# Linking Cost and Quality Measures
# In-Person Meeting Discussion Guide

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## General Feedback on the Draft Paper

The purpose of this paper is to:

- Explore current approaches and applications of linking cost and quality measures at both the measure and programmatic level
- Identify key methodological challenges to linking cost and quality measures
- Define key principles and best practices for linking cost and quality measures
- Provide operational guidance and recommendations for application and evaluation of efficiency measures to measure endorsement and selection

**For Panel Consideration:**

- Based on the stated scope of the paper, are there any other issues or topics that should be considered in addition to those indicated in the guide?

## Efficiency Measurement Approach Considerations

The environmental scan performed by the authors predominantly yielded models that link a set of two or more quality and cost measures together through reporting, scoring and ranking methodologies to determine an efficiency signal. It remains unclear as to whether a composite measure approach to measuring efficiency is feasible or currently in use in this context. NQF has defined a composite performance measure as a combination of two or more component measures, each of which individually reflects quality of care, into ***a single performance measure with a single score***.[i] While the Hospital Value-Based Purchasing Program creates a total performance score at the *program level*, it does not combine cost and quality measures resulting in a single score at the *measure level*.

Some of the key elements or principles of NQF's current guidance on composite measures includes:

Defining Composite Measures

The following **are** considered composite performance measures for purposes of NQF endorsement:

- Measures with two or more individual performance measure scores combined into one score for an accountable entity.
- Measures with two or more individual component measures ***assessed separately for each patient*** and then aggregated into one score for an accountable entity. These include:
    - all-or-none measures (e.g., all essential care processes received, or outcomes experienced, by each patient); or

- any-or-none measures (e.g., any or none of a list of adverse outcomes experienced, or inappropriate or unnecessary care processes received, by each patient).

The following **are not** considered composite performance for purposes of NQF endorsement at this time:

- Single performance measures, even if the data are patient scores from a composite instrument or scale (e.g., single performance measure on communication with doctors, computed as the percentage of patients where the average score for four survey questions about communication with doctors is equal or greater than 3).
- Measures with multiple measure components that are assessed for each patient, but that result in multiple scores for an accountable entity, rather than a single score. These generally should be submitted as separate measures and indicated as paired/grouped measures.
- Measures of multiple linked steps in one care process assessed for each patient. These measures focus on one care process (e.g., influenza immunization) but may include multiple steps (e.g., assess immunization status, counsel patient, and administer vaccination). These are distinguished from all-or-none composites that capture multiple care processes or outcomes (e.g., foot care, eye care, glucose control).
- Performance measures of one concept (e.g., mortality) specified with a statistical method or adjustment (e.g., empirical Bayes shrinkage estimation) that combines information from the accountable entity with information on average performance of all entities or a specified group of entities (e.g., by case volume), typically in order to increase reliability.

**Question(s) for Panel Consideration:**

- Is a single score composite measure of efficiency feasible?
- Might the models in the draft paper be considered approaches to developing a composite measure? How are they similar and different?

In addition to understanding the methodological challenges for combining cost and quality measures, through this work, NQF seeks to use this effort to build operational guidance for its two core programmatic activities, measure endorsement and measure selection. Recommendations for measure selection to programs are facilitated by the Measure Applications Partnership (MAP) and the measure endorsement process is guided by various Steering Committees seated through the Consensus Development Process (CDP) and by the NQF Measure Evaluation Criteria.

## Implications for Efficiency Measurement in Private and Public Programs

These efficiency measurement approaches are being used to differentiate performance in cost and quality among providers for a variety of “use cases”. The methodology selected for

assessing cost and quality may vary depending on the use case and its intended audience. These use cases could include:

- Quality Improvement
- Public Reporting
- Network Design / Tiering
- Pay for Performance

**Question(s) for Panel Consideration:**

- What are the considerations for measuring efficiency for these use cases? (i.e., audience, interpretability, extent of scientific rigor).

