Solving Cyber

California Society for Healthcare Risk Management

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Agenda

- Cyber from a Risk Management Lens
- Emerging Security Environment
- Risk Quantification Update
- Insurance Marketplace Overview

Treating Data/ Privacy Breach Risk as Enterprise Risks

- Companies must treat data/ privacy breach risk as a risk to the entire enterprise, not an isolated information technology event.
- A potential impact of an incident on a company's financials may not be easily quantified or linked.
- Financial statement auditors and rating agencies are starting to use a company's approach to this exposure as part of their analysis.
- Reputational costs can be equal to or greater than financial.

Corporate Data/ Privacy Breach Policy

- Needs to involve executives from IT, IT Security, Risk Management, General Counsel/ Legal with support from the C Suite.

- Stanford Healthcare/ Stanford Children's Health have in place the following infrastructure:

    - Office of the Chief Compliance and Privacy Officer (CCPO)
    - Institution wide governance via:

        - Operational Privacy Governance Counsel
        - Executive Privacy Governance Counsel

Privacy Education and Loss Prevention

Comprehensive compliance program in place including the following:

- Removal and Transport of PHI, PCI, PII
- Security Incident Procedures and Incident Monitoring
- 24/7 dedicated hotline with immediate notification to the Privacy Office Staff
- Mandatory privacy and security training for all employees
- Contract with outside entity to execute notifications to outside parties
- Thorough review protocol regarding vendor security

Healthcare cybersecurity is rapidly evolving

- **Growing attack surface**
- **Increasingly sophisticated threat actors**
- **Evolving underground markets for health data**

81%

have been breached in the last two years[1]

The health and medical industries account for **42.5 %** of total hackings in 2014[1]

340%

more security incidents and attacks[2]

$100m

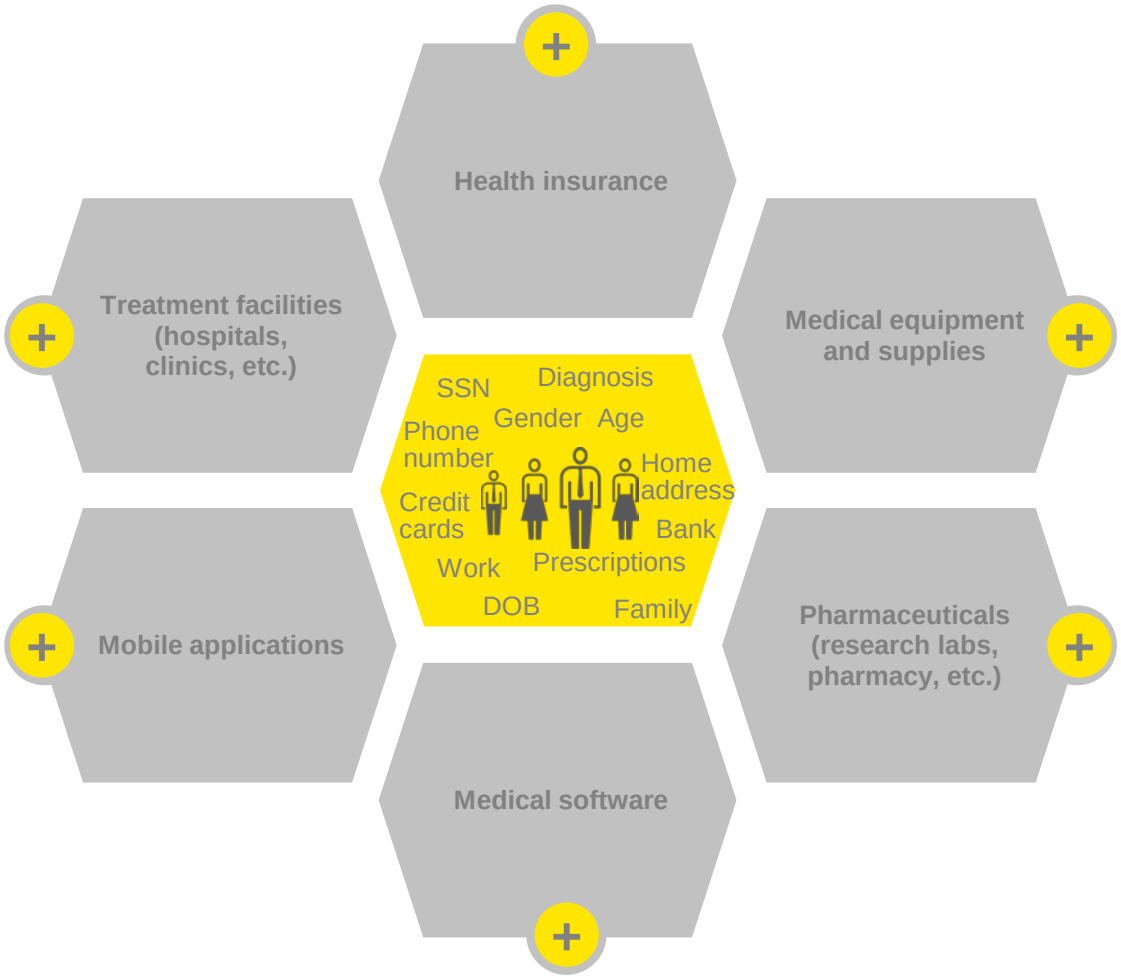
the costs from a single cyber attack[3]

