The Importance of Developing a Relationship with IT

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B. Scott Wilson, MA
IT / Business Relationship Manager
OhioHealth, Columbus OH

Learning Objectives

- Recognize the expanded role of IT in healthcare
- Outline the regulatory complexities driving health IT expansion, and related requirements
- Review potential risks and rewards of health IT
- Identify the potential teams involved in health IT
- Discuss the importance of business, clinical and IT relationships

Disclosures

- No conflicts of interest or disclosures related to the material in this presentation

Evolution of Health Information Technology (HIT)

Part I
Evolution of HIT

Health information
• Generally includes information about
  – Health status
  – Provision of care
  – Billing and payment for care

Evolution of HIT

Health information
• Protected Health Information (PHI)
  – Can be linked to a specific individual
  – Any part of the medical record or payment history
  – Created or collected by “covered entity” or “business associate”

Evolution of HIT

Health information – primary uses
• Patient diagnostics and treatment
• Patient health risk assessment
• Claims and payment processing

• Primary use information normally is PHI

Evolution of HIT

Health information – secondary uses
• Public health monitoring
• Health system planning
• Quality control and monitoring
• Research

• Information is often aggregated
• May be PHI or de-identified information
Evolution of HIT

Information technology

- The use of tools to store, retrieve, transmit data
- Four distinct phases of IT evolution (so far…)

Evolution of HIT

Information technology

Pre Mechanical Era
3000 BC – 1450 AD

Stone cuneiform letter to the King of Lagash
Circa 2400 BC

Evolution of HIT

Information technology

Mechanical Era
1450 – 1840

Gutenberg Printing Press Replica

Evolution of HIT

Information technology

Electro Mechanical Era
1840 – 1940

German Enigma Machine
Circa 1930
Evolution of HIT

Information technology

Electronic Age
1940 – Present

Computer Data Center
Circa 2014

Evolution of HIT

Key advances in IT in current era

- Moore’s Law (an observation)
  - Dramatic increase in raw computing power
  - Significant reduction in cost
- The Internet
- Smart phones
- “Big Data”, “AI” and “virtual assistants”

Evolution of HIT

The Big One

The “Internet of Things”

Term coined by Kevin Ashton of Proctor & Gamble, in 1999

The Regulatory Landscape

Health Information Technology
The Regulatory Landscape

Health Insurance Portability & Accountability Act
- Signed into law in 1996, updated in 2013
- Title I – Access, portability, renewability
- Title II – Fraud, abuse, privacy, security
- Title III – Pre-tax medical spending and savings
- Title IV – Group health plans
- Title V – Company-owned life insurance

The Regulatory Landscape

HIPAA Title II – HHS rules
- Privacy rule
- Transactions and code sets rule
- Security rule
- Unique identifier rule
- Enforcement rule

The Regulatory Landscape

HIPAA Title II – HHS privacy rule
- Regulates use and disclosure of PHI
- Applicable to “covered entities”
  - Medical service providers
  - Health plans, clearinghouses, etc.
- Applicable to “business associates”
  - Anyone working with PHI on behalf of “covered entity”
  - Subcontractors, tech companies, individuals, etc.

The Regulatory Landscape

HIPAA Title II – HHS privacy rule
- Establishes patient rights to their own PHI
- Privacy complaints channeled through HHS Office of Civil Rights
The Regulatory Landscape

HIPAA Title II – security rule

• Establishes national standard for confidentiality, integrity and availability of e-PHI
• Initially applied only to “covered entities”
• Three categories of required security
  – Administrative safeguards
  – Physical safeguards
  – Technical safeguards

HIPAA Title II – security rule

The Regulatory Landscape

• Administrative safeguards
  – Security management process
  – Security personnel
  – Information access management
  – Workforce management and training
  – Periodic evaluation

The Regulatory Landscape

• Physical safeguards
  – Facility access controls
  – Workstation and device security

The Regulatory Landscape

• Technical safeguards
  – Access control
  – Audit controls
  – Integrity controls
  – Transmission security
The Regulatory Landscape

HIPAA Title II – enforcement rule
• Establishes investigatory and due process procedures for potential HIPAA violations
• Establishes civil penalties for violations
  – Range from $100 to $50k per violation
  – Certain violations may result in criminal prosecution

The Regulatory Landscape

HITECH Act
• Health Information Technology for Economic and Clinical Health Act
• Part of the American Recovery and Reinvestment Act of 2009

The Regulatory Landscape

HITECH Act – four subtitles
• A – Promotion of health information technology
• B – Testing of health information technology
• C – Grants and loans funding
• D – Privacy and security

The Regulatory Landscape

HITECH Act – Subtitle A – promotion of HIT
• Improving healthcare quality, safety, efficiency
• Meaningful use
  – Voluntary CMS program to encourage use of electronic health record systems
  – Three stages with increasing financial incentives
  – Goal is to drive EHR adoption to gain anticipated quality, safety and efficiency benefits
The Regulatory Landscape

HITECH Act – Subtitle D – security
- Enhances the security provisions of HIPAA
- Extends “breach notification” requirements
- Extends HIPAA privacy and security requirements to all business associates

