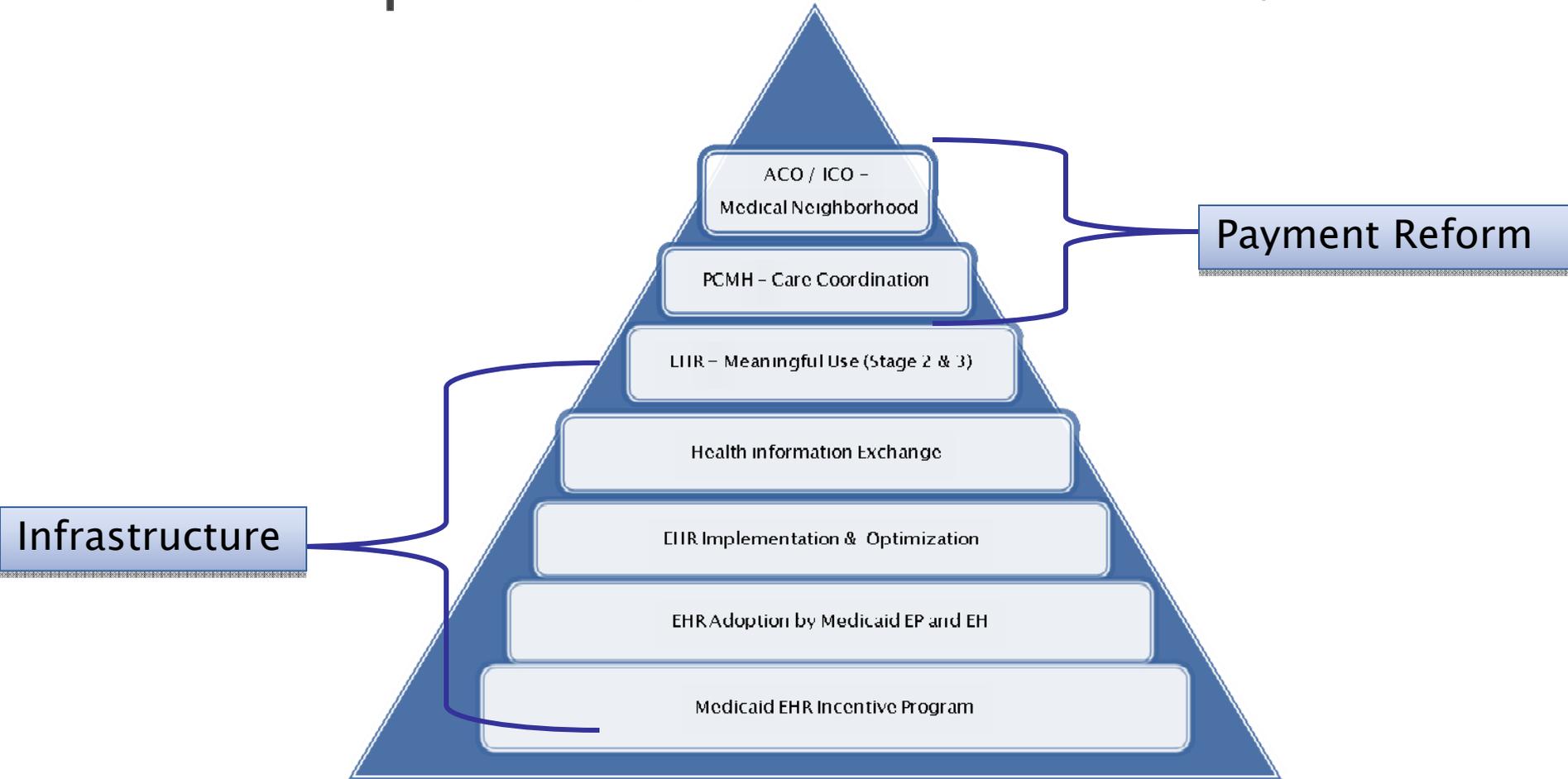


# Health Information Exchange in Accountable Care Organizations

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University of Connecticut  
2/23/12

