ARANCIA

Healthcare Cybersecurity Solutions for Patient Safety

Cybersecurity to improve patient safety

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Why the Connected Healthcare Landscape is a Target for Cyber Criminals?

Arancia's Cybersecurity team has been supporting the Health Sector for over 15 years and we have a deep understanding the risks to patient safety stemming from adversaries targeting the Healthcare technology platforms.

Cyber criminals target the Healthcare ecosystem for many reasons and over next 3 years attacks will become more sophisticated as adversaries using AI powered tools can swiftly execute double extortion attacks which can encrypt files and also steal data at the same time.

Personal Health Information (PHI) & Research Data

Healthcare organizations store vast amounts of sensitive data, including personal health records (PHRs), medical histories, research data, clinical trials, insurance information, PII/PHI and other sensitive information. This data is valuable to cybercriminals because it can be sold on the dark web or used for identity theft, fraud, or blackmail.

Ransomware Attacks

Healthcare systems are complex in nature with Cloud assets, Electronic Medical Records (EMRs) integration with many on-prem systems, along with biomedical IoT and research networks. The compromise of one system could result in a lengthy downtime resulting in a patient safety issue. Organizations who are unprepared may have no other choice but to pay a large ransom.

Cyber Talent Shortage

Many healthcare delivery organizations simply cannot afford to attract or retain experienced and seasoned cyber professionals. This leads to cyber solutions being incompletely implemented or not monitored and maintained appropriately. This allows adversaries an opportunity to leverage these weaknesses to launch their attack.

Cyber Threat Landscape in healthcare- Background

Rapid technological advancements have significantly transformed the cyber threat landscape in the healthcare sector. The World Health Organization (WHO) has highlighted those innovations in artificial intelligence, cyberattacks, and genetic engineering could pose severe risks to global biosecurity. A 2024 WHO report identified several ways in which cyber threats could impact healthcare, including unauthorized access to sensitive data or research, disruption of laboratory security systems, theft or sabotage of critical information, and espionage for competitive or malicious purposes. Additionally, cyberattacks could disable essential laboratory systems, disrupt operations, and compromise data integrity, leading to delays in critical research and jeopardizing safety protocols.

64% of healthcare providers

faced at least one security breach since 2023.

200+ adversaries are actively targeting healthcare

tracked by leading cyber intelligence firms.

84%

of cloud-focused intrusions are linked to e-crimes

75%

increase in cloud environment intrusions in 2024.

Important Considerations

Advanced phishing attacks

use impersonation tactics, deepfakes, vishing to compromise user identities to enable access to networks and systems

Digital Transformation Challenges

Virtual care, BYOD, and remote patient monitoring and expanded patient access challenge traditional security control methods

Regulatory Complexity

Organizations must align with NIST CSF, HITRUST, PHIPA, SOC 2, HIPAA, ISO 27001, and other evolving security frameworks.

Rising Privacy & Compliance Demands

Stricter regulations and evolving cyber insurance requirements make it harder for organizations to meet security obligations.

The following Healthcare sectors are being targeted by both Nation State and financially motivated cyber criminals.

- Bio Medical Companies
- Health Tech Organizations
- Hospitals and Clinics
- Pharmaceuticals

Nation States and Cybercriminal Actors are executing attacks across multiple assets simultaneously. These actors are executing attacks on the following types of assets:

- Desktop and Endpoints
- Medical Devices, Biomedical and Research Network
- Data Infrastructure & Network services
- Cloud Servers and Containers
- Network (ICS/SCADA/PLC)
- Identity and Active Directory

Staying ahead of Cyber Criminals

Know your Weakness before an Adversary does

It's important to know what your exposures are based on current attack scenarios so these risks can be mitigated before they are leveraged by attackers. Professional services such as those listed below can help improve your cyber readiness.

- Red Team Exercise
- Ransomware simulation & Compromise Assessments
- Threat Modeling Assessment
- Cloud Security Assessments
- FW and Active Directory (AD) Security Audits
- Table-Top Exercise to validate Cyber Incident & Breach Response Plan
- Implement Incident Response Retainers

Advance Security Monitoring with Automated Response

Traditional SIEM, MDR, XDR and other SOC Managed Services require a tremendous amount of effort to implement use cases for detecting Adversarial behaviors and then raise alerts. Its important to have partners who provide a service for Threat Hunting along with a AI Powered advance Security Platform.

Set a good foundation (Practical Advice)

Ensure your organization is has implemented the basic system hardening & critical controls effectively. Establish a program to close vulnerabilities and gaps. Build a strong foundation of controls and have basic security hygiene in place. Arancia can provide assistance and operational support to manage these control areas if required.

