Pragmatic Privacy:
Foundation of Service-oriented Meaningful Use
Introduction

- Diane Gross
  - As Vice President/General Counsel of Poudre Valley Health System (PVHS), Diane was on the senior management team that led PVHS to the prestigious 2008 Malcolm Baldrige National Quality Award.
  - Currently on the Senior Management team and Corporate Attorney for Advanced Medical Imaging Consultants.

- Don Jorgenson
  - More than twenty years of experience leading embedded system and software development projects in telecom and healthcare.
  - Co-chair of the HL7 SOA workgroup and lead of the HL7 Privacy, Access and Security Services (PASS) project.
Which one of these two injections won’t cause a lethal allergic reaction?
Overview

The chains must be removed...

EHR Systems Require Health Information Networks

Must connect:
• 3M+ Healthcare Providers/Associates
• 300M+ Patients

Removes barriers to EHR System deployment and use

Service-Oriented Solutions

Must be:
• Secure
• Private
• Interoperable

EHR Systems must be deployed and used

ARRA Stimulus creates financial incentives

Secure Private Interoperable

Health Information Networks
Meaningful Use and Healthcare Reform

- Meaningful use— incentive program is optional
- The new Healthcare Reform Act—is not an option
What we know: Providers can earn incentive payments by demonstrating the meaningful use of EHR technology.

What is meaningful use? Criteria demonstrating that the entity is meaningfully using EHR. Examples: CPOE, medical record access to patients, maintain drug-allergy checks, etc.


Penalties begin in 2015 — reduction in fee schedule.
Patient Protection and Affordable Care Act (PPACA)

- Emphasizes the use of HIT. Some examples:
  - Measuring and enhancing quality
  - Physician Quality Reporting Initiative (PQRI)
  - HIPAA amendment rules regarding the standardization of transaction code sets
  - Health Homes-including the use of wireless technology to improve the coordination and management of care

- It will drive major healthcare organizational change
How do healthcare administrators make decisions?

- Who is involved?
  - CEO
  - CFO
  - PR
  - Legal
  - HR
  - CNO
  - CMO
  - CIO
  - Operations
  - CPO

- What information do they need?
  - Timeline
  - Cost
  - Human Resources
  - Risk analysis
  - Publicity (good and bad)

Executive Decision Factors
- Timeline
- Cost
- Human Resources
- Risk analysis
- Publicity
Timeline
What do we have to do and when do we have to do it?

- **Milestone Dates**
  - **HITECH**
    - 2009-Legislation passed. (purchase, implement & utilize EHR)
    - 2011-Incentive payments start over 5 years (Medicare incentive payments for Hospitals & Eligible Professionals.)
    - 2015-Penalties begin
    - 2016-Medicare/Medicaid payment incentives end
  - **PPACA**
    - 2012-Secretary must develop plan to integrate reporting on quality measures under PQRI with reporting requirements pertaining to Meaningful Use.
    - 2013-Administrative Simplification -health plans must adopt and implement uniform standards and rules for the electronic exchange of health information
    - 2014-bonuses available to Medicare Advantage Plans for use of HIT in data collection for patient care and clinical decision support
    - 2015-reimbursement based on value, not volume

- **Executive Decision Factors**
  - Timeline
  - Cost
  - Human Resources
  - Risk analysis
  - Publicity
Cost

- **How much will it cost?** Estimated cost (by CMS) for an Eligible Professional to adopt/implement EHR technology is $54,000 per physician and $10,000 per physician annual maintenance.

- **For hospitals, there is a huge range**—CMS estimates $1 million to $5 million for installation; $1 million for annual maintenance, upgrades and training. (We’ve seen much higher costs reported by those in the process of implementation.)

- **Is our current system worthless?**
  - SOA and legacy systems
Human Resources: What will it take?

- Training
- Entity disruption
- Morale/entity culture- e.g. will providers be forced to access different systems to complete one task?
- Can you automate security/privacy enforcement?
Risk

**Patient Care:** The wrong information at the wrong time to the wrong people can lead to **bad patient outcomes.**

**Regulatory:** What if organization is not ready for PPACA? Under PPACA:
- Prosecutions are easier
- Penalties are larger
- Creates new reporting responsibilities

**HIT:** If you choose not to achieve Meaningful Use:
- You will be behind
- You will forgo the financial incentives
- You will be penalized starting in 2015

**Reputational:** Breach of privacy and/or security or a patient care or regulatory incident can lead to **bad publicity.**
If you seek Meaningful Use, your **reward** will be **money**, **knowledge** and **experience**.

Early adopters of privacy and security compliance gain a **Competitive Advantage**.
Patient and Community Trust

“If we can’t trust them with our privacy, why would we trust them with our healthcare?”
Current Environment

- Always changing
- Especially dynamic now
- Agility and Flexibility of SOA can help

How can I go forward when I don’t know which way to turn? -John Lennon
Service Orientation

- **Benefits**
  - **Basic**
    - Agility
    - Flexibility
    - Substitutability
    - Scalability
    - Reliability
    - Lower costs
  - **Healthcare Critical**
    - Security and Privacy at Perimeter
    - Implement complex clinical and business processes
    - Policy-driven, Context Aware
What does a Health Information Network do?

- Provides:
  - Secure, Private and Interoperable Message Exchange
    - Policy-Driven Access Control
    - Currency of Trust
    - Audit Support
    - Shared Message Metadata Semantics
  - Healthcare Grade*
  - Encryption
    - Digital Signature

* Healthcare Grade Systems/Components: capable of processing patient health information using healthcare standard terminologies, formats and protocols with high reliability while maintaining its confidentiality, integrity and availability.
Pragmatic Privacy

Given SOA—Privacy is about the Health Information Network (HIN).

- Two Types:
  - InterHealthNet – a healthcare organization’s “outward facing” Inter-Health Information Network
  - IntraHealthNet – a healthcare organization’s internal Intra-Health Information Network
InterHealthNet

- Security/Privacy Perimeter
- Patient Information Collection
- InterHealthNet
- Healthcare Organization IntraHealthNet
- Patient Record Storage
- Health Information Network
  - Policy-driven Access Control
  - Currency of Trust
  - Audit
  - Encryption
  - Digital Signature
  - Available
  - Reliable

Patient Information Use

Gateway - Secure, Private, Interoperable
Health Information Network
Security/Privacy/ Meaningful Use Services

- Examples
  - Breach Monitoring and Notification
  - Exchange Patient Information
  - Disclosure Accounting Support
  - Data Capture and Reporting Support
  - Single Sign-On
  - NHIN Support
Meaningful Use Solution Checklist

- ✔ Service Oriented
- ✔ Security and Privacy at Perimeter
  - ✔ Digital Security Token (DST) Support
- ✔ Business Process Management
  - ✔ With Integral Security and Privacy
- ✔ Policy-Driven
- ✔ Healthcare Grade System/Service Components
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Pragmatic Privacy:
Build it in. Do it now. It’s the foundation.
Questions?

“I'm sorry. My responses are limited. You must ask the right questions.”

- Dr. Alfred Lanning, hologram