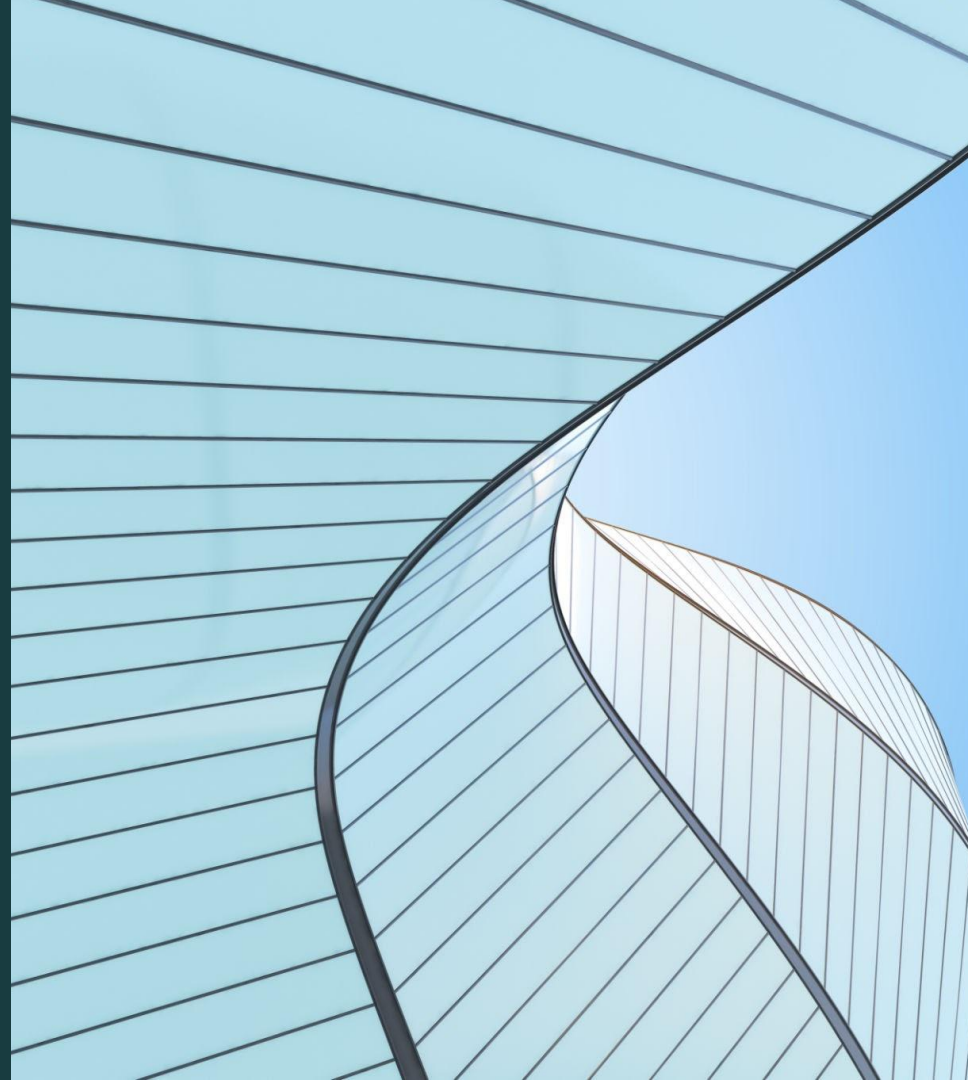


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Cybersecurity In Healthcare: An Overview of Security Operations and Their Implications



The Threats

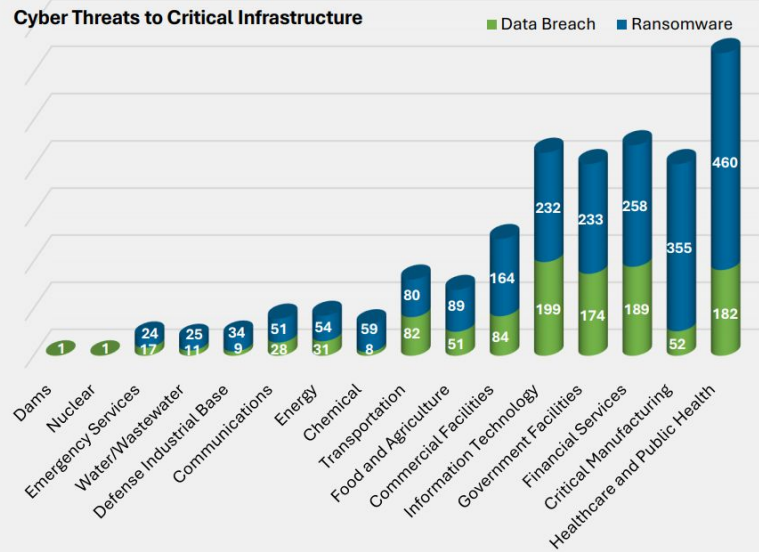
According to the IC3, the healthcare industry is the most attacked.

The healthcare industry must comply with HIPAA which requires the anonymity of patients data.

The healthcare industry faces many problems, not all of them are technical.

People's lives depend on the online systems hospitals use.

(Federal Bureau of Investigation, 2025)



The Human and Social Factors

Human error results in two times more health records being breached than any other factor (Yeo & Banfield, 2022).

The human factor, specifically human error, is the leading cause of breaches in healthcare.

Hospitals are critical infrastructure and are often times underfunded, and if the hospitals underfunded, the community likely is too, making them even more vulnerable.

Patient Data

Threats to individuals

01

Protected Health Information (PHI)

- Demographic Data
- Medical History
- Test Results
- Unique Identifiers

02

Financial Information

- Credit/ Debit Card
- Bank Account #
- PINs
- Credentials

03

Personally Identifying Information (PII)

- Personal Details
- Identification #
- Digital Identifiers
- Biometric Data

What are the affects?

Public Health Implications

Operation

- Pulls attention from patients
- Thins out resources
- Increase operational delays
- Cause patient diversions
- Increased Mortality
- Delayed Procedures

Personal Information

- HIPPA confidentiality
- Fincancial & Medical Records
- Names, Addresses and SSN
- Creates panic of security

Money

- Breach in healthcare 3x cost than other industries (American Hospital Association, N.D)
- Can raise prices for healthcare & services
- Cost to fix breach
 - 42% increase since 2020 (Vipre, 2024)

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