

Practitioner Forum

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Health Information Technology Presents New Opportunities for Advanced Practice Nurses

The U.S. health care system saw 2 major pieces of legislation pass within a span of just over 1 year: the Health Information Technology for Economic and Clinical Health (HITECH) Act, which was passed as part of the American Recovery and Reinvestment Act (ARRA) in February 2009, and the Patient Protection and Affordable Care Act (PPACA), which was passed in March 2010. The HITECH Act is expected to improve the practice and delivery of care, increase quality, and reduce cost,¹ while the PPACA is projected to extend affordable health insurance coverage to an estimated 32 million uninsured Americans and, simultaneously, expand preventive and primary care²—2 areas in which large numbers of nurse practitioners and other advanced practice nurses (APNs) have demonstrated excellence.³ For APNs, the synergy of the 2 pieces of legislation creates new career opportunities, but a number of challenges as well.

The rising number of Americans with health insurance is expected to increase demand for health care by

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more than 11%. It is predicted that the number of physicians, which already is inadequate, cannot be increased sufficiently to meet the uptick in demand.⁴ Because it takes fewer years to train APNs than to train physicians, the supply of APNs can be increased faster to meet the surge in health care demand.⁵ For the APN who hopes to take full advantage of the professional opportunities this situation creates, however, proficiency in the use of health information technology is a prerequisite. Equipped with this know-how, APNs can become agents of change, facilitating their organizations in complying with the provisions of the HITECH Act and using electronic health records (EHRs) efficiently in their practice as primary caregivers. This column discusses the HITECH compliance, barriers to the adoption of requisite technology, and the training possibilities the HITECH Act presents for APNs.

HISTORY BEHIND THE HITECH ACT

The quality of health care in the United States, measured in terms of outcomes, access, equity, and efficiency, is widely considered to be lower than that of other industrialized countries, though it is more costly.⁶⁻⁹ System reform was an attempt to improve care in these quality areas, while controlling the exorbitant costs.

The HITECH portion of the ARRA allocated \$26 billion as an incentive for physicians and hospitals to adopt and implement EHRs.¹⁰ The HITECH Act authorizes an extension program, consisting of a national research center as well as 70 or more regional extension centers, each of which

serves a specific geographic area and offers "technical assistance, guidance, and information on best practices to support and accelerate health care providers' efforts to become meaningful users" of EHRs.¹¹

The HITECH EHR is designed to allow providers, consumers, insurers, and government agencies to share patient information, while keeping that information secure and protecting patient privacy. By providing a longitudinal medical history of the patient, including immunization records and current medication regimens, the HITECH EHR is expected to improve overall health care quality, prevent medical errors, increase the efficiency of the care provided, reduce costs, and improve the overall health of the population.¹²⁻¹⁵

BARRIERS TO HITECH ADOPTION

The full benefits of the HITECH Act can be realized only if the EHR system is widely adopted. To work optimally, it also must be integrated and interoperable. In other words, it must enable different providers and institutions to communicate with each other. Unfortunately, in the interest of protecting proprietary interests, commercial software companies specifically design programs to communicate only with the systems and programs that they produce, and not with those produced by competitors. Thus, physicians working in more than 1 hospital often are required to use more than 1 EHR program.

Incompatibility of the various software programs is a factor delaying the widespread adoption of EHRs; another is the inadequate training

given to physicians and staff upon system installation. Many facilities that endeavor to adopt health information technology, discontinue its use when they fail to receive continuous support during the transition from paper to electronics and from system to system.

Compliance with provisions of the HITECH Act is voluntary, though it influences Medicare and Medicaid payments. The penalty for nonadopters, however, is not great enough to generate widespread compliance.¹⁶ The widely held fear is that, after the incentive money allotted for HITECH implementation is exhausted, there may be no tangible results to show for it.

A longitudinal study, initiated in 2001, showed that resistance to EHR adoption rates grew as time passed.¹⁷ According to this study, fewer than half (47.3%) of physicians working in small practices would be expected to have implemented an EHR system by 2014.¹⁷

As recently as 2008, EHR adoption rates were dismal even at the institutional level. Only 1.5% of hospitals used comprehensive EHR systems (defined as having 24 specific electronic functions within the areas of clinical documentation, test and imaging results, provider order entry, and decision support in all clinical units); another 7.6% used basic EHR systems with clinician notes (defined as having 10 specific electronic functions within the areas of clinical documentation, test and imaging results, and provider order entry in at least 1 clinical unit); and another 10.9% used basic EHR systems without clinician notes.¹⁸ The hospitals most likely to adopt health information technology were large, urban, teaching hospitals.¹⁸

Barriers mentioned by nonadopting hospitals included the high cost of initial installation (74%) and main-

tenance (44%), physician resistance (36%), uncertain return on investment (32%), and inadequate information technology staff (30%).¹⁸ Of note, hospitals that had adopted EHRs were significantly less likely to cite 4 of these 5 barriers—all but physician resistance, suggesting that physician resistance remains an obstacle following EHR implementation.¹⁸ Together, these findings suggest that financial and training support as well as provider “buy-in” may promote HITECH compliance among facilities without EHR systems.¹⁹

