

Achieving Value in Healthcare: SOA Across Organizations, Geographies and Implementations

April 16, 2008

**Donald T. Mon, PhD
Vice President, Practice Leadership**

AHIMA

- **Professional society of 53,000 members**
 - 125 job titles in 40 different health care, vendor, government, settings
 - Manage, analyze, report, and utilize data for patient care, while making it accessible to healthcare providers and appropriate researchers when it is needed most
- **Dual mission:**
 - Advance the HIM profession through leadership in advocacy, education, certification, and lifelong learning
 - Advance HIM/HIT standards and practices in the industry

Background: Donald T. Mon, PhD

- **30 yrs of health information management & technology, consulting, teaching, research experience**
 - ❑ **HIT standards**
 - ❑ **Strategic planning, process re-engineering**
 - ❑ **Data warehousing/mining**
 - ❑ **Decision support, outcomes, performance measurement, clinical indicators, program evaluation, benchmarking**
 - ❑ **Administrative & clinical systems**

Background: Donald T. Mon, PhD

- **Industry activities**
 - ❑ **Member, AHIC 2.0 Business Sustainability Work Group**
 - ❑ **Industry Liaison, Certification Commission for Healthcare Information Technology (CCHIT)**
 - ❑ **Subcontractor, Health Information Security & Privacy Collaborative (HISPC)**
 - ❑ **Principal Investigator, State Level Health Information Exchange (SLHIE) projects, engaged in NHIN activities**
 - ❑ **Voting member, Health Information Technology Standards Panel (HITSP)**
 - ❑ **Co-Chair, Health Level 7 EHR Technical Committee**
 - ❑ **Co-Chair, Health Level 7 PHR Work Group**
 - ❑ **Co-Chair, National Alliance for Health Information Technology (NAHIT) Records Work Group – defining EMR, EHR, PHR**
 - ❑ **Member, National Quality Forum (NQF) HIT Structural Measures Steering Committee**
 - ❑ **Testified before AHIC, NCVHS, IOM**

Agenda/Objectives

- **Common business drivers across organizations, states, regions**
- **Challenges in use and opportunities of SOA across organizations**

Safety, Quality, Cost, Confidentiality

- ***To Err is Human*, 2000 IOM patient safety report: Between 44,000 and 98,000 deaths per year due to medical errors**
- ***IOM: Crossing the Quality Chasm, and Improving the Quality of Healthcare for Mental Health and Substance Use Conditions* highlighted use of HIT**
- **Healthcare expenditures account for 14% - 17% of the gross domestic product (GDP); 20% by 2017**
- **One-third of the \$1.7 trillion in US healthcare expenditures is spent on duplicate or ineffective services**
- **At the same time, some patients are not receiving recommended care**
- **3%-10% of healthcare expenditures are lost to fraud or from mistakes in documentation**
- **Increasing consumer advocacy, concerns for health information privacy and confidentiality**

HIT: A Major Part of the Solution

“... adoption of advanced computer systems for drug ordering in the outpatient setting could eliminate more than two million adverse drug events and 190,000 hospitalizations per year, saving \$44 billion annually.”

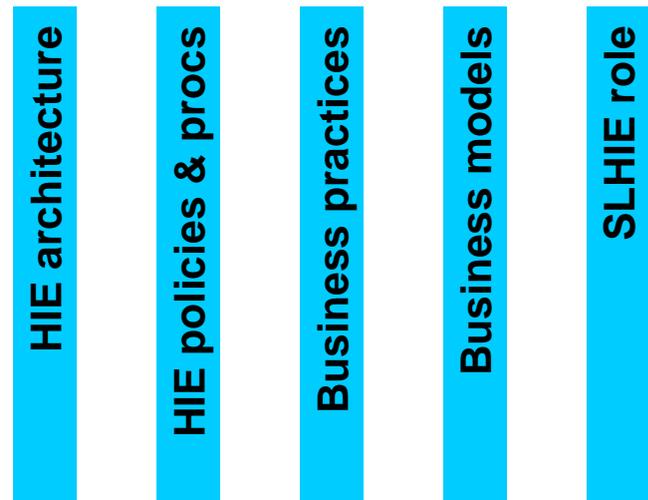
“Standardized healthcare information exchange among healthcare IT systems would deliver national savings of \$86.8 billion annually...”

