HIPAA Security:
The Essence of What Matters

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Agenda

- What is HIPPA Security?
- What Matters?
- Information Security Lifecycle
- Cost of Not Planning
- Q&A

What is HIPAA Security?

Congressional Bafflegab

or

Prudent Regulation?

What is HIPAA Security?

- A literal interpretation would indicate an impossible task
  - Use of the word “ensure” is troubling at best
    - You can’t ensure security
    - You can only ensure the effort
- A “reasonableness” interpretation would indicate a prudent business practice
  - You already have a fiduciary responsibility to secure patient records
  - The responsibility is no different for any other industry

Understanding HIPPA Security

- It’s a complex problem involving:
  - People (Behavioral)
  - Technology
- Like all complex business processes, it must be broken down to manageable task
- Break down the regulation to the THINGS THAT MATTER!

What Matters?

- Leadership Matters
- Policies Matter
- Training Matters
- Risk Management Matters
- Technology Matters

Leadership Matters

- Identifies a single responsible individual and establishes accountability
  - Naming a Security Officer is the only effective way to build accountability into the process
- Security, like all other important business processes, must start at the executive level
  - Budgets
  - Resources
  - Direction

Policies Matter

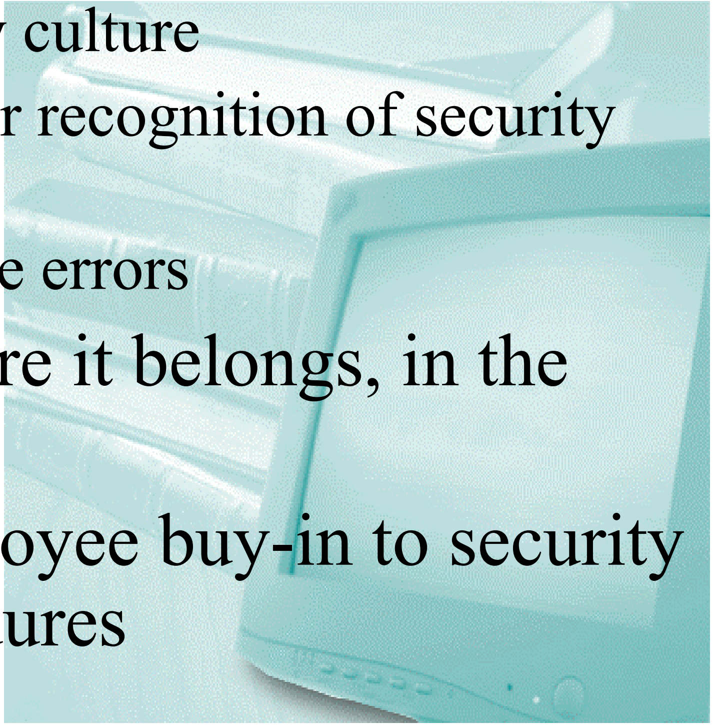
- Policies establish organizational directives
  - They provide essential guidance
  - They are the foundation of the information security program
  - They must be, both, enforceable and enforced
- Standards and Procedures must also be addressed
  - "Best Practice" Standards
  - Incident Response Planning
  - Business Continuity Planning

Security Policies

- **HR Policies**
  - Monitoring Awareness
  - Privacy Issues & 1st Amendment Rights
  - Company Equipment Use
  - Who Owns the Data
- **Operational Policies**
  - Internet & Intranet Usage
  - Passwords
  - E-mail usage
  - File transfers & Attachments
  - Virus Control
  - Data Classification Sensitivity
- **Moral & Ethical Conduct**
  - Etiquette and Proper Usage
  - Pornography
  - Harassment
- **Legal Responsibilities, Penalties & Enforcement**
  - Warning Notice
  - Incident Response Plan
- **Administrative Policies**
  - Sanctions
  - Workforce Clearance
  - Separation Policy
  - Media Reuse & Destruction

Training Matters

- Helps the entire staff better understand security issues, risks and threats
  - Creates a security culture
  - Allows for greater recognition of security events
  - Helps to minimize errors
- Puts security where it belongs, in the forefront
- Helps foster employee buy-in to security policy and procedures



Risk Management Matters

- You must understand the problem, before it can be resolved
- Risk Management Process
  - Risk Assessment
  - Risk Reduction
  - Risk Transfer
  - Risk Acceptance
- Risk Analysis Vital!

Risk Management Matters

- What could happen (threat event)?
- If it did happen, how bad could it be (threat impact)?
- How often could it happen (threat frequency)?
- How certain are the answer to the first three questions (recognition of uncertainty)?

