HIPAA and Beyond: The Emergence of a National Health Information Technology Policy

HIPAA Summit
Baltimore, MD

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September 14, 2004

Overview of Presentation

- Role of Healthcare Information Technology in Improving Quality and Safety
- Recognition of Value by Administration, Congress, Private Sector
- Emerging Interest in Community Collaboration for Health Information Exchange and HIT Adoption: Value; National Programs; Examples
- Barriers to Forward Movement and Opportunities to Overcome Barriers

What Problems Are We Trying to Solve?

- Looming Healthcare Crisis
  - Americans age 65+ will increase from 12% of population in 1997 to 20% of population in 2030
  - Rising healthcare costs - premiums increased 12.7% at the beginning of 2002
  - Physicians leaving practice and nursing shortage
  - 44 million or 15.8% U.S. population uninsured

What Problems Are We Trying to Solve?

- Quality and Safety Challenges
  - 44,000 to 98,000 deaths due to medical error costing $37.6 billion annually
  - 770,000 injured each year due to ADEs
  - Adverse drug events in 5% to 18% of ambulatory patients
  - American adults on average receive only 54.9% of recommended healthcare

What Problems Are We Trying to Solve?

- Fragmented Healthcare System
  - Care is delivered by a variety of physicians, hospitals and other providers - clinicians providing care sometimes without knowing what has been done previously and by whom
  - Medicare beneficiaries see 1.3 – 13.8 unique providers annually, on average 6.4/year
  - Patient data unavailable in up to 81% of cases in one clinic…other data shows 1/3 of time
  - 18% of medical errors due to inadequate availability of patient information

What Problems Are We Trying to Solve?

- "Un-wired" Healthcare System
  - > 90% of the 30B U.S. health transactions each year are conducted by phone, fax or mail
  - % Revenues Invested in IT
    - ✓11.10% - Financial Services
    - ✓8.10% - Insurance
    - ✓6.5% - Consumer Services
    - ✓2.2% - Healthcare
  - 1/3 hospitals have CPOE systems completely or partially available - only 4.9% require their use.
  - < 5% of U.S. physicians prescribe electronically

Value of Information Technology

- Improves Quality and Safety
- Drives Cost Savings
- Helps Patients Navigate the Healthcare System

Why Information Technology Matters

It Improves Quality and Saves Lives

- National adoption of ACPOE (ambulatory computerized physician order entry) would prevent
  - 2 million ADEs/year
  - 190,000 ADE admissions/year
  - 130,000 life-threatening ADEs/year

Center for Information Technology Leadership 2003

Why Information Technology Matters

It Improves Quality and Saves Lives

- Provider adoption of ACPOE would prevent
  - 9 ADE/year
  - 6 ADE visits/year and 4 ADE admissions/year
  - 4 ADE admissions/5 years and 3 life-threatening ADE/5 years

Center for Information Technology Leadership 2003

Why Information Technology Matters

It Saves Money

- Nationwide adoption of ACPOE would save $44 billion annually
- Nationwide adoption of standardized healthcare information exchange among healthcare IT systems would save $86.8 billion annually after full implementation

Center for Information Technology Leadership 2003, 2004

Why Information Technology Matters

It Saves Money

- Recent cost benefit analysis of EMR showed use by primary care providers could result in $86,000 in savings over five years. Benefits include reduced drug spending, reductions in radiology, and decreased billing errors.
- Kaiser Permanente study found that when physicians used a computerized system, the average time spent in the unit dropped by 4.9 days to 2.7, slashing costs by 25%

Value for Consumers

- Over 70% of consumers surveyed believe a PHR will improve quality of care
- Consumers believed that having health information online would:
  - Clarify doctor instructions – 71%
  - Prevent medical mistakes – 65%
  - Change the way they manage their health – 60%
  - Improve quality of care – 54%

* Source: Foundation for Accountability Survey for Connecting for Health

Value for Consumers

- More than half of consumers believe that their own doctor and the health system as a whole *is far more "wired" than it actually is*

- In response to question: "if you could keep your medical records online, what would you do?"
  - Email doctor – 75%
  - Store immunization records – 69%
  - Transfer information to specialist – 65%
  - Look-up test results – 63%
  - Track medication use – 62%

* Source: Foundation for Accountability Survey for Connecting for Health

Recognition of Value by Administration

- On President Bush's Radar Screen
- Appointment of sub-Cabinet Level Position – David J. Brailer, MD, PhD
- Strategic Plan Progress Report – 7/21
- Significant Increase in Focus by All Federal Agencies
- Increased Funding in Administration's budget

President Bush's State of the Union

"By computerizing health records, we can avoid dangerous medical mistakes, reduce costs and improve care"

President George W. Bush - State of the Union Address, January 20, 2004

President Bush's April 26th Announcement of 10-Year Plan for EHR

"Within the next ten years, electronic health records will ensure that complete health information is available for most Americans at the time and place of care, no matter where it originates."

