This column will explore and make suggestions about two key education and training issues affecting nursing and the healthcare industry—the nursing shortage as well as its major underlying contributor, the nursing faculty shortage, and the significant lack of informatics knowledge and skill among the present nursing workforce.

The Nursing Shortage
The nursing shortage is not news, and the reasons behind it are well known. Nursing is a largely female profession, and for most of the previous century, the majority of women had two professional career choices—teaching and nursing. In the last quarter of the 20th century, women’s career choice constraints were blown away, to the great benefit of our society and economy.

Many other reasons exist for the continuing and chronic nursing shortage. About 70,000 nurses are graduating each year in America, but even at that rate, the country will need about 1 million more nurses by 2020, about the time the average reader of this column turns 65.

Some wonder how, in a capitalist society, the country can be experiencing a worsening chronic nursing shortage with the law of supply and demand in play. The market tried to correct the shortage as it did the last time, in the 1980s, as well as the time before that. Why did it fail this time?

Adam Smith’s “invisible hand” tried to move the pendulum back toward a balanced supply of nurses, but the pendulum was held back by an even stronger force—a new, profound nursing faculty shortage. The American Association of Colleges of Nursing reports U.S. nursing schools turned away 41,683 qualified applicants from baccalaureate and graduate programs in 2005 because of insufficient numbers of faculty, clinical preceptors, and budget constraints.1

Not being able to accommodate nearly 42,000 qualified applicants is a terrible waste of precious resources. Had nursing academia been able to handle the surge in demand for nursing careers that ensued as a result of the dot-com crash and the aftermath of the September 11 terrorist attacks, the free market would have been able to correct the nursing shortage.

Reasons for the Faculty Shortage
The fundamental cause of the nursing shortage, at this point, is the nursing faculty shortage. Two significant reasons are at the bottom of the faculty shortage. First, the surge in nursing school applicants in 2002 and after followed a steady 12-year decline in nursing school applications and enrollments. Nursing academia simply had been dealing with declining enrollments for too long and could not respond to the unprecedented demand.

The other and perhaps more important reason was, and is, money—especially as it applies to RNs who pursue the education necessary to achieve RN designation at the baccalaureate level. The NIH
budget for nursing research in 2006 was $139 million, about 50 percent of the total of all nursing research funds, with the rest coming from foundations and other sources. By contrast, the NIH budget for biomedical research in 2006 was about $20 billion. Simple math suggests our country annually supports 300,000 practicing physicians with $66,666 in research funding per physician, while annually supporting 3 million practicing nurses with $92 in research funding per nurse. This is a crucial problem for nursing faculty, nurses, and healthcare delivery organizations.

Nursing schools that grant baccalaureate and graduate degrees count on funding to fuel their research and scholarship missions. As a result of chronic under funding, nursing research faculties are seriously constrained in accomplishing what society wants them to do. The success rate for funding nursing research proposals submitted to the National Institute for Nursing Research is about 15 percent, and much of that is “repeat business” for a small community of researchers. A new nursing researcher trying to obtain funding has a practically insurmountable challenge to overcome.

Many potentially promising nursing faculties do not even choose to go into academia because they have seen their academic mentors swimming against the current for years. These potential faculty members can immediately make the same or more money in advanced positions in healthcare delivery organizations or industry, and have more chances for advancement. As a result, it's difficult for nursing schools to attract research faculty, and they struggle with funding in general. The nursing faculty shortage is the fundamental reason why there's a current shortage of 200,000 nurses in the United States, and that deficit will quintuple in less than 15 years.

**Informatics Competency for all Nurses**

Many suggest competency in using healthcare IT by nurses is one way to gain efficiency to deal with staffing shortages. However, it appears nurses aren't getting needed training. A survey released by CDW Healthcare in September 2006 of 559 nurses found about 25 percent of respondents indicated they had not received IT training in the last year, while 56 percent had received only one to eight hours of training. Some 55 percent of respondents said more IT training would have the greatest impact on improving their use of IT. Despite the profound lack of training in IT, 44 percent said they spend three or more hours per day using it on the job. Despite the current disparities, 86 percent of nurses in the study remained optimistic regarding the potential for IT to improve patient care. A survey I conducted in 2001 of 50 schools of nursing revealed only 15 percent of schools of nursing had an informatics course, and most of those courses were not required.

The findings of these studies did not surprise a group of nursing and nursing informatics leaders who have been working in 2005 and 2006 to convene a summit to address the profound lack of training in schools of nursing and in the workplaces of practicing nurses on informatics principles and practices. By the time you read this, the Technology Informatics Guiding Educational Reform (TIGER) Invitational Summit, “Evidence and Informatics Transforming Nursing,” will have been held.

If the country is going to meet President George W. Bush’s call for a highly functional and widely used electronic health record to be available to all Americans by 2014, the alarming lack of informatics knowledge and skill by 54 percent of the healthcare workforce must be addressed now.

“The summit will yield a vision for transforming nursing practice and education over the next 10 years to prepare nurses to practice in an increasingly automated, informatics-rich and consumer-driven healthcare environment,” said Diane Skiba, TIGER chair. “This vision will be supported by the active participation of leading experts, guidelines for integrating information technology into practice and education, and commitments to a three-year local and global action plan.”

**How the HIMSS Community Can Help**

There are ways the healthcare informatics community can impact current nursing education and training issues.

The current situation brings to mind the quote by Lewis Thomas, a famous physician, who said in 1978, “Nurses are the glue that holds hospitals together.” Today, Dr. Thomas most likely would expand that to say nurses hold much of the rest of healthcare together as well. Because
of the worsening nursing shortage, which appears to be refractory to market correction because the supply of nurses is severely impacted by an even more profound nursing faculty shortage, healthcare delivery organizations might be in danger of falling apart for lack of nursing glue.

This is a serious situation that calls for careful study and dialogue among a wide array of stakeholders. The industry has essentially two options—support the profession of nursing with a large and rapid infusion of funding for nursing research and education, or, relatively quickly, come up with human resources and wide-ranging professional practice changes to replace what nurses have traditionally done.

If healthcare informatics professionals choose to support the nursing profession, there are many other ways to help, besides a large and rapid infusion of funding for nursing research and education. Support can be given to numerous government, insurance, provider, and other initiatives in many states that are attempting to address the nursing and nursing faculty shortages at local and state levels. HIT professionals can reach out to schools of nursing and nursing faculty to provide access to data researchers could use. HIT professionals should redouble efforts to increase nursing effectiveness and efficiency by providing applications that can facilitate care planning, nursing documentation, barcode-assisted medication administration, nurse scheduling, and many other clinical and administrative duties.

By the time you read this, the preliminary report and perhaps the complete report from the TIGER Summit will be out. Get a copy of the reports, read them and begin to support the many initiatives that will be getting started to help all nurses and nursing students get the knowledge and skill they need to be full participants in the electronic health record and the digital age of healthcare.

Nursing is at a crossroads. We are all stakeholders, many of us on multiple levels, in nursing’s service to society. It behooves us to engage with nursing leaders, ask tough questions, and offer our time and talents to a transformation that is within the larger transformation of healthcare that is occurring—the transformation of the profession of nursing.

About the Author

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References