HIPAA: Proactive Security & Compliance Best Practices

Webinar Q4, 2021





Conversation Set Up

According to <u>Black Book Research</u>, 90% of the healthcare staff working remotely during the COVID-19 outbreak did not receive any security guidelines or data privacy training before going remote.

At the same time, in 2020 the number of Healthcare industry cyber attacks in the U.S. increased by 45%. Some countries like Canada and Australia experienced cyber attack increases between 100% - 250%. *As of September 2021, cyber-attack frequency and severity is not slowing down.*

In August 2021 there were 707 healthcare data breaches reported for the previous 12-month period, up from 465 for the same time last year. HIPAA compliance was created to help protect customer health records and information, but many organizations struggle with data privacy and security.

In today's session we will discuss healthcare industry attack trends, and proactive IT and security best practices for addressing cyber threats and HIPAA compliance.



Why Healthcare?

The largest industry in the U.S. @ 17.8% of the GDP - \$3.6T. 784K Companies within the Industry.

Growing Market.
Global Spend is
Estimated @ \$10T
by 2022. CAGR is
7.3%.

Vulnerable Supply
Chain. Business
Associates now
account for 43%
of all breaches in
2021.

Value of Data.

Personal Health
Records and
Information Fetch
Big \$ the Dark
Web.

Patient records can sell between \$1 and \$1,000 due to the amount of information found in the documents, including date of birth, credit card information, Social Security number, address and email. These records are used to commit pharmaceutical and medical fraud on the Dark Web and internationally.

Xceptional.com



Healthcare Industry Realities

Staff:

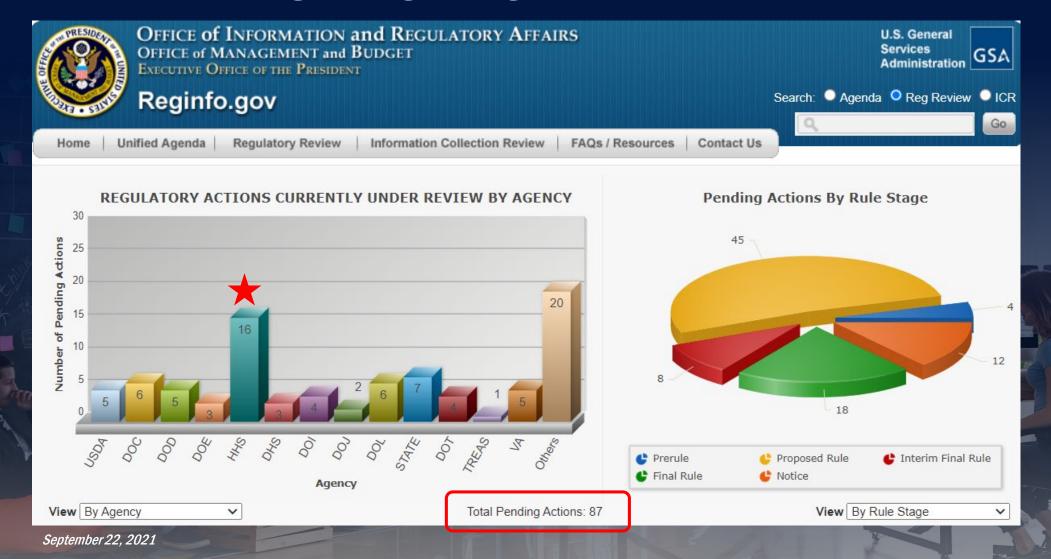
- Mentally Tired
- Emotionally Tired
- Overworked
- Talent Shortage

