

Putting Nurses in the Driver's Seat

by Ann Greiner and Ann Hendrich

The ringer on Mary Johnston's personal digital assistant (PDA) goes off as she is filling out routine forms. Using the instrument's keypad, Johnston, a Seton Northwest Hospital staff nurse, records what she is doing by scrolling through a menu of work activities and selecting "Documentation" and then "Discharge paperwork." This scenario is repeated randomly during seven arbitrarily selected days a month for 21 randomly selected RNs on Johnston's med/surg unit.

This sampling of work activity provides valuable information—for the hospital's leadership as well as Johnston and her colleagues—on how nurses on the unit spend their time. The study helps administrators gauge whether the changes they are making to work processes and the physical environment through the Transforming Care at the Bedside (TCAB) project are increasing the time that nurses spend with patients and in value-added activities.

Transforming Care at the Bedside is a collaborative effort of The Institute for Healthcare Improvement (IHI), the Robert Wood Johnson Foundation (RWJF) and 13 hospitals across the country to comprehensively redesign medical/surgical care. More specifically, the project focuses on improving safety and reliability, enhancing staff "vitality" or joy in work, making care more responsive to the needs and preferences of patients and families, and enhancing efficiency. [Editor's note: Another aspect of the Transforming Care at the Bedside project was discussed by Tami Merryman in an article titled "Coming: To a hospital near you," published in the Fourth Qtr. 2005 issue of *Reflections on Nursing Leadership*.]

The PDAs used by TCAB hospitals facilitate data collection and analysis of the effects of efficiency measures. At a macro level, they enable nursing leaders to determine if there is a shift from indirect to direct care on a particular med/surg unit. Numerous studies show that nurses spend less than half of their time delivering direct patient care (Linden & English, 1994; Urden & Roode, 1997). Such a shift may also have benefits beyond efficiency in key areas, including quality of care, safety (Needleman, Buerhaus, Matke, Stewart, & Zelevinski, 2002; Aiken, Clarke, Sloane, Sochalski, & Silber, 2002), staff satisfaction and patient/family centeredness.

How PDAs facilitate work sampling

PDAs are a novel, 21st-century answer to traditional time and motion studies that involved industrial engineers and stopwatches, with one important difference. They generate efficiency data on a unit's RN staff as a whole, rather than information on the work activity of any single nurse.

This makes PDAs palatable to staff members, who serve as data collectors, and it focuses management decisions at the unit rather than the individual level. This approach engages caregivers, who intuitively know that many efficiency problems result from broader system and process shortcomings rather than individual ones.

The 58 work categories in the PDA-assisted study fall into four domains, which have been refined over time and are carefully tailored to reflect med/surg needs. To document a particular work activity, a nurse first selects a domain—on or off the unit, at the nursing station or in a patient's room—and then, depending on the domain he or she has selected, chooses one of the nine to 17 activities available on the menu.

For example, in a patient's room—one of the domains—an RN may select one of the following activities: administering medications, taking vitals, communicating with the care team, providing wound or skin care, assessing the patient, or a dozen other options. A select number of these categories are then broken down further into subcategories. For instance, documentation in the patient's room includes writing care plans and seven other activities.

Such detail provides important information to nursing leadership and frontline staff. A nurse executive from one of the TCAB hospitals, Tami Merryman, vice president of patient care services at the University of Pittsburgh Medical Center (UPMC), Shadyside Campus, in Pennsylvania, noted that the hospital has improved efficiency by decentralizing supplies to the bedside and adding a charge nurse. Not long after this change, said Merryman, the PDA data indicated that UPMC had decreased time spent in waiting or in hunting for and gathering supplies and equipment, and increased time spent in direct patient care.

In the last year and a half, time spent in documenting care at the 13 participating hospitals has been reduced, while value-added activities have increased. However, because these institutions are implementing so many changes simultaneously, it is difficult to know which changes are directly responsible for the positive results. With time, these cause-and-effect relationships will become more apparent.

Evidence-based management

PDAs and other technology-assisted methods for collecting and analyzing data can support evidence-based management, an approach that the Institute of Medicine (2004) recommends to nursing leaders in its recent report, *Keeping Patients Safe*. Other characteristics of evidence-based management include fostering "learning organizations" and engaging staff in the redesign of work processes.

For example, PDAs can facilitate data collection that helps leaders understand the costs and benefits of purchasing a second medication management system for a unit. By comparing the capital outlay required for such a system to the time nurses spend retrieving or waiting for drugs—time that takes them away from their patients—managers are able to make decisions driven by actual data rather than undocumented assumptions.

Taking this concept of technology-assisted data collection a step further, a recently inaugurated study, also funded by the Robert Wood Johnson Foundation, will help define an ideal, evidence-based design for nursing units by combining PDA data collection with radio-frequency tracking of RNs. It will measure the effect of an electronic health record in reducing waste and inefficiencies in common care tasks and processes, and will build upon other TCAB findings in determining this design of the future.

Forty other hospitals are also beginning to use PDA work sampling to inform their decisions about work-process design and the physician environment. These institutions, part of a new IHI initiative launched in late 2005, will adapt many of the promising ideas from Transforming Care at the Bedside.

In summary, use of PDAs for data collection promises to facilitate dialogue, based on actual data, between nursing leaders and staff RNs about what needs to change in our nation's health care organizations and assist in evaluating various options on the pathway to transformation.

"There is a lot we know intuitively about how we are spending our time—and it seems more and more we are away from our patients," concludes Johnston, the staff RN at Seton Northwest. "The PDAs quantify what is going on and give us a way to collectively make the case to the executive suite that we need to change the way we work. We all want to get back to the bedside and, not surprisingly, the patients want us back there, too."

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