



Measuring the Contributions of Nurses to High-Value Health Care

Special Report

A 10-year effort to build the evidence base about the impact of nursing on quality of care and patient outcomes has yielded tangible results...but the road has been challenging to navigate

SUMMARY

Nurses are the largest group of health care providers, but the care they provide to patients often is undervalued. In 2001, the Robert Wood Johnson Foundation (RWJF) provided funding to the Washington-based National Quality Forum (NQF) for the identification and endorsement of a set of standards that would adequately quantify nurses' contributions to higher-value inpatient care—improvements in the quality of care hospitalized patients receive and efficiencies in the way care is delivered.

Findings from several RWJF-funded studies had highlighted the need for "nursing sensitive" quality-of-care measures—patient-related outcomes, processes of care and structural proxy measures that indicate higher-quality nursing care.

Key Results

After a rigorous consensus process, in 2004, the NQF endorsed 15 national voluntary consensus standards for nursing-sensitive care—referred to as the "NQF-15"—that can be used for performance measurement and public reporting of hospital-level performance in three domains:

- Patient-centered measures, such as patient falls with injuries
- Nursing-centered measures, such as smoking-cessation counseling¹
- System-centered measures, such as the mix of registered nurses to licensed practical nurses and unlicensed assistive personnel

¹ A subsequent review of the NQF-15 measures by the Consensus Standards Approval Committee and Board modified some of the original measures and "retired" smoking cessation as a measurement.

Challenges

Because the endorsed standards were developed by various measurement developers and generated from a range of data sources, including surveys, hospitals reported barriers in implementing the measures. Therefore, in 2004, RWJF funded the Joint Commission (formally called the Joint Commission on Accreditation of Healthcare Organizations) to create, test and disseminate an implementation guide for data collection and analysis of the NQF-15.

In 2005, RWJF funded NQF to track the implementation of the endorsed nursing-sensitive measures and identify potential opportunities to accelerate implementation of them. NQF found that the measures did matter, but that hospitals were not harnessing these measures' full potential. Project Director Ellen Kurtzman, R.N., M.P.H., said "... some [measures] were required for Joint Commission accreditation or for other reasons. Hospital staff members were using them but they weren't necessarily using them because they wanted to know about nursing care. They were using them because they were required for accreditation, public or private purchaser or recognition requirements."

Response

In 2006, RWJF launched the *Interdisciplinary Nursing Quality Research Initiative* (INQRI), a national program to generate, disseminate and translate research about the relationship between nursing and health care quality to improve the quality of patient care. As of February 2011, INQRI had funded 39 two-year research projects, including some seeking to improve the NQF-15 measures and examine factors that encourage their implementation.

In 2007, RWJF funded researchers at the George Washington University Medical Center to plan a national nursing quality and safety alliance to strengthen nursing's ability to influence health care quality and safety. The alliance aims to engage the nursing community in setting policies related to quality, safety and value. RWJF renewed the first grant with another to implement the National Alliance for Quality Care, which runs to January 2012.²

Ten Years Later

Ten years after RWJF launched its strategy to quantify nurses' contribution to quality care, there is a renewed focus on performance measurement, public reporting and quality improvement. The Affordable Care Act (ACA), for example, charges the U.S. Department of Health and Human Services (DHHS) with developing new measures to fill gaps in performance reporting.

² ID#s 059419 and NS 066729.

Current approaches to measurement also may be shifting. "There is now a push for measures that relate more to the way people experience health care than the way it is delivered," said Kurtzman. "Rather than looking at whether or not you get a pressure ulcer when you are in the hospital, the value of health care should be evaluated over the entire course of that illness, whatever that illness is and wherever you are being treated."

CONTEXT

Everyone has had experience with nurses. A nurse often is the first person we encounter when we have a health concern or is our first line of defense in preventive care. She or he is the one we ask for advice, the one who tends wounds, both physical and emotional, the one who comforts when the news is bad and the one who is there at the end.

Nurses are the single largest group of health care providers and in close proximity to the delivery of patient care. Yet, the critical work nurses provide—especially in inpatient settings—is unseen and undervalued. One reason is that the growing evidence base that quantifies how nursing and nursing interventions affect quality of care and patient outcomes has not been well understood or disseminated.

In 2001, RWJF provided funds for the identification and endorsement of a set of measures that would make a direct and quantifiable connection between what nurses do and the quality of care patients receive. RWJF hoped that these measures could be used not only by nurses and others to guide internal quality improvement projects, but also by patients, patients' families, health plans and purchasers of health care interested in public reporting and external accountability.

