BMI 201 – Introduction to Clinical Informatics
Midterm Study Guide
Fall 2019

All materials from the Hoyt textbook, PowerPoint slides, videos, and assignments are potential test material for the midterm exam. This study guide should serve as a GUIDE and should not be the only thing you rely on when studying.

CHAPTER 1 OVERVIEW OF HEALTH INFORMATICS

Key Terms and Concepts
- State the definition and origin of health informatics
- Identify the drivers behind health informatics
- List the barriers to health information technology (HIT) adoption
- State the impact of HITECH Act and Affordable Care Act (ACA) on health informatics in the United States
- Understand why there are barriers to health information technology (HIT) adoption
- ARRA 2009 o Includes HITECH
- 5 Vs of Big Data
- Data, information, and knowledge
- Health informatics curricula o 5 broad goals
  - ✦ improve medical quality, patient safety, healthcare efficiency and reduce health disparities
  - ✦ engage patients and families
  - ✦ improve care coordination
  - ✦ ensure adequate privacy and security of personal health information
  - ✦ improve population and public health
- ACA 2010 o Expanded Medicaid for uninsured [Medicaid is "aid" for those who need vs. Medicare "care" for over 65]
  - ✦ Prevent discrimination re. preexisting conditions, prohibit lifetime caps on healthcare costs, require all to have insurance, subsidies for low income
  - ✦ Varies from state to state, but adheres to federal guidelines
  - ✦ AZ Medicaid is AHCCCS; CHIP – Children's Health Insurance Plan; in AZ it is KidsCare o Improved Medicare
  - ✦ Created PCORI and CMS Innovation Center for evaluate new healthcare delivery models (ACO, PCMH)
- MACRA 2015
  - ✦ Introduced new payment models
  - ✦ Change reimbursement for physicians (to value NOT volume)
- HIPAA

CHAPTER 4 ELECTRONIC HEALTH RECORDS
- State the definition and history of Electronic Health Records
- Understand the key terms related to EHRs
- Describe the ARRA-HITECH programs to support electronic health records
- Describe the benefits and challenges of computerized order entry and clinical decision support systems
- Understand the challenges and obstacles to EHR adoption
- EHR, EMR, and PHR definitions
  - ✦ Identify the benefits of EHRs vs paper records
  - ✦ Flexibility and Adaptability
  - ✦ Integration multimedia information
  - ✦ Radiology images, echocardiograms

- ✦ Portability
- ✦ Enhanced Security
- ✦ Accessibility for providers and patients
- ✦ Legibility
- ✦ Decision support
- Advantages and Disadvantages of EHRs
- Electronic Health Records Key Components
  - ✦ 8 Core Functions in EHR
  - ✦ Other components
- Clinical Care Locations
- Coordination of Care or Continuity of Care (CCD)
- Computerized Physician Order Entry (CPOE)
- Clinical Decision Support (CDS)

<mark>CHAPTER 5 STANDARDS AND INTEROPERABILITY</mark>

Key Terms and Concepts

- Interoperability - exchange and use data

Terminology Standards –

Important for normalizing the representation of concepts used in health information systems.

i. ICD-10 - International Classification of Diseases.

ii. LOINC (Logical Observations: Identifiers, Names and Codes) - labs, clinical, HIPAA

iii. SNOMED-CT (Systematized Nomenclature Medicine - Clinical Terminology) - covers diseases, findings, procedures, drugs, etc.

<mark>CHAPTER 6 HEALTH INFORMATION EXCHANGE</mark>

Key Terms and Concepts

- HIE
- Benefits of HIE
  - ✦ Improve communication
  - ✦ Reduce paperwork and extra testing
  - ✦ Improve safety and errors
  - ✦ Engage patients(consumers) to be involved
  - ✦ CDS available
  - ✦ Improve quality and outcomes
  - ✦ Reduce health care cost
  - ✦ Public health monitoring
- HIO
- HISP
- Opt-in and Opt-out