Risk Management Matters

- What is the Risk that:
  - PHI will be used/disclosed inappropriately on:
    - Internet transmissions?
    - Wireless LANs?
    - Tele-worker Workstations?
    - Portable Devices (Hand-helds, PDAs)?
  - Passwords will be compromised?
  - Security incidents will go undetected?
  - "Social engineering" will result in unauthorized access?

Risk Management Matters

- Complete at least a ‘minimal’ Gap Analysis
  - Information Security Assessment
  - Vulnerability Testing
- Asset Identification and Classification
- Fix the easy stuff
- Do what’s practical and cost effective
- Document what you plan to do/not do, and why
- Finally, you need to be systematic about security

Risk Management Matters

- Administrative Safeguards
  - 12 Required
  - 11 Addressable
- Physical Safeguards
  - 4 Required
  - 6 Addressable
- Technical Safeguards
  - 4 Required
  - 5 Addressable

Note: The concept of “addressable implementation specifications” was introduced to provide covered entities with additional flexibility with respect to compliance with the security standard.

Technology Matters

- Design a Secure Architecture
- Services for a Trusted Environment
  - Confidentiality
  - Integrity
  - Availability
  - Identification & Authentication
  - Authorization & Access Control
  - Non-repudiation

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Technology Matters

- Select & Implement Countermeasures
  - Firewalls
  - IDS
  - Standardized hardware-software platforms
  - Host Hardening
  - Strong Authentication & Access Control (w/Auditing)
  - Integrity Controls (i.e. Tripwire)
  - Encryption and VPNs
  - Virus protection

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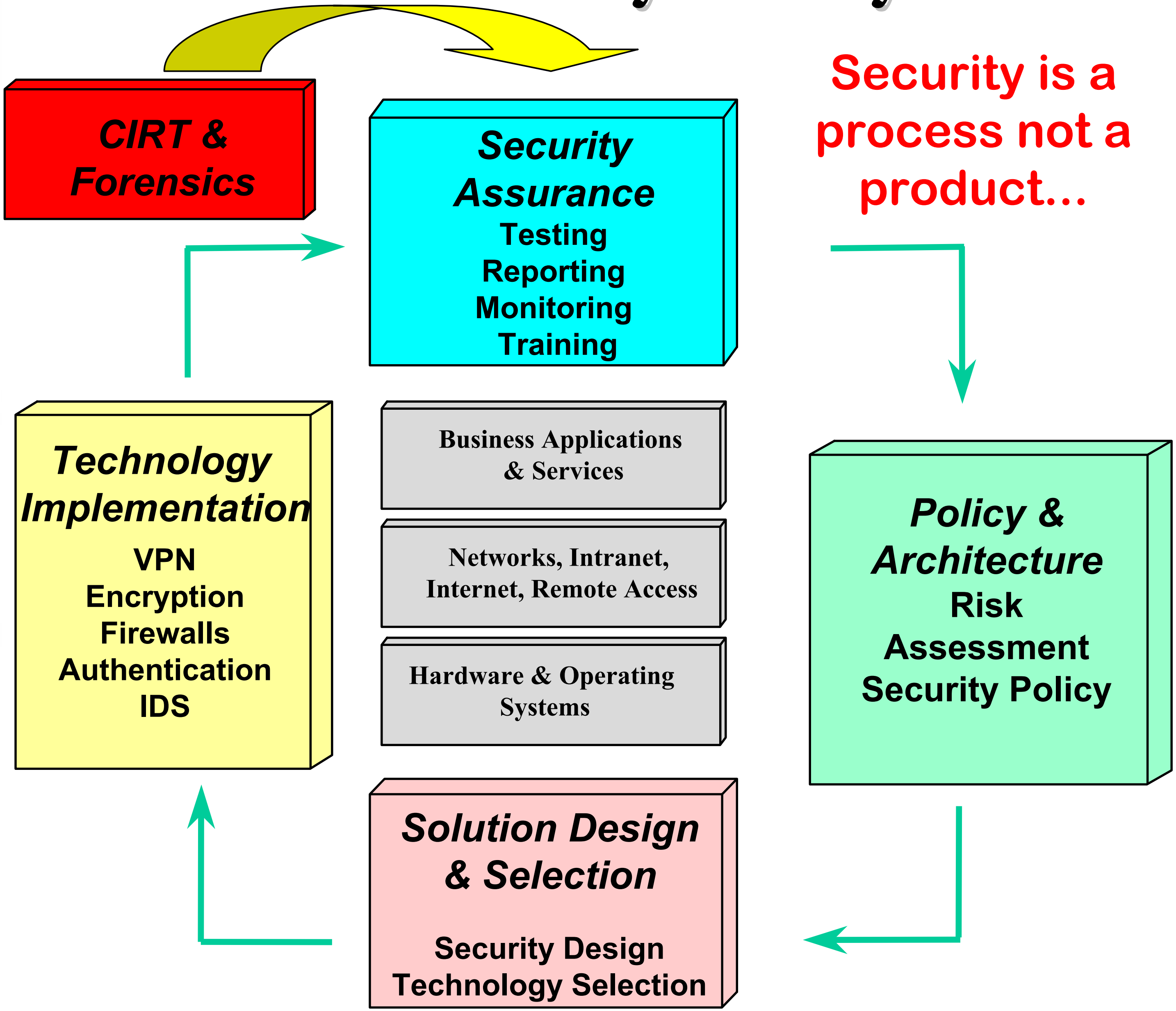
Information Security Lifecycle