Center for Information Technology Leadership



Connecting The Projects Together

Joint Forum
NHIN-HISPC-SLHIE-SAeH
April 30 – May 2, 2008
Dallas



Access, Use and Control Issues

- Access management
- Authentication
- Subject & user identity arbitration
- Consumer choice not to participate in HIE
- Availability of access & disclosure info for consumer's PHR & HIE data
- Routing of consumer's request to correct data



HISPC Phase 3

Collaborative	N	Participating States
Consent 1 - Data Elements	11	IN, ME, MA, MN, NH, NY, OK, RI, UT,VT,WI
Consent 2 - Policy Options	4	CA, IL, NC, OH
Harmonizing Privacy Law	7	FL, KY, KS, MI, MO, NM,TX
Consumer Education and Engagement	8	CO, GA, KS, MA, NY, OR,WA, WV
Provider Education	8	FL, KY, LA, MI, MO, MS,TN,WY
Adoption of Standard Policies	10	AZ, CO, CT, MD, NE, OH, OK, UT, VA,WA
Interorganizational Agreements	7	AK, GU, IA, NJ, NC, PR, SD

HISPC Phase 3 Collaboratives

- **Consent 1: Data elements**
 - ❑ **ID and resolve patient consent & info disclosure requirements across states**
 - ❑ **Describe & compare requirements mandated by state laws & any known consent policies & practices**
- **Consent 2: Policy options**
 - ❑ **ID different consent approaches within & between states**
 - ❑ **Propose policy approaches for consent that facilitate interstate HIE**

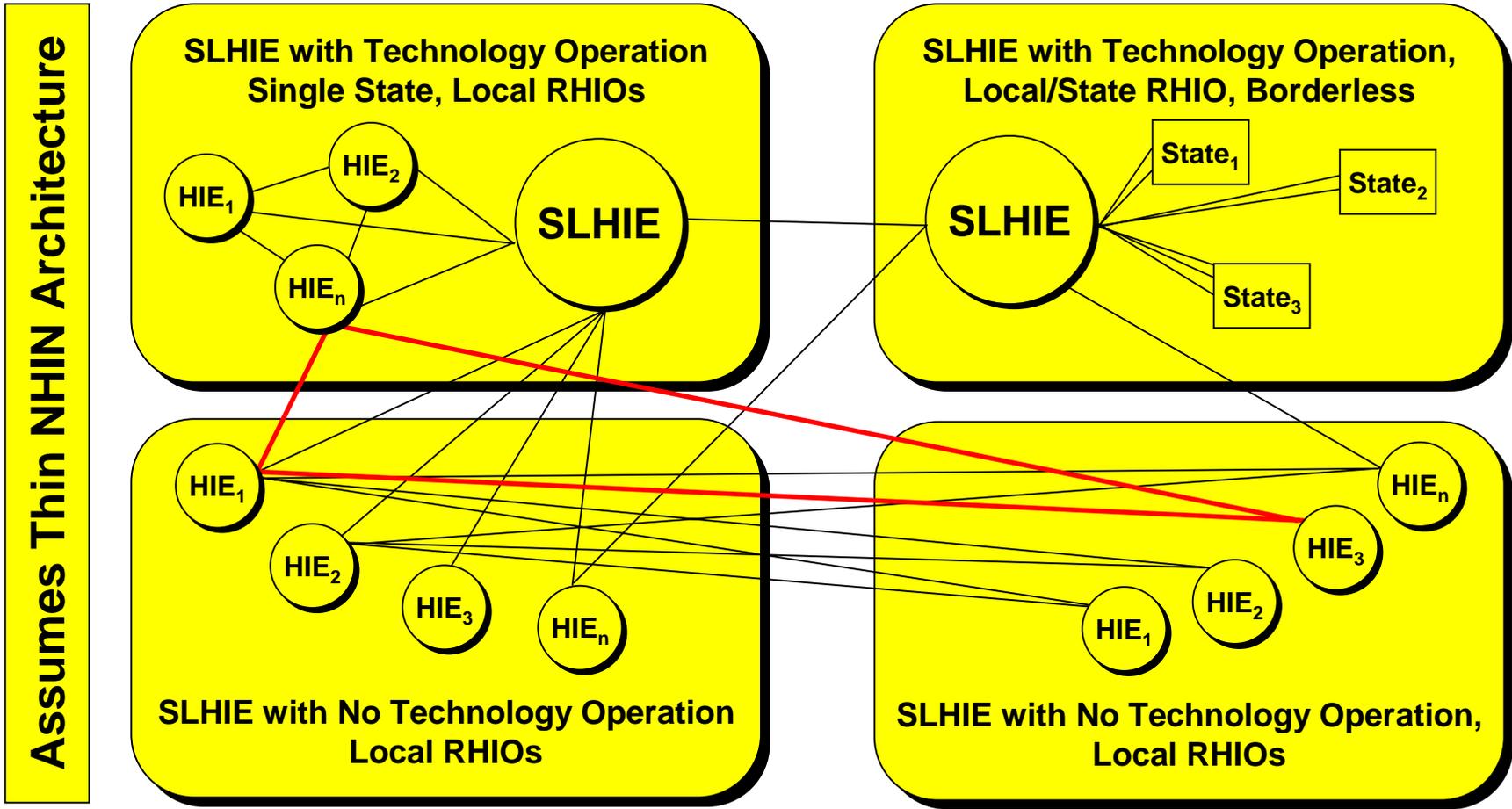
HISPC Phase 3 Collaboratives (cont.)