**Measure Applications Partnership (MAP)**

The Patient Protection and Affordable Care Act created a number of initiatives to measure healthcare efficiency through the use of cost and quality measure. The Measure Applications Partnership (MAP) is a public-private partnership convened by the NQF to provide input to the Department of Health and Human Services (HHS) on the selection of performance measures for public reporting and performance-based payment programs, including a number of programs intended to measure efficiency. NQF was selected by HHS to fulfill a statutory requirement to convene multi-stakeholder groups to:

- Identify the best available performance measures for use in specific applications.
- Provide input to HHS on measures for use in public reporting, performance-based payment, and other programs.
- Encourage alignment of public- and private-sector performance measurement efforts.

MAP provides input to HHS on measures under consideration for a number of efficiency-focused programs including the:

- Hospital Value-Based Purchasing Program (VBP)
- Physician Value-Based Payment Modifier (VBPM)
- Medicare Shared Savings Program (MSSP)

To make recommendations for these programs, MAP currently uses the measure selection criteria to guide the selection of measures into the various programs:

1. NQF-endorsed measures are required for program measure sets, unless no relevant endorsed measures are available to achieve a critical program objective
2. Program measure set adequately addresses each of the National Quality Strategy's three aims
3. Program measure set is responsive to specific program goals and requirements
4. Program measure set includes an appropriate mix of measure types
5. Program measure set enables measurement of person- and family-centered care and services

6. Program measure set includes considerations for healthcare disparities and cultural competency
7. Program measure set promotes parsimony and alignment

**Question(s) for Panel Consideration:**

- Should the selection of measures for a model vary depending on its use case?
- Should the selection of measures depend on the model selected or should the selection be model agnostic?
- Should other models for linking cost and quality measures be considered in addition to those listed in the draft paper?

**Results of Environmental Scan of Approaches for Linking Cost and Quality Measures**

The authors identified seven approaches to combine cost and quality measures to measure efficiency. The models are as follows:

1. The Conditional Model
2. The Quality Hurdle Model and Cost Hurdle Model
3. The Unconditional Model
4. The Regression Model
5. The Cost-Effectiveness Model
6. The Data Envelopment Analysis and Stochastic Frontier Analysis Model
7. The Side-by-Side Model

**Break-Out Sessions: Analysis of models in the context of various "use-cases"**

The panel will divide into 4 groups to discuss the following questions about each use case. The group will include:

1. Quality Improvement
2. Public Reporting
3. Network Design / Tiering
4. Pay for Performance

**Question(s) for Panel Consideration:**

- For your use case:
  - Which of the seven models are best suited?
  - What are the pros and cons of each model?

- How might the perspective of the intended audience impact the selection of the model(s)?
- The relative importance of quality and cost performance is crucial for efficiency measurement. Does the model give appropriate weights to the quality and cost domains, either implicitly or explicitly?

- What principles should be considered when selecting individual measures of cost and quality for the use case and model(s) selected:
  - What is the right mix of measures? Considerations may include:
    - Measure types: Quality measures tied to outcomes of importance, types of cost measures (total cost, condition-specific)
    - Performance Gap: is there room for improvement?
    - Focus of the efficiency measure set (efficiency at the episode level? procedure level, for settings)
    - Stakeholder perspective
  - Is technical and conceptual alignment of the cost and quality measures necessary for the use case and model(s) selected? If so, what are the key considerations for technical and conceptual alignment/harmonization? Considerations may include harmonization of:
    - Measure Population
    - Measurement time period (period of performance)
    - Risk adjustment
    - Level of analysis/setting

## Implications for Efficiency Measurement Evaluation and Endorsement

The National Quality Forum (NQF) uses its formal consensus development process (CDP) to review, endorse, and recommend the use of standardized healthcare performance measures. Through recent projects to endorse cost and resource use measures several principles emerged. Measures of cost and quality must be aligned in order to truly understand efficiency and value. As a starting place in understanding efficiency and value, NQF supports using and reporting of resource use measures in the context of quality performance, preferably outcome measures. Using resource use measures independent of quality measures does not provide an accurate assessment of efficiency or value and may lead to adverse unintended consequences in the healthcare system.[ii] Currently NQF endorses cost and resource use measures as stand-alone measures under the guidance and framework that when implemented, they are used and reported with quality measures. However, the mechanism for how this should be done both methodologically and operationally has been unclear.