This report chronicles the progress of that effort through 2010.

RWJF's Interest in the Issue

RWJF has a long history of championing the work of nurses. In the early 1980s, it established a staff team devoted entirely to nurses and nursing issues.

Early on, RWJF focused an array of initiatives³ to address the nursing shortage, a cyclical problem that when severe threatens the quality of patient care. RWJF found that the shortage could not be fixed simply by recruiting more nurses to the profession. The team concluded that retaining nurses already in practice also had to be part of the solution.

Yet, by the early 2000s, many, especially older experienced nurses in hospitals, were leaving the profession. They were reporting a deteriorating patient care environment in

³ Programs included the Nurse Faculty Fellowship Program; Clinical Nurse Scholars Program; Strengthening Hospital Nursing: A Program to Improve Patient Care; Nursing Services Manpower Development Program; and Ladders in Nursing Careers (see [Program Results Report](#)).

which to do their work—long shifts, high patient census, taxing physical demands, lack of administrative support, fewer professional development opportunities—and other issues.⁴

In 2000, RWJF made a strategic decision to address environmental factors most frustrating the nurses, as a means for attracting and retaining nurses. A group of leaders in nursing and quality measurement convened by RWJF in 2001 agreed that nurses were undervalued and poorly equipped in the settings in which they worked.

They furthered asserted that progress would only be achieved when performance measures captured the contributions nurses make to high-quality care. Without a set of nursing measures to capture nurses' contributions, it would be more difficult to convince funders and researchers to make the investments in the nursing work environment that would improve the way care is delivered at the bedside—the ultimate aim of this work.

The efforts that followed to identify and endorse a set of measures that would describe and document what nurses do brought together two important priorities at RWJF: to elevate the nursing profession and to improve the quality of care for patients.

ENDORISING "NURSING SENSITIVE" MEASURES

Although hospitals look at an array measures—to track performance, to improve quality, to monitor costs, to fulfill accreditation requirements, among other reasons—it appeared that a new, rigorous, evidence-based set of indicators identified as being 'sensitive' to nursing care would be needed to measure the complex and varied work of nurses in hospitals.

Beginning in 2003, RWJF funded eight research projects to examine and evaluate existing indicators of nursing performance. Collectively, these projects found that available data typically did not include the specific variables that quantify the unique aspects of nurses' activities or contributions to quality of care.

The studies also highlighted the need for "nursing sensitive" measures. Nursing-sensitive measures are patient-related processes or outcomes—or structural variables that serve as proxies to these processes and outcomes—that reflect the nurse-quality relationship. *Medical Care Research and Review* 64(2 suppl.) April 2007 covered this body of research. Abstracts of the articles are available [online](#).⁵

⁴ See [Program Results Report](#) on Wisdom at Work: Retaining Experienced Nurses, an RWJF program to address this particular issue.

⁵ See [Program Results Report](#) on ID# 049530 and [Program Results Report](#) on ID# 056621 for more details about the research projects.

RWJF turned to the National Quality Forum (NQF), a Washington-based group that endorses national voluntary consensus standards through a formal consensus process that encourages input from a diverse set of stakeholders (see [Program Results Report](#) for ID# 047479)⁶ to endorse a set of nursing-sensitive measures.

RWJF support had helped create the NQF in 1999 (see [Program Results Report](#)). Subsequent RWJF grants supported NQF to endorse quality measures for mammogram centers, palliative care practice, substance abuse treatment and physician-level ambulatory care.⁷

Turning its sights to nursing quality measures, NQF tapped Ellen Kurtzman, R.N., M.P.H. (currently a research professor at George Washington University School of Nursing), to head the project. NQF also enlisted leaders in nursing research and practice and measurement as well as leadership from hospital administration and national nursing organizations to form a steering committee and a technical advisory committee (see [Appendix 1](#) for a list of members).

"The steering committee represented a cross section of stakeholders and included nurses," Kurtzman said, "but drew heavily on experts from other disciplines." Its purpose was to have "very technical discussions about the strength of different measures for quantifying nursing's impact on higher-value care," she said.

