

The Impact of Nursing Care on Quality¹

Introduction: Nursing is integral to patient care and is delivered in many and varied settings. The sheer number of nurses and their central role in caregiving are compelling reasons for measuring their contribution to patients' experiences and the outcomes that are attained (NQF, 2007). The impact of nursing care on healthcare quality cannot be denied.

Nurses represent the largest, single group of healthcare professionals. In initially endorsing voluntary consensus standards for nursing-sensitive care, the National Quality Forum (NQF) noted "nurses, as the principal frontline caregivers in the U.S. healthcare system, have tremendous influence over a patient's healthcare experience" (NQF, 2004). In 2008, of the total licensed RN population, 84.8 percent (an estimated 3,063,163) were employed in nursing (HRSA, 2010).

Evidence substantiates nursing's influence on inpatient outcomes. A growing body of evidence demonstrates nursing's impact on the provision of care that is safe, effective, patient-centered, timely, efficient, and equitable...the adequacy of nursing staffing and proportion of registered nurses is inversely related to the death rate of acute medical patients within 30 days of hospital admission (Tourangeau, et al, 2005). Increasing RN staffing could reduce costs and improve patient care by reducing unnecessary deaths and reducing days in the hospital (Stone, et al, 2007)...patients hospitalized for heart attacks, congestive heart failure and pneumonia...are more likely to receive high quality care in hospitals with higher registered nurse staffing ratios (Landon, 2006). Higher fall rates were associated with fewer nursing hours per patient day and a lower percentage of registered nurses...(Dunton, et. al., 2004)...nurses can accurately differentiate pressure ulcers from other ulcerous wounds in Web-based photographs, reliably stage pressure ulcers, and reliably identify community versus nosocomial pressure ulcers (Hart, et al, 2006). A 10% increase in the number of patients assigned to a nurse leads to a 28% increase in adverse events such as infections, medication errors, and other injuries (Weisman, 2007). Understaffing of registered nurses in hospital intensive care units increases the risk of serious infections for patients; specifically pneumonia (Hugonnet, et al, 2007). According to The Joint Commission (2005), "quantifying the effect that nurses and nursing interventions have on the quality of care processes, and on patient outcomes, has become increasingly important to support evidence-based staffing plans, understand the impact of nursing shortages and optimize care outcomes."

Measures of nursing care have been fully developed, are in use, and have been vetted. The endorsement in 2004 of the 15 nursing-sensitive measures by NQF was an initial (albeit significant) step towards standardized measurement of nursing care; detailing its relationship to the quality (and efficiency) of health care. Scientific acceptability is a component of the NQF endorsement process and hence, NQF-endorsedTM nursing-sensitive measures are valid and reliable (NQF, 2002). The initial measure set

¹ Rita Munley Gallagher, PhD, RN, Senior Policy Fellow, National Center for Nursing Quality, American Nurses Association. Revised: 20 April, 2010.

complements and extends existing hospital care measures of relevance to nursing care in the NQF *National Voluntary Consensus Standards for Hospital Care: An Initial Performance Measure Set* (NQF, 2003). For this reason, their implementation on a national basis can be viewed as a natural, next step. Collectively, the measures “provide consumers a way to assess the quality of nurses’ contribution to inpatient hospital care, and they enable providers to identify critical outcomes and processes of care for continuous improvement that are directly influenced by nursing personnel” (NQF, 2004). In addition, the data can provide valuable feedback to nursing personnel as to the care they are providing. All nurses must thoroughly understand the impact of the care they provide on the outcomes their patients experience.

One important source of feedback on nursing care is the National Database of Nursing Quality Indicators[®] (NDNQI[®]), a repository for nursing-sensitive indicators and a program of the American Nurses Association (ANA) National Center for Nursing Quality (NCNQ[®]). NDNQI[®] is the only national database containing data collected at the nursing unit level. NDNQI[®] is dynamic in nature. New nursing-sensitive indicators are added to the database; new projects are initiated; and new facilities join regularly. National comparison data for the indicators are grouped based on patient (Adult/Pediatric) and unit type: Critical Care, Step-Down, Medical, Surgical, Combined Medical-Surgical, Rehab, Psychiatric and Staffed Bed Size. Teaching and Magnet status are identified as they relate to participating hospitals. Quarterly NDNQI[®] reports provide national comparison information along with unit performance data trended over 8 quarters. Hospitals find the reports assist them in quality improvement efforts, RN retention and recruitment, patient engagement, research, staff education, nursing administration and to satisfy reporting requirements for regulatory agencies and/or the Magnet Recognition Program[®]. Comparisons can also be evaluated regionally and by state.

The Joint Commission engaged in a “comprehensive test of nursing-focused performance measures to determine whether they can be used nationally to identify opportunities to improve the quality of patient care provided by nurses. The project was funded by a grant from the Robert Wood Johnson Foundation. Testing of the integrated set of measures yielded a set of refined technical specifications suitable for use by hospitals nationwide and for inclusion in quality initiatives such as those of the Hospital Quality Alliance, Centers for Medicare and Medicaid Services (CMS) and The Joint Commission” (Hill, 2007). Following action in summer 2009 by the NQF Board of Directors, 12 nursing-sensitive measures continue to enjoy endorsement by NQF (Appendix A). The Joint Commission (2010) posted the updated *Implementation Guide for the NQF-Endorsed Nursing-Sensitive Care Performance Measures* (“the Guide”). The updated Guide reflects the technical specification modifications that are needed to maintain the consistency of the Nursing-Sensitive Care Performance Measure Set with other national performance measure sets.

