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HEALTHCARE SOLUTIONS, INC

Best Practices Securing ePHI

Ignite Transformation! Advancing Positive Health Outcomes Through Quality Care

July 31, 2015

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Acronyms

- BA: Business Associate
- BC/BS: Blue Cross Blue Shield
- BYOD: Bring Your Own Device
- CE: Covered Entity
- EHR: Electronic Health Record
- ePHI: Electronic Protected Health Information
- FDA: Food and Drug Administration
- FTC: Federal Trade Commission
- GINA: Genetic Information Non-Discrimination Act
- HIPAA: Health Insurance Portability and Affordability Act
- HIT: Health Information Technology
- IHI: Institute for Healthcare Improvement
- IT: Information Technology
- OCR: Office for Civil Rights
- OIG: Office of the Inspector General
- PCI DSS: Payment Card Industry Data Security Standard
- PHI: Protected Health Information
- SRA: Security Risk Analysis

Objectives

- Recognize the changing health information technology environment
- Understand your risks and how to mitigate them
- Comprehend the regulations and enforcement activities impacting covered entities

Agenda

- Why Does Information Security Matter?
- Changing Environment of Health IT
- Know Your Risk
- HIPAA Security Rule Compliance
- Beyond HIPAA Compliance

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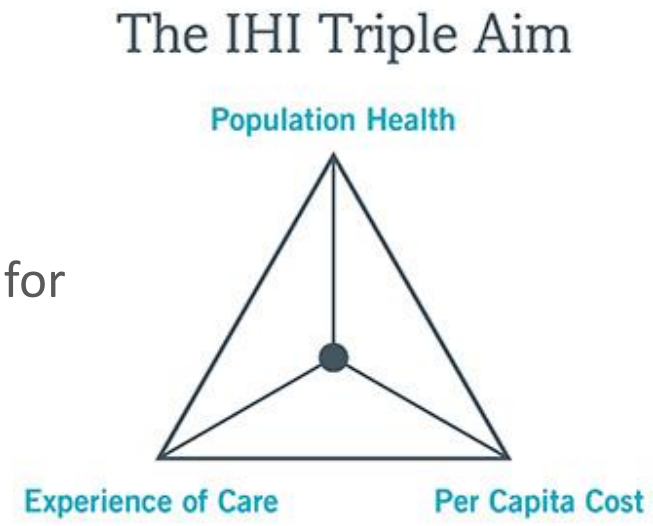
Why Does Information Security Matter?

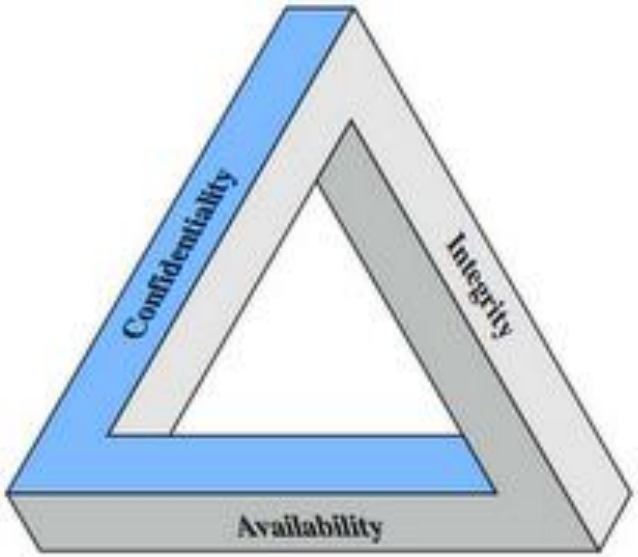
- Healthcare is trending toward advanced payment models
- Triple Aim and EHRs
  - Better care for individuals
    - Clinical decision support
    - Efficient access to health records for healthcare providers as well as patients and their caretakers
  - Better health for populations
    - Accurate population health reports
  - Reducing per-capita costs
    - Reduce duplicative testing and unnecessary services



Graphic from IHI

Health Affairs Blog: *Berwick Brings The 'Triple Aim' To CMS*

Why Does Information Security Matter?



Graphic from
George Moraetes LinkedIn post

- If patients do not trust their healthcare providers to protect their sensitive information:
  - Information provided may be inaccurate or incomplete
  - They may not seek timely care for highly sensitive conditions
- Securing patient data is a critical piece of the health IT puzzle!

