital Compare will still report performance on measures; stars will be added to help consumers make decisions</td>
</tr>
<tr>
<td><strong>Impact on Providers</strong></td>
</tr>
<tr>
<td>• Patients will have comparison information on providers that is more streamlined and easier to understand, increasing the importance of provider performance on quality measures</td>
</tr>
</tbody>
</table>

CMS=Centers for Medicare & Medicaid Services; HCAHPS=Hospital Consumer Assessment of Healthcare Providers and Systems.
Medicare Advantage Value-Based Insurance Design Pilot\textsuperscript{143}:

- In 2017, CMS plans to introduce the first ever value-based insurance design proposal for Medicare Advantage through the CMMI
- The model would give plans the ability to vary benefit design co-insurance around services that have a demonstrated ability to reduce costs and improve patient outcomes, such as treatments for patients with diabetes

Enhanced MTM Model\textsuperscript{144}:

- Also in 2017, CMMI proposes to reward standalone PDPs with a $2 reduction to their bids if they are able to reduce overall medical costs (Parts A and B spending) by at least 2% overall via greater participation in medication therapy management programs\textsuperscript{145}
- The model seeks to encourage greater use of MTM models among standalone prescription drug plans, in light of low participation rates and insufficient incentives for PDPs to invest in programs designed to lower medical costs\textsuperscript{145}
Appendix B:
CMS Quality Reporting Programs
## Public Reporting and Performance Programs in the Inpatient Setting

<table>
<thead>
<tr>
<th>Program</th>
<th>Participation</th>
<th>Audience</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hospital Inpatient Quality Program</strong>[^146]</td>
<td>Mandatory</td>
<td>Hospitals</td>
<td>• P4R program that incentivizes quality improvement through reporting on a variety of quality measures</td>
</tr>
</tbody>
</table>
| **PPS-Exempt Cancer Hospital Quality Reporting Program (PCHQR)**[^94]    | 2014 Onward: Mandatory for 11 participating hospitals | Hospitals| • Program that requires all PPS-exempt cancer hospitals (PCHs) participating in Medicare to submit data for specific cancer clinical process of care measures  
  • At this point, there is no financial penalty under the PCHQR Program   |

[^146]: Program details
[^94]: Program details
### Public Reporting and Performance Programs in the Outpatient Setting

<table>
<thead>
<tr>
<th>Program</th>
<th>Participation</th>
<th>Audience</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medicare Shared Savings/Pioneer Program (ACO Program)&lt;sup&gt;9&lt;/sup&gt;</td>
<td>Application Only</td>
<td>Provider groups</td>
<td>• P4R program for provider groups to form and operationalize ACOs and report performance on quality measures</td>
</tr>
<tr>
<td>Physician Quality Reporting System/Physician Value-Based Modifier&lt;sup&gt;147&lt;/sup&gt;</td>
<td>• 2010–2015: Voluntary • 2015 onward: Mandatory</td>
<td>Providers</td>
<td>• P4R program that incentivizes quality improvement through measure reporting</td>
</tr>
<tr>
<td>Medicare Advantage Star Rating Program&lt;sup&gt;148&lt;/sup&gt;</td>
<td>Mandatory</td>
<td>Health plans</td>
<td>• P4P program for health plans to report and improve performance on quality measures; bonuses are based on a five-star scale</td>
</tr>
<tr>
<td>Outpatient Quality Reporting Program (OQR)&lt;sup&gt;146&lt;/sup&gt;</td>
<td>Mandatory</td>
<td>Hospitals</td>
<td>• P4R program that incentivizes quality improvement through measure reporting</td>
</tr>
</tbody>
</table>
# Public Reporting and Performance Programs in the Outpatient Setting

<table>
<thead>
<tr>
<th>Program</th>
<th>Participation</th>
<th>Audience</th>
<th>Description</th>
</tr>
</thead>
</table>
| Medicaid Adult Core Set[^149]                     | Voluntary     | State Medicaid program    | • As of January 2014, state data on the adult quality measures became part of the Secretary’s annual report on the quality of care for adults enrolled in Medicaid  
• In December 2015, updated 2016 Adult Core Set was released |
| Ambulatory Surgical Center Quality Reporting Program (ASCQR)[^150] | Mandatory     | Ambulatory surgical centers | • P4R program that incentivizes quality improvement through measure reporting                   |

[^149]: Medicaid Adult Core Set
[^150]: Ambulatory Surgical Center Quality Reporting Program (ASCQR)
Appendix C:
References
References


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