- **Harmonizing privacy law**
 - ❑ **Advance ability to analyze & reform existing laws related to HIE**
- **Consumer education**
 - ❑ **Develop coordinated projects focusing on target populations to describe risks & benefits of HIE, educating consumers re: privacy & security**
 - ❑ **Develop messaging to address consumer privacy & security concerns**
- **Provider education**
 - ❑ **Create a toolkit to introduce HIE to providers**
 - ❑ **Increase awareness of privacy & security benefits of HIE**

HISPC Phase 3 Collaboratives (cont.)

- **Adoption of standard policies**
 - ❑ **Develop basic policy requirements for authentication & auditing**
 - ❑ **Develop an implementation strategy to accelerate adoption of policies**
- **Interorganizational agreements**
 - ❑ **Develop core set of privacy & security components for interorganizational agreements**
 - ❑ **Execute agreements where possible**

Variations in Network Architectures



— Sub-Network Organization with No State Boundaries (e.g., VA)

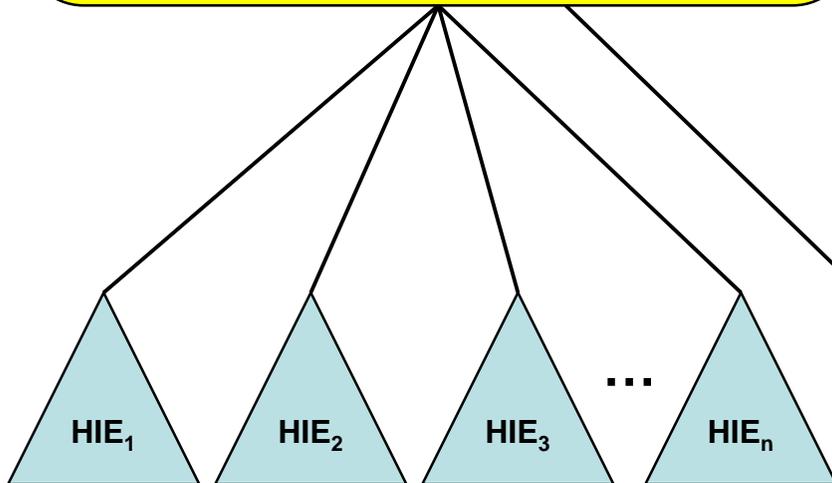
For readability, not all point to point lines are drawn, not all variations depicted.