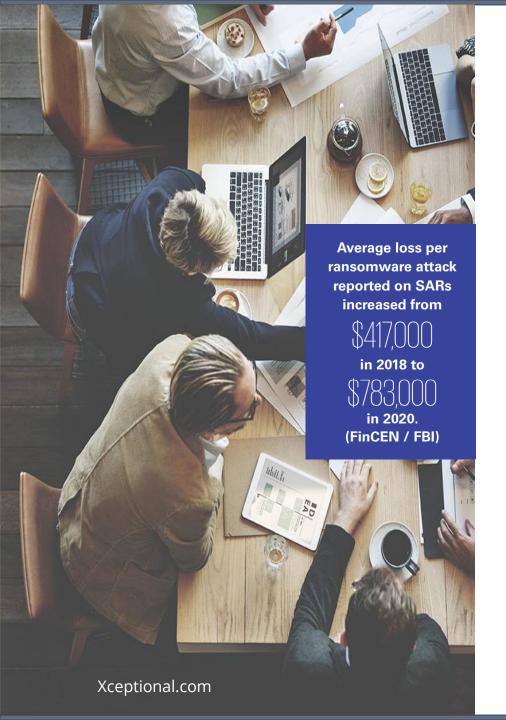
IT, InfoSec, Operations:

- Legacy & Unpatched Systems
- Legacy and Unpatched Applications
- Growth of Internet Connected Devices (IoT)
- Growing Threat Landscape, Facilities, Clinics, TeleHealth
- Understaffed IT Departments
- Understaffed Infosec Departments
- Understaffed Operations
- Unsecured 3rd Party Partners



The Rate of Change: Reginfo.gov





Regulatory Pressure Points:

- 1. Increased integration and improved operational resiliency, including cyber risk management
- 2. Outdated risk assessment and resiliency frameworks
- Closer partnership between the board and business functions to strategically align initiatives
- 4. Focus on modern technology resilience across platforms, data and applications
- Expanded cyber and vulnerability threats resulting from increased use of digital platforms, including rapid cloud adoption and software deployment
- 6. Regulatory focus on proprietary data, customer data, core processes, and exposure from third party vendors and partners
- Availability of new technologies and tooling; increased focus on IT asset management and the need for a complete and accurate view of IT assets
- 8. Enhanced integration of cyber risk management with enterprise risk management

Top Technology risks to manage



Software development



Obsolete technology



Security of systems and data



People and skills



Third party technology and services



Failed technology strategy



Services and availability



Emerging technology



Data quality and management



Regulations and compliance

Compliance Realities In Healthcare

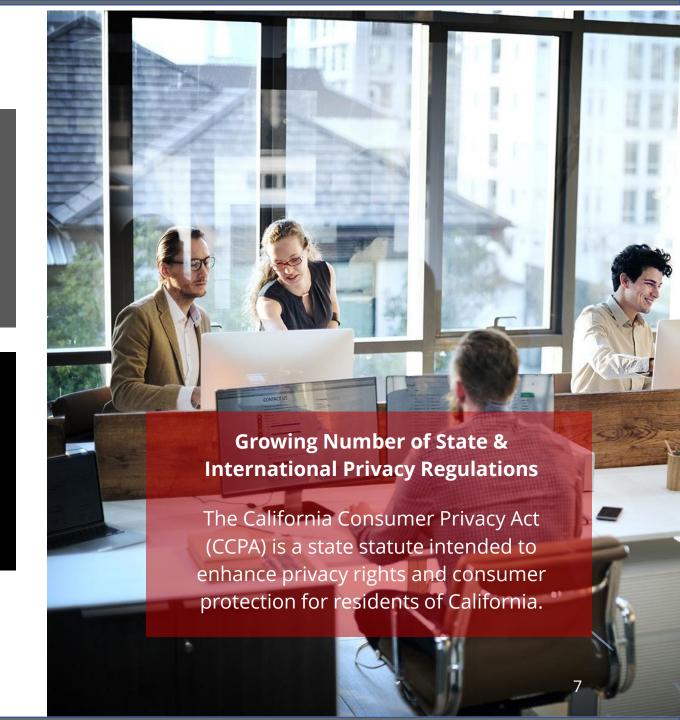
Healthcare spends about \$39 billion annually on the administrative facets of regulatory compliance.

*Hospitals with 161
beds pay on
average \$7.6M in
compliance
administrative
costs per year.

Estimated annual costs of regulatory compliance for the average hospital is \$47K per bed.

The number of regulations for Acute Care providers has grown to 629 - 288 more than 2017.

