Health Information Exchange

Illinois e-Health Task Force Conference Call
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Utah Health Information Network

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Health IT: Terminology

- **Electronic Medical Record (EMR)**
  - ✓ Paperless office
  - ✓ Personal Health Record
- **Health Information Exchange (HIE)**
  - ✓ Regional Health Information Org. (RHIO)
  - ✓ Allows interoperability between stakeholders
- **Clinical Decision Support Systems (CDSS)**
  - ✓ Case and cohort management
  - ✓ Computerized Physician Order Entry (CPOE)
  - ✓ Prompts, recalls, trends, protocols, drug interactions, generics, performance measures

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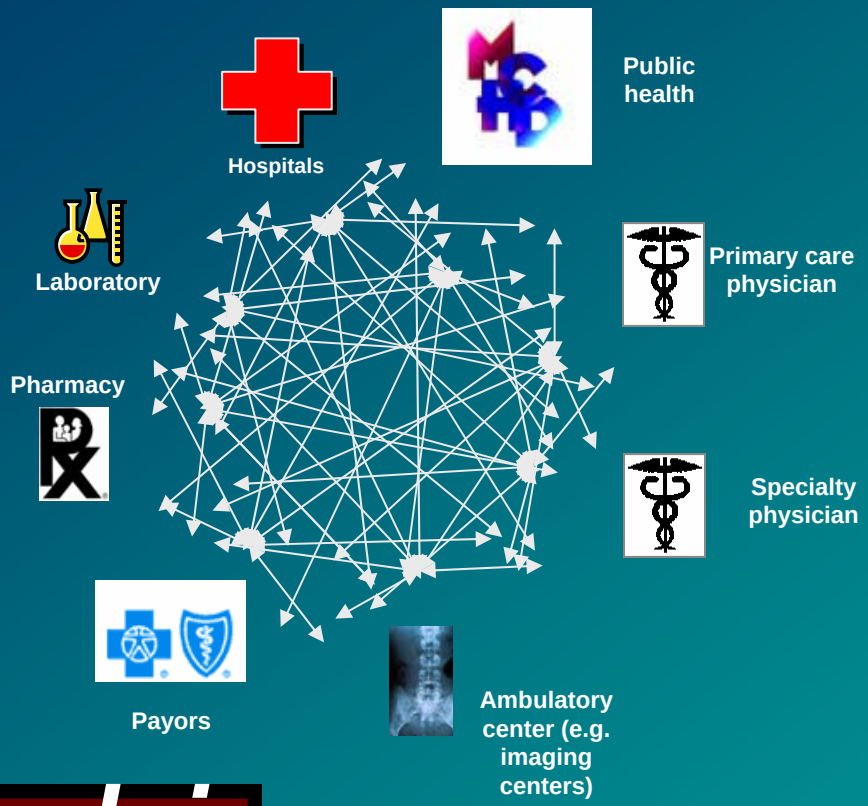
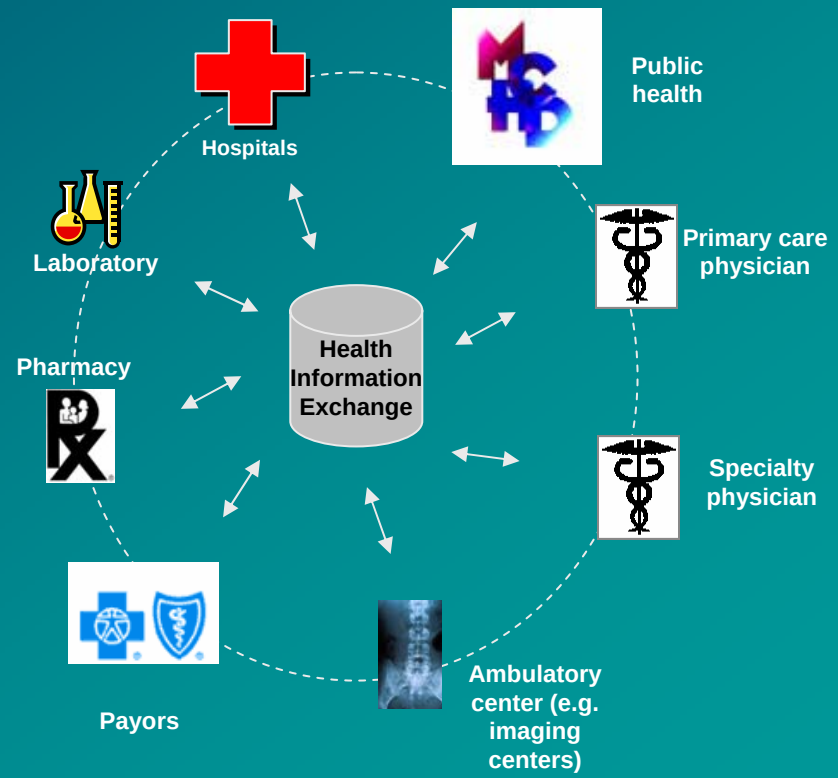
HIE: "Wiring" Healthcare Efficiently

