Notes to Instructors
This Instructor Manual is a resource for instructors using this component. Each component is broken down into units, which include the following elements:

- Learning objectives
- Suggested student readings, texts, reference links to supplement the narrated PowerPoint slides
- Lectures (voiceover PowerPoint in Flash format); PowerPoint slides (Microsoft PowerPoint format), lecture transcripts (Microsoft Word format); and audio files (MP3 format) for each lecture
- Self-assessment questions reflecting Unit Objectives with answer keys and/or expected outcomes
- Application Activities (e.g., discussion questions, assignments, projects) with instructor guidelines, answer keys and/or expected outcomes
## Contents

Notes to Instructors ................................................................. 2  
Disclaimer ................................................................................... 5  
Component Overview ................................................................. 6  
Component Objectives ................................................................. 6  
Component Authors ................................................................... 7  
Author Biography ....................................................................... 10  
Component 5/Unit 1 .................................................................. 15  
Component 5/Unit 2 .................................................................. 22  
Component 5/Unit 3 .................................................................. 26  
Component 5/Unit 4 .................................................................. 29  
Component 5/Unit 5 .................................................................. 33  
Component 5/Unit 6 .................................................................. 37  
Component 5/Unit 7 .................................................................. 41  
Component 5/Unit 8 .................................................................. 46  
Component 5/Unit 9 .................................................................. 50  
Component 5/Unit 10 ................................................................. 52  
Component 5/Unit 11 ................................................................. 55  
Component 5/Unit 12 ................................................................. 59  
Component 5/Unit 13 ................................................................. 62  
Component 5/Unit 14 ................................................................. 65  
Component 5/Unit 15 ................................................................. 68  
Component 5/Unit 16 ................................................................. 71  
Component Acronym Glossary ..................................................... 75  

Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported ........................................................................ 79

Health IT Workforce Curriculum  History of Health Information Technology in the U.S. Version 3.0/Spring 2012

This material was developed by The University of Alabama at Birmingham, funded by the Department of Health and Human Services, Office of the National Coordinator for Health Information Technology under Award Number 1U24OC000023
Disclaimer

These materials were prepared under the sponsorship of an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

Likewise, the above also applies to the Curriculum Development Centers (including Columbia University, Duke University, Johns Hopkins University, Oregon Health & Science University, University of Alabama at Birmingham, and their affiliated entities).
Component Overview
This component traces the development of IT systems in health care and public health, beginning with the experiments of the 1950s and 1960s and culminating in the HITECH act, including the introduction of the concept of “meaningful use” of electronic health records.

Component Objectives
At the completion of this component, the student will be able to:
- Explain the rationale for elements of the HITECH Act in terms of the history of health IT
- Describe the background of today’s health IT landscape including EHR, HIE, CDS, applications in Public Health, relevant professional organizations
- Describe the history of regulation of Health IT in the U.S.
- Describe how legislation related to privacy and security of electronic health information has evolved in the US.
- Discuss how financial incentives for use of HIT have changed over time.
Component Authors

Assigned Institution
University of Alabama at Birmingham, Birmingham, Alabama

Team Lead
Eta S. Berner, EdD
Department of Health Services Administration
School of Health Professions
University of Alabama at Birmingham

Primary Contributing Authors
Eta S. Berner, EdD
Department of Health Services Administration
School of Health Professions
University of Alabama at Birmingham

Glenn Hammack, OD, MSHI
NuPhysicia LLC
Houston Texas

Terrell Herzig, MSHI, CISSP
UAB Health System
University of Alabama at Birmingham

Nir Menachemi, PhD, MPH
Department Health Care Organization and Policy
School of Public Health
University of Alabama at Birmingham

Critical Reviewers
Meg N Bruck, MSHI
Department of Health Services Administration
School of Health Professions
University of Alabama at Birmingham

Darrell E. Burke, PhD
Department of Health Services Administration
School of Health Professions
University of Alabama at Birmingham
Virginia Caris, MA
Department of Health Services Administration
School of Health Professions
University of Alabama at Birmingham

Carol McKelvey, MA, RHIA
Healthcare Information Programs
Wallace State Community College

Nena Scott, MSEd, RHIA, CCS, CCS-P
Precyse Solutions, LLC
Donna Stanley, EdS, RHIA, CCS
Healthcare Information Programs
Wallace State Community College

**Instructional Designers**
Lorrinda Khan, MFA
Department of Health Services Administration
School of Health Professions
University of Alabama at Birmingham

Dan L. Murphy, BS
Nursing Clinical Simulation and Tech
School of Nursing
University of Alabama at Birmingham

Michelle Robinson, PhD
School of Dentistry
University of Alabama at Birmingham

**Test Item Writing Assistant**
Susie P Bagwell, MA
Birmingham, AL

**Lecture Narration**
Narration talent provided by Maestro Productions, Nashville, TN.

**Narrators**
Milton Bagby
Lori Stegner
Sound Engineer
Bryan Talbot
Talbot Sound
Nashville, TN

Instructor Manual Editor
Shannon Houser, PhD, MPH, RHIA
Department of Health Services Administration
School of Health Professions
University of Alabama at Birmingham

Other Contributors
Lance Hanff, MSHI
Health System Information Services
University of Alabama at Birmingham

Jonathan McNair, MS
Health Services Administration
University of Alabama at Birmingham
Author Biography

Eta S. Berner, Ed.D., is a Professor in the Health Informatics Program in the Health Services Administration Department of the School of Health Professions of the University of Alabama at Birmingham. Dr. Berner is the founding Director of UAB’s Center for Health Informatics for Patient Safety and Quality and is co-Director of the Biomedical Informatics Component of the UAB Center for Clinical and Translational Science. She also is a Fellow of both the American Medical Informatics Association (AMIA)’s American College of Medical Informatics and the Health Information Management and Systems Society (HIMSS); Dr. Berner is a member of a technical expert panel for AHRQ’s Clinical Decision Support Initiative and is on the Board of Directors for AMIA. She has served on the editorial boards of three journals related to HIT and informatics and has taught in UAB’s Master of Science in Health Informatics Program since 1997. In addition to being the Program Director of UAB’s ONC-funded Curriculum Development Center project, she has received funding for both informatics and educational research including research on clinical decision support, electronic health records and health information exchange, development of online instructional materials for graduate and undergraduate health informatics, and the use of videoconferencing as an instructional modality for distance learning.