STATE 2

Requesting State-Level HIE

Governance: Convener, Coordinator
Technical Operations: Yes

**Create and sustain collaborative process;
deliberate and decide policies, standards;
manage projects & assist local exchanges**



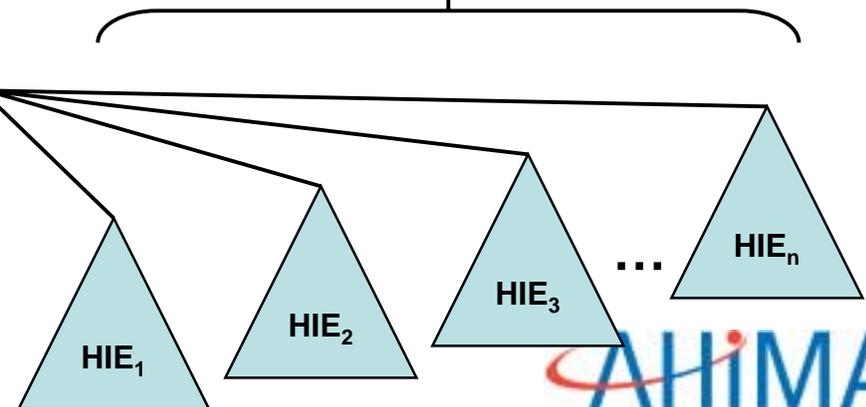
STATE 1

Responding State-Level HIE

Governance: Convener, Coordinator
Technical Operations: No

**Create and sustain collaborative process;
deliberate and decide policies, standards;
manage projects & assist local exchanges**

Implementation Guides, Tools,
Other Resources



SLHIE Report Findings

Example: Consumer opting out of HIE network

- Responding HIE's reply to Requesting HIE would be "no health information to return" even though there may be health information on the patient at the CDOs
- How would Requesting HIE know the difference between that reply and no return because:
 - ❑ There really is no health information to transfer
 - ❑ There was an error in the network as an artifact of the HIE architecture (but there really is data to return)
 - ❑ There was an error at the CDO level which caused the HIE to reply with no return (but there really is data to return)
 - ❑ State law prohibits sending health information being requested

Findings (Example)

