MEASURE APPLICATIONS PARTNERSHIP

CONVENED BY THE NATIONAL QUALITY FORUM

MEETING MATERIALS

for

IN-PERSON MEETING OF THE HOSPITAL WORKGROUP

OCTOBER 12-13, 2011

Measure Applications Partnership

Hospital Workgroup

In-Person Meeting #1

October 12-13, 2011
Washington, DC

Welcome and Review of Meeting Objectives

Meeting Objectives

NQF National Quality Forum

- Provide input to the MAP Coordinating Committee on the draft measure selection criteria
- Evaluate CMS measure sets for the Hospital Inpatient Quality Reporting (IQR), Outpatient Quality Reporting (OQR), and Value-based Purchasing (VBP) programs
- Identify a proposed core set of hospital measures
- Provide input to the Coordinating Committee on the approach to accomplishing the pre-rulemaking input to HHS
- Provide input to the Coordinating Committee on the selection of performance measures for cancer care, particularly PPS-exempt Cancer Hospitals

Meeting Agenda: Day 1

NQF National Quality Forum

- Introductions and Disclosures of Interest
- MAP Hospital Workgroup Task
- Proposed Approach for the Pre-Rulemaking Task
- Hospital IQR Measure Set Survey Exercise Results
- Hospital OQR Measure Set Exercise
- Building a Hospital Core Measure Set
- Input into Approach for the Pre-Rulemaking Task
- Summary of Day 1 and Look-Forward to Day 2
- Adjourn for the Day

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Introductions and Disclosures of Interests

Hospital Workgroup Membership

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Chair	Frank G. Opelka, MD, FACS		
Organizational Members	Alliance of Dedicated Cancer Centers	Representatives	Ronald Walters, MD, MBA, MHA, MS
	American Hospital Association		Richard Umbdenstock
	American Organization of Nurse Executives		Patricia Conway-Morana, RN
	American Society of Health-System Pharmacists		Kasey Thompson, Pharm.D
	Blue Cross Blue Shield of Massachusetts		Jane Franke, RN, MHA
	Building Services 32BJ Health Fund		Barbara Caress
	Iowa Healthcare Collaborative		Lance Roberts, PhD
	Memphis Business Group on Health		Cristie Upshaw Travis, MSHA
	Mothers Against Medical Error		Helen Haskell, MA
	National Association of Children's Hospitals and Related Institutions		Andrea Benin, MD
	National Rural Health Association		Brock Slabach, MPH, FACHE
	Premier, Inc.		Richard Bankowitz, MD, MBA, FACP
Coordinating Committee Co-Chairs	George Isham, MD, MS		
	Beth McGlynn, PhD, MPP		

Hospital Workgroup Membership

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	Patient Safety	Subject Matter Experts	Mitchell Levy, MD, FCCM, FCCP
	Palliative Care		R. Sean Morrison, MD
	State Policy		Dolores Mitchell
	Health IT		Brandon Savage, MD
	Patient Experience		Dale Shaller, MPA
	Safety Net		Bruce Siegel, MD, MPH
	Mental Health		Ann Marie Sullivan, MD
Federal Government Members	Agency for Healthcare Research and Quality (AHRQ)	Representatives	Mamatha Pancholi, MS
	Centers for Disease Control and Prevention (CDC)		Chesley Richards, MD, MPH, FACP
	Centers for Medicare & Medicaid Services (CMS)		Shaheen Halim, Ph.D., CPC-A
	Office of the National Coordinator for HIT (ONC)		Leah Marcotte
	Veterans Health Administration (VHA)		Michael Kelley, MD

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MAP Hospital Workgroup Task

MAP Hospital Workgroup Charge

The Hospital Workgroup will advise the Coordinating Committee on measures to be implemented through the rulemaking process for hospital inpatient and outpatient services, cancer hospitals, the value-based purchasing program, and psychiatric hospitals.

The Workgroup will:

- Provide input on measures to be implemented through the Federal rulemaking process, the manner in which quality problems could be improved, and the related measures for encouraging improvement.
- Identify critical hospital measure development and endorsement gaps.
- Identify performance measures for PPS-exempt cancer hospital quality reporting by:
  - Reviewing available performance measures for cancer hospitals, including clinical quality measures and patient-centered cross-cutting measures;
  - Identification of a core set of performance measures for cancer hospital quality reporting; and
  - Identification of measure development and endorsement gaps for cancer hospitals.

Guidance from the Coordinating Committee

- Consider alignment between public and private sectors
- Focus on models of care in addition to individual measures
- Consider cancer care beyond PPS-exempt cancer hospitals.
- Maintain appropriate expectations given the time constraints (e.g., identify work for subsequent phases)

Workgroup Member Terms

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- While NQF's current scope of work with HHS lasts through June 2012; MAP's work is expected to continue.
  - Specific tasks will change over time
  - The workgroup structure is designed to be flexible and groups may shift to align with evolving priorities
- The terms for MAP members are for three years.
- The initial members will serve staggered 1-, 2-, and 3-year terms, determined by random draw.
- There are equal numbers of 1-, 2-, and 3-year terms.
- Members whose terms expire are eligible to re-nominate themselves during the open Call for Nominations.
- There is no term limit for MAP members at this time

Hospital Workgroup Membership

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Chair	Frank G. Opelka, MD, FACS	Term Expires	

Organizational Members	Representatives	Term Expires
Alliance of Dedicated Cancer Centers	Ronald Walters, MD, MBA, MHA, MS	
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Proposed Approach for the Pre-Rulemaking Task

Pre-rulemaking Analysis

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Measures to Be Implemented Through the Federal Rulemaking Process

Task Description	Deliverable	Timeline
Provide input to HHS on measures to be implemented through the federal rulemaking process, based on an overview of the quality issues in hospital, clinician office, and post-acute/long-term care settings; the manner in which those problems could be improved; and the metrics for encouraging such improvement.	Final report containing Coordinating Committee framework for decision-making and proposed measures	Draft Report: January 2012 Final Report: February 1, 2012

Coordinating Committee with input from all workgroups

MAP Coordinating Committee Timeline and Processes – February 1, 2012 Pre-Rulemaking Analysis Report

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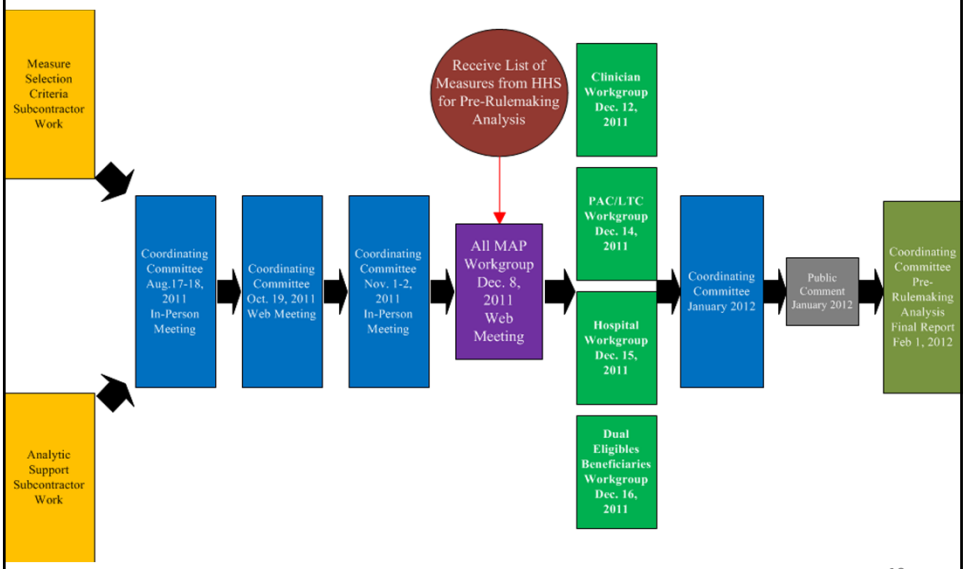
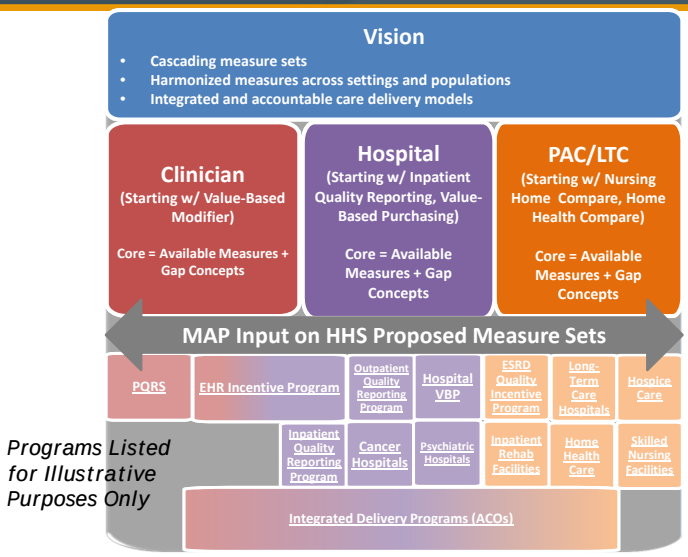


MAP Pre-Rulemaking Proposed Approach



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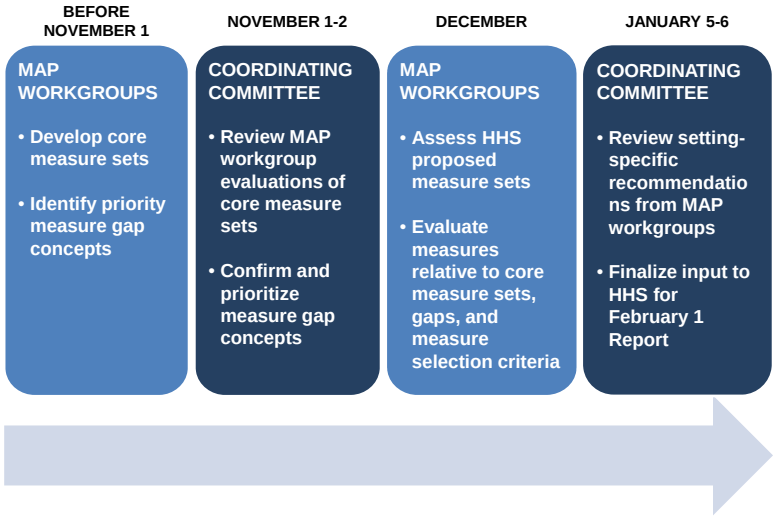
Pre-Rulemaking Analysis Proposed Process



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Before November 1

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MAP WORKGROUPS

- **Develop core measure sets**
- **Identify priority measure gap concepts**

Key Deliverable	• Preliminary core measure sets for each setting (i.e., clinician, hospital, PAC/LTC) that reflect the ideal characteristics of a measure set and identified priority measure gaps concepts
Activity	• Complete evaluation of initial starting point for core measure set, including identification of priority measure gap concepts
Background Materials	• List of measures used in federal programs • Federal program descriptions • Measure selection criteria

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November 1-2

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COORDINATING COMMITTEE

- **Review MAP workgroup evaluations of core measure sets**
- **Confirm and prioritize measure gap concepts**

Key Deliverable	• Finalize core measure sets and prioritized measure gap concepts
Activity	• Review MAP workgroup evaluations of preliminary core measure sets and identified measure gap concepts
Background Materials	• List of measures used in federal programs • Workgroup evaluations of existing measure sets and associated measure concept gaps • Measure selection criteria

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December

MAP WORKGROUPS

- **Assess HHS proposed measure sets**
- **Evaluate measures relative measure sets, gaps, and measure selection criteria**

Key Deliverable	• Input to MAP Coordinating Committee on HHS proposed measure sets
Activity	• Assess HHS proposed measure sets against MAP core measure sets and prioritized gaps concepts
Background Materials	• HHS proposed measure sets list • Finalized MAP core measure sets and prioritized measure gap concepts • Measure selection criteria

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January 5-6

COORDINATING COMMITTEE

- **Review the setting-specific recommendations from MAP workgroups**
- **Finalize input to HHS for February 1 Report**

Key Deliverable	• Finalized input to HHS on proposed measure sets
Activity	• Review MAP workgroup input regarding HHS proposed measure sets
Background Materials	• MAP workgroup input to Coordinating Committee on HHS proposed measure sets

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Hospital IQR Measure Set Survey Exercise Results

Experience Applying Measure Selection Criteria

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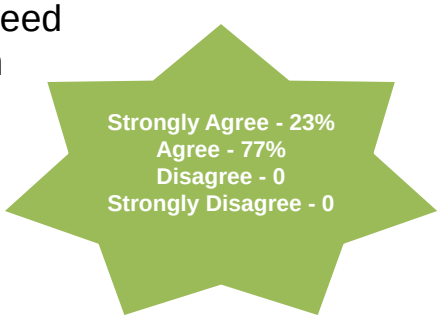
Majority of respondents agreed the MAP measure selection criteria are a good starting place for assessing the adequacy of a measure set for a specific purpose



Criteria would ideally better ascertain if a set contains the best or right measures to address a given criterion.

Experience Applying Measure Selection Criteria

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Hospital WG Feedback:

- Good principles, but difficult to apply; very “all or nothing”
- High-impact conditions have gaps (e.g., child health, cancer care, behavioral health)
- Suggest that criteria include functional health status outcomes for patients
- There is a need to assess individual measures alongside this “set-level” criteria
- Criteria does not address how infrastructure (e.g., data sources, tools, etc.) can be used for improvement purposes
- Overall consensus that the criteria is focused on the right things (e.g., consensus, patient-centeredness, burden)

IQR Measure Set Survey Exercise Results

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Overall, the IQR program measure set is a good starting place. It addresses many of the measure selection criteria.

However, measure gaps were identified, specifically:

- Some priorities of the National Quality Strategy
- Some measure types
- Disparities sensitive measures

IQR Measure Set Survey Exercise Results

- Nearly all IQR measures are NQF-endorsed or meet requirements for NQF submission (Criterion #1)
  - Some concern expressed about the HAC measures
- The IQR measure set does not address all of the NQS priorities. Does address safety (67% of measures), prevention/treatment, and person/family-centeredness (Criterion #2)
  - Evident gaps include measures for alcohol, tobacco, care coordination, depression, functional health status, and patient-reported outcomes

IQR Measure Set Survey Exercise Results

- Agreement that the IQR measure set addresses high impact conditions (Criterion #3)
  - Gaps include child health and cancer care
- Agreement that measure set promotes alignment with specific program attributes (Criterion #4)
  - Varying opinion on how well it bridges care from inpatient to outpatient

IQR Measure Set Survey Exercise Results

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- Measure set adequately includes process and experience of care measures (Criterion #5)
  - Gap areas include:
    - Outcome measures
    - Cost/resource use/appropriateness measures
    - Structural measures
- General agreement that the set enables measurement across the patient-focused episode of care for settings and across time (Criterion #6)
  - Some question as to whether or not it's applicable across providers

IQR Measure Set Survey Exercise Results

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- Workgroup felt strongly that the measure set does not have special considerations for health care disparities (Criterion #7)
- General consensus that the measure set promotes parsimony (Criterion #8), although the following concerns were raised:
  - Some measures are "topped out"
  - Measures not e-specified (so not useful for Meaningful Use)
  - Unclear if measure are useful for PQRS

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Opportunity for Public Comment

OQR Measure Set Exercise

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Instructions:

1. Individual evaluation of the OQR program measure set using the MAP measure selection criteria (approximately 15 minutes)
2. Small group discussion regarding results of individual assessments (approximately 30 minutes)
3. Report out of small group findings and discussion (approximately 45 minutes)

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Building a Hospital Core Measure Set

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Input into Approach for Pre-Rulemaking Task

Feedback to the Coordinating Committee

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MAP Measure Selection Criteria:

- Good principles, but difficult to apply; very “all or nothing”
- High-impact conditions have gaps (e.g., child health, cancer care, behavioral health)
- Suggest that criteria include functional health status outcomes for patients
- There is a need to assess individual measures alongside this “set-level” criteria
- Criteria does not address how infrastructure (e.g., data sources, tools, etc.) can be used for improvement purposes
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Opportunity for Public Comment

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Summary of Day 1 and Look-Forward to Day 2

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Recap of Day 1 and Review of Day 2 Agenda

Meeting Agenda: Day 2

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- Review Work of the CMS Cancer Care Measures Technical Expert Panel
- NQF-endorsed® Cancer Care Measures
- Data Sources and HIT Implications
- Priorities for Cancer Care Measurement
- Propose a Cancer Care Measurement Strategy
- Adjourn for the Day

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Review Work of the CMS Cancer Care Measures Technical Expert Panel

CMS Technical Expert Panel Work

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- PPS-exempt Cancer Hospital background and statutory requirements
- Prioritization process for selecting measures
- Review the five measures recommended
- Opportunities identified for future measurement

CMS Technical Expert Panel Work

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Five measures selected by the TEP

- Adjuvant chemotherapy for Stage III colon cancer
- Combination chemotherapy for AJCC T1c or Stage II or III hormone receptor-negative breast cancer
- Hormone therapy for AJCC T1c or Stage II or III hormone receptor-positive breast cancer
- Catheter-associated urinary tract infections (CAUTIs)
- Central line-associated bloodstream infections (CLABSIs)

NQF-endorsed® Cancer Care Measures

Angela J. Franklin, JD
Performance Measures
National Quality Forum

Past NQF Work Related to Cancer

- **Cancer Care Phase I – 2002**
  - Focus: Identified priority areas for public reporting & accountability
  - Defined what should be included in a core set for cancer care:
    1. access to care/critical trials/cultural competence;
    2. diagnosis and treatment of breast cancer;
    3. diagnosis and treatment of colorectal cancer;
    4. communication and coordination of care,
    5. including information technology issues;
    6. prevention/screening;
    7. diagnosis and treatment of prostate cancer; and
    8. symptom management/end-of-life care
  - No measures were endorsed during this phase