Glenn G. Hammack, OD, MSHI, is the founding President of NuPhysicia LLC, developing it as a spinout company from the University of Texas, where he served as Assistant Vice President of the University of Texas Medical Branch (UTMB) and founding Executive Director of their Electronic Health Network (EHN), developing and managing their telemedicine programs. Before 2004, he served as Director of Health Informatics and Telemedicine, leading implementation of a large-scale electronic medical record system and creation of a statewide system for primary care and specialty telemedicine. He received his OD Optometry degree from the Michigan College of Optometry at Ferris State University and his MSHI Master of Science in Health Informatics from the University of Alabama at Birmingham with a Telemedicine internship at Massachusetts General Hospital.

Terrell W. Herzig, MSHI, CISSP, is Information Security Officer of the UAB Health System, Birmingham, Alabama, the UAB HIPAA Security Officer, and teaches in the Health Informatics program at the University of Alabama at Birmingham (UAB). Mr. Herzig teaches graduate courses in Information Engineering, Programming, Computer Networks and
Information Security in the UAB School of Health Professions. During his tenure at UAB, he has served as Director of Information Technology for the Civitan International Research Center and Director of Informatics for the Pittman General Clinical Research Center. Mr. Herzig has also consulted on numerous informatics projects with external groups, including Southern Nuclear and the US Army Medical Command. Mr. Herzig is also the editor of the recent HIMSS book: Information Security in Healthcare: Managing Risk.

Nir Menachemi, PhD, MPH, is Professor and Doctoral Program Director, Department of Health Care Organization and Policy, UAB School of Public Health. Relevant roles include being a Health Policy Fellow, Center of Quality Improvement and Patient Safety, Agency for Healthcare Research and Quality (AHRQ); Director, Center on Patient Safety, Florida State University, College of Medicine; and Special Advisor to the Florida Governor’s Health Information Infrastructure Advisory Committee (2004-2007). He brings expertise in Public Health, Health Services Delivery, and the current and historical roles of healthcare IT on the healthcare delivery infrastructure in the US. Dr. Menachemi has published extensively on adoption of healthcare IT in the US.

Meg Bruck, MSHI, is employed part-time in the Department of Health Services Administration at the University of Alabama at Birmingham. She provides management and review services on the HIT Curriculum Development Center project. She is a graduate of Hunter College of the City University of New York with a Master’s degree in Health Informatics from UAB. She has taught several components of the HIT Curriculum at Santa Fe College in Gainesville, FL.

Darrell Burke, PhD, is an Associate Professor in the Master of Science in Health Informatics (MSHI). His research has been in the area of adoption of health IT as well as healthcare operations research. He has designed and taught in both traditional and online formats. He has published extensively on the role, measure and impact of healthcare information technology on delivery organizations and has taught for three different universities and a for-profit online education institution. Dr. Burke is a member of the Academy of Management and the Healthcare Information Management and Systems Society (HIMSS).

Virginia Caris, MA, is employed part-time in the Department of Health Services Administration at the University of Alabama at Birmingham. She
provides review and editorial services on the HIT Curriculum Development Center project. She is a graduate of Emory University with a Master’s degree in American Literature from George Washington University. She has taught at Diné (Navajo) Community College and at the University of Montevallo and has worked in advertising and scientific/medical publishing.

Carol D. McKelvey, MA, RHIA, has been a member of the faculty of the Health Information Technology (HIT) Program at Wallace State Community College since 1993. She earned a B.S. degree in health information administration from the University of Alabama at Birmingham and an M.A. degree in health science from the University of Alabama. Over the past eight years, her concentration has been in the area of e-learning, serving as developer and instructor of distance education classes for the HIT Program, and evaluator of online course content and quality for Wallace State. Prior to becoming an educator, Ms. McKelvey served as the Director of Health Information Services in general acute care and rehabilitation settings. She is an active member of the American Health Information Management Association and the Alabama Association of Health Information Management.

Nena Scott, MSEd, RHIA, CCS, CCS-P, is a Registered Health Information Administrator (RHIA), Certified Coding Specialist (CCS), Certified Coding Specialist - Physician-Based (CCS-P) and an AHIMA Certified ICD-10 trainer. She holds a Master’s of Education in Workforce Educational Leadership from Mississippi State University, Bachelors degree in Business Administration from the University of Mississippi and is currently pursuing a PhD in Community College Leadership. She is currently employed with Precyse Solutions as the ICD-10 Educator. Prior to this role she was the Program Director of the Health Information Technology program at Itawamba Community College. While serving as the program director she wrote Itawamba Community College’s portion of the grant for the region D consortium. She has served as President of the Mississippi Health Information Management Association (MSHIMA) as well as many other leadership positions. She is a former MSHIMA Distinguished Member recipient, MSHIMA Educator Award recipient, and Champion Award recipient. She currently services as an accreditation program reviewer for the Commission on Accreditation Informatics and Information Management Education.
Donna S. Stanley, EdS, RHIA, CCS, is Director of the Health Information Technology (HIT) Associate Degree Program in the Health Division of Wallace State Community College in Hanceville, Alabama. She has been Program Director and Instructor in the HIT program since 1992, teaching both on campus and online courses. Mrs. Stanley is currently the Past-President of the Alabama Association of Health Information Management (AAHIM). In 2011 she became an AHIMA Approved ICD-10-CM/PCS Trainer.

Lorrinda Khan, MFA, is a Senior Instructional Design Specialist in the Department of Health Services Administration at the University of Alabama at Birmingham (UAB). She has a MFA and has worked as a senior textbook editor for professional publications at Davis Publications as well as an online instructor (Capella University, Southern New Hampshire University, Baker College). Her instructional design experiences include curriculum design and development for the Alabama Fire College and the University of South Florida College of Medicine. At UAB she provides support for online education for multiple graduate programs within the Department of Health Services Administration. She has extensive experience with course development and maintenance using a variety of online instructional technologies (Blackboard, WebCT, WebCT Vista, etc). She has also published guides for online instruction.

Dan L. Murphy, is an Instructional Design Manager in the School of Nursing. He has a BS in Corporate Training and Development and a prior Associate of Applied Science Degree (Instructor of Technology). He is currently studying for a Masters in Education in Instructional Technology. He has prior experience as a Technical Training Instructor and Technical Training Evaluator for the US Air Force. He has developed a Virtual Patient Simulator for which he has a patent pending. He currently provides instructional design support for a number of externally funded projects including “Distance-Based Education for International Study Coordinators”, “A Culturally Competent Online NNP Program”, “Psychiatric NP program for the Rural Deep South”, “Leadership Education in Child-Health Nursing (LECHN)”, “Culturally Competent Alabama Clinical Nurse Leaders Program”, and a “Distance Learning Culturally Competent ANP/GNP Program for rural and underserved populations.”

