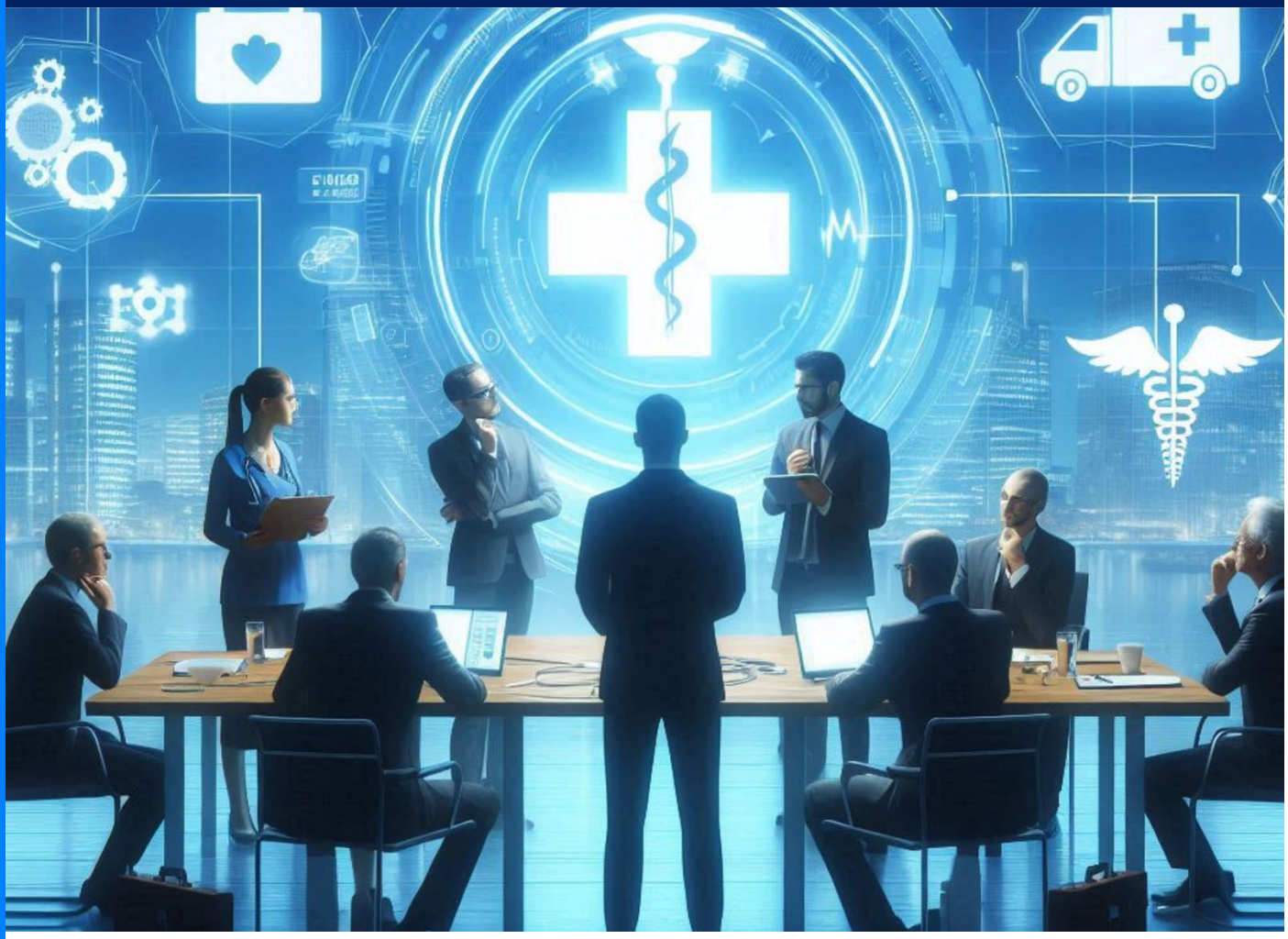
Health Sector Coordinating Council
Cybersecurity Working Group