$10 billion

in cybersecurity spending by 2020[4]

[1] www.forbes.com
[2] threatbrief.com
[3] www.cnet.com
[4] www.reuters.com

Myriad uses for healthcare data



- Identity theft
- Fraud and extortion
- Target marketing
- Intellectual property theft
- Phishing
- Population health information
- Market manipulation

A new perspective

Key takeaways

- Rapid digitization and sharing of health care information is expanding the attack surface
- Increased usage of healthcare devices creates additional risk
- Value of health care data in the underground markets is increasing
- Threat actors are more sophisticated

A new mindset

- Embrace **Safety** as the primary driver in building security programs
- Consider the full **scope of security controls** as it relates to the threats faced by your business
- Higher **likelihood of fraud** as the underground markets adapt
- Drive **intelligence sharing** to support group learning amongst peers

In this new mindset, healthcare organizations must think more broadly about their risks, they must also consider impact to patient and customer safety.

Cyber Modeling Update

- Public studies conducted by The Ponemon Institute, Advisen, EY, Verizon, etc. have enabled stronger loss modeling

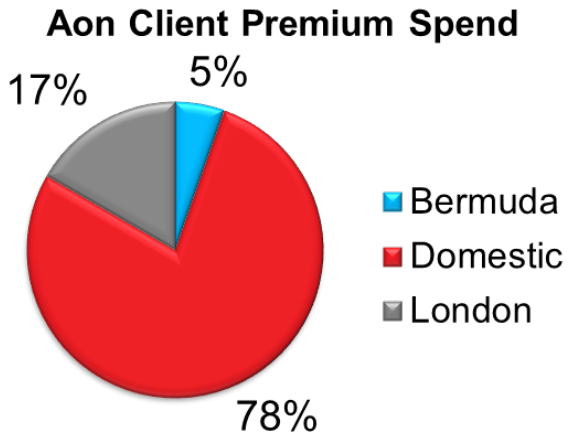
- Brokers and Insurers continue to invest in Cyber modeling tools

- As loss experiences develop, modeling platforms will improve. The key: refining the assumptions

Cyber Losses: Impact on Insurers

- Loss Ratios for large, multinational, risks went from ~40% to >100% for many insurers throughout 2014 and 2015
- Many insurers in high excess layers were receiving <$6,000 per million in limit paid limit losses on multiple risks, in some cases causing the insurer to exit the Cyber marketplace
- Larger insurers in the Cyber product space incurred multiple limit losses, aggregating over $200M in loss within 12 months
- Insurer product leaders struggled to understand how to underwrite “Cyber”

Current Cyber Marketplace



DOMESTIC
- AIG
- Allianz
- Arch
- Argo
- Aspen
- AXIS
- AWAC
- BCS
- Beazley
- Berkshire Hathaway
- Chubb
- CNA
- CV Starr
- Endurance
- Nationwide
- Hartford
- HCC
- Hiscox
- Ironshore
- Liberty Mutual
- QBE
- RLI
- RSUI
- SCOR Re
- Swiss Re
- Travelers
- XL- Catlin
- Zurich

LONDON
- Aegis
- Allianz
- ANV
- Ascent
- Aspen
- AIG Lexington
- Berkshire Hathaway
- Barbican
- Beazley
- Brit
- CFC
- Chubb
- HCC
- Hiscox
- Kiln
- Liberty
- Principia
- SCOR
- Swiss Re
- Axis
- Zurich
- Munich Re
- Novae

BERMUDA (Excess only)
- AIG
- Chubb
- Markel
- Argo
- Aspen
- AWAC
- AXIS
- Endurance
- Iron-Starr
- XL - Catlin
- Global Indemnity

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Open Q&A