Michelle Robinson, DMD, MA, is Associate Professor in General Dental Sciences and Associate Dean for Health Information and Business Systems at the UAB School of Dentistry. Her dental career has included
private practice, teaching, consulting, outreach programs, and working with online learning and computer and communications technologies. In her current role, Dr. Robinson is completing her third clinical systems implementation and online curriculum for a professional school. Dr. Robinson is a graduate of the University of Medicine and Dentistry of New Jersey and has a master’s degree in medical informatics from Columbia University. She also has several certifications, including Special Patient Care, IT Project Management, and Online Education. Among several honors and awards, Dr. Robinson is the recipient of the 2002 “Most Promising Health Professional” award from the International Women of Color in Health, Science and Technology, and the 2007 Faculty Award for research from the National Dental Association.

Susan P. Bagwell, MA, received her Masters degree in Education from The University of Alabama at Birmingham in 2009. She is an alumnus of the UAB Urban Teacher Enhancement Program. She has over six years of teaching experience and served as administrator and teacher at a summer learning program for urban school children.

Shannon Houser, PhD, MPH, RHIA, is an Associate Professor in the Department of Health Services Administration, School of Health Professions of the University of Alabama at Birmingham (UAB). Dr. Houser serves as a member of the American Health Information Management Association (AHIMA)’s Education Strategy Committee and Research Committee; and the Healthcare Information and Management Systems Society (HIMSS)’s Electronic Health Record Usability Taskforce. She has served on the editorial review board and is currently a reviewer of the Perspectives in Health Information Management journal, and associate editor of the International Journal of Privacy and Health Information Management. Dr. Houser develops courses and teaches in the undergraduate and graduate Health Information Management Programs for both the traditional classroom courses and online/distance learning courses.
Component 5/Unit 1

Unit Title
Evolution of Health IT: The Early Years

Unit Description
This unit describes the early years of the evolution of health IT.

Unit Objectives
By the end of this unit the student will be able to:

1. Discuss the enduring values that have been foci for HIT stakeholders and how the social, educational, and professional environments in healthcare influence these values.
2. Discuss the impact of key developments in the 1950s and 1960s including Sputnik, Medicare/Medicaid legislation and medical research on healthcare.
3. Describe how medical records and the use of health information technology changed from the 1950’s through the 1980’s.
4. Describe some of the key informatics innovations in the 1970’s and 1980’s including the problem-oriented medical record, Medline, the early electronic medical records and clinical decision support systems.
5. Discuss the increasing professionalization of informaticians and HIT professionals including training programs and professional organizations.

Unit Topics
1a.1 Influences, goals and values of key players in healthcare and health IT
1a.2 The healthcare environment prior to 1970
1b.1 The 1970s environment
1b.2 Key informatics innovations in the 1960s and 1970s (Medline, early EHRs, medical expert systems)
1c.1 The 1980s environment
1c.2 Information systems in healthcare
1c.3 Early clinical decision support systems
1c.4 Professionalization of informatics
Lecture Titles
1a Introduction and Pre-1970
1b The 1970s
1c The 1980s

Unit References
(All links accessible as of 1/17/2012)

Lecture 1a

Lecture 1a Charts, Tables, and Figures
None.

Lecture 1a Images

Lecture 1b
7. Miller RA, Pople HE, Myers JD. INTERNIST-1: An experimental computer-based diagnostic consultant for general internal medicine.

*Indicates this link is no longer functional.

Lecture 1b Charts, Tables, and Figures
None.

Lecture 1b Images

Lecture 1c

Lecture 1c Charts, Tables, and Figures
None.

Lecture 1c Images

*Indicates this link is no longer functional.
Unit Required Readings
None.

Unit Suggested Readings

Student Application Activities
comp5_unit1_activity.doc
comp5_unit1_activity_key.doc
comp5_unit1_self_assess.doc
comp5_unit1_self_assess_key.doc

*Indicates this link is no longer functional.
Additional Materials

Glossary-- The glossary includes definitions of some of the terms mentioned in the Component 5 presentations.

Glossary

AHIMA
American Health Information Management Association

AMIA
American Medical Informatics Association

Capitation
A method of healthcare reimbursement in which an insurance carrier prepaid a physician, hospital, or other healthcare provider a fixed amount for a given population without regard to the actual number or nature of healthcare services provided to the population.¹

Critical Pathway
The sequences of tasks that determine the project finish date.¹ In IT management this would be part of the implementation process, but in healthcare in general, there are protocols that determine the sequence of activities or patient outcomes that must be met before a patient is ready to be discharged from the hospital.

Decentralized Data Structure
A decentralized architecture, or federated model, involves the exchange of information on an “as needed basis” rather than aggregating all databases to a centralized location. In decentralized architectures, individual organizations maintain their own health information network with no centralized repositories.

Diagnostic Related Groups (DRGs)
Groups of International Classification of Disease (ICD) coded diagnoses, procedures, and other information used to group patients for reimbursement by Medicare.²

Fiscal
Refers to financial issues.

¹Indicates this link is no longer functional.
Geriatrics
A branch of medicine that deals with the problems and diseases of old age and aging people.¹

HIMSS
Healthcare Information and Management Systems Society

HIPAA (Health Insurance Portability and Accountability Act of 1996)
The federal legislation enacted to provide continuity of health coverage, control fraud and abuse in healthcare, reduce healthcare cost, and guarantee the security and privacy of health information.¹

Informaticians
Individuals in a field of study (informatics).¹

Informatics
There are often slightly different definitions of this term, but all relate to management of information and most relate to technology.¹

Information Technology (IT)
Computer technology (hardware and software) combined with telecommunications technology (data, image, and voice networks); often used interchangeably with information systems (IS).¹

Managed Care
A generic term for reimbursement and delivery systems that integrate the financing and provision of healthcare services by means of entering contractual agreements with selected providers to furnish comprehensive healthcare services and developing explicit criteria for the selection of healthcare providers, formal programs of ongoing quality improvement and utilization review, and significant financial incentives for members to use providers associated with the plan.¹ In the early 1990s it was expected that managed care that involved capitation would dominate health care but that has not occurred.

Outcome analysis
An evaluation that measures the actual outcomes of patient care and services against predetermined criteria or expected outcomes; also called outcome assessment.¹
Pediatrics
A branch of medicine dealing with the development, care, and diseases of children.³

Platform
The combination of hardware and operating system on which an application program can run.¹

Protocol
A detailed plan of care for a specific medical condition based on investigative studies.¹

Telehealth
Using communications networks to provide health services including, but not limited to, direct care, health prevention, consulting, and home visits to patients in geographical locations different than the provider of these services.²

Sources for definitions:
Component 5/Unit 2

Unit Title
Evolution of Health IT: The Modern Era

Unit Description
This unit describes the evolution of health IT from 1990 - 2009.