Changing Environment of Health IT

- Anthem, Inc. Breach
  - Breach details
    - Anthem-owned unencrypted database was compromised on 12/10/2014
    - Compromise was discovered on 01/27/2015 by a database administrator who noticed his credentials were used to run a query he did not initiate
  - 78.8 million records compromised

CSO Online: *Anthem: 78.8 million affected, FBI close to naming suspect*

Changing Environment of Health IT

- Anthem, Inc. Breach (cont.)
  - Includes customers of
    - Amerigroup
    - Anthem Blue Cross Blue Shield
    - Empire Blue Cross Blue Shield
    - Caremore
    - Unicare
  - May also include customers that used their BC/BS insurance in 14 states served by Anthem
    - California, Colorado, Connecticut, Georgia, Indiana, Kentucky, Maine, Missouri, Nevada, New Hampshire, New York, Ohio, Virginia and Wisconsin

Anthem Facts

Changing Environment of Health IT

- Anthem, Inc. Breach (cont.)
  - Compromised data includes
    - **Names**
    - **Dates of birth**
    - **Social Security numbers**
    - Health care identification numbers
    - Home addresses
    - Email addresses
    - Work information such as income data
  - Compromised data does not appear to include
    - Credit card or banking information
    - Medical information (claims, test results, diagnostic codes, etc.)

Changing Environment of HIT

- Healthcare data is becoming an increasingly valuable target for malicious/criminal hackers
  - It is believed that the value of health data is much more valuable than financial data
    - Medical identity theft is used to receive medical care, buy drugs, submit fake claims, and other activities
    - Financial identity theft is used to open new credit/bank accounts, claim government benefits, get a job, file a false tax return and other activities
  - From 2013 to 2014, the number of people affected by medical identity theft grew 22%
  - Healthcare is “behind the curve” on information security

Money and Career CheatSheet: *Why Thieves Want to Steal Your Medical Records*

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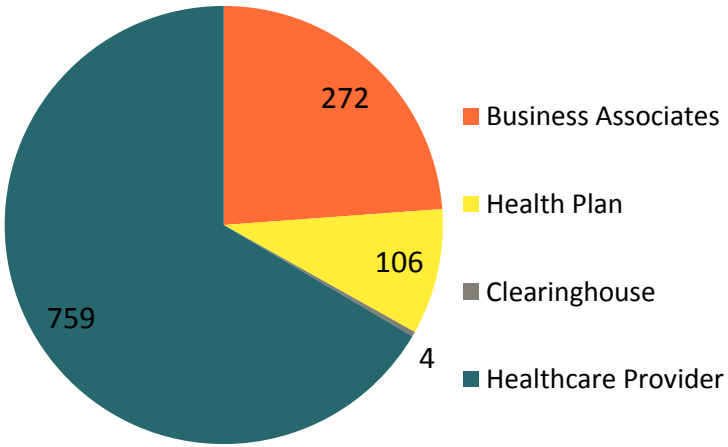
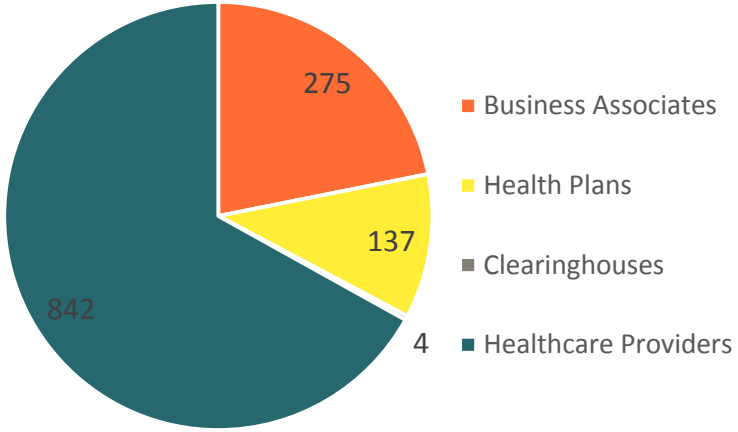
Changing Environment of HIT

Breach Statistics

Number of Breaches by Entity Type as of 02/18/2015



Number of Breaches by Entity Type as of 07/02/2015



Breach statistics compiled from Office for Civil Rights Breaches Affecting 500 or More Individuals website