There has been a public call for information about nursing care quality. Consumers will benefit from information regarding the impact of nursing care as they make decisions regarding care. In addition, enhancing the initial nursing-sensitive measure set through the inclusion of additional measures will increase the overall value of the set.

Evidence exists that public reporting of data stimulates quality improvement and choice. Making performance information public appears to stimulate quality improvement activities in areas where performance is reported to be low. The findings ... indicate that there is added value to making this information public. (Hibbard, et.al, 2003).

There is agreement among diverse health care stakeholders that the NQF-endorsed nursing-sensitive measures should be incorporated into national and state hospital performance measurement and reporting activities. In 2007, interviews were conducted with nearly three dozen national health care, hospital, and nursing leaders, principles of nursing performance measurement efforts, and hospital representatives to determine their interest in and use of the NQF-15. Recommendations derived from the data gathered from these interviews and published by NQF (2007), point to several complementary and incremental actions that can be collectively undertaken by health care stakeholders to advance hospital performance measurement and accelerate our collective understanding of nursing's key role in quality. Among those recommendations was a "call" to health care leaders to fully integrate the...nursing-sensitive measures...into national and state hospital performance measurement and reporting initiatives, including, but not limited to, HQA (NQF, 2007).

Summary: Nurses are the primary caregivers in all healthcare settings. As such, they are critical to the provision of quality care. "Gaining a more in-depth understanding of the role that nurses play in quality improvement and the challenges nurses face can provide important insights about how hospitals can optimize resources to improve patient care quality" (Draper, Felland, Liebhaber and Melichar, 2008). Measurement must be integrated into professional nursing practice at all levels, including the practice of APRNs, and not simply considered to be a separate activity (Gallagher, 2009). The information available to assist consumer decision-making (such as is provided through a number of electronic quality resources (Appendix B) including *Hospital Compare*) will be greatly enhanced by the inclusion of data on the twelve (12) NQF-endorsed™ nursing-sensitive measures. All nurses must have thorough evidence-based knowledge of the impact of the care they provide on the outcomes patients experience and data on the nursing-sensitive measures (such as is available through NDNQI. The data from such analytic activity can be used to inform quality improvement activities and/or evaluate organizational effectiveness.

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Patient-centered Outcome Measures:

1. Death among surgical inpatients with treatable serious complications (failure to rescue): The percentage of major surgical inpatients who experience a hospital-acquired complication and die.
2. Pressure ulcer prevalence: Percentage of inpatients who have a hospital acquired pressure ulcer, stage 2 or greater.
3. Falls prevalence: Number of inpatient falls per inpatient days.
4. Falls with injury: Number of inpatient falls with injuries per inpatient days.
5. Restraint prevalence: Percentage of inpatients who have a vest or limb restraint.
6. Urinary catheter-associated urinary tract infection for intensive care unit (ICU) patients: Rate of urinary tract infections associated with use of urinary catheters for ICU patients.
7. Central line catheter-associated blood stream infection rate for ICU and high-risk nursery patients: Rate of blood stream infections associated with use of central line catheters for ICU and high-risk nursery patients.
8. Ventilator-associated pneumonia for ICU and high-risk nursery patients: Rate of pneumonia associated with use of ventilators for ICU and high-risk nursery patients.

System-centered Measures:

9. Skill mix: Percentage of registered nurse, licensed vocational/practical nurse, unlicensed assistive personnel, and contracted nurse care hours to total nursing care hours.
10. Nursing care hours per patient day: Number of registered nurses per patient day and number of nursing staff hours (registered nurse, licensed vocational/practical nurse, and unlicensed assistive personnel) per patient day.
11. Practice Environment Scale - Nursing Work Index: Composite score and scores for five subscales: (1) nurse participation in hospital affairs; (2) nursing foundations for quality of care; (3) nurse manager ability, leadership and support of nurses; (4) staffing and resource adequacy; and (5) collegiality of nurse-physician relations.
12. Voluntary turnover: Number of voluntary uncontrolled separations during the month by category (RNs, APNs, LVN/LPNs, NAs).

Selected Quality Resources

Website/Sponsor	Web Address
Agency for Healthcare Research and Quality	www.ahrq.gov
American Nurses Association	www.nursingworld.org
American Nurses Credentialing Center	www.nursecredentialing.org
<i>HomeHealthCompare</i>	medicare.gov/hhcompare
<i>Hospital Compare</i>	www.hospitalcompare.hhs.gov
Hospital Quality Alliance	www.hospitalqualityalliance.org
National Association of Clinical Nurse Specialists	www.nacns.org
National Center for Nursing Quality	www.ncnq.org
National Database of Nursing Quality Indicators®	www.ndnqi.org
National Priorities Partnership	www.nationalprioritiespartnership.org
National Provider Identifier Standard	www.cms.hhs.gov/NationalProvIdentStand/
National Quality Forum	www.qualityforum.org
<i>Nursing Home Compare</i>	www.medicare.gov/nhcompare
United States Department of Health and Human Services Health Resources and Services Administration Bureau of Health Professions	www.bhpr.hrsa.gov