Evolution of HIT

Part II

Why the rapid convergence of healthcare and IT?
- The HITECH incentive
- Spotlighting healthcare costs
- Consumerism
- The “connected” world
- The “Amazon Effect”
- Non-traditional players with new ideas

Rapid advances in a short period of time
- Robust EMR systems and information sharing
- Telemedicine makes care more accessible
- Implantable and externally worn devices provide real-time patient monitoring
- Patient care equipment monitors itself and asks for service as needed
HIT – Risks and Rewards

Potential rewards for individual patients...
- Comprehensive patient medical record
- Faster patient care
- More accurate diagnoses
- More precise treatments
- Reduced medical errors
- In general, BETTER patient care

Potential rewards for general population...
- Population health predictions
- Early detection of disease outbreaks
- More accessible care
- More affordable care

Realized rewards – a few examples
- Telemedicine for comprehensive stroke care
- “Big data” predictive analytics to improve infusion and OR scheduling
- Automated MRI brain structure analysis using crowd-sourced data sets
- MRI guided robotic deep brain surgery (SEEG, ablations, and more)
HIT – Risks and Rewards

Potential risks...

- More complex systems require more vigilance
- Patient equipment reliability
- Risks from interconnectedness
- Network reliability
- Complacency

HIT – Risks and Rewards

Potential risks...

- ID theft, PHI theft
- Data manipulation
- Ransomware attacks

HIT – Risks and Rewards

Recent ransomware attacks (large scale)

- WannaCry (May, 2017)
  Impacted nearly 70k devices operated by UK's National Health Service, including PCs, MRI, blood refrigerators, and more. Estimated over 300,000 organizations affected worldwide.

- NotPetya (June, 2017)
  Drug maker Merck, Heritage Valley Health Systems and several other US healthcare orgs impacted, as well as others around the world.
HIT – Risks and Rewards

Hacker initiated data breaches in 2017
- Anthem BlueCross BlueShield – 18k members impacted
- Henry Ford Health – 18k patients impacted
- Mid-Michigan Physicians Imaging – 106k patients
- Pacific Alliance Medical Center – 266k patients
- Peachtree Neurological Clinic – 176k patients
- Plastic Surgery Assoc. of South Dakota – 10k patients
- + at least 35 more publicly reported incidents

Potential negative impacts of hacker risks
- Degraded patient health outcomes
- Delayed patient care
- Loss of patient confidence in provider
- Potential fines for data breaches
- Revenue loss
- More…

Reward vs. risk

The HIT Team
Providing the best patient care and experience is the primary goal.

Many highly technical, non-clinical disciplines are now critical to health care delivery.

Potential technical support teams:
- Clinical engineering (Biomed)
- Information security
- Network security
- Solution architecture and design
- Integration and application support
- PACS

Potential technical support teams:
- Network infrastructure
- Desktop engineering
- Desktop field support
- Mobile device management
- Disaster planning and return to operation (recovery)
The HIT Team

Potential clinical and operations teams
- Clinicians
- Nurses, technicians and other medical support
- Clinical operations support (supply, EVS, etc.)
- Executive leadership
- Business operations support (finance, etc.)
- Facilities management
- More…

The HIT Team

Diverse team backgrounds
- Three distinct professional areas
  - Clinical care and support
  - Business operations and support
  - Information technology and support
- Each team has a unique set of goals
- Each area has its own unique “language”
- Experts in one area generally not experts in others

The HIT Team

Vendors
- HIT vendors often present unique challenges
- May not fully understand the healthcare, IT or regulatory environments
- Particularly a risk with non-traditional HIT vendors

Working Together

It’s all about relationships
Working Together

Quick recap

• Healthcare continues to advance rapidly
• IT has evolved briskly in past 15 years
• There are complicated regulatory schemes
• Many diverse teams involved in HIT
• Many non-traditional players

Quick recap

“The single biggest problem in communication is the illusion that it has taken place.”

– George Bernard Shaw

Creating relationships for better communication

• Get to know several key players within all areas
• Understand that each area has real experts
• Learn the goals and objectives of their business
• Discover their “language”
• Embrace a “lifelong learning” mindset

Facilitating IT / business relationships

• Many organizations have a “navigator” role
• At OhioHealth - IT/Business Relationship Manager
  – Experts in communication and relationship management
  – Sufficient knowledge across all areas of the business to know who to connect, and when
  – Strategic advisors to IT, clinical and operations
Working Together

Recipe for successful projects

- Be prepared – clearly understand your objectives
- Ask if the organization has an IT “Navigator”
- Draw on the relationships you’ve built
- Involve each area early in the idea process
- Ask lots of questions, provide lots of answers
- Let _____ be _____

Questions and Comments

References and Further Reading


   https://tinyurl.com/ycs8mgve

   https://tinyurl.com/y8wcxgm9


   https://www.hipaajournal.com/hipaa-administrative-simplification-regulations/

   https://www.hhs.gov/hipaa/for-professionals/privacy/laws-regulations/index.html


h) HIPAA for Professionals. HHS.gov. Retrieved 4/2/18
   https://www.hhs.gov/hipaa/for-professionals/index.html
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