July 21, 2004 Framework for Strategic Action – DHHS/ONCHIT

1. Inform Clinical Practice
   - Incentivize EHR Adoption
   - Reduce risk of EHR investment
   - Promote EHR diffusion in rural and underserved areas
2. Interconnect Clinicians
   - Foster regional collaborations
   - Develop a national health information network
   - Coordinate federal health information systems

National HIT Coordinator – Strategic Framework Goals

3. Personalize Care
   - Encourage use of PHRs
   - Enhance informed consumer choice
   - Promote use of telehealth systems
4. Improve Population Health
   - Unify public health surveillance architectures
   - Streamline quality and health status monitoring
   - Accelerate research and dissemination of evidence

Strategic Action Framework – Key Actions that are Underway

- Establishment of HIT Leadership Panel with recommendations by Fall 04
- Private sector certification of HIT products being explored
- Funding of health information exchange demonstrations – AHRQ, eHealth Initiative and HRSA
- RFI release in summer for requirements for private sector consortia that would form to plan, develop and possibly operate a health information network – not out yet…..

Strategic Action Framework – Key Actions that are Underway

- Electronic prescribing as part of MMA implementation by 2006
- CMS Medicare Beneficiary Portal
- FDA and NIH with CDISC have developed a standard for representing observations made in clinical trials
- As part of the Consolidated Health Informatics Initiative Federal agencies have endorsed 20 sets of standards
- AHRQ $50 million HIT Program

NCVHS Recommendations on Electronic Prescribing

- General standards compatibility
- General standards versioning
- Prescription messages
- Coordination of prescription message standards
- Formulary messages
- Eligibility and benefits messages
- Prior authorization messages

Recognition of Value by Congress

- Medicare Modernization Act
- NHII and National Health Information Technology Legislation
- Patient Safety Improvement Act

IT Provisions in Medicare Modernization Act

- Electronic Prescription Program
  - Establishes a real-time electronic prescribing program for all who serve Medicare beneficiaries with Part D benefits
  - Requires following electronic information: drug being prescribed, patient's medication history, drug interactions, dosage checking, and therapeutic alternatives
  - Requires uniform standards for e-prescribing
  - Establishes a safe harbor from penalties under the Medicare anti-kickback statute

IT Provisions in Medicare Modernization Act

- Grants to Physicians
  - Authorizes Secretary to make grants to physicians to defray costs of purchasing, leasing, installing software and hardware; making upgrades to enable eRx; and providing education and training
  - Requires 50% matching rate
  - Authorizes appropriation of $50 million for grants in FY 2007 and such sums as necessary for fiscal years 2008 and 2009

IT Provisions in Medicare Modernization Act

- Payment Demonstrations
  - Pay for performance demonstration program with physicians encouraging adoption and use of IT and evidence based outcomes measures
  - Four demonstration sites – carried over three years
  - HHS Secretary pays a per beneficiary amount to each participating physician who meets or exceeds specific performance standards regarding clinical quality and outcomes

IT Provisions in Medicare Modernization Act

- Chronic Care Improvement
  - Phased-in development, testing, implementation and evaluation by randomized control trials of chronic care improvement programs
  - Proposals due August 6
  - Required elements include monitoring and IT tools

National Health Technology Legislation

- National Health Information Infrastructure Act
  - Sponsor: Rep. Nancy Johnson (R-CT)
  - NHII Officer and NHII strategic plan including public sector and private sector activities.