Past NQF Work Related to Cancer

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- **Cancer Care Phase II – 2004**
  - Focus: Public reporting & accountability
  - Endorsed 19 performance measures for gauging the quality of cancer care in the areas of
    - breast cancer
    - colorectal cancer
    - symptom management, and
    - end-of-life care
  - Areas for consideration under this project were selected based on five criteria:
    - alignment with national goals
    - key leverage points
    - addressed variation in care
    - patient centered, and
    - addressed disparities in vulnerable populations

Past NQF Work Related to Cancer

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- **Cancer Care Phase II – 2004**
  - One conclusion of the Steering Committee was that because cancer—especially if one type is to be evaluated—is a relatively infrequent disease, most measures for accountability may be at the institutional level rather than at the physician level.
    - Breast cancer: 6 measures
    - Colorectal cancer: 4 measures
    - Symptom management and end-of-life care: 9 measures
  - The 19 endorsed measures do not reflect all the NQF-endorsed measures and practices; these cancer measures can be used with other NQF-endorsed measures to provide a more complete picture of the quality of care provided

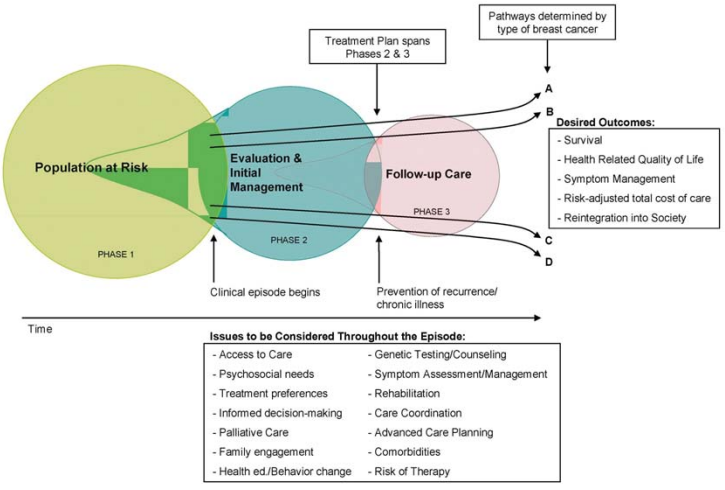
Past NQF Work Related to Cancer

- **Cancer Measure Set: Value-Based Episodes of Care – 2008**
  - Focus: Recommendations for a path forward for cancer quality measurement and a defined research agenda.
  - Building on the previous two projects, this project developed recommendations for a comprehensive cancer measure set to potentially apply the NQF framework for assessing "episode efficiency" for chronic conditions to cancer care.
  - The project:
    - Reviewed the current state of cancer care quality measurement
    - Presented one method of measuring quality care through the episode of care approach and a conceptualization this approach for breast and colorectal cancers
    - Highlighted recognized gaps in measures of cancer care quality, and
    - Offered recommendations for a path forward

Past NQF Work Related to Cancer

- **Cancer Measure Set: Value-Based Episodes of Care – 2008**

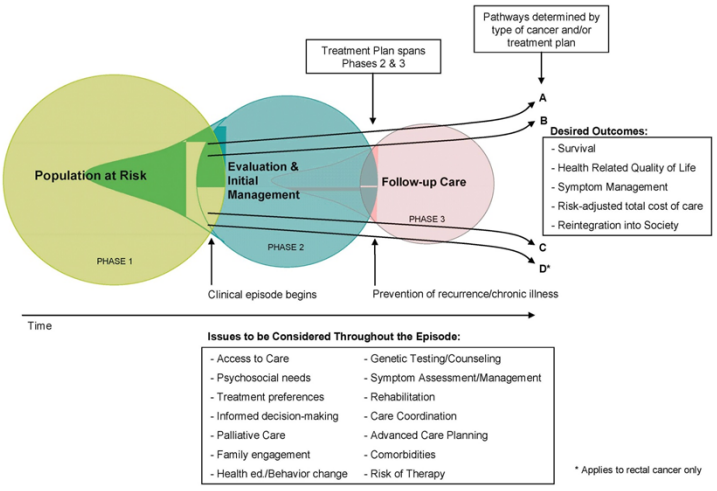
Figure 1: Context for Considering a Breast Cancer Episode of Care



Past NQF Work Related to Cancer

- **Cancer Measure Set: Value-Based Episodes of Care – 2008**

Figure 2: Context for Considering Colon and Rectal Cancers Episodes of Care



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Past NQF Work Related to Cancer

- **Cancer Measure Set: Value-Based Episodes of Care – 2008**
  - **Recommendations and Next Steps in Four categories:**
    - patient-centered measurement
      - Prioritize outcomes and cross-cutting issues (e.g. symptom management, end of life, communication around transitions, psychosocial distress)
      - Focus on shared decision-making and clear communication
    - data and measurement issues
      - Ensure correct and relevant data elements (including those around initial stages and disease status)
      - Expand on current guidelines (e.g. NCCN) and evidence bases
      - Push for outcomes measures
      - Develop a framework and system for all measurement needs
    - models of accountability
      - Focus on multidisciplinary care coordination: shared accountability across health professionals and providers
    - explicit consideration of palliative and psychosocial care needs
      - Assess psychosocial and palliative care needs of the patient and family much earlier in the episode of care, if not at the very start

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Cancer Endorsement Maintenance Project

- Cancer Endorsement Maintenance 2011
  - Focus: to identify and endorse additional cancer care measures for accountability and QI
- Seeking composite, outcome, and process measures proximal to outcomes, applicable to any setting. Will prioritize measures:
  - addressing specific National Quality Strategy areas
  - specified for use with EHRs (eMeasures), and
  - harmonized across settings (e.g., outpatient and hospital)
- Will evaluate measures endorsed before 2009

Cancer Endorsement Maintenance Project

- Cancer Endorsement Maintenance 2011

  Timeline:
  - Nominations: Oct 14th – Nov 11th
  - Measures: Oct 14th – Jan 13th, 2012
  - Implementation Comments: Oct 14th –Nov 11th

Current Set of Endorsed Cancer Measures

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- Thirty-four (34) NQF-endorsed measures directly related to cancer
- Current measures cover a wide range of topic areas including:
  - breast cancer,
  - colorectal cancer,
  - blood cancers,
  - symptom management, and
  - end-of-life care

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Workgroup Discussion and Questions

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Opportunity for Public Comment

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Data Sources and HIT Implications

Data Sources and HIT Implications

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American College of Surgeons Commission on Cancer

- Stephen B. Edge, MD

American Society of Clinical Oncology

- Michael Nuess, MD
- Kristen McNiff, MPH

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Priorities for Cancer Care Measurement

Dr. Ronald Walters, MD, MBA, MHA, MS

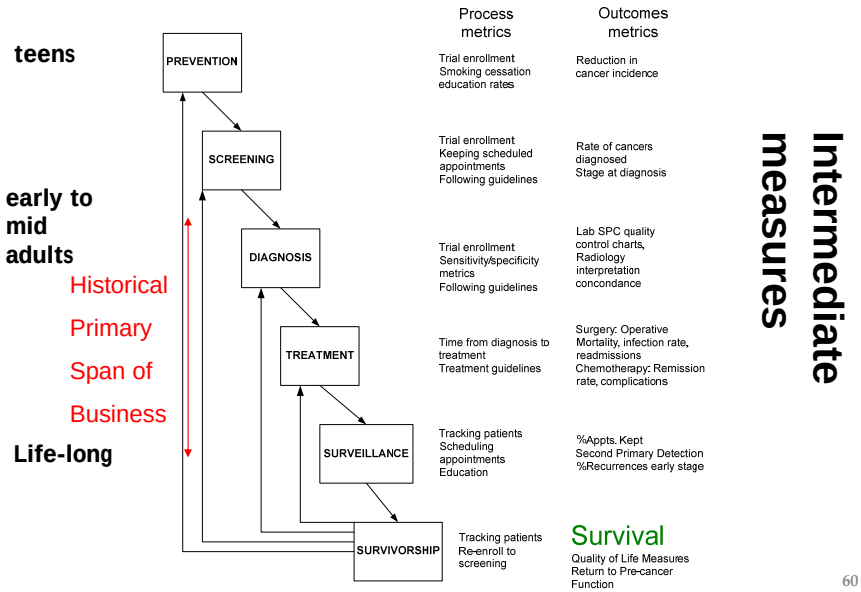
Alliance of Dedicated Cancer Centers

First, some housekeeping

- Yes, cancer care is complex and involves many types of providers and procedures
- Yes, there are many types and subtypes
- Yes, there is much work to do

- This only means it is challenging, not impossible

Measuring The Value Delivered Across The Cancer Care Cycle



Unique characteristics and measurement needs

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- Short-term (months) and long term (years) focus
- Components of inpatient and outpatient care
- Longitudinally patient centered database
- Generally across many providers = coordinated data systems
- Generally across many settings
- Prognostic factors (data elements) very complex
- Significant interplay between disease characteristics and host characteristics

ASCO - Quality Oncology Practice Initiative (QOPI)

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- Tested, valid, reliable, usable
- “Registry” type – abstracted data
- Very process-oriented
- Very physician practice oriented
- Covers many steps in the process
  - Diagnosis, staging, lab testing, treatment, symptom management, screening and detection, prevention, follow-up, end of life care

ASCO - Quality Oncology Practice Initiative (QOPI)

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- Gaps:
  - Patient preferences
  - Patient satisfaction
  - Complications of care
  - Long-term outcomes
  - Handoffs and care coordination
  - Inpatient care

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ACS – National Cancer Database

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- Tested, reliable, valid, usable
- “Registry” type – abstracted data
- Heavily weighted towards initial interventions
- Specifically geared to measure survival

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Longitudinal measures that span care continuum

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- SURVIVAL
- SURVIVAL
- SURVIVAL
- Patient perceived quality of life
- Functional status
- Disease status
- Long term consequences of treatment

Patient reported measures

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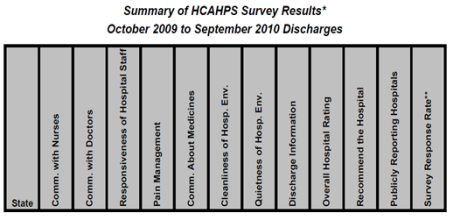
- HCAHPS
  - Inpatient
  - Not cancer specific
  - Halo effects
- Press-Ganey
  - Inpatient and Outpatient
  - Customized for cancer



*Summary of HCAHPS Survey Results**
October 2009 to September 2010 Discharges

State	Comm. with Nurses	Comm. with Doctors	Responsiveness of Hospital Staff	Pain Management	Comm. About Medicines	Cleanliness of Hosp. Env.	Quietness of Hosp. Env.	Discharge Information	Overall Hospital Rating	Recommend the Hospital	Publicly Reporting Hospitals	Survey Response Rate**

Patient centered approach to public reporting, i.e. FACIT

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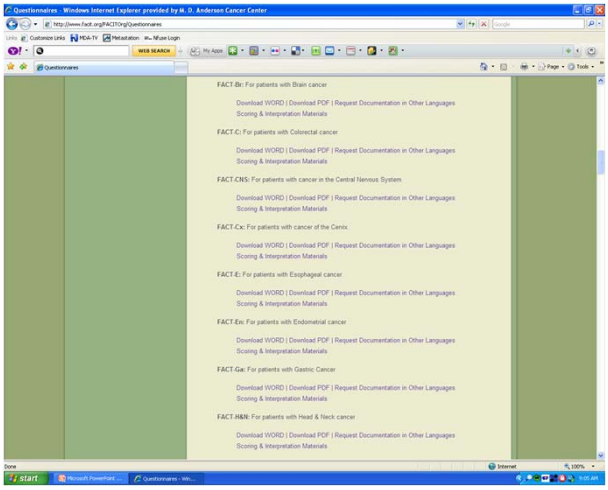
- Very cancer specific
- Valid tool
- True patient outcomes
- Need registry or EHR development
- Primarily research



For example, ovarian

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NCCN-FACT FOSI-18

Below is a list of statements that other people with your illness have said are important. **Please circle or mark one number per line to indicate your response as it applies to the past 7 days.**

		Not at all	A little bit	Some-what	Quite a bit	Very much
GP1	I have a lack of energy	0	1	2	3	4
GP4	I have pain	0	1	2	3	4
GP6	I feel ill	0	1	2	3	4
O3	I have cramps in my stomach area	0	1	2	3	4
HI7	I feel fatigued	0	1	2	3	4
Cx6	I am bothered by constipation	0	1	2	3	4
O1	I have swelling in my stomach area	0	1	2	3	4
C3	I have control of my bowels	0	1	2	3	4
GP3	I am sleeping well	0	1	2	3	4
GE6	I worry that my condition will get worse	0	1	2	3	4
GP2	I have nausea	0	1	2	3	4

Palliative and end of life measures

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- Previously ASCO – sponsored, QOPI measures do exist
- No registry other than QOPI
- Administrative data "close"
- Do require human interpretation
- Very important tie to resource utilization

#0210: Proportion receiving chemotherapy in the last 14 days of life	No identified steward	Percentage of patients who died from cancer receiving chemotherapy in the last 14 days of life
#0211: Proportion with more than one emergency room visit in the last 30 days of life	No identified steward	Percentage of patients who died from cancer with more than one emergency room visit in the last 30 days of life
#0212: Proportion with more than one hospitalization in the last 30 days of life	No identified steward	Percentage of patients who died from cancer with more than one hospitalization in the last 30 days of life
#0213: Proportion admitted to the ICU in the last 30 days of life	No identified steward	Percentage of patients who died from cancer admitted to the ICU in the last 30 days of life
#0214: Proportion dying from Cancer in an acute care setting	No identified steward	Percentage of patients who died from cancer in an acute care setting
#0215: Proportion not admitted to hospice	No identified steward	Percentage of patients who died from cancer not admitted to hospice
#0216: Proportion admitted to hospice for less than 3 days	No identified steward	Percentage of patients who died from cancer, and admitted to hospice and spent less than 3 days there

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Resource utilization measures

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- Initial attempts failed
- VERY KEY! – over-, under-, mis-use
- Very emotional
- Administrative data possible
- Interesting recent NYT article re: surgery

Colon CA	(1583) Episode of care for 21-day period around a colonoscopy	Resource use and costs associated with colonoscopy. Patients undergoing a colonoscopy are identified and the resource use and costs associated with colonoscopy in the 7 days before the procedure and the 14 days following the procedure are measured. For the group of patients with a colectomy that includes a primary diagnosis for colon cancer within the 14-day follow-up period, the episode will be from 7 days preceding the colonoscopy to 2 days preceding the colectomy. Those with a colectomy with a primary diagnosis of colon cancer within 2 days of the colonoscopy will be excluded from the measure.	ABMS-REF
Colon CA	(1584) Episode of care for treatment of localized colon cancer	Resource use and costs associated with colon cancer treatment. Patients undergoing colectomy are identified and the resource use and costs associated with colon cancer care in the 30 days before the procedure and the 11 months following the procedure are measured.	ABMS-REF
Breast CA	(1578) Episode of care for 60-day period preceding breast biopsy	Resource use and costs associated with breast biopsy. Women with a breast biopsy are identified and the resource use and costs associated with the biopsy in the 60 days preceding the biopsy and the seven days following the biopsy are measured.	ABMS-REF
Breast CA	(1579) Episode of care for cases of newly diagnosed breast cancer over a 15 month period	Resource use and costs associated with management of newly diagnosed cases of breast cancer over an 18-month period, three months preceding the diagnosis date and 15 months following the initial diagnosis. Patients are included in the cohort based on identification of new diagnoses of breast cancer using a validated algorithm. Women with a diagnosis code for breast cancer are identified during the measurement year and stratified into high likelihood cases if they have surgical or procedure claims related to breast cancer (mastectomy, lumpectomy, radiation treatment) or have more than two visits with a primary diagnosis of breast cancer. Women are identified as non-high likelihood cases if they do not meet these criteria. These women are included as potential cases if they meet certain criteria related to surgery, multiple claims, other cancers and secondary breast cancer. Patients with a previous diagnosis of breast cancer, metastatic disease and non-melanoma non-skin cancer are excluded. Eligible patients are followed for 15 months following the initial date of their diagnosis during the measurement period and data from the three months preceding the entry date are also captured for identification of breast cancer-related care. Patients are stratified into four mutually exclusive groups: 1) Chemotherapy, with trastuzumab; 2) chemotherapy, no trastuzumab; 3) no chemotherapy; and 4) neoadjuvant chemotherapy. Overall breast cancer-related costs and resource use are calculated for each stratum. Costs of care are calculated at a system level due to the inability to measure important case-mix factors such as stage of disease and estrogen and progesterone receptor status in current administrative datasets.	ABMS-REF

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Recommendation

NQF National Quality Forum

- "The journey starts with….."
- At least start measuring something – nothing will be perfect
- Learn the lessons from previous core measures
- Refine and improve over time
- Enhance the data systems

Specifics

NQF National Quality Forum

- Utilize the process measures in QOPI to maximum with staged implementation
- "Re-commission" end of life measures
- Introduce at least one or two resource utilization measures
- Start with cancer-specific patient satisfaction
- Work towards true patient reported outcomes, including quality of life

NQF
National Quality Forum

Propose a Cancer Care Measurement Strategy

Cancer Care Measurement Strategy

NQF
National Quality Forum

- Define a core set of cancer care measures
- Identify priority measure gap concepts
- Consider the relationship to the hospital core measure set
- Review data source and HIT implications
- Synthesis of Hospital Workgroup guidance to the Coordinating Committee

Proposed Cancer Care Measure Set

NQF National Quality Forum

Five measures selected by the TEP:

- Adjuvant chemotherapy for Stage III colon cancer
- Combination chemotherapy for AJCC T1c or Stage II or III hormone receptor-negative breast cancer
- Hormone therapy for AJCC T1c or Stage II or III hormone receptor-positive breast cancer
- Catheter-associated urinary tract infections (CAUTIs)
- Central line-associated bloodstream infections (CLABSIs)

