The Governance Institute presents

Managing Cybersecurity Risk in America's Hospitals: A Leadership Imperative

June 15, 2023 | 2:00–3:00 p.m. Eastern

presented by

Steve Cagle, M.B.A., HCISSP, CEO, Clearwater

and

Jim Brady, Ph.D., CHCIO, CDH-E, CISM, CRISC, CISSP, QTE, FHIMSS, FCHIME
Vice President, Cybersecurity & Risk Management and CISO,
M Health/Fairview

Today's Presenters

Steve Cagle, M.B.A., HCISSP
CEO, Clearwater

- Leader of firm recognized as healthcare's top security advisors & consultants and top compliance & risk management solution
- Former CEO, Moberg Pharma North America
- Former CEO, Alterna LLC
- Former Executive & Principal, Sparta Systems, Inc.
- 20+ years B2B software & professional services, pharmaceuticals
- B.S., Finance, Rutgers Business School
- M.B.A., NYU Stern School of Business

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Jim Brady, Ph.D., CHCIO, CDH-E, CISM, CRISC, CISSP, QTE, FHIMSS, FCHIME
Vice President, Cybersecurity & Risk Management and CISO, M Health/Fairview

- Leads M Health/Fairview's Cybersecurity, Governance, Risk, and Compliance, Service Delivery, Network, Unified Communications, End User Services, and Computer, Cloud, Storage, and Database teams
- Independent Corporate Boardroom Certified Qualified Technology Expert
- Former CIO, Los Angeles County Department of Health Services
- Former CIO, Kaiser Permanente Orange County
- Former CISO, Hawaii Health Systems Corporation
- Former Enterprise Information Systems Services Manager, Cedars-Sinai Health System

Learning Objectives

After viewing this Webinar, participants will be able to:

Identify the connection between cyberattacks and patient safety in hospitals

Define reasons why cybersecurity has become a critical business risk.

Describe actions senior leaders and boards can take to manage cybersecurity risk at the enterprise level

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Continuing education credits available

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Program level: Overview
Prerequisites: None
Advanced preparation: None
Delivery method: Group Internet based
Maximum potential CPE credits: 1

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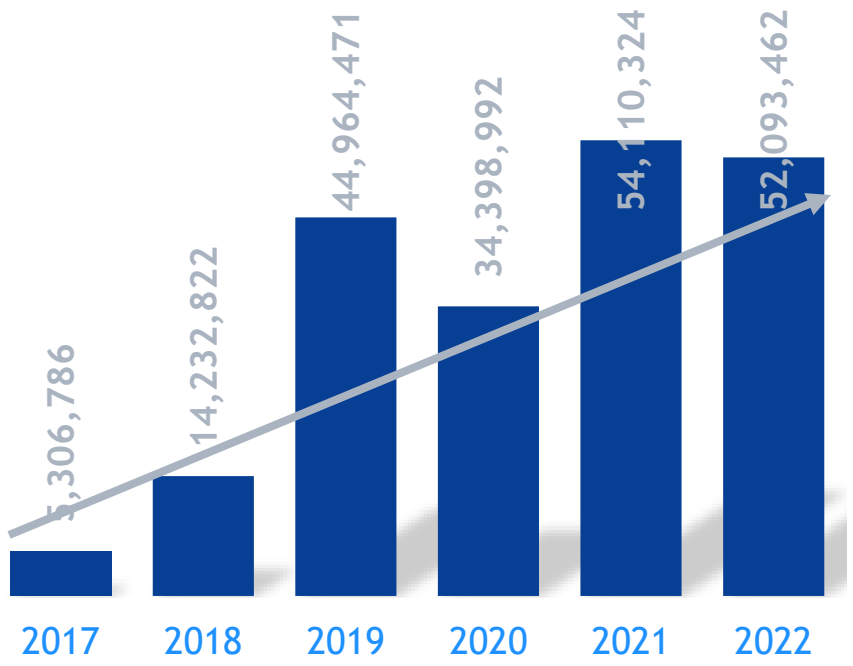
- None of the presenters intend to discuss off-label uses of drugs, mechanical devices, biologics, or diagnostics not approved by the FDA for use in the United States.