National Health Technology Legislation

- National Health Information Technology Adoption Act (S. 2710)
  - Sponsors: Senators Judd Gregg (R-NH), Bill Frist (R-TN), Jeff Sessions (R-AL), Jim Bunning (R-KY) introduced 7/21/04
  - Establishes Director of Office of HIT - works with public and private sectors to implement strategic plan
  - AHRQ and other federal agencies charged with
    - Evaluating information relating to evidence of costs and benefits of HIT
    - Reviewing federal payment structures and differential for healthcare providers that utilize HIT

National Health Technology Legislation

- National Health Information Technology Adoption Act (S. 2710)
  - Use private sector quality improvement organizations to promote HIT adoption and provide technical assistance
  - Requires within two years, federal government adoption of national data and communication standards (voluntary for private sector)
  - Limits federal HIT purchases to systems compliant with standards within five years

National Health Technology Legislation

- National Health Information Technology Adoption Act (S. 2710)
  - Provides up to $50 million in loan fund guarantees and $50 million for grants for local health infrastructures
  - Requires DHHS, VA and DoD to establish uniform measures of quality

National Health Technology Legislation

- Patient Safety Legislation
  - House passed Patient Safety Improvement Act (H.R. 663) in March 2003
  - Senate passed Patient Safety Improvement Act (S. 720) on July 21, 2004
  - Will be reconciled and conferenced in Fall 2004
  - Both have IT provisions: development and adoption of voluntary standards by DHHS; grant funding in the House version of the bill

Recognition of Value by the Private Sector

- Ballot passed for HL7's EHR functional model
- Number of pilot and actual incentive programs launching – employers and health plans – example is *Bridges to Excellence*
- Number of activities across all trade associations designed to support effort
- Connecting for Health releases Preliminary Roadmap for Electronic Connectivity on July 14
- eHealth Initiative Foundation launches Connecting Communities for Better Health Program – announces funding for nine communities on July 21

Connecting for Health

- Catalyzing specific changes on national basis that will rapidly clear the way for an interconnected, electronic health information infrastructure
- Launched and funded by Markle Foundation with support by the Robert Wood Johnson Foundation
- Leadership
  - Chair: Carol Diamond and Executive Vice-Chairs: Dan Garrett, John Lumpkin, Herb Pardes, MD
  - Working Group Chairs: John Glaser, David Lansky, Clay Shirky
  - Technical Expert Panel: John Halamka, Mark Leavitt, Marc Overhage, Wes Rishel, Paul Tang
  - Executive Director: Janet Marchibroda

Connecting for Health Deliverables

- Preliminary Roadmap released July 14, 2004
  - Series of recommendations for practical strategies and specific actions to be taken over the next one to three years
- Recommendations in Four Areas:
  - Technical Architecture, Incremental Applications, and Data Standards
  - Accurately Linking Patient Information
  - Organizational and Sustainability Models for Community-Based Health Information Exchange
  - Policies for Electronic Information Sharing between Clinicians and Patients

Key Recommendations – July 2004

1. Creating a Technical Framework for Connectivity
   - Creation of a non-proprietary network of networks is essential to rapid acceleration of electronic connectivity
   - Need common framework of standards, policies
   - Decentralized, federated, based on standards, safeguards patient privacy, and built incrementally without use of a National ID
   - Test standards working together through reference implementation and make widely available

Key Recommendations – July 2004

2. Addressing Financial Barriers
   - Financial incentives are needed – put a number out there that would cause “tilt” - $3 to $6 per patient visit or $.50 to $1.00 per member per month
   - Create safe harbors to enable provision of hardware, software, training by hospitals and other providers
   - Align incentives with standards-based applications and connectivity

Key Recommendations – July 2004

3. Engaging the American Public
   - Develop and employ a set of measures to encourage the American public to become partners in improving healthcare through IT
   - Identify techniques, standards and policies to be employed by all developers of personal health records to ensure interoperability with rest of healthcare system

eHealth Initiative Mission and Vision

Our Mission: Drive improvement in the quality, safety, and efficiency of healthcare through information and information technology

Our Vision: Consumers, providers and those responsible for population health will have ready access to timely, relevant, reliable and secure health care information and services through an electronic interoperable health information infrastructure to promote better health and healthcare

eHealth Initiative's Members

- Health care information technology suppliers
- Health systems and hospitals
- Health plans
- Employers and purchasers
- Non-profit organizations and professional societies
- Pharmaceutical and medical device manufacturers
- Practicing clinician organizations
- Public health organizations
- Research and academic institutions

eHealth Initiative Focus for 2004

- *Align incentives and promote public and private sector investment* in improving America's healthcare through IT and an electronic health information infrastructure
- *Develop the field* to enable more widespread and effective implementation of HIT and an electronic health information infrastructure – particular focus on community-based health exchanges and clinicians
- *Continue to drive adoption of standards* to promote an interoperable, interconnected healthcare system

