

The Current State of Nursing Performance Measurement, Public Reporting, and Value-Based Purchasing

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Over the last decade, there has been a substantial investment in holding health care providers accountable for the quality of care provided in hospitals and other settings of care. This investment has been realized through the proliferation of national policies that address performance measurement, public reporting, and value-based purchasing. Although nurses represent the largest segment of the health care workforce and despite their acknowledged role in patient safety and health care outcomes, they have been largely absent from policy setting in these areas. This article provides an analysis of current nursing performance measurement and public reporting initiatives and presents a summary of emerging trends in value-based purchasing, with an emphasis on activities in the United States. The article synthesizes issues of relevance to advancing the current climate for nursing quality and concludes with key issues for future policy setting.

Keywords: *nursing-sensitive outcomes; health care quality; performance measurement; public reporting; value-based purchasing; pay for performance*

Background

Over the last decade, there has been substantial investment in holding health care providers accountable for the quality of care provided in hospitals and other settings of care. In 2000 and 2001, respectively, the Institute of Medicine (IOM) published its landmark reports, *To Err Is Human: Building a Safer Health System* (IOM, 2000) and *Crossing the Quality Chasm: A New Health System for the 21st Century* (IOM, 2001). These reports detail the significant lapses in the quality of health care in the United States and lay out a transformational agenda to achieve a safer and more effective, patient-centered, timely, efficient, and equitable system. Subsequent reports by the IOM set forth a series of recommendations that address the nursing work environment (IOM, 2004), performance measurement (IOM, 2006), and payment incentives (IOM, 2007).

These reports, the evidence on which they are based, as well as subsequent consensus statements by a diverse constituency of health care stakeholders (National Quality Forum [NQF], 2002; The Strategic Framework Board, 2003) recognize that performance measurement, public reporting, and value-based purchasing¹ are key

vehicles to motivating accountability and achieving improvements in patient safety and health care outcomes. To this end, there has been a proliferation of national hospital- and physician-level quality measurement, reporting, and value-based purchasing activities. Although nurses represent the largest segment of the health care workforce (Bureau of Labor Statistics, 2006-07 Edition) and despite their acknowledged role in patient safety and health care outcomes (IOM, 2004), they have been largely absent from policy setting in these areas.

This article summarizes nurses' roles in inpatient safety and quality and details the measurement and reporting activities associated with these roles. It argues for the value of nursing performance measurement as a component of national quality activities, provides an analysis of current nursing performance measurement and public reporting initiatives, and presents a summary of emerging trends in value-based purchasing, with an emphasis on

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activities in the United States. The article begins with a justification of the investment in nursing performance measurement, public reporting, and value-based purchasing. This justification is followed by an overview of current nursing performance measurement and reporting programs that are instructive in informing future directions and a summary of current initiatives in value-based purchasing (VBP). This study has been informed by published reports, briefings, and government bulletins, supplemented by key informants, and augmented by a literature search. It synthesizes issues relevant to advancing the current climate for nursing quality and concludes with key issues for future policy setting.

A Case for Nursing Quality

There are compelling reasons to leverage nurses as change agents in and targets of the growing number of policy reforms aimed at improving quality and patient safety. In making this case, the following should be taken into account:

