



Health Information Technology (HIT) Guide for the Delta Rural Hospital Performance Improvement (RHPI) Program

Health Information Technology Workforce: Current Issues and Recommended Solutions

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Overview

Information technology is transforming the health care world. New technologies, a vast amount of information and quality improvements are just a few of the factors that are contributing to the need for health information technology workers.

There is a large shortage of health information technology (HIT) workers that is becoming more noticeable as the health care industry is implementing electronic health records (EHRs) and health information exchange (HIE). The evidence of a shortage in HIT workforce has been published from several different sources including the 2008 Bureau of Labor Statistics report that projected an additional 35,000 HIT workers would be needed by 2018. [1] The Office of the National Coordinator (ONC) has recently projected that there is a shortage of 50,000 HIT workers that will be needed in the next five years in order to meet the EHR meaningful use criteria. [1] The American Medical Informatics Association estimates that nationally 130,000 information technicians and 70,000 informatics specialists are needed to achieve the goal of implementation by 2014. [2] In addition to HIT workers needed for EHR implementation, health care facilities also need to have trained staff to deal with HIPAA data security standards, adopt ICD-10 coding and new transaction standards for 2013 and reimbursement reforms for necessary revenue cycle management modifications. [3] There will also be online health insurance exchanges requirements by 2014. [4]

Health care providers in rural areas face a variety of obstacles in adopting and using EHRs, which includes access to training and retention of HIT staff. The high cost of implementing an EHR system, training staff, and future upgrades and maintenance hinders rural facilities from both converting to EHRs and being able to properly utilize them.

Challenges

1. Competition with other industries to recruit and retain IT workers
2. Statistically, IT staff to employee ratios are much lower in hospitals and clinics than in other industries, even though the level of complexity is often much greater
3. Cost of hiring IT workers
4. Lack of understanding how EHRs can be used to improve clinical practice, quality of care and patient safety which leads to lack of motivation to utilize an EHR
5. IT staff skill set
 - Inexperience including lack of project management skills and understanding of healthcare processes
 - Leadership
 - Attrition
6. Increased training opportunities are needed that are inexpensive and deliver competency-based EHR training and continuing education programs to rural areas need to be developed.
7. The lack of standardization in the use of EHRs complicates curriculum development
8. Lack of sustainability plans for after the federal grant funding for training ends
9. Training changes rapidly because technology changes rapidly
10. Vendor-supplied training is often limited and inadequate

Solutions

1. Train and develop HIT staff from within organizations
2. Fill workforce gaps with skill sets from within the organization
3. Explore alternatives to traditional HIT implementations
 - a. Remotely hosted systems
 - b. HIT Networking
 - c. Sharing of HIT staff between partner facilities
4. Train health care providers and their staff on basic computer skills that can enable them to set up a computer, setup and modify templates and tables in the system, and conduct decision support as well as front-line troubleshooting. These skills can help reduce technical support costs.
5. Train providers how EHRs can be used to improve clinical practice, quality of care and patient safety.
6. Train health care super users and clinical champions who are knowledgeable in HIT and clinical aspects to promote the use of the EHR to other health care professionals and to translate health systems work flow into the EHR system.
7. Integrate EHR training into health profession education programs to ensure competency by graduation. Currently, most health profession programs only do EHR training during on-site clinical internships.

The American Recovery and Reinvestment Act (ARRA) funded HIT Workforce Development Programs are targeted to meet projected demands for HIT staff (see below for specific information). However, the issue that still exists is recruiting and retaining these newly trained HIT workers for rural health care facilities.

ARRA HIT Workforce Development Program

The ONC has awarded several grants for community college consortia and universities to develop programs to train HIT workers. The purpose of these grants is to train technicians and professionals to help health care facilities meet meaningful use criteria by 2020. For example, the goal of the Community College Consortia Program is to train an additional 10,500 EHR implementation technicians per year by 2012. [5]The overall goal is to quickly educate and prepare students for careers as HIT professionals.