A report by the Ponemon Institute found that the average cost of compliance for an organization was \$5.5 million. Meanwhile, the average cost of noncompliance was over \$14.5 million.



2020 Healthcare Focused Dark Web Ads, Ransomware





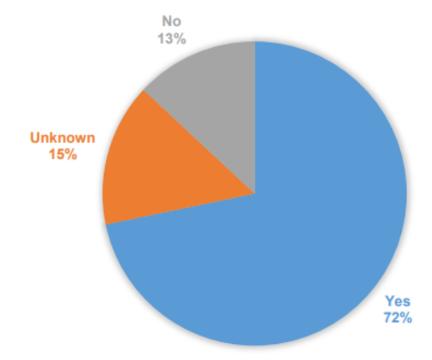
https://cti-league.com/wp-content/uploads/2021/02/CTI-League-Darknet-Report-2021.pdf

2021 Ransomware Attacks



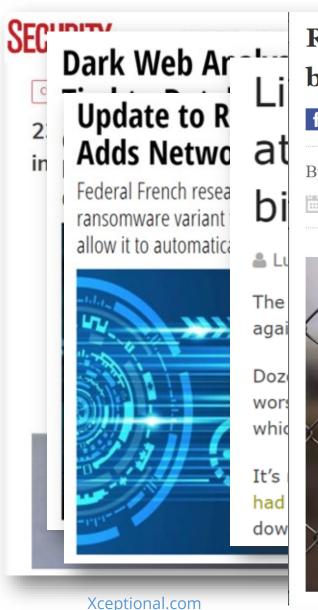
- Looking back at a total of 48 ransomware incidents in the United States healthcare sector tracked by HC3 this year, for at least 72% of the ransomware incidents, victim data was leaked.
- This involved either full file dumps, screenshots, or samples.
- Based on HC3 observations of ransomware blogs, data leaks ranged from just a few screenshots to as large as Terabytes of data from the victims.

U.S. HPH RANSOMWARE INCIDENTS 2021: WAS DATA LEAKED?



2021 Cyber Attack Trends & Realities: Escalation





Ransomware gang plans to call victim's business partners about attacks



By Lawrence Abrams

March 6, 2021 12:47 PM





Attack Trends 24-36 Months Ago





42,000 patients impacted by 2016 breach of Michigan provider

by Jessica Davis June 04, 2018



Phishing hack on Ohio provider breaches data of 42,000 patients

by Jessica Davis May 29, 2018



Data of 500k patients compromised in LifeBridge **Health breach**

by Beth Jones Sanborn May 23, 2018

was infected with malware that infected its



Ransomware attack breaches 40,800 patient records in Hawaii

by Jessica Davis September 13, 2018

was able to restore data from backups, and with help from a cybersecurity firm wipe the



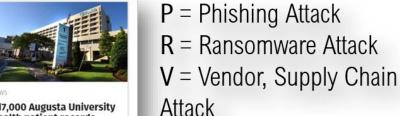
Phishing attack breaches 38,000 patient records at **Legacy Health**

by Jessica Davis August 22, 2018



417,000 Augusta University Health patient records breached nearly one year

by Jessica Davis | August 17, 2018



The financial impact of these attacks are significant!

How One Ransomware

Attack Cost Erie County

Medical Center \$10 Million



DoD IG finds massive security flaws in Army, Navy

by Jessica Davis May 08, 2018



205,000 patient records exposed on misconfigured FTP server

by Jessica Davis May 18, 2018

without the need for a login.