Discussion Flow

1. **Healthcare Cybersecurity Trends & Effect on Patient Safety**
2. Learnings from M Health Fairview's Cyber Risk Management Program
3. The Board's Role in Cybersecurity, Liabilities, and Other Considerations
4. Q&A

Healthcare Cyber Landscape: A Perfect Storm

Healthcare records breaches



Key factors

- Growing attack surface
- Highly valuable data
- Highly targeted (109 current threat actors targeting healthcare)
- Low level of maturity
- Limited resources

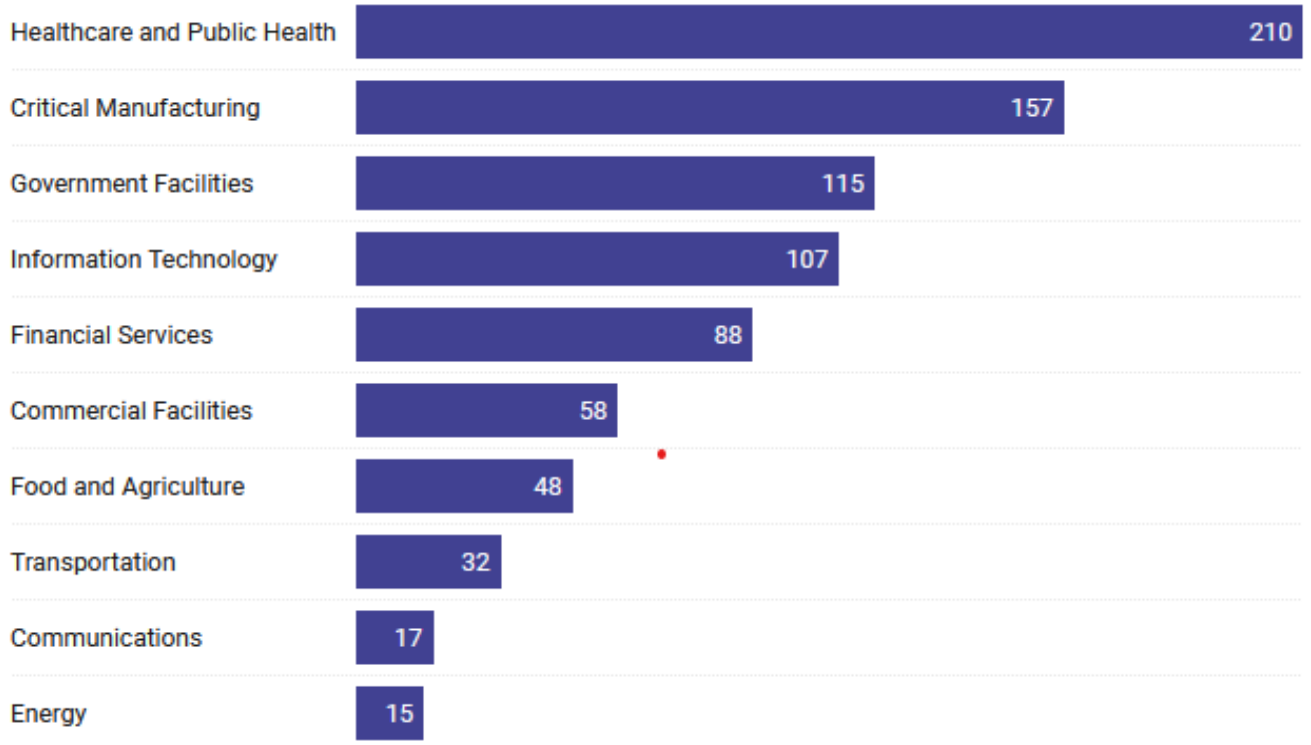
Ransomware: Increasing Risk to Healthcare Organizations

According to the FBI, **healthcare is the most targeted** industry for ransomware attacks of all critical infrastructure industries.[1]

The number of **ransomware attacks on healthcare has doubled** in the past five years.[2]

Health sector hardest hit in ransomware targeting critical infrastructure

Number of ransomware infections in 2022, by sector



1 Federal Bureau of Investigation Internet Crime Report 2022. Internet Crime Complaint Center.

2 Hannah T. Neprash, Ph.D., Claire C. McGlave, M.P.H., and Dori A. Cross, Ph.D., et al., "Trends in Ransomware Attacks on U.S. Hospitals, Clinics, and Other Health Care Delivery Oranizations, 2016-2021," *JAMA Health Forum.* 2022; 3(12):e224873. doi:10.1001/jamahealthforum.2022.4873.

