HEALTH INDUSTRY CYBERSECURITY STRATEGIC PLAN (HIC-SP) 2024-2029
CYBER PANDEMIC IN THE HEALTH SECTOR

Patient Not Found
HIPAA breaches in 2023 nearly doubled to 725 since 2018

Ransomware Hit 141 Hospitals in 2023 – avg. ransom $1.5M,

**Impacting:**
- Imaging and other diagnostic and therapeutic devices
- Loss of patient medical records
- Down payment systems
- Loss & corruption of clinical trial & research data
- Pharmaceutical manufacturing operations

“If you are unlucky enough to be in the hospital when a ransomware attack occurs, your risk of dying goes up”
WHO IS THE NEXT HEADLINE

Study finds that “targeted hospital cyberattacks ... associated with disruptions of health care delivery ... should be considered a regional disaster.”

“If you are unlucky enough to be in the hospital when a ransomware attack occurs, your risk of dying goes up”
Objective

• Identify healthcare industry trends over the next five years

• Assess associated cybersecurity challenges

• Recommend cybersecurity strategy to upgrade from “Critical Condition” to “Stable Condition” in 2029; and

• All hands on deck – health providers, medtech and health IT, pharmaceutical, health plans and payers, and government: implement and facilitate achievement of the strategy.
Who is Prescribing the Wellness Plan

Health Sector Coordinating Council
Joint Cybersecurity Working Group

• Government-recognized critical infrastructure advisory council of more than 400 healthcare providers, life sciences, medtech, payers, health IT & public health entities

• Partners with government to identify and mitigate cyber threats to patient care, health data & research, IT & medical technology systems, manufacturing operations

• Publishes freely-available healthcare cybersecurity best practices and policy recommendations – by the sector for the sector

• Organizing imperative that Cyber Safety is Patient Safety.
The Health Industry Cybersecurity Strategic Plan puts patient safety in the center, while supporting innovation, resilience, and the move to the future of health.
The following depicts the structure of the HIC-SP. Projected 5-year industry trends informed identification of broad cybersecurity goals realized by actionable implementing objectives to move the sector toward a more cyber-secure and resilient posture.
Seven business, technology, clinical, and policy trends will characterize the evolution of the health sector over the next five years and beyond.

**Trend 1:** Methods of care delivery will continue to shift and evolve

**Trend 2:** Adoption of emerging and disruptive technologies will accelerate

**Trend 3:** The business of healthcare will continue to change and adapt

**Trend 4:** Acute Financial Distress will not abate

**Trend 5:** Workforce recruitment and talent management will face competitive supply and demand pressures

**Trend 6:** Government will be challenged to develop balanced policy that achieves objectives in complex health systems

**Trend 7:** Global instability, climate change and downstream effects will increase pressure on the healthcare supply chain
## 5-Year Cybersecurity Goals
### Meet Industry Trends

The health industry will pursue ten cybersecurity goals to meet the challenges posed by industry trends.

<table>
<thead>
<tr>
<th>Goal</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>Goal 1</strong></td>
<td>Healthcare and wellness delivery services are user-friendly, accessible, safe, secure, and compliant.</td>
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<td><strong>Goal 2</strong></td>
<td>Cybersecurity and privacy practices and responsibilities are understandable to healthcare technology consumers and practitioners.</td>
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<td><strong>Goal 3</strong></td>
<td>Cybersecurity requirements are readily available, harmonized, understandable, and feasible for implementation across all relevant healthcare and public health subsectors.</td>
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<td><strong>Goal 4</strong></td>
<td>Health data, commercially sensitive research, and intellectual property data are reliable and accurate, protected and private, while supporting interoperability requirements.</td>
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<td><strong>Goal 5</strong></td>
<td>Emerging technology is rapidly and routinely assessed for cybersecurity risk, and protected to ensure its safe, secure, and timely use.</td>
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<td><strong>Goal 6</strong></td>
<td>Healthcare technology used inside and outside of organizational boundaries is secure-by-design and secure-by-default while reducing the cybersecurity burden and cost on technology users.</td>
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<td><strong>Goal 7</strong></td>
<td>A trusted healthcare delivery ecosystem is sustained with active partnership and representation between critical and significant technology partners and suppliers, including non-traditional health and life science entities.</td>
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<td><strong>Goal 8</strong></td>
<td>Foundational resources and capabilities are available to support cybersecurity needs across all healthcare stakeholders regardless of size, location, and financial standing.</td>
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<td><strong>Goal 9</strong></td>
<td>The health and public health sector has established and implemented preparedness response and resilience strategies to enable uninterrupted access to healthcare technology and services.</td>
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<td><strong>Goal 10</strong></td>
<td>Organizations across the health sector have strong cybersecurity and privacy cultures that permeate down from the highest levels with-in each organization.</td>
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</table>
Enterprise and sector-wide implementation of twelve cybersecurity objectives will achieve the proposed cybersecurity goals that address the identified sector trends.