- *Additional measures*

NQF National Quality Forum

Opportunity for Public Comment

NQF
National Quality Forum

Hospital Workgroup Next Steps

Next Steps

NQF
National Quality Forum

Pre-rulemaking Task:

- Feedback on MAP measure selection criteria to Coordinating Committee – Oct. 19 Coordinating Committee web meeting to finalize criteria
- Pre-rulemaking Task – Hospital Workgroup in-person meeting on Dec. 15

Cancer Care Measures Task:

- Follow-up survey exercise to confirm workgroup recommendations (if needed)
- Draft Report to Coordinating Committee – Mar. 15-16 in-person meeting

Hospital Program Descriptions

CMS Hospital Inpatient Quality Reporting Program

Since 2004, CMS has collected quality and patient experience data from acute care hospitals on a voluntary basis under the Hospital Inpatient Quality Reporting (IQR) Program. The program was originally mandated by Section 501(b) of the Medicare Prescription Drug, Improvement, and Modernization Act (MMA) of 2003. This section of the MMA authorized CMS to pay hospitals that successfully report designated quality measures a higher annual update to their payment rates. Initially, the MMA provided for a 0.4 percentage point reduction in the annual market basket (the measure of inflation in costs of goods and services used by hospitals in treating Medicare patients) update for hospitals that did not successfully report. The Deficit Reduction Act of 2005 increased that reduction to 2.0 percentage points. [1] Information gathered through the Hospital IQR program is reported on the Hospital Compare Website.[2]

The program intends to address the following:

Care Setting(s): Hospitals
Level of Analysis: Facility
Intended Population: Program includes both all adult patient and Medicare beneficiary specific measures

CMS Hospital Outpatient Quality Reporting Program

The CMS Hospital Outpatient Quality Reporting Program (Hospital OQR) is a pay for reporting program for outpatient hospital services. The program was mandated by the Tax Relief and Health Care Act of 2006, which requires hospitals to submit data on measures on the quality of care furnished in hospital outpatient settings. Hospitals that do not meet the program requirements receive a 2 percentage point reduction in their annual payment update under the Outpatient Prospective Payment System (OPPS). Information gathered through the Hospital OQR program is reported on the Hospital Compare Website.[3]

The program intends to address the following:

Care Setting(s): Outpatient Hospital Services
Level of Analysis: Facility
Intended Population: Program includes both all adult patient and Medicare beneficiary specific measures

[1] https://www.cms.gov/HospitalQualityInits/08_HospitalRHQDAPU.asp
[2] http://www.gpo.gov/fdsys/pkg/FR-2011-05-06/pdf/2011-10568.pdf
[3] https://www.cms.gov/HospitalQualityInits/10_HospitalOutpatientQualityReportingProgram.asp

Hospital Value-Based Purchasing Program

In FY 2013, Medicare will begin basing a portion of hospital reimbursements on hospital performance on a set of quality measures that have been linked to improved clinical processes of care and patient satisfaction. For FY 2013, the Hospital Value-Based Purchasing Program will distribute an estimated $850 million to hospitals based on their overall performance on the quality measures. These funds will be taken from what Medicare otherwise would have spent for hospital stays, and the size of the fund will gradually increase over time, resulting in a shift from payments based on volume to payments based on performance. Hospitals will continue to receive payments for care provided to Medicare patients based on the Medicare Inpatient Prospective Payment System, but those payments will be reduced by 1 percent starting in fiscal year 2013 to create the funding for the new value-based payments. Hospitals will be scored based on their performance on each measure relative to other hospitals and on how their performance on each measure has improved over time. The higher of these scores on each measure will be used in determining incentive payments. CMS plans to add additional outcomes measures that focus on improved patient outcomes and prevention of hospital-acquired conditions. Measures that have reached very high compliance scores would likely be replaced.[4] The measures included in the Hospital Value-Based Purchasing Program are a subset of those collected through the Hospital IQR program. Information gathered through the Hospital IQR program is reported on the Hospital Compare Website.[5]

The program intends to address the following:

Care Setting(s):	Hospitals
Level of Analysis:	Facility
Intended Population:	Program includes both all adult patient and Medicare beneficiary specific measures

[4] http://www.healthcare.gov/news/factsheets/valuebasedpurchasing04292011a.html
[5] http://www.gpo.gov/fdsys/pkg/FR-2011-05-06/pdf/2011-10568.pdf

Hospital IQR Measures for FY 2014 Payment Determination

Measure Name	NQF Measure # and Status	Measure Type	NQS Priorities					
			Safer care	Effective care coordination	Prevention and treatment of leading causes of mortality and morbidity	Person and family centered care	Supporting better health in communities	Making care more affordable
AMI–2 Aspirin prescribed at discharge	142 Endorsed	Process			X			
AMI–7a Fibrinolytic (thrombolytic) agent received within 30 minutes of hospital arrival	164 Endorsed	Process			X			
AMI–8a Timing of receipt of primary percutaneous coronary intervention (PCI)	163 Endorsed	Process			X			
AMI–10 Statin prescribed at discharge	639 Endorsed	Process			X			
HF–1 Discharge instructions		Process	X	X	X	X	X	
HF–2 Evaluation of left ventricular systolic function	135 Endorsed	Process			X			
HF–3 Angiotensin converting enzyme inhibitor (ACE–I) or angiotensin II receptor blocker (ARB) for left ventricular systolic dysfunction	162 Endorsed	Process			X			
PN–3b Blood culture performed in the emergency department prior to first antibiotic received in hospital	148 Endorsed	Process			X			
PN–6 Appropriate initial antibiotic selection	147 Endorsed	Process			X			
SCIP INF–1 Prophylactic antibiotic received within 1 hour prior to surgical incision	527 Endorsed	Process	X					
SCIP INF–2: Prophylactic antibiotic selection for surgical patients	528 Endorsed	Process	X					
SCIP INF–3 Prophylactic antibiotics discontinued within 24 hours after surgery end time (48 hours for cardiac surgery)	529 Endorsed	Process	X		X			X
SCIP INF–4: Cardiac surgery patients with controlled 6AM postoperative serum glucose	300 Endorsed	Process	X		X			

Shading indicates Final Measures for FY 2013 Hospital VBP Program and Finalized Outcome Measures for FY 2014 Hospital VBP Program

Hospital IQR Measures for FY 2014 Payment Determination

Measure Name	NQF Measure # and Status	Measure Type	NQS Priorities					
			Safer care	Effective care coordination	Prevention and treatment of leading causes of mortality and morbidity	Person and family centered care	Supporting better health in communities	Making care more affordable
SCIP INF–9: Postoperative urinary catheter removal on post-operative day 1 or 2 with day of surgery being day zero	453 Endorsed	Process	X					
SCIP INF–10: Surgery patients with perioperative temperature management	452 Endorsed	Process	X					
SCIP Cardiovascular-2: Surgery Patients on a beta blocker prior to arrival who received a beta blocker during the perioperative period	284 Endorsed	Process			X			
SCIP INF—VTE-1: Surgery patients with recommended venous thromboembolism (VTE) prophylaxis ordered	217 Endorsed	Process	X					
SCIP–VTE-2: Surgery patients who received appropriate VTE prophylaxis within 24 hours pre/post-surgery	218 Endorsed	Process	X					
Acute myocardial infarction (AMI) 30-day mortality rate	230 Endorsed	Outcome			X			
Heart failure (HF) 30-day mortality rate	229 Endorsed	Outcome			X			
Pneumonia (PN) 30-day mortality rate	468 Endorsed	Outcome			X		X	
HCAHPS survey	166 Endorsed	Patient Experience				X		
Acute myocardial infarction 30-day risk standardized readmission measure	505 Endorsed	Outcome	X	X	X			
Heart failure 30-day risk standardized readmission measure	330 Endorsed	Outcome	X	X	X			
Pneumonia 30-day risk standardized readmission measure	506 Endorsed	Outcome	X	X				X

Shading indicates Final Measures for FY 2013 Hospital VBP Program and Finalized Outcome Measures for FY 2014 Hospital VBP Program

Hospital IQR Measures for FY 2014 Payment Determination

Measure Name	NQF Measure # and Status	Measure Type	NQS Priorities					
			Safer care	Effective care coordination	Prevention and treatment of leading causes of mortality and morbidity	Person and family centered care	Supporting better health in communities	Making care more affordable
PSI 06: Iatrogenic pneumothorax, adult	346 Endorsed	Outcome	X					
PSI 11: Post-operative respiratory failure	533 Endorsed	Outcome	X		X			
PSI 12: Post-operative PE or DVT	450 Endorsed	Outcome	X					
PSI 14: Post-operative wound dehiscence	368 Endorsed	Outcome	X					
PSI 15: Accidental puncture or laceration	345 Endorsed	Outcome	X					
IQI 11: Abdominal aortic aneurysm (AAA) mortality rate (with or without volume)	359 Endorsed	Outcome	X					
IQI 19: Hip fracture mortality rate	354 Endorsed	Outcome	X					
Complication/patient safety for selected indicators (composite)	531 Endorsed	Other (composite)	X					
Mortality for selected medical conditions (composite)	530 Endorsed	Other (composite)			X			X
PSI 04 Death among surgical in patients with serious treatable complications	351 Endorsed	Outcome	X					
Participation in a systematic database for cardiac surgery	113 Endorsed	Structure		X	X			
Participation in a systematic clinical database for stroke care	493 Endorsed	Structure		X	X			
Participation in a systematic clinical database for nursing sensitive care	493 Endorsed	Structure		X				
Participation in a systematic clinical database registry for general surgery	493 Endorsed	Structure		X				
Central line associated bloodstream infection	139 Endorsed	Outcome	X					
Surgical site infection *(see OP-24 surgical site infection)*	299 Endorsed	Outcome	X					

Shading indicates Final Measures for FY 2013 Hospital VBP Program and Finalized Outcome Measures for FY 2014 Hospital VBP Program

Hospital IQR Measures for FY 2014 Payment Determination

Measure Name	NQF Measure # and Status	Measure Type	NQS Priorities					
			Safer care	Effective care coordination	Prevention and treatment of leading causes of mortality and morbidity	Person and family centered care	Supporting better health in communities	Making care more affordable
Catheter-Associated Urinary Tract Infection	138 Endorsed	Outcome	X					
Foreign object retained after surgery		Outcome	X					
Air embolism		Outcome	X					
Blood incompatibility		Outcome	X					
Pressure ulcer stages III and IV		Outcome	X					
Falls and trauma		Outcome	X					
Vascular-catheter associated infection		Outcome	X					
Catheter-associated urinary tract infection		Outcome	X					
Manifestations of poor glycemic control		Outcome	X					
ED–1 Median time from emergency department arrival to time of departure from the emergency room for patients admitted to the hospital	495 Endorsed	Process						
ED–2 Median time from admit decision to time of departure from the emergency department for emergency department patients admitted to the inpatient status	497 Endorsed	Process				X		
Immunization for influenza		Process					X	
Immunization for pneumonia		Process					X	
Medicare spending per beneficiary		Cost						

Shading indicates Final Measures for FY 2013 Hospital VBP Program and Finalized Outcome Measures for FY 2014 Hospital VBP Program

Proposed CY 2014 Hospital OQR Measure Set

Measure Name	NQF Measure # and Status	Measure Type	NQS Priorities					
			Safer care	Effective care coordination	Prevention and treatment of leading causes of mortality and morbidity	Person and family centered care	Supporting better health in communities	Making care more affordable
OP–1: Median time to fibrinolysis	287 Endorsed	Process			X			
OP-2: Fibrinolytic therapy received within 30 minutes	288 Endorsed	Process			X			
OP–3: Median time to transfer to another facility for acute coronary intervention	290 Endorsed	Process		X	X			
OP–4: Aspirin at arrival	286 Endorsed	Process			X			
OP-5 Median time to ECG	289 Endorsed	Process			X			
OP–6: Timing of antibiotic prophylaxis.	270 Endorsed	Process	X					
OP-7: Prophylactic Antibiotic Selection for Surgical Patients	268 Endorsed	Process	X					
OP–8: MRI lumbar spine for low back pain	514 Endorsed	Cost	X					X
OP–9: Mammography follow-up rates		Process		X				
OP–10: Abdomen CT—use of contrast material		Cost	X					
OP–11: Thorax CT—use of contrast material	513 Endorsed	Cost	X					
OP–12: The ability for providers with HIT to receive laboratory data electronically directly into their qualified/certified EHR system as discrete searchable data	489 Endorsed	Structure	X	X				
OP–13: Cardiac imaging for preoperative risk assessment for non-cardiac low risk surgery	669 Endorsed	Cost	X					X

Proposed CY 2014 Hospital OQR Measure Set

Measure Name	NQF Measure # and Status	Measure Type	NQS Priorities					
			Safer care	Effective care coordination	Prevention and treatment of leading causes of mortality and morbidity	Person and family centered care	Supporting better health in communities	Making care more affordable
OP–14: Simultaneous use of brain computed tomography (CT) and sinus computed tomography (CT)		Cost	X					X
OP–15: Use of brain computed tomography (CT) in the emergency department for atraumatic headache		Cost	X					X
OP–16: Troponin results for emergency department acute myocardial infarction (AMI) patients or chest pain patients (with probable cardiac chest pain) received within 60 minutes of arrival	660 Endorsed	Process			X			
OP–17: Tracking clinical results between visits	491 Endorsed	Process	X	X				X
OP–18: Median time from ED arrival to ED departure for discharged ED patients	496 Endorsed	Process				X		
OP–19: Transition record with specified elements received by discharged patients	649 Endorsed	Process	X	X				X
OP–20: Door to diagnostic evaluation by a qualified medical professional	498 Endorsed	Process	X			X		
OP–21: ED–median time to pain management for long bone fracture	662 Endorsed	Process				X		
OP–22: ED–patient left without being seen	499 Endorsed	Patient Experience	X			X		

Proposed CY 2014 Hospital OQR Measure Set

Measure Name	NQF Measure # and Status	Measure Type	NQS Priorities					
			Safer care	Effective care coordination	Prevention and treatment of leading causes of mortality and morbidity	Person and family centered care	Supporting better health in communities	Making care more affordable
OP–23: ED–head CT scan results for acute ischemic stroke or hemorrhagic stroke who received head CT scan interpretation within 45 minutes of arrival	661 Endorsed	Process	X					
OP-24: Surgical Site Infection *(see IQR Surgical Site Infection)*	299 Endorsed	Outcome	X					
OP–25: Diabetes: hemoglobin A1c management.	59 Endorsed	Outcome			X			
OP–26: Diabetes measure pair: A lipid management: low density lipoprotein cholesterol (LDL–C) <130, B lipid management: LDL–C <100	64 Endorsed	Outcome			X			
OP–27: Diabetes: blood pressure management	61 Endorsed	Process			X			
OP–28: Diabetes: eye exam	55 Endorsed	Process						
OP–29: Diabetes: urine protein screening	62 Endorsed	Process						
OP–30: Cardiac rehabilitation patient referral from an outpatient setting	643 Endorsed	Process		X	X		X	
OP–31: Safe surgery checklist use		Process	X					
OP–32: Hospital outpatient volume data on selected outpatient surgical procedures		Structure						

Final Measures for FY 2013 Hospital VBP Program and Finalized Outcome Measures for FY 2014 Hospital VBP Program

Measure Name	NQF Measure # and Status	Measure Type	NQS Priorities					
			Safer care	Effective care coordination	Prevention and treatment of leading causes of mortality and morbidity	Person and family centered care	Supporting better health in communities	Making care more affordable
AMI–7a Fibrinolytic (thrombolytic) agent received within 30 minutes of hospital arrival	164 Endorsed	Process			X			
AMI–8a Timing of receipt of primary percutaneous coronary intervention (PCI)	163 Endorsed	Process			X			
HF–1 Discharge instructions		Process	X	X	X	X	X	
PN–3b Blood culture performed in the emergency department prior to first antibiotic received in hospital	148 Endorsed	Process			X			
PN–6 Appropriate initial antibiotic selection	147 Endorsed	Process			X			
SCIP INF–1 Prophylactic antibiotic received within 1 hour prior to surgical incision	527 Endorsed	Process	X					
SCIP INF–2: Prophylactic antibiotic selection for surgical patients	528 Endorsed	Process	X					
SCIP INF–3 Prophylactic antibiotics discontinued within 24 hours after surgery end time (48 hours for cardiac surgery)	529 Endorsed	Process	X		X			X
SCIP INF–4: Cardiac surgery patients with controlled 6AM postoperative serum glucose	300 Endorsed	Process	X		X			
SCIP Cardiovascular-2: Surgery Patients on a beta blocker prior to arrival who received a beta blocker during the perioperative period	284 Endorsed	Process			X			
SCIP INF—VTE-1: Surgery patients with recommended venous thromboembolism (VTE) prophylaxis ordered	217 Endorsed	Process	X					

Final Measures for FY 2013 Hospital VBP Program and Finalized Outcome Measures for FY 2014 Hospital VBP Program

Measure Name	NQF Measure # and Status	Measure Type	NQS Priorities					
			Safer care	Effective care coordination	Prevention and treatment of leading causes of mortality and morbidity	Person and family centered care	Supporting better health in communities	Making care more affordable
SCIP–VTE-2: Surgery patients who received appropriate VTE prophylaxis within 24 hours pre/post-surgery	218 Endorsed	Process	X					
HCAHPS survey	166 Endorsed	Patient Experience			X			
Acute myocardial infarction (AMI) 30-day mortality rate	230 Endorsed	Outcome			X			
Heart failure (HF) 30-day mortality rate	229 Endorsed	Outcome			X			
Pneumonia (PN) 30-day mortality rate	468 Endorsed	Outcome				X		
Complication/patient safety for selected indicators (composite)	531 Endorsed	Composite	X					
Mortality for selected medical conditions (composite)	530 Endorsed	Composite			X			
Foreign object retained after surgery		Outcome	X					
Air embolism		Outcome	X					
Blood incompatibility		Outcome	X					
Pressure ulcer stages III and IV		Outcome	X					
Falls and trauma		Outcome	X					
Vascular-catheter associated infection		Outcome	X					
Catheter-associated urinary tract infection		Outcome	X					
Manifestations of poor glycemic control		Outcome	X					

MAP "Working" Measure Selection Criteria

1. Measures within the set meet NQF endorsement criteria

Measures within the set meet NQF endorsement criteria: important to measure and report, scientifically acceptable measure properties, usable, and feasible. (Measures within the set that are not NQF endorsed but meet requirements for submission, including measures in widespread use and/or tested, may be submitted for expedited consideration).