We're Tackling Key Challenge Areas

- Upfront Financing Vehicles and Sustainable Incentive Models
- Technical Aspects (Architecture, Applications, Standards, Security) While Protecting Patient Privacy
- Clinical Process and Organizational Change
- Organization, Governance and Legal Issues
- Engaging Patients and Consumers

Recap of eHI Accomplishments

1. Help put electronic connectivity and HIT “on the map” in Administration and Congress
2. Launched $7 million *Connecting Communities for Better Health* Program, a $7 million program providing seed funding and support to multi-stakeholder collaboratives that are using IT
3. 450 community stakeholders from over 30 states learned about HIT and health information exchange at June *Connecting Communities Learning Forum*
4. Played key role in Connecting for Health

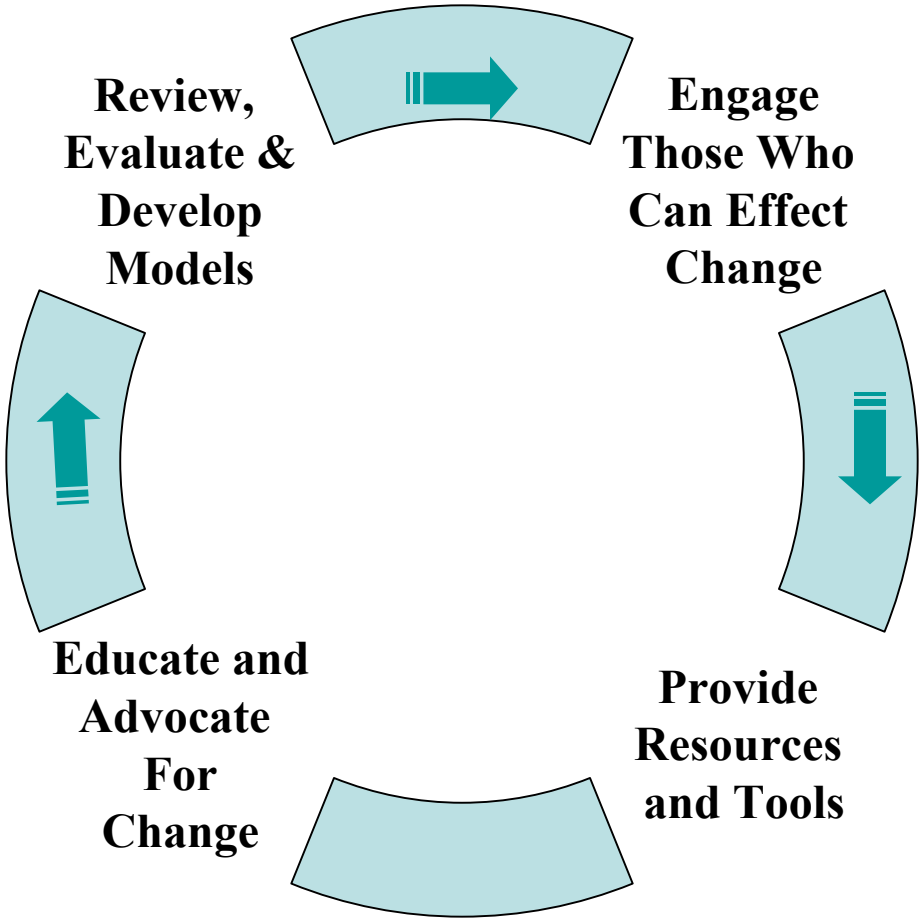
Recap of eHI Accomplishments

5. Convened 70 of the nation's experts to develop design, implementation, and incentives recommendation for e-prescribing in ambulatory care
6. Engaged employers/purchasers for over 60% of insured Americans to increase awareness of the need for electronic connectivity and HIT
7. Convened leaders from 16 nations to review the challenges and strategies employed to create electronic health information infrastructure…AHRQ-funded to be released on October 20, 2004