The Search for Existing Measures

To begin, the committee scoured the literature, inventoried measures developed by government agencies and examined experiences of the few organizations with expertise in health care performance measurement to identify existing measures that could be used to assess nursing care. While they found a sizable number of measures of hospital performance—such as patients' length of stay and inpatient mortality—there was limited evidence on which to draw that established a clear nurse-outcome relationship. "Although they were well developed and reliable performance measures, the evidence didn't necessarily distinguish them as 'nursing sensitive,'" Kurtzman said. "Certainly, nurses influence those things, but not to the extent that members of the steering and technical advisory committees felt they could recommend it as a nursing measure."

Kurtzman found a stronger, more mature literature substantiating nursing's influence on inpatient infection rates, restraint use, pressure ulcer prevalence and "failure to rescue"—defined as death following the occurrence of an adverse event during hospitalization.

⁶ The federal Department of Veterans Affairs provided additional funding for creating the measures.

⁷ See [Program Results Report](#) on [mammography centers](#), [palliative care](#), substance abuse treatment (1) and (2) and [ambulatory care](#).

Mary Naylor, Ph.D., R.N., the Marian S. Ware Professor in Gerontology at the University of Pennsylvania School of Nursing, co-chaired the steering committee.⁸ Naylor recalls a particularly strong reaction to the "failure to rescue" measures being considered. Committee members conceded that nurses were on the front lines when patients suffered adverse events, but chafed at using the word "failure" in relation to nursing care. They wanted to know why so few measures captured "the kinds of things that nurses do to create and promote health," Naylor said.

The committee also found glaring gaps in the literature. There were no measures, for example, in the area of pain management, even though nurses play a big role in assessing and controlling patients' pain.

The NQF consensus process in place at the time included an opportunity for broad stakeholder input on the new measures. One of the stakeholders' concerns was how hospitals would gather data about the measures. Some measurement developers, for instance, maintain proprietary databases and measure specifications are not open source. There were also concerns about whether the sources of the data for some measures—especially those from administrative records—were reliable.

"There are a couple of measures derived from hospital discharge records," Kurtzman recalled. "These include patient diagnoses, inpatient procedures and other data that is actually helpful for deconstructing what happened to the person while hospitalized ... But research had revealed reliability concerns with some of the data to construct [quality] measures. There were some problems with the data."

The NQF-15: A "Starter Set" of Standards

For all of these reasons, reaching consensus was difficult, but in 2004, the NQF board of directors endorsed 15 voluntary consensus standards for nursing-sensitive care recommended by the steering committee. Known as the NQF-15, they contained measures in three domains:

- *Patient-centered* measures, such as deaths among surgical inpatients who experience a treatable serious complication; patient falls; and infections associated with hospital procedures
- *Nursing-centered* intervention measures, such as smoking-cessation counseling

⁸Naylor also directs the RWJF-funded program, *Interdisciplinary Nursing Quality Research Initiative*.

- *System-centered* measures, such as the mix of registered nurses to licensed practical nurses and unlicensed assistive personnel and the number of nursing care hours per patient day⁹

See [Appendix 2](#) for a list of the initial NQF-15 nursing sensitive standards.

NQF published the endorsed consensus standards, and the process by which it endorsed them, in a 2004 report entitled *National Voluntary Consensus Standards for Nursing-Sensitive Care: An Initial Performance Measure Set*, available [online](#). Kurtzman and Kenneth Kizer, M.D., M.P.H., then the president and chief executive officer of NQF also published an article about the process by which NQF endorsed the nursing measures in 2005 in *Nursing Administration Quarterly*. An abstract of the article is available [online](#).

The NQF report also identified a number of areas in which adequate measurements simply did not exist and called for further research about such topics as:

- The relationship between nursing variables such as staffing (turnover, experience, etc.) and patient outcomes
- The contribution of nurses to pain management
- The relationship between patient outcomes and process measures for nursing-centered interventions, including measures that describe the distinctive contributions of nurses (such as assessment, problem identification, prevention and patient education)

Read more [online](#).

"[The NQF-15] was to be used as a set, but it was always considered a starter set," Naylor recalls. "It had both processes and outcomes. It was believed that it was in the collective that we would begin to get a sense of both ... quality opportunities and areas for improvement."

RWJF's Next Step

RWJF took the set of NQF measures and the set of research priorities and pursued parallel tracks—the first, to encourage spread and use of the measures and the second, to test and improve the measure set. Members of the steering committee signed on to assist with these tasks.