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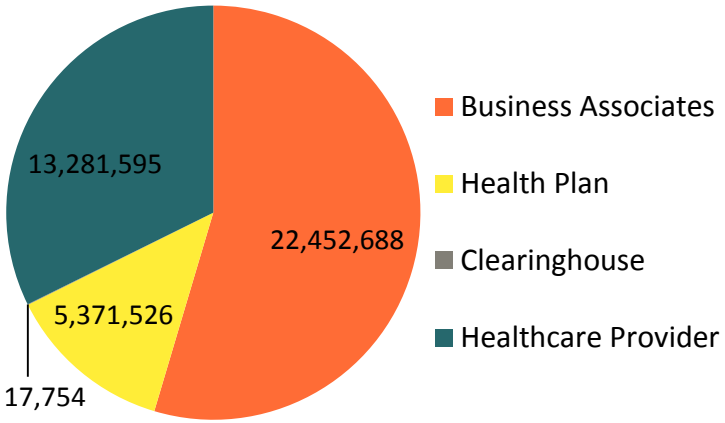
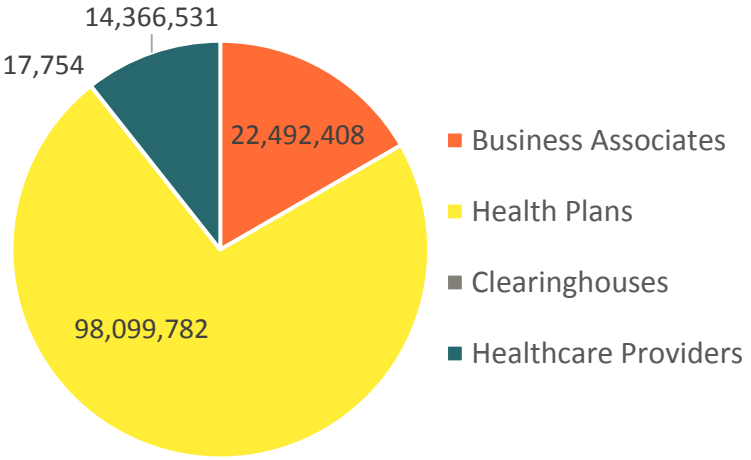
Changing Environment of HIT

Breach Statistics

Lives Affected by Entity Type as of 02/18/2015



Lives Affected by Entity Type as of 07/02/2015



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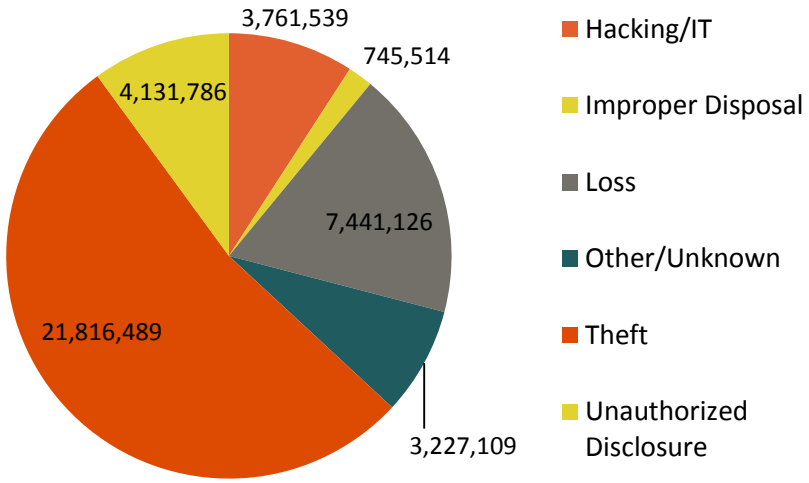
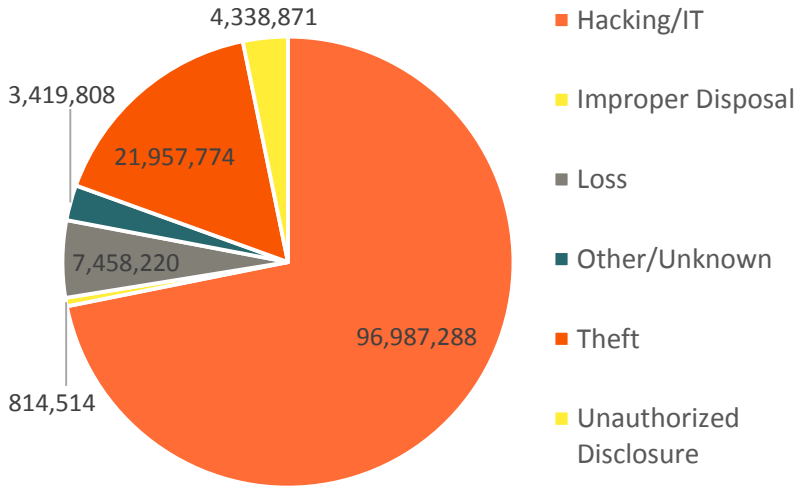
Changing Environment of HIT

Breach Statistics

Lives Affected by Type of Breach as of 02/18/2015



Lives Affected by Type of Breach as of 07/02/015



Know Your Risk

- Is a tornado approaching a school a risk?