- A growing body of evidence demonstrates that widespread problems in health care quality persist in the United States. Current performance levels are substandard in the case of both adults (e.g., only 54% receive recommended care; McGlynn et al., 2003) and children (e.g., fewer than 50% receive recommended care in ambulatory settings; Mangione-Smith et al., 2007) as well as in hospitals (e.g., only 75.9% of patients with acute myocardial infarction, heart failure, and community-acquired pneumonia received recommended care; Landon et al., 2006). Despite the spotlight that has been placed on patient safety and quality issues for nearly a decade, current performance remains suboptimal.
- In addition to low-level performance, disparities and inequities persist. According to findings from the Agency for Healthcare Research and Quality's (AHRQ's) 2007 National Healthcare Disparities Report (U.S. Department of Health and Human Services [USDHHS], 2007), "across all core measures and for all priority groups, the number of measures of quality and access where disparities exist grew larger from 2000-2001 and 2004-2005." Early findings from a national program aimed at improving the quality of health care provided to minority populations in the United States, *Expecting Success*,² suggest that nurses and nursing leadership are key to improving cardiac care for racial and ethnic minority populations in the United States (B. Siegel, personal communication, 2007).
- Nurses are the single largest group of providers of health care services and are the most frequent points of patient contact in many health care settings (Bureau of Labor Statistics, 2006-07 Edition; USDHHS, 2004, 2006). Today's nursing workforce numbers more than 3 million. Tremendous strength would be garnered if nurses were systematically engaged in and motivated to achieve specific patient safety and health care quality goals.
- In public opinion polls, nurses are rated *the* most trusted and ethical professionals. Over the last decade, nurses have consistently outrated physicians, managed care executives, clergy, college teachers, politicians, and public safety workers (Jones, 2007). Strengthening these natural tendencies will result in gains in trust and confidence among the public for health care.
- A strong, compelling case has been articulated by independent organizations, advisory boards, quasi-governmental bodies, and government agencies for needed changes in the management, workforce deployment, work design, and organizational culture of nurses to mitigate threats to health care safety (IOM, 2004). Simply stated, without significant modifications to the nursing work environment, dramatic improvements in patient safety will be unrealized.
- Independent of these recommendations, the evidence base linking nursing to inpatient safety measures and health care outcomes has been expanding (Aiken, Clarke, Sloane, Sochalski, & Silber, 2002; Blegen, Vaughn, & Goode, 2001; Needleman, Buerhaus, Mattke, Stewart, & Zelevinsky, 2002). For most of the following indicators, a substantial opportunity for improvement exists that is only achievable with nursing's commitment:
 - Rates of falls in medical units of all sizes have been estimated to be 3 to 4 per 1,000 inpatient days and 1 to 2.5 falls per 1,000 inpatient days for surgical units in hospitals with more than 200 staffed beds. This is consistent with Blegen's estimates (Blegen, Goode, & Reed, 1998) of a mean fall rate of 2.69 per 1,000 patient days (range 0-11).
 - Inpatient pressure ulcer prevalence has been reported at 5-10%. The incidence of hospital-acquired pressure ulcers is 10 to 20 per 1,000 patient days for patients in critical care and medical units (National Database of Nursing Quality Indicators, 1999). Among those hospitals

surveyed under the fourth national pressure ulcer prevalence survey ($N = 265$), the overall prevalence was 10.1% (range 1.4% to 36.4%; Barczak, Barnett, Childs, & Bosley, 1997). A recent study of hospitalized elders found a cumulative incidence of 6.2% for pressure ulcers (95% confidence interval, 5.4%-7.1%) within the first 2 days of hospitalization (Baumgarten et al., 2006).

- In a 2001 analysis of close to 800 hospitals, failure-to-rescue rates (i.e., death among inpatients with treatable serious complications) were found to be 18.6% (± 5.9) among the medical patients and 19.7% (± 13.3) among the surgical patients (Needleman et al., 2002). These rates are similar to those described in AHRQ's 2002 report of the Patient Safety Indicators (PSIs; McDonald et al., 2002).
- Based on 1990-1995 data from the Centers for Disease Control and Prevention's (CDC's) National Nosocomial Infections Surveillance system (NNIS), health care-associated infections (HAIs) are a significant problem in hospitals: the CDC has estimated the ICU (adult and pediatric) urinary tract infection (UTI) rate to be 3.38 per 1,000 patients-days and the bloodstream infection (BSI) rate to be 2.71 per 1,000 patient-days. Together, these infections represent almost one-half of all HAIs (Klevens et al., 2007).
- The existing nurse, nurse manager, and nursing faculty shortages place quality issues in peril. To substantiate this point, in a 2004-2005 national survey of registered nurses (RNs), physicians, hospital chief executive officers, and chief nursing officers on their perceptions of the current nurse shortage, findings suggest that respondents perceived an adverse effect on all six IOM aims of quality—that is, care that is safe, effective, patient-centered, timely, efficient, and equitable—by the nursing shortage. Not surprisingly, agreement among these respondents was reported on the extent that the current shortage would lead to other staff needing to provide some nursing care, nursing turnover, and lower quality of patient care, although there was disagreement regarding the extent the shortage would affect higher pay, workplace improvements, and more respect (Buerhaus et al., 2007). The extent to which measurement, reporting, and VBP might address the shortage and improve recruitment and retention among staff nurses and nursing managers has not been tested, but these are important associations to explore.

Together these arguments point to the essential role nurses play in health care safety and outcomes, contribute to the business case for nursing quality, and substantiate nursing's involvement in both accountability and incentive programs.