⁹ This initial measure set complemented and extended existing hospital care measures with links to nursing care that had been published in the *NQF National Voluntary Consensus Standards for Hospital Care: An Initial Performance Measure Set*, which is available [online](#). Most of the endorsed measures are derived from other national hospital and nursing initiatives (e.g., Centers for Medicare & Medicaid Services-Quality Improvement Organizations [CMS-QIOs], Joint Commission-Core Measures [*Implementation Guide for the NQF-Endorsed Nursing Sensitive Care Measure Set, 2009*] (available [online](#))), the American Nurses Association-National Database of Nursing Quality Indicators [ANA-NDNQI], Collaborative Alliance for Nursing Outcomes [CALNOC] database project and VHA Inc.).

Steering committee members produced papers summarizing what had been done in each area identified as needing further research. At a meeting at RWJF in March 2005, stakeholders engaged in a structured discussion intended to produce partnerships and plans for subsequent measure-development projects.¹⁰ Participants included data collectors, nursing researchers, social scientists, hospital accreditors, health care union officials and health care administrators.

This group produced a set of recommendations to guide researchers engaged in developing, validating and testing measures of quality nursing care. Versions of the papers were later published in a supplement to the April 2007 issue of *Medical Care Research and Review*. Abstracts are available [online](#).¹¹

Slow Uptake in Implementing the Measures

Though a number of hospitals began to implement the NQF-15 measures, the uptake was slower than expected. Hospitals were facing numerous barriers—reflective more of the difficulty of implementing measures in general than of nursing-related measurement in particular.

Many of the measures had been created originally to serve as outcomes in clinical studies and were not intended for other purposes. As a result, hospital staff members often were not used to collecting data the way the NQF-15 endorsed measures had been prescribed.

The measures required data collection from a variety of sources. For example, "failure to rescue" required looking at electronic claims. Tracking the number and severity of inpatient pressure ulcers required a physical examination. Measuring aspects of the environment in which nurses worked required that nurses complete surveys.

At many hospitals, collecting data to calculate the NQF-15 measures required a completely new data collection mechanism—without additional staffing to assist already stressed workers.

"Measurement is tough," Naylor said. "It is not just tough to develop. It is asking frontline staff to collect consistently reliable information. Even if you have a great measure...reliably collecting data related to the measure is essential. We need to understand not only what data are important, but also what are reasonable ways to collect the data."

¹⁰ Grant ID# 051115.

¹¹ See also [Program Results Report](#) on ID# 056621.

A GUIDE FOR IMPLEMENTATION

To address these difficulties, RWJF funded the Joint Commission¹² to create, test and disseminate standardized specifications—a step-by-step implementation guide for how to collect data for the NQF-15 measures.¹³

The implementation guide went through a series of iterations and testing in the field. A group of 30 volunteer hospitals and others reviewed a draft of the guide prior to its publication in 2005. In 2007, after a number of hospitals began to use the guide, the Joint Commission undertook a study to test implementation in a different group of volunteer hospitals.¹⁴ These pilot sites collected data for the NQF-15 measures from August 1, 2007, through July 31, 2008.

Findings from the Field Tests

- This extensive field test found it was feasible to collect data on all 15 nurse-sensitive performance measures. Further, each of the measures individually, and all of them as a set, were effective in improving patient care. For example, 95 percent of hospitals found measuring the prevalence of pressure ulcers valuable in evaluating nursing care. Most said they would continue to collect that data even though it was one of the most time-consuming measures.
- A number of the measures needed further refinement and clarification, however.
- Several hospitals had difficulty collecting electronic data to measure death among surgical in-patients with serious, but treatable, complications.
- Hospitals were not consistent in the way in which they classified and reported injuries from falls.
- Hospitals were taking inconsistent approaches to determining the onset date of an infection, with some measuring when symptoms began and others measuring the date a culture was taken.
- Of the 18 hospitals asked how they collected data about nursing hours, 17 reported actual hours worked while one reported scheduled hours. Five included education hours in their total, and five included time spent on committees.
- The concept of "voluntary" turnover among nurses was not uniformly defined.

The technical advisory panel to the implementation guide recommended that all of the 15 nurse-specific measures be used in hospitals, in most cases with modifications. The panel

¹² The Joint Commission is a not-for-profit organization that accredits and certifies more than 16,000 health care organizations and programs in the United States.

¹³ See [Program Results Report](#) on ID# 051781.

¹⁴ See [Program Results Report](#) for ID# 059409.

also recommended that hospitals adopting the 15 nurse-sensitive measures phase them in gradually and make sure trained staff is in place to collect data. See [Appendix 3](#) for a list of technical advisory panel members.

