

Evaluating the Efficiency of Medical Care

Establishing national goals and an accountability framework for public reporting of health care performance data

SUMMARY

During 2007–2009, the National Quality Forum (NQF) convened a steering committee to create a measurement framework for evaluating the efficiency of medical care across a patient's trajectory of illness or "episode of care." NQF's episode of care definition (below) was adopted from the work of M.C. Hornbrook:

"a series of temporally contiguous health care services related to the treatment of a given spell of illness or provided in response to a specific request by the patient or other relevant entity."

(Other relevant entity refers to anyone involved in a patient's care, such as a caregiver, physician or hospital.)

Key Results

- The National Quality Forum created a measurement framework to "help key stakeholders move toward a high-performing health care system that is patientcentered, focused on quality, mindful of costs and vigilant against waste." NQF described the framework in *Measurement Framework: Evaluating Efficiency Across* Patient-Focused Episodes of Care (2009), which set forth:
 - A model for evaluating the efficiency of a patient's episode of care
 - Descriptions of three domains for performance measurement
 - Nine guiding principles
- With funding from the Commonwealth Fund, the NQF convened a multistakeholder workshop to address technical issues around fully implementing the framework using heart attack and low back pain as illustrative examples.
- With other funding, the National Quality Forum applied the measurement framework to additional high impact chronic diseases:
 - Cancer: Funded by the National Cancer Institute and the federal Agency for Healthcare Research and Quality

- Diabetes: Funded by the Veterans Administration
- Substance abuse: Funded by the Open Society Institute and the federal Substance Abuse and Mental Health Services Administration

Additionally, the framework served as a conceptual model for identifying measure gap areas to inform a national measure development and endorsement agenda. Funded by the federal Department of Health and Human Services (DHHS), this project initially prioritized conditions that impose a heavy health burden on Medicare beneficiaries and identified critical cross-cutting areas such as care coordination, measure development and subsequent endorsement.

DHHS is also funding an adaptation of this framework to patients with multiple chronic conditions.

Funding

The Robert Wood Johnson Foundation (RWJF) supported this work with a grant of \$294,226.

CONTEXT

In 2006, health care spending per capita in the United States was more than double that of other industrialized nations, but the country ranked comparatively low on key indicators of the quality of care and population health status, according to the Commonwealth Fund, a private foundation in New York City. Inefficiencies such as duplicate tests and widespread regional variations in medical practice were major problems.

Health care performance measurement is essential to improving quality. While substantial progress has been made in this area, most efforts to measure the quality of care are poorly coordinated and do not focus on areas with the greatest potential to improve quality or control costs.

RWJF's Interest in the Area

RWJF's Quality/Equality program area has four goals, two of which are addressed by this project, as stated on the Foundation's website:

- Transparency. While performance measurement and public reporting in quality have become more common, we need far greater collaboration at the federal and local levels to standardize measurement and reporting activities and create measures that are more meaningful to patients, providers and others.
- Measuring Progress. We are devoting a substantial portion of our portfolio to research, tracking and evaluation.

The National Quality Forum

RWJF helped fund the creation of the National Quality Forum, a nonprofit organization in Washington working to improve the quality of health care through standardized performance measurement. With support from RWJF, the National Quality Forum has worked on nursing sensitive quality measures, palliative care measures, ambulatory care measures, substance abuse treatment quality measures and more. See Recommended Reading (at bottom of page) for Program Results on this work.

THE PROJECT

The National Quality Forum convened a multistakeholder steering committee in May 2008, which:

- Created a framework for evaluating the efficiency of health care over time. This "comprehensive quality measurement framework" focuses on the quality of patient care given during a discrete patient-focused episode of care.
 - The steering committee developed a model of the measurement framework and illustrated its use for heart attack and low back pain. The National Quality Forum used an iterative process in which members and the general public had an opportunity to provide feedback during a formal comment period, followed by revision and refinement. Members voted on the final version and the forum endorsed the measurement framework in March 2009.
- Identified gaps in current health care quality measurement. The goal in identifying these gaps was to provide guidance to ongoing and future consensus-development and endorsement work regarding health care quality measurement.

The steering committee, comprised of representatives of consumer organizations, public and private purchasers, professional associations, supporting industries, and health care research and quality improvement organizations, met four times and held five conference calls. See Appendix 1 for a list of members.