Nursing Performance Measurement and Public Reporting Activities

Over the last few years, growing evidence has documented nursing's influence on patient safety and health care outcomes. Several recent studies have been published that describe the linkages between nursing and quality (Needleman et al., 2002; Tourangeau et al., 2007; Landon et al., 2006; Needleman, Buerhaus, Stewart, Zelevinsky, & Mattke, 2006). Recent syntheses (Needleman, Kurtzman, & Kizer, 2007) of this evidence base and the policy recommendations derived from them (most notably, the National Quality Forum's, 2004, endorsement of a set of national voluntary consensus standards for nursing-sensitive care³) verify the nature of, importance, and need for measuring nursing's contribution to inpatient care quality.

Measurement

To some extent, the growth of the evidence base linking nursing variables to patient outcomes has led to and accelerated the expansion of nursing-related performance measurement activities. There are currently several national and regional database projects that focus primarily on nursing's impact on inpatient care based on a set of nursing-sensitive⁴ performance measures. Each of these databases has grown in the number of participants as well as in the number of performance measures, although none of these databases includes all of the NQF-endorsed nursing-sensitive consensus standards nor have they been harmonized to ensure uniform specifications of each measure.

National

National Database of Nursing Quality Indicators (NDNQI)—The National Database of Nursing Quality Indicators (NDNQI) is a repository for nursing-sensitive indicators developed by the American Nurses Association (ANA) and managed at the University of Kansas School of Nursing. Since 1998, the database has collected unit-level data on structure, process, and outcome measures and provides quarterly quality reports to participating facilities. Currently, more than 1,200 hospitals in the United States voluntarily participate in NDNQI.

Veterans Affairs Nursing Outcomes Database (VANOD)—The Veterans Health Administration (VHA) has established the Veterans Affairs Nurse Outcomes Database (VANOD) modeled after the California Nursing Outcomes Coalition (CalNOC) Database Project (CalNOC; see below). The purpose of the measurement activity is benchmarking and comparing local Veterans Integrated Service Network (VISN) and national patient quality outcomes, including the analysis of unit-level institutionally specific data.

Military Nursing Outcomes Database (MilNOD)—Military nurses have initiated a nursing outcomes database (MilNOD) consisting of data related to nurse staffing and patient safety. The project aligns with the CalNOC database incorporating structural and outcome measures that are used to support evidence-based clinical and administrative practices as well as research.

Regional

California Nursing Outcomes Coalition (CalNOC) Database Project—CalNOC is a collaborative of the ANA/California and the Association of California Nurse Leaders (ACNL). Its mission is to advance improvements in patient care by building and sustaining a valid and reliable statewide outcomes database, conducting research to advance evidence-based interventions to achieve quality, and synthesizing and disseminating data to shape public policy, practice, and education. Under this collaborative, a California statewide nursing quality outcomes database has been constructed with more than 200 active hospital participants.

In part, to accelerate the pace of fully developed valid and reliable performance measures that capture the contribution of nurses, the Robert Wood Johnson Foundation (RWJF) launched the Interdisciplinary Nursing Quality Research Initiative (INQRI⁵). The INQRI is aimed at generating, disseminating, and translating research to understand how nurses contribute to and can improve the quality of patient care. Through the INQRI, a number of investigators are currently working on new nursing-sensitive indicators or refining existing indicators that hold tremendous future promise for standardized performance measurement and public reporting.

Another important development in standardizing these measures is validity and feasibility testing of the NQF-endorsed consensus standards for nursing-sensitive care. Specifically, scientific testing, conducted by the

Joint Commission with funding from the RWJF, will likely involve improvements to the specifications that enable more rapid and uniform adoption by hospitals. Completion of this research is anticipated in early 2009.

Although the number of databases focusing on nursing performance measurement has grown and the number of fully developed and tested measures to populate those databases has expanded, the penetration of nursing performance measurement among hospitals in the United States remains largely unknown. In 2007, the NQF completed a study aimed at tracking the implementation of its endorsed nursing-sensitive consensus standards (NQF, 2007). Through targeted, written surveys that were submitted by 60 respondents and to telephone interviews conducted with 30 informants, the NQF sought to better understand patterns of adoption and levers to accelerating implementation of nursing performance measurement and reporting. Although the sample was small and not likely representative,⁶ ten recommendations derived from study findings⁷ were formulated to accelerate adoption. These include the alignment of the NQF-endorsed consensus standards for nursing-sensitive care with nursing quality performance measurement and reporting initiatives and incorporation of the consensus standards into national and state hospital performance measurement and reporting activities.