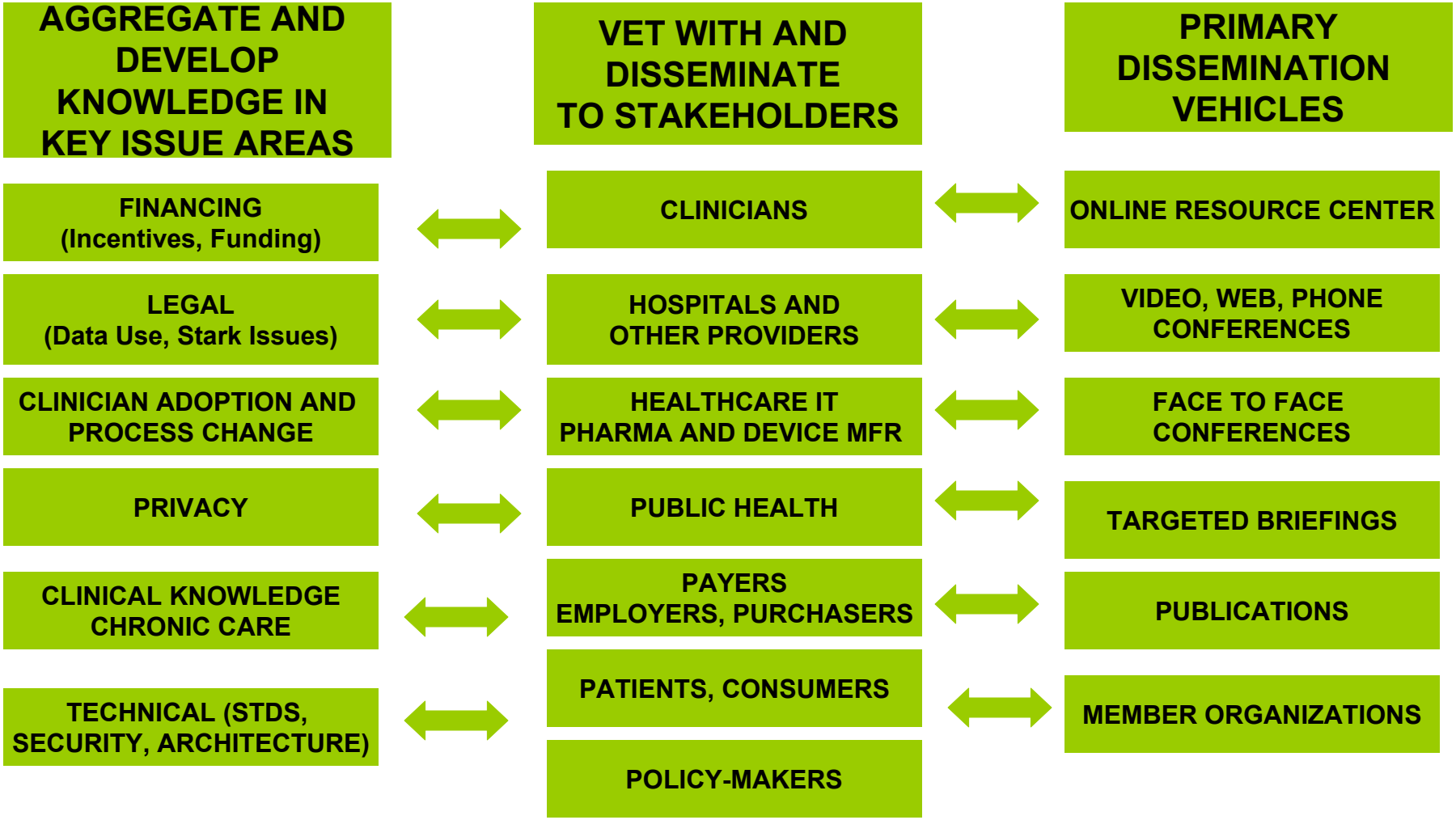
Recap of eHI Accomplishments

8. Developed recommendations related to Stark
9. Increased membership to over 150 members and membership dues by 56% since 12/31
10. Diversified and increased revenue streams
11. Launched First Annual Health Information Technology Summit to take place Oct 2004

Our Approach



Our Operating Model



Connecting Communities for Better Health

- Catalyzing activities at national, regional and local level to create electronic interoperable health information infrastructure

- $6.9 million program in cooperation with HRSA …additional funding being secured

- Providing seed funding to community-based multi-stakeholder collaboratives that are mobilizing information across organizations

Connecting Communities for Better Health

- Mobilizing pioneers and experts to develop resources and tools to support health information exchange: technical, financial, clinical, organizational, legal
- Disseminating resources and tools and building a dialogue across communities
  - Through *Community Learning Network and Online Resource Center*
  - June 2004 *Connecting Communities Learning Forum*
  - Ongoing audio, video and web conferences