The revised *Implementation Guide for the NQF Endorsed Nursing-Sensitive Care Performance Measures*, published in the fall of 2009, includes those measures approved for continued endorsement and reflects updates to the guide because of the comprehensive testing. The guide is available [online](#).

USE OF THE MEASURES: A MIXED STORY

By the mid-2000s, RWJF had made a significant investment in creating nursing-sensitive measures, and wanted information on whether the measures were taking hold. In 2005, RWJF again funded NQF to examine hospitals' uptake of the measures for quality improvement, transparency and accountability.¹⁵

"There was a question of whether collecting [the measures] had any impact at all," said Kurtzman, who directed the project. "If a tree falls in the forest and nobody hears it, did the tree really fall? We tried to get our arms around whether gathering and analyzing these nursing-sensitive measures actually mattered to hospitals, their nurses and patient care."

A planning advisory committee guided the tracking project for the measures. Members included representatives from hospitals that had implemented the measures, measurement developers, national hospital corporations, researchers and principal investigators of two other key RWJF national programs addressing nursing issues: *Interdisciplinary Nursing Quality Research Initiative* and *Transforming Care at the Bedside*.

Through semistructured telephone interviews and a web-based survey, the planning advisory committee found that the NQF-15 measures did matter, but were not being used in the way they had been envisioned. For one thing, "Some people were cherry picking from the 15," Kurtzman said. "And some were required for Joint Commission accreditation or for other reasons. Hospital staff members were using them but they weren't necessarily using them because they wanted to know about nursing care. They were using them because they were required for accreditation, public or private purchaser or recognition requirements."

And as before, hospitals were reporting some of the same barriers to implementing regular use of the NQF-15. These included cost concerns, lack of training and technical assistance as well as the enormous external demands on nurses.

¹⁵ Grant ID# 053972.

NQF staff made a number of recommendations for accelerating the adoption of the nursing-sensitive measures—among them, incorporating nursing-sensitive measures into existing, hospital performance measurement sets such as those endorsed by NQF or required by national and state hospital review boards—and aligning the NQF-15 with other nurse quality performance measures.

In a report of the tracking study published by NQF (available [online](#)), NQF staff also noted "the pressing need to update the consensus standards as new measures emerge and science evolves, the importance of testing the consensus standards as a bundle, and the critical gaps that exist that are completely unaddressed by the set." They recommended creating educational tools for hospital staff to reduce the burden of implementing the measures and to improve their use in strategic decision-making.

For more details, see [Appendix 4: Recommendations for Accelerating the Adoption of the NQF-Endorsed Standards for Nursing-Sensitive Care](#).

AFTERWARD

The tough terrain that those implementing nursing-sensitive measures encountered highlighted the importance of advancing understanding about nurses' contributions to quality care and patient outcomes. Therefore, in 2006, RWJF launched the *Interdisciplinary Nursing Quality Research Initiative* (INQRI), a national program to generate, disseminate and translate research demonstrating how nurses contribute to and can improve the quality of patient care. Naylor heads the program.

As of February 2011, INQRI had funded 39 two-year research projects led by teams of nurse scholars and scholars from other disciplines and six teams to conduct 18-month projects focused on dissemination and implementation. The goal of one set of projects was to improve and refine the existing NQF-15 measures and understand what factors encourage their implementation. Another set of projects aimed to identify, develop and test new measures that capture nursing's contributions to quality care.

Other projects revisit a number of areas that had proved problematic in the original NQF-15, in particular the "failure to rescue" measure. Some delve into aspects of nursing care that had been noticeably missing in the original set, in particular nurses' role in managing patients' pain. Other areas in which nurses play a key role also are addressed, including:

- Care coordination
- Symptom management
- Medication management

See [Appendix 5](#) for highlighted projects that show the range of issues and questions the INQRI-funded research is pursuing.

In 2007, RWJF funded researchers at the George Washington University Medical Center to study how performance measures might be used as the basis for payment or incentives for nurses. The research team, led by Kurtzman, produced and published a framework for a system to measure, report and reward nursing's contributions to quality, safety and value, as well as other articles.¹⁶

The project influenced the planning and implementation of a national Nursing Alliance for Quality Care established in January 2010 to engage the nursing community in policy setting related to quality, safety and value. RWJF awarded a grant (ID# 064663) to the George Washington University Medical Center in September 2008 to plan for the alliance. A second, two-year grant (ID# 066729) awarded in January 2010 provides support for the implementation of the alliance.