Public Reporting

Despite the expansion and availability of nursing-sensitive performance measures, there are only two formal public reporting initiatives that are dedicated to nursing quality—the former mandatory and the latter voluntary:

Nursing-Sensitive Patient-Centered (NSPC) and Nursing-Sensitive System-Centered (NSSC) Health Care Quality Data Sets (State of Maine)—Statutory authority under 22 M.R.S.A. §8708-A, Chapter 270, provides for uniform statewide reporting of data related to health care quality. These data include the Nursing-Sensitive Patient-Centered (NSPC) and Nursing-Sensitive System-Centered (NSSC) Health Care Quality Data Sets.⁸ Data are currently being collected on six of the NQF-endorsed measures among Maine hospitals. Public reporting of them via a public Web site (<http://www.mainequalityforum.gov/>) is planned for 2008 (J. Cutler & S. Schow, personal communication, November 20, 2007).

Patients First (Commonwealth of Massachusetts)—A voluntary initiative, known as Patients First,⁹ has

been spearheaded by the Massachusetts Hospital Association (MHA) and Massachusetts Organization of Nurse Executives (MONE). Patients First supplies information to the public about the quality of care provided in hospitals in the Commonwealth of Massachusetts. As a first step, hospitals posted proposed staffing plans by unit (e.g., medical-surgical, intensive care, pediatric) on the initiative's public Web site. This was followed by public reporting of hospitals' actual staffing levels. In January 2008, additional measures were added to the Web site, including pressure ulcer prevalence, falls, and falls with injury. Other nursing-sensitive measures are planned for future inclusion.

Hospital Measurement and Reporting Initiatives

Although the penetration of nursing performance measurement and public reporting activities are relatively modest, the number of and participation in hospital accountability initiatives has grown dramatically in the past few years. Although not aimed at reporting nursing performance per se, performance rates for smoking cessation counseling for three conditions (i.e., acute myocardial infarction [AMI], heart failure [HF], community-acquired pneumonia [CAP])—measures that have been previously endorsed by the NQF as both hospital and nursing sensitive—are among the measures incorporated into these hospital-level reports.

The following summarizes public reporting activities that target all hospitals in the United States, are most relevant to nursing performance, and available at no cost to the public:

Hospital Quality Alliance (HQA) and Hospital Compare (www.hospitalcompare.hhs.gov)—In 2002, the nation's leading hospital organizations joined forces with more than a dozen health care, government, consumer, and employer organizations to convene the Hospital Quality Alliance (HQA).¹⁰ The HQA is a voluntary collaborative to make performance information about quality, patient safety, and value of hospital care available to patients and other consumers. Since its inception, the HQA has played a meaningful role in standardizing performance measures for public accountability, engaging hospitals in this effort and publicizing the availability of information to the public. Currently, the HQA has adopted more than a dozen performance measures, which are reported

on Hospital Compare. Although the three smoking cessation counseling measures are included, a number of additional nursing-sensitive measures are being considered for adoption by the HQA. Recent advances in hospital value-based purchasing (e.g., Reporting Hospital Quality Data for Annual Payment Update [RHQDAPU]) rapidly accelerated the rate of participation in HQA and the adoption of measures for public reporting (Pham, Coughlan, & O'Malley, 2006).

Quality Check™ (www.qualitycheck.org)—In 1996, The Joint Commission launched Quality Check™, a directory of Joint Commission accredited organizations and performance reports. Quality Check™ is a comprehensive guide to health care organizations in the United States and includes performance results on measures in up to five treatment areas (i.e., heart attack, heart failure, community-acquired pneumonia, pregnancy and related conditions, and surgical infection prevention) as well as accreditation decisions, compliance with National Patient Safety Goals, and special quality awards including Magnet status. In an ongoing effort to improve the quality and availability of performance information, beginning in October 2007, the Joint Commission's Quality Check™ Web site was expanded to include organizations that are not Joint Commission accredited.

America's Best Hospitals reported by U.S. News & World Report (<http://www.usnews.com/usnews/nycu/health/hospit/tophosp>)—In 1990, the magazine initiated an annual assessment of U.S. hospitals. The assessment is based on a tiered set of qualifiers that include data from multiple sources, including affiliations and memberships (e.g., Council of Teaching Hospitals and medical school affiliation), availability of advanced services (e.g., image-guided radiation therapy), specialty-based criteria (e.g., minimum number of Medicare inpatients with certain conditions or having undergone certain procedures), reputation, mortality rates, and care-related factors. A "nursing index" is among the care-related factors that are incorporated into the evaluation methodology. This index is based on a ratio of RNs on staff expressed in full-time equivalents to the adjusted average daily census of patients.