Connecting Communities for Better Health

- Creating and widely publicizing a pool of “electronic health information exchange-ready” communities to facilitate interest and public and private sector investment

- Building national awareness regarding feasibility, value, barriers, and strategies

Connecting Communities for Better Health

- Key partnering organizations
  - Center for Information Technology Leadership – Partners Healthcare System – Boston, MA
  - Regenstrief Institute – Indiana Health Information Exchange, IN
  - Others in process of being finalized

Pioneers in Health Information Exchange*

- Bellingham, WA
- Delaware
- Florida
- Indianapolis, IN
- Los Angeles, CA
- Maine
- Maryland
- Massachusetts
- Michiana Health Information Network, IN
- Michigan

*Sample

Pioneers in Health Information Exchange*

- New York
- North Carolina
- Ohio
- Pennsylvania
- Rhode Island
- Santa Barbara, CA
- Tennessee
- Utah Health Information Network
- Vermont
- Washington, D.C.

*Sample

What Problems Are They Trying to Solve?

- Improving Healthcare Delivery at Point of Care
- Reducing Costs – Achieving Efficiencies
- Biosurveillance/Public Health Initiatives
- Quality Improvement Initiatives
- Reaching out to Remote, Rural and Underserved Areas

Common Issues and Challenges

- Upfront Funding and Sustainable Incentive Models
- Clinical Process and Work-flow Change (including application of clinical knowledge)
- Organization, Governance and Legal Issues
- Technical (Architecture, Applications, Standards, Security)
- Protecting Patient Privacy
- Engaging Patients and Consumers

Our Areas of Focus

- Upfront funding and incentives for sustainability
- Clinician process and work-flow change, application of clinical knowledge
- Electronic prescribing
- Organizational and legal issues
- Technical aspects to enable electronic connectivity across organizations – replicable models

Health Information Exchange Value

- Standardized, encoded, electronic HIE would:
  - Save U.S. healthcare system $337B over 10 year implementation period and $78B/year thereafter
  - Net Benefits to Stakeholders
    - Providers - $34B
    - Payers - $22B
    - Labs - $13B
    - Radiology Centers - $8B
    - Pharmacies = $1B
  - Reduces admin burden of manual exchange
  - Decreases unnecessary duplicative tests

Response to Request for Capabilities

- What We Asked For in our 2003 Request for Capabilities Statements:
  - Multi-stakeholder initiatives involving at least three stakeholder groups
  - Matched funding
  - Use of standards and a clinical component
- What We Received:
  - 134 responses representing 42 states and the District of Columbia proposing collaborative health information exchange projects across the country

Communities Being Funded

- Connecting Colorado (Denver, CO)
  - Involves four healthcare delivery institutions
  - Establishing a secure environment and necessary legal framework for sharing clinical data
  - Master patient index
  - Interface engine for clinical data acquisition from four data repositories
  - Secure web server application to display integrated clinical information

Communities Being Funded

- Indiana Health Information Exchange (Indianapolis, IN)
  - Involves hospitals, clinicians, and public health
  - Building upon existing infrastructure for electronic community health record developed by Regenstrief
  - Common, secure electronic infrastructure that is initially supporting clinical messaging
  - Single IHIE electronic mailbox through which clinicians can access clinical results for their patients
  - Learnings shared through Connecting Communities online resource center

Communities Being Funded

- MA-SHARE MedsInfo e-Prescribing Initiative (Waltham, MA)
  - Anchor project of the Massachusetts Health Data Consortium's MA-SHARE Program
  - Involves health plans and hospital emergency rooms
  - Enables clinicians to access prescription history for emergency department patients
  - Makes available electronic prescribing technology at the point of service

Communities Being Funded

- MD/DC Collaborative for Healthcare Information Technology (Baltimore/Washington Metro Area)
  - Involves private physician practices, community hospitals, three major academic systems
  - Just getting off the ground…
  - Will provide valuable insights on how to address the challenges of health information exchange in a complex, multi-jurisdictional, metropolitan setting that combines federal, state and local entities

