

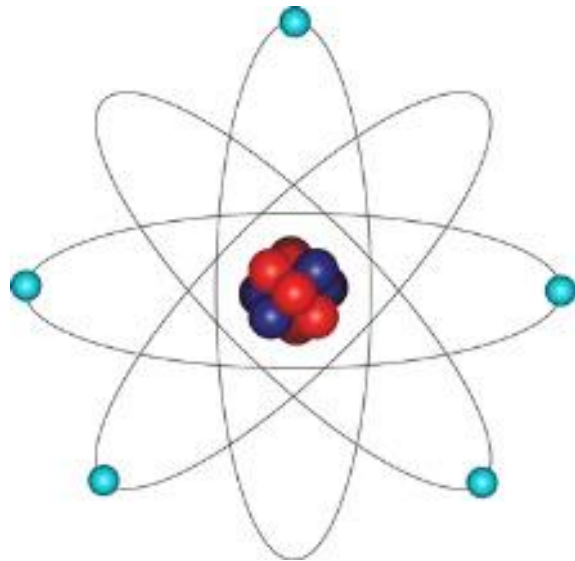
Creating the Technology Infrastructure to Support Healthcare Innovation



Presentation to the Greater Philadelphia Business Coalition on Health