Current system fragments patient information and creates redundant, inefficient efforts



Future system will consolidate information and provide a foundation for unifying efforts



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Source: Indiana Health Information Exchange

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Utah & the HIT concept

- **University of Utah Medical Informatics**
  - ✓ One of the first academic departments in the nation
- **Intermountain Health Care**
  - ✓ Pioneering work in clinical HIT since 1970s
- **Utah Health Information Network**
  - ✓ 12 years of successful administrative health data exchange
- **Utah Department of Health**
  - ✓ Immunization Registry
  - ✓ Child Health Advanced Records Management (CHARM)

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Utah & the HIE concept

- **Western Governor's Association initiatives**
- **Jan 2003 Governor Leavitt & UDOH host meeting of community leaders on HIE**
- **Jan 2004 Governor Walker & UDOH host progress report meeting of same group**
- **Sept 2004 AHRQ demonstration project proposal funded**

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UHIN Overview

- **Utah Health Information Network (UHIN)**
  - ✓ **12 years of successful administrative health data exchange**
    - **Claims, remittance, eligibility**
    - **Credentialing, coordination of benefits, EFT**
    - **One of the few "survivors" of the CHIN movement**
  - ✓ **Regional Health Information Organization development grantee (AHRQ)**
    - **Labs, pharmacy, clinical notes and reports**

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UHIN Structure

- **Governance Board**
  - ✓ $35,000 membership
  - ✓ Health plans (Medicaid) & providers
  - ✓ Ex officio non-voting members (Insurance Commissioner, Office Managers Assoc, State CIO)
- **Standards**
  - ✓ Development process open to entire community regardless of UHIN membership
  - ✓ Only members vote on final standards
- **Operations**
  - ✓ 9-10 FTEs
  - ✓ Contracted technical support
  - ✓ Annual Budget

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Current UHIN Services

- **Administrative data exchanges**
  - ✓Claims
  - ✓Remittance advice
  - ✓Others
- **Pricing**
  - ✓Plans
  - ✓Large providers (hospitals)
  - ✓Small providers (clinics)

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Value: Administrative Health Data

- **UHIN (17 million claims/year)**
  - ✓ **Efficiency of Claims Processing by 1 adjudicator**
    - **Paper** — **100-150/ day**
    - **Scanned** — **300/ day**
    - **EDI** — **700-800/ day**
    - **Autoprocessing** — **60% of claims require no human involvement**
  - ✓ **Payer value- just for intake of claim**
    - **Paper = $6-10/ claim**
    - **EDI < $1/ claim**
  - ✓ **Provider value**
    - **Faster payments**
    - **Fewer rejected claims**
    - **Less staff time**

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Lessons Learned: UHIN

- **Requires a champion leader**
  - ✓ credible, neutral, trusted
- **Value must accrue to all participants**
  - ✓ Drives priorities
  - ✓ Drives business model
- **Community owns & governs the exchange**
  - ✓ Consensus decision making
- **Standards-driven transactions**
  - ✓ not a clearinghouse
- **Data sources retain control**
  - ✓ Secondary uses of data is subject to governance process