Communities Being Funded

- Santa Barbara County Care Data Exchange (Santa Barbara, CA)
  - Involves hospitals, physician group practices, public health, labs, and clinics
  - Manages peer to peer technology application whose purpose is to allow community physicians and other providers to securely share patient-specific data without the necessity of a central data repository
  - Learnings shared through Connecting Communities online resource center

Communities Being Funded

- Taconic Health Information Network and Community (Fishkill, NY)
  - Involves 2,300 independent practice association, hospitals, labs, health plans, pharmacies and employers
  - Clinical, insurance, administrative and demographic information will be available through secure internet infrastructure to support care delivery
  - Ongoing support by MedAllies, which is providing training and support to community clinicians and their office staff

Communities Being Funded

- Tri-Cities TN-VA Care Data Exchange (Kingsport, TN)
  - Involves hospitals, VA medical center, medical groups, public health, pharmacies, behavioral health care providers, health plans and employers
  - Providing foundation for health information exchange in a multi-jurisdictional area
  - Will support care delivery and chronic care management

Communities Being Funded

- Whatcom County e-Prescribing Project (Bellingham, WA)
  - Involves Whatcom Health Information Network, hospitals, medical groups, three specialty practices, and pharmacies (hospital and retail-based)
  - Will support electronic prescribing for those who have and do not have an electronic health record
  - Will test in four pilot sites product that provides formulary information at point of prescription and medication list
  - Part of a broader initiative that is facilitating information exchange between providers and patients

Communities Being Funded

- Wisconsin Health Information Exchange (National Institute for Medical Informatics – Midwest) (Milwaukee, WI)
  - Involves public health agencies for nine counties, hospitals, business coalition, medical society, and hospital association
  - Single easy-to-use portal for three existing networks: network for emergency care, state public health information network, and state immunization registry

Recap Communities' Focus

- Strategically focused on critical areas that need to be addressed to implement health information exchange
  - Replicable and sustainable technical architecture models
  - Alignment of incentive models
  - Use of replicable data exchange standards
  - Addressing ways to accurately link patient data
  - Multi-jurisdictional models
  - Electronic prescribing issues

Barriers to Adoption

- Upfront Funding and Alignment of Incentives (a Business Model)
- Interoperability Which Can be Achieved through Standards
- Clinical Process and Work-flow Changes Required
- Lack of Perceived “Value” by Many
- Lack of Awareness of Safety Benefits
- Not Yet a “Standard of Practice”

Opportunities to Enhance Value

- Improve usability: it's all about speed of operation, support of real workflow and ease of learning and use
- Improve business case: align incentives between those who bear the cost and those who receive the benefit
- Improve connectivity to other systems…and interoperability…using standards
- Make eRx an "incremental step" towards the interoperable EHR and HIE – not a "dead-end"

Key Opportunities to Enhance Value and Accelerate Adoption

- MMA implementation
- Implementation of DHHS Strategic Plan
- Emerging interest in incentives by public and private payers
- Lessons from increasing number of demonstration projects and implementations: AHRQ HIT, CMS, eHI in cooperation with HRSA
- Emerging private sector coalitions, initiatives
- Lessons from U.S. pioneers and the U.K.
- Emerging legislation – will see increase in 2005

Key Imperatives

- Electronic prescribing standards in MMA implementation should be well-thought through and vetted considerably
- Financial incentives must be provided to clinicians to support migration and they should only support those applications that use agreed-upon standards
- Exceptions to Stark and anti-kickback laws need to be addressed…currently not sufficient as proposed

Key Imperatives

- Demonstration projects and learning laboratories should not be “one-offs”. They must test, evaluate or provide learning to support migration of others and their results should be widely communicated
- Reference implementations are needed to help us understand how the standards work together and to take them to the “next level” and their findings and outputs placed in the public domain
- Investments in “dead-ends” should be discouraged
- Adoption of HIT applications should occur with electronic connectivity in mind – a “network of networks”

Key Imperatives

- Certification is needed by a trusted source that represents all stakeholders in the system, particularly users—including clinicians and patients…the bar should be set at a baseline functionality and migrate to higher levels over time...
- Innovation is needed to provide support to clinicians—particularly small to medium medical practices—as they make the transition

Closing

- We are *finally* building momentum…the “stars and planets are aligning”
- The focus has shifted from “whether we should” to “how will we do this?”
- This work will create lasting and significant changes in the U.S. healthcare system…how clinicians practice…how hospitals operate….how healthcare gets paid for*…how patients manage their health and navigate our healthcare system*

Thank You

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