**Purpose of the Project**

Healthcare expenditures in the United States are unmatched by any country in the world. This spending, however, has not resulted in better health for Americans – in general, the U.S. does not outperform other countries in terms of lower mortality, greater patient satisfaction, increased access to care, or higher-quality care within the healthcare system. Meanwhile, healthcare spending continues to increase at a rate of seven percent per year, and is largely focused on treating acute and chronic illness rather than prevention and health promotion. When looked at together, these factors illustrate an unparalleled opportunity for creating a more efficient, less wasteful healthcare system.

As health reform efforts focus on expanding coverage, increasing access to care, and reducing costs, understanding how resources are being used is important. Resource use data – especially when paired with quality data – are integral to evaluate care efficiency, defined as a measure of cost of care associated with a specified level of quality of care. Several provisions in recent policy require use of resource use data over the next several years to support efforts to move toward a value-based purchasing payment model. Furthermore, making quality care more affordable by developing and spreading new healthcare delivery models is one of the National Quality Strategy’s priorities. Understanding resource use measurement as a building block toward measuring efficiency and value is a critical step toward achieving these aims.

Diagram 1. Resource Use as a Building Block toward Efficiency and Value

*Efficiency can be defined broadly as the resource use (or cost) associated with a specific level of performance with respect to the other five Institute of Medicine (IOM) aims of quality: safety, timeliness, effectiveness, equity, and patient-centeredness. Resource use measures can be used to assess value by integrating preference-weighted assessments of the quality and cost performance of a specified stakeholder, such as an individual patient, consumer organization, payer, provider, government, or society.*
Resource use measures as defined by NQF are broadly applicable and comparable measures of health services counts (in terms of units or dollars) that are applied to a population or event (this is also broadly defined to include diagnoses, procedures, or encounters). A resource use measure counts the frequency of defined health system resources; some may further apply a dollar amount – such as allowable charges, paid amounts, or standardized prices – to each resource use unit. Current approaches for measuring resource use range from broadly focused measures, such as per capita measures, which address total healthcare spending per person, to those with a more narrow focus, such as measures dealing with healthcare spending for an individual procedure.

In 2009, NQF was tasked with understanding resource use measures and identifying important attributes to consider when evaluating them, which resulted in a guidance document that provided explanatory language to accommodate resource use measures. Since that time, NQF has evaluated resource use measures for endorsement. NQF convened an expert, multi-stakeholder Steering Committee and divided this work into two cycles, choosing first to focus on four areas for measurement: cardiovascular, stroke, diabetes, and non-condition specific. The second cycle focused on pulmonary, cancer, and bone/joint conditions.

What was Endorsed

Under this first cycle of work, NQF endorsed four measures as voluntary consensus standards suitable for accountability and performance improvement:

(1557) Relative Resource Use for People with Diabetes (NCQA).

Description: The risk-adjusted relative resource use by health plan members 18-75 years of age who were identified as having diabetes (type 1 and type 2) during the measurement year.

(1558) Relative Resource Use for People with Cardiovascular Conditions (NCQA).

Description: The risk-adjusted relative resource use by health plan members with specific cardiovascular conditions – including major cardiac events such as acute myocardial infarction, coronary artery bypass graft, and percutaneous cardiac intervention, as well as cardiovascular-related diagnoses such as ischemic vascular disease – during the measurement year.

(1598) Total Resource Use Population-based PMPM Index (HealthPartners).

Description: Resource Use Index (RUI) is a measure of a primary care provider’s risk-adjusted frequency and intensity of services used to manage patients using standardized prices. Resource use includes all resources associated with treating members, including professional, facility inpatient and outpatient, pharmacy, laboratory, radiology, ancillary, and behavioral health services.

(1604) Total Cost of Care Population-based PMPM Index (HealthPartners).

Description: Total Cost Index (TCI) is a measure of a primary care provider’s risk-adjusted cost effectiveness at managing the population they care for using actual prices paid by the health plan. TCI includes all costs associated with treating members, including professional, facility inpatient and outpatient, pharmacy, lab, radiology, ancillary, and behavioral health services.

In April 2012, NQF endorsed four additional measures as voluntary consensus standards suitable for accountability and performance improvement:

(1560) Relative Resource Use (RRU) for People with Asthma (NCQA).

Description: This measure identifies members with asthma then captures their total resource use over the measurement year. Both encounter and pharmacy data are used to identify members for inclusion in the eligible population, and the results are adjusted to account for age, gender, and hierarchical condition category (HCC) RRU risk classifications that predict cost variability.

(1561) Relative Resource Use for People with Chronic Obstructive Pulmonary Disease (COPD) (NCQA)

Description: This measure identifies members with COPD then captures their total resource use over the measurement year. Clinical diagnosis of COPD is used to identify members for inclusion in the eligible population and the results are adjusted to account for age, gender, and HCC-RRU risk classifications that predict cost variability.
**ENDORSEMENT SUMMARY: Resource Use Measures**

(1609) ETG based Hip/Knee Replacement Cost of Care (Ingenix)

*Description:* This measure uses an episode-based approach for measuring the cost of care for hip and knee replacement using actual prices paid by the health plan. Together, the Episode Treatment Group (ETG) and Procedure Episode Group (PEG) methodologies identify the services involved in diagnosing, managing and treating, as well as the procedure event and related services performed before and after the procedure.

(1611) ETG based Pneumonia Cost of Care (Ingenix)

*Description:* This measure uses an episode-based approach for measuring the cost of care for pneumonia using actual prices paid by the health plan. The Episode Treatment Groups (ETG) methodology identifies the services involved in diagnosing, managing and treating pneumonia.

**The Need these Measures Fill**

These measures are primed to offer a more complete picture of what is driving healthcare costs. Notably, the measures will enable stakeholders to identify opportunities to create a higher-value healthcare system centered on reduced cost growth. They will also send a clear signal to the measure development community of the urgent need to develop additional resource use measures. Such measures get us one step closer to achieving a higher quality, lower cost healthcare system, where quality is measured in conjunction with resource use, or efficiency. Given the diverse perspectives on cost and resource use measurement in healthcare, NQF recognizes that the measures submitted and evaluated in this process only represent a narrow perspective in accounting for healthcare expenditures.

**Potential Use**

These four measures are structured to capture costs across a range of clinical and administrative settings, including ambulatory care centers, acute and long-term care facilities, outpatient and home health service settings, laboratories, and pharmacies. Based on the current level of testing, these measures are appropriate for measuring utilization of healthcare services within the commercial population (<65 years old) in settings where administrative claims data is accessible.

These measures may be useful to a wide range of stakeholders when used in concert with measures of quality and patient satisfaction. Purchasers, health plans, and consumers may be able to better identify providers that deliver high quality care at the lowest cost. Providers and health care teams can more effectively manage cost and health care quality if they can better understand how resources are being expended.

**Project Perspectives**

Resource use is a key gap area in performance measurement, but this project has made an important contribution. Over the coming years, NQF will work to enhance its portfolio of resource use measures, given the keen interest in cost and resource use measures on the part of public and private payers. For example, the Centers for Medicare & Medicaid Services will soon introduce a value-based payment modifier under the Medicare Physician Fee Schedule, and many private plans have used these types of measures for years.

Further work is needed by the broader quality and applied research community to identify how best to use resource use measures in concert with quality measures. When paired with measures of patient outcomes and experience of care, resource use measures can help the healthcare system identify best practices for removing waste while maintaining quality. However, there is much to learn about how best to display and interpret measure sets that include measures of quality and cost, and how to construct composite measures that assess value.