CNN Photo

HIPAA Security Rule Compliance

- Security risk analysis and risk management
  - Security risk analysis is not a do-it-and-shelve-it process – it is a ongoing, cyclical improvement process
    - Evaluate your risk
      - Complete your initial SRA to establish a benchmark and start the risk mitigation process
      - Review/update your existing SRA no less than annually
      - As needed, update your existing SRA more frequently for significant planned changes to the information systems
    - Remediate risks in ways that are reasonable and appropriate for your environment
    - Evaluate the effectiveness of remediation activities and (when necessary) alter the remediation activity to improve effectiveness

HIPAA Security Rule Compliance

- Implement control measures
  - Encrypt ePHI at rest and in transit
    - ePHI at rest includes server and hard drive workstations, smart phones, storage devices, removable media, biomedical devices, etc.
    - ePHI in transit is any ePHI that is moving from one recipient to another
  - Assign a Security Official
    - Oversee HIPAA Security compliance program
    - Oversee policy development and implementation
    - Oversee guidance for workstation use
    - Oversee workforce training and education
    - Oversee security incident investigation and breach notification

HIPAA Security Rule Compliance

- Implement control measures (cont.)
  - Implement hiring practices to ensure (as much as possible) that appropriate staff are hired
  - Implement role-based access controls to ePHI
  - Implement physical controls for facilities and sensitive areas within the facility
  - Implement controls to secure workstations
  - Implement controls to secure and track devices and media

HIPAA Security Rule Compliance

- Implement control measures (cont.)
  - Implement routine auditing and evaluations
  - Develop contingency plans
    - Maintain exact copies of ePHI
    - Restore ePHI in the event of loss or corruption
    - Continue providing services during an unexpected event
  - Due diligence and oversight are important with business associates
    - Obtain fully executed BA agreements
    - Determine the most effective method to oversee BA's protection and proper use of your ePHI

HIPAA Security Rule Compliance

- Implement control measures (cont.)
  - Self-insured CEs
    - Must comply with the Genetic Information Non-Discrimination Act (GINA)
  - CEs that also function as a clearinghouse
    - Must separate clinical and practice management functions from the clearinghouse functions

HIPAA Security Rule Compliance

- HIPAA compliance investigations can now be initiated by
  - Patient or workforce member compliant
  - OCR's Permanent Audit Program
  - State Attorneys General
  - Office of the Inspector General during a meaningful use audit

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Beyond HIPAA Compliance

- Information security is more than just HIPAA compliance
  - HIPAA Security Rule became effective in April 2005 and has undergone minimal change even though the healthcare environment and infrastructure is experiencing significant change
    - Healthcare records are rapidly becoming digital
    - Electronic devices can fit easily in the palm of your hand
    - BYOD is becoming increasingly common for healthcare professionals
    - Use of medical wearables and smart phone health apps is on the rise
    - Removable media can hold a lot of information and is easy to misplace
    - Use of social media is rising

Beyond HIPAA Compliance

- Regulations outside of HIPAA
  - Federal Trade Commission has ruled that HIPAA-covered entities may also be subject to enforcement under the FTC Act
  - Food and Drug Administration is tasked with providing guidance to secure biomedical devices
  - If you store financial information for patients, you need to be PCI DSS compliant

Key Takeaways

- Your first priority should be protecting ePHI with technological and physical controls, not just administrative controls.
- Securing patient data is crucial for timely, accurate patient care as well as healthcare reform initiatives.
- Understanding your risk is critical to protecting PHI and other sensitive data.
- Information security is more than HIPAA Security compliance.
- The balance between protecting information and sharing information is delicate and needs to be evaluated often.

Resources

- Health Affairs Blog: *Berwick Brings The 'Triple Aim' To CMS*
- CSO Online: *Anthem: 78.8 million affected, FBI close to naming suspect*
- Anthem Facts
- Office for Civil Rights Breaches Affecting 500 or More Individuals
- Money and Career CheatSheet: *Why Thieves Want to Steal Your Medical Records*

Guidance

- NIST SP 800-111: Guide to Storage Encryption Technologies for End User Devices
- NIST SP 800-52: Guidelines for the Selection and Use of Transport Layer Security (TLS) Implementations
- 800-77: Guide to IPsec VPNs; or 800-113, Guide to SSL VPNs
- Others which are Federal Information Processing Standards (FIPS) 140-2 validated
- NIST SP 800-124 Rev. 1: Guidelines for Managing the Security of Mobile Devices in the Enterprise

Any Questions?

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