Robert Wood Johnson Foundation

Published: November 19, 2013
Program Results Report
Grant ID: 68277 in QE 3

# Devising Episode-of-Care Performance Measures for Select Illnesses

## Measures to be used in value-based purchasing

## SUMMARY

With heightened concern across the country about the ballooning costs and poor quality of health care, the industry is moving from a fee-for-service payment model to value-based purchasing, which rewards providers for delivering high-quality and cost-efficient medical care.

From November 2010 through April 2012, researchers at the RAND Corporation developed detailed episode-of-care frameworks for selected medical illnesses that could be used in value-based purchasing. The RAND Corporation is a nonprofit research and analysis institution based in Santa Monica, Calif.

Under an episode-of-care model, medical practitioners and institutions are evaluated and compensated based on the treatment given over a period of illness or an acute medical event. Examples of performance measures that could be used to evaluate efficiency and quality include giving an aspirin to a heart-attack patient, a hospital's readmission or mortality rates, and patients' assessment of the care they received.

### The Solicitation

The project was funded under a 2010 solicitation, Improving Quality and Value in Health Care: Ideas from the Field, from the Quality/Equality Program Management team at RWJF. This solicitation sought to promote learning and knowledge about innovative efforts that address health care quality and value problems, by studying such efforts in the following specific areas, in order to understand how they may lead to better health care quality and lower costs:

- Value-based purchasing
- Data collection and aggregation for performance measurement
- Quality improvement support
- Public reporting of provider performance

For more information on the solicitation and links to Program Results Reports on other projects funded under it, read the Introduction.

### Key Results

In a report to the Robert Wood Johnson Foundation (RWJF), project staff members wrote that they:

- Developed detailed diagrams that illustrate possible patient trajectories and associated performance measures for pregnancy, type 2 diabetes, hip or knee replacement, PCI (coronary angioplasty) and insertion of a stent, depression, and ischemic stroke.
- Identified gaps in existing performance measures such as:
  - Missing measures for key components of an episode of care
  - A shortage of measures that span multiple steps to reflect continuity of care, transitions among providers or settings, and shared decision-making

### Recommendations

To evaluate doctors and hospitals based on episodes of care, the health care industry should fill existing gaps in performance measures such as those that evaluate:

- Changes in the health status of a patient over time
- The patient's experience—such as level of pain—over the course of an episode
- Prevention of additional episodes of care
- Bundled care processes associated with a particular outcome

### Funding

RWJF supported this project from November 2010 through April 2012 with a grant of $299,208.

## CONTEXT

The National Quality Forum cites several potential advantages to an episode-based approach to performance measurement, describing it as patient centered and focused on shared accountability among providers. It can be used to compare costs and quality and can foster incentives to reduce overuse of services.

"If you bundle a set of services collectively, medical practitioners will start structuring their system to be able to work together," said Project Director Cheryl Damberg, PhD, MPH, a senior researcher at RAND, in an interview with RWJF. "It's really trying to get

everyone working on the same page. Everybody's got to do their part to contribute to the whole production."

However, existing performance measures may not be adequate because they "do not track the quality of care over an entire episode, are poorly coordinated, and focus on care delivered in discrete settings," RAND staff wrote in a funding proposal to RWJF.

While the Affordable Care Act of 2010 mandates a value-based purchasing program for providers participating in Medicare, the ability of public and private purchasers to put episode-based models into practice "is limited by the lack of episode-based performance measure sets," according to RAND staff.

## RWJF's Interest in This Area

The 2010 solicitation Improving Quality and Value in Health Care: Ideas from the Field sought to promote learning and knowledge about innovative efforts that addressed health care quality and value problems. Heightened concern across the country about the ballooning costs and poor quality of health care led to the funding solicitation.

RWJF made 12 grants, totaling $3.1 million, addressing issues in value-based purchasing, quality improvement support, public reporting of provider performance, and data collection and aggregation for performance measurement.

Among the initiatives RWJF had previously funded in the area of performance measurement were:

- The High Value Health Care Project, a $15.8 million initiative that ran from 2007 to 2010, aimed to build the initial infrastructure for a nationwide performance measurement and reporting system. The project included a component about evaluating physician performance. See the Program Results Report for more information.
- In 2005–2007, the National Committee for Quality Assurance examined applications of pay-for-performance in behavioral health care.[1]
- In 2009, Cornell University, the Joan and Stanford I Weill Medical College studied whether medical practices in less affluent areas score lower on quality measures and how pay-for-performance might improve performance scores.[2]

In 2007-2009, RWJF supported the National Quality Forum in convening a steering committee to create a framework for episodes of care, see Program Results Report.[3]

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[1] This project, funded by Grant ID#s 51650 and 55816 was part of a national program, *Depression in Primary Care.* See Program Results Report. Online at www.rwjf.org/content/rwjf/en/research-publications/find-rwjf-research/2010/09/depression-in-primary-care.html.