Project Evolution

National Quality Forum Endorsement of the Framework Document

The initial intention of the project, according to staff, was to generate a conceptual framework for evaluating efficiency—defined as quality and costs—across patient-focused episodes of care. The framework was vetted in multiple forums and several organizations—National Cancer Institute, federal Agency for Healthcare Research and Quality, Veterans Administration, Open Society Institute and the federal Substance Abuse and Mental Health Services Administration—sought to apply the evolving framework document to additional medical conditions (see Results). As the utility of the

framework continued to demonstrate value, the National Quality Forum undertook formal endorsement.

National Priorities and Goals Work

The National Quality Forum had also intended to convene stakeholders to identify national priorities and goals for health care performance measurement as a key part of this project. In discussions with RWJF, NQF agreed to focus on developing the measurement framework in this project and address priorities and goals separately. To do so, in 2008, NQF convened the National Priorities Partnership (NPP), initially comprised of 28 groups, increasing to 32 groups with significant influence over health care. RWJF funded this work through three grants from May 2008 to November 2010 (ID#s 063997, 066943 and 067486).

NPP's national priorities for performance measurement, released in November 2008, are:

- Patient and family engagement
- Population health
- Safety
- Care coordination
- Palliative and end-of-life care
- Overuse of care services
- Descriptions are available online.

Other Funding

The Commonwealth Fund, a New York-based foundation that funds health care-related research and projects to improve health care practice and policy in the United States, supported the project's work to further flesh out technical issues around the framework by applying it to a subset of conditions—initially heart attack and low back pain.

After the National Quality Forum committee developed the measurement framework, the following organizations decided to fund work to apply it in the specific areas described under Results:

- The National Cancer Institute and the federal Agency for Healthcare Research and Quality
- The Veterans Administration
- The Open Society Institute and the federal Substance Abuse and Mental Health Services Administration

- The federal Department of Health and Human Services
- Additionally, the framework served as a conceptual model for identifying measure
 gap areas to inform a national measure development and endorsement agenda.
 Funded by the federal Department of Health and Human Services (DHHS), this
 project initially prioritized conditions that impose a heavy health burden on Medicare
 beneficiaries and identified critical cross-cutting areas such as care coordination,
 measure development and subsequent endorsement.

The work accomplished with this funding is described below.

RESULTS

The National Quality Forum reported these results in a report summarizing project work: *Measurement Framework: Evaluating Efficiency Across Patient-Focused Episodes of Care* (2009), and in reports to RWJF.

- The National Quality Forum created a measurement framework for evaluating efficiency across patient-focused episodes of care. The measurement framework is intended to "help key stakeholders move toward a high-performing health care system that is patient-centered, focused on quality, mindful of costs and vigilant against waste."
- The measurement framework "proposes a patient-centered approach to measurement that focuses on patient-level outcomes over time—soliciting feedback on patient and family experiences; assessing functional status and quality of life; ensuring treatment options are aligned with informed patient preferences; and using resources wisely. It will require fundamental change in the health care delivery system."
- The forum described the framework in a 43-page report, Measurement Framework: Evaluating Efficiency Across Patient-Focused Episodes of Care (2009), which set forth:
 - A model for tracking a patient with a health problem and for measuring and evaluating the core components, or phases, of a patient's episode of care. NQF's episode of care definition was adopted from the work of M.C. Hornbrook (See "Health Care Episodes: Definition, Measurement and Use," in *Medical Care Review*, 42(2): 163-218, 1985. Available online to subscribers.):

"a series of temporally contiguous health care services related to the treatment of a given spell of illness or provided in response to a specific request by the patient or other relevant entity."

(Other relevant entity refers to anyone involved in a patient's care, such as a caregiver, physician or hospital.)

The model is adaptable to many types of care episodes and health conditions. It treats the episode of care as three phases applicable to any type of health problem (acute, chronic or a combination):

- Viewing the population at risk, which acknowledges that for many conditions, prevention is the most efficient approach to care. (The steering committee noted that evaluating health promotion and prevention may require research with the general population rather than patients who have started the clinical phase of the episode of care.)
- Evaluation and initial management, which commences with a patient's first clinical contact.
- *Follow-up care*, which includes assessment at the end of a care episode and interventions to prevent recurrence.

The model calls for consideration of patient preferences and shared decision-making between the patient and the health care provider.

- A description of three domains representing the essential components for measuring efficiency during an episode of care. The intent was to ensure that the domains could fairly and accurately evaluate performance at the system and provider levels without imposing an undue data collection burden. It was also "critical that the domains capture potential patient-level outcomes and that they be capable of detecting waste in the system or of exposing unjustifiable costs."
 - Domain 1: Patient-Level Outcomes. Although performance measures exist, they focus primarily on process (e.g., administration of aspirin after a heart attack), with a few structural measures (e.g., nurse staffing levels) and a sprinkling of outcome measures (e.g., death within 30-days for heart attack patients).