Example: MPI contamination

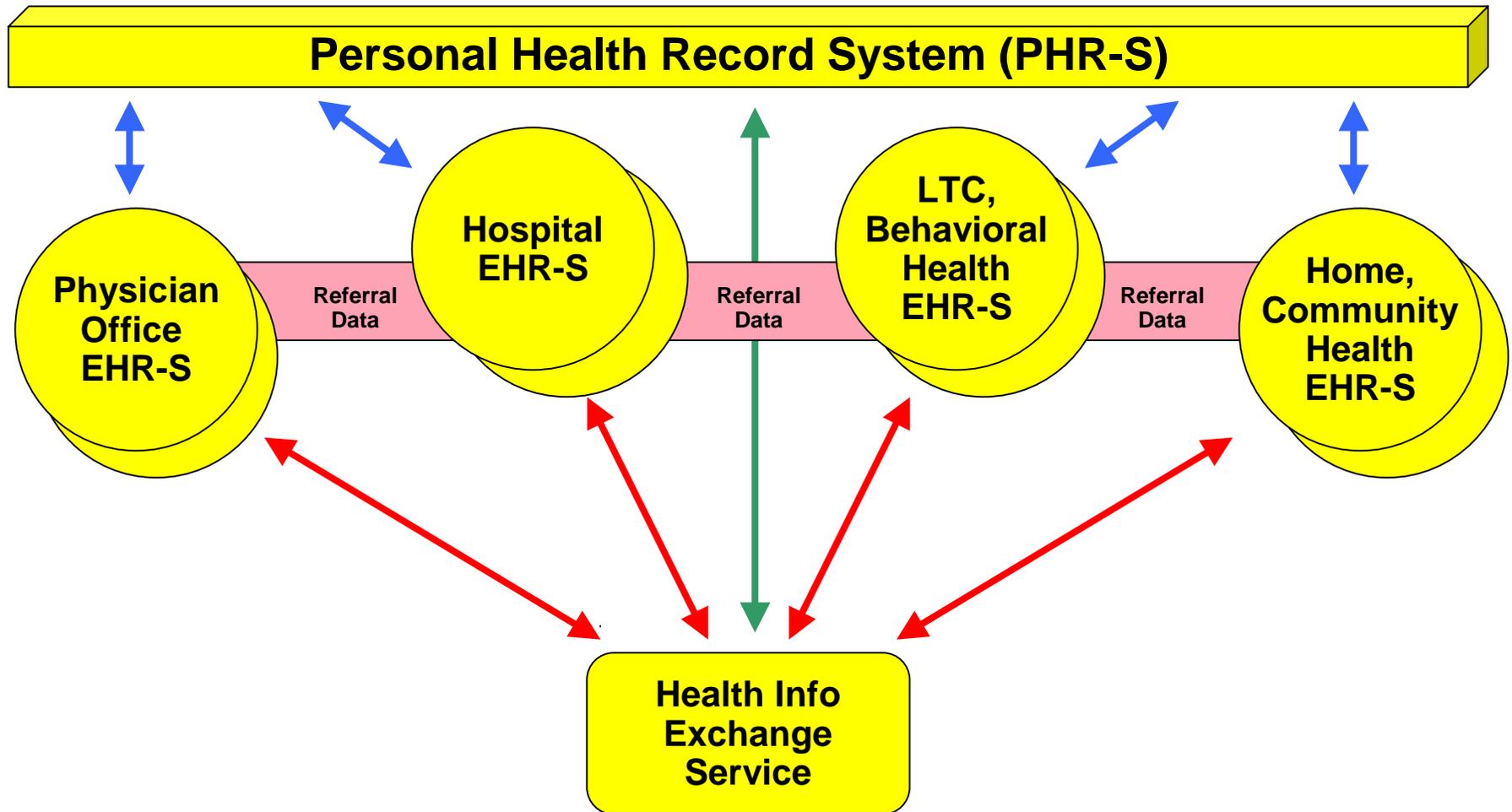
- **MPIs at SLHIE and local HIEs each can have a certain error rate (duplicate data, missing data, inaccurate data, etc.)**
- **Error may cause Responding HIE to send erroneous data to Requesting HIE**
- **MPI at CDOs can also have a certain error rate; can cause CDO's to pass erroneous data to the HIE (cascading errors)**