Unit Objectives
By the end of this unit the student will be able to:
1. Discuss factors that led to increasing clinical use of computers from 1990-2009.
2. Discuss key influences on health IT developments including the Internet, HIPAA, and the Institute of Medicine reports.
3. Discuss the focus of health IT in the late 90s up to the present.
4. Discuss the role of health IT in clinical and translational research and personalized medicine.
5. Discuss why there is more receptivity to the use of Health IT now than during the previous 50 years.

Unit Topics
2a.1 Changes in the general environment from 1990-2009
2a.2 Changes in the healthcare environment from 1990-2009
2b.1 Changes in healthcare organizations from 1990-2009
2b.2 The practice of medicine in the modern era
2b.3 Academic medicine and the role of Informatics
2b.4 Impact of changes over the last 50 years

Lecture Titles
2a The Environment
2b Key Stakeholders

Unit References
(All links accessible as of 1/17/2012)

Lecture 2a

*Indicates this link is no longer functional.

This material was developed by The University of Alabama at Birmingham, funded by the Department of Health and Human Services, Office of the National Coordinator for Health Information Technology under Award Number 1U24C000023


Lecture 2a Charts, Tables, and Figures
None.

Lecture 2a Images
Slide 6: Three “W” computer keys Available from: Microsoft Clip Art. Source Name: Used with permission of Microsoft.
Slide 21: The Leapfrog Group, Logo of the Leapfrog Group, Used with permission from The Leapfrog Group.

*Indicates this link is no longer functional.
Lecture 2b


Lecture 2b Charts, Tables, Figures and Images

None.

Unit Required Readings

None.

Unit Suggested Readings

Student Application Activities
comp5_unit2_activity.doc
comp5_unit2_activity_key.doc
comp5_unit2_self_assess.doc
comp5_unit2_self_assess_key.doc

Additional Materials
None.
Component 5/Unit 3

Unit Title
Evolution of Health IT: The HITECH Act

Unit Description
This unit describes the background and provisions of the HITECH Act.

Unit Objectives
By the end of this unit the student will be able to:
1. Discuss the barriers to adoption of Health IT that the HITECH Act is designed to address.
2. Discuss how the following ARRA/HITECH requirements relate to previous developments in health IT:
   a. Certified electronic health records
   b. Concept of meaningful use including e-prescribing, clinical decision support, interoperability and HIE, structured documentation of quality measures
   c. Incentives to providers
   d. Education of clinicians
   e. Workforce development.
3. Give examples of how the HITECH provisions support healthcare reform efforts.
4. Discuss the overall vision for the effects of the HITECH Act.

Unit Topics
3a.1 Barriers to the use of Health IT to improve quality and reduce cost
3a.2 The HITECH vision
3a.3 Regional Extension Centers
3a.4 Workforce Development
3b1 "Meaningful Use" of Health IT
3b2 Promotion of Health Information Exchange
3b3 Strategic Health IT Advanced Research Projects

Lecture Titles
3a Regional Extension Center and Workforce Training

*Indicates this link is no longer functional.
3b Meaningful Use, Health Information Exchange and Research

Unit References
(All links accessible as of 1/17/2012)
None.

Lecture 3a

Lecture 3a Charts, Tables, and Figures
None.

Lecture 3a Images
Slides 12, 13: Courtesy of the Office of the National Coordinator for Health Information Technology. Available from: http://healthit.hhs.gov/portal/server.pt/gateway/PTARGS_0_11673_911674_0_0_18/FINAL_ONC-HITECH-Anniversaryf

Lecture 3b

Lecture 3b Charts, Tables, and Figures
None.

*Indicates this link is no longer functional.
Lecture 3b Images
Slide 4, 8, 20, 24: Courtesy of the Office of the National Coordinator for Health Information Technology. Available from: http://healthit.hhs.gov/portal/server.pt/gateway/PTARGS_0_11673_911674_0_0_18/FINAL_ONC-HITECH-Anniversary*
Slide 6, 7: Microsoft clip art; Used with permission from Microsoft.

Unit Required Readings
None.

Unit Suggested Readings

Student Application Activities
comp5_unit3_activity.doc
comp5_unit3_activity_key.doc
comp5_unit3_self_assess.doc
comp5_unit3_self_assess_key.doc

Additional Materials
1. HITECH Programs. This is the official website for the Office of the National Coordinator and includes information on all the HITECH programs. Available from: http://www.healthit.gov/policy-researchers-implementers/hitech-programs-advisory-committees
3. Martin R. HITECH An interoperetta in three acts. This is a

*Indicates this link is no longer functional.
humorous musical introduction to the HITECH Act. It also includes definitions of many of the terms connected with health IT. It was made shortly after the HITECH legislation passed but before many of rules had been finalized. Available from: http://www.youtube.com/watch?v=Gv1s8fM3mMk
Component 5/Unit 4

Unit Title
Evolution of Public Health Informatics

Unit Description
This unit describes the evolution of public health informatics.

Unit Objectives
By the end of this unit the student will be able to:
1. Discuss how the sub-discipline of public health informatics has evolved over time.
2. Describe how health IT (HIT) can be used to enhance public health practice.
3. List potential ethical, social, and political issues associated with the development of HIT applications for public health purposes.

Unit Topics
4.1 What is public health?
4.2 What is public health informatics (PHI) and how did it evolve?
4.3 What were early PHI applications?
4.4 What are emerging and future PHI uses?

Lecture Titles
4 Evolution of Public Health Informatics

Unit References
(All links accessible as of 1/17/2012)

Lecture 4
1. CDC at Work. BioSense is useful tool during California wildfires. CDC [Internet]. Available from: http://www.cdc.gov/washington/cdcatWork/pdf/wildfires2.pdf*
4. Geographic Information Systems. Wikipedia. [Internet]. Available

*Indicates this link is no longer functional.
Lecture 4 Charts, Tables, and Figures


Lecture 4 Images


*Indicates this link is no longer functional.
None.

Unit Suggested Readings


*Indicates this link is no longer functional.


Student Application Activities
comp5_unit4_activity.doc
comp5_unit4_activity_key.doc
comp5_unit4_self_assess.doc
comp5_unit4_self_assess_key.doc

Additional Materials
None.

*Indicates this link is no longer functional.
Component 5/Unit 5

Unit Title
Evolution of Nursing Informatics and HIT Tools Used By Nursing

Unit Description
This unit describes the evolution of nursing informatics and the HIT tools used by nursing.

Unit Objectives
By the end of this unit the student will be able to:
1. Discuss how health IT (HIT) tools have evolved to support the practice of nursing.
2. List common nursing HIT applications and describe how they have evolved over time.
3. Describe the evolving role of nurse informaticists in healthcare organizations.

