



# Comprehensive Technology Solutions for Enhanced Healthcare Data Security

Securing Healthcare Operations in the Digital Era



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# Introduction

The digital transformation of healthcare services has opened up new opportunities to leverage innovative technology for improved patient care. However, implementing new technologies has also created challenges that healthcare providers must address, especially when it comes to safeguarding patient data and privacy.

The stakes are high; **more than 540 organizations reported healthcare data breaches in 2023, impacting over 112 million people.**<sup>1</sup> And with **the average cost of a healthcare cyber attack totaling nearly \$5 million last year,**<sup>2</sup> investing in secure technology solutions to protect sensitive health information is crucial not just for cultivating patient trust but for avoiding costly repercussions.

In this white paper, we'll explore the essential technology solutions healthcare providers need to strengthen their defenses against cyber threats and data security risks. From managed IT services and HIPAA-compliant cloud computing to advanced cybersecurity capabilities and compliance consulting, this guide covers the comprehensive IT strategy required to keep protected health information (PHI) safe and operations running smoothly.

1. <https://healthitsecurity.com/features/this-years-largest-healthcare-data-breaches>

2. <https://www.proofpoint.com/us/resources/threat-reports/ponemon-healthcare-cybersecurity-report>

# Managed IT Services

Managed IT services from experienced providers form the backbone of secure, efficient, and compliant healthcare operations in today's digital landscape. By outsourcing IT management to an expert team, organizations can maintain seamless operations while allocating internal resources toward their core clinical and operational priorities. Typical services offered by a managed IT provider include:

## Proactive Monitoring

With patient health on the line, any network downtime can be disastrous for healthcare companies. Managed IT service providers leverage around-the-clock monitoring of networks, systems, applications, and performance metrics to detect potential issues, threats, or inefficiencies before they can escalate and disrupt critical operations.

## Support Services

With managed IT services, healthcare organizations gain on-demand access to a team of experts who provide support and issue resolution across the entire technology environment. Proactive maintenance from third-party professionals maximizes system uptime and availability, freeing up internal IT staff to focus on other priorities while ensuring critical healthcare systems remain continuously operational.

## Data Management

Data backup, recovery, retention, and storage solutions tailored for healthcare providers are critical for safeguarding sensitive patient data and maintaining business continuity. Managed services teams implement stringent data protection protocols aligned with regulations, including secure encrypted transfer and storage of PHI.



# Cloud Computing

Secure, HIPAA-compliant cloud platforms enable healthcare providers to enhance data accessibility and protection while taking advantage of advanced clinical capabilities that improve patient care. Migrating to the cloud delivers benefits such as:



## Secure Data Storage

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In the cloud, electronic health records (EHRs) and other sensitive data are encrypted both in transit and at rest, with robust access controls governing authentication. Automatic backups, redundant storage, and built-in disaster recovery mechanisms safeguard against data loss, downtime, and continuity risks.



## Information Sharing

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Cloud platforms facilitate seamless, secure sharing of EHRs and other patient data to enable real-time collaboration between providers across multiple care teams and facilities. Integration with EHR, practice management, and other clinical systems improves care coordination through centralized, up-to-date patient information.



## Telehealth Enablement

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Telehealth solutions hosted in the cloud provide a secure, scalable infrastructure for healthcare organizations to conduct video consultations, extending care access to remote locations. Cloud technologies also streamline appointment booking and check-in processes and enable remote patient monitoring capabilities.

# Cybersecurity

The healthcare industry is a prime target for cyber threats like ransomware, phishing, and data breaches due to the valuable nature of patient records and the prospect of disrupting critical medical operations. **In the past twelve months, 88% of organizations experienced an average of 40 attacks.**<sup>2</sup> As the cybersecurity threat landscape evolves, healthcare organizations must implement security controls such as:

- ✓ **Threat Prevention:** Deploying a suite of preventive security tools is crucial, including next-generation firewalls, antivirus, email security, web filtering, and more. Security awareness training cultivates a culture of cybersecurity vigilance while access controls and data encryption harden defenses.
- ✓ **Threat Detection:** Continuous security monitoring and analysis of security logs using advanced threat intelligence allows early identification of potential incidents. Intrusion detection systems (IDS) and routine risk assessments and penetration testing uncover hidden vulnerabilities before attackers can exploit them.

- ✓ **Incident Response:** Having a comprehensive incident response strategy is vital for healthcare providers. This includes rapid breach assessment and containment protocols, digital forensics capabilities, crisis communications plans, and ransomware remediation and decryption services when incidents do occur.

By implementing multi-layered enterprise-grade cybersecurity controls, healthcare providers can stay ahead of evolving cyber risks and safeguard patient information.

2. <https://www.proofpoint.com/us/resources/threat-reports/ponemon-healthcare-cybersecurity-report>



# IT Infrastructure

Legacy, outdated technology infrastructure can severely limit a healthcare organization's ability to safeguard patient data and meet evolving compliance requirements. Modernization efforts should prioritize:



## System Updates

Achieving comprehensive system updates requires replacing end-of-life hardware and software with modern counterparts and implementing the latest security patches and upgrades. Healthcare IT teams need continuous improvement roadmaps to eliminate technical debt.



## Network Optimization

Leveraging strategies like network segmentation, access controls, high availability architectures, and performance monitoring optimizes network environments. This fortifies security while ensuring reliable connectivity for critical healthcare operations.



## Technology Integration

Ensuring interoperability between clinical systems like EHRs, medical devices, IoT monitoring tools, and unified communications platforms is critical. Integration promotes seamless data sharing and communication between staff and patients.



# Regulatory Compliance

Healthcare regulations that govern patient privacy and data security – including HIPAA – present a complex compliance landscape. Maintaining compliance in-house requires dedicated healthcare IT security expertise and resources that many organizations lack.

To fulfill the stringent requirements around safeguarding PHI, healthcare providers need guidance from compliance experts encompassing:

- ✓ Comprehensive risk assessments across technology, processes, and people
- ✓ Developing strategies to achieve and maintain continuous compliance
- ✓ Designing and implementing administrative, technical, and physical safeguards
- ✓ Drafting up-to-date policies, procedures, and other documentation
- ✓ Managing compliance program monitoring and addressing any gaps
- ✓ Ensuring all staff undergo relevant training for organizational buy-in

By partnering with IT compliance experts, healthcare organizations can avoid penalties, mitigate risks, and build an embedded culture of adherence to industry regulations.







## Partner With OnDemand

Having a secure technology foundation is non-negotiable for healthcare organizations committed to protecting patient data while delivering optimal care. Providers require guidance from experienced technology advisors to navigate the complex array of solutions available and make the right investments.

With modern, secure IT ecosystems powered by the right technology solutions in place, your healthcare company can safeguard sensitive patient information, meet all regulatory mandates, and focus on your core mission – improving patient outcomes and providing high-quality care.

If you need help selecting and implementing best-fit healthcare technology solutions to improve data security while optimizing operations, OnDemand is here to help. Our experienced, knowledgeable experts provide vendor-agnostic IT guidance to help you find solutions that keep your sensitive patient information safe and your business HIPAA compliant.

**Contact OnDemand today**  
to get started.

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