Patient-level outcome measures are urgently needed in two areas:

- *Health status/health-related quality of life*. Examples include patient self-perception of health status, functional status, and physical and psychological health.
- Patient experience with care, which requires formally and systematically asking patients and their families about this (e.g., through a survey) and then acting upon their feedback.
- Domain 2: Cost and Resource Use. Because prices for identical services can vary across geographic areas and among payers, and because providers may not have control over all prices, measures of overall resource use based on both actual prices paid and standardized prices are important.

Other measures of resource use could include:

- *The volume of services* (e.g., number of physician visits or number of hospital or nursing home days for a patient during an episode)
- *Nursing intensity weights* (relative values of the quantity and types of nursing services provided to patients with different diagnoses)
- *Opportunity costs to patients* resulting from inefficiencies in the health care system, for example, time wasted waiting for an appointment
- Out-of-pocket costs
- *Domain 3: Processes of Care*. This domain includes measures of process such as administration of an evidence-based bundle of medications for heart attack patients. To minimize the data collection burden, process measures should be strongly linked to desired outcomes.

This domain also includes the process of engaging patients proactively in shared decision-making to assist them in making informed choices regarding treatment options. Many patients, when given balanced information, will choose not to have a given procedure or test, even if they meet eligibility requirements.

- Nine guiding principles toward the development and implementation of the measurement framework across any episode of care:
 - Efficiency measurement is multidimensional.
 - The choice of measures to inform judgments on efficiency should include considerations of potential leverage.
 - Measures used to inform judgments on efficiency should promote shared accountability across providers and be assigned to the smallest unit of accountability as technically feasible.
 - Measures used to inform judgments on efficiency should respond to the need to harmonize measurement across settings of care.
 - Measures to inform judgments on efficiency should be used for benchmarking.
 - Public reporting of measures of efficiency should be meaningful and understandable to consumers and entities accountable for their care.
 - Inappropriate care cannot be efficient.
 - The measurement framework should achieve its intended purpose and should be monitored for unintended consequences.

 Measures to inform judgments on efficiency should be an integral part of a continuous learning system.

The report also contains:

- Advantages and limitations of using an episode of care to measure performance
- Case studies of specific interventions
- Case scenarios considering the application of quality of care measurement in terms of costs

For more information about these sections, see Appendix 2.

- With funding from the Commonwealth Fund, the National Quality Forum applied the
 measurement framework to care for heart attack and low back pain. Each application
 defines an episode of care for the condition then establishes a performance
 measurement framework, which begins with a description of those at risk, then
 sketches phases of care.
 - Heart Attack (acute myocardial infarction). The phases of care are:
 - Acute phase
 - Post-acute care/rehabilitation phase
 - Prevention
 - Low back pain. The phases of care are:
 - Diagnosis and initial management
 - Shared decision-making and informed choice
 - Surgery or medical treatment
 - Follow-up care and prevention

For more information about these applications, see Appendices D and E, respectively, in *Measurement Framework: Evaluating Efficiency Across Patient-Focused Episodes of Care* (2009).

• The National Quality Forum began the path toward a comprehensive measurement system. "The framework ... is viewed as a living document that will continue to evolve as we learn more about how to best address individuals with complex chronic illnesses and better integrate public health and personal health systems. Nonetheless, this framework provides a starting point for identifying measurement gaps and for examining models of shared accountability to help move us closer toward attaining a high-performing, high-value health care system."

Using the measurement framework, project staff identified the following gaps in health care quality measurement:

- Patient-focused outcomes
- Cost of care
- Shared decision-making
- Care coordination

Applying the Measurement Framework With Other Funding

During the grant period, the National Quality Forum received other funding to apply or build on the measurement framework.

- The National Cancer Institute and the Agency for Healthcare Research and Quality funded a workshop on using the measurement framework in cancer (May 20, 2008, in Washington). The summary report and a white paper *Towards a Comprehensive Cancer Measure Set: Value-Based Episodes of Care* are available online.
- The Veterans Administration funded a workshop on using the measurement framework in diabetes (September 23, 2008, in Washington). The summary report and a white paper *Toward a Comprehensive Diabetes Measure Set: Value-Based Episodes of Care* are available online.
- The Open Society Institute—Baltimore, a nonprofit that focuses its work exclusively on three intertwined problems: untreated drug addiction, an overreliance on incarceration, and obstacles that impede youth in succeeding inside and outside the classroom, and the federal Substance Abuse and Mental Health Services Administration funded a workshop using the measurement framework in substance abuse (November 4, 2009, Washington). The summary report and a white paper A Path Forward to Measuring Continuing Care Management for Substance Use Illness: Patient-Focused Episodes of Care are available online.
- The Department of Health and Human Services awarded the National Quality Forum \$10 million each year for fiscal years 2009 and 2010 with the option for renewal in 2011 and 2012. A portion of this funding is dedicated to the development of a national performance measurement and endorsement agenda. This work—built upon the measurement framework to:
 - Develop a prioritized list of conditions that impose heavy health burdens on Medicare beneficiaries and account for significant costs.
 - Identify high leverage measure-gap areas for development and endorsement to improve the care provided to beneficiaries with these conditions, and the performance of providers in various health care settings.