Response option: Strongly Agree / Agree / Disagree / Strongly Disagree

Measures within the measure set are NQF endorsed or meet requirements for NQF submission (including measures in widespread use and/or tested)

Additional Implementation Consideration: Individual endorsed measures may require additional discussion and may be excluded from the set if there is evidence that implementing the measure would result in undesirable unintended consequences.

2. Measure set adequately addresses each of the National Quality Strategy (NQS) priorities

Demonstrated by measures addressing each of the National Quality Strategy (NQS) priorities:

Subcriterion 2.1	*Safer care*
Subcriterion 2.2	*Effective care coordination*
Subcriterion 2.3	*Preventing and treating leading causes of mortality and morbidity*
Subcriterion 2.4	*Person- and family-centered care*
Subcriterion 2.5	*Supporting better health in communities*
Subcriterion 2.6	*Making care more affordable*

Response option for each subcriterion:
Strongly Agree / Agree / Disagree / Strongly Disagree:

NQS priority is adequately addressed in the measure set

3. Measure set adequately addresses high-impact conditions relevant to the program's intended population(s) (e.g., children, adult non-Medicare, older adults, dual eligible beneficiaries)

Demonstrated by the measure set addressing Medicare High-Impact Conditions; Child Health Conditions and risks; or conditions of high prevalence, high disease burden, and high cost relevant to the program's intended population(s). (Reference tables 1 and 2 for Medicare High-Impact Conditions and Child Health Conditions determined by NQF's Measure Prioritization Advisory Committee.)

Response option:
Strongly Agree / Agree / Disagree / Strongly Disagree:

Measure set adequately addresses high-impact conditions relevant to the program.

4. Measure set promotes alignment with specific program attributes

Demonstrated by a measure set that is applicable to the intended care setting(s), level(s) of analysis, and population(s) relevant to the program.

Response option for each subcriterion:

Strongly Agree / Agree / Disagree / Strongly Disagree

Subcriterion 4.1	Measure set is applicable to the program's intended care setting(s)
Subcriterion 4.2	Measure set is applicable to the program's intended level(s) of analysis
Subcriterion 4.3	Measure set is applicable to the program's population(s)

5. **Measure set includes an appropriate mix of measure types**

Demonstrated by a measure set that includes an appropriate mix of process, outcome, experience of care, cost/resource use/appropriateness, and structural measures necessary for the specific program attributes.

Response option for each subcriterion:

Strongly Agree / Agree / Disagree / Strongly Disagree

Subcriterion 5.1	Outcome measures are adequately represented in the set
Subcriterion 5.2	Process measures with a strong link to outcomes are adequately represented in the set
Subcriterion 5.3	Experience of care measures are adequately represented in the set (e.g. patient, family, caregiver)
Subcriterion 5.4	Cost/resource use/appropriateness measures are adequately represented in the set
Subcriterion 5.5	Structural measures and measures of access are represented in the set when appropriate

6. Measure set enables measurement across the patient-focused episode of care[1]

Demonstrated by assessment of the patient's trajectory across providers, settings, and time.

Response option for each subcriterion:

Strongly Agree / Agree / Disagree / Strongly Disagree

Subcriterion 6.1	Measures within the set are applicable across relevant providers
Subcriterion 6.2	Measures within the set are applicable across relevant settings
Subcriterion 6.3	Measure set adequately measures patient care across time

[1] National Quality Forum (NQF), *Measurement Framework: Evaluating Efficiency Across Patient-Focused Episodes of Care*, Washington, DC: NQF; 2010.

7. Measure set includes considerations for healthcare disparities[2]

Demonstrated by a measure set that promotes equitable access and treatment by addressing race, ethnicity, socioeconomic status, language, gender, or age disparities. Measure set also can address populations at risk for healthcare disparities (e.g., patients with behavioral/mental illness).

Response option for each subcriterion:
Strongly Agree / Agree / Disagree / Strongly Disagree

Subcriterion 7.1	Measure set includes measures that directly assess healthcare disparities (e.g., interpreter services)
Subcriterion 7.2	Measure set includes measures that are sensitive to disparities measurement (e.g., beta blocker treatment after a heart attack)

8. Measure set promotes parsimony

Demonstrated by a measure set that supports efficient (i.e., minimum number of measures and the least burdensome) use of resources for data collection and reporting and supports multiple programs and measurement applications.

Response option for each subcriterion:
Strongly Agree / Agree / Disagree / Strongly Disagree

Subcriterion 8.1	Measure set demonstrates efficiency (i.e., minimum number of measures and the least burdensome)
Subcriterion 8.2	Measure set can be used across multiple programs or applications (e.g., Meaningful Use, Physician Quality Reporting System [PQRS])

[2] NQF, *Healthcare Disparities Measurement, (commissioned paper under public comment)*, Washington, DC: NQF; 2011.

Table 1: National Quality Strategy Priorities:

1. Making care safer by reducing harm caused in the delivery of care.
2. Ensuring that each person and family is engaged as partners in their care.
3. Promoting effective communication and coordination of care.
4. Promoting the most effective prevention *and* treatment practices for the leading causes of mortality, starting with cardiovascular disease.
5. Working with communities to promote wide use of best practices to enable healthy living.
6. Making quality care more affordable for individuals, families, employers, and governments by developing and spreading new healthcare delivery models.

Table 2: High-Impact Conditions:

Medicare Conditions	Child Health Conditions and Risks
1. Major Depression	1. Tobacco Use
2. Congestive Heart Failure	2. Overweight/Obese (≥85th percentile BMI for age)
3. Ischemic Heart Disease	3. Risk of developmental delays or behavioral problems
4. Diabetes	4. Oral Health
5. Stroke/Transient Ischemic Attack	5. Diabetes
6. Alzheimer's Disease	6. Asthma
7. Breast Cancer	7. Depression
8. Chronic Obstructive Pulmonary Disease	8. Behavior or conduct problems
9. Acute Myocardial Infarction	9. Chronic Ear Infections (3 or more in the past year)
10. Colorectal Cancer	10. Autism, Asperger's, PDD, ASD
11. Hip/Pelvic Fracture	11. Developmental delay (diag.)
12. Chronic Renal Disease	12. Environmental allergies (hay fever, respiratory or skin allergies)
13. Prostate Cancer	13. Learning Disability
14. Rheumatoid Arthritis/Osteoarthritis	14. Anxiety problems
15. Atrial Fibrillation	15. ADD/ADHD
16. Lung Cancer	16. Vision problems not corrected by glasses
17. Cataract	17. Bone, joint or muscle problems
18. Osteoporosis	18. Migraine headaches
19. Glaucoma	19. Food or digestive allergy
20. Endometrial Cancer	20. Hearing problems
	21. Stuttering, stammering or other speech problems
	22. Brain injury or concussion
	23. Epilepsy or seizure disorder
	24. Tourette Syndrome

MAP "Working" Measure Selection Criteria Interpretive Guide

DRAFT

Instructions for applying the measure selection criteria:

The measure selection criteria are designed to assist MAP Coordinating Committee and workgroup members in assessing measure sets used in payment and public reporting programs. The criteria have been developed with feedback from the MAP Coordinating Committee, workgroups, and public comment. The criteria are intended to facilitate a structured thought process that results in generating discussion. A rating scale of Strongly Agree, Agree, Disagree, Strongly Disagree is offered for each criterion or sub-criterion. An open text box is included in the response tool to capture reflections on the rationale for ratings.

The eight criteria areas are designed to assist in determining whether the measure set is aligned with its intended use and whether the set best exemplifies whether the data to be gathered and reported for the program adequately reflects 'quality' health and healthcare.

<u>For criterion 1 – NQF endorsement:</u>

The optimal option is for all measures in the set to be NQF endorsed or ready for NQF expedited review. The endorsement process evaluates individual measures against four main criteria:

1) 'Importance to measure and report" - how well the measure addresses a specific national health goal/ priority, addresses an area where a performance gap exists, and demonstrates evidence to support the measure focus;

2) 'Scientific acceptability of the measurement properties' - evaluates the extent to which each measure produces consistent (reliable) and credible (valid) results about the quality of care.

3) 'Usability'- the extent to which intended audiences (e.g., consumers, purchasers, providers, and policy makers) can understand the results of the measure and are likely to find the measure results useful for decision making.

4) 'Feasibility' - the extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measures.

For measures to be considered under an expedited review, all of the following criteria should be considered:

- the extent to which the measure(s) under consideration has been sufficiently tested and/or in widespread use
- whether the scope of the project/measure set is relatively narrow
- time-sensitive legislative/regulatory mandate for the measure(s)

Measures that are NQF-endorsed are broadly available for quality improvement and public accountability programs. In some instances, there may be evidence that implementation challenges and/or unintended negative consequences of measurement to individuals or populations may outweigh benefits associated with the use of the performance measure. Additional consideration and discussion by the MAP workgroup or Coordinating Committee may be appropriate prior to selection. To raise concerns on particular measures, please make a note in the included text box under this criterion.

For criterion 2 – set addresses the National Quality Strategy priorities:

The set of measures is expected to adequately address each of the NQS priorities as described in criterion 2.1-2.6. The definition of "adequate" rests on the expert judgment of the Coordinating Committee or workgroup member using the selection criteria. This assessment should consider the current landscape of NQF-endorsed measures available for selection within each of the priority areas.

For criterion 3 – set addresses high-impact conditions:

When evaluating the measure set, measures that adequately capture information on high-impact conditions should be included based on their relevance to the program's intended population. High-priority Medicare and child health conditions have been determined by NQF's Measure Prioritization Advisory Committee and are included to provide guidance. For programs intended to address high-impact conditions for populations other than Medicare beneficiaries and children (e.g., adult non-Medicare and dual eligible beneficiaries), high-impact conditions can be demonstrated by their high prevalence, high disease burden, and high costs relevant to the program. The definition of "adequate" rests on the expert judgment of the Coordinating Committee or workgroup member using the selection criteria.

For criterion 4 – set promotes alignment with specific program attributes:

Measure sets should align with the attributes of the specific program for which they intend to be used. Background material on the program being evaluated and its intended purpose are provided to help with applying the criteria. This should assist with making discernments about the intended care setting(s), level(s) of analysis, and population(s).

**Care settings include: Ambulatory Care, Ambulatory Surgery Center, Clinician Office, Clinic/Urgent Care, Behavioral Health/Psychiatric, Dialysis Facility, Emergency Medical Services - Ambulance, Home Health, Hospice, Hospital- Acute Care Facility, Imaging Facility, Laboratory, Pharmacy, Post-Acute/Long Term Care, Facility, Nursing Home/Skilled Nursing Facility, Rehabilitation.

**Level of analysis includes: Clinicians/Individual, Group/Practice, Team, Facility, Health Plan, Integrated Delivery System.

**Populations include: Community, County/City, National, Regional, or States. Population includes: Adult/Elderly Care, Children's Health, Disparities Sensitive, Maternal Care, and Special Healthcare Needs.

For criterion 5 – set includes an appropriate mix of measure types:

Measure set should be evaluated for an appropriate mix of measure types. The definition of "appropriate" rests on the expert judgment of the Coordinating Committee or workgroup member using the selection criteria. The evaluated measure types include:

1) Outcome measures – Reflect the actual results of care.[1] Outcome measures denote the effects of care on the health status of patients and populations. Improvements in the patient's knowledge and salutary changes in the patients' behaviors are included under a broad definition of health status.[2] When choosing among similar clinical outcome measures, measures that are risk adjusted for clinically important factors, such as factors that assess for comorbidity and severity of illness, are preferred.
2) Process measures –Process denotes what is actually done in giving and receiving care. [3] NQF-endorsement seeks to ensure that process measures have a systematic assessment of the quantity, quality, and consistency of the body of evidence that the measure focus leads to the desired health outcome.[4] When choosing among similar process measures, measures that have a stronger linkage to outcomes and that are more proximal to outcomes are preferred. Another important factor is whether the process measure captures that the care process has in fact been provided.[5]
3) Experience of care measures– Defined as patients' perspective on their care.[6]
4) Cost/resource use/appropriateness measures–
    a. Resource use (cost) measures - Resource use measures are defined as broadly applicable and comparable measures of health services counts (in terms of units or dollars) that are

[1] National Quality Forum. (2011). The right tools for the job. Retrieved from http://www.qualityforum.org/Measuring_Performance/ABCs/The_Right_Tools_for_the_Job.aspx

[2] Donabedian, A. (1988) The quality of care. *JAMA*, 260, 1743-1748.

[3] Donabedian, A. (1988) The quality of care. *JAMA*, 260, 1743-1748.

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[5] Chassin, M., Loeb, J., Schmaltz, S., Wachter, R. (2010) Accountability measures – Using measurement to promote quality improvement. New England Journal of Medicine.363:7, 683-688.

[6] National Quality Forum. (2011). The right tools for the job. Retrieved from http://www.qualityforum.org/Measuring_Performance/ABCs/The_Right_Tools_for_the_Job.aspx

applied to a population or event (broadly defined to include diagnoses, procedures, or encounters).[7]

b. Appropriateness measures – Measures that examine the significant clinical, systems, and care coordination aspects involved in the efficient delivery of high-quality services and thereby effectively improve the care of patients and reduce excessive healthcare costs.[8]

5) Structure measures– Reflect the conditions in which providers care for patients.[9] This includes the attributes of material resources (such as facilities, equipment, and money), of human resources (such as the number and qualifications of personnel), and of organizational structure (such as medical staff organizations, methods of peer review, and methods of reimbursement).[10] In this case, structural measures should be used only when appropriate for the program attributes and the intended population.

For criterion 6 – set enables measurement across the patient focused episode of care:

The optimal option is for the set to approach measurement in such a way as to capture the patient's natural trajectory through the health and healthcare system over a period of time. Evaluating performance in this way can provide insight into how effectively services are coordinated across multiple settings and during critical transition points.

When evaluating subcriteria 6.1-6.3, it is important to note whether the measure set captures this trajectory (across providers, settings or time). This can be done through the inclusion of individual measures (e.g., a 30-day readmission post-hospitalization measure) or multiple measures in concert (e.g., aspirin at arrival for AMI, statins at discharge, AMI 30-day mortality, referral for cardiac rehabilitation).

For criterion 7 – set includes considerations for healthcare disparities:

Measures sets should be able to detect differences in quality among populations or social groupings (e.g., race/ethnicity, language).

Subcriterion 7.1 seeks to include measures that are known to assess healthcare disparities (e.g., use of interpreter services to prevent disparities for non-English speaking patients).

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[7] National Quality Forum. (2011). National voluntary consensus standards for cost and resource use (cycle 1): a consensus report. (draft report for commenting). Retrieved from http://www.qualityforum.org/projects/efficiency_resource_use_2.aspx?section=PublicandMemberComment-Non-ConditionSpecificCVDiabetes2011-08-302011-09-28

[8] National Quality Forum (2009). National voluntary consensus standards for outpatient imaging efficiency. Retrieved from http://www.qualityforum.org/Publications/2009/08/National_Voluntary_Consensus_Standards_for_Outpatient_Imaging_Efficiency__A_Consensus_Report.aspx

[9] National Quality Forum. (2011). The right tools for the job. Retrieved from http://www.qualityforum.org/Measuring_Performance/ABCs/The_Right_Tools_for_the_Job.aspx

[10] Donabedian, A. (1988) The quality of care. *JAMA*, 260, 1743-1748.

Subcriterion 7.2 seeks to include disparities-sensitive measures; these are measures that serve to detect not only differences in quality across institutions or in relation to certain benchmarks, but also differences in quality among populations or social groupings (e.g., race/ethnicity, language).

For criterion 8 - set promotes parsimony:

The optimal option is for the measure set to support an efficient use of resources in regard to data collection and reporting for accountable entitles, while also measuring the patient's health and healthcare comprehensively.

Subcriterion 8.1 can be evaluated by examining whether the set includes the least number of measures required to capture the program's objectives and data submission that requires the least burden on the part of the accountable entitles.

Subcriterion 8.2 can be evaluated by examining whether the set includes measures that are used across multiple programs (e.g., PQRS, MU, CHIPRA, etc.) and applications (e.g., payment, public reporting, and quality improvement).

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Improving Cancer Care Through Public Reporting Of Meaningful Quality Measures

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ABSTRACT Historically, quality measures for cancer have followed a different route than overall quality measures in the health care system. Many specialized cancer treatment centers were exempt from standard reporting on quality measures because of the complexity of cancer. Additionally, it has been difficult to create meaningful quality measures for cancer because the disease can strike so many different organs; is discovered at and progresses through different stages; and is treated using different modalities, such as surgery, radiation, and chemotherapy. Over the past decade the National Quality Forum, a nonprofit organization dedicated to bettering the quality of US health care, has endorsed measures of quality for cancer providers and patients. The Affordable Care Act of 2010, which has sections specific to cancer reporting, will also further the development and public reporting of cancer quality measures—important steps in improving the delivery of cancer care.

