Informatics and the HIM Professional

Northeast Florida Health Information Management Association Meeting

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The Past
1996 an idea...
2002 The Problem....
Declining IT Enrollments

Freshmen Intention to Major

Where is the $$$$$$

• 2001 - $5 million
  - Space and agricultural biotechnology research education and commercial applications (sabre)
  - UF and NASA

• 2003 - $10 million
  - Florida Center of Excellence in Biomedical and Marine Biotechnology - Harbor Branch, FAU, FIU, NSU, the Smithsonian Marine Station at Ft. Pierce, and several private companies

• 2004 - $310 million
  - Scripps Research Institute

• 2005 - $250 million
  - Jobs for the 21st Century program for community colleges to partner with employers in high-demand job sectors
Informatics

- the sciences concerned with gathering, manipulating, storing, retrieving, and classifying recorded information
- refers to the processing of data on patients and clients, normally - but by no means exclusively - through IT systems
- field of study that focuses on the use of technology for improving access to and utilization of information
Common Informatics Fields

Bio

Nursing

Informatics

Medical

Health
Bioinformatics

• Florida ranks second in the nation in biomedical employment
  - more than 2,000 firms with 50,000 workers

• Average wage of $50,909
  - 40% higher than Florida’s average annual wage

• NIH- Bioinformatics
  - Research, development, or application of computational tools and approaches for expanding the use of biological, medical, behavioral, or health data including those to acquire, store, organize, archive, analyze, or visualize such data.
Nursing Informatics

- Integrates nursing science, computer science and information science to manage and communicate data, information and knowledge in nursing practice
- Nursing informatics uses methods such as data collection, data organization, information technology, knowledge, understanding and integration to application of wisdom in decision-making.
Medical Informatics

• The scientific field that deals with the storage, retrieval, sharing and optimal use of medical information, data and knowledge for problem solving and decision making.

• Medical informatics touches on all basic and applied fields in biomedical science and is closely tied to modern information technologies, notably in the areas of computing and communication.
Healthcare Informatics

- is the systematic study of information in the healthcare delivery system—how it is captured, retrieved, and used in making decisions—as well as the tools and methods used to manage this information and support decisions
More Informatics

Role of Informatics from Discovery to Dissemination

- **Discovery Informatics** is concerned with the application of informatics theory and methods to drug discovery infrastructures, the integration of scientific applications, the design of drug discovery databases, and the setup of drug discovery datamarts.

- **Clinical Research Informatics** is concerned with the application of informatics to design, conduct and improve clinical research and disseminate the knowledge gained from three kinds of research: patient-focused, epidemiologic and outcomes or health services research.

- **Translational research** is concerned with the application of informatics to 1) enabling discoveries generated in the lab (basic science) to become in-human trials and studies, and 2) enhancing adoption of research findings by clinical practice and the community at large.

- **Clinical Informatics** is concerned with computer applications that collect, store and analyze medical data to assist in the management and processing of information that support the delivery of clinical care.

- **Consumer Health Informatics** is the branch of medical informatics that analyses consumers’ needs for information; studies and implements methods of making information accessible to consumers; and models and integrates consumer preferences into medical information systems.

- **Public Health Informatics** is the systematic application of informatics to public health practice, research, and learning, distinguished from healthcare informatics by emphasizing data about populations rather than that of individuals.

Differences

- Bio
  - DNA, Proteins, Human Genome
- Medical
  - Research
    - Medical Decision Making
    - EHR
    - EMR
- Nursing
  - Direct Patient Care (clinical)
  - Nursing Decision Making
- Health
  - Use of educational technology for health care of clients or general public
Paper vs. EMR

- 35-39% of hospital operating costs due to professional and patient communications
- Physicians spend 38%, nurses 50% of their time charting
- Content: missing, illegible, inaccurate
- One hospital study: 11% of tests were repeats to replace lost information
- Too thick (1.5 lbs avg.)
- Incomprehensible to patients and families

The EMR

• In 2003 only 19% of providers had a fully operational EMR system in place
• 23% had developed a plan to implement one
• 37% were beginning to install EMR hardware and software
• In 2003 most clinical data is still managed on paper
EMR and IT

- An EMR project requires IT resources such as data base administrators, system administrators and application analysts to work closely together.

- The move to complete electronic records will require effort to develop standards and excellent character recognition systems and voice recognition systems.

- The focus of medical records will not be the individual practitioner, but the HMO, PPO or other type of overall medical provider.
EMR and Security

• Medical records of a patient will be available at workstations to all medical practitioners providing care in a medical procedure.

• Security provisions will be required for restricting access to care givers who have a need to access the records.

• Entries will be individual entries to facilitate processing by software programs.

• A patient’s medical record will be integrated with the financial side of medicine.
The Plan - Part 1

• Research
  - Stanford - Medical Informatics Introductory Short Course (Online)
  - University of West Florida - Medical Informatics Certificate
  - St. Petersburg College - Healthcare Informatics Certificate
  - Miami Dade College - Healthcare Informatics Certificate

• Obtain Clinical Skills
  - First Responder, EMT, LPN

• Become part of the culture

• Build Institutional Support
The Plan - Part 2

• Create learning communities with Health Sciences

• Specialized - Introduction to College Computing Class

• Partnerships with High School

• Partnerships with hospitals
  - become part of the culture
  - more hybrid and online courses

• Healthcare Informatics Certificate
THE PRESENT
AFFECTING THE MOOD
OF INTEGRATION

Geri Newman, RHIT
HIM1102.0M1
Dec. 8, 2012
LIVING IN A MOBILE WORLD

5.981 Billion cellular subscribers worldwide

86.7% of the world population

321.7 Million mobile subscribers in the US

34% of US households only have a cell phone

1.186 Billion subscribers worldwide have mobile internet
CURRENT USE OF MOBILE TECHNOLOGY

What do you use your mobile for?

