Standardized Nursing Terminologies Can Transform Practice

Gail M. Keenan, PhD, RN
Dana Tschannen, PhD, RN
Mary Lou Wesley, MS, RN

This department, sponsored by the American Organization of Nurse Executives, presents information to assist nurse leaders in shaping the future of healthcare through creative and innovative leadership. The strategic priorities of the American Organization of Nurse Executives anchor the editorial content. They reflect contemporary healthcare and nursing practice issues that challenge nurse executives as they strive to meet the needs of patients.

Standardized nursing terminologies have been under development for almost 3 decades. Their main purpose is to supply the means for representing nursing in the electronic health record. Implementing the terminologies, a common language, was expected to bring visibility to nursing and generate the data needed to evaluate and continuously improve practice. To date, the initial expectations have not been fully realized mainly because there is little evidence showing how use in practice brings the intended value. In a recently completed 3-year study funded by the federal government (Health Information Technology Support for Safe Nursing Care (2004-2007), R01HS015054-01, Agency for Health Research and Quality), a technology-supported method of using the standardized nursing terminologies of the NANDA International, the Nursing Outcomes Classification (NOC), and the Nursing Interventions Classification (NIC) was fully tested in a multisite study and found to bring the intended value (Hands-on Automated Nursing Data System [HANDS] Project Research Team, written communication, November 12, 2007). It is thus no surprise that many view nurses as doing little more than carrying out the physician’s orders. The hidden consequences of this view are that nursing is invisible and cannot be adequately monitored for safety, evaluated for quality, and improved. Since nurses coordinate and provide more than 80% of the healthcare, it is crucial to all stakeholders (eg, patients, nurses, physicians, administrators, and payers) that nursing practice be made visible and trackable.

The intervention, HANDS Method, has evolved through 10 years of field research and development and provides a viable plan of care (POC) solution designed to work in all types of settings where nursing care is provided (HANDS Project Research Team, written communication, November 12, 2007). The Problem and Impact

There has been no consistent way to describe nursing practice before the development of standardized nursing terminologies. As a result, nurses have typically described their care in the patient’s record and during handoffs with a mix of medical terms and their own words. Nursing documentation and communication vary widely and are also heavily focused on the details related to medical orders (HANDS Project Research Team, written communication, November 12, 2007). It is thus no surprise that many view nurses as doing little more than carrying out the physician’s orders. The hidden consequences of this view are that nursing is invisible and cannot be adequately monitored for safety, evaluated for quality, and improved. Since nurses coordinate and provide more than 80% of the healthcare, it is crucial to all stakeholders (eg, patients, nurses, physicians, administrators, and payers) that nursing practice be made visible and trackable.

The POC, also a part of the medical record, is the one exception where aspects of nursing can be found. In the POC, nurses frequently document the broad-level...
nursing problems associated with the medical diagnoses, goals of care, and their relationship to nursing interventions (HANDS Project Research Team, written communication, November 12, 2007). The POC content, a requirement for Joint Commission accreditation, however, is variable and rarely used to coordinate and communicate about care—bringing little value in day-to-day practice. Research evidence, however, suggests that the low value is due to poor tools and methods rather than the planning process and POC (HANDS Project Research Team, written communication, November 12, 2007).

Solving the Problem
The HANDS Method, an innovative approach to improving the POC, consists of an electronic tool, a centrally controlled infrastructure, and specified processes of use. The HANDS Method allows nurses to easily document and update their care at the conceptual level in a way that this keeps the “big picture” of care current, available, and always in the same format. The standardized HANDS Method has been designed to work in all types of settings and organizations. The POC includes the issues being addressed, the care provided, the desired outcomes, and the progress toward the outcomes. Nursing standardized terminologies are used to represent the clinical issues (NANDA), the interventions performed (NIC), and progress toward goals (NOC). The major benefit of HANDS is that the standardized approach supports the nurse, as coordinator of care, to help all members of the interdisciplinary team share a common understanding of care. This “collective mind” aspect of the HANDS Method is characteristic of high-reliability organizations and can reduce the untold numbers of costly medical errors that result from poor communication each day. These errors (eg, missed care, wrong care, and redundant care) severely compromise the continuity and quality of care.

The HANDS infrastructure provides the less obvious but most substantial benefits to be realized. It is precisely because of the HANDS technical model and deployment mechanism that standardization of the method can be maintained and system updates can be quickly integrated wherever HANDS is used. Moreover, the HANDS infrastructure makes it easy for patient’s care to be easily monitored and adjusted across time, the nursing care to be evaluated, best practices to be identified, and new knowledge to be immediately sent back to the point of care. The method can be used as either a stand-alone system or easily connected to an organization’s electronic health record through a simple admission, discharge, and transfer Health Level Seven (ADT-HL7) feed.