Cancer is the second leading cause of death in the United States: one in four deaths is the result of cancer.[1] It is estimated that more than 1.5 million new cancer cases were diagnosed in the United States in 2010, and more than 11 million people have been living with a history of cancer during any given year since 2006. Five-year relative survival rates for cancer have improved, rising from 50 percent in the 1970s to 68 percent in the early twenty-first century, owing to earlier detection and more effective therapies.[1]

As a result of improved survival rates, more people are living longer with a cancer diagnosis. This has effectively transformed cancer into a chronic disease for many patients. The aging of the US population will increase the numbers of people diagnosed and living with cancer over the next twenty years.[2] In a fee-for-service environment, where compensation is based on the volume and intensity of services provided, these factors will lead to increased costs of cancer treatment.[3]

A cornerstone of quality improvement in health care is the definition and application of meaningful measures. The fundamental challenge of defining quality measures is that the precise definition of *meaningful* is subjective and differs among providers, patients, caregivers, and payers. For the purpose of this article, *meaningful measures* are defined as quantifiable factors that influence the decision making of patients, caregivers, providers, payers, and policy makers. Meaningful measures for cancer may encompass objective criteria, such as whether a patient can speak following treatment for throat cancer. They may also encompass subjective criteria, such as whether a breast cancer patient is satisfied with her appearance following therapeutic and reconstructive surgery.

Minimal progress has been made in developing meaningful measures for cancer care, in part because of the complexity of the disease. Cancer

represents a set of diseases with some common traits but tremendous variability, unlike more homogeneous conditions such as diabetes. Cancers vary greatly depending on location, type, stage, and molecular and genetic characteristics. Treatment may involve medical, surgical, and radiation oncologists, which presents a unique challenge for attributing patient outcomes to a particular provider. Similarly, most cancer treatment is delivered as outpatient care, which has been underrepresented in efforts to develop measures. These factors underlie the formidable challenge of representing a disparate set of diseases with a uniform set of quality measures.

Generic quality measures that are not disease specific, such as length-of-stay and readmission rates, are relatively simple to report, although these measures provide limited insight into the quality of cancer care because they cannot assess long-term outcomes. However, when general quality measures are paired with cancer-specific measures—such as long-term survival rates—and are publicly reported, we will be able to identify opportunities for immediate and long-term improvements in cancer care.

In this article we describe the history and current state of measuring cancer care as it relates to recent health reform, and we emphasize the lessons learned about developing meaningful measures for this and other diseases.

Cancer Care Quality Measurement

In 1999 the Institute of Medicine published ten recommendations to improve the quality of cancer care.[4] They included using a core set of quality measures that were applicable to all aspects of cancer care—from screening through posttreatment follow-up—to hold providers responsible for the quality of cancer care they delivered. Public reporting of these measures would inform health-related decision making by patients, purchasers, and policy makers.[4]

The Institute of Medicine extended its recommendations to all of health care in 2001.[5] In the publication *Crossing the Quality Chasm: A New Health System for the 21st Century*, the institute recommended the establishment of a monitoring system to evaluate the health care system's accomplishments with regard to six aims for improvement—safety, effectiveness, patient-centeredness, timeliness, efficiency, and equity—and to report these results annually to Congress.[5] Despite the call to action in these seminal publications, public reporting of measures for cancer care progressed minimally during the past decade. However, the Affordable Care Act of 2010, together with interest from providers, patients, and payers, has reignited this effort.

Endorsement Of Cancer Measures

The National Quality Forum is a nonprofit organization that uses a well-defined, consensus-based process to endorse health care measures for use in public reporting. In the past decade the National Quality Forum conducted several projects to endorse cancer care measures under the guidance of multistakeholder committees that represented payer, consumer, quality improvement, provider, and patient perspectives.[6]

In 2002 the forum initiated a project called Cancer Quality of Care Measures. Phase I created a framework for a core set of cancer care measures and identified seven priorities of cancer care: access and cultural competence; communication and care coordination; prevention and screening; diagnosis and treatment of breast, colorectal, and prostate cancers; symptom management; and end-of-life care.[7]

The priorities identified in this phase laid the groundwork for Phase II, which began in 2004. Through this phase, the National Quality Forum endorsed nineteen voluntary consensus standards addressing breast and colorectal cancers, symptom management, and end-of-life care. Among these were five measures developed through a collaboration among the American Society of Clinical Oncologists, the National Comprehensive Cancer Network, and the American College of Surgeons Commission on Cancer.[8]

The National Quality Forum directed its attention to an additional project in 2007, in which it endorsed sixteen clinician-level measures addressing hematologic (blood) and prostate cancers, radiation and medical oncology, and pathology. These measures formed the basis used by the Centers for Medicare and Medicaid Services (CMS) to develop the Physician Quality Reporting System, which provides incentive payments for eligible physicians who report on quality measures for services furnished to Medicare beneficiaries.[9]

In 2008 the forum hosted a workshop to build upon previous work and identify a comprehensive set of cancer measures. Workshop participants mapped cancer measures that had been endorsed or approved across an episode of care (the period that includes diagnosis, treatment, and follow-up care) and highlighted key measurement gaps, including patient outcomes, care coordination, shared decision making, patient and family engagement, and end-of-life care. The subsequent white paper laid the foundation for recent National Quality Forum efforts to identify outcome and efficiency measures for cancer.[10,11] Despite these efforts, considerable gaps persist in cancer-specific measures endorsed for public reporting.

Gaps In Endorsed Measures

Measures endorsed by the National Quality Forum include disease-specific measures for more common cancers such as breast cancer, but few measures for less common cancers, such as ovarian cancer. Many measures address screening and initial cancer treatment, but there are few measures that evaluate posttreatment follow-up and long-term consequences of care.

Existing measures focus on physical manifestations of cancer (for example, the amount of time from diagnosis to the initiation of therapy) but do not assess the emotional and social consequences of the disease.[12] Overall gaps remain in measures that the Affordable Care Act identified as meaningful for cancer care, including measures of outcomes, structure, process, costs, efficiency, and patients' perception of care. These gaps are described below and summarized in Exhibit 1 and in the Appendix.[13]

OUTCOME MEASURES Outcome measures, frequently regarded as key indicators of health care quality, assess the results of health care with regard to recovery, functional restoration, and survival.[14] For patients receiving a cancer diagnosis, survival is the critical outcome and the principal concern. In addition to survival, cancer patients seek to understand the immediate and long-term impacts of their disease and its treatment.

Historically, outcome measures focused on short-term results of care, particularly mortality and complications following treatment.[15] That focus has expanded to include immediate and intermediate results relating to quality of life during and after treatment, including functional status and symptom management.[16,17]

The measures endorsed by the National Quality Forum include few cancer-specific outcome measures, reflecting the challenge of measuring long-term outcomes for cancer patients.[12] Recommended areas for development of outcome measures for cancer are outlined in the Appendix and include measures reflecting patients' preferences and patients' compliance with treatment regimens.[13] An example would be a measure of patients' assessment of their quality of life during and after therapy.

STRUCTURE MEASURES Structure measures assess the adequacy of health care delivery settings, including the physical facilities in which the care is delivered and the individuals engaged

EXHIBIT 1

Current State Of Endorsed Quality Measures Applied To Cancer Care

	Measures		Cancer-specific measures	
Cancer care continuum	Number	Percent	Number	Percent
OUTCOMES				
Treatment	36	24	4	7
Subsequent disease care	2	1	2	4
Subtotal	38	25	6	11
STRUCTURE				
All stages of care	14	9	2	4
PROCESS				
Treatment	56	37	18	33
Diagnosis/staging	13	9	11	20
Subsequent disease care	12	8	6	11
Screening/prevention	10	7	5	9
Surveillance/survivorship	5	3	5	9
Subtotal	96	64	45	83
EFFICIENCY				
All stages of care	0	0	0	0
COST OF CARE				
All stages of care	0	0	0	0
PATIENTS' PERCEPTION OF CARE				
All stages of care	3	2	1	2
TOTAL				
	151	100	54	100

SOURCE Authors' analysis of measures endorsed by the National Quality Forum. See Note 12 in text. **NOTES** The list of endorsed measures includes measures that are applicable to cancer disease only (for example, National Quality Forum–endorsed measure 0386: documentation of cancer stage) and measures that are applicable to a broad range of diseases (for example, National Quality Forum–endorsed measure 0533: postoperative respiratory failure).

The exemptions obtained by cancer centers have been important factors in delaying the development of cancer-specific measures.

in delivering that care. Examples are nurse-to-patient ratios, patient services such as palliative care, and key technologies such as robotic surgery. Few endorsed structure measures are cancer specific,[12] which reflects the general lack of structure guidelines for cancer care. Suggested areas for development of structure measures for cancer, such as the volume of procedures done at the facility, are described in the Appendix.[13]

PROCESS MEASURES Process measures assess uniform adherence to accepted standards of care where evidence links a particular approach with improved outcomes.[18] To date, more than ninety process measures applicable to cancer patients have been endorsed (for example, administering antibiotics prior to surgery to reduce surgical site infections or screening elderly patients for fall risk); however, few are cancer specific.[12] Proposed areas for development of cancer-specific process measures, such as control and management of treatment side effects, are described in the Appendix.[13]

EFFICIENCY MEASURES Efficiency measures examine the relationship between inputs and outputs in health care delivery, comparing resource use and associated costs with the level of health outcome achieved (for example, the time between diagnosis and the initiation of treatment).[19] The National Quality Forum has ongoing projects to expand its endorsed efficiency measures.[11] Recommended areas for development of efficiency measures for cancer, which should support reduced costs and improved patient outcomes—such as time to completion of treatment—are described in the Appendix.[13]

COST-OF-CARE MEASURES Cost-of-care measures evaluate total direct and indirect costs associated with a specific health care service or episode of care.[20] These measures provide insights into perceived cost inefficiencies and increased costs associated with comorbidities, delayed diagnoses, treatment settings, and adverse events. Where higher costs are noted for certain treatment settings, such as research-oriented academic medical centers and comprehensive cancer centers, further investigation of the clinical outcomes is needed.

Despite the scrutiny applied to rising health care costs, gaps persist in the endorsed measures, in both health care cost information and cost-of-care measures.[12] Suggested areas for development of cost-of-care measures for cancer, such as cost per treatment modality, are described in the Appendix.[13]

PATIENTS' PERCEPTION-OF-CARE MEASURES Patients' perception-of-care measures assess patients' satisfaction with the health care they received. Although restoration of health is a priority among patients and providers, equally important is patient satisfaction throughout the period of care. This is particularly true for cancer patients, whose treatment may be noncurative.

Many providers use the endorsed Hospital Consumer Assessment of Healthcare Providers and Systems survey to assess patient satisfaction.[12] This survey applies to inpatient care only, is not cancer specific, and does not assess quality of life during and after treatment. This represents a large gap because most cancer treatment is delivered in an outpatient setting, and many patients undergo complete treatment cycles without an inpatient hospital stay. These measures may be expanded to include tools that will assist providers in delivering patient-centered and patient-directed care, regardless of the health care setting. Proposed areas for development of patients' perception-of-care measures for cancer are described in the Appendix.[13]

Exemptions, The Affordable Care Act, And Cancer Measures

Eleven of the nation's specialized cancer care centers (see the Appendix),[13] including those at prominent teaching hospitals, sought and won exemptions to Medicare's hospital prospective payment system—and its subsequent requirement to report on quality—that were part of legislation in 1983.[21] Additional hospitals identified as comprehensive care centers were also exempted from the prospective payment system and its reporting requirements in 1989.[22] The prospective payment system is based on estimates of how intensively patients with certain diagnoses use hospital services, but that system could not accurately forecast the use of

services in cancer centers[13,22] such as the MD Anderson Cancer Center and the Dana-Farber Cancer Institute.[22]

The exemptions obtained by these centers, combined with the emphasis on outpatient delivery of care, have been important factors in delaying the development of cancer-specific measures. Because the prospective payment system did not accurately reflect the intensity of resource use, the nation's most important cancer centers were exempted from reporting standard measures of quality required of other hospitals. For organizations that were not included in this exemption, Medicare reimbursement is tied to public reporting of certain noncancer quality measures.

However, the Affordable Care Act established a mechanism for these eleven cancer care centers and other organizations exempted from quality reporting (such as certain mental health and long-term care facilities) to begin reporting health care quality measures to CMS. Section 3005 of the Affordable Care Act includes the following stipulations specific to quality reporting by the eleven cancer centers: (1) Beginning in 2014 and thereafter, these cancer centers will be required to submit data to the secretary of health and human services on selected endorsed quality measures. (2) By 2012, CMS will announce the quality measures for these cancer centers, including measures of outcomes, structure, process, costs, efficiency, and patients' perceptions of care. (3) This information will be reported publicly on the CMS website.

Although this provision specifically addresses the eleven specialized cancer centers, it represents a likely prelude to mandatory public reporting of outcomes, costs, and other measures of cancer care from all cancer centers, leading to greater transparency and scrutiny of the outcomes and costs related to all cancer treatment.[23]

CMS And Cancer Measures

In late 2010 CMS announced its contract with Mathematica Policy Research and the National Committee for Quality Assurance (together known as the "contractors") to develop up to six cancer-specific, quality-of-care measures for the most common cancers among Medicare beneficiaries (breast, colon, lung, and prostate). The measures developed and tested through this project will probably be submitted to the National Quality Forum for endorsement in 2012.

To facilitate this effort, the contractors assembled a technical expert panel with a broad representation of perspectives (including cancer hospital care, performance measurement and quality improvement organizations, payers, cancer survivorship, and health care disparities) to advise on areas such as content, consumer advocacy, clinical relevance, and methodology. Through this collaboration, CMS seeks to improve the quality of cancer care for all Americans.[24,25]

A cancer-specific risk-adjustment model is needed to facilitate public reporting of meaningful measures.

However, that objective will be difficult to achieve with the six measures targeted under this project. Future projects are needed to build upon this initial effort and address other types of cancer with a broader range of measures. Throughout, the groups will need to consider key limitations to meaningful quality measurement and data comparison, including adjusting for disease severity and information technology requirements.

Adjusting For Disease Severity In Cancer

Patient characteristics such as severity of illness and age may greatly influence clinical outcomes, including length-of-stay and mortality. To ensure equitable comparisons among hospitals, organizations adjust for severity of disease using risk-adjusted methodologies that classify patients according to demographics, diagnoses, severity of illness, mortality risk, and use of resources.

However, these models do not account for critical components of cancer outcomes such as cancer type and stage, previous treatment, and coexisting illnesses. Models that ignore these factors result in imprecise outcomes for hospitals with a disproportionate share of high-risk patients who have complex cancers and challenging comorbidities.[26] Therefore, a cancer-specific risk-adjustment model, which accounts for severity of disease and comorbidities, is needed to facilitate public reporting of meaningful measures, to link reimbursement to quality, and to highlight opportunities for improving health care delivery for cancer patients.

Developers must not allow the logistics of reporting to dictate the selection of the measures.

Information Technology And Public Reporting

There is often a disconnect between the need to report meaningful outcomes and the data available to support that reporting. Early efforts to report quality measures publicly relied on administrative data because they were widely available. But the interests of providers, patients, and payers were misaligned because the most common measures assessed length-of-stay, complications of care that could be coded, and mortality. Although these are measures of care, they provide an incomplete view of the quality of health care delivery, notably for cancer.

Developing systems that capture and analyze extractable data from the electronic health record is fundamental to meaningful quality measurement. Of particular importance are tools that capture patients' perspective of care, such as patient preference and quality of life.

In recent years, providers rushed to implement electronic health records in an effort to capture the data needed to support quality measurement. However, early adopters of these systems observed that the necessary data were embedded in scanned documents or other unsearchable text fields within these systems. For all providers, the common mechanism for collecting data to support quality measurement is abstracting medical records—the process of entering clinical data from a traditional paper or electronic record into an electronic database for clinical or research purposes—which is labor-intensive and costly.

Continued adoption and enhancement of electronic systems to support public reporting of meaningful health care measures is a vital element of ongoing health care reform and quality improvement. For all providers, implementing the technical infrastructure to support this reporting is costly. This is particularly true within the current economic environment, where providers are facing ongoing reimbursement cuts from public and private payers.

Lessons Learned

LESSON ONE Frequently, measures based on billing data—for example, length of hospital stay—are limited in their ability to define and influence desired outcomes. Many are measures of convenience, selected because they are reported from existing administrative information systems.

In identifying meaningful cancer measures, developers must not allow the logistics of reporting to dictate the selection of the measures. They must instead focus on the following questions: Which health outcomes are providers attempting to deliver? Which outcomes are most important to the patients receiving services?

This exercise requires a candid dialogue between providers and patients. Experience suggests that long-term survival and quality-of-life valuations are far more important to patients than hospital readmission and infectious complication rates. To date, there has been minimal effort at the national level to support development of measures that are important to patients.

LESSON TWO Health information systems must be structured to support reporting of meaningful measures to patients, caregivers, providers, payers, and policy makers. One such measure might be patients' satisfaction with cosmetic results of surgery. Without routine marking, tracking, and collection of critical measures, it will be impossible to compare outcomes across providers or to demonstrate improved outcomes over time.

LESSON THREE Once identified, key indicators of cancer outcomes must account for severity of disease using a risk-adjusted methodology. For example, patients with early-stage confined tumors have vastly different expected outcomes than patients who present with a widely metastatic disease that has spread beyond the main tumor site to other organs and tissues. Similarly, those who present with advanced age or multiple serious conditions will not achieve the same outcomes as their younger, healthier counterparts. Current risk adjustment methodologies are limited in their ability to report accurate cancer outcomes. However, accounting for stage of disease and comorbidities is essential to equitable and meaningful comparisons of cancer outcomes.

The Way Forward

In a 2011 report, the Institute of Medicine stated that although several organizations are attempting to develop quality measures, a proliferation of measures could confuse and fragment the value of meaningful measures.[27] Accordingly, a cohesive set of cancer measures relevant to patients, providers, and payers is essential to improving the quality of cancer care.

Short- and long-term outcomes, together with patients' preferences (such as preservation of sexual function following treatment) and patient-reported outcomes, constitute a collection of meaningful measures for patients. For providers, the Institute of Medicine's six aims for improvement represent six domains of measures useful for evaluating and improving processes.[5] Additionally, in section 3005 the Affordable Care Act identifies six categories of measures that are meaningful to payers, particularly as efforts continue to link reimbursement to quality.