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HIE: UHIN Approach

- **Identify value-based priority use cases with interested stakeholders**
- **Obtain broad stakeholder support**
- **Develop and adopt technical model**
- **Develop and adopt financing model**
- **Convene standards development process**
- **Adopt standards**
- **Pilot, refine, implement**

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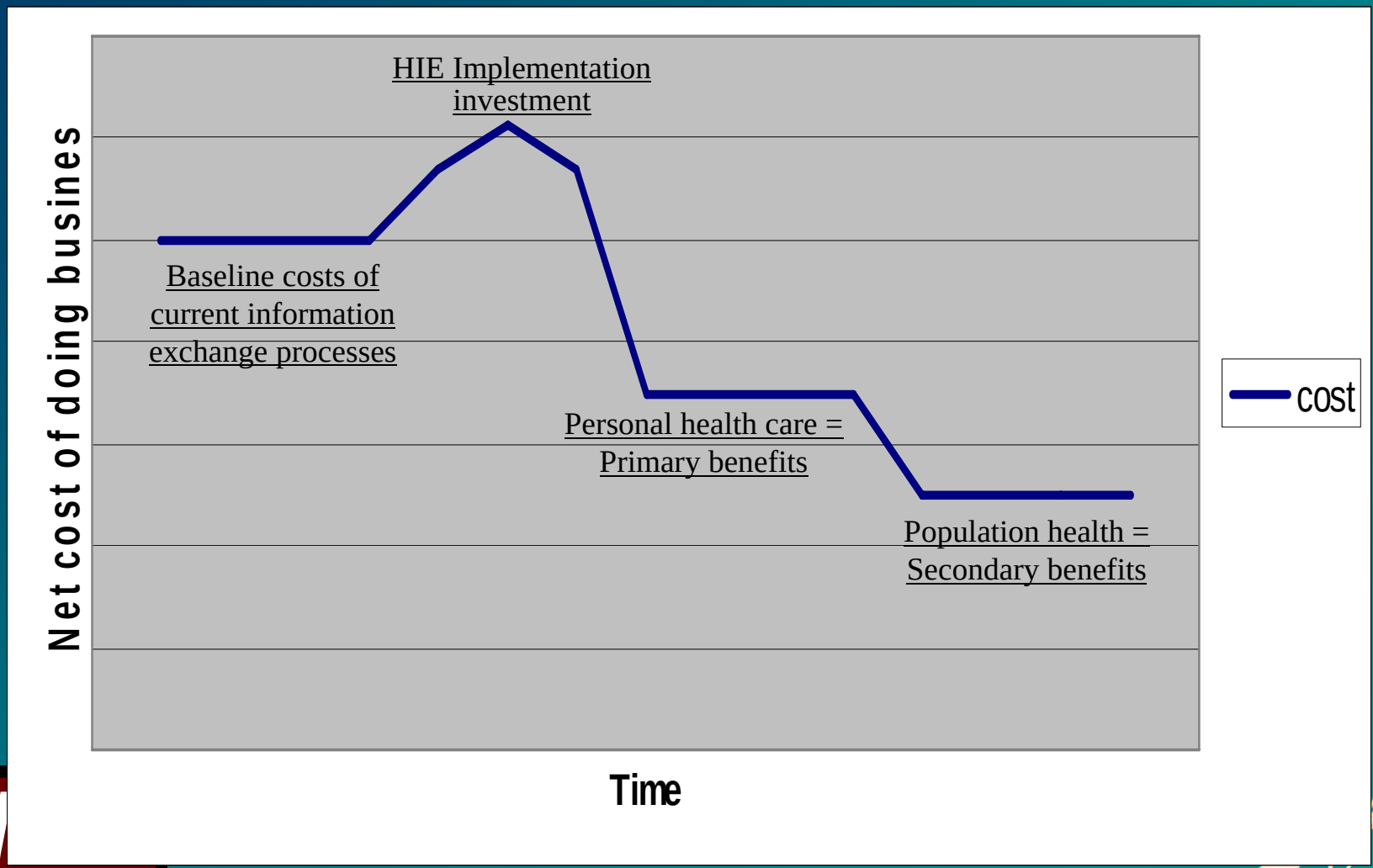
What is the HIE business case?