OCR investigating Banner Health for breach of 3.7 million records

by Jessica Davis March 21, 2018



Canadian pharmacist fined for routinely accessing health records of acquaintances

by Lynne Minion August 13, 2018



1.4M records breached in **UnityPoint Health phishing** attack

by Jessica Davis July 31, 2018



exposes data of 19K patients for 2 months

by Jessica Davis August 02, 2018



Third-party vendor error





Ransomware breaches data of 85,000 patients

by Jessica Davis | April 26, 2018



UnityPoint Health System hit with cyberattack affecting 16,000 patients

by Beth Jones Sanborn April 20, 2018



California medical device manufacturer reports breach of 30,000 consumers

by Jessica Davis April 17, 2018



Ransomware, malware attack breaches 45,000 patient records

by Jessica Davis July 26, 2018



LabCorp's network breach puts millions of records at

by Jessica Davis July 17, 2018

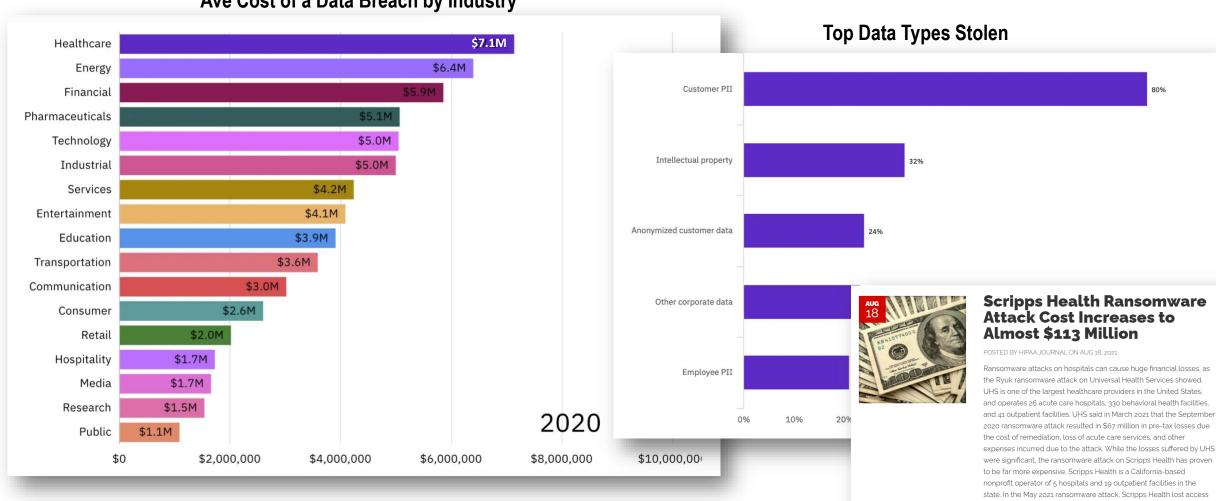


Hackers breach 1.5M Singapore patient records, including the prime minister's

Data Breach Costs







https://digitalguardian.com/blog/what-does-data-breach-cost-2020

to information systems at two of its hospitals, staff couldn't access the

electronic medical record system, and its offsite backup servers were also affected. Without access to critical IT systems, Scripps Health was forced to re-route stroke and heart attack patients from four.

HIPAA Realities: Growing Complexity



HIPAA Risk Assessment (Title II) 245 Controls

Measures an organization's ability to meet the HIPAA standards and requirements set forth by Congress and the Department of Health and Human Services (HHS) around electronic health data (electronic Protected Health Information – ePHI)

Privacy Rule (both paper and electronic PHI)

2 Privacy Safeguards: Use and Disclosures......89 Controls

Security Rule (ePHI – only)

- Administrative Safeguards73 Controls
- Technical Safeguards45 Controls
- Physical Safeguards38 Controls



HIPAA Realities: Growing Penalties



HIPAA Violation Type	Civil Penalty (MIN)	Civil Penalty (MAX)			
Individual did not know (and by exercising reasonable diligence would not have known) that he/she violated HIPAA	\$100 - \$50,000 per violation, with an annual maximum of \$25,000 for repeat violations	\$59,522 per violation, with an annual maximum of \$1,789,651			
HIPAA violation due to reasonable cause and not due to willful neglect	\$1,000 - \$50,000 per violation, with an annual maximum of \$100,000 for repeat violations	\$59,522 per violation, with an annual maximum of \$1,789,651			
HIPAA violation due to willful neglect but violation is corrected within the required time period	\$10,000 - \$50,000 per violation, with an annual maximum of \$250,000 for repeat violations	\$59,522 per violation, with an annual maximum of \$1,789,651			
HIPAA violation is due to willful neglect and is not corrected	\$59,522 per violation, with an annual maximum of \$1,789,651	\$59,522 per violation, with an annual maximum of \$1,789,651			