Building Blocks

- People
- Process
- Technology



Security is a process not a product...

CIRT & Forensics

Security Assurance
Testing
Reporting
Monitoring
Training

Policy & Architecture
Risk
Assessment
Security Policy

Solution Design & Selection

Security Design
Technology Selection

Technology Implementation
VPN
Encryption
Firewalls
Authentication
IDS

Business Applications & Services

Networks, Intranet, Internet, Remote Access

Hardware & Operating Systems

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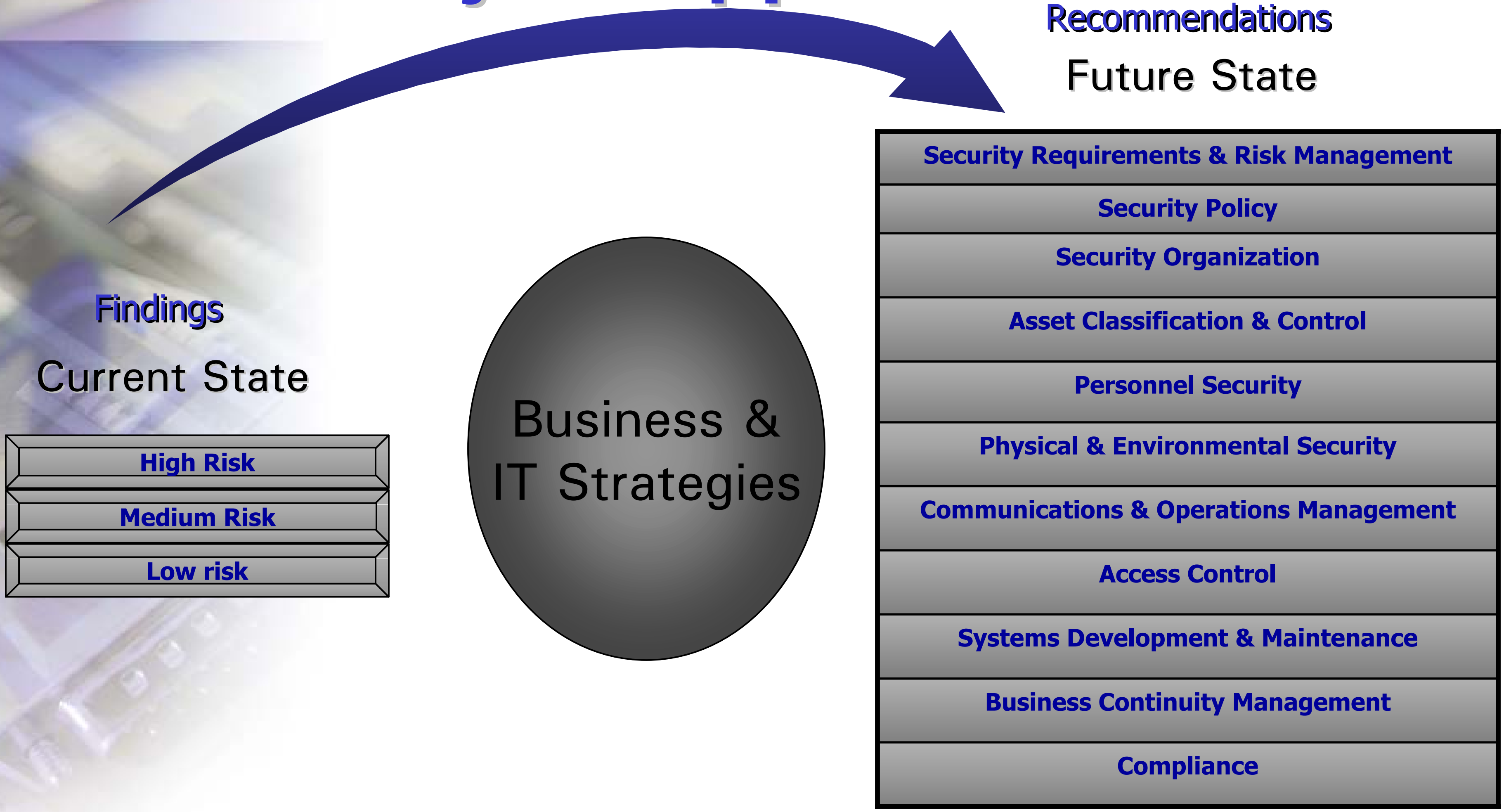
Project Approach



