

Nursing IT

Nursing Informatics of Tomorrow

One of nurses' new roles will be agents of change in the healthcare revolution.

by Marion J. Ball

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Studies estimate that nurses spend as little as 15 percent of their time on direct patient care. As much as half goes to documentation. One welcome outcome expected of the many IT initiatives under way is revitalization and redefinition of the role of nurses and the nursing practice.

Clinical documentation is an area where IT can have a major influence. As they help coordinate all the multifaceted activities related to patients, nurses must ensure that every aspect of diagnosis and care is carefully documented. Documentation poses a tremendous, often unmanageable, challenge and has become the root cause of many patient safety and other problems.

Busy physicians and busy nurses might not remember or have time to read each other's notes. Information entered by other healthcare professionals is seldom integrated into physician and/or nursing documentation. These silos of information by discipline do not lead to the best care plan. Data generated by any one group that may be of interest to other groups should be integrated, easily accessible, and clearly visible as patient-centric information.

A change expected to surface soon is acknowledgement that patient care is an interdisciplinary process requiring an interdisciplinary approach to documentation, data collection and analysis. Systematic data collection reduces paperwork redundancy and improves quality of care and fiscal efficiency. Single-entry data sets can save staff time by directly supporting reporting requirements that involve patient classification, acuity level, productivity, quality of care, decision support software and financial analysis.

Plus, data transformed into information and further transformed into knowledge assists healthcare staff in making knowledge-based decisions--choices based on the patient's total healthcare picture. Systemwide data provides a means to analyze overall process effectiveness and to spot areas needing change. This type of information management is instrumental in analyzing indicators that correlate nursing actions--such as the percentage of R.N. care hours versus all nursing care hours--with patient outcomes.

New areas of influence

Many healthcare organizations have begun incorporating evidence-based clinical knowledge, integrated clinical and financial information systems (ISs), and point-of-care technologies into various departments--capabilities that may have widespread effects on nursing roles. For example, nurses' use of computer-aided visualization and non-invasive diagnostic devices changes their role in the procedure and also in the care process (e.g., by reducing the number of hospital days).

Nurse practitioners are taking on increased responsibility, such as educating patients in disease management practices. More are providing primary care, since nurse-managed clinics are becoming a mechanism for delivering more affordable healthcare. Nursing staff able to use the outcomes information provided by disease surveillance and health reporting systems can improve care management.

A new nursing role--Internet guide--has developed as patients are given "information prescriptions," with instructions to find applicable resources at recommended Web sites. A joint project between the National Library of Medicine and the American College of Physicians is encouraging such guided Internet use, and the U.S. Department of Defense is developing Web-enabled applications, such as appointment scheduling, for its constituency.

With their growing experience in a highly automated environment, nurses will be in a prime position to become agents of change. They may contribute to selection and implementation of ISs or facilitate clinical and business process redesign. They may help prepare colleagues for implementations and new or upgraded software. They can explain system needs of healthcare professionals and patients to designers, engineers and vendors.

Nurse administrators

IS proliferation will have important influences on the role of the nurse administrator, who decides how best to organize, coordinate and develop IS management and support computer-based data collection. Other responsibilities include strategic and systems planning and implementation of clinical nursing systems--to support staff and facilitate monitoring and evaluation of clinical and budgetary outcomes.

Nurse administrators must work directly with the CIO and nurse informatics specialist in developing and deploying systems to convert this data into useful information. The nurse administrator must help develop the IS strategic vision to ensure selection of the hardware and software needed for applications that can be used in many units or linked with other facilities. These key applications will provide fundamental systems support for nursing department operations, such as workforce, financial and quality management systems.

Systems for patient classification (e.g., analyzing patient acuity level to determining level of care needed) are critical to support nursing administration functions. In financial management, linking patient classification data, staffing requirements, and evidence-based practice data to a budget methodology can help justify the nursing department's annual operating budget and expedite budget preparation.

Wireless technology will have a growing role. Wireless LANs and PDAs allow documentation during encounters. Electronic bulletin boards, calendar filings and email enable rapid communication of nursing administrators with staff, nursing managers and support departments.

With the right nursing informatics background and training, nurse administrators can play a major role in accreditation and compliance--such as assisting in implementing standards of the Joint Commission on Accreditation of Healthcare Organizations, based in Washington, D.C., or ensuring that systems are in place to evaluate compliance with the Health Information Portability and Accountability Act.

Computer-literate nurses

Nurses have acquired much of their IT expertise through on-the-job training, but its growing pervasiveness will require a new level of knowledge. Computer literacy and informatics should be made an important component of the nursing curriculum at all levels.

Even though education in nursing informatics is still largely self-directed, interest has been so prolific that the formal designation of Informatics Nurse Specialist was recently approved by the American Nurses Association, Silver Spring, Md. Furthering their education in nursing informatics will give nurses diversity and thus wider employment opportunities.

During the past decade, prominence of the chief nursing officer has increased, both in healthcare organizations and with vendors. Some nursing informatics training or background is no doubt needed in this role. In provider organizations, nursing information specialists often report directly to the CIO. This structure emphasizes the need for informatics specialists to communicate directly with the chief nursing officer to ensure that nursing priorities for enterprisewide clinical and administrative decision support are addressed.

Clearly, IT proliferation in healthcare will increasingly challenge nurses to communicate, share and synthesize data. Nurses who can use computer hardware, software, terminology and operating systems will be able to harness the power and efficiency of computer systems in enhancing care delivery and shaping nursing practice.

Nursing makeover

The nation is at a tipping point in applying enabling technologies to healthcare. With the push coming from the federal government and all corners of the field, this is indeed a far-reaching revolution. The time has come for healthcare to leave the manual tools of the past in the past and turn to the enablers of the 21st century. The nursing profession is being transformed to meet the needs of the new world and will be a major player in the revolution.

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The author referenced the work of Mary Etta Mills and Darinda Sutton in putting together this article.

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