

# Chapter 2: Framework for Implementing the U.S. Medical Records Infrastructure

Biomedical Informatics: By David Lubliner PhD (available June 2015)

**Chapter Objective** “ *Familiarity with Government initiatives that set stage for the Electronic Health Record (EHR) Infrastructure.* “

## **TimeLine:**

1. **1971** Veterans Administration , largest medical provider in U.S. started developing an EHR
  - a. **1987**, VA rolled out a working system worldwide originally called the Veterans Health Information Systems and Technology Architecture (VistA) and renamed **HealthVet**
2. **1996** Health Insurance Portability and Accountability Act (**HIPAA**) under President Clinton, public law 104-191.
3. **2009** Stimulus Bill Health IT funding, President Obama , allocated 19.7 billion to defray the costs of implementing EHR’s
4. **2010** Affordable Care Act(ACA), President Obama, ) often referred to as ObamaCare
5. **2012** e-Prescriptions required of all physicians, reimbursement reductions for non compliance

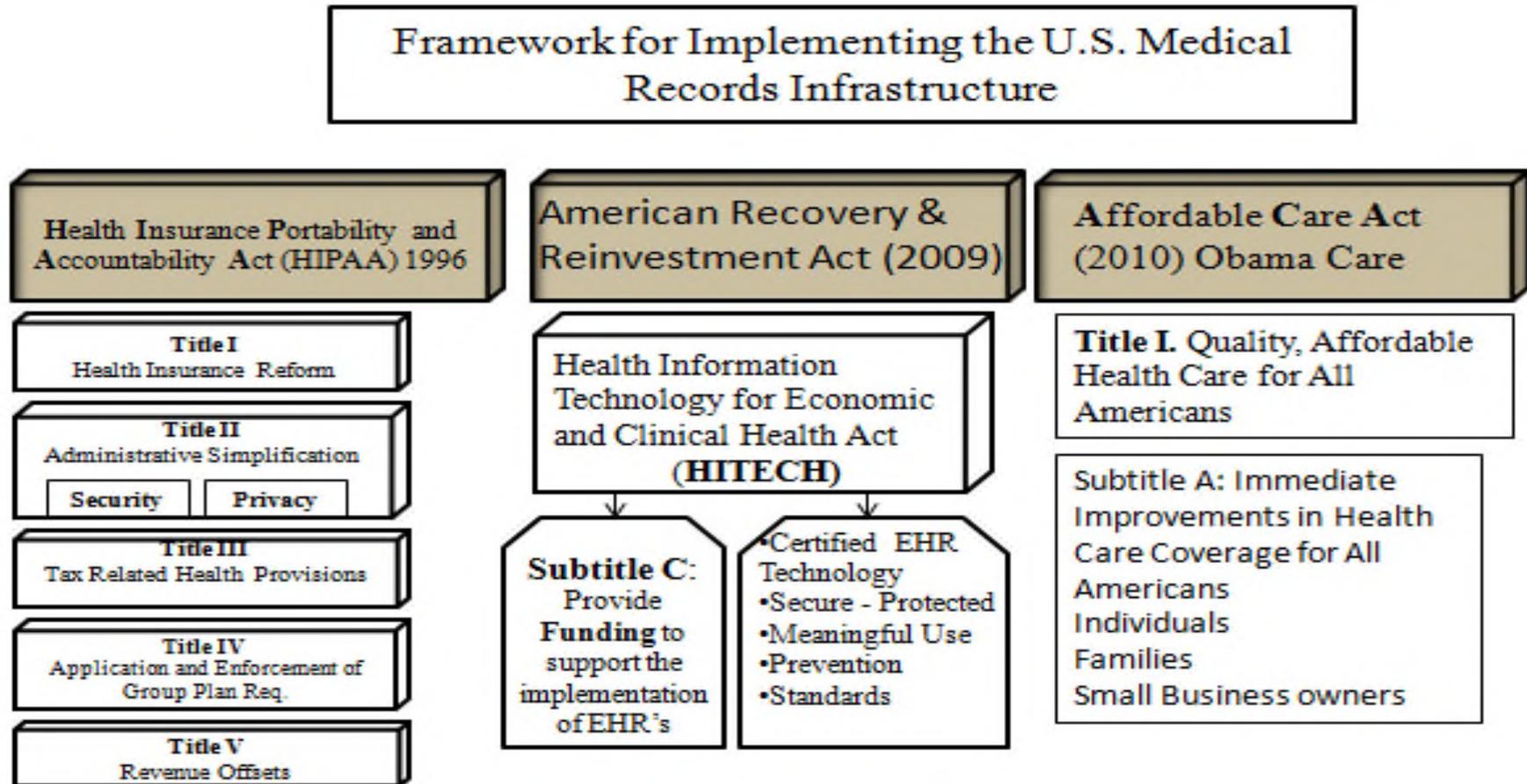
## **Implications:**

Goals were to

1. Enhance healthcare delivery and accessibility
2. Reduce errors and duplicate diagnostic procedures
3. Create integrated research and clinical databases
4. Patient confidentiality specified by HIPAA title II