Implications & Practical Solutions

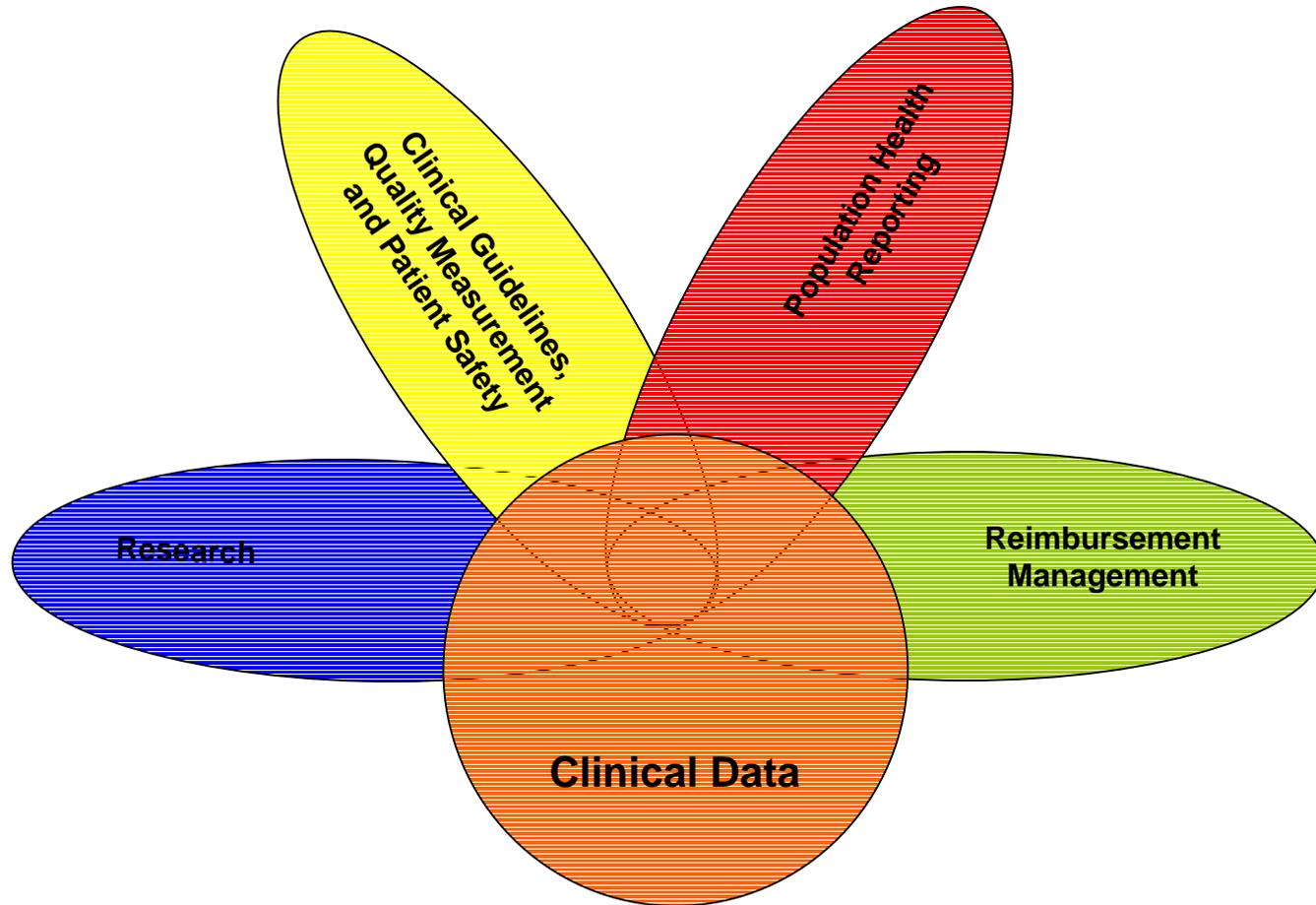
Example: MPI contamination

- Will erroneous data result in
 - A different clinical decision to be made?
 - Mistrust in HIE?
- Data use and reciprocal support agreement “warrants and represents that the data it provides is an accurate reproduction of the data...in its System...”; data may be accurate reproduction of erroneous data
- Responsibility of Requesting HIE to notify Responding HIE of errors, and Responding HIE’s responsibility to correct it -- DURSA
- Responding HIE’s responsibility to monitor data quality – SLA
- Consumer request to correct data