Additionally, DHHS is funding an adaptation of this framework to patients with multiple chronic conditions.

Communications

The National Quality Forum created a page on its website with information about the project and the measurement framework report. In October 2009, staff presented a Webinar to discuss applications of the measurement framework; 165 National Quality Forum members and representatives of a broad range of stakeholders (e.g., Dartmouth Institute for Health Policy and Clinical Practice and the American Board of Medical Specialties) attended. NQF also sent out notices about the availability of the framework report to targeted audiences and key reporters.

See the Bibliography for more details.

LESSONS LEARNED

1. Keep a wide range of stakeholders involved in a project in order to improve results and anticipate and, if possible, defuse resistance to it. Quality of care measurement has implications for medical performance standards, public reporting and payment systems.

Thus staff considered it critical to engage forum members and to reach out to additional stakeholder groups, including those defined by the various conditions the framework addressed or will address. They did this through the steering committee and NQF's formal public comment period. This not only helped defuse potential resistance to the framework, but opened it to wide discussion and circulation among a broad audience for whom it had relevance, improving the quality of the final product. (Karen Adams/Project Director)

2. **Keep project work iterative to allow the product to change and improve—to be a** "**living" product.** "RWJF tries to push the envelope and when you do that you've got to have that flexibility and readiness to recognize shades of gray," said project director Adams. "This project was evolving, and [we needed] to make it responsive to the field." Flexibility allowed the project to grow toward its most perfect version of itself.

AFTERWARD

The National Quality Forum continues to use the measurement framework as the basis of its ongoing work defining national standards for quality of care measurement for individual medical conditions, and then building consensus for them.

"It has shaped how we're thinking about performance measurement and what measures now come through NQF for endorsement," said project director Adams. "It made us look

at the current state and what the desired state would be and ... provided a ... road map, but through a very patient-centered view." The framework also defined efficiency as multidimensional, including the need to assess both quality and costs of care, according to Adams.

The National Quality Forum is using the measurement framework to inform ongoing work by the National Priorities Partnership in refining national priorities and goals for quality of care measurement. From this, an integrated framework has evolved that includes the NPP priority areas mapped across a patient-focused episode of care as applied to high-impact conditions for Medicare and other populations.

As of July 2010, the National Quality Forum was continuing its work funded by the Department of Health and Human Services to prioritize conditions of Medicare recipients and to identify critical gap areas to guide the development of performance measures. Other work under this grant includes:

- Identifying programs to track and disseminate measures
- Regularly and appropriately updating performance measures
- Promoting the use of electronic health records for performance measurement, reporting and improvement
- Adapting the framework to patients with multiple chronic conditions

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APPENDIX 1

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APPENDIX 2

More Information About Measurement Framework: Evaluating Efficiency Across Patient-Focused Episodes of Care (2009)

(Current as of the end date of the program; provided by the program's management; not verified by RWJF.)

This report also contains:

- The advantages as well as the limitations of an episode of care model for measuring performance. The advantages include the following:
 - This approach offers a more patient-centered way to evaluate health system performance.
 - The approach is a way to shift performance measurement toward assessments that allow judgments to be made about value.
 - It can foster and enable new strategies for financing health care.
 - An episode approach based on prolonged episodes (one year or more) can provide more generalizable insights into the overall performance of delivery systems.

Limitations of an episode of care model stem from challenges entailed in:

- Addressing appropriateness of care
- Adjusting the risk for different populations
- Sorting out patients with multiple chronic conditions
- Facilitating comparisons among organizations
- Case studies of specific interventions. The case studies sketch work at two organizations applying quality of care and efficiency improvement models:
 - Virginia Mason Medical Center in Seattle
 - Geisinger Medical Center in central Pennsylvania

See Appendix A, available online.

• Case scenario considering the application of quality of care measurement in terms of costs. See Appendix C, available online.

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