Building a national consensus around measurable cancer outcomes and quality of care will not be a rapid or simple process. Nevertheless, the patient-driven, provider-driven, and payer-driven measurement approaches we have described will define the future path of developing and validating meaningful cancer measures. Viewed as an evolving and iterative effort to link patient, provider, and payer perspectives, it will produce a balanced picture of patient-driven, high-quality cancer care and a model for improving overall health care delivery. ■

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ABOUT THE AUTHORS: TRACY E. SPINKS, RONALD WALTERS, THOMAS W. FEELEY, HEIDI WIED ALBRIGHT, VICTORIA S. JORDAN, JOHN BINGHAM & THOMAS W. BURKE

Tracy E. Spinks is the project director of the Institute for Cancer Care Excellence at the MD Anderson Cancer Center.

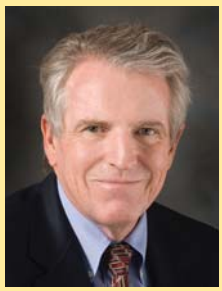
Tracy Spinks explains that the core quality measures she and her coauthors propose in this month's *Health Affairs* are grounded in an updated vision for good cancer care and how to measure it. All of the authors are at the MD Anderson Cancer Center at the University of Texas. The center is one of eleven comprehensive cancer centers in the United States whose exemption from mandatory public quality reporting will soon be nullified by provisions in the Affordable Care Act.

Those provisions not only extend the quality reporting mandate, but also call for a new set of metrics. "My collaborators recognized that the revised quality measures must be appropriate for all cancer patients, not just those served at facilities already required to report," Spinks notes. "The comprehensive centers take a more multidisciplinary and patient-centered treatment approach," she explains, "and serve a far more diverse and complex patient population."

Spinks joined the center as its clinical metrics program coordinator in 2010. She is now the project director of the center's Institute for Cancer Care Excellence. Previously, she provided financial and litigation consulting services to clients in a variety of industries. In her work at MD Anderson, she has been able to draw on her previously acquired expertise in insurance coverage law, financial modeling, and complex data analysis. She received her undergraduate degree in management information systems from the University of Houston.

Ronald Walters is associate vice president of medical operations and informatics at the MD Anderson Cancer Center.

Ronald Walters has been an associate vice president of medical operations and informatics at the center since 2000. He is involved in the development of quality metrics on a local and national level and serves on the National Quality Forum and the Alliance of Dedicated Cancer Centers. Walters received his medical degree from the University of Nebraska. His other postgraduate degrees include a master of business administration degree from the University of Houston.



Thomas W. Feeley is vice president of medical operations and head of the Division of Anesthesiology and Critical Care at the MD Anderson Cancer Center.

Thomas Feeley is vice president of medical operations and has served as head of the Division of Anesthesiology and Critical Care at the center since 1997. He currently leads the center's Institute for Cancer Care Excellence, which conducts research in cancer care delivery. Feeley underscores the importance of the new Affordable Care Act quality reporting requirements for cancer care—a specialty he described as having let itself "lag far behind the rest of medicine in the quality metric development process." Feeley received his medical degree from Boston University.

Heidi Wied Albright is director of the Institute for Cancer Care Excellence, MD Anderson Cancer Center.

Heidi Albright is director of the center's Institute for Cancer Care Excellence. A certified health care financial professional, she is responsible for the strategy,

direction, and implementation of research on cancer care delivery. Albright holds a master's degree in health administration from Texas Woman's University.

Victoria S. Jordan is director of quality measurement and engineering at the MD Anderson Cancer Center.

Victoria Jordan is director of quality measurement and engineering at the center. She provides expertise in process and system improvement and the reporting of process and outcome data. She holds a doctoral degree in industrial and systems engineering from Auburn University.

John Bingham is vice president of performance improvement and chief quality officer at the MD Anderson Cancer Center.

John Bingham, the center's vice president of performance improvement and chief quality officer, directs the center's organizationwide efforts for quality. Bingham received his master's degree in health administration from Georgia State University

Thomas W. Burke is executive vice president and physician-in-chief at the MD Anderson Cancer Center.

Thomas Burke is the center's executive vice president and physician-in-chief, responsible for oversight and strategic planning for patient care delivery at the center. Burke received his medical degree from Tulane University.

NQF-Endorsed Measures Relating to Cancer Care

Measure Name	NQF Measure # and Status	Measure Type	NQS Priorities					
			Safer care	Effective care coordination	Prevention and treatment of leading causes of mortality and morbidity	Person and family centered care	Supporting better health in communities	Making care more affordable
Breast cancer screening	0031 Endorsed	Process			X		X	
Cervical cancer screening	0032 Endorsed	Process			X		X	
Colorectal cancer screening	0034 Endorsed	Process			X		X	
Family Evaluation of Hospice Care	0208 Endorsed	Composite				X		
Comfortable dying: pain brought to a comfortable level within 48 hours of initial assessment	0209 Endorsed	Outcome				X		
Proportion receiving chemotherapy in the last 14 days of life	0210 Endorsed	Cost		X		X		X
Proportion with more than one emergency room visit in the last days of life	0211 Endorsed	Cost		X		X	X	X
Proportion with more than one hospitalization in the last 30 days of life	0212 Endorsed	Cost		X		X	X	X
Proportion admitted to the ICU in the last 30 days of life	0213 Endorsed	Cost		X		X		X
Proportion dying from cancer in an acute care setting	0214 Endorsed	Cost		X		X	X	X
Proportion not admitted to hospice	0215 Endorsed	Cost		X		X	X	X
Proportion admitted to hospice for less than 3 days	0216 Endorsed	Cost		X		X	X	X

NQF-Endorsed Measures Relating to Cancer Care

Measure Name	NQF Measure # and Status	Measure Type	NQS Priorities					
			Safer care	Effective care coordination	Prevention and treatment of leading causes of mortality and morbidity	Person and family centered care	Supporting better health in communities	Making care more affordable
Post breast conserving surgery irradiation	0219 Endorsed	Process			X			
Adjuvant hormonal therapy	0220 Endorsed	Process			X			
Needle biopsy to establish diagnosis of cancer precedes surgical eXcision/resection	0221 Endorsed	Process			X			
Patients with early stage breast cancer who have evaluation of the aXilla	0222 Endorsed	Process			X			
Adjuvant chemotherapy is considered or administered within 4 months (120 days) of surgery to patients under the age of 80 with AJCC III (lymph node positive) colon cancer	0223 Endorsed	Process		X	X			
Completeness of pathology reporting	0224 Endorsed	Process			X			
At least 12 regional lymph nodes are removed and pathologically eXamined for resected colon cancer	0225 Endorsed	Process			X			
Myelodysplastic syndrome (MDS) and acute leukemias – baseline cytogenetic testing performed on bone marrow	0377 Endorsed	Process			X			
Documentation of iron stores in patients receiving erythropoietin therapy	0378 Endorsed	Process			X			
Chronic lymphocytic leukemia (CLL) – baseline flow cytometry	0379 Endorsed	Process			X			

NQF-Endorsed Measures Relating to Cancer Care

Measure Name	NQF Measure # and Status	Measure Type	NQS Priorities					
			Safer care	Effective care coordination	Prevention and treatment of leading causes of mortality and morbidity	Person and family centered care	Supporting better health in communities	Making care more affordable
Multiple myeloma – treatment with bisphosphonates	0380 Endorsed	Process			X			
Oncology: treatment summary documented and communicated – radiation oncology	0381 Endorsed	Process		X				
Oncology: radiation dose limits to normal tissues	0382 Endorsed	Process	X					
Oncology: plan of care for pain – medical oncology and radiation oncology (paired with 0384)	0383 Endorsed	Process				X		
Oncology: pain intensity quantified – medical oncology and radiation oncology (paired with 0383)	0384 Endorsed	Process				X		
Oncology: chemotherapy for stage IIIA through IIIC colon cancer patients	0385 Endorsed	Process			X			
Oncology: cancer stage documented	0386 Endorsed	Process			X			
Oncology: hormonal therapy for stage IC through IIIC, ER/PR positive breast cancer	0387 Endorsed	Process			X			
Prostate cancer: three-dimensional radiotherapy	0388 Endorsed	Process	X					
Prostate cancer: avoidance of overuse measure – isotope bone scan for staging low-risk patients	0389 Endorsed	Process	X					X

NQF-Endorsed Measures Relating to Cancer Care

Measure Name	NQF Measure # and Status	Measure Type	NQS Priorities					
			Safer care	Effective care coordination	Prevention and treatment of leading causes of mortality and morbidity	Person and family centered care	Supporting better health in communities	Making care more affordable
Prostate Cancer: adjuvant hormonal therapy for high-risk patients	0390 Endorsed	Process			X			
Breast cancer resection pathology reporting- pT category (primary tumor) and pN category (regional lymph nodes) with histologic grade	0391 Endorsed	Process			X			
Colorectal cancer resection pathology reporting- pT category (primary tumor) and pN category (regional lymph nodes) with histologic grade	0392 Endorsed	Process			X			
Recording of clinical stage for lung cancer and esophageal cancer resection	0455 Endorsed	Process			X			
Recording of performance status (Zubrod, Karnofsky, WHO or ECOG Performance Status) prior to lung or esophageal cancer resection	0457 Endorsed	Process			X			
Risk-adjusted morbidity after lobectomy for lung cancer	0459 Endorsed	Outcome	X					
Risk-adjusted morbidity and mortality for esophagectomy for cancer	0460 Endorsed	Outcome	X					

NQF-Endorsed Measures Relating to Cancer Care

Measure Name	NQF Measure # and Status	Measure Type	NQS Priorities					
			Safer care	Effective care coordination	Prevention and treatment of leading causes of mortality and morbidity	Person and family centered care	Supporting better health in communities	Making care more affordable
Combination chemotherapy is considered or administered within 4 months (120 days) of diagnosis for women under 70 with AJCC T1c, or Stage II or III hormone receptor negative breast cancer	0559 Endorsed	Process		X				
Melanoma coordination of care	0561 Endorsed	Process		X				
Over-utilization of imaging studies in stage 0-IA melanoma	0562 Endorsed	Cost	X					X
Follow-up after initial diagnosis and treatment of colorectal cancer: colonoscopy	0572 Endorsed	Process		X				
Annual cervical cancer screening for high-risk patients	0579 Endorsed	Process			X		X	
Breast cancer - cancer surveillance	0623 Endorsed	Process			X		X	
Prostate cancer - cancer surveillance	0625 Endorsed	Process			X		X	
Melanoma continuity of care – recall system	0650 Endorsed	Structure		X			X	

NATIONAL QUALITY FORUM

Measure Applications Partnership (MAP)

Bios of the MAP Hospital Workgroup

Chair (voting)

Frank G. Opelka, MD FACS

Frank G. Opelka, MD FACS is the Vice Chancellor for Clinical Affairs and Professor of Surgery at Louisiana State University Health Sciences Center in New Orleans. At LSU, he actively teaches in the 4 health sciences schools, developing programs for innovation and delivery system redesign. He also works at the LSU seven hospital system to support efforts for the development of a safety net ACO to address various challenges, such as the dual eligibles. He also represents the American College of Surgeons, Washington DC Office in the Division of Health Policy and Advocacy. Dr. Opelka founded and serves as the chair of the Surgical Quality Alliance, with over 20 surgical organizations sitting in the alliance. He serves as one of the original members of the National Priorities Partnership in the National Quality Forum, a member of the NQF's Consensus Standards Advisory Committee, and has served as a chair of an NQF steering committee. Dr. Opelka continues to serve on the Quality Alliance Steering Committee, the AQA, and the AMA's Physician Consortium for Performance Improvement. He has served on several advisory committees to several health plans, including United Health Group, Blue Cross Blue Shield of America, and Humana. Dr. Opelka has developed and assisted the American Board of Medical Specialties in their clinical registry efforts for the Maintenance of Certification Part IV. Prior to serving in the quality arena, Dr. Opelka worked closely with CMS in the Ambulatory APG relative values, AMA's Relative Value Updates Committee, Practice Expense Committee, and an advisory to the CPT Editorial Committee. Dr. Opelka served 12 years on active duty in the US Army where he did his residency in General Surgery at the Walter Reed Army Medical Center and Eisenhower Army Medical Center. His colorectal surgery fellowship was at the Ochsner Clinic New Orleans where he served for 12 years as faculty and attending surgeon. His career then included time at the Beth Israel Deaconess Medical Center in Boston before returning to New Orleans just in time for Hurricane Katrina. Dr. Opelka is a board certified colon and rectal surgery. He is a fellow of the American College of Surgeons and the American Society of Colon and Rectal Surgeons.

Organizational Members (voting)

Alliance of Dedicated Cancer Centers
Ronald Walters, MD, MBA, MHA, MS

Ron Walters is an associate vice president of medical operations and informatics at The University of Texas MD Anderson Cancer Center in The Texas Medical Center, applying more than 30 years of experience and knowledge at MD Anderson. Dr. Walters is a breast medical oncologist and is responsible for the professional aspects of Clinical Operations including Medical Informatics, the Tumor Registry, the Transfer Center, Managed Care Programs, Uncompensated Charity Care, Clinical Safety and Effectiveness and the Physicians Network. He serves on multiple institutional committees striving for improvements in patient care, research and our support systems. Dr. Walters pursued his MBA at the University of Houston. When he realized it didn't cover enough of the health care administration aspects, he went for a Masters degree too. It was in business school where he really learned to appreciate that a different perspective was obtained if you had some hands-on experience in the profession. He completed

a Masters program in the management of computing and information systems at Houston Baptist University. Dr. Walters considers himself a productive member of a great team with great leadership at MD Anderson Cancer Center.

American Hospital Association
Richard Umbdenstock
Richard J. Umbdenstock became president and chief executive officer of the American Hospital Association (AHA) on January 1, 2007. He was the elected AHA Board Chair in 2006. The AHA leads, represents and serves more than 5,000 member hospitals, health systems and other health care organizations, and 40,000 individual members. Mr. Umbdenstock's career includes experience in hospital administration, health system leadership, association governance and management, HMO governance and health care governance consulting. He has written several books and articles for the hospital board audience and authored national survey reports for the AHA and its Health Research and Educational Trust, and for the American College of Healthcare Executives. He received a B.A. degree in Politics in 1972 from Fairfield University, Fairfield, CT, and a Master of Science degree in 1974 in Health Services Administration from the State University of New York at Stony Brook. He is a Fellow of the American College of Healthcare Executives. Mr. Umbdenstock serves on the National Quality Forum Board of Directors and the National Priorities Partnership, and chairs the Hospital Quality Alliance.

American Organization of Nurse Executives
Patricia Conway-Morana, RN
Pat Conway-Morana received her basic nursing education as a diploma graduate from Riverside Hospital School of Nursing; her BSN from Jefferson College of Health Sciences: her BS in Business Administration from Christopher Newport University; a Master of Administration from Lynchburg College and is currently a Nursing Doctoral Candidate at George Mason University. She has worked as a Labor and Delivery Staff Nurse and in several leadership roles including Labor and Delivery Nurse Manager; Risk Management Consultant; Director of Accreditation and Licensure; and Chief Nurse Executive at Carilion Health System; Columbus Regional Medical Center and Inova Fairfax Hospital. Pat is certified in Inpatient Obstetrics; as a Professional in Healthcare Quality; Board Certified as a Nurse Executive, Advanced: Certified Nurse in Executive Practice and is a Fellow in the American College of Healthcare Executives. Pat is on the Board of Directors of the American Organization of Nurse Executives and is the Board Chairperson for the AONE Foundation. She is also a member of the American Nurses Association, Sigma Theta Tau International Honor Society, and the American College of Healthcare Executives. Pat is currently working full time on her doctoral dissertation, "Predicting Structurational Divergence in Nursing."

American Society of Health-System Pharmacists
Kasey Thompson, PharmD
Dr. Kasey Thompson is Vice President of the Office of Policy, Planning and Communications, and Director of the Practice Standards Division at the American Society of Health-System Pharmacists (ASHP) in Bethesda, Maryland. In this role he coordinates strategic planning and policy development for ASHP, and leads the Society's public relations, government relations, and practices standards development programs. He previously served as the Director of the ASHP Center on Patient Safety, and the Director of the ASHP Practice Standards and Quality Division. Dr. Thompson has published numerous articles, editorials, and book chapters on medication-use safety and quality. He is co-editor along with Dr. Henri R. Manasse, Jr., of the 2005 book: Medication Safety: A Guide for Health Care Facilities. Dr. Thompson has given presentations nationally and internationally, and has served on numerous advisory committees and governing boards for various public and private sector organizations.

Dr. Thompson holds a Bachelor of Science degree in cellular biology from Northeastern Oklahoma State University; and Bachelor of Science and Doctor of Pharmacy degrees from the University of Oklahoma, College of Pharmacy. He is currently completing a Master of Science in Information Technology degree with emphasis in informatics and security from the University of Maryland University College.

Blue Cross Blue Shield of Massachusetts
Jane Franke, RN, MHA, CPHQ
Jane Franke, RN, MHA, CPHQ is the Director of Hospital Performance Measurement & Improvement for Blue Cross Blue Shield of Massachusetts. Ms. Franke has been involved in the strategic development and evolution of hospital performance measurement since 2002 and currently oversees the Hospital Performance Incentive Program (HPIP); HPIP provides hospitals across the state with the opportunity to earn increased payment by meeting absolute thresholds for good performance on a set of clinical outcome, clinical process, and patient experience measures. Ms. Franke also works with hospitals and medical group practices participating in the Alternative Quality Contract (AQC), BCBSMA's innovative global payment model that uses a budget based methodology and substantial performance incentive payments to improve quality and efficiency. Ms. Franke serves on the Steering Committee for the State Action on Avoidable Rehospitalizations (STAAR) and the Massachusetts Coalition for Prevention of Medical Errors. Ms. Franke has more than 20 years of hospital-based clinical experience and, prior to her role at BCBSMA, was the Executive Director of a successful physician hospital organization operating under global risk in central Massachusetts.

