Building an Education Program to Support the Demand for Qualified Health I.T. Professionals

Thomas Gallagher  
University of Montana - Missoula

Anne V. Delaney  
University of Montana - Missoula

Kari Lynn McLean  
University of Montana - Missoula

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Introduction

The rapid adoption of standardized electronic medical records in clinical settings has created a demand for individuals with expertise in clinical health practices and Information Technology. High demand, high wage job opportunities are available for individuals entering the field with these interdisciplinary skills. Faculty members from the Applied Computing & Electronics and Health Professions Departments at UM have partnered with clinicians from regional health facilities and faculty members from the Department of Healthcare Informatics at Montana Tech in designing a cross-curricular program for educating individuals to support IT in clinical settings. This poster session will describe our progress in creating a new program of study and describe our successes and challenges at UM in educating individuals for careers in Health Information Technology.

What is Health IT?

- Devices – ergonomics and information
- Electronic Medical Record (EMR) and Electronic Health Record (EHR)
- Database - Security/Access/Maintenance
- Patient Care - Safety, Quality, Access
- Healthcare Workers: Physicians, Nurses, Pharmacists, Radiologists, etc.
- Research – improve patient care, patient outcomes, use qualitative data

Issue: Healthcare Worker – Limited Computer Skills

The Office of the National Coordinator (ONC) for Health IT is the principal Federal entity charged with coordination of nationwide efforts to implement and use the most advanced health information technology and the electronic exchange of health information.

ONC Workforce Roles (for community college training and education programs)

1. Practice workflow and information management redesign specialist
   Workers in this role assist in reorganizing the work of a provider to take full advantage of the features of EHR, in pursuit of meaningful use of health IT to improve health and care. Individuals in this role may have backgrounds in health care (for example, as a practice administrator) or in information technology, but are not licensed clinical professionals.

2. Clinician/practitioner consultant
   This role is similar to the “redesign specialist” role listed above but brings to bear the background and experience of a licensed clinical and professional or public health professional.

3. Implementation support specialist
   Workers in this role provide on-site user support for the period of time before and during implementation of health IT systems in clinical and public health settings. The previous background of workers in this role includes information technology or information management.

4. Implementation manager
   Workers in this role maintain systems in clinical and public health settings, including patching and upgrading of software. The previous background of workers in this role includes information technology or information management.

5. Technical/software support staff
   Workers in this role maintain systems in clinical and public health settings, including patching and upgrading of software. The previous background of workers in this role includes information technology or information management.

6. Trainer
   Workers in this role design and deliver training programs, using adult learning principles, to employees in clinical and public health settings. The previous background of workers in this role includes experience as a health professional or health information management specialist. Experience as a trainer in the classroom is also desired.

Flexible Education and Training

- Nursing
- Medical Assistant
- Pharmacy
- Dental Hygienist
- Radiologic Technologist
- Medical Records and Health Information Technicians
- Respiratory Therapist
- Medical Laboratory Technicians
- Surgical Technologists
- Engineers
- Software Developers
- Systems Analysts
- Medical Practice Administrators
- Health IT Security

Partnerships

- Community Medical Center
- Local Advisory Board
- Office for the National Coordinator for Health IT (ONC)
- UM – Department of Applied Computing & Electronics
- UML – Department of Health Professions
- UM - Montana Tech Department of Health Care Informatics

Literature Cited


EMR

Electronic Medical Record

- Computerized clinical records created and managed by an individual care delivery organization (CDO). The EMR is an intra-organizational record for one patient. Electronic Medical Records are replacing traditional paper files

Benefits of Health IT

- Improve health care quality
- Continuity of care across the healthcare continuum
- Prevent medical errors
- Reduce health care costs
- Increase administrative efficiencies
- Decrease paperwork
- Expand access to affordable care.

HITECH Act

- GOAL: Improved healthcare delivery and patient care through the use of health information technologies (HIT)2
- Incentive programs for meaningful use and EMR/EHR adoption

HIPAA

- Privacy, Access, Security
- Administrative, Physical, & Technical Safeguards

Progress Report: Hospital Self-Assessment

77% of Montana Hospitals report being on-track or ahead in meeting 2015 HITIeal deadline (n=22 participants)

On-track to completing by 2015

- 53%
- 11%
- 9%

HITIeal Survey

- 2013 Montana Hospital Survey
- On-track Completion Self-Assessment

Issue: IT/CS Technician – Understanding Healthcare Opportunity: Cross-curricular Education

The inter-disciplinary skills of healthcare providers and IT professionals are necessary for patients to achieve the best possible results. Healthcare providers need to be aware of the role of IT professionals in healthcare and IT professionals need to be aware of the role of healthcare professionals in patient care.

Opportunity: Montana Jobs

91% of Montana Hospitals report having hired or will be hiring 1-4 new employees in Health IT over the next two years (n=22 participants)

Opportunity: Department of Labor Employment Projections

2020 Projected Job National Openings (growth and retirement)

- Medical Assistants
- Pharmacy Technicians
- Dental Hygienists
- Radiologic Technologists
- Medical Records and Health Information Technicians
- Respiratory Therapists
- Medical Laboratory Technicians
- Surgical Technologists

Figure 1. Categorization of Healthcare Information Systems

Figure 2. DOL Job Opportunities

Figure 4. MUS Comparison: Two-year Health Professions degrees requiring at least one computing course