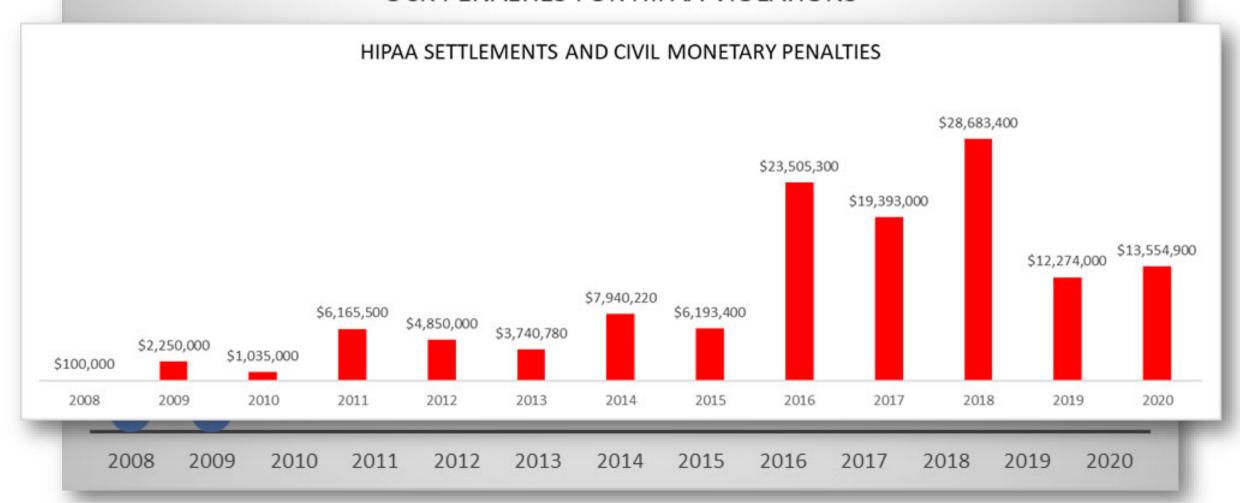
https://www.govinfo.gov/content/pkg/FR-2020-01-17/pdf/2020-00738.pdf
https://www.ama-assn.org/practice-management/hipaa/hipaa-violations-enforcement#:~:text=Civil%20violations&text=The%20secretary%20is%20prohibited%20from,extended%20at%20HHS'%20discretion).

PCI Violation Month	Merchant Level 1	Merchant Level 2
1 to 3	\$10,000 monthly	\$5,000 monthly
4 to 6	\$50,000 monthly	\$25,000 monthly
7 and on	\$100,000 monthly	\$50,000 monthly

HIPAA Realities: Growing Enforcement



OCR PENALTIES FOR HIPAA VIOLATIONS



Proactive Cyber & IT Best Practices





TRENDS TO RECOGNIZE

- Hacking the Human
 Works
- Phishing & Social
 Engineering Attacks,
 Losses Are Growing YOY
- Ransomware & MalwareAttacks Are Pervasive
- Scans & Attacks Are
 Automated 24/7/365
- Once Breached, Infected, Attacks Increase
- No One is Too Small For Criminals, Hackers To Attack

HOW TO BEGIN

- The 4 Ps: People,
 Program, Patching,
 passwords,
- Identify Crown Jewels
- Educate Employees
- Understand Your Maturity, Risks, Vulnerabilities
- Discover Your Assets,
 Who Has Access to Your
 Systems
- Patch, Update Systems,Applications, Websites
- Harden & MonitorSystems, Applications,Websites

EVOLVE THE PROGRAM

- People (Train, Educate, Phish, Incentivize)
- Data (Encrypt Customer, Business Info)
- Platforms, Systems (Scan, Patch, Update, Remediate)
- Brand, Enterprise (Pen Test, Risk Assessment, Remediation, Logging, Monitoring, Alerting, Incident Response, Password & Vulnerability Management)
- Partners, Vendors (Assessment, Score Card, Rank, Remediate

FIND A TRUSTED PARTNER

- End Point Detection & Response (Anti-Malware, Anti-Ransomware)
- Managed Threat
 Detection, Alerting, &
 Response (SIEM, SOC)
- Security and Risk
 Assessments
- Security as a Service
- Compliance as a Service

Where to Begin?