Building Services 32BJ Health Fund
Barbara Caress
Barbara Caress has over 25 years of experience as a non-profit and public agency manager, consultant and administrator. She is currently Director of Strategic Policy and Planning for the SEIU Local 32BJ Health, Pension, Legal and Training Funds, which provide benefits to 250,000 people living in seven states. She directs the Funds' research and planning efforts and staffs the Trustees' committees on health insurance, benefits and reform. Under her direction the 32BJ Health Funds have undertaken a substantial re-design effort dedicated to developing incentives for members to use, and providers to offer, patient centered medical homes and other certified quality providers. Ms Caress spent many years as a health care consultant working for such clients as the New York City and State Health Departments, the Community Service Society, Local 1199 and the United Hospital Fund. She is currently a member of NCQA's Standards Committee and the NYC Primary Care Improvement Project Advisory Board. Author of a wide range of health policy reports and reviews, Ms Caress received her undergraduate and graduate education at the University of Chicago and is currently an adjunct faculty member at the School of Public Affair, Baruch College, CUNY.

Iowa Healthcare Collaborative
Lance Roberts, PhD
Lance L. Roberts, PhD is the Health Services Analyst for the Iowa Healthcare Collaborative. He is primarily responsible for collaborating with state healthcare stakeholders and national quality/safety measurement and reporting organizations in order to promote and carry out responsible public reporting efforts in Iowa. These efforts culminate in the release of Iowa hospital quality/safety performance information in the online Iowa Report. He also utilizes his health services research background to produce actionable knowledge for use in various continuous improvement, policy, and research activities conducted by the Iowa Healthcare Collaborative. His educational and professional background include both technology and health services research science. His 14 years of manufacturing experiences included work in production and inventory control, purchasing, master scheduling, capacity management, supervision, and an array of manufacturing/process engineering activities including several years of

experience with TPS/Lean methods and philosophy implementation. His healthcare experiences include Six Sigma, Lean, and computer simulation implementation projects within hospitals; teaching undergraduate statistics; public reporting of delivery system performance; and health services research.

Memphis Business Group on Health
Cristie Upshaw Travis, MSHA
Cristie Upshaw Travis is Chief Executive Officer of the Memphis Business Group on Health, a business coalition with 15 employer members and affiliates providing health care benefits to approximately 350,000+ residents of the Mid-South and Tennessee, which focuses on sharing solutions and providing tools to manage health benefits in an ever-changing environment. Ms. Travis is Immediate Past Chair of the Board of Governors of the National Business Coalition on Health, and continues to serve on the Board; she is former Chair of the Board of Directors for The Leapfrog Group; and she serves on the Purchaser Advisory Committee for NCQA. She is Immediate Past Chair of the Healthy Memphis Common Table, a community health collaborative in Memphis, TN, and continues to serve on the Board. Ms. Travis is a member of the Board of Trustees for the Southern College of Optometry; President of the Community Advisory Board for the University of Memphis Graduate Program in Health Administration; a member of the Dean's Advisory Council for the University of Memphis School of Public Health; and a member of the Community Advisory Board for the Christian Brothers University Physician's Assistant program. She also serves on the National Commission on Prevention Priorities and the National Transitions of Care Coalition. She has her Master of Science in Hospital and Health Administration from the University of Alabama at Birmingham. Ms. Travis is a frequent national speaker on value-based benefit design, community health improvement collaboratives, employer-sponsored quality improvement initiatives, health plan performance measurement and worksite initiatives. She has recently presented for the National Quality Forum, the World Congress, Integrated Benefits Institute, National Business Coalition on Health, The Leapfrog Group, America's Health Insurance Plans (AHIP), America's Health Information Management Association (AHIMA), and Agency for Healthcare Research & Quality (AHRQ).

Mothers Against Medical Error
Helen Haskell, MA
Helen Haskell is founder and president of Mothers Against Medical Error, a consumer-led organization dedicated to improving patient safety and providing support for patients who have experienced medical injury. For Helen, patient safety is a calling to which she was brought by the medical error death of her fifteen-year-old son Lewis in a South Carolina hospital in November, 2000. In 2005, Helen helped put together a coalition of patients, policymakers, and healthcare providers to pass the Lewis Blackman Patient Safety Act, the first of several South Carolina legislative initiatives addressing healthcare safety and transparency. In 2007, the state of South Carolina created the Lewis Blackman Chair of Patient Safety and Clinical Effectiveness, an endowed professorship named in honor of her deceased son. Helen is actively involved in patient safety and quality improvement efforts in South Carolina, the United States, and internationally, on topics including medical education reform, patient-activated rapid response, infection prevention, medical error disclosure, and patient empowerment and education. She is a director of the patient safety organizations Consumers Advancing Patient Safety and The Empowered Patient Coalition; a member of the AHRQ National Advisory Council; and a founding member of the Nursing Alliance for Quality Care. Helen is co-author, with Julia Hallisy, of numerous patient educational materials including *The Empowered Patient Guide to Hospital Care for Patients and Families.*

NATIONAL QUALITY FORUM

National Association of Children's Hospitals and Related Institutions
Andrea Benin, MD
Andrea L. Benin, MD is System Executive Director, Performance Management for the Yale New Haven Health System and the Quality and Safety Officer, Yale-New Haven Children's Hospital as well as Assistant Clinical Professor, Pediatrics, Yale School of Medicine in New Haven, Connecticut. Dr. Benin is a Pediatrician with background and training in informatics, public health, epidemiology, and infectious diseases. Since 2005, she has overseen the quality and safety activities for the three-hospital Yale New Haven Health System. As part of that work, Dr. Benin provides her expertise in developing, validating, and measuring metrics of quality of care – in both paper and electronic formats. Dr. Benin recently completed a grant from the National Library of Medicine targeting this interest. Dr. Benin has served on multiple peer-review groups and study sections as well as several national steering committees.

National Rural Health Association
Brock Slabach, MPH, FACHE
Brock Slabach currently serves as the Senior Vice-President of Member Services for the National Rural Health Association (NRHA), a membership organization with over 20,000 members nationwide. Mr. Slabach has over 23 years of experience in the administration of rural hospitals. From 1987 through 2007, he was the administrator of the Field Memorial Community Hospital, in Centreville, Mississippi. His experiences have led him to be a member of the NRHA Board of Trustees (2004-2007), Member of AHA's Regional Policy Board (RPB) for Region 4 (2004-2007), Chair of the NRHA Hospital and Health Systems Constituency Group (2004-2007), Chair, National Rural Health Policy Issues Group for HHS's Office of Rural Health Policy (ORHP) (2006-2007) and the President of the Delta Rural Health Network (2004). He earned his Bachelor of Science from Oklahoma Baptist University and his Master of Public Health in Health Administration from the University of Oklahoma.

Premier, Inc.
Richard Bankowitz, MD, MBA, FACP
In his role as chief medical officer, Richard Bankowitz, MD, MBA, FACP, works at an enterprise level to engage physicians, provide thought leadership, and ensure that Premier continues to deliver value to its clinician constituency. Dr. Bankowitz previously served as vice president and medical director for Premier Healthcare Informatics. A board-certified internist and a medical informaticist, Dr. Bankowitz has devoted his career to improving healthcare quality at the national level by promoting rigorous, data-driven approaches to quality improvement and by engaging senior clinicians and healthcare leaders. In 2011, Dr. Bankowitz was named by Modern Healthcare magazine as one of the top 25 clinical informaticists in the United States. He began his career at the University of Pittsburgh, School of Medicine as an assistant professor of medicine and medical informatics. Prior to joining Premier, Dr. Bankowitz was medical director at CareScience, where he was responsible for strategy, product delivery, consulting, sales and advocacy efforts. He also has previously served as the corporate information architect of the University HealthSystem Consortium (UHC), where he was responsible for the strategic direction of the organization's executive reporting tools and comparative data. In his 12-year tenure with UHC, Dr. Bankowitz also held positions as senior director of clinical informatics, director of clinical information management and director of clinical evaluative sciences. Dr. Bankowitz is a fellow of the American College of Physicians and was a National Library of Medicine graduate trainee in medical informatics. He also is senior scholar with the Center for Healthcare Policy at Thomas Jefferson University. Dr. Bankowitz is a graduate of the University of Chicago Pritzker School of Medicine and the University of Chicago Graduate School of Business.

NATIONAL QUALITY FORUM

Individual Subject Matter Expert Members (voting)

Patient Safety
Mitchell Levy, MD, FCCM, FCCP

Mitchell M. Levy MD is Chief, Division of Critical Care, Pulmonary, and Sleep Medicine, Department of Medicine, The Warren Alpert Medical School of Brown University, where he is Professor of Medicine. He is also Medical Director of the Medical Intensive Care Unit at Rhode Island Hospital, Providence, Rhode Island. Dr. Levy is a founding member (2002) and a member of the Executive Committee of the Surviving Sepsis Campaign, a global initiative to improve the care of patients with severe sepsis. He is the lead investigator for Phase III of the campaign, the goal of which is to facilitate adoption of evidence-based guidelines for sepsis management into clinical practice and reduce mortality in severe sepsis by 25% by 2009. Dr. Levy is Past-President of the Society of Critical Care Medicine (2009). Dr. Levy's current research interests include biomarkers in sepsis, end-of-life care in the ICU, and knowledge translation. He has authored over 100 peer-reviewed articles and book chapters. He is the co-director of the Ocean State Clinical Coordinating Center, which manages large, international, multi-center clinical trials in sepsis. Dr. Levy is very active in the field of quality and safety. He continues to serve as the representative to the National Quality Forum for SCCM and also serves on the advisory committees on Quality for the Blue Distinction program of Blue Cross Blue Shield of America. Dr. Levy has worked on several state-wide initiatives on quality, including Rhode Island and New Jersey, and has served on the steering committee for their efforts in sepsis and palliative care. He led a similar initiative for the New York City Health and Hospital Corporation in their quality initiative in catheter-related bloodstream infection and sepsis. He was recently appointed a content expert and voting member of the Hospital Workgroup of the Measure Applications Partnership (MAP) of the National Quality Forum and serves as a technical expert for the project Closing the Quality Gap: Prevention of Healthcare-associated Infections, which is part of the Evidence-Based Practice Center (EPC) program of the Agency for Healthcare Research and Quality (AHRQ).

Palliative Care
R. Sean Morrison, MD

Dr. R. Sean Morrison is Director of the National Palliative Care Research Center, a national organization devoted to increasing the evidence base of palliative care in the United States. He is also the Vice-Chair of Research; Professor of Geriatrics and Medicine; and Hermann Merkin Professor of Palliative Medicine in the Brookdale Department of Geriatrics and Palliative Medicine at the Mount Sinai School of Medicine in New York City. During 2009-2010, he served as President of the American Academy of Hospice and Palliative Medicine. Dr. Morrison is the recipient of numerous awards, including a PDIA American Academy of Hospice and Palliative Medicine National Leadership Award, the American Geriatrics Society's Outstanding Achievement for Clinical Investigation Award, the Open Society Institute Faculty Scholar's Award of the Project on Death in America, a Paul Beeson Faculty Scholars Award, a Brookdale National Fellowship, and a Faculty Council Award from the Mount Sinai School of Medicine. He is currently Principal Investigator of an NIA funded five-year multisite study on improving the management of pain in older adults. Dr. Morrison has published extensively in all major peer-reviewed medical journals, including the New England Journal of Medicine, Annals of Internal Medicine, and the Journal of the American Medical Association. He edited the first textbook on geriatric palliative care and has contributed to more than 10 books on the subject of geriatrics and palliative care. As one of the leading figures in the field of palliative medicine, Dr. Morrison has appeared numerous times on television and in print, including ABC World News Tonight, The Factor with Bill O'Reilly, the New York Times, the Los Angeles Times, USA Today, the Philadelphia Enquirer, the New York Daily News, Newsday, AARP, and Newsweek. He figured prominently in the Bill Moyers series On Our Own Terms, a four-part documentary aired on PBS and in Gail Sheehy's new book, Passages in Caregiving.

R. Sean Morrison received his BA from Brown University and his MD from the University of Chicago Pritzker School Of Medicine. He completed his residency training at the New York Hospital-Cornell Medical Center followed by fellowship training at the Mount Sinai School of Medicine in New York City. He has been on the faculty of the Department of Geriatrics and Palliative Medicine and Department of Medicine at Mount Sinai since 1995.

State Policy
Dolores Mitchell

Dolores L. Mitchell is the Executive Director of the Group Insurance Commission, the agency that provides life, health, disability, dental and vision services to the Commonwealth's employees, retirees and their dependents; many of these benefits are also provided to a number of authorities, municipalities, and other entities. More than 350,000 people are covered by the GIC. Mrs. Mitchell has been in this position since 1987, serving in the administrations of Governors Dukakis, Weld, Cellucci, Swift, Romney, and now Governor Patrick. Mrs. Mitchell is a member of a number of professional and community organizations, including the Massachusetts Health Data Consortium, of which she is a Director, the Greater Boston Big Sister Association, of which she is a Board member, the Massachusetts Health Council, and the Mass E-Health Collaborative of which she is a Director. More recently, she is a member of the governing board of the Massachusetts Health Care Connector Authority, and its companion organization, the Quality and Cost Council. She is an elected member of the board of the National Committee for Quality Assurance (NCQA), the Hospital Quality Alliance (HQA), the Consumer/Purchaser Disclosure, and has recently been elected a member of the Board of Directors of the National Quality Forum (NQF), and is one of the founding members of Catalyst for Health Payment Reform. She is also an Advisory Board member of the Milbank Foundation. Mrs. Mitchell is a frequent speaker on health care, politics, women's career issues, and related subjects.

Health IT
Brandon Savage, MD

Brandon Savage, MD, is the Chief Medical Officer for GE Healthcare's Integrated IT Solutions (IITS) business. Dr. Savage's passion is empowering healthcare systems with powerful tools to help optimize the cost and quality of the care they deliver. As CMO, Dr. Savage is responsible for building GE's clinical IT vision, driving this vision into current and future IT products, and facilitating integrated product solutions that enable digital communities and early health. Dr. Savage's primary focus is to leverage strategic customer-driven development, with organizations such as Intermountain healthcare, to evolve GE's Enterprise Electronic Health Record, marketed as Centricity® Enterprise, into a knowledge-driven, evidence-based medical system that supports clinicians in providing the highest levels of care. Additionally Dr. Savage works with the regulatory teams to ensure GE's products promote the quality standards that protect the safety of the patients we serve. Previous to his CMO role, Dr. Savage served as the General Manager of Global Marketing for GE Healthcare IITS with responsibilities for developing an integrated product strategy and brand promise to unite the business. Specifically, Dr. Savage and his team led efforts focused on growth strategies, market analysis, interoperability, platforming, brand strategy and marketing excellence. During his tenure at GE, Dr. Savage also led the development of products, such as computerized provider order entry (CPOE), and worked with customers to select and implement software solutions. Prior to GE, Dr. Savage practiced internal medicine and served as an assistant professor of medicine at the University of California, San Diego, with a focus on clinical trials, patient safety, and residency training. During this time, he also co-founded Intensive Solutions International, which developed software for managing patients in intensive care units. Dr. Savage has a Bachelor of Arts from the University of California, Berkeley, in molecular cellular biology and a Medical Doctor degree from the University of California, San Diego. He has been published in

numerous journals and magazines, including *Physician Executive, American Journal of Kidney Diseases*, and *Current Opinion in Critical Care*.

Patient Experience
Dale Shaller, MPA
Dale Shaller is Principal of Shaller Consulting Group, a health policy analysis and management consulting practice based in Stillwater, Minnesota. He has devoted nearly three decades to the design, implementation, and evaluation of health care quality measurement and improvement programs, with a special focus on listening to the voice of the patient and promoting methods for engaging consumers in managing their health and health care. His work on measuring and improving the experience of patients and families has been based in the Consumer Assessment of Healthcare Providers and Systems (CAHPS®) program funded by the U.S. Agency for Healthcare Research and Quality. He has served as a member of the Harvard and Yale CAHPS research teams for 10 years, working on patient experience survey design, measurement, and reporting issues. He has directed the National CAHPS Benchmarking Database since its inception in 1998 and is a co-author of The CAHPS Improvement Guide and other articles related to strategies for improving the patient experience. Mr. Shaller currently serves as the Chair of the Patient Experience Committee for the Aligning Forces for Quality program funded by the Robert Wood Johnson Foundation. He has been a principal investigator on several projects funded by the Picker Institute, including a series of case studies documenting factors contributing to high-performing patient- and family-centered medical centers. He also has written a series of reports on consumer decision-making in health care, and was a founding developer of the TalkingQuality website that provides practical guidance to developers of health care quality reporting tools for consumers. He has served on many national health care advisory panels and is a frequent writer and presenter on health care quality and patient engagement strategies. He received his B.A. from Kalamazoo College and holds a Master's degree in public affairs from the Humphrey Institute of Public Affairs at the University of Minnesota.

Safety Net
Bruce Siegel, MD, MPH
Dr. Siegel has an extensive background in healthcare management, policy and public health. Before joining NAPH as Chief Executive Officer, he served as Director of the Center for Health Care Quality and Professor of Health Policy at the George Washington University School of Public Health and Health Services. He also previously served as President and CEO of two NAPH members: Tampa General Healthcare and the New York City Health and Hospitals Corporation. In addition, Dr. Siegel has served as Commissioner of Health of the State of New Jersey. Among many accomplishments, Dr. Siegel has led groundbreaking work on quality and equity for the Robert Wood Johnson Foundation, as well as projects for the Commonwealth Fund, the California Endowment, and the Agency for Healthcare Research and Quality. He currently is a member of the National Advisory Council for Healthcare Research and Quality. Dr. Siegel earned an A.B. from Princeton University, a Doctor of Medicine from Cornell University Medical College, and a Master of Public Health from Johns Hopkins University School of Hygiene and Public Health.

Mental Health
Ann Marie Sullivan, MD
Ann Marie Sullivan, M.D. is the Senior Vice President for the Queens Health Network of the New York City Health and Hospitals Corporation. As Senior Vice President, she is responsible for Elmhurst and Queens Hospital Centers, two public hospitals which have been serving the Queens Community of over 2 million New York City residents. The Network, a teaching affiliate of the Mount Sinai School of Medicine currently comprises 806 acute care beds, a trauma and stroke center, a large comprehensive Women's Health Services, and centers for excellence in Cancer, Cardiology, Diabetes and Mental Health.

