The U.S. Health Information Technology Agenda – and the Web

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Critical Needs for Health IT

• Avoidance of medical errors
  – Up to 98,000 avoidable annual deaths due to medical errors

• Improvement of resource utilization
  – Up to $300B spent annually on treatments with no health yield

• Acceleration of knowledge diffusion
  – 17 years for evidence to be integrated into practice

• Reduction of variability in healthcare delivery and access
  – Access to specialty care highly dependent on geography

• Empowerment of the consumer
  – Capitalize on growing consumer trend of active health management

• Strengthening of data privacy and protection
  – HIPAA becomes reality

• Promotion of public health and preparedness
  – Surveillance is fragmented, and importance to homeland security brings heightened awareness
Current HIT Landscape - Information Sharing

• Most practices do not have Electronic Health Records (EHR’s)

• Where EHR’s exist:
  – Do not exchange data electronically with each other, hospitals, labs, or pharmacies
  – EHR data must be input manually - impedes adoption

• Primary transfer of clinical information: paper mail, phone and fax
  – Not infrequently all approaches have to be supported by the clinician
Current HIT Landscape - Information Sharing

• Disincentives to exchanging data
  – Complex information
  – Unique solutions
  – Integration professional services
  – Concerns about privacy
  – Competition and accrual of benefits

• Policy issues
• Sociology / adoption issues
• Technology issues
National Health Information Technology Agenda

- Widespread adoption of interoperable Electronic Health Records within 10 years
- Medical information follows the consumer
- Clinicians have complete, computerized patient information
- Quality initiatives measure performance and drive quality-based competition
- Public health and bioterrorism surveillance are seamlessly integrated into care

Office of the National Coordinator (ONC) for Health IT Established in response to Executive Order 13335, April 27, 2004 to advance this vision.
Health Information Technology Deployment

Health Care Industry

Breakthroughs

- Biosurveillance
- Consumer Empowerment
- Chronic Care
- Electronic Health Records

Coordination of Policies, Standards, Architecture, Resources, and Priorities

Consumer Value

Technology Industry

Infrastructure

- Nationwide Health Information Network
- Standards Harmonization
- Compliance Certification
- Privacy / Security
- Health IT Adoption

Industry Transformation
Web Authentication and Authorization

• Benefits
  – Most highly publicized security breaches have not been based on flaws in web security

• Needs
  – Broad penetration of two factor authentication?
  – Support of clinical workflow
  – Infrastructure for federated system of role based access controls
Web Access to Distributed Clinical Care Data

**Benefits**
- Accessing distributed clinical data repositories while maintaining patient privacy
- Patient look-up and data pointers
- Non-integrated retrievals

**Needs**
- Integrate retrievals based on characteristics other than storage location
- Chronology, content type, etc.
Web Information Retrieval and Decision Support

• Benefits
  – Boon to consumers and providers
  – Major force in the educated healthcare consumer
  – Increasingly dominant in provider education and research

• Needs
  – Contextualized information delivery
    • With Personal Health Records - prevention
    • In point of care provider workflow
  – Context in content vs. “traditional” decision support
    • Not complex processing
    • Not from idealized information model
• Questions?