Begin with the 4 P's: https://resources.xceptional.com/webinars

- **People** (Security Education, Training, Awareness, Internet Usage, Phishing Simulations)
- Program (Data Privacy, *SOC-SIEM, Logging/Monitoring, Policies, Procedures, Resources)
- Patching, Scanning (Vulnerability Management Program Planned, Automated)
- Passwords (Unique Phrases w Special Characters, Vault)
 - ✓ **Data Privacy, Data Encryption** (At Rest, In Transit)
 - Security Operations, SIEM, Scanning & Monitoring
 - ✓ Backups (Full-Off Network)
 - ✓ Limit and Lock Down Administrative and System Access Control/Write
 - ✓ **Limit, Block Network Access** (RDP, etc), email file extension delivery
 - ✓ End Point Detection & Response: Modern Anti-Malware, Ransomware, Encryption on End Points
 - ✓ Updated BCDR Plans, Solutions (Ransomware, Social Engineering)
 - ✓ IoT, IT Inventory, Assessment & Pen Testing
 - Business Process Assessments

Compliance Solutions Map



Company Size	Industries	Regulatory Requirement, Business Driver	Common Cyber Threats, Attacks	Potential Security, Compliance Solutions
Small, Medium, Large	Covered Entities: Hospitals, Clinics, Group Practices, Independent Dr. Offices, Labs, etc	PCI Compliance, Letter from Processor, HIPAA Compliance, HITRUST Certification, HHS Notice	Data Breach, Malware or Ransomware Attack, Business Email Compromise, Social Engineering (Phishing, Vishing, Physical) Attack, 3 rd Party Partner Vendor Breach	Security Operations Center SIEM Scanning & Monitoring, Encryption, Anti-Ransomware Software, Compliance as a Service, Policies- Procedures-Services-Solutions Bundled as MRC, Vendor Risk Assessments, Quarterly ASV Scanning
Small, Medium, Large	Business Associates: Manufacturing, Bio, Business Services, Supplies,	FDA, EPA, SSAE, ISO, SOC 2, HIPAA, Other Federal & Industry Compliance, Letter from Covered Entity	DDoS Attack, Data Breach, Malware or Ransomware Attack, Business Email Compromise, Business Process Compromise, Social Engineering (Phishing, Vishing, Physical) Attack, 3 rd Party Vendor Data Breach	Security Operations Center SIEM Scanning & Monitoring, Anti- Ransomware Software, Encryption, Compliance as a Service, Policies- Procedures-Services-Solutions Bundled as MRC

Cisco HIPAA Compliance Solution Guide



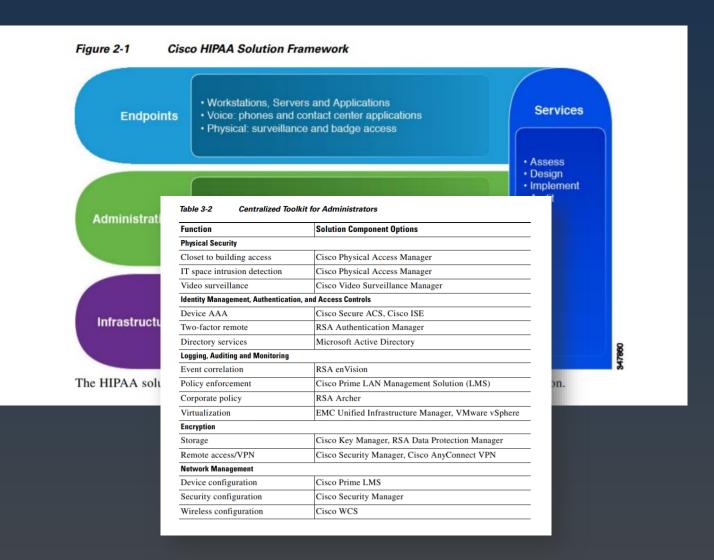




Cisco Compliance Solution for HIPAA Security Rule Design and Implementation Guide