# Health IT Initiatives foundational for Healthcare Reform Goals Improved Outcomes at Lower Costs



# Health Information Technology Exchange of CT - HITE-CT

- Established as quasi-public agency Jan 2011
  - CEO David Gilbertson hired 2011 – additional staffing now
- MOA with Dept of Public Health for HIE services
  - DPH received \$7.29 million ONC grant as State HIE
- Responsible for HIE for state of CT
- Board of Directors – 20 members
  - Executive Committee
  - Legal and Policy Subcommittee
  - Technical Infrastructure Subcommittee
  - Finance Subcommittee
  - Business and Technical Operations Subcommittee
  - Special Populations Subcommittee

# HITE-CT Goals & ACO Needs Align

**Provide safer, more timely, efficient, effective, equitable, patient-centered care.**

- **Connectivity**

- Enable sharing of clinical data between providers of all sizes to enable continuity of care for patients

- **Repository**

- Create a longitudinal digital patient record which will enable faster decision making for more positive outcomes

- **Access**

- Allow for secure, permission based access to and retrieval of patient data

# Who derives Value from a state level HIE in CT?

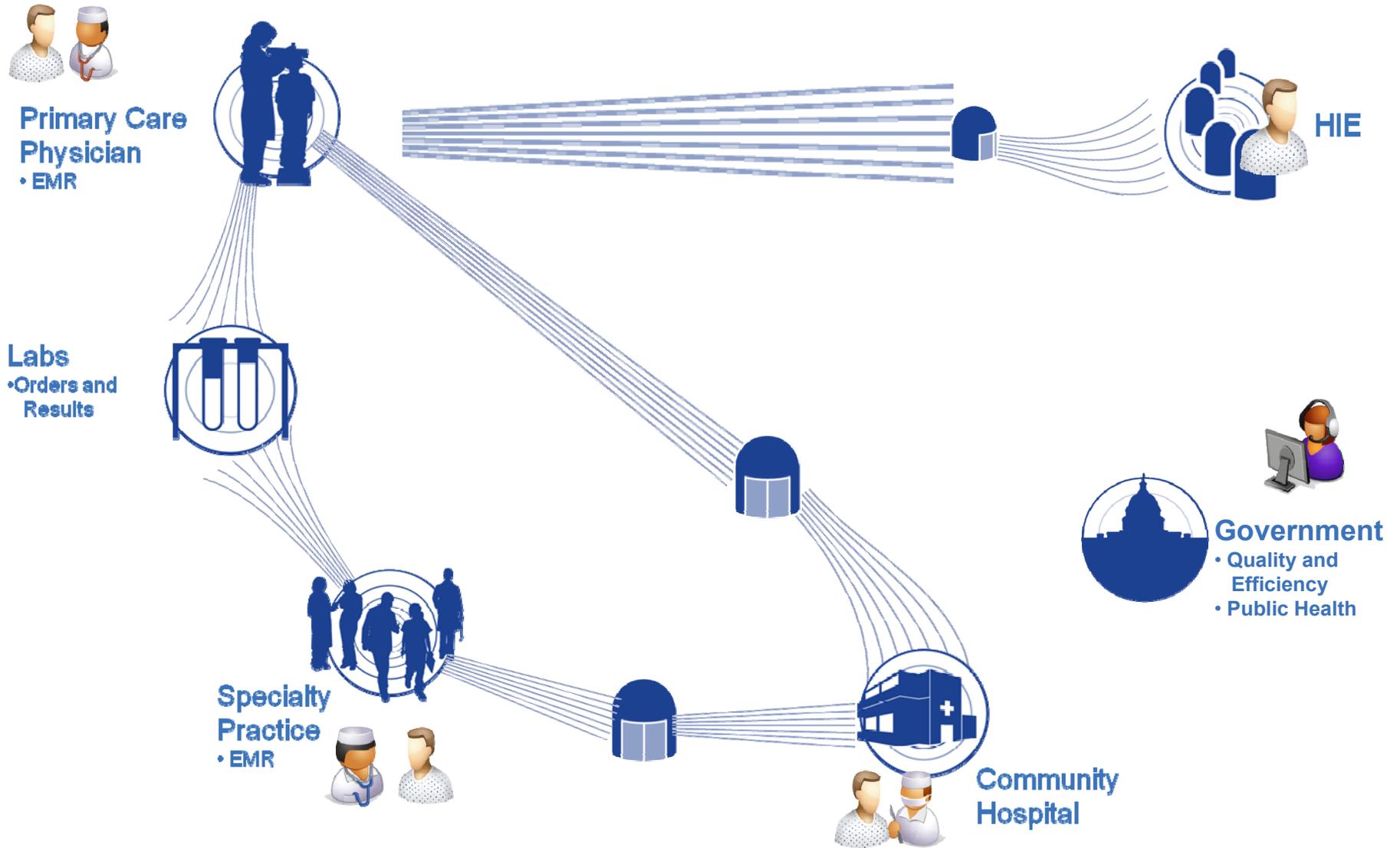
- Patients and Families
- Clinicians (physicians, dentists, nurses)
- Hospitals & other healthcare organizations
- Public Health Departments
- Payers (Public and Private insurers)
- Business community
- Researchers