Respond & Recover

HEALTH INDUSTRY CYBERSECURITY

From Panic to Plan: Executive Strategies for Handling Cybersecurity Incidents



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1. Introduction

Cybersecurity attacks against the healthcare sector are on the rise. In 2023, an average of 2 healthcare data breaches exposing more than 364,571 healthcare records on average were reported each day, with an average HIPAA fine of $1.5 million. The rate of ransomware attacks against healthcare organizations has reached a four-year high since 2021, impacting two-thirds of 400 healthcare organizations according to one estimate by Sophos. Accompanying this surge are higher recovery times and costs, with the mean cost of recovery in a healthcare ransomware attack at $2.57 million in 2024, double the 2021 cost. In 2024 alone, 60 reported ransomware attacks have resulted in class-action litigation, further imposing crippling costs on healthcare organizations. Many of these incidents are the result of attacks against business associates, third-party vendors and suppliers.

The impact of cyber-attacks on healthcare providers, payers, health IT, and medical products companies, whether direct or through business partners and solution providers, can be overwhelming: industry-wide delays in claim processing, research and intellectual property theft, postponed operations, unplanned overtime hours, inaccurate or incomplete patient data, and widespread destruction of blood donations due to mission critical systems being compromised.

And who must deal with the aftermath of these incidents? Consequences across a victim organization invariably involve executives responsible for legal, regulatory, operational, reputational, financial and clinical risk, and ultimately, patient safety.

The epidemic of cyber threats and incidents on the health sector highlights the need for healthcare executives not only to recognize the potential business consequences of cyberattacks but to understand and manage the executive role in directing and supporting incident response and continuity of operations.

Emergency management, business continuity, and disaster recovery plans are typically established to address natural disasters, physical safety events, pandemics, and technical outages. But the emerging threat of cybersecurity incidents warrants additional preparedness, as they present unique challenges that require specialized considerations. Preplanning establishes the framework for a swift cyber incident response, delineates contingency and continuity plans, and facilitates the quick resumption of services

This checklist aims to raise awareness about critical considerations for informed and swift executive decision-making during and after a cybersecurity incident. These considerations are categorized into Incident Response, Business Continuity, and Communication sections below. By familiarizing themselves with these strategic concerns in advance, healthcare executives can enhance their preparedness to ask the right questions and make effective decisions during a crisis.

2. About the Health Sector Coordinating Council Joint Cybersecurity Working Group

The Health Sector Coordinating Council (HSCC) Joint Cybersecurity Working Group (JCWG) is a government-recognized critical infrastructure industry council of more than 450 healthcare providers, pharmaceutical and medical technology companies, payers, health IT and government entities partnering to identify and mitigate cyber threats to health data and research, systems, manufacturing and patient care. The CWG membership collaboratively

develops and publishes freely-available healthcare cybersecurity best practices and policy recommendations, and produces outreach and communications programs emphasizing the imperative that cyber safety is patient safety. See https://HealthSectorCouncil.org.

3. Executive Checklist for Cyber Incident Response

Incident Response

The response to a cybersecurity event can be complex, requiring a comprehensive array of actions.

The foundation of an effective incident response is the identification of a team and development of a plan that is exercised to ensure timely activation. Key advance preparedness elements for a streamlined response include:

- Collaboration with risk management and legal counsel to consider an optimal cyber insurance policy, balancing coverage levels, premium costs, and risk management requirements.
- Engaging in proactive discussions with executive leaders, board members, and legal counsel regarding extortion policies and the authority to negotiate demands or payments.
- Identifying who within the organization has the authority to take all technology systems offline. This is typically a time-sensitive decision that may be necessary to limit the spread of an attack yet needs to be balanced against clinical needs.
- Contracting with cyber security response firms prior to an incident to foster partnerships, expedite planning and minimize response costs.
- Establishing protocols for sharing information with internal and external partners, including patients, healthcare organizations, vendors, staff, and the public.
- Mapping and prioritizing criticality of essential services with a recommended restoration sequence during an extended downtime event.