A Cisco Validated Design





Cisco HIPAA Control Mapping





Healthcare Services & Corresponding Compliance Controls Located at Facility

Hospital/Clinic Service Types	Controls Recommended	Relevant Solution Products			
Electronic medical records (EMR) systems	Data encryption/decryption Auto-log-off controls Passwords	Cisco Identity Services Engine (ISE), wireless IPS, 802.1x Switch			
Wired and wireless medical devices	Data encryption/decryption Auto-log-off controls Passwords	Cisco Identity Services Engine (ISE), wireless IPS, 802.1x Switch			
Imaging systems	Data encryption/decryption Auto-log-off controls Passwords	Cisco Identity Services Engine (ISE), wireless IPS, 802.1x Switch			
Wireless tablets and roll-around carts	Data encryption/decryption Auto-log-off controls Passwords	Cisco ISR, Cisco ASA, Cisco IPS appliance, Cisco Unified Wireless			
Hospital/clinic LAN/WAN	Firewall, IDS	Cisco Integrated Services Router (ISR), Cisco Adaptive Security Appliance (ASA), Cisco IPS Appliance			
Patient registration workstations Nurse station workstations	Authentication controls Passwords	Cisco Identity Services Engine (ISE), wireless IPS, 802.1x Switch			
Internet demarcation	Data encryption/decryption Firewall, IDS	Cisco Integrated Services Router (ISR), Cisco Adaptive Security Appliance (ASA), Cisco IPS Appliance			

Cisco HIPAA Safeguard Area Mapping





The Healthcare Security Requirements revolve around HIPAA Part 164 Part C. HIPAA Part 164 Subpart C is made up of nine sections.

Three of the sections are administrative and are not part of this assessment. The remaining six sections (Security Standards: General Rules; Administrative Safeguards; Physical Safeguards; Technical Safeguards; Organizational Requirements; and Policies and Procedures and Documentation Requirements) consist of 52 Security Safeguards.

Verizon performed an initial assessment to determine whether the safeguards could be met by using specific technology components provided by Cisco. Of the **52** Safeguards in the current healthcare requirements, Verizon identified **29 Safeguards as not applicable** in the context of this Assessment, because the Safeguard was either explicit and demanding direct (non-technology related) controls, or general but not allowing for the reasonable use of technology as a compensating control in the fulfillment of the Safeguard.

Of the remaining 23 Safeguard Areas in the current healthcare requirements, Verizon has further identified 8 Safeguards that call for universal security control requirements that are foundational across Cisco's products and present in all network devices and systems that make up Cisco's Healthcare Reference Architecture.

Safeguard Areas where Cisco Security Controls are Not-Applicable	Safeguard Areas where Cisco Security Controls are Universally Applicable	Safeguard Areas where Cisco Security Controls are Specifically Applicable			
29	8	15			

Cisco Zero Trust Technology Portfolio



Portfolio enhancements that address cyber hygiene and program maturity

00|000|00 GISGO Partner

		Ва	Ξ	Ğ	Ā	A
Product	Capability	1	2	3	4	5
ESA/WSA	Advanced threat protection capabilities to detect, block and remediate threats					
Umbrella	Advanced defense and intelligence against threats					
Duo	Establish user trust w/multi-factor auth, SSO for SaaS and device visibility					
Cyber Vision	Threat detection/intelligence for cyber threats in the industrial networks					
AnyConnect	Remote access to network with visibility and posture compliance via agent					
SDA/ISE/TrustSec	Wired, wireless, VPN access policy with network segmentation					
Tetration	Threat detection/intelligence for threats in the private/hybrid clouds					
AMP/Threat Grid	Threat detection/intelligence with host visibility and remediation					
Stealthwatch	Threat detection with internal network and cloud visibility via flow sensors					
Threat Response	Threat visibility and rapid containment with intel-driven incident response					
Firepower	Network access, segmentation and threat detection with in-line insertions					