Estimates > \$80 Billion in savings nationally from HIT / HIE

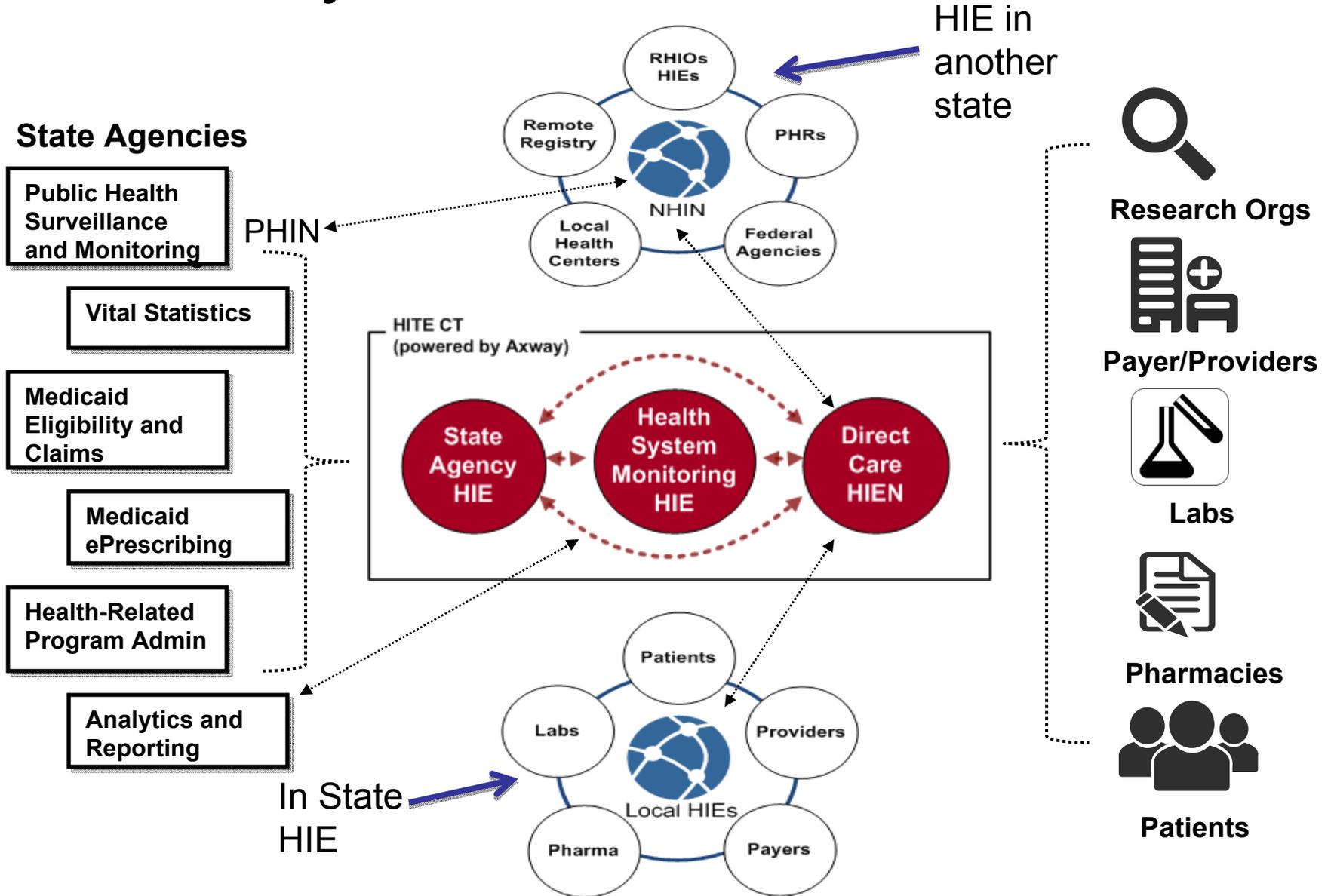
Rand Study 2005, CITL study 2005

Nearly \$60 Million annually in CT (conservative) – Gartner 2010

# Current State of Connecticut HIE



# Health Systems Infrastructure - Vision



# HIE Services That Support ACO

- Secure Messaging between providers
  - Clinicians and Organizations
- Web-based access to a Clinical Data Repository