To date, NQF's evaluation of cost and resource use measures has been guided by the Resource Use Measure Evaluation Criteria. These criteria are based on the four major criteria used to evaluate quality measures with some key differences between cost and quality measures (e.g., lack of clinical guidelines or evidence):

**1. Importance to measure and report**
The goal of this criterion is to determine if the measure focus is important to making significant contributions toward understanding healthcare costs for a specific high-impact aspect of healthcare where there is variation or a demonstrated high-impact aspect of healthcare or overall poor performance.

**2. Scientific Acceptability of Measure Properties**
The goal of this criterion is to determine the extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the cost or resources used to deliver care.

**3. Feasibility**
The goal of this criterion is to assess the extent to which the required data are readily available or could be captured without undue burden, and can be implemented for performance measurement.

**4. Usability and Use**
The goal of this criterion is to assess the extent to which potential audiences (e.g., consumers, purchasers, providers, policymakers) are using or could use performance results for both accountability and performance improvement to achieve the goal of high-quality, efficient healthcare for individuals or populations.

Evaluation of Composite Measures

Composite measures are also evaluated using criteria based on the four major criteria described above, also with some differences based on the differences in the measure construct. Some of the key principles discussed in the recent NQF composite measure guidance for the evaluation of composites included:

- Both the quality construct itself, as well the empirical evidence for the composite (i.e., supporting the method of construction and methods of analysis), should be considered.
- The individual components in a composite performance measure generally should demonstrate a gap in performance; however, there may be conceptual (e.g., clinical evidence) or analytical justification (e.g., addition increases the variability/gap for the overall composite measure) for including components that do not have a gap in performance.
- Each component of a composite performance measure should provide added value to the composite as a whole—either empirically (e.g., they contribute to the reliability, or overall score) or conceptually.
- The individual components in a composite performance measure may or may not be correlated, depending on the quality construct.
- Reliability and validity of the constructed composite performance measure should be demonstrated.

**Question(s) for Panel Consideration:**

- What should NQF be endorsing in terms of efficiency "measures"? The programmatic/methodology of approach, the combination of measures or both?
- How might the current endorsement process for cost and resource use measures integrate the linking of quality measures (e.g., should resource use measures be evaluated in the context of identified quality measures that would be linked, or evaluate them together)?
- If NQF were to evaluate efficiency models (or efficiency composite measures) for endorsement, what criteria or principles should be considered (e.g., testing threshold, feasibility, current composite guidance)?
- What are the implications for endorsement of efficiency measures/models that include rating systems (e.g., star rating system)?

**Challenges and the Path Forward**

NQF endorses performance measures as voluntary consensus standards suitable for both accountability applications as well as internal quality improvement efforts. Because endorsement initiates processes and infrastructure to collect data, compute performance results, report performance results, and improve and sustain performance, NQF endorsement is intended to identify those performance measures that are most likely to facilitate achievement of high quality and efficient healthcare for patients. Endorsed consensus standards are intended to be used as a national standard to compare performance.

**Question(s) for the Panel:**

- Can the evaluation of efficiency models be "use-agnostic"?
- What are some of the benefits and unintended consequences that might result from the endorsement of efficiency models or efficiency measure composites?
- What challenges might present for current and future measure development efforts to align with the recommendations and identified principles from this panel?
- What challenges might present for current and future programs to apply the principles and recommendations for efficiency measurement?

[i] National Quality Forum (NQF). Composite Performance Measure Evaluation Guidance. Washington, DC: NQF; 2013.
[ii] National Quality Forum (NQF). Measurement Framework: Evaluating Efficiency Across Patient-Focused Episodes of Care. Washington, DC: NQF; 2009.