In addition, the Network serves the ethnically diverse Queens Community with large Primary Care and Mental Health Ambulatory services. Dr. Sullivan attended NYU Medical School and completed her Psychiatric Residency at New York University/ Bellevue Hospital in1978. She has served as the Associate Director of Psychiatry and Medical Director of Ambulatory Care at the Gouverneur Diagnostic and Treatment Center and joined the Queens Health Network as the Regional Director of Psychiatry in 1990. Dr. Sullivan is a Clinical Professor of Psychiatry at the Mount Sinai School of Medicine, and has lectured and written on community based psychiatric services. She is currently on the Board of Trustees for the American Psychiatric Association and the Board of Directors of the NYC Mental Health Association. She is also a fellow for the New York Academy of Medicine and the American College of Psychiatrist.

Federal Government Members (non-voting, ex officio)

Agency for Healthcare Research and Quality (AHRQ)
Mamatha Pancholi, MS

Centers for Disease Control and Prevention (CDC)
Chesley Richards, MD, MPH, FACP
Chesley Richards MD, MPH, FACP, is the Director, in the Office of Prevention through Healthcare (OPTH) in the Office of the Director, Centers for Disease Control and Prevention. OPTH, a new office at CDC, works to build and enhance strategic collaboration between public health and healthcare sector stakeholders to improve the use of preventive services, and to enhance the quality and safety of healthcare. Previously, Dr. Richards served as the Deputy Director, Division of Healthcare Quality Promotion in the National Center for Infectious Diseases at CDC. Dr. Richards is a board-certified internist and geriatrician and holds an appointment as Clinical Associate Professor of Medicine in the Division of Geriatric Medicine and Gerontology at Emory University. Dr. Richards earned his MD from the Medical University of South Carolina, an MPH in Health Policy and Administration from University of North Carolina at Chapel Hill and is a graduate of the Epidemic Intelligence Service (EIS) at CDC and the Program on Clinical Effectiveness at Harvard School of Public Health. Dr. Richards's interests include patient safety, healthcare quality, and preventive services, especially among older adults.

Centers for Medicare & Medicaid Services (CMS)
Shaheen Halim, PhD, CPC-A
Dr. Shaheen Halim is the current Director of the Division of Hospital and Medication Measures of the Quality Measures and Health Assessment Group in the Centers for Medicare and Medicaid Services' Office of Clinical Standards and Quality. Her Division is responsible for the development, maintenance, and implementation of quality measures in CMS' pay for reporting, and value based purchasing programs such as the Hospital Inpatient Quality Reporting Program, Hospital Outpatient Quality Reporting Program, Hospital Value Based Purchasing, Cancer Hospital Reporting Program, Inpatient Psychiatric Facility Reporting Program, and Ambulatory Surgical Center Reporting Program. Shaheen's Division is also responsible for the coordination and development of content on the Hospital Compare website, which provides hospital quality information to consumers. She received her Ph.D. in Sociology from Texas A&M University in 2005, and has been with the Centers for Medicare and Medicaid Services for 6 years.

Office of the National Coordinator for HIT (ONC)
Leah Marcotte

Leah Marcotte is the Partnership for Patients liaison and works in the Meaningful Use Division in the Office of the National Coordinator for Health Information Technology (ONC). At ONC, she helps to: support the policy-making process for the second stage of meaningful use in the CMS EHR Incentive Program; develop resources for primary care physicians transitioning to and optimizing the use of electronic health records; and encourage further integration of health informatics training in medical education. She also works to strategically align ONC initiatives with the goals of the Partnership for Patients. Leah is currently attending the University of Pennsylvania School of Medicine and is working at ONC through a fellowship. During medical school, she developed a focus in quality and patient safety through involvement in curriculum development and quality improvement research. She received her BA in Neurobiology from the University of Pennsylvania.

Veterans Health Administration (VHA)
Michael Kelley, MD
Since 2007, Dr. Michael Kelley has been the National Program Director for Oncology for the Department of Veterans Affairs. He develops policy and programs in oncology for the national Veterans Health Administration where a primary focus has been on electronic data systems to collect cancer patient data for quality improvement and other purposes. Dr. Kelley is a board certified Medical Oncologist. He completed Internal Medicine training at Duke University followed by fellowship and post-doctoral work at the National Cancer Institute. He is Chief of Hematology and Oncology at the Durham Veterans Affairs Medical Center where he oversees the clinical service, clinical research, and fellowship training. He is also Associate Professor of Medicine at Duke University Medical Center with research interests that include treatment and prevention of lung cancer, the genetics and molecular biology of chordoma, and clinical trials. Dr. Kelley has published over 50 peer-reviewed publications as well as reviews and book chapters. He is an active member of the American Society of Clinical Oncologist and is a Fellow of the American College of Physicians.

MAP Coordinating Committee Co-Chairs (non-voting, ex officio)

George J. Isham, MD, MS
George J. Isham, M.D., M.S. is the chief health officer for HealthPartners. He is responsible for the improvement of health and quality of care as well as HealthPartners' research and education programs. Dr. Isham currently chairs the Institute of Medicine (IOM) Roundtable on Health Literacy. He also chaired the IOM Committees on *Identifying Priority Areas for Quality Improvement* and *The State of the USA Health Indicators*. He has served as a member of the IOM committee on *The Future of the Public's Health* and the subcommittees on the Environment for Committee on Quality in Health Care which authored the reports *To Err is Human* and *Crossing the Quality Chasm.* He has served on the subcommittee on performance measures for the committee charged with redesigning health insurance benefits, payment and performance improvement programs for Medicare and was a member of the IOM Board on Population Health and Public Health Policy. Dr. Isham was founding co-chair of and is currently a member of the National Committee on Quality Assurance's committee on performance measurement which oversees the Health Employer Data Information Set (HEDIS) and currently co-chairs the National Quality Forum's advisory committee on prioritization of quality measures for Medicare. Before his current position, he was medical director of MedCenters health Plan in Minneapolis and in the late 1980s he was executive director of University Health Care, an organization affiliated with the University of Wisconsin-Madison.

Elizabeth A. McGlynn, PhD, MPP

Elizabeth A. McGlynn, PhD, is the director for the Center of Effectiveness and Safety Research (CESR) at Kaiser Permanente. She is responsible for oversight of CESR, a network of investigators, data managers and analysts in Kaiser Permanente's regional research centers experienced in effectiveness and safety research. The Center draws on over 400 Kaiser Permanente researchers and clinicians, along with Kaiser Permanente's 8.6 million members and their electronic health records, to conduct patient-centered effectiveness and safety research on a national scale. Kaiser Permanente conducts more than 3,500 studies and its research led to more than 600 professional publications in 2010. It is one of the largest research institutions in the United States. Dr. McGlynn leads efforts to address the critical research questions posed by Kaiser Permanente clinical and operations leaders and the requirements of the national research community. CESR, founded in 2009, conducts in-depth studies of the safety and comparative effectiveness of drugs, devices, biologics and care delivery strategies. Prior to joining Kaiser Permanente, Dr. McGlynn was the Associate Director of RAND Health and held the RAND Distinguished Chair in Health Care Quality. She was responsible for strategic development and oversight of the research portfolio, and external dissemination and communications of RAND Health research findings. Dr. McGlynn is an internationally known expert on methods for evaluating the appropriateness and technical quality of health care delivery. She has conducted research on the appropriateness with which a variety of surgical and diagnostic procedures are used in the U.S. and in other countries. She led the development of a comprehensive method for evaluating the technical quality of care delivered to adults and children. The method was used in a national study of the quality of care delivered to U.S. adults and children. The article reporting the adult findings received the Article-of-the-Year award from AcademyHealth in 2004. Dr. McGlynn also led the RAND Health's COMPARE initiative, which developed a comprehensive method for evaluating health policy proposals. COMPARE developed a new microsimulation model to estimate the effect of coverage expansion options on the number of newly insured, the cost to the government, and the effects on premiums in the private sector. She has conducted research on efficiency measures and has recently published results of a study on the methodological and policy issues associated with implementing measures of efficiency and effectiveness of care at the individual physician level for payment and public reporting. Dr. McGlynn is a member of the Institute of Medicine and serves on a variety of national advisory committees. She was a member of the Strategic Framework Board that provided a blueprint for the National Quality Forum on the development of a national quality measurement and reporting system. She chairs the board of AcademyHealth, serves on the board of the American Board of Internal Medicine Foundation, and has served on the Community Ministry Board of Providence-Little Company of Mary Hospital Service Area in Southern California. She serves on the editorial boards for *Health Services Research* and *The Milbank Quarterly* and is a regular reviewer for many leading journals. Dr. McGlynn received her BA in international political economy from Colorado College, her MPP from the University of Michigan's Gerald R. Ford School of Public Policy, and her PhD in public policy from the Pardee RAND Graduate School.

Presenters

Thomas W. Croghan, MD
Mathematica

Thomas W. Croghan (M.D., West Virginia School of Medicine) is a senior fellow at Mathematica Policy Research, adjunct professor of Medicine and Psychiatry at the Georgetown University School of Medicine, and a primary care physician at the Whitman Walker Clinic in Washington, DC. Widely known for his research on access, quality, equity, and affordability of health and mental health services, Dr. Croghan has led development of physician quality measures for the Centers for Medicare and Medicaid Service's (CMS') Physician Quality Reporting System, developed a composite scoring methodology to

evaluate the quality and efficiency of health care providers for CMS' value-based purchasing initiative, and is the current project director for Mathematica's quality measure development and implementation master contracts with CMS and the National Quality Forum. Dr. Croghan has had leadership roles on projects designed to influence the manner in which providers and health care organizations adopt evidence-based practices and performance measures. Before joining Mathematica, Dr. Croghan was with the RAND Corporation and Eli Lilly and Company, and he served on the faculty of the Indiana University Schools of Medicine, Public and Environmental Affairs, and Arts and Sciences, where he was associate director of the Indiana Consortium for Mental Health Services Research, and the University of Florida College of Medicine.

Phyllis Torda
National Committee for Quality Assurance
Phyllis Torda (M.A., History, University of Wisconsin-Madison) is vice president for Quality Solutions Group and Strategic Initiatives at the National Committee for Quality Assurance (NCQA) and has been responsible for developing programs for evaluating the quality of care provided by organizations and professionals. She is serving as the NCQA project lead with Mathematica to develop psychiatric inpatient and cancer hospitals' quality-of-care measures for the Centers for Medicare and Medicaid Services quality reporting programs. Ms. Torda is the project director for NCQA's contract with CMS to develop performance measures for the Medicare Advantage program and to conduct an annual assessment of special needs plans. Additionally, Ms. Torda has developed many NCQA evaluation programs, including the Physician Hospital Quality program and Physician Practice Connections™, a nationwide recognition program for physician practices that uses information systematically to enhance the quality of patient care.

Stephen B. Edge, MD FACS
American College of Surgeons Commission on Cancer
Stephen B. Edge, MD FACS is a surgical oncologist and the Alfiero Foundation Endowed Chair in Breast Oncology at Roswell Park Cancer Institute in Buffalo, NY. He serves as Chair of the Commission on Cancer of the American College of Surgeons. In addition, he serves on the Executive Committee of the Board of the National Comprehensive Cancer Network. His medical school and residency training were at Case Western Reserve University and he served a fellowship in the Surgery Branch of the National Cancer Institute. His research focus is in developing methods to monitor and improve community-wide quality of care. He was a leader in the CoC team that developed quality measures approved by the NQF, and currently also represents the Commission on Cancer and serves as Co-Chair of the Technical Evaluation Panel of the NCQA developing measures for public reporting by the PPS-Exempt Cancer Centers.

National Quality Forum Staff

Janet M. Corrigan, PhD, MBA
Janet M. Corrigan, PhD, MBA, is president and CEO of the National Quality Forum (NQF), a private, not-for-profit standard-setting organization established in 1999. The NQF mission includes: building consensus on national priorities and goals for performance improvement and working in partnership to achieve them; endorsing national consensus standards for measuring and publicly reporting on performance; and promoting the attainment of national goals through education and outreach programs. From 1998 to 2005, Dr. Corrigan was senior board director at the Institute of Medicine (IOM). She provided leadership for IOM's Quality Chasm Series, which produced 10 reports during her tenure,

including: To Err is Human: Building a Safer Health System, and Crossing the Quality Chasm: A New Health System for the 21st Century. Before joining IOM, Dr. Corrigan was executive director of the President's Advisory Commission on Consumer Protection and Quality in the Health Care Industry. Among Dr. Corrigan's numerous awards are: IOM Cecil Award for Distinguished Service (2002), American College of Medical Informatics Fellow (2006), American College of Medical Quality Founders' Award (2007), Health Research and Educational TRUST Award (2007), and American Society of Health System Pharmacists' Award of Honor (2008). Dr. Corrigan serves on various boards and committees, including: Quality Alliance Steering Committee (2006–present), Hospital Quality Alliance (2006–present), the National eHealth Collaborative (NeHC) Board of Directors (2008–present), the eHealth Initiative Board of Directors (2010–present), the Robert Wood Johnson Foundation's Aligning Forces for Healthcare Quality (AF4Q) National Advisory Committee (2007–present), the Health Information Technology (HIT) Standards Committee of the U.S. Department of Health and Human Services (2009–present), the Informed Patient Institute (2009 – present), and the Center for Healthcare Effectiveness Advisory Board (2011 – present). Dr. Corrigan received her doctorate in health services research and master of industrial engineering degrees from the University of Michigan, and master's degrees in business administration and community health from the University of Rochester.

Thomas B. Valuck, MD, JD, MHSA

Thomas B. Valuck, MD, JD, is senior vice president, Strategic Partnerships, at the National Quality Forum (NQF), a nonprofit membership organization created to develop and implement a national strategy for healthcare quality measurement and reporting. Dr. Valuck oversees NQF-convened partnerships—the Measure Applications Partnership (MAP) and the National Priorities Partnership (NPP)—as well as NQF's engagement with states and regional community alliances. These NQF initiatives aim to improve health and healthcare through public reporting, payment incentives, accreditation and certification, workforce development, and systems improvement. Dr. Valuck comes to NQF from the Centers for Medicare & Medicaid Services (CMS), where he advised senior agency and Department of Health and Human Services leadership regarding Medicare payment and quality of care, particularly value-based purchasing. While at CMS, Dr. Valuck was recognized for his leadership in advancing Medicare's pay-for-performance initiatives, receiving both the 2009 Administrator's Citation and the 2007 Administrator's Achievement Awards. Before joining CMS, Dr. Valuck was the vice president of medical affairs at the University of Kansas Medical Center, where he managed quality improvement, utilization review, risk management, and physician relations. Before that he served on the Senate Health, Education, Labor, and Pensions Committee as a Robert Wood Johnson Health Policy Fellow; the White House Council of Economic Advisers, where he researched and analyzed public and private healthcare financing issues; and at the law firm of Latham & Watkins as an associate, where he practiced regulatory health law. Dr. Valuck has degrees in biological science and medicine from the University of Missouri-Kansas City, a master's degree in health services administration from the University of Kansas, and a law degree from the Georgetown University Law School.

Constance W. Hwang, MD, MPH

Dr. Hwang is vice president of the Measure Applications Partnership (MAP), which is responsible for providing input to the Department of Health and Human Services on the selection of performance measures for public reporting and performance-based payment programs. Dr. Hwang is a board-certified general internist, and prior to joining NQF, was the Director of Clinical Affairs and Analytics at Resolution Health, Inc (RHI). RHI is a wholly-owned subsidiary of WellPoint Inc., providing data-driven disease management interventions aimed at both patients and providers to improve quality of care and cost efficiency. At RHI, Dr. Hwang managed an analytics team that developed and implemented clinical algorithms and predictive models describing individual health plan members, their overall health status, and potential areas for quality and safety improvement. Dr. Hwang has served as clinical lead for

physician quality measurement initiatives, including provider recognition and pay-for-performance programs. She has experience designing and programming technical specifications for quality measures, and represented RHI as a measure developer during NQF's clinically-enriched claims-based ambulatory care measure submission process. Nominated to two different NQF committees, Dr. Hwang has participated in both NQF's measure harmonization steering committee, which addressed challenges of unintended variation in technical specifications across NQF-endorsed quality measures, and the NQF technical advisory panel for resource use measures regarding cardiovascular and diabetes care. Dr. Hwang is a former Robert Wood Johnson Clinical Scholar at Johns Hopkins and received her Master of Public Health as a Sommer Scholar from the Johns Hopkins Bloomberg School of Public Health. She completed her internal medicine residency at Thomas Jefferson University Hospital in Philadelphia, and received her medical degree from Mount Sinai School of Medicine in New York.

Lindsay Lang, MHSA, RN

Lindsay currently serves as a Senior Project Manager with the National Quality Forum (NQF). In her time at NQF, she has been responsible for developing a process for the maintenance of all NQF-endorsed performance measures and supported multiple convening activities. She currently leads a team creating the Quality Positioning System (QPS), a web-based search engine for finding NQF-endorsed measures, and supports the Hospital and Ad Hoc Safety Workgroups of the Measure Applications Partnership (MAP). Ms. Lang joined the National Quality Forum with 10 years of experience in the healthcare industry. She received her Bachelor of Science in Nursing from the University of Iowa and practiced as an RN in oncology, hematology and dialysis care settings. She went on to earn a Master's of Health Services Administration (MHSA) from the University of Kansas. During this time, she first developed an interest in working in healthcare quality serving as a Hospital Liaison for the National Database of Nursing Quality Indicators. Upon completion of her MHSA, she was awarded an Administrative Fellowship with Trinity Health system in Michigan. Prior to relocating to Washington, DC, Ms. Lang worked as a Nurse Manager of an inpatient neurosciences unit at Froedtert Hospital in Wisconsin. She came to NQF from the Advisory Board Company, where she worked as a Dedicated Advisor in the Business Intelligence.