Chart: Matt Kapko/Cybersecurity Dive; source: FBI. Created with Datawrapper.

Recent Ransomware Events

Reported May 4

Tennessee health system stops all operations amid cyberattack recovery

Jessica Davis May 4, 2023

Murfreesboro Medical Clinic & SurgiCenter was forced offline after a cyberattack. (Adobe Stock Images)

Reported May 12

Staten Island Hospital operating in network downtime amid ransomware attack

Jessica Davis May 12, 2023

Richmond University Medical Center's main campus in Staten Island, New York. The center is one of several healthcare facilities currently attempting to fully restore services in the wake of a cyber attack. (Credit: Richmond University Medical Center)

Reported May 23

Cyberattack on Norton Health spurs long waits, prescription and lab delays

Jessica Davis May 23, 2023

A cyberattack at Norton Healthcare in Louisville, Ky., is leading to pharmacy and lab delays. (U.S. Air Force)

[Tennessee health system stops all operations amid cyberattack recovery | SC Media (scmagazine.com)]

[Cyberattack on Norton Health spurs long waits, prescription and lab delays | SC Media (scmagazine.com)]

Cybersecurity IS Patient Safety

2021: CISA reported ransomware causes worsened health outcomes as measured in **excess deaths** due to disruption. [1]

2022: Of all providers who had a ransomware attack, **22% reported increased in mortality rates** following the attack.[2]

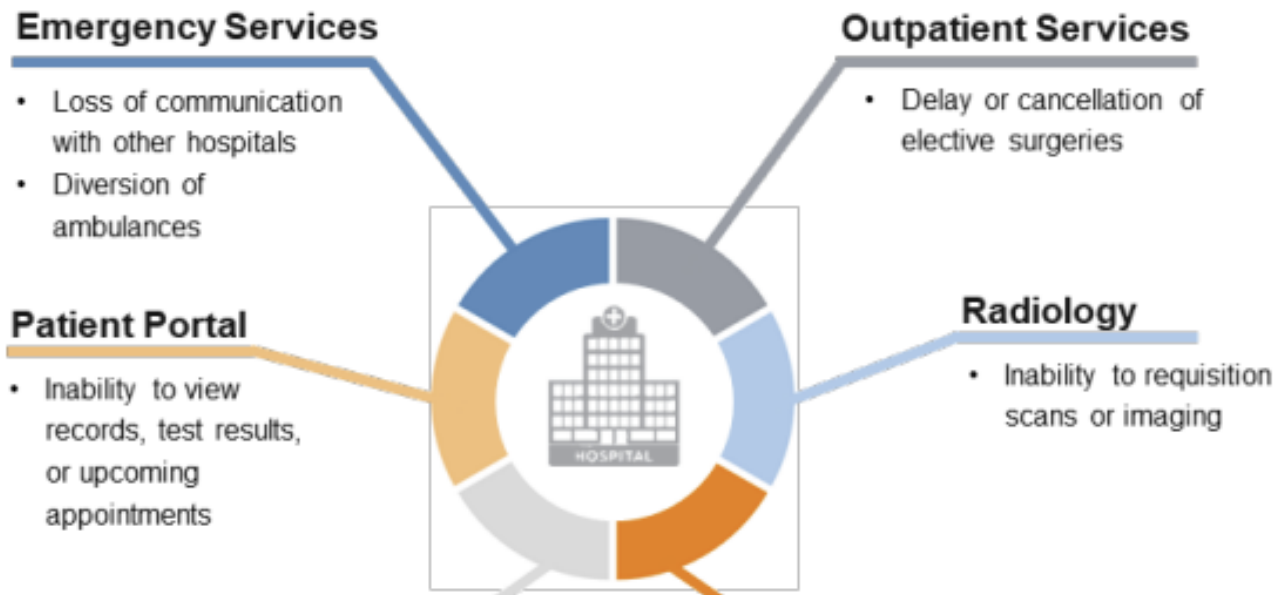
2023: A recent JAMA study found hospitals adjacent to others affected by ransomware attacks may see disruptions in patient care and **risks to increased mortality**.[3]