Although current public reporting of nursing-sensitive measures is relatively limited, under the final fiscal year (FY) 2009 Inpatient Prospective Payment System (IPPS) rule (CMS-1390-F),¹¹ explicit plans have been laid for the continued expansion of quality measures required for the RHQDAPU program to 43 in FY2010, including the addition of

one nursing-sensitive performance measure previously endorsed by the NQF (i.e., failure to rescue). Close attention to these future directions is warranted.

Value-Based Purchasing Initiatives

Public disclosure of performance results is one mechanism to hold providers accountable for quality. However, because of mounting health care costs and misaligned reimbursement systems, employers, purchasers, and policy makers have begun to design and implement incentive programs—commonly referred to as “pay-for-performance” and VBP initiatives—that reward high-performing hospitals (Medicare Prescription Drug, Improvement, and Modernization Act, 2003)^{12,13} and physicians.^{14,15} These initiatives are aimed at encouraging the provision of high-quality, cost-effective care and have been proliferating among private and public payers. For example, the CMS has launched a number of VBP demonstration projects and initiatives in hospitals, physician offices, nursing homes, home health agencies, and dialysis facilities.¹⁶ The CMS, however, is not the only payer proliferating such models. There are more than 100 different VBP initiatives—targeting hospital and physician performance—underway by health plans and employer groups (e.g., Rewarding Results, Bridges to Excellence; Baker & Carter, 2004-2005). Combined with public efforts, it is estimated that these VBP efforts cover an estimated 50 million beneficiaries (Scott, 2007).

Historically, and in the case of physician office practices, purchasers have represented a significant lever in performance measurement, public reporting, and incentive initiatives. Although the number of VBP initiatives has grown, the review undertaken for this study revealed no examples of nursing-focused incentive programs found in the literature, acknowledged by health care leaders and experts, or identified through other data-gathering activities (e.g., contact with key informants). The absence of VBP initiatives focused on nursing is especially problematic in view of the growing recognition of nurses’ influence on quality and the enthusiasm for aligning incentives to accelerate improvement. For example, in *Keeping Patients Safe: Creating and Sustaining a Culture of Safety*, the IOM details the influence of nurses on patient safety. Among the elements cited by the IOM that contribute to a culture of safety is a system of rewards and incentives (IOM, 2004). Subsequently, in *Rewarding Provider Performance: Aligning Incentives in Medicare* (IOM, 2007), the IOM articulates an agenda to align payment incentives with its

six quality aims. However, the connection between incentive-based payment and nursing performance has not yet been made. For this reason, a conceptual basis needs to be developed and practical methodologies need to be tested and refined that result in value-based purchasing programs reflecting nursing’s essential contribution to performance.

Although an inclusive list of the hospital and physician VBP initiatives is beyond the scope of this article, the following summarizes selected initiatives that are hospital- or physician-focused and offer the most promise for expansion and/or application to nurses delivering care in inpatient settings.

RHQDAPU Program

The RHQDAPU initiative was developed as a result of the Medicare Prescription Drug, Improvement and Modernization Act (MMA) of 2003. The MMA set out a voluntary hospital quality initiative requiring the submission of performance data on 10 specific quality measures in order to receive the full market basket update (the inflationary adjuster applied by Medicare to hospital payment rates). It called for an initial 0.4% reduction in the Medicare Annual Payment Update (APU—i.e., adjustment in fees paid to hospitals under Medicare based on a formula of actual expenditures compared with a set target) for hospitals that fail to collect and submit the data on all 10 quality measures was enacted.

Under the Deficit Reduction Act (DRA) of 2005, new requirements for the RHQDAPU program were made with provisions that expanded the number of quality measures to 21 and increased the penalty for failing to report from 0.4% to 2.0% in fiscal year 2007. In addition, the DRA authorized CMS to develop a plan for VBP for Medicare hospital services beginning in fiscal year 2009.

Groundwork for the continued expansion of the number of quality measures has been set. As noted above, the FY2009 Inpatient Prospective Payment System (IPPS) rule expands the total number of measures required for the full APU to 43 beginning in FY2010, including the addition of a nursing-sensitive performance measure (i.e., failure to rescue) previously endorsed by the NQF.

Of special note is the future direction of RHQDAPU stipulated by the DRA and referenced in the IPPS rule. A VBP plan for hospitals is proposed to begin in fiscal year 2009. Under the DRA, the plan must address the:

- process for developing, selecting, and modifying measures of quality;

- mechanisms to report, collect, and validate these quality data;
- structures of incentive payment including thresholds in quality that will “trigger” a payment adjustment, the size of the payments, and the source of funding;
- process for disclosure of information on hospital performance.