In a national survey of physicians working in ambulatory care settings, only 4% reported having extensive and fully functional EHR systems, defined as systems that permit providers to record clinical and demographic data, view and manage results of laboratory tests and imaging studies, manage order entry (including electronic prescriptions), and that provide support for clinical decisions (such as warnings about drug interactions or contraindications).²⁰ An additional 13% reported having basic EHR systems (differentiated from the extensive, fully functional systems in that they lacked certain order-entry capabilities and provided no support for clinical decisions).²⁰ The EHR users among the physicians surveyed were satisfied with the system they used and believed it improved quality of care, but, as with nonadopting hospitals, nonusers cited finance as the major barrier to EHR adoption.²⁰

A WINDOW OF OPPORTUNITY

Because PPACA aims to shift the emphasis from acute care to primary and preventive care, while increasing the overall demand for health care, it presents an opportunity for more APNs to work without physician collaboration in order to accommodate the millions of new patients now seeking care. In doing so, APNs can

expect to increase the fees they collect for services rendered.

It is well established that, with appropriate training, APNs provide primary care of excellent quality and achieve outcomes matching those of primary care physicians.⁵ In the VA, where APNs are employed in large numbers and EHRs also are widely adopted, HITECH may serve as a vehicle for advancing the role of the APN.²¹

To date, studies of HITECH adoption have focused on physicians and institutions, not on APNs. Nevertheless, it is assumed in our report that APNs have the same influence as physicians in implementing technology.¹³ Health care reform and the push to adopt health information technology have opened a new frontier for APNs, who are in an ideal position to become the agents of change within their respective organizations by taking a leadership role in the adoption and use of HITECH. It is through EHR mastery that APNs will most readily expand their role as primary care providers in this new frontier. Hence, it would be to their advantage to expedite the adoption process.

NEED FOR TRAINING

While emerging opportunities for APNs are attractive, it is important for them to realize that maximizing patient outcomes will require them to master the use of the EHR in their daily practice and in their communication with other providers. Through their coursework, APNs acquire at least computer literacy and, possibly, informatics and database training. What they lack is hands-on experience in the use of EHRs.

Unfortunately, of the many training programs that have been developed for nurses, all are designed for informatics specialists and only one, a Columbia University initiative, is

tailored specifically to the APN level of nursing practice.²²⁻²⁴ The needs of the clinician are limited to mastering the EHR software; hence, programs need to be developed that meet these needs. HITECH competencies can be achieved in various venues and at levels that suit the needs of both the practitioner and the institution.

When organizations install EHR systems for the first time, vendors generally provide employee software training for a limited time. Eventually, however, users are left to fend for themselves. Most EHR discontinuance occurs during the first year of adoption. Even after having invested substantially in the hardware and software installation, many organizations discontinue use due to inexperience with the software and lack of long-term technical support. In such cases, the employment of informatics specialists, who mediate between clinicians and information technology professionals, can alleviate the problem. Once the transition process is accomplished successfully, the informatics specialists can continue to help clinicians upgrade their technology skills.

EHRs should be a part of the current APN college curriculum; mastery then can be reinforced in all practical and clinical experiences. By the time APNs graduate, they should be ready to use EHRs in their clinical practice or as informatics specialists. As undergraduate nursing programs include EHRs and informatics in their curricula, such training can be phased out at the APN level because most APN program admissions will be from undergraduate nursing programs.

Practicing APNs who lack the necessary technologic knowledge base to work with EHRs can participate in orientation programs at their place of practice. The VA, which has a paperless patient record and infor-

mation system, also has excellent orientation and support programs. New employees are given training and orientation in the use of EHRs and HITECH in general and, at the conclusion of orientation, are given a low patient load until they are ready to work on their own.

Nursing associations and educational institutions can play a major role in preparing APNs to avail themselves of the new opportunities. As part of the HITECH Act, the federal government has made funds available for all types of training and research. To support HITECH, the economic stimulus package provides funds that can be used to develop relevant college curricula at all levels and in all health care fields, including testing and research. Currently, most fund recipients are undergraduate nursing informatics programs.

The VA's Veterans Health Information System and Technology Architecture (VistA) program can be used in colleges and other training programs to maximize convenience and minimize cost. VistA is preferred to other EHR software programs on the market because of its ease of use and wide application. Since the software is free, its use substantially reduces schools' EHR installation costs. Once the students are skilled in using the EHR, they can easily adapt to the EHR software used by the institutions that hire them.

THE ROLE OF NURSING PROGRAMS, ASSOCIATIONS, AND EMPLOYERS

Health care delivery in the United States is changing for the better. Together, HITECH and PPACA provide a unique opportunity for APNs to embrace new health information technology, promote HITECH compliance within their institutions, and lead the way in modernizing health care practice.

Resistance on the part of physicians and health care institutions has slowed the widespread adoption of health information technology. At the current rate of adoption, the U.S. health care system will not meet the 2014 deadline for full implementation. APNs have demonstrated the skills required to meet the increased demand for primary and preventive care; they require only the technologic training, which can be imparted as part of their college curricula, in employee orientations, and through in-service training. College nursing programs, nursing associations, and health care employers all have roles to play in helping APNs rise to this challenge. The VA's VistA system offers the best option for use as an instruction tool in EHRs. ●

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