How We Help

Architecture, Design, Implementation, Run, Manage, Maintain







- Remote and Onsite
 Managed Services Support
- 24 x 7 Monitoring and Management of Desktop, Network, Phones, and Applications
- Multiple Support Levels to Fit Your Business, Budget
- Virtual CIO: Quarterly Technology Reviews and Reporting. Includes Strategic IT Planning, Updates to Plans, Standards, Maintenance, and Support Levels



- Design, Deployment, and Management of Telepresence and Video Solutions
- Voice, Video, and Webbased Conferencing
- Real Time
 Communications on all
 Devices
- Cloud, Onsite, and Hybrid
 Communications
 Solutions



- Strategic enterprise-class
 Data Center and Hosting
 Services. IT Software,
 Services, Applications,
 Email, and Network
 Solutions (Hosting, IaaS)
- Storage Solutions
- Backup & Recovery
 Solutions (BaaS)
- Compliance as a Service Solutions (CaaS)
- Virtualization



- Networking Solutions
 Driving Technology and
 Business Operations
- Routers/Switches
- Wireless Mobility Solutions
- Security Solutions and Security as a Service
 - WAN Optimization

XceptionalCare, Advisory, Security as a Service, Compliance as a Service



Support and Monitoring Services

- 24x7 Monitoring and Alerting
- Managed Detection & Response (SIEM/SOC)
- Unlimited Helpdesk Support 6:00 a.m. 6:00 p.m. M-F
- End Point Detection & Response with Anti-Virus and Patching
- Password Vault and Document Repository
- IT Asset Management
- Desktop/Email/Server Backups
- Mobile Device Management
- Single Sign On with Multifactor Authentication

Benefits

- Comprehensive Blanket IT Support, Security & CMMC Managed Services
- Predictable Cost Per User/Asset
- Access to Dedicated Engineers

IT Management, Consulting & Compliance Services

- Virtual CIO/CISO Strategy and Planning
- Hardware/Software Architecture, Design, Implementation, Resale
- Quarterly Security Assessments
- HIPAA Compliance Manager
- Performance Tuning
- End-User Security Training and Phishing Tests

HIPAA:

- ✓ Compliance Manager HIPAA One-time Set Up
- ✓ Annual Subscription
- √ HIPAA Compliance Manager Software
- ✓ Quarterly Scans
- ✓ Assessment Report Delivery
- ✓ 1 Hour Report Review/Recommendations Session

Reports & Assets Included:

- ✓ HIPAA Privacy Rule Worksheet
- ✓ HIPAA Breach Notification Rule Worksheet
- ✓ HIPAA Auditor Checklist
- ✓ HIPAA Policies and Procedures
- ✓ HIPAA Management Plan
- ✓ HIPAA Risk Analysis
- ✓ HIPAA Evidence of Compliance
- ✓ HIPAA Risk Analysis Update
- ✓ HIPAA Change Summary Report
- ✓ HIPAA Risk Management Plan Update
- ✓ HIPAA External Vulnerability Scan Detail
- ✓ Additional Supporting Documents & Worksheets



Wrap Up



Most healthcare executives or suppliers we speak to are seeking ways to reduce cyber attack risks, improve employee safety and productivity, while looking for highly efficient and cost-effective ways to address regulatory compliance while serving and supporting customers and patients.

The amount of time, energy, effort, and resources required to align IT systems and business processes with regulatory compliance is significant.

But you are not alone.

As a leading, award winning provider of Managed IT Services, Networking, and Security Solutions, Xceptional is committed to helping customers reduce risks and align their IT systems and applications to address regulatory compliance. We work collaboratively with clients to deploy effective and efficient IT solutions that support the current needs of their business, employees, and customers!

Embrace the Xceptional experience and <u>visit our website</u> or <u>contact us</u> today!