  - Longitudinal Record
- Direct to EHR delivery of
  - Lab Results, Image Results, Transition of Care documents
- Connection to Public Health Programs
  - Immunization Registries, Disease Surveillance
- Data Transformation Services
  - Transform data to enable communication between different EHR systems

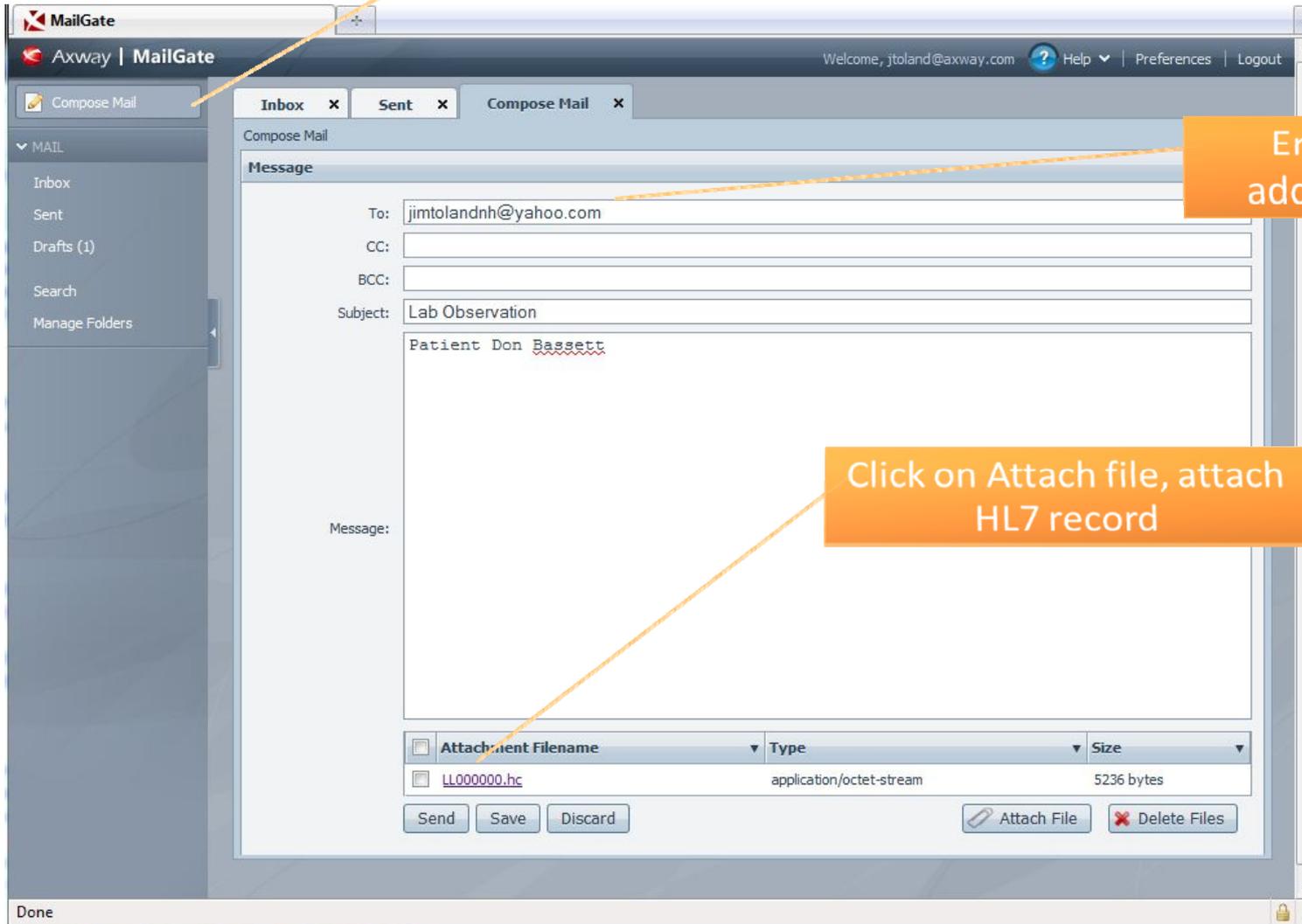
*Privacy and Security Features and Processes for all elements*