Table 1: Summary of the HIT Workforce Development Program

Program	Description	Awarded
Community College Consortia	Six-month EHR technician training courses	\$ 35,000,000
Curriculum Development Centers	Develop the curricula and materials for above training courses	\$ 10,000,000
Competency Examination	Develop and administer competency exams	\$ 6,000,000
University-based Training	Develop and offer advanced university-level programs	\$ 32,000,000
	Total	\$ 84,000,000

HIT Workforce Development Program Highlights

Community College Consortia

Each community college grantee offers six-month (non-degree) training programs. These training programs focus on the following six roles identified by the ONC:

1. Practice workflow and information management redesign specialist
 - These individuals assist in reorganizing the work of a provider to take advantage of the features of health IT. These workers may have a background in health care or information technology and integrate information technology functions into work flow.
2. Clinician/practitioner consultant
 - These workers are similar to “redesign specialists” but bring the background and experience of a clinical or public health professional. In addition to the activities noted above, these professionals suggest solutions for implementation problems in clinical and public health settings and address work flow and data collection issues from a clinical perspective.
3. Implementation support specialist
 - These workers provide on-site user support for implementation of health IT systems in clinical and public health settings. With backgrounds in information technology or information management these workers execute implementation project plans by installing hardware and configuring software and incorporate usability principles into design and implementation.
4. Implementation Manager
 - These individuals provide on-site management of mobile adoption support teams for implementation of health IT systems in clinical and public health settings and have experience in health or IT environments as well as administrative and managerial experience and apply project management and change management principles.
5. Technical/software support staff
 - These workers maintain systems in clinical and public health settings, including patching and upgrading of software. With backgrounds in information technology or information management, these workers interact with end users to diagnose IT problems and implement solutions.
6. Trainer

- These workers design and deliver training programs to employees in clinical and public health settings. With experience as a health professional or health information management specialist, trainers use a range of health IT applications, communicate both health and IT concepts and design lesson plans and active learning experiences for users.

University-Based Training Program

Nine universities were awarded grants for the development of 12-month or shorter advanced university-level training programs which will result in a post-baccalaureate certificate or master's degree. The university training program targets six different roles identified by the ONC:

1. Clinical/public health leader

- By combining formal clinical or public health training with training in health IT, these individuals lead the deployment and use of health IT to improve the quality, safety, outcomes and value of health services. In the health care setting this role may include job titles such as Chief Medical Information Officer and Chief Nursing Informatics Officer.

2. Health information management or exchange specialist

- These workers, frequently titled Health Information Management Administrators, support the collection, management, retrieval, exchange, and analysis of information in electronic form in health care and public health organizations. Training for this role would require specialization in baccalaureate-level studies, certificate of advanced studies, or post-baccalaureate-level training in Health Information Management, health informatics, or related fields.

3. Health information privacy and security specialist

- These individuals serve as institutional information privacy or security officers. Training for this role includes specialization in baccalaureate-level studies, certificate of advanced studies, or post-baccalaureate-level training in health information management, health informatics, or related fields.

4. Research and development scientist

- These individuals support efforts to create innovative models and solutions that advance the capabilities of health IT, and conduct studies on the effectiveness of health IT and its effect on health care quality. These individuals would also likely be teachers in institutions of higher education.

5. Programmer and software engineer

- These individuals are the architects and developers of advanced health IT solutions. These individuals train in IT and health domains thereby possessing a high level of familiarity with health domains to complement their technical skills in computer and information science.

6. Health IT sub-specialist

- The ultimate success of health IT requires a small number of individuals whose training combines health care or public health generalist knowledge, knowledge of IT, and knowledge from disciplines that inform health IT policy or technology. The understanding of an external discipline, as it applies to health IT, enables these individuals to complement the work of the research and development scientists. These individuals would likely be employed in research and development settings and as faculty in higher education.

Sources

[1] Conn, J. "Working on IT." *Modern Healthcare*, May 24, 2010, 28.

[2] Lauer, G. "Where Will the 'Mini-Army' of Health IT Workers Come From?" *iHealthBeat*, March 13, 2009.

[3] Zywiak, W. "U.S. Healthcare Workforce Shortages: HIT Staff." *Computer Sciences Corporation*, July 2010.

[4] Initial Guidance to States on Exchanges. *Department of Health and Human Services Office of Consumer Information and Insurance Oversight*. n.d. Web 1 Aug 2011.
http://www.hhs.gov/ociio/regulations/guidance_to_states_on_exchanges.html

[5] Community College Consortia to Educate Health Information Technology Professionals in Health Care Program. *Department of Health and Human Services Office of the National Coordinator for Health Information Technology*. n.d. Web 1 Aug 2011.
http://healthit.hhs.gov/portal/server.pt/community/community_college_consortia_to_educate_health_it_professional_/141/home/16927