## Chapter 2: (cont)

### Graphical representation of U.S. HealthCare Initiatives



The chapter will provide details of each U.S. initiative. Important subcomponents such as HIPAA Title II provide important Security and Privacy frameworks. All are outlined by Health and Human Services (HHS) [www.hhs.gov](http://www.hhs.gov) the govt. agency responsible for healthcare

# Chapter 2:

## Health Insurance Portability and Accountability Act (**HIPAA**) 1996

(enforced by Health and Human Services (HHS) Office for Civil Rights. [www.hhs.gov/ocr/office/news/2000/prprifl.doc](http://www.hhs.gov/ocr/office/news/2000/prprifl.doc))

### Title I

Sets guidelines and expands access to medical coverage.

1. Increased Portability Limiting the use of pre-existing Conditions in group health plans
2. Special enrollment plans for dependants
3. Health Insurance must be renewable in small (0-50) and large markets

### Title II :

1. Administrative Simplification
    - a. Privacy
    - b. Security
    - c. Electronic Data Exchange
  2. Medical Liability Reform
  3. Preventing Fraud and Abuse
- (see Chapter 5: Security for more details)

### Other components:

- Electronic Protected Health Information (ePHI) guidelines to ensure patient confidentiality.
- Exceptions where anonimized medical data, where all identifying information is removed, can be used for public healthcare emergencies and sanctioned research. (public responsibility)

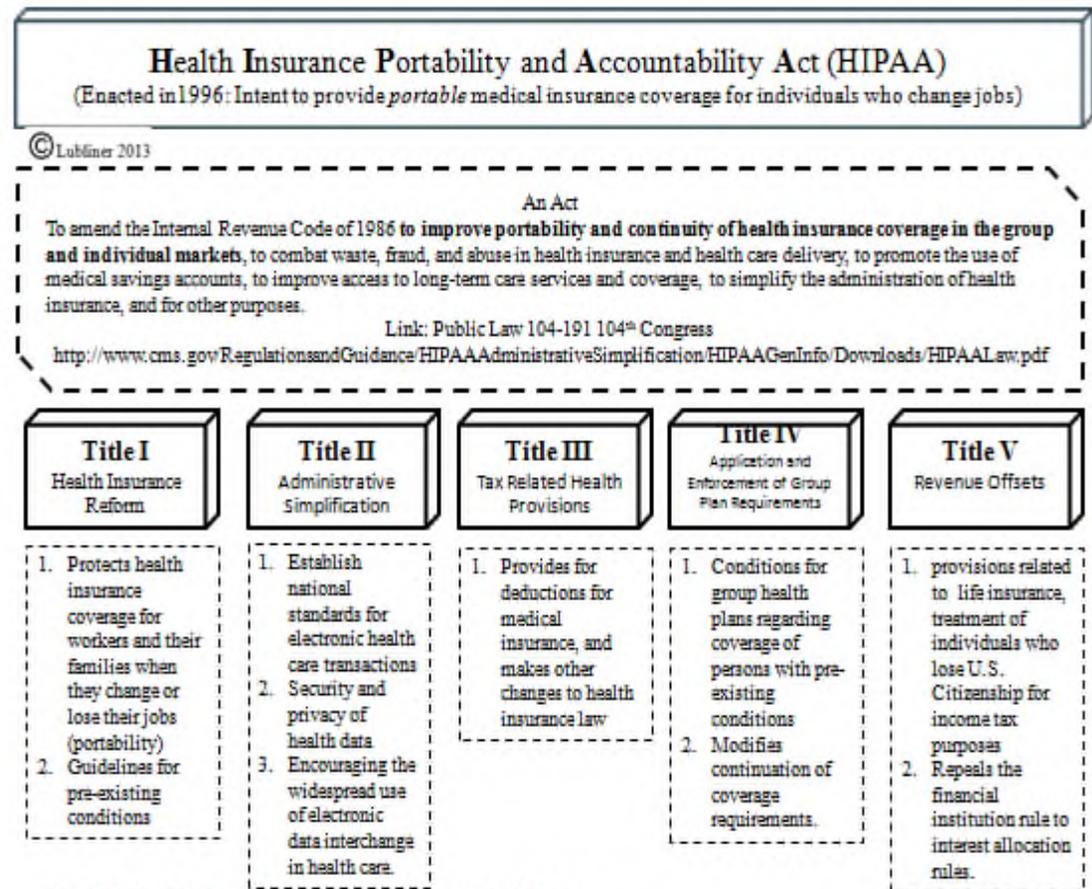


Fig #: Text for this diagram source: <http://www.hhs.gov/healthcare/>

## Chapter 2: HIPAA (continued)

### **Title III: Tax Simplification Rule**

Tax code changes to generate more revenue to pay for the increased costs of HIPAA implementation.