Unit Topics
5.1 How nurses spend their time
5.1 The changing definitions of nursing informatics over time
5.1 Early nursing informatics tools, and how they evolved over time
5.1 Evolving Role of the Nurse Informaticist

Lecture Titles
5 Evolution of Nursing Informatics and HIT Tools Used By Nursing

Unit References
(All links accessible as of 1/17/2012)

Lecture 5

*Indicates this link is no longer functional.


Lecture 5 Charts, Tables, and Figures
None.

Lecture 5 Images
Slide 6: Nurse typing on a computer, Source Name: UAB School of Nursing.

*Indicates this link is no longer functional.
Unit Required Readings
None.

Unit Suggested Readings


Student Application Activities
comp5_unit5_activity.doc
comp5_unit5_activity_key.doc
comp5_unit5_self_assess.doc
comp5_unit5_self_assess_key.doc

*Indicates this link is no longer functional.

Health IT Workforce Curriculum  History of Health Information Technology in the U.S. 35
Version 3.0/Spring 2012

This material was developed by The University of Alabama at Birmingham, funded by the Department of Health and Human Services, Office of the National Coordinator for Health Information Technology under Award Number 1U24OC000023
Additional Materials
Videotaped Stories from Nursing Informatics Pioneers. Available from: (http://www.amia.org/programs/working-groups/nursing-informatics/history-project/video-library-1)
Component 5/Unit 6

Unit Title
History of Electronic Health Records (EHRs)

Unit Description
This unit describes the history of electronic health records.

Unit Objectives
By the end of this unit the student will be able to:
1. Describe some early examples of electronic medical records.
2. Discuss lessons learned from the early EHR implementations.
3. Discuss how the attributes that were identified for a computer-based patient record in the 1991 Institute of Medicine Report relate to the concept of meaningful use.
4. Discuss differences between the terms electronic health record (EHR) and personal health record (PHR).

Unit Topics
6a.1 EHR terminology changes over time
6a.2 Example of an early EHR—COSTAR
6a.3 Example of an early EHR—TMR
6a.4 Example of an early EHR—RMRS
6a.5 Lessons learned from the early systems
6a.6 Barriers to widespread use
6a.7 The Computer-Based Patient Record (1991)
6a.8 Electronic Health Record System Capabilities (2003)
6a.9 Meaningful Use (2010)

Lecture Titles
6a Early EHR Prototypes
6b Evolution of Functional Requirements for EHRs

Unit References
(All links accessible as of 1/17/2012)
None.

Lecture 6a

*Indicates this link is no longer functional.

Lecture 6a Charts, Tables, Figures and Images
None.

Lecture 6b
3. Miller RA, Waitman LR, Chen S, Rosenbloom ST. The anatomy of decision support during inpatient care provider order entry (CPOE):

*Indicates this link is no longer functional.

Lecture 6b Charts, Tables, and Figures
None.

Lecture 6b Images

Unit Required Readings
None.

Unit Suggested Readings

Student Application Activities
comp5_unit6_activity.doc
comp5_unit6_activity_key.doc
comp5_unit6_self_assess.doc
comp5_unit6_self_assess_key.doc

Additional Materials
None.

*Indicates this link is no longer functional.

Health IT Workforce Curriculum

History of Health Information Technology in the U.S.

Version 3.0/Spring 2012

This material was developed by The University of Alabama at Birmingham, funded by the Department of Health and Human Services, Office of the National Coordinator for Health Information Technology under Award Number 1U24OC000203
Component 5/Unit 7

Unit Title
History of Clinical Decision Support Systems

Unit Description
This unit describes the history of clinical decision support systems.

Unit Objectives
By the end of this unit the student will be able to:
1. Describe various types and structures of clinical decision support (CDS) systems.
2. Discuss the evolution of clinical decision support from expert system research.
3. Discuss the changes in focus of clinical decision support from the 1980s to the present.
4. Discuss the change in architecture and mode of access of clinical decision support systems from the 1980s to the present.
5. Describe some of the early clinical decision support systems.
6. Discuss the historical challenges in implementing CDS.

Unit Topics
7a.1 Definition of clinical decision support (CDS)
7a.2 Types of CDS
7a.3 “Classic” clinical decision support systems
7b.1 Examples of CDS and how they evolved
7b.2 Evolution of CDS architecture
7b.3 Challenges to be overcome

Lecture Titles
7a What is CDS?
7b Examples of Early CDS Systems
7c Evolution of CDS

Unit References
(All links accessible as of 1/17/2012)
None.

Lecture 7a


Lecture 7a Charts, Tables, Figures and Images
None.

Lecture 7b


Lecture 7b Charts, Tables, Figures and Images
None.

Lecture 7c


3. Hand L. The T.J. Hooper, 60 F.2d 737, 740 (2d Cir. 1932).


Lecture 7c Charts, Tables, and Figures
None.

Lecture 7c Images
Slide 12, 13: Available from: http://images.jsc.nasa.gov/luceneweb/fullimage.jsp?from_month=9&from_day=1&from_year=1958&to_

*Indicates this link is no longer functional.
Unit Required Readings
None.

Unit Suggested Readings

Student Application Activities
comp5_unit7_activity.doc
comp5_unit7_activity_key.doc
comp5_unit7_self_assess.doc
comp5_unit7_self_assess_key.doc

Additional Materials
Additional historical CDS resources:
2. Buchanan BG, Shortliffe EH. Rule-based expert systems [. Boston,
MA: Addison-Wesley, 1984 Available from:
http://www.aaai.org/AITopics/pmwiki/pmwiki.php/AITopics/
RuleBasedExpertSystems


*Indicates this link is no longer functional.
Component 5/Unit 8

Unit Title
History of CPOE and E-Prescribing

Unit Description
This unit describes the history of CPOE and e-prescribing.

Unit Objectives
By the end of this unit the student will be able to:
1. Explain how the evolving capabilities of CPOE systems impact quality and patient safety in the hospital setting.
2. Explain how the evolving capabilities of e-prescribing systems impact quality and patient safety in the ambulatory setting.

Unit Topics
8a.1 The unreliability of physician handwriting
8a.2 Automation of the ordering process
8a.3 Early CPOE systems
8a.4 Early e-prescribing systems

Lecture Titles
8a History of CPOE
8b History of E-Prescribing

Unit References
(All links accessible as of 1/17/2012)

Lecture 8a

*Indicates this link is no longer functional.

This material was developed by The University of Alabama at Birmingham, funded by the Department of Health and Human Services, Office of the National Coordinator for Health Information Technology under Award Number 1U24OC000023

Lecture 8a Charts, Tables, and Figures
None.

Lecture 8a Images

*Indicates this link is no longer functional.
Lecture 8b


Lecture 8b Charts, Tables, and Figures
None.

Lecture 8b Images
Slide 3: Nir Menachemi, Personal Collection.