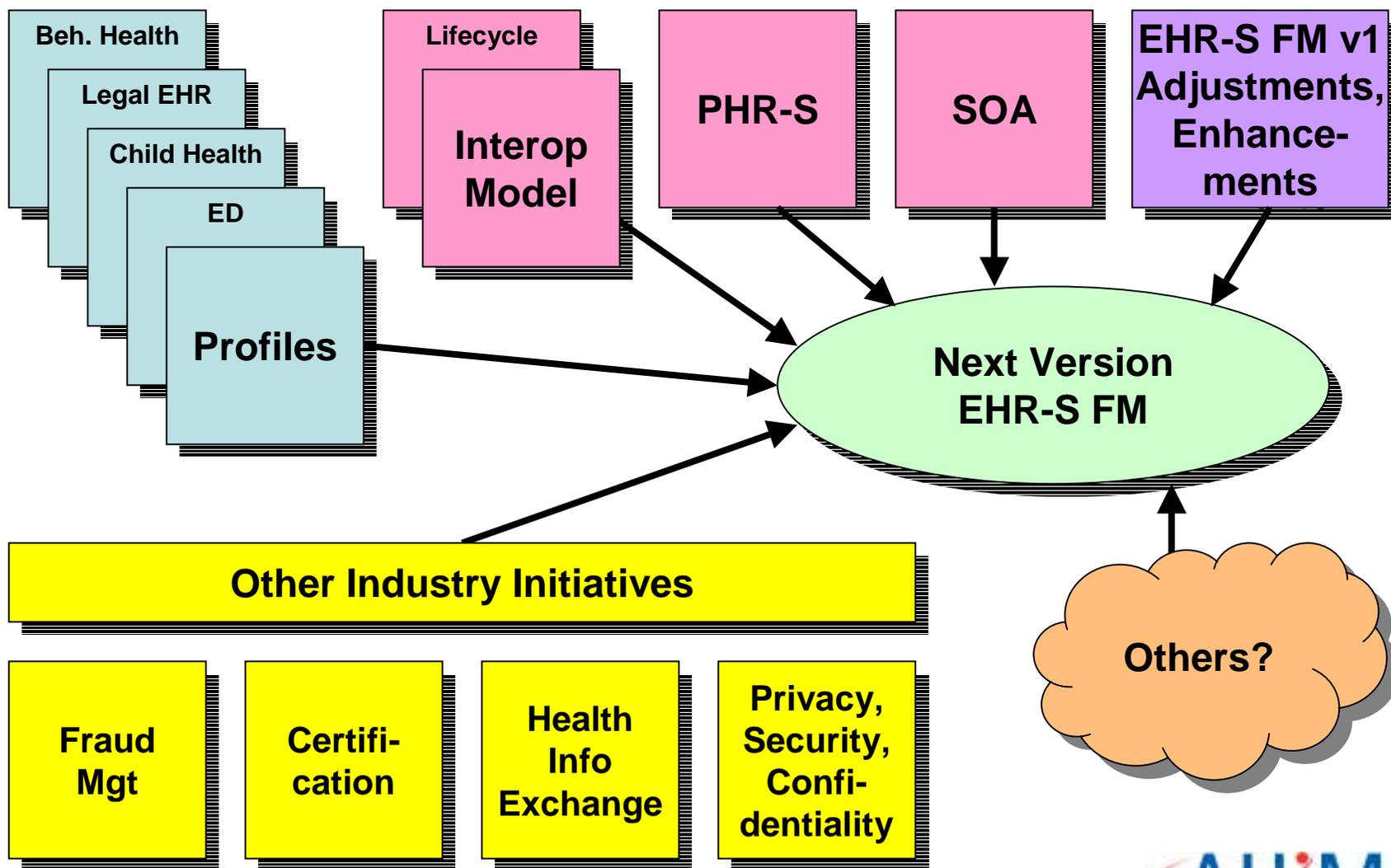
HIE between the PHR-S & EHR-S



Clinical & Other Uses of Health Data



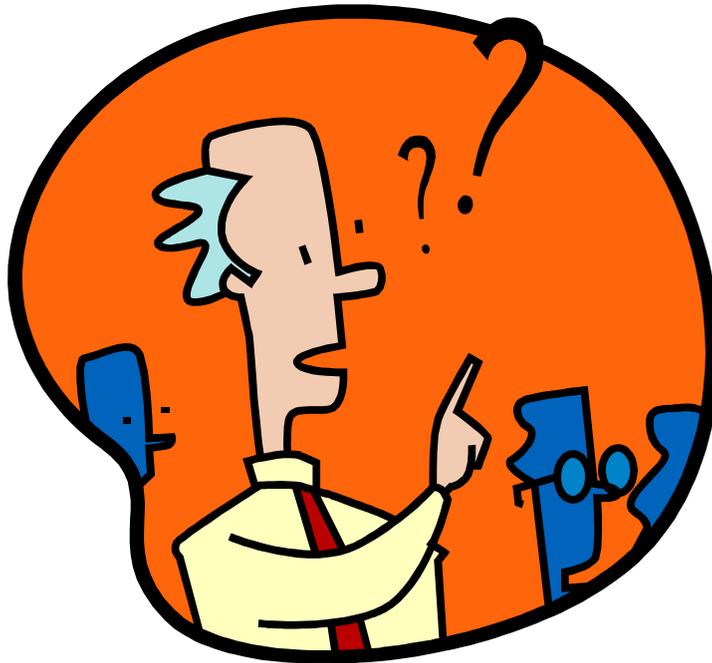
Revised EHR-S FM: Value to Industry



Donald T. Mon, PhD
Vice President, Practice Leadership

Donald.Mon@ahima.org

(312) 233-1135



Thank you!
Questions?