Key Cybersecurity Technology Enablement

It is important to review current cyber investments and implement key capabilities. Arancia has partnered with the leading vendors in the following control areas:

1 PRIVILEGED ACCESS MANAGEMENT (PAM)

2 ZERO TRUST (ZTNA) & SECURITY SERVICES EDGE (SASE)

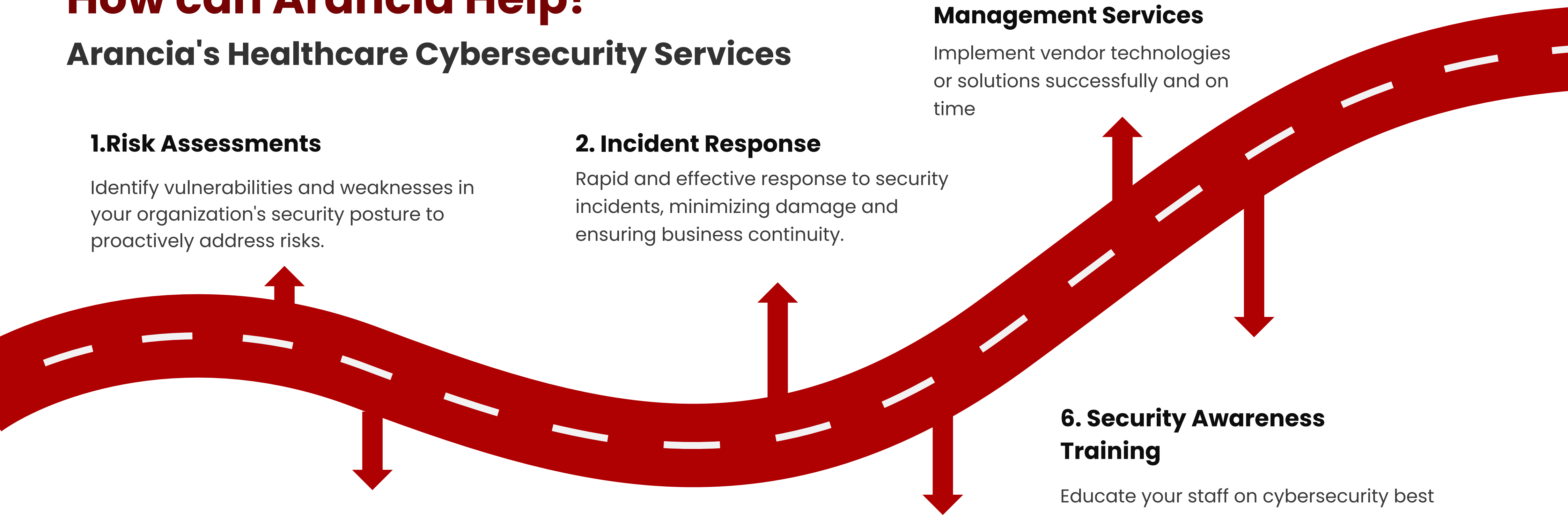
3 DATA LEAKAGE PREVENTION (DLP) AT THE EMAIL & INTERNET GATEWAY LEVEL WITH INTEGRATION WITH SASE

4 STRONG END POINT DETECTION & RESPONSE (EDR) TECHNOLOGIES

5 ADVANCE EMAIL SECURITY GATEWAYS

How can Arancia Help?

Arancia's Healthcare Cybersecurity Services



1.Risk Assessments

Identify vulnerabilities and weaknesses in your organization's security posture to proactively address risks.

2. Incident Response

Rapid and effective response to security incidents, minimizing damage and ensuring business continuity.

3. Cyber Security Project Management Services

Implement vendor technologies or solutions successfully and on time

4. Managed SOC

24/7 monitoring and management of your security environment, providing expert threat detection and response.

5. Penetration Testing and Red Teaming

Simulated attacks to identify vulnerabilities in your systems and applications before attackers can exploit them.

6. Security Awareness Training

Educate your staff on cybersecurity best practices to reduce the risk of human error leading to security incidents.

Benefits

ENHANCED SECURITY POSTURE

Proactively identify and address risks, strengthening your defenses against cyberattacks.

COMPLIANCE WITH REGULATIONS

Ensure compliance with industry regulations and avoid costly penalties.

REDUCED DOWNTIME

Minimize disruptions to operations caused by security incidents, ensuring continuity of care.

IMPROVED PATIENT TRUST

Demonstrate your commitment to protecting patient data, building trust and confidence.