Informatics’ Role in the Future of Nursing

Health IT and Health Professional Organizations at Crossroad

The 2011 Annual HIMSS Conference & Exhibition adjourned on Feb. 24, 2011, with record attendance and a mind-boggling number of preconference symposia, educational sessions, posters, virtual learning and networking opportunities, and more than 900 vendors displaying the latest and greatest health information technology solutions.

Even long-time veterans of the industry concede that never before has such emphasis been placed on the value offered by health IT and never before has the expectation been higher. The federal government agrees and is putting money behind its belief that health IT can help with efforts to reform our struggling healthcare delivery system.

Through the HITECH Act of 2009, billions of dollars are being pumped into the industry to accelerate adoption of enabling technologies by 2015 and to promote its successful implementation as defined by meaningful use criteria. Providers from the largest for-profit integrated delivery systems to community hospitals struggling to stay afloat all the way to the sole provider practitioner are trying to figure out how to receive the government incentive, adopt the technology all while trying to take care of patients in one of the most challenging era’s for both the US economy and its failing healthcare system.

The magnitude of the change related to adoption of health IT notwithstanding there is also significant change simultaneously occurring in the very professional organizations that support the delivery of care. Nursing represents the largest segment of the healthcare workforce, with more than 3 million registered nurses in the United States (HRSA, March 2010).

The nursing profession has struggled for decades with a core professional definition around who nurses are, what nurses do, how to educate the next generation of professionals and perhaps most importantly how to raise the voice of nursing and lead the national effort to transform healthcare as we know it.

On Oct. 5, 2010, the Robert Wood Johnson Foundation and the Institute of Medicine (RWJF/1OM) released a landmark report that gets to heart of the crisis within the nursing profession.

The Future of Nursing: Leading Change Advancing Health (Robert Wood Johnson Foundation and the Institute of Medicine, 2010) is seen by many as a crucial work for the profession and a call to action for all. This consensus report endorsed by physician and nursing leaders alike explores the issues facing the nursing profession today and offers recommendations for the future. While the details of the recommendations are emerging there is little doubt that nursing informatics professionals will be called upon to offer their expertise in the transformation of nursing.

According to the 1989 Graves and Corcoran definition, nursing informatics is a specialty that combines nursing science, computer science and information science. The American Nurses Association has formally recognized the specialty since 1992, and its credentialing agency—the American Nurse Credentialing Center offers the opportunity for aspiring informatics nurses to gain Board Certification in the specialty.

According to a recent survey released by HIMSS, today’s informatics nurses are increasing in number. The results as compared to previous surveys from 2004 and 2007 continues to suggest that nurse informaticists play a critical role in the implementation of various clinical applications including clinical/nursing documentation and clinical information systems, computerized practitioner order entry (CPOE) and electronic health records.

Furthermore, in comparison to previous surveys, the 2011 salary data suggests a substantial increase for nurse informaticists as the average salary increased by 17 percent from 2007 and 42 percent from 2004. The value that informatics nurses bring is well recognized within the profession as evidenced by the results of this survey. Nursing informatics as a specialty within nurs-
ing, therefore is well positioned to assist the profession in meeting the challenges identified in The Future of Nursing report.

The Future of Nursing report identifies eight key recommendations for the profession to consider. These recommendations are organized into three broad categories of leadership, practice and education.

Practice

The key recommendations from the report related to nursing practice include:

- Remove scope-of-practice barriers.
- Increase nurse residency program.

The report shows that nursing practice is challenged on many fronts. One example explored in the report relates to the disparity in practice between Advance Practice Registered Nurses (APRN) across the United States. Despite national standards for education and specialty certification of APRNs there is great inconsistency from state to state in how APRNs are allowed to practice.

In some states APRNs are allowed to practice independently, others allow for some autonomy as it relates to prescription writing and many require a collaborative arrangement with a physician to diagnose, treat and prescribe. Even that level of collaboration however, varies from state to state.

As nursing informatics professionals know, the role of technology and informatics to support nursing practice is crucial; regardless of practice setting. In the example cited in the report above with APRNs, informatics can help promote the value of this specialty practice through data and information. APRNs for example may be eligible for Meaningful Use fund-

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support practice. Additionally, and perhaps more importantly, informatics skills and competencies are fundamental to demonstrating outcomes of the care provided by APRNs.

Collecting and assimilating the data collected in this practice setting will be essential to measurement and reporting of outcomes. This is also true for every nurse practicing in every environment. Without good data and information to demonstrate the value of nursing practice nurses will not be able to move the profession forward.

**EDUCATION**

Nursing has struggled for decades with entry to practice and the multitude of educational pathways available to enter the profession. The profession has also struggled with the ability of its academic institutions to keep pace with rapid advancements in medicine as well as significant changes in the practice environment and the role of modern day nurse. One of the most challenging issues in the education arena, however, is the aging of our faculty.

Key recommendations from the report related to nursing education include:

- Increase the proportion of nurses with a baccalaureate degree to 80 percent by 2020.
- Double the number of nurses with a doctorate by 2020.
- Ensure that nurses engage in life-long learning.

These recommendations are bold and aggressive and will require close collaboration between practice and academia. Informatics competencies will need to be defined for all levels of practice and will need to be built into revised nursing curricula. Deans of schools of nursing will need to move away from thinking about informatics as a standalone course and move towards embedding informatics competencies in all didactic and clinical courses.

Simulation technology is another great example of how academia and informatics can come together to help achieve the goals identified in the report related to transition to practice. While more and more institutions are implementing simulation laboratory environments few have the informatics experts on staff to be able to thread through the concepts of data, information, knowledge and wisdom to support critical thinking. Rather, simulation labs are implemented with a task or skills based focused. Again, informatics experts can help in the design and implementation of effective simulation environments.

**LEADERSHIP**

During times of great change stakeholders look to leadership for guidance. Never before in the history of the nursing profession has the need for leadership been greater. While there are many great nursing leaders there are few who are able to advocate for the profession at a national level and to directly define, shape and influence public policy.

The key recommendations from Leadership include:

- Expand opportunities for nurses to lead and diffuse collaborative improvement efforts.
- Prepare and enable nurses to lead change to advance health.

Nursing informatics leaders and nursing management leaders will need to join forces to collectively address these recommendations. All nursing leaders must understand the implications for informatics in practice and must demonstrate by example. Embracing technology is one step that nursing leaders.

**CONCLUSION**

The last of the eight key recommendations from the report is: Build an infrastructure for the collection and analysis of interprofessional healthcare workforce data.

This recommendation speaks directly to the nursing informatics community and is a call to action. Building the infrastructure will require close collaboration with nursing informatics professionals and other members of the interprofessional team who not only understand the underlying data requirements but can offer to assist in translating and mining that data into meaningful information about the workforce. Informatics nurse stakeholders are uniquely positioned to help define national, minimum data sets that can be used as part of interprofessional workforce surveillance. Nursing informatics professionals have a strong history of interprofessional collaboration and will need to embrace, own and be accountable for this recommendation.

These are historic times for the healthcare industry and the profession of Nursing. Informatics provides an opportunity to help transform not only the care delivery system, but the very professions it relies on to deliver safe, effective and evidence-based care. JHIM

**SOURCES**


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