Financial Tax Incentives that fall into three categories

1. tax deductions for medical insurance
2. medical savings accounts that use pre tax dollars
3. long term medical insurance guidelines.

### **Title IV: Group Healthcare Guidelines-Enforcement**

Provides more detail regarding enforcement for group medical plans to

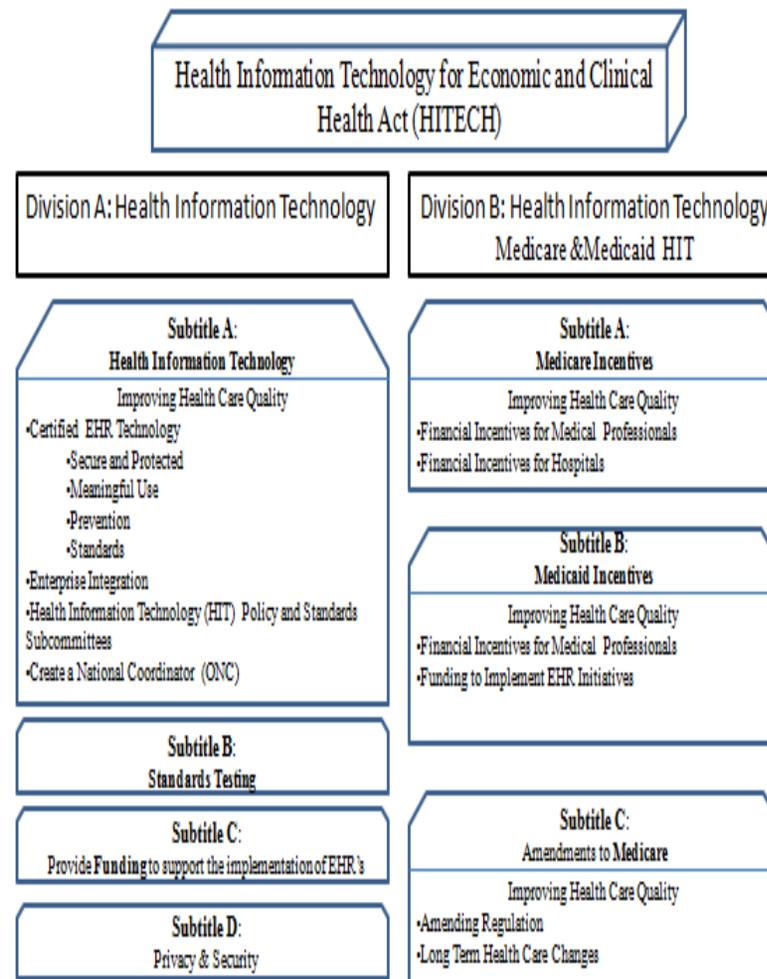
1. prevent exclusion based on preexisting conditions and continuation of coverage when moving between jobs
2. Improves continuation of coverage regulations

### **Title V: Application and Enforcement of Group Health Plans**

1. Healthcare treatment relating to individuals who lose U.S. citizenship (related to income tax)
2. Company owned life insurance: regulations on how employers can deduct company-owned life insurance premiums

## Chapter 2: American Recovery and Reinvestment Act of 2009 (ARRA) *(contained \$782 Billion to jumpstart the economy)*

1. The ARRA provided \$31 billion for health care initiatives
  - A. Of which 19.7 billion dollars were earmarked to facilitate the adoption of Electronic Health Records (EHR's) by the healthcare community.
    - i. Provides \$44-64,000 per physician to offset the cost of EHR implementation
    - ii. Hospitals received millions for EHR implementation
2. Includes Health Information Technology for Economic and Clinical Health (**HITECH**) Act
  - A. Incorporated **Meaningful Use specifications** that became guidelines for reimbursement
    - i. Reimbursement was conditional on these level of compliance of these standards
    - ii. Regulations required all medical practitioners to implement electronic prescription technologies by 2012, hospital and physicians EHR's by 2015
  - B. Categories of effectiveness of integration of EHR's into their processes.