A final report, prepared by the CMS’s Hospital Value-Based Purchasing Workgroup,¹⁷ submitted to Congress in November 2007, discusses options for implementation and approaches to monitoring and evaluating its effects.

Premier Hospital Quality Incentive Demonstration

The CMS undertook this 3-year VBP demonstration project in 2003 in partnership with Premier, Inc., an alliance of not-for-profit hospitals. Under the demonstration project, 260 participating hospitals received awarded bonus payments (2% for top decile performers; 1% for second decile performers) for the achievement of high performance (e.g., top 20%) on 34 quality measures in five condition areas (i.e., AMI, HF, CAP, coronary artery bypass graft, and hip/knee replacement). A small penalty (1-2% reduction) was put in place for low-performing hospitals (e.g., below the 9th decile).

Findings from this demonstration project suggest that improvements from baseline have been achieved in every year of the demonstration and across all five conditions. During its first 2 years, approximately 20% of the participating hospitals received bonuses and, during year 1, award payments of more than \$8 million were paid. Overall, hospitals achieving quality scores in the top quartile realized fewer complications, fewer readmissions, lower hospital costs, and shorter lengths of stay. These results and other findings have been widely reported in the literature (Lindenauer et al., 2007; Grossbart, 2006; Kahn, Ault, Isenstein, Potetz, & Van Gelder, 2006).

Physician Quality Reporting Initiative

The Tax Relief and Health Care Act of 2006 (TRHCA) authorizes the CMS to establish a physician quality reporting system. This program, the Physician Quality Reporting Initiative (PQRI),¹⁸ was implemented on July 1, 2007, and establishes a financial incentive for eligible professionals to participate in a voluntary quality reporting program. Eligible professionals who successfully report a designated set of quality measures on claims for services from July 1 to December 31, 2007,

are eligible for a bonus payment, subject to a cap, of 1.5% of total allowed charges for covered Medicare physician fee schedule services. Under PQRI, covered professional services are those paid based on the Medicare Physician Fee Schedule and eligible professionals are defined to include physicians and certain clinical practitioners, including physician assistants, nurse practitioners, clinical nurse specialists, certified registered nurse anesthetists, and certified nurse midwives.

In 2007, 74 measures were identified for PQRI based on measures previously utilized under the Physician Voluntary Reporting Program and expanded through consensus activities (e.g., National Quality Forum, AQA—formerly the Ambulatory Quality Alliance).

The CMS has continued the 2007 PQRI program for 2008. Eligible professionals who report applicable quality measures from among a set of 119 from January 1, 2008, through December 31, 2008, will receive an incentive payment of 1.5% of their total allowed charges for Physician Fee Schedule covered professional services.

Issues for Nursing Quality

In the United States, most of the performance measurement, reporting, and value-based purchasing agenda has focused on hospital and physician quality, with less attention being devoted to leveraging the single, largest health care workforce—nurses. Recognizing that lessons from these narrowly directed incentive programs are just emerging (Glickman et al., 2007; Petersen, Woodard, Urech, Daw, & Sookanan, 2006), it may be premature to anticipate the effects of nursing-focused performance measurement, public reporting, or value-based purchasing efforts. Although current national policy directions that accelerate performance measurement, public reporting, and value-based purchasing directly affect nurses, they have not been informed, for the most part, by nurses. Evidence, public opinion, and labor trends contend otherwise—that nurses must be viewed as key levers in achieving the patient safety targets and health care outcomes that have been scrutinized by the public, public and private payers, and government agencies.

Tactical Concerns and Strategic Priorities

Despite this contention, building an infrastructure to support nursing-sensitive performance measurement, public reporting, and value-based purchasing is enormously complex and challenging. The absence of nursing-sensitive measures embedded into national performance measurement and reporting initiatives (e.g., HQA) is a

result of significant operational and feasibility issues that are not easily reconciled:

- the need for standard measures of nursing quality (e.g., structure–process–outcome, patient experience with care) and a supporting evidence base;
- available data that are retrievable and/or easily collected by hospitals;
- a repository that can accommodate nursing performance data elements for validation and analysis;
- a validation process to verify the accuracy and completeness of the data;
- a mechanism, in consumer-centric formats, to publicly report performance at the hospital and/or unit level, including electronic/Web interfaces; and
- an incentive methodology linked to the measures.