Efficiency Value: Level 4 HIE

- **Where does $77.8 billion net value accrue (HIE Only)?**

Providers	**$33.7 billion**
Payers	**$27.6 billion**
Laboratories	**$13.1 billion**
Radiology centers	**$8.2 billion**
Pharmacies	**$1.3 billion**
Public health departments	**$94 million**

Walker et al. Health Affairs. January 2005

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Developmental HIE Model

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UHIN Pilot

HL7 messages

Hospitals send *hospital messages* (discharge notes, labs, meds reconciliation, etc) to physicians and payers

Labs send *laboratory results* to ordering physicians

NCPDP messages

Payers send *medication histories* to physicians, pharmacists and hospitals

Physicians send *electronic prescriptions* to pharmacies

PDF messages

Anyone can send or receive pdfs

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Goal of Pilot

- **Demonstrate value (both clinical and administrative) of these exchanges**
- **Focus on workflow challenges**
- **Make technology easy and inexpensive**

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HIE and Public Health

- **Facilitates surveillance**
  - ✓ Routine communicable disease
  - ✓ Chronic disease, trauma, medical errors, etc.
  - ✓ Bioterrorism detection
- **Facilitates delivery of preventive services**
  - ✓ Immunizations, screenings, prenatal care, etc.
- **Facilitates patient care coordination & quality**
  - ✓ Medicaid, S-CHIP
  - ✓ CSHCN, Local Health Depts., etc.
- **Facilitates research**
  - ✓ Epidemiology
  - ✓ Public health services & evaluation

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Health IT and Quality

- **Facilitates quality measurement**
  - ✓Data aggregating capacity
  - ✓Automated reporting
- **Facilitates quality practice**
  - ✓More efficient clinical workflow
  - ✓Reinforce best practices
  - ✓More accessible medical knowledge

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With just claims data from payer:

- **Diabetic obese smoker with high cholesterol**
- **Overdue for Td and Eye exam**

3051	C	04/05	MH2	V611	A	10/95 MH1
27800	C	11/04	OBESITY	462	A	03/94 PHARYNGITIS,ACUTE
2729	C	02/89	HYPERLIPIDEMIA	7279	A	08/89 TENDONITIS
2724	C	08/05	HYPERLIPIDEMIA	V703	A	05/89 PREMAR/SCH/CAMP
25002	C	08/05	DIABETES TYPEII	0539	A	12/88 HERPES ZOSTER
25000	C	08/05	DM TYPE II,NOS	1110	A	11/88 TINEA VERSICOLO
7245	A	08/05	BACK PAIN			
V720	A	07/04	NORMAL EYE EXAMINATION			
37300	A	03/04	BLEPHARITIS			
V048	A	11/03	VACCIN FOR INFLUENZA			
9309	A	11/01	FOREIGN BDY EYE			
72690	A	05/00	TENDINITIS			
81500	A	04/00	FX METACARPAL			
71907	A	04/00	JOINT EFFUSION-ANKLE			
3679	A	10/97	REFR DISORDER			

HEALTH MAINTENANCE (*=DELINQUENT,?=UNKNOWN,R=REFUSAL,N=N/A)

TOBAC-SMK *04/19/05*	FLU	11/15/04	PNEUMO	HEPB
PAP	TD	**/**/**		
CHLAMYDIA	MENINGOCOC			
MAMMOGRAM	PPD		MMR	
BONE DNSTY	PSA			
CHEST XRAY	LDL CHOL	08/19/05		HEPA
COLONOSCOP	GLUCOSE	08/19/05	VARICL	
BARIUM ENM	MICROALBUM	08/19/05		
FLEXISIG	EYE/RETINA	07/06/04		TYPHOID
STOOL GUAC 05/05/04	COMP FE	05/12/04		