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<thead>
<tr>
<th>Cybersecurity Objectives</th>
<th>Implement 5-Year Goals</th>
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<tbody>
<tr>
<td><strong>O1.</strong> Develop, adopt and demand safety and resilience requirements for products and services offered, from business to business, as well as health systems to patients, with the concept of secure by-design and by-default.</td>
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<td><strong>O2.</strong> Simplify access to resources and implementation approaches related to the adoption of controls and practices aligned with regulatory and sector standards for securing devices, services, and data.</td>
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<td><strong>O3.</strong> Develop and adopt practical and uniform privacy standards to protect personal information and promote fair and ethical data practices while sharing the data in a consensual ecosystem.</td>
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<td><strong>O4.</strong> Increase new partnerships with public-private entities on the front edge of evaluating and responding to emerging technology issues to enable safe, secure, and faster adoption of emerging technologies.</td>
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<td><strong>O5.</strong> Enhance health sector senior leadership and board knowledge of cybersecurity and their accountability to create a culture of security within their organizations.</td>
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<td><strong>O6.</strong> Increase utilization of cybersecurity practices / resources / capabilities by public health, physician practices and smaller health delivery organizations (e.g., rural health).</td>
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<td><strong>O7.</strong> Increase incentives, development and promotion of healthcare cybersecurity-focused education and certification programs.</td>
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<td><strong>O8.</strong> Increase utilization of automation and emerging technologies such as AI to drive efficiencies in cybersecurity processes.</td>
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<td><strong>O9.</strong> Develop health subsector-specific integrated cybersecurity profiles aligned with regulatory requirements.</td>
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<td><strong>O10.</strong> Develop meaningful cross-sector third-party risk management strategies for evaluating, monitoring, and responding to supply chain and third-party provider cybersecurity risks.</td>
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<td><strong>O11.</strong> Increase meaningful and timely information sharing of cyber related disruptions to improve sector readiness.</td>
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<td><strong>O12.</strong> Develop mechanisms to enable “mutual aid” support across sector stakeholders to allow for timely and effective response to cybersecurity incidents.</td>
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2029 Target Future State

If we succeed, our healthcare cybersecurity diagnosis will upgrade from “Critical Condition” in 2017 to “Stable Condition” in 2029. HIC-SP will lead us to an end-state environment in which cybersecurity is ingrained as a public health and patient safety standard:

<table>
<thead>
<tr>
<th>Reflexive Cybersecurity</th>
<th>Secure Design &amp; Implementation</th>
<th>C-Suite Ownership</th>
<th>Cyber Safety Net</th>
<th>Cyber Competence</th>
<th>911 Cyber Civil Defense</th>
</tr>
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<tbody>
<tr>
<td>Both practiced and regulated healthcare cybersecurity is reflexive, evolving, accessible, documented and implemented for practitioners and patients.</td>
<td>Technology and services across the healthcare ecosystem is a shared and collaborative responsibility.</td>
<td>Healthcare C-Suite embraces accountability for cybersecurity as enterprise risk and a technology imperative.</td>
<td>Under-resourced health organizations are supported in the form of financial, policy and technical assistance ensuring cyber equity across the ecosystem.</td>
<td>Workforce learning and application is an infrastructure wellness continuum.</td>
<td>Ensures that early warning, incident response and recovery are reflexive, collaborative and always on.</td>
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Health Organizations Support
Health Industry Cybersecurity Strategic Plan

The Undersigned Organizations agree:

• The United States Healthcare and Public Health (Health) Sector continues to face dramatic increases in cyber-attacks, causing disruption to patient safety, the care continuum and the operation of supporting network-connected products and services;

• Cyber preparedness and resiliency of the Health Sector depends on a collective defense involving all Health subsectors and supporting infrastructure in the interconnected and interdependent ecosystem;

• Progress has been made in awareness and implementation of Health Sector guidance for cybersecurity risk management, but efforts must be accelerated in an All-of-Sector, national collective strategy; and

• The Health Sector Coordinating Council Joint Cybersecurity Working Group has developed a Five-Year Health Industry Cybersecurity Strategic Plan (HIC-SP) that presents a wellness plan for lifting Health Sector cybersecurity from “critical condition” to “stable condition” by 2029.