A system to report and reward nurses is dependent on an infrastructure that currently does not exist. For example, although performance measures exist, as evidenced by the NQF's national voluntary consensus standards, readily retrievable data sources from which to gather the data elements to construct these measures, are not standardized or available. Similarly, although incentive systems are being built to reward high-performing hospital and physicians, limited attention has been paid to modifying them or designing new systems for other providers and health care professionals. Hardwiring solutions to these tactical barriers are fundamental if nursing-sensitive performance measurement, public reporting of these data, and value-based purchasing in a nursing context are to be achieved.

A Strategic Roadmap

To reconcile the current state with the ideal and to accelerate the interest in and rate of performance measurement, public reporting, and value-based purchasing activities aimed at and “friendly” to nursing, the following short- and long-term priorities should be contemplated:

1. Recasting the NQF-endorsed nursing-sensitive measures as vital hospital quality measures.
2. Building a case that measures that are not explicitly “nursing” measures reflect the contribution of nurses. For example, several HCAHPS domains are reflective of nursing care (e.g., nurse communication, pain management, responsiveness of hospital staff) but have not been endorsed as “nursing-sensitive” performance measures.
3. Further documenting the link between nursing and the performance measures that have been integrated into public reporting (e.g., HQA) and

pay-for-performance initiatives (e.g., RHQDAPU). Strengthening this connection will substantiate—both conceptually and practically—a rationale for financially incentivizing nurses.

4. Developing, testing, and refining incentive-based payment methodologies aimed at quality nursing care and advocating for their adoption.
5. As of October 1, 2008, Medicare will cease paying for a number of hospital-acquired conditions (e.g., object inadvertently left in after surgery, air embolism, catheter-associated urinary tract infection, pressure ulcer [decubitus ulcer], vascular catheter-associated infection, manifestations of poor glycemic control, certain types of falls and trauma, and deep vein thrombosis/pulmonary embolism).^{19,20} These conditions should be rebranded and described in the context of nursing's key role in their early screening, detection, and intervention. This will require documentation of nursing's relationship to all of these hospital-acquired conditions, something which thus far has been limited to only a subset (i.e., catheter-associated urinary tract infection, pressure ulcer, vascular catheter-associated infection, and falls).
6. Advocating for public reporting of the hospital-acquired conditions (and/or other performance measures that are in the pipeline), which might bring attention to nursing's essential role in contribution to quality.
7. Advocating for efforts to design and implement financial incentives around *existing* nursing performance measurement and reporting initiatives (such as those currently in place in Massachusetts and Maine);
8. Prioritizing the integration of nursing measures into existing hospital measurement, public reporting, and value-based purchasing activities (e.g., HQA, Consumer's CHECKBOOK, Leapfrog Group's Hospital Insights);
9. Working in collaboration with principals at existing nursing performance measurement databases (e.g., NDNQI, VANOD, MiNOD, Magnet) to supply data for public reporting via Hospital Compare. Conversely, working with the principals of the Hospital Quality Alliance to publicly report these data once supplied.
10. With support from the evidence that demonstrates nurses' influence on measures used in value-based payment programs, advocating for sharing of a portion of the incentive payments currently received by hospitals and physicians with nurses.

11. Developing performance measures that are relevant and scientifically sound for settings in which advanced practice registered nurses—for whom third-party reimbursement regulations exist—frequently practice (e.g., retail clinics) and developing incentive-based payment structures that accelerate quality improvement in these settings and among these practitioners.
12. Advocating for continued research in this area. Additional studies that substantiate the nurse–quality connection and that are translatable into practice and policy (e.g., Interdisciplinary Nursing Quality Research Initiative [INQRI]) should be pursued. Furthermore, research must be undertaken that documents the economic consequences of the hospital-acquired conditions payment reform.
13. Advocating for the incorporation and alignment of data elements that can be used to construct nursing performance measures with health information technology companies. Because this will require significant long-term efforts, an interim solution is to develop an infrastructure to accommodate human resources data that populates several nursing-sensitive measures (e.g., voluntary turnover).
14. Supporting instructional and curriculum development to address system-level competencies. A call for the development and integration of nursing education and training that addresses system design, human factors engineering, and effective communication among nurses at all levels of practice. This may be resolved, although not in the near term, through Quality and Safety Education for Nurses,²⁰ an RWJF-funded project to reshape professional identity formation in nursing to include commitment to quality and safety competencies recommended by the IOM.
15. Supporting the improvement and updating of the NQF-endorsed measures themselves. This effort needs to be shaped by an expanding evidence base that builds the predictive case between the measures and nursing quality as well as generating data—which are currently not available and/or retrievable—on which this research can be based.