2023: FBI and DOJ now treating patient cyber-attacks as **"threat to life"** crimes. [4]

1 *Provide Medical Care is in Critical Condition: Analysis and Stakeholder Decision Support to Minimize Further Harm,* Cybersecurity and Infrastructure Security Agency (CISA), September 2021.
2 Kevin Collier, "Cyberattacks Against U.S. Hospitals Mean Higher Mortality Rates, Study Finds," *NBC News,* September 8, 2022.
3 Christian Dameff, M.D., M.S., et al., "Ransomware Attack Associated With Disruptions at Adjacent Emergency Departments in the U.S.," *JAMA Network Open,* 2023; 6(5):e2312270.
4 *Hospital Resiliency Landscape Analysis,* Healthcare and Public Health Sector Coordinating Council, Office for Civil Rights, Centers for Medicare and Medicaid Services, and HHS 405(d) Working Group, Joint Publication, March 2023.

Cybersecurity IS Patient Safety

Hospital System Services and Departments Disrupted by Cyber Attack



Polling Question #1

A key factor in the increase in cyberattacks is:

a. Insurance companies are increasing insurance coverage with lower premiums
b. Rapid expansion of the attack surface
c. FBI recommends to pay ransom
d. None of the above

Discussion Flow

1. Healthcare Cybersecurity Trends & Effect on Patient Safety
2. **Learnings from M Health/Fairview's Cyber Risk Management Program**
3. The Board's Role in Cybersecurity, Liabilities, and Other Considerations
4. Q&A

Polling Question #2

Ransomware causes increased patient safety risk, and is associated with increased mortality rates due to:

a. Ambulance diversion to other hospitals, which delays emergency care
b. Delayed or reduced quality of treatment due to lack of patient data or ability to have tests performed
c. Reduced capacity at other adjacent medical facilities due to overflow
d. All of the above

Polling Question #3

Is your board informed of risks that exceed its threshold?

a. Yes – on an ongoing basis
b. Yes – annually
c. Yes – sporadically
d. No

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Critical Tasks for the Board

- Establish a culture of cybersecurity
- Set your appetite for cyber risk
- Discuss and prioritize your unique high risks
- Ensure resources for your cybersecurity and resiliency program

Additional Liabilities and Concerns

- Healthcare is the most expensive industry to have a breach ($10.1M average cost, per the latest Ponemon Institute study).
- Cyber insurance premiums are increasing and may not cover the cost of a major incident.
- Class action lawsuits are increasing in number and size.
- Enforcement action is now more commonly occurring with State Attorney Generals and the FTC, as well as through HHS OCR.
- New cyber incident reporting requirements for critical infrastructure owners as required by the Cyber Incident Reporting for Critical Infrastructure Act of 2022 (CIRCIA).
- SEC proposed rules requiring cyber incident reporting and cybersecurity program disclosures.

Polling Question #4

Boards should engage on which of the following regarding cyber risk management:

a. Conducting assessments of the organization's cybersecurity program
b. Making decisions on which technical controls to implement
c. Determining the organization's risk appetite and authorizing the leadership team to respond to risks above the threshold
d. Reviewing and approving specific security operating procedures

Final Thoughts

- Healthcare will continue to be highly targeted by threat actors.
- Cyberattacks are a top business and patient safety risk for all healthcare organizations.
- Some organizations have responded well and, as a result, avoided devasting attacks.
- The board plays a crucial role in setting the tone for the organization's cyber risk management strategy.

Questions & Discussion

Contact Us…

Steve Cagle
CEO
Clearwater
steve.cagle@clearwatersecurity.com

Jim Brady
VP Cybersecurity & Risk Management and CISO
M Health/Fairview
jim.brady@fairview.org

The Governance Institute
1245 Q Street
Lincoln, NE 68508
(877) 712-8778
Info@GovernanceInstitute.com