Unit Required Readings
None.

Unit Suggested Readings

Student Application Activities
comp5_unit8_activity.doc
comp5_unit8_activity_key.doc
comp5_unit8_self_assess.doc
comp5_unit8_self_assess_key.doc

Additional Materials
None.
Component 5/Unit 9

Unit Title
History of Health Information Exchange

Unit Description
This unit describes the history of health information exchange.

Unit Objectives
By the end of this unit the student will be able to:
1. Describe historical U.S. efforts at realizing health information exchange.
2. Define community health information networks or CHINs and regional health information organizations known as RHIOs.
3. Describe why CHINs failed in the 1990s.
4. Describe the concept of RHIOs and articulate how they relate to Nationwide Health Information Network now called the NwHIN.

Unit Topics
9.1 What is health information exchange (HIE)?
9.2 How is health information currently exchanged?
9.3 What were early HIE systems, and why did they fail?
9.4 The goals of the Nationwide Health Information Network

Lecture Titles
9 History of Health Information Exchange

Unit References
(All links accessible as of 1/17/2012)

Lecture 9 Charts, Tables, and Figures
None.
Lecture 9 Images
Slide 6: Available from: maps.google.com

Unit Required Readings
None.

Unit Suggested Readings

Student Application Activities
comp5_unit9_activity.doc
comp5_unit9_activity_key.doc
comp5_unit9_self_assess.doc
comp5_unit9_self_assess_key.doc

Additional Materials

*Indicates this link is no longer functional.
Component 5/Unit 10

Unit Title
History of Privacy and Security Legislation

Unit Description
This unit describes the history of privacy and security legislation in the US.

Unit Objectives
By the end of this unit the student will be able to:
1. Discuss the reasons why the administrative simplification provisions were attached to the original HIPAA legislation.
2. Explain the five principles underlying the HIPAA privacy rule.
3. Discuss the reasons why the privacy rule was an action of the executive, not the legislative branch of Congress.
4. Describe security recommendations in the 1997 report “For the Record.”
5. Describe the major changes in privacy and security requirements as a result of HITECH and the reasons why the changes were needed.

Unit Topics
10a.1 Definitions of privacy, confidentiality and security
10a.2 HIPAA legislation-1996
10a.3 Privacy and confidentiality prior to HIPAA
10a.4 Principles underlying the HIPAA Privacy Rule
10a.5 HIPAA-1998-2009
10b.1 Practices recommended by National Research Council (NRC) to ensure confidentiality
10b.2 NRC Recommended Security Practices
10b.3 Background to HITECH changes to HIPAA
10b.4 HITECH changes to HIPAA
10b.5 Challenges in implementing HITECH privacy and security requirements

Lecture Titles
10a Background of HIPAA
10b Best Practices for Information Security
10c HITECH Privacy and Security Regulations

*Indicates this link is no longer functional.

This material was developed by The University of Alabama at Birmingham, funded by the Department of Health and Human Services, Office of the National Coordinator for Health Information Technology under Award Number 1U24OC000023
Unit References
(All links accessible as of 1/17/2012)

Lecture 10a Charts, Tables, and Figures
None.

Lecture 10a Images

Lecture 10b Charts, Tables, Figures and Images
None.

Lecture 10c Charts, Tables, and Figures
None.

Lecture 10c Images
Slide 8: David Weiss, Personal Collection.

Unit Required Readings
None.
Unit Suggested Readings

Student Application Activities
comp5_unit10_activity.doc
comp5_unit10_activity_key.doc
comp5_unit10_self_assess.doc
comp5_unit10_self_assess_key.doc

Additional Materials
1. Department of Health and Human Services, Office of Civil Rights, Health Information Privacy. This website provides information on HIPAA Privacy and Security requirements. Available from: http://www.hhs.gov/ocr/privacy/
2. Video: Press conference of Kathleen Sebelius, Secretary, U.S. Department of Health and Human Services on strengthening the privacy rule as a result of HITECH. This video is closed caption and features Kathleen Sebelius speaking on the changes in HIPAA as a result of the HITECH Act. Available from: http://www.hhs.gov/news/imagelibrary/video/2010-07-08_press.html*
Component 5/Unit 11

Unit Title
Software Certification and Regulation

Unit Description
This unit describes the history of software certification and regulation.

Unit Objectives
By the end of this unit the student will be able to:
1. Discuss the history of FDA involvement in the regulation of clinical software.
2. Describe the origins, focus and activities of CCHIT.
3. Discuss the changes in the EHR certification process as a result of the HITECH Act.
4. Discuss the recent efforts to improve the safety of EHRs.

Unit Topics
11.1 Explanation of EHR certification and FDA regulation processes
11.2 Challenges in regulation of EHRs
11.3 1989 FDA policy on ‘competent human intervention’
11.4 Recommendations on software regulation from 1996 FDA workshop
11.5 Rise of interest in HIT-1999-2004
11.6 2004-2009 Certification of EHRs-origins and role of CCHIT
11.7 Patient safety and HIT regulation
11.8 HITECH requirements for certification of HIT
11.9 Unintended consequences of HIT
11.10 Improving the Safety of HIT

Lecture Titles
11 Software Certification and Regulation

Unit References
(All links accessible as of 1/17/2012)

Lecture 11

*Indicates this link is no longer functional.


Lecture 11 Charts, Tables, and Figures
None.

Lecture 11 Images
Slide 9: Clip Art, Available from: Microsoft clips online; Used with permission from Microsoft.

*Indicates this link is no longer functional.
Unit Required Readings
None.

Unit Suggested Readings
Note: This reading addresses the history of FDA regulation. Additional materials for the topic of certification are in the section below on Additional Materials.


Student Application Activities
comp5_unit11_activity.doc
comp5_unit11_activity_key.doc
comp5_unit11_self_assess.doc
comp5_unit11_self_assess_key.doc

Additional Materials
1. ONC Standards and Certification—This website is useful to monitor the changes in the certification process. It is available from: http://healthit.hhs.gov/portal/server.pt/community/healthit_hhs_gov

*Indicates this link is no longer functional.
standards_and_certification/1153*

2. ONC – Authorized Testing and Certification Bodies—This website describes the current EHR certification bodies under HITECH and includes links to other relevant sites, including other certification groups in addition to CCHIT. This website is available from: http://healthit.hhs.gov/portal/server.pt?open=512&mode=2&objID=3120*
Component 5/Unit 12

Unit Title
History of Mobile Computing

Unit Description
This unit describes the history of mobile computing in healthcare.

Unit Objectives
By the end of this unit the student will be able to:
1. Discuss the developments in mobile computing that have enabled portable computers to be used in health care settings.
2. List the benefits of using mobile computers in the clinical setting, and discuss how these benefits have developed over time.
3. Give examples of three applications for mobile computers in healthcare.