Conclusion

This article documents the value of nursing performance measurement as an integral component of broader performance measurement, reporting, and value-based purchasing activities that have emerged in the United

States. Informed by published literature, experts in the field, personal communications, and government reports, the article documents current trends in pay-for-performance. Finally, it suggests specific short- and long-term strategies that may facilitate the translation of these initiatives for nurses.

Notes

1. *Value-based purchasing* is a term that generally refers to organized attempts by purchasers to ensure and improve the quality of health programs when negotiating costs with providers and insurers (Agency for Health Care Policy and Research, 1997).

2. See www.expectingsuccess.org.

3. Available at <http://www.qualityforum.org/pdf/reports/nsc.pdf>.

4. Nursing-sensitive performance measures are processes and outcomes—and structural proxies for these processes and outcomes (e.g., skill mix, nurse staffing hours)—that are affected, provided, and/or influenced by nursing personnel—but for which nursing is not exclusively responsible. Nursing-sensitive measures must be quantifiably influenced by nursing personnel, but the relationship is not necessarily causal.

5. See www.inqri.org.

6. Candidate interviewees were derived from a deliberate sample of (a) national nursing, health care, hospital, and quality leaders; (b) representatives and principal investigators of nursing performance measurement and reporting initiatives; and (c) hospital adopters. Because the sampling methodology was not randomized, but rather based on candidate's possession of explicit characteristics (e.g., hospital size, geographic location, and stage of implementation), the respondents are not likely to be representative.

7. In total, 10 recommendations were proposed. A complete list and description of these can be found in the study report. Available at <http://www.qualityforum.org/pdf/reports/Nursing70907.pdf>. Last accessed October 31, 2007.

8. Available at http://mhdo.maine.gov/imhdo/_pdf/NSI%20Manual%20V10%207-01-06.pdf and <http://mhdo.maine.gov/imhdo/qualitydata.aspx>. Last accessed December 6, 2006.

9. Available at <http://www.patientsfirstma.org/>. Last accessed December 6, 2006.

10. See <http://www.hospitalqualityalliance.org/hospitalqualityalliance/index.html>.

11. A copy of the final IPPS rule can be downloaded from <http://www.cms.hhs.gov/AcuteInpatientPPS/downloads/CMS-1390-F.pdf>

12. Leapfrog Hospital Rewards Program. Available at <https://leapfrog.medstat.com/hrp/index.asp>. Last accessed November 1, 2006.

13. Premier, Inc., Hospital Quality Incentive Demonstration. Terms and Conditions. Available at <http://www.cms.hhs.gov/HospitalQualityInits/downloads/HospitalTermsAndConditions200601.pdf>. Last accessed November 1, 2006.

14. See Rewarding Results at <http://www.leapfroggroup.org/RewardingResults/about.htm>. Last accessed November 1, 2006.

15. See Bridges to Excellence at <http://www.bridgestoexcellence.org/bte/>. Last accessed November 1, 2006.

16. Other CMS VBP initiatives include Care Management for High-Cost Beneficiaries, Chronic Care Improvement Program, Disease Management Demonstration for Severely Chronically Ill Dual-Eligible Beneficiaries, Disease Management Demonstration for

Severely Chronically Ill Medicare Beneficiaries, Medicare Care Management Performance Demonstration, Medicare Health Care Quality Demonstration, and Physician Group Practice Demonstration.

17. The Workgroup prepared the report with assistance from the RAND Corporation, Brandeis University, and Booz/Allen/Hamilton, and Boston University. Available at: <http://www.cms.hhs.gov/AcuteInpatientPPS/downloads/HospitalVBPPJanRTCFINALSUBMITTED2007.pdf>. Last accessed November 27, 2007.

18. CMS' Physician Voluntary Reporting Program (2006) transitioned into PQRI in 2007 (Guthrie, McLean, & Sutton, 2006).

19. See FY2008 IPPS final rule. Available at <http://www.cms.hhs.gov/AcuteInpatientPPS/downloads/CMS-1533-FC.pdf>. Last accessed May 7, 2008.

20. See FY2009 IPPS final rule. Available at <http://www.cms.hhs.gov/AcuteInpatientPPS/downloads/CMS-1390-F.pdf>. Last accessed August 6, 2008.

20. Available at <http://qsen.org/>. Last accessed March 31, 2008.

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