Business Continuity

Healthcare relies heavily on technology to ensure patient safety and maintain efficient business operations. Even a brief technology outage can pose significant patient safety risks. The repercussions of a cybersecurity incident extend beyond the technical environment, often leading to prolonged operational downtimes and disruptions, which could last multiple weeks to months. Typically, downtime and continuity plans are limited in scope and primarily support short, planned outages.

To develop robust processes and resources for sustaining extended downtime events, consider the following continuity considerations:

- How will operations continue if the technical network is taken offline, and technology is unavailable?
- Which services will be suspended to manage downtime, and who has the authority to suspend services within the facility?
- If a system goes down, do you understand how it affects other systems and business processes?
- Is there a comprehensive list of technical, clinical, and operational vendors with up-to-date contact information?

- Do all patient and operational areas have procedures in place to support an extended downtime event and are they reviewed regularly?
- What federal, state and local, and tribal regulatory reporting notifications are required, and who is responsible for making these notifications?
- What will be the impact on hospital billing, revenue cycle, cash flow, and payroll operations during an extended downtime event?
- How will clinical trials and research be managed in relation to grant funding and FDA requirements?
- What are the potential implications for the supply chain during an extended downtime event?
- How will you secure your facility if access control systems are impacted or unavailable
- How will staff communicate if traditional communications mechanisms such as phone and email are unavailable or untrusted?

Communications

Effective communication is crucial during a cybersecurity incident. It must be clear, concise, factual, and timely. Incident management relies on collaboration and understanding the organization's capabilities and response plans. Pre-incident discussions can enhance these plans and protect the organization, staff, and community from cybersecurity attacks and downtime.

Key considerations for communication during a cybersecurity incident include:

- Before an incident occurs, establish a crisis communication plan that outlines the information the organization is prepared to share during a cybersecurity event. The communication plan should include tailored templates for various audiences, including:
  - Board of Directors
  - Patients and Customers
  - Vendors and Contractors
  - Staff and Providers
  - Partner healthcare agencies and cybersecurity collaboratives.
- Be aware that internal communications may be inadvertently shared with external media outlets, partners, regulators, social media channels, or other entities. Establish clear policies for the internal chain of command regarding external communications.
- Be aware that if law enforcement is engaged as part of your forensics and incident response, law enforcement may circumscribe external communications about the incident “due to an ongoing investigation.” This muting of some information to the public can introduce reputational and misinformation risk.
- Provide status updates, specific instructions, and foster a culture of teamwork, empowering staff to continue performing their roles effectively.
- Alert partner organizations to immediate risks posed by the incident.
- Consider sharing information about identified vulnerabilities or indicators of compromise with cyber security peer networks or information sharing organization to help prevent similar attacks.

4. Additional Resources

Effective cybersecurity responses demand the collaboration of Emergency Management, Information Technology, Clinical, Operational, and Cybersecurity programs to manage the interdependencies and tactical nuances arising from a cybersecurity incident. This Checklist address those collaborative imperatives and supplements leading practices published by HSCC in other incident response and operational continuity resources, including (links embedded):

Operational Continuity Cyber Incident (OCCI)

Flexible checklist tool aligned with the Hospital Incident Command System framework to guide response actions for the first operational period of a cyber security attack resulting in a widespread downtime event. Organizations can adapt the suggested structures and tasks based on their size, resources, complexity, and capabilities.

Coordinated Healthcare Incident Response Plan (CHIRP)

Technical cybersecurity incident response template designed for health systems, hospitals, and clinics, including recommendations and guidance for responding to the incident while facilitating collaboration between hospital and leadership teams to ensure a coordinated and effective response.

Cyber Security for the Clinician Video Training Series

An eight-part video series tailored for clinicians to boost cybersecurity awareness, identify risks, and learn how to mitigate cyber threats. Participants can earn one CME/CEU credit hour, and the series may help fulfill documentation requirements for the CMS Emergency Preparedness Rule, the National Fire Protection Association, and The Joint Commission.

For other leading practices in healthcare cybersecurity, visit https://healthsectorcouncil.org/hscc-publications/.

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Feedback

To provide feedback about this document, please reference the document name and share your comments to Feedback@HealthSectorCouncil.org

5. Acknowledgments

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