Recommendations

Future State

Security Requirements & Risk Management

Security Policy

Security Organization

Asset Classification & Control

Personnel Security

Physical & Environmental Security

Communications & Operations Management

Access Control

Systems Development & Maintenance

Business Continuity Management

Compliance

Business & IT Strategies

Findings

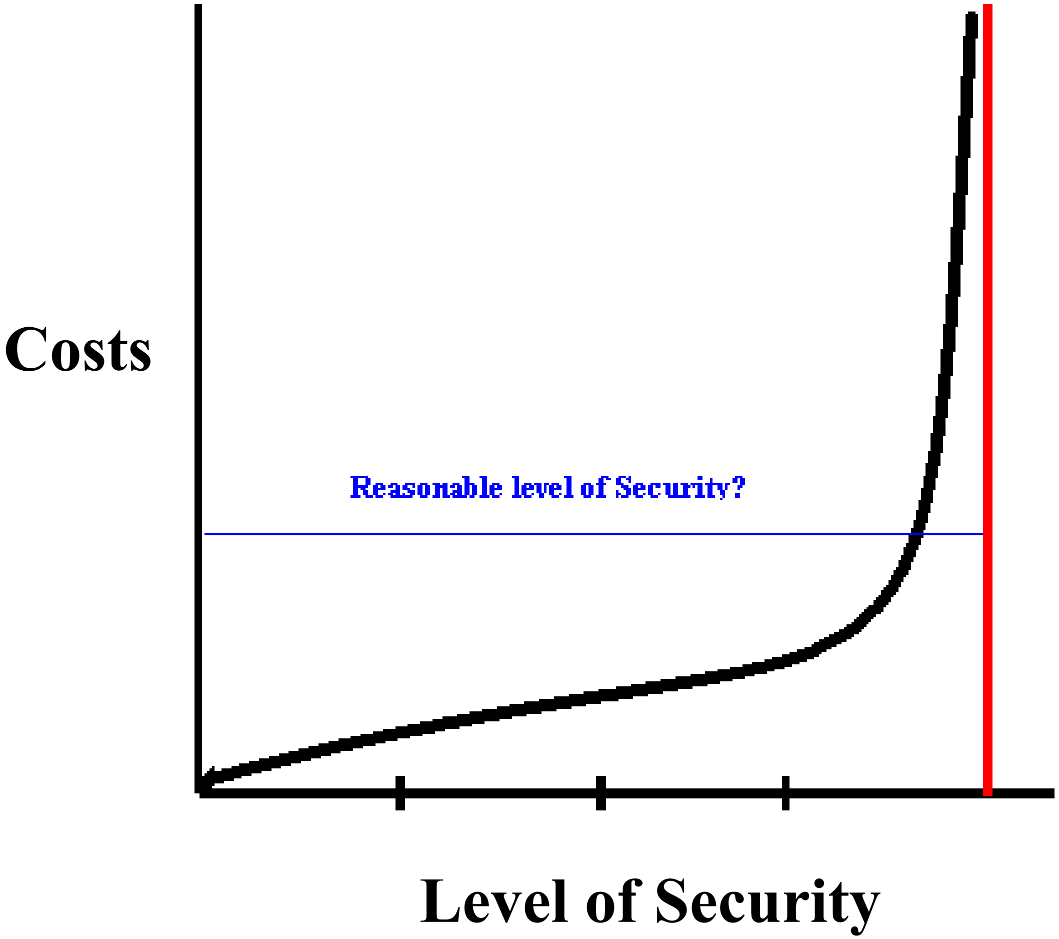
Current State

High Risk

Medium Risk

Low risk

The Cost of Security



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Risk Management Model

FEAR

TRUST

The level of impact to each critical asset is estimated based on the relationship between the threat and vulnerability.