[2] The project was funded by grant ID# 65453 under the *Targeted Solicitation on Quality Improvement and Performance Measurement*.

## THE PROJECT

RAND researchers developed and evaluated detailed episode frameworks and performance measures for selected medical conditions, seeking to determine where gaps in those measures exist.

Researchers used the following criteria to select the medical conditions included in the study:

- High prevalence
- High cost
- Variety of physicians who treat the condition

They also wanted to include a variety of episode types: acute, chronic, and procedural. An acute episode could be a coronary or stroke. A chronic episode could be diabetes. A procedural episode could be a knee or hip replacement or a C-section.

They chose to define episodes of care for the following conditions:

- Pregnancy
- Type 2 diabetes
- Hip or knee replacement
- PCI (coronary angioplasty) and insertion of a stent
- Depression
- Ischemic stroke

The episodes of care for these conditions can span different settings for the same condition such as a physician's office, a hospital, and an outpatient facility.

Researchers then populated the episode-of-care diagrams with existing performance measures. Those measures were culled from a variety of sources including: the National Quality Measures Clearinghouse, the National Quality Forum, the Center for Quality Assessment and Improvement in Mental Health, and the Patient Reported Outcomes Measurement Information System.

They concentrated on quality measurement rather than cost or efficiency, Damberg said, because, “We were trying to bound the project due to limited time and resources. You try to figure out where your holes are.”

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[3] Grant ID# 59667

The researchers recruited panels of three or four clinical and/or performance-measurement experts for each of the six conditions. The experts, meeting by teleconference, reviewed the draft episode-of-care diagrams, suggested additional performance measures, and identified priorities for future quality-measurement development.

For a list of panelists, see the Appendix.

## RESULTS

In a report to RWJF and an interview for this report, project staff stated that they:

- **Developed detailed diagrams that illustrate possible patient trajectories and associated performance measures.** Each episode includes the clinical processes and performance measures within phases of care. Examples include:
  - PCI or angioplasty:
    - *Evaluation and initial management*. This phase includes a physical exam and advice on lifestyle modifications including exercise, nutrition counseling, and smoking cessation.
    - *Invasive procedure and recovery*. If symptoms persist or worsen, the patient moves to the angioplasty surgery itself, treatment of any complications, and a prognosis discussion.
    - *Continuing management.* After the procedure, or if symptoms improve without invasive intervention, the patient moves to the continuing-management phase including lifestyle modification.
  - Type 2 diabetes:
    - *Strategies for diabetes management*. This phase includes blood pressure monitoring, glycemic control, and patient education.
    - *Possible complications*, which include cardiovascular disease or diabetic retinal disease.
    - *Treatment of complications*.
    - *Stabilization of complications*.
- **Identified gaps in existing performance measures, such as:**
  - *Missing measures for key components* of an episode of care. For example, measures to prevent type 2 diabetes in high-risk groups.
  - *A shortage of measures that span multiple steps* to reflect continuity of care, transitions among providers or settings, and shared decision-making. Examples

include measures that evaluate patients' level of pain or blood-sugar levels over time.

— *Measures that do not reflect recent changes* in scientific evidence, patients' clinical progress over time or patients' risk factors.

Coronary artery disease is one example. Current measures call for medication therapy, but panelists said there is enough clinical evidence to specifically require the use of statins, which are drugs that manage cholesterol levels. Panelists also thought that routine, annual screening for diabetes in coronary-artery disease patients was unnecessary for both logistical reasons and insufficient evidence of the benefits.

"We want to hand somebody [the health care professional] the playbook and say, 'This is how you do it,'" Damberg said.

## RECOMMENDATIONS

The RAND staff made a number of recommendations.

To evaluate doctors and hospitals based on episodes of care, the health care industry should develop measures to fill existing gaps such as those that evaluate:

- Changes in the health status of a patient over time
- The patient's experience—such as level of pain—over the course of an episode
- Prevention of additional episodes of care
- Bundling care processes associated with a particular outcome

"They do sound intuitive," Damberg said, "but nobody's doing it—and nobody's been doing it."