Text Messaging: 7.8 Trillion annually worldwide

Web Browsing: 46.7% of subscribers

Social networking: 76% of subscribers

Blogging: 41% of subscribers

Mobile Health: 49% of subscribers interested or currently use
POSSIBLE USES OF MOBILE TECHNOLOGY

88% of providers want to use mobile health

Incomplete data used to treat patients

Possible uses include:

Improving care team coordination

Patient communications and reminders

Pharmacy follow-up and medication tracking

Drug recall services

Disease and Mental Health Management

Preventative Care alerts

Fitness

Emergency Information
Meaningful use objectives call for:

Sending patient reminders and alerts

Bi-directional patient communication

Increasing patient access to health information through patient portals

Transmitted information is regulated by HIPAA.
CHALLENGES TO USING MOBILE TECHNOLOGY

- Device security on receiving end
- Loss of theft of mobile devices
- Lack of password protection measures
- Hospital and provider infrastructure limited or outdated
- EHR integration not complete
- Not everyone has access to same type of mobile services
WHY MOBILE TECHNOLOGY?

- Reduce Missed appointments
- Increased medication compliance
- Increased Disease Management Compliance
- Better communication between patient and provider
- Improved emergency and critical need communication
- Greater flexibility
WHAT ABOUT THE HIM PROFESSIONAL?

EHR implementation underway

Basic infrastructure established in most places

Can use more bandwidth and reliable data storage and back-up capability

No new devices are required to utilize HIPAA compliant options
WHAT ABOUT THE HIM PROFESSIONAL?

Understand importance of data security, integrity, and accuracy

Know how data is used, collected, stored, and analyzed

Promote migration to EHR

Help to improve quality measures and reduce spending

Knowledgeable of laws and regulations

Know the technology and jargon

Standards Setters
REAL-LIFE EXAMPLE

Small office
4 therapists
1 HIM employee
1 computer
100% electronic billing
Basic infrastructure
Specialty EMR
EMR has limitations
REAL-LIFE EXAMPLE

Establishing a template system and recommending tablet use for session drawings.

Document Imaging Implementation and increased data storage and back-up services.

Researching options in secure internet text messaging for appointments and mood charting.
INFORMATICS AND THE HIM PROFESSIONAL

40+ different work settings
Various job specializations
Unique skills in data management, information, management, and patient communication
Pursuit of better health care initiatives
Ability to build and analyze processes and workflows
What a wonderful time to be in HIM
CODING REIMBURSE ANALYST 1

Responsible for data inputting coding and billing of professional medical fees for faculty physicians within the Department of Medicine. This involves charge entering abstracted billable services from EPIC and confirming the compatibility of the CPT and ICD-9 codes and then entering these services in the EPIC Resolute billing system for submission. This position works closely with faculty and residents to provide education on correct coding, proper documentation to maximize physician reimbursement, and ensure compliance with federal and state regulations.

Knowledge of anatomy, medical terminology, CPT and ICD-9 coding required
Personal computer skills
Ability to work independently
Ability to handle confidential material in compliance with HIPAA.
Proficiency in data entry required.
Certified Professional Coder (CPC)/ American Academy of Professional Coders (AAPC) or Certified Coding Specialist (CCS-P)/ American Health Information Management Association (AHIMA) preferred.
## Santa Fe College HealthCare Informatics Specialist Certificate

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<th>Term 2 (Spring)</th>
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<tr>
<td>HIM1000</td>
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<td>Introduction to Health Information</td>
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<td>(3)</td>
<td>Project Management</td>
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**Total Hours 8**

**Total Hours 11**

**Total SF Semester Hours = 19**
The Future

- **PCMH - FFS** model pays for number of services not quality
- Ready Access to Care - same day appointments
- Care Coordination - focus on preventative care
- Patient Centered - Teamwork
- Emphasis on Informatics and Technology
- Improved patient care and management especially in cases of chronic conditions like high blood pressure, diabetes, and obesity
PCMH Model

- Primary Care Physician - increase reimbursements, directs care, consultations over the web
- Panel Manager - communicate physician recommendations to patients, constant contact and follow up - email
- Case Manager - connecting patient with needed community services
- Quality Analyst - ensures that expectations are being met, HEDIS® and other quality measures
PCMH & Informatics

- IT Specialist - Electronic Health Record, Telemedicine, Online patient portals, patient training, e-prescribing

- Cloud Services - cost spread among many users which lowers costs, usually outsourced, unlimited storage capacity.

- Improved integration of public health notices to physicians - pop up bulletins
Healthcare Informatics Course Outline

- Terminologies and Standards
  - HIPAA, Medical Terminology, EMR, Informatics
- Project Management
- Decision Support and Database Systems
- Security
  - Internet Standards, Privacy, PHR
- Mobile and Tablet Computing
- Programming
- Emerging Technologies
Informatics and the Future of Healthcare

TED - Ideas Worth Sharing