Testing the Solution
Most recently, the HANDS Method was fully tested in 8 diverse acute care units located in 4 different healthcare organizations: 1 university, 2 large communities, and 1 small community. The study units varied in size, nurse staffing levels, nurse experience, care focus, and intensity of care. All units were for adult care and included medical, surgical, intensive care, and rehabilitation. The design intentionally included units that varied widely on multiple clinical factors to test the main hypothesis: the HANDS POC Method can be successfully implemented with standardization maintained across all types of units and bring value at the point of care.

To serve as a test site, a unit was required to adopt the Method and training strategy. Four units tested HANDS for 1 year, and 4 others tested it for 2 years. The training strategy involved a train-the-trainer program. Core groups of champions, all informal leaders, were prepared through a 40-hour program that involved both group and individual hands-on exercises. The champions co-led the staff training, consisting of 3 hours of in-class and 4 hours of individual exercises, and ensured that nurses met the specified competencies. The nurses demonstrated competency in using the HANDS application; creating admission and update plans with NANDA, NOC, and NIC; and delivering the new handoff. The handoff procedure was refined, and the acronym SHARE which means sketch, HANDS, aim, rationale, and exchange (Figure 1) was adopted and taught to the 4 units entering the study in year 2. Once HANDS was live, each nurse was required to enter an admission or update the POC on each patient at every formal handoff and use the POC generated in the report.

The Outcomes
The findings from this most recent study of HANDS provided further evidence of the viability and utility of the Method across diverse settings. In all 8 units,
The software was deployed as planned, on time, and with few glitches. Standardization was maintained, and new enhancements were delivered quickly and at the same time to all units. The nurses indicated significantly greater knowledge (P < .01) and satisfaction with (P < .01) the NANDA, NOC, and NIC terminologies and significantly greater usefulness of the HANDS Method (P < .01) over previous POC methods. Moreover, there was a POC available in the database for 90% of the times that one was expected. This high level of compliance for POC submissions is noteworthy, given that there were no explicit consequences for failure to submit, and compliance using other methods is around 50%. In organizations with more than 1 test unit, the nurses liked having the ability to view the HANDS POC and history on a transferred patient and begin the new episode by building on the last submitted plan. Finally, at the end of the study, the common feedback echoed across administrators, managers, and staff nurses across all sites was that “nurses love HANDS” and the method “is an excellent tool for promoting critical thinking” (HANDS Project Research Team, written communication, November 12, 2007).

Many lessons were learned throughout this study and, where possible, integrated into the HANDS Method and made available on all units. It was not possible, however, to address all lessons due to limited resources and organizational constraints. One worth noting is that the team had underestimated the resources and requirements for changing the handoff. Through the evaluation, we learned that nurses valued the new SHARE handoff but were not sufficiently supported to master and retain the new behavior. The nurses recommended additional training, mandating use, and providing a means to enforce and reinforce it. Interestingly, the nurses did not view the mandate as punitive but rather a means to help them adopt and sustain a desirable new habit. These recommendations have been integrated into the method and are used with new units adopting HANDS (HANDS Project Research Team, written communication, November 12, 2007).

Data Use and Conclusions
During this study, the research team developed a set of reports to show managers and executives the powerful data that are automatically collected in HANDS when the nurse documents the POC. In addition to supporting care decisions at the point of care, the data are assessed for use in evaluating care in the aggregate. Examples of questions that can be automatically answered include as follows: What are the most prevalent problems, outcomes, and interventions on my unit? How successful is my unit in meeting the expected outcomes of care at discharge from my unit? What outcomes are we not achieving on my unit? What interventions are associated with achieving a desired outcome for patients with the same NANDA diagnosis, primary and secondary medical diagnoses, age, and sex? Are the patient loads assigned to nurses comparable? What staffing and nurse experience levels are needed to achieve desired outcomes for the patients currently housed on my unit? What is my unit’s rate of compliance with POC submissions and where exactly are the holes? How does my unit compare with other like units/organizations on these same measures?

In conclusion, the study of HANDS described above has provided solid evidence that the standardized terminologies, NANDA, NOC, and NIC, can be successfully used to transform nursing practice. It is, however, absolutely critical to point out that the goals achieved in this study are in great part due to the systematically developed and tested method used to implement the terminologies (HANDS Project Research Team, written communication, November 12, 2007). Implementing the standardized terminologies from scratch nurse by nurse, unit by unit, organization by organization, or vendor by vendor, will not bring the range of outcomes that were realized in this study. Instead, isolated
adoption of the terminologies will perpetuate wide variation in documentation and communication patterns, be costly in terms of time and money spent on developing one’s own method, and fail to generate the data that are automatically standardized and immediately usable in evaluating and improving practice. The immediate next steps are to devise and implement a strategy to rapidly diffuse the knowledge gained in this study into nursing practice.

Acknowledgment
The authors express their appreciation to the Agency for Healthcare Research and Quality (AHRQ) and for the funding and staff support of the 3-year study “Health Information Technology: Support for Safe Nursing Care.”

REFERENCES