## LESSONS LEARNED

1. **In research of this type, limit expert panels to three or four individuals.** "While individual interviews are useful," RAND researchers stated in a report to RWJF, "we found the interchange among the experts in the panel sessions to be particularly valuable in reaching consensus." By limiting the number of panelists, the researchers avoided the logistical challenges of scheduling teleconference for a large group.
2. **Use a modified Delphi process to reach consensus among members of a panel.** The Delphi process is a method of reaching consensus in which the experts, aided by a facilitator, go through successive rounds of reviews. (Final Report to RWJF)

3. **Conduct work of this type across a range of health conditions.** Doing so "allowed for comparison of similarities and differences across clinical contexts," RAND researchers noted in a report to RWJF.

## AFTERWARD

Researchers showed the results of their work in a poster presentation at the 2012 annual research meeting of AcademyHealth, June 24–26 at Orlando, Fla.

They plan to submit articles to peer-reviewed journals—one on the diabetes episode and another summarizing themes common to all six episodes of care—and write a RAND research brief, which would summarize both articles.

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# APPENDIX

## Expert Panels

### *Depression*

**Benjamin George Druss, MD**
Psychiatrist
Professor, Rollins School of Public Health
Emory University
Atlanta, Ga.

**Richard C. Herrmann, MD, MPH**
Psychiatrist
Director, Center for Quality Assessment and Improvement in Mental Health
Tufts University Medical Center
Boston, Mass.

**Kenneth B. Wells, MD, MPH**
Psychiatrist
Professor in Residence
Department of Psychiatry and Behavioral Sciences
David Geffen School of Medicine, UCLA
And Department of Health Services
School of Public Health, UCLA
Director, UCLA Robert Wood Johnson Clinical Scholars Program
Los Angeles, Calif.

### *Diabetes*

**Alan Martin Glaseroff, MD, ABFM**
Family Practitioner
Chief Medical Officer
Humboldt Del Norte Independent Practice Association
Arcata, Calif.

**Eve Askanas Kerr, MD, MPH**
Internist
Professor of Medicine
Director, Center for Clinical Management Research
University of Michigan
Ann Arbor, Mich.

**Graham T. McMahon, MD, MMSc**
Endocrinologist
Associate Professor of Medicine
Brigham and Women's Hospital
Boston, Mass.

### *Elective Coronary Angioplasty*

**Ralph Gerard Brindis, MD**
Cardiologist
Senior Adviser for Cardiovascular Disease,
Northern California Kaiser Permanente
Oakland, Calif.
Clinical Professor of Medicine
University of California at San Francisco
San Francisco, Calif.

**David P. Faxon, MD**
Cardiologist
Vice Chair of Medicine for Strategic Planning
Brigham & Women's Hospital
Boston, Mass.

**Rahul Sakhuja, MD, MPP, MSc**
Interventional Cardiologist
Wellmont CVA Heart Institute
Kingsport, Tenn.

### *Hip/Knee Replacement*

**Nelson Soohoo, MD**
Orthopedic Surgeon
Associate Professor
University of California at Los Angeles
Los Angeles, Calif.

**Kevin Bozic, MD, MBA**
Arthoplasty Surgeon
Associate Professor and Vice Chairman,
Department of Orthopedic Surgery
University of California at San Francisco
San Francisco, Calif.

**Richard Mark Dell, MD**
Orthopedic Surgeon
Kaiser Permanente Medical Center
Downey, Calif.

**Norman A. Johanson, MD**
Orthopedic Surgeon
Professor and Chairman, Department of Orthopedic Surgery
Drexel University
Philadelphia, Pa.

## *Pregnancy*

**Elliott K. Main, MD**
Obstetrician/Gynecologist
Chairman, Department of Obstetrics and Gynecology
California Pacific Medical Center
San Francisco, Calif.

**Deidre Gifford, MD, MPH**
Obstetrician/Gynecologist
Providence, R.I.

**Vanitha Janakiraman, MD, MPH**
Perinatologist
Kaiser Permanente Medical Center
Walnut Creek, Calif.

## *Stroke*

**Jeffrey L. Saver, MD, FAAN, FAHA**
Vascular Neurologist
Director of UCLA Stroke Center
Professor of Neurology
Geffen School of Medicine
University of California at Los Angeles
Los Angeles, Calif.

**Dana Leifer, MD**
Vascular Neurologist
Associate Professor of Neurology
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New York, N.Y.

**Robert G. Holloway, MD, MPH**
Neurologist
Professor and Vice Chair of Neurology
University of Rochester Medical Center
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