# HIE for Care Coordination

- Direct Messaging for exchanging and IHE for Posting / Retrieving clinical data
  - E-Referrals / consults (PCP - specialist)
  - Meds, problem lists and allergies
  - Care Plans (Care coordinator/ VNA to PCMH, PCP)
  - Hospital D/C and ER summaries
  - Pt preferences for advanced directives

Requirements of a PCMH and an ACO

Click on "Compose" to create a message to send to the HIE



Enter the email address of the HIE

Click on Attach file, attach HL7 record

Can be embedded within an EHR

# User Portals (Web EMR, Clinical Viewers)

USER PORTAL  
Community Desktop | Clinical Views



XDS  
Document Registry/Repository (DRR)  
IHE Profiles (XDS.b)



- Clinician access to patient records, assists those without access to EMR
- Enables patient, document query, retrieval (view DICOM images and more)
- View history of encounters, medication, diagnoses, etc.

### Documents

VIEW BY: Document Type

- Radiology studies
- 05/04/2011 12:38 - Radiology Report
- 05/04/2011 12:29 - Radiology Report
- 04/17/2011 00:00 - Hand Scan Image Radi
- 04/01/2011 00:00 - Dicom image

Showing 1 DocumentTypes / 4 Total Docs

[Add New Document](#)

Nom du patient : test1  
Prenom : test Date de naissance : 17/11/1964

Examen effectué le : 23/07/2010

I.R.M. CEREBRALE

Conteúdo :  
Céphales rebelles.

Technique :  
Acquisition axiale T1, diffusion, FLAIR, T1 post-injection de Gadolinium (3D) et coronale T2.

Résultats :