The alliance will be the "go to" organization for nurses seeking to inform policy and for policy-makers seeking nursing expertise on performance measurement.¹⁷

Looking Forward

Ten years after RWJF launched its drive to measure nurses' contribution to quality, there is a renewed focus on quality reporting across the board. The Affordable Care Act (ACA), for example, charges DHHS with identifying gaps in measures of quality and developing new measures to fill those gaps.

"NQF-15 was an early phase of measure development," Naylor said, "and things have accelerated rather dramatically, not just within nursing-sensitive measures but within the whole quality measurement arena. The National Quality Forum effort and INQRI are both part of a ... movement that [has] said measurement is really important. Linking what happens to the people we serve to the work of nurses is really important."

Current approaches to measurement also may be shifting. "There is now a push for measures that relate more to the way people *experience* health care than the way it is delivered," Kurtzman said. "Rather than looking at whether or not you get a pressure ulcer when you are in the hospital, the value of health care should be evaluated over the entire course of that illness, whatever that illness is and wherever you are being treated."

However measurement evolves, it will be important to keep the contribution of nurses front and center, Kurtzman said. "If you are a patient, the person who delivers the most care in a hospital is a nurse," she said. "To overlook what that workforce is doing in terms of quality is a mistake.... I don't say that because I am pro-nursing, [though] I happen to be a nurse. I say that because I am pro-patient. Patients deserve to know about

¹⁶ See [Program Results Report](#) on ID# 059410.

¹⁷ Grant ID#s 064663 and 066729.

the care they are receiving, they deserve to know if that care is of the highest quality. And nurses are a big part of that in almost every setting."

Whatever directions these shifts take, nurses may be assuming larger roles in shaping policies and measurements. Nurses are starting to appear on some key national policy-making committees. For example, in early 2011, Robin Newhouse, Ph.D., R.N., a two-time grantee of RWJF's INQRI national program, was appointed to the methodology committee of the Patient-Centered Outcomes Research Institute (PCORI). She is the sole nurse on the committee. Created as part of the ACA, PCORI has a mission to help patients, clinicians, purchasers and policy-makers make informed health decisions by providing quality, relevant evidence on how best to prevent, diagnose, treat and monitor diseases and other health conditions.

Newhouse's research studies with INQRI focus on linkages between nursing and patient outcomes in rural hospitals, and the impact of a nursing intervention on substance abuse screening in acute care settings.

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APPENDIX 1

Steering Committee and Technical Advisory Panel

(As provided to RWJF; accurate at the time the committee and panel served; not updated by RWJF.)

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APPENDIX 2

The Original NQF-15 Nursing-Sensitive Measures

1. Death among surgical inpatients with treatable serious complications ("failure to rescue")
2. Pressure ulcer prevalence
3. Falls prevalence
4. Falls with injury
5. Restraint prevalence (vest and limb only)
6. Urinary catheter-associated urinary tract infection for intensive care unit (ICU) patients
7. Central line catheter-associated blood stream infection rate for ICU and high-risk nursery (HRN) patients
8. Ventilator-associated pneumonia for ICU and HRN patients
9. Smoking-cessation counseling for acute myocardial infarction patients

10. Smoking-cessation counseling for heart failure patients
11. Smoking-cessation counseling for pneumonia patients
12. Skill mix
13. Nursing care hours per patient day
14. Practice Environment Scale-Nursing Work Index (composite plus five subscales)
15. Voluntary turnover of nursing staff (where nurses leave their jobs on their own volition)

APPENDIX 3

Technical Advisory Panel for the Implementation Guide

(As provided to RWJF; accurate at the time the committee and panel served; not updated by RWJF.)

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APPENDIX 4

National Quality Forum Recommendations for Accelerating the Adoption of the NQF-Endorsed Standards for Nursing-Sensitive Care

Recommendation 1

Improve the NQF-15 standards to reflect current measurement and reporting priorities and the best available evidence. While the NQF-15 standards reflected a deliberate consensus process driven by evidence, other factors such as prevailing nursing science, state-of-the-art knowledge, technology and data and technology improvements (e.g., administrative coding updates, application of electronic health records) may not have been realized. For these reasons, NQF should make specific efforts to review the existing standards for appropriateness, comprehensiveness and balance.