The undersigned therefore embrace the principles of the Health Industry Cybersecurity Strategic Plan to enhance our shared preparedness and resiliency on the imperative that “Cyber Safety is Patient Safety”
SIGN THE PLEDGE AND JOIN US

MOBILIZE & IMPLEMENT

DEFINE & TRACK MEASURES FOR SUCCESS
About the Health Sector Coordinating Council
Joint Cybersecurity Working Group
Interconnected Healthcare Ecosystem

**Laboratories, Blood & Pharmaceuticals**
- Pharmaceutical Manufacturers
- Drug Store Chains
- Pharmacists’ Associations
- Public and Private Laboratory Associations
- Blood Banks

**Medical Materials**
- Medical Equipment & Supply
- Manufacturing & Distribution
- Medical Device Manufacturers

**Health Information Technology**
- Medical Research Institutions
- Information Standards Bodies
- Electronic Medical Record System and Other Clinical Medical System Vendors

**Federal Response & Program Offices**
- Coordinated Response Activities
- Under Emergency Support Function 8
- Government Coordinating Council
- Federal Partners (e.g., HHS, DoD, other sector partners)

**Direct Patient Care**
- Healthcare Systems
- Professional Associations
- Medical Facilities
- Emergency Medical Services
- Consumer Devices \ BYOD

**Mass Fatality Management Services**
- Cemetery, Cremation, Morgue, and Funeral Homes
- Mass Fatality Support Services (e.g., coroners, medical examiners, forensic examiners, & psychological support personnel)

**Health Plans and Payers**
- Health Insurance Companies & Plans
- Local and State Health Departments
- State Emergency Health Organizations

**Public Health**
- Governmental Public Health Services
- Public Health Networks
Organized in 2018

- **425 private-sector member organizations** (as of February 2024, **600% increase since 2018**), including:
  - 52 industry associations
  - 58 non-voting Advisor firms
  - 19 Government organizations, including federal state, city and county
  - Total representing personnel: 980

Identifies and develops strategic, cross-sector solutions to cybersecurity threats and vulnerabilities affecting the security and resiliency of the healthcare sector

Outcome-oriented task groups meet regularly through the year; full CWG meets twice a year around the country

Works closely on joint initiatives with:
  - HHS Administration for Strategic Preparedness and Response
  - HHS Office of the Chief Information Officer
  - Food and Drug Administration
HSCC JCWG Member Organization
Distribution by Subsector

- Direct Patient Care: 40.5%
- Health Information Technology: 6.8%
- Health Plans and Payers: 5.3%
- Mass fatality and Management Services: 0%
- Medical Materials: 9.6%
- Laboratories, Blood, Pharmaceuticals: 6.0%
- Public Health: 5.5%
- Cross-sector: 8.2%
- Government (Fed, State, County, Local): 3.9%
- Advisors: 14.2%
## HSCC Publications Supplementing HIC-SP

By the Sector for the Sector

<table>
<thead>
<tr>
<th>Year</th>
<th>Publications</th>
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<tbody>
<tr>
<td>2024</td>
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</table>
| 2023 | • [Updated] Health Industry Cybersecurity Information Sharing Best Practices  
      • [Updated] Health Industry Cybersecurity Matrix of Information Sharing Organizations  
      • Coordinated Healthcare Incident Response Plan  
      • Recommended Government Policy & Programs  
      • Hospital Cyber Landscape Analysis ([Joint] HSCC/HHS)  
      • Prioritized Recognized Cybersecurity Practices  
      • Health Industry Cybersecurity Practices 2023 ([Joint])  
      • Cybersecurity for Clinician Video Training Series  
      • Health Industry NIST CSF Implementation Guide ([Joint])  
      • Managing Legacy Technology Security  
      • Artificial Intelligence Machine Learning |
| 2022 |  |
| 2021 | • Securing Telehealth and Telemedicine |
| 2020 | • Supply Chain Risk Management  
      • Health Sector Return-to-Work Guidance  
      • Tactical Crisis Response  
      • Protection of Innovation Capital  
      • Information Sharing Best Practices  
      • Checklist for Teleworking Surge During COVID-19 |
| 2019 | • Matrix of Information Sharing Organizations  
      • Workforce Guide  
      • Medical Device and Health IT Joint Security Plan  
      • Health Industry Cybersecurity Practices ([Joint]) |

[https://healthsectorcouncil.org/hscc-publications](https://healthsectorcouncil.org/hscc-publications)
HSCC Cybersecurity Working Group
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CHAIR: Erik Decker, VP, CISO, Intermountain Healthcare

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