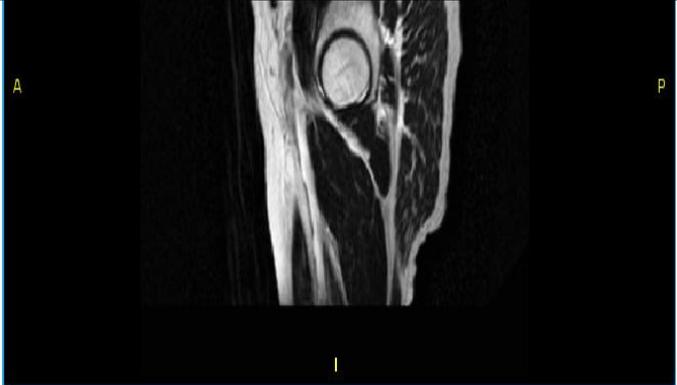
On ne note pas de processus expansif sus ou sous-tentorial individualisable en dehors d'une formation hypersignal T1, hypersignal T2 frontale para-médiane droite au contact de la ligne médiane, valeur environ 14 mm de diamètre. Prise de contraste périphérique fine meninge. Aspect donc vocateur d'un kyste arachnoïdien.

Présence de très discrètes images hypersignal T1, hypersignal FLAIR en situation sous-corticale, haut situes, FLAIR en situation sous-corticale gauche (série 4, image 14); une autre en situation immédiatement sus-jacente (série 4, image 17) gauche. Ces images correspondent de petites ponctuations de leuco-encéphalopathie vasculaire.

Pas d'autre anomalie décrite, notamment en supra ou infra-tentorial.

Intégrité du tronc cérébral, du cervelet, des lésions de l'oreille interne.

Conclusion :  
Kyste arachnoïdien très probable para-médian frontal droit de 14 mm.



A

P

I

### Details

[Send To Printer](#) [Send To File](#)

**Title:** Abdomen Report  
**Document Type:** Healthcare Communication  
**Creation Time:** 05/03/2011 09:00  
**Author:** Reyan smith  
**Organization:**  
**Comments:**

# How can this Improve Care?

- Automated receipt & filing of hospital D/C summaries, ER visits, image reports from hospital into your EHR.
- Use secure messaging for referring to a specialist, receiving data from them or coordinating care
- ER / other providers can access Medications, Allergies, Problem Lists and recent treatments
- Reduction in unneeded labs and procedures
- Automated results delivery to public health

# How Can This Reduce Costs

- Up to 10 -30% Labs and Radiology not needed
  - Even if HIE could reduce this by 1% - significant
    - No repeat CT Scan when pt presents to another hospital with severe headaches
- Reduction in ER Utilization and Costs
  - Milwaukie HIE – reduced ER visit cost \$29 on avg as well as realized a 10% reduction of time spent in ER
  - Vanderbilt reduced ER costs of \$1.2 million

# Initial Value Proposition HITE-CT

## A portion could be realized in an ACO

There is a significant amount of value that will be created by accessing and utilizing the HIE

	Value
<b>Benefit Tier 1 - Quantifiable and Currently Measurable</b>	
Prevent Unnecessary 30-day Readmissions	\$11,753,333
<b>Benefit Tier 2 - Quantifiable and Possibly Measurable</b>	
Reduce avoidable Adverse Drug Events (ADEs) - Inpatient	\$4,457,200
Reduce avoidable Adverse Drug Events (ADEs) - GP	\$58,144
Avoid Duplicative Testing and Imaging	\$22,167,000
Reduced Administration Burden (providers)	\$4,405,760
Reduced Administration Burden (hospitals)	\$7,075,296
<b>Total</b>	<b>\$49,916,732</b>

<b>Benefit Tier 3 - Value that has Multiple Dependencies or is Difficult to Measure</b>	
Avoid Duplicative Consults	\$1,332,000
Reduce Length and Complexity of Stays	\$5,267,600
Increase Provider Availability	\$5,025,320
Reduce Inpatient Costs by Allowing Stays in Less Expensive Settings	\$4,200,000
Increase in Patient Empowerment (inPx)	\$2,440,722
Increase in Patient Empowerment (ER)	\$1,290,750
<b>Total</b>	<b>\$19,556,392</b>

- Tier 3 Benefits are expected to be realized along with Tier 1 and Tier 2, however they will be difficult to measure and so will be excluded from further calculations
- Detailed Descriptions of the Value Calculations are available in Appendix A
- Administrative and medical savings were not distinguished or weighted differently in this analysis

# Questions and Discussion ?

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Link to Health Information Technology