Unit Topics
12.1 History and examples of mobile devices
12.2 Medical uses for mobile devices
12.3 History of use of mobile devices in medicine
12.4 Benefits of mobile devices in healthcare
12.5 Characteristics of users of mobile devices in healthcare

Lecture Titles
12 History of Mobile Computing

Unit References
(All links accessible as of 1/17/2012)

Lecture 12
3. Carroll AE, Christakis DA. Pediatricians’ use of and attitudes about

*Indicates this link is no longer functional.

Lecture 12 Charts, Tables, and Figures
None.

Lecture 12 Images
Slides 4, 5, 21, 22, 23, 24, 25: Clip Art, Available from: Microsoft clips online Source Name: Used with permission from Microsoft.

Unit Required Readings
None.

Unit Suggested Readings
1. Andersen P, Lindgaard A-M, Prgomet M, Creswick N, Westbrook JI. Mobile and fixed computer use by doctors and nurses on hospital

*Indicates this link is no longer functional.
wards: Multi-method study on the relationships between clinician role, clinical task, and device choice.


**Student Application Activities**
comp5_unit12_activity.doc
comp5_unit12_activity_key.doc
comp5_unit12_self_assess.doc
comp5_unit12_self_assess_key.doc

**Additional Materials**
None.
Component 5/Unit 13

Unit Title
History of Telemedicine

Unit Description
This unit describes the history of telemedicine.

Unit Objectives
By the end of this unit the student will be able to:
1. Define telemedicine.
2. Describe the differences between telemedicine and telehealth.
3. Discuss key developments in the history of telemedicine.
4. Identify and describe at least two current applications of telemedicine.

Unit Topics
13.1 Telemedicine definitions
13.2 Differences between telemedicine and telehealth
13.3 History of telemedicine in the early and late 20th century
13.4 Telemedicine reports to Congress
13.5 Current and future developments in telemedicine

Lecture Titles
13 History of Telemedicine

Unit References
(All links accessible as of 1/17/2012)

Lecture 13


*Indicates this link is no longer functional.


Lecture 13 Charts, Tables, Figures and Images
None.

Unit Required Readings
None.

Unit Suggested Readings
1. The 2001 Telemedicine Report to Congress – This review of telemedicine issues and policy direction emerged as the Internet grew in importance and most of the content is equally relevant today. The whole report is almost 100 pages. If a shorter assignment is desirable, the Executive Summary is only 10 pages.

2. Evolution & Summative Evaluation of the Alaska Federal Health Care Access Network Telemedicine Project – This summary and evaluation of the Alaska telehealth initiative is an excellent model for building and evaluating a telemedicine program.

3. Telemedicine Reimbursement Report – This review of telemedicine licensing and reimbursement, while dated in 2003, contains an excellent review of the status at that time, and the framework by which it is constructed is valid today for structuring an updated understanding.

Student Application Activities
comp5_unit13_activity.doc
comp5_unit13_activity_key.doc
comp5_unit13_self_assess.doc
comp5_unit13_self_assess_key.doc

Additional Materials
None.

*Indicates this link is no longer functional.
Component 5/Unit 14

Unit Title
History of Quality Improvement and Patient Safety

Unit Description
This unit describes the history of the use of information technology as a part of quality improvement and patient safety.

Unit Objectives
By the end of this unit the student will be able to:
1. Describe conditions and notable publications concerning patient safety and quality improvement from 1959 to the present.
2. Describe the background to the Institute of Medicine reports on Patient Safety
3. Summarize the main findings from several Institute of Medicine reports on quality, patient safety, and health information technology (HIT).
4. Describe various ways in which HIT has evolved to improve quality or enhance patient safety.

Unit Topics
14.1 The Institute of Medicine Reports
14.2 History of patient safety and role of HIT
14.3 History of patient safety and quality
14.4 HITECH and patient safety and quality

Lecture Titles
14 History of Quality Improvement and Patient Safety

Unit References
(All links accessible as of 1/17/2012)

Lecture 14
3. Institute of Medicine. Health IT and patient safety: building safer

*Indicates this link is no longer functional.
systems for better care. 2011.

Lecture 14 Charts, Tables, and Figures
None.

Lecture 14 Images
Slides 8, 11, 18: Clip Art, Available from: Microsoft clips online Source Name: Used with permission from Microsoft.

Unit Required Readings
None.

Unit Suggested Readings

*Indicates this link is no longer functional.


**Student Application Activities**
comp5_unit14_activity.doc  
comp5_unit14_activity_key.doc  
comp5_unit14_self_assess.doc  
comp5_unit14_self_assess_key.doc

**Additional Materials**
None.
Component 5/Unit 15

Unit Title
Payment-Related Issues and the Role of HIT

Unit Description
This unit describes payment-related issues and the role of HIT.

Unit Objectives
By the end of this unit the student will be able to:
1. Discuss the evolution of incentives for adoption of HIT.
2. Discuss direct and indirect ways in which health care payors can influence the adoption of HIT.
3. Describe past and current strategies employed by payors to influence HIT adoption.

Unit Topics
15.1 Third party payors and misalignment of incentives
15.2 Payor’s influence on HIT
15.3 Incentivizing the use of HIT
15.4 Payor generosity and HIT
15.5 Other roles for payors and HIT
15.6 Payors and health information exchange
15.7 Incentives under the HITECH Act

Lecture Titles
15 Payment-Related Issues and the Role of HIT

Unit References
(All links accessible as of 1/17/2012)
None.

Lecture 15
Lecture 15 Charts, Tables, and Figures
None.

Lecture 15 Images
Slide 4, 9, 14, 15, 16, 18: Microsoft clip art; Used with permission from Microsoft.

Unit Required Readings
None.

Unit Suggested Readings


Student Application Activities
comp5_unit15_activity.doc
comp5_unit15_activity_key.doc
comp5_unit15_self_assess.doc

*Indicates this link is no longer functional.

This material was developed by The University of Alabama at Birmingham, funded by the Department of Health and Human Services, Office of the National Coordinator for Health Information Technology under Award Number 1U24OC000023
Additional Materials

1. Incentive Programs for EHRs. The website of the Centers for Medicare and Medicaid Services (CMS) contains a description of the incentives for meaningful use of EHRs. Available from: https://www.cms.gov/ehrincentiveprograms/
Component 5/Unit 16

Unit Title
History of Health IT Organizations

Unit Description
This unit describes the history of health IT organizations.

Unit Objectives
By the end of this unit the student will be able to:
1. Describe the background and original constituencies of AMIA, HIMSS, and AHIMA.
2. Describe the changes in major interests that have occurred at AMIA, HIMSS, and AHIMA over time.
3. Describe the origins, current focus, and relationships among the following standards development organizations: HL-7, HITSP, ONC Health IT Standards Committee.

Unit Topics
16a.1 American Medical Informatics Association (AMIA)
16a.2 Healthcare Information and Management Systems Society (HIMSS)
16a.3 American Health Information Management Association (AHIMA)
16a.4 Collaborations among organizations
16a.5 16b.1 Standards Development Organizations

Lecture Titles
16a Professional Organizations
16b Standards Development Organizations

Unit References
(All links accessible as of 1/17/2012)

Lecture 16a
2. AHIMA, AMIA. Health Information Management and Informatics Core Competencies for Individuals Working with Electronic Health Records [Internet]. Chicago: American Health Information

*Indicates this link is no longer functional.


**Lecture 16a Charts, Tables, Figures and Images**

None.

**Lecture 16b**


**Lecture 16b Charts, Tables, and Figures**

None.

**Lecture 16b Images**


**Unit Required Readings**

None.

**Unit Suggested Readings**

1. There are no readings for this unit. To learn about the organizations students will explore the websites of the organizations. These are included in the section on Additional Materials.

**Student Application Activities**

comp5_unit16_activity.doc
comp5_unit16_activity_key.doc

*Indicates this link is no longer functional.

Health IT Workforce Curriculum History of Health Information Technology in the U.S. Version 3.0/Spring 2012

This material was developed by The University of Alabama at Birmingham, funded by the Department of Health and Human Services, Office of the National Coordinator for Health Information Technology under Award Number 1U24CO000023
Additional Materials

1. Professional Associations related to health information technology
   - American Medical Informatics Association (AMIA) http://www.amia.org/
     • About AMIA http://www.amia.org/about-amia
     • History of the American College of Medical Informatics (ACMI) http://www.amia.org/programs/acmi-fellowship
   - Health Information and Management Systems Society (HIMSS) http://www.himss.org/
     • History of HIMSS http://www.himss.org/content/files/HIMSS_HISTOR.pdf*
   - American Health Information Management Association (AHIMA) http://www.ahima.org/
     • Background and History http://www.ahima.org/about/history.aspx

2. Standards Development Organizations
   - International Organization for Standardization (ISO) http://www.iso.org
     • Background and History http://www.iso.org/iso/about/the_iso_story.htm
   - American National Standards Institute (ANSI) http://www.ansi.org
     • Background and History http://www.ansi.org/about Ansi/introduction/history.aspx?menuid=1

*Indicates this link is no longer functional.
- Health Level 7 (HL 7) http://www.hl7.org
  • Background and History http://www.hl7.org/about/index.cfm?ref=nav

- Health Information Technology Standards Panel (HITSP) http://www.hitsp.org
  • Background and History http://www.hitsp.org/faq.aspx#formed
  • Health IT Standards Committee http://www.healthit.gov/facas/health-it-standards-committee

- National Institute of Standards and Technology (NIST) http://www.nist.gov
  • Background and History http://www.nist.gov/public_affairs/general_information.cfm

*Indicates this link is no longer functional.
**Component Acronym Glossary**

- AAMSI – American Association of Medical Systems and Informatics
- ABD – Abdomen
- ABS – Arterial Blood Sample
- ACMI – American College of Medical Informatics
- AHA – American Hospital Association
- AHIMA – American Health Information Management Association
- AHRQ – Agency for Healthcare Research and Quality
- AMA – American Medical Association
- AMIA – American Medical Informatics Association
- AMRA – American Medical Record Association
- ANA – American Nursing Association
- ANSI – American National Standards Institute
- ARRA – American Recovery and Reinvestment Act
- ATCB – Authorized Testing and Certification Body
- BCMA – Barcode Medication Administration
- BM – Bowel Movement
- BP – Blood Pressure
- BS – Bowel Sounds
- CAT – Computed Axial Tomography
- CCHIT – Certification Commission for Healthcare Information
- CD – Compact Disc
- CDC – Centers for Disease Control and Prevention
- CDRH – Center for Devices and Radiological Health
- CDS – Clinical Decision Support
- CEO – Chief Executive Officer
- CFO – Chief Financial Officer
- CHIN – Community Health Information Network
- CIA – Central Intelligence Agency
- CIO – Chief Information Officer
- CMS – Centers for Medicare and Medicaid Services
- COSTAR – Computer Stored Ambulatory Record
- CPOE – Computerized Provider [or Physician] Order Entry; Computer-based [or Care Provider] Order Entry
- CPR – Computer-based Patient Record
- CPRS – Computerized Patient Record System
- CTA – Clear to Auscultation
- CV – Cardiovascular
- d/c – Discontinue

*Indicates this link is no longer functional.*
JAMIA – Journal of the American Medical Informatics Association
K2 – Kennedy Kassebaum Act
LDS – Latter Day Saints
MIS – Medical Information System
MAUDE – Manufacturer and User Facility Device Experience
MD – Medical Doctor
MI – Myocardial Infarction
MMA – Medicare Modernization Act
MRSA – Methicillin Resistant Staphylococcus Aureus
MUMPS – Massachusetts General Hospital Utility Mutiprogramming System
NAHIT – National Alliance for Health Information Technology
NHII – National Health Information Infrastructure
NHIN – Nationwide Health Information Network
NI – Nursing Informatics
NIH – National Institutes of Health
NIST – National Organization of Standards and Technology
ONC – Office of the National Coordinator
ONCHIT – Office of the National Coordinator for Health Information Technology
OP – Operation
P4P – Pay for Performance
PACS – Picture Archiving and Communication System
PCA – Patient Controlled Analgesia
PCV – Packed Cell Volume
PDA – Personal Digital Assistant
PHI – Public Health Informatics
PHI – Protected Health Information
PHR – Personal Health Record
PKI – Public Key Infrastructure
PM – Afternoon, Evening
POD – Post Operative Day
PVC – Predicted Vital Capacity
QMR – Quick Medical Reference
R – Respiration
REC – Regional Extension Center
RHIO – Regional Health Information Organizations
RMRS – Regenstrief Medical Record System
RRR – Relative Risk Reduction
RRR – Regular Rhythm Rate
Rx – Prescription
S/P – Status Post
SAMS – Society for Advanced Medical Systems
SCAMC – Symposium on Computer Applications in Medical Care
SCM – Society for Computer Medicine
SHARP – Strategic Health IT Advanced Research Projects
SOAP – Subjective, Objective, Assessment and Plan
SPEP – Serum Protein Electrophoresis
STD – Sexually Transmitted Disease
T – Temperature
TMR – The Medical Record
TPO – Treatment Payment [Hospital] Operations
UOP – Urine Output
VA – Veterans Affairs