Threats to Your Organization

- “Acts of God”
- People (Hackers, Crackers, O.C., etc.)
  - Error and Omissions
  - Remote Employees
  - Malicious and Criminal Behavior
- Insecure Applications
- Information Warfare/ Cyber Threat
- Loss of Data from Malicious Code and Viruses
- Civil Liability

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No one is immune!

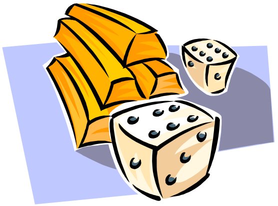
…and the threat is increasing.

Why is the Threat Increasing?

- Increased Computer Use
- More Technical Population
- Global Networks and Broadband Technologies
- Insecure Systems*
- Dependency on Computers
- No Real Deterrents
- Lack of Ethics
- Many “Good” Tools
- Increased Anonymity

Cost of Not Planning Security

- Financial Loss
  - Lost Revenue, Loss of Trade Secrets or IP, Embezzlement, Extortion, etc.
- Loss of Customer Confidence
- Embarrassment
- Increased Liability
  - Failure to follow a “Standard of Due Care”
  - Failure to Protect “Private” Data
  - Third-party Liability



Information Security

- Security is more than just a Login
  - It MUST be implemented in layers
- Security should be as transparent as possible
- An organization must be ready to protect, detect, and respond to any type of adverse event.

Questions & Answers

Administrative Safeguards

Standards	Sections	Implementation Specification	R/A	T
Security Management Process	164.308(a)(1)	Risk Analysis	R	
		Risk Management	R	
		Sanction Policy	R	
		IS Activity Review	R	
Assigned Security Responsibility	164.308(a)(2)		R	
Workforce Security	164.308(a)(3)	Authorization and/or Supervision	A	
		Workforce Clearance Procedures	A	
		Termination Procedures	A	
Information Access Management	164.308(a)(4)	Isolating Health care Clearinghouse Function	R	
		Access Authorization	A	**Y**
		Access Establishment and Modification	A	**Y**
Security Awareness and Training	164.308(a)(5)	Security Reminders	A	
		Protection from Malicious Software	A	**Y**
		Log-in Monitoring	A	**Y**
		Password Management	A	
Security Incident Procedures	164.308(a)(6)	Response and Reporting	R	**Y**
Contingency Plan	164.308(a)(7)	Data Backup Plan	R	**Y**
		Disaster Recovery Plan	R	**Y**
		Emergency Mode Operation Plan	R	**Y**
		Testing and Revision Procedure	A	
		Applications and Data Criticality Analysis	A	
Evaluation	164.308(a)(8)		R	
BA Contracts and Other Arrangement	164.308(b)(1)	Written Contract or Other Arrangement	R	

Physical Safeguards

Standards	Sections	Implementation Specifications	R/A	T
Facility Access Controls	164.301(a)(1)	Contingency Operations	A	
		Facility Security Plan	A	
		Access Control and Validation Procedures	A	Y
		Maintenance Records	A	
Workstation Use	164.310(b)	Documented procedures for system use	R	Y
Workstation Security	164.310(c)	Physical placement and control	R	Y
Device and Media Controls	164.310(d)(1)	Disposal	R	Y
		Media Re-use	R	Y
		Accountability	A	
		Data Backup and Storage	A	Y

Technical Safeguards

Standards	Sections	Implementation Specifications	R/A	T
Access Controls	164.312(a)(1)	Unique User Identification	R	**Y**
		Emergency Access Procedure	R	**Y**
		Automatic Logoff	A	**Y**
		Encryption and Decryption	A	**Y**
Audit Controls	164.312(b)		R	**Y**
Integrity	164.312(c)(1)	Mechanism to Authenticate Electronic PHI	A	**Y**
Person or Entity Authentication	164.312(d)		R	**Y**
Transmission Security	164.312(e)(1)	Integrity Controls	A	**Y**
		Encryption	A	**Y**

Planning for the Worst Case

- Loss of Intellectual Property
  - Theft
  - Data Loss or Destruction
- Hack Attack
  - Breach of Confidentiality
  - Loss of Data Integrity (Data Manipulation)
- Virus Contamination and Worms
  - Organizational Impact of Nimda and Code Red
- Distributed Denial of Service (DDoS) Attack
  - It Can Happen to Yahoo, eBay and others
  - Loss of System Availability
- Cyber Terrorism