Recommendation 2

Develop a composite "nursing quality index." The NQF-15 was designed to be used as a "set" to capture the wide impact of nurses on processes and patient outcomes. In this spirit, development of several "composite" nursing indexes should be pursued.

Recommendation 3

Incorporate the NQF-15 standards into other sets of measures endorsed by NQF, as appropriate. These might include standards that are not nursing-specific (e.g., hospital care), that address other settings (e.g., nursing homes) or that apply to specific conditions (e.g., health-care-associated infections).

Recommendation 4

Align the NQF-15 standards for nursing-sensitive care with other nursing quality performance measurement and reporting requirements. This effort could yield a single set of measures that hospitals could use for meeting multiple purposes. A single set will ensure that identical definitions, data elements, allowable values and analytic techniques apply across initiatives and it will enable hospitals to "push the button once" to meet multiple demands.

Recommendation 5

Incorporate the NQF-endorsed consensus standards for nursing-sensitive care into national and state hospital performance measurement and reporting activities.

Centers for Medicare & Medicaid Services (CMS) and/or the Joint Commission requirements are relatively "silent" on nursing quality and/or lack specific standards (e.g., Joint Commission's staffing effectiveness standard). NQF and its stakeholders should, therefore, work collaboratively to prioritize the addition of these consensus standards into reporting programs.

A number of state-based initiatives—both voluntary and mandatory—have developed primarily in response to workforce issues (e.g., mandated nurse staffing ratios). NQF should work collaboratively with its members and state representatives on developing reporting models that can be adopted by interested states.

Recommendation 6

Develop electronic decision support that integrates nursing performance measures.

Recognizing that costs, burdens, staff and resources associated with nursing quality performance measurement are significant, the forum and its stakeholders should vigorously support efforts to achieve a fully electronic data set vis-à-vis an electronic health record.

Recommendation 7

Develop educational tools for hospital staff to facilitate rapid adoption of the consensus standards, to minimize burdens associated with their implementation and to improve their use in strategic decision-making.

While awareness of the NQF consensus standards exists, adoption of them in practice settings has not been swift. The forum should collaborate with organizations such as the Joint Commission, Institute for Health Improvement and others to provide courses, training and information to promote utilization of the standards.

Recommendation 8

Develop a "brand management" strategy for the NQF-endorsed consensus standards for nursing-sensitive care.

Despite the extensive consensus development process and its reliance on the existing evidence base, there is still confusion, uncertainty and reservation in the consensus standards.

Findings from the study demonstrate that various stakeholders hold very different views of the NQF consensus standards—some believing that NQFs credibility directly conveys the value of the consensus standards without questioning the measures or the evidence that supports them; others doubting each measure and the science behind the measures.

NQF and others should undertake a campaign to fully inform these stakeholders and the public of the process for achieving consensus, the value of the measures themselves and the supporting evidence base.

Recommendation 9

Hold nurses accountable for high-quality care through public reporting and incentive systems. Nurses, like other health professionals and providers, should have performance results available to them so that they can be held accountable for the care they deliver. To that end, measuring and publicly reporting nursing-sensitive measures is essential.

Recommendation 10

Build a business case for nursing quality measurement and the nursing-sensitive consensus standards. A business case for nursing quality measurement is essential to branding and communication efforts.

This business case will require dedicated investment among the research, business and performance measurement/quality improvement communities to test, conceptually and empirically, the links between nursing care, as measured through the NQF consensus standards and patient outcomes in safety and quality. This business case must also rely on consumer research to demonstrate the need for and value of these measures and their role in stimulating patient choice and selection.

APPENDIX 5

Highlighted Research Projects from INQRI

Developing and testing nurse-sensitive quality measurements of hospital care

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An interdisciplinary team of nurse scientists and system engineers developed the Nurse Care Coordination Instrument, a tool to capture what nurses do when they coordinate care for hospitalized patients. The tool, the first of its kind, captures nurse care coordination activities in six domains: mobilizing, exchanging, organizing, assisting, checking and backfilling. The tool will enable nurses and hospitals to document important nursing work and increase understanding of ways to improve care coordination and the quality of patient care in hospitals.

Improving the National Quality Forum's nursing-sensitive quality of care performance measures on failure to rescue

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Led by scholars in nursing and health services research and informatics, the project set out to refine one of the most controversial measures of nursing-sensitive quality of care: failure to rescue. The team developed three revised failure to rescue measures, one based on discharge data where the diagnosis was not coded as "present on admission" and two based on data where the diagnosis was coded as "present on admission." Project directors also collaborated with the federal Agency for Healthcare Research and Quality (AHRQ) to test the associations of nurse staffing and failure to rescue in a large multi-state data set. AHRQ published freely available and downloadable software that addresses the complexity faced by individual hospitals in implementing the risk adjustments for the failure to rescue measure.

Examining the causal relationship between the quality of nursing care and patient outcomes in acute inpatient units

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Researchers examined the extent to which nurse staffing levels affected the incidence of complications and the failure to rescue from those complications, (i.e. death following complications). Their examination showed that nursing hours per patient day were strongly associated with lower rates of pressure ulcers and hospital-acquired infections, and with fewer deaths from complications. Further, more RN hours in the mix had additional benefit, with still lower rates of failure to rescue and hospital acquired infections. The study demonstrated that higher levels of nursing hours per patient day and RN skill mix in intensive care and general units lead to better patient outcomes.

Developing and testing nursing quality measures with consumers and patients

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The research team conducted focus groups with recently hospitalized patients to understand their perception of the NQF nursing sensitive measures. These patients found several patient safety measures to be compelling and clearly believed that nurses had a significant role in hospital quality. Yet those interviewed did not think nurses should be advising patients to quit smoking, arguing that nurses have better things to do with their time. They also found measures of nurse skill mix and turnover rates confusing.

The team learned that, over all, this segment of the public values nurses highly but has an incomplete understanding of what nurses do, including what actions they take based on their own assessments, and to whom they are accountable.

Researchers also examined the literature regarding care coordination activities of nurses, interviewed nurses in four hospitals and held nine focus groups with recent patients. They found that while patients recognize the importance of care coordination, their perceptions of nurses' role differed from the perspective of the nurses. The team found that there are limits to patients' ability to truly observe many aspects of care coordination, which may explain why nurses see their role as broader and more central than do patients.

This research highlights the importance of seeking public views when creating measures of nurse quality. Findings could influence the process by which NQF endorses measures. In part because of this research, NQF recently dropped smoking-cessation counseling for myocardial infarction, heart failure and pneumonia from the nursing-sensitive measures.

Measuring nursing care quality as related to pain management

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The research team developed and validated the Pain Care Quality (PCQ) questionnaire, a tool to measure opinions of patients about how their nurses manage their pain. Many hospital patients report significant pain, which can cause distress and limit their ability to carry out usual activities or provide reliable information. The final version of the PCQ was easily understood by patients in pain and will advance understanding of how patients in pain understand and interpret questions related to the quality of their nursing care. This measure is likely to prove helpful to consumers in selecting hospitals that can best address their care needs, as well as to hospital administrators and policy-makers interested in improving the quality of nursing-related care.

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Validating the National Quality Forum's nursing-sensitive quality of care performance measures

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A research team at the University of Pennsylvania analyzed how a number of the National Quality Forum's nursing sensitive measures track with each other. Do nurse staffing and practice environment measures for hospitals predict the quality of care patients receive? And do quality of care measures link with endpoints like inpatient mortality? Researchers merged unique survey data and patient outcomes data from approximately 600 hospitals in three states with new performance measures disseminated by the Centers for Medicare & Medicaid Services on the Hospital Compare website.

Principal investigators Clark and Sloane wrote to RWJF that "the findings themselves ... are exciting because they begin to shed some light on various aspects of structure, process, and outcomes in hospital care, whereas previously, a dearth of data sources restricted researchers' attention to links between structural measures involving nursing and outcomes."

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Testing the effects of state rollouts of the National Quality Forum's nursing-sensitive quality of care performance measures

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Led by a team of health services researchers, the project evaluated two statewide implementations of the NQF Nursing-Sensitive Measures—a voluntary effort in Massachusetts hospitals and a government-mandated effort in Maine hospitals. The team found that while hospital leaders believed that public reporting of nurse-sensitive measures was likely to have a positive impact on the quality of nursing care and on patient outcomes, they found the initiatives to be burdensome. In both states, most believed that a public mandatory program would work best to improve the quality of nursing care. Based on the experiences in Maine and Massachusetts, the researchers believe that it is possible to publicly report measures of nursing quality and that doing so can have a positive impact on the quality of care. The team theorizes that these initiatives are likely generalizable to other quality measurement initiatives not focused on nurse-sensitive measures.

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