Note: A number of healthcare providers dentists, optometrists, providers of mental health services given more time to implement EHR's

## Chapter 2: Affordable Care Act (ACA)

*The Affordable Care Act (ACA) was passed in March 2010 and upheld by the Supreme Court in June 2012, often referred to as Obama Care.*

### **Some Key Conditions are:**

1. Marketplace to compare healthcare plans (2014)
2. Lower costs, depending on income, subsidized up to \$88,000
3. Access to Medicaid or Children's Health Insurance Program (CHIP)
4. **Pre-Existing Conditions will be covered**
5. Remove Lifetime medical limits
6. Coverage for dependents up to 26 years of age
7. Create Uniform Coverage standards
8. Require coverage of preventive services and immunization
9. Provide assistance for the uninsured
  - Tax credits for individuals with 100-400% of the poverty line (up to \$88,000)
  - Medicaid expansion for those individuals with 130% of the Federal Poverty line
10. Everyone is required to have healthcare coverage by 2014, or pay a small fee
11. Employers with greater than 200 employees must enroll new hires
12. \$20 billion in funding to help hospitals and physicians make the transition to EHR's and provides \$44-64,000 per physician to offset the cost of HER implementation
13. Meaningful Use standards levels 1-7 required medical practitioners to document the effectiveness of their implementation

# Chapter 2: (cont)

## Meaningful Use

Office of the National Coordinator for Health Information Technology (ONC) part of the U.S. Department of Health and Human Services (HHS) created a non-profit certification Commission for Health Information Technology (CCHIT) <http://www.cchit.org/> to certify that organizations met Meaningful standards.

*Meaningful Use was defined by the Center for Medicare and Medicaid Services (CMS) as a series of standards and incentive programs used as criteria for physician reimbursement*

<b>Meaningful Use Objectives</b> (19 needed by Physicians (23 by hospitals) to qualify for incentive reimbursement program from ARRA)	
<b>14 Core Objectives for Physicians (all required)</b>	<b>10 Menu options (comply with at least 5)</b>
1. Use <b>computerized physician order entry</b> for physicians.	1. Implement drug formulary checks
2. Implement drug-drug and drug-allergy interaction checks.	2. Incorporate clinical lab-test results into EHR as structured data
3. Maintain an up-to-date problem list of current active diagnoses.	3. Generate list of <u>patients</u> by specific conditions to use <u>for quality improvement</u> , reduction of disparities, research and outreach
4. Keep an active medication list.	4. Send patient reminders per patient preference for preventive follow up care.
5. Maintain an active medication allergy list.	5. Provide patients with <u>timely electronic access to their health information</u> (including lab results, problem list, medication lists and allergies) within 4 business days of the information being available.
6. Record specified demographics on patients	6. Use certified EHR technology to identify patient specific education resources and provide those resources to the patient if possible.
7. Record and chart changes in specific vital signs	7. The physician who receives a patient from another setting of care or provider or believes an encounter is relevant should <u>perform medication reconciliation</u> .
8. Document whether patients age 13 and older are smokers	8. The physician who transitions their patient to another setting of care or refers their patient should <u>provide a summary of care record for each transition</u>
9. <b>Report clinical quality measures</b>	9. Capability to submit electronic data to immunization registries or immunization information systems and submission to applicable law and practice
10. Implement one clinical decision support rule related to a high priority hospital condition.	10. Capability to <u>submit electronic syndrome surveillance data to public health agencies</u> and actual submission according to applicable law and practice.
11. Offer patients an electronic copy of their health information upon request	
12. Give patients an electronic copy of their discharge instructions upon request	
13. Have the capability to exchange key clinical information	
14. <b>Protect electronic health Information.</b>	

## Chapter 2:

### Summary

- In 1987 the Veterans Administration implemented an Electronic Health Records system, under development for a decade. This was a rudimentary system by modern standards, but marked the beginning of the U.S. governments support and funding for this concept.
- With the emergence of the internet, world wide web in the 1990s, the stage was set via **HIPAA in 1996** to set guidelines for the modern EHR infrastructure.
- This was not a single event, a series of modifications over the next decade culminating with the Final Rule of 2013 set specific rational implementable standards for transactions between system including privacy and security.
- In parallel the American Reinvestment Act (2009), with included the HITECH Act funding, directed \$20 billion to subsidize this effort.
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- Then in 2010 the Affordable Care Act (ACA) set guidelines to ensure all citizens had access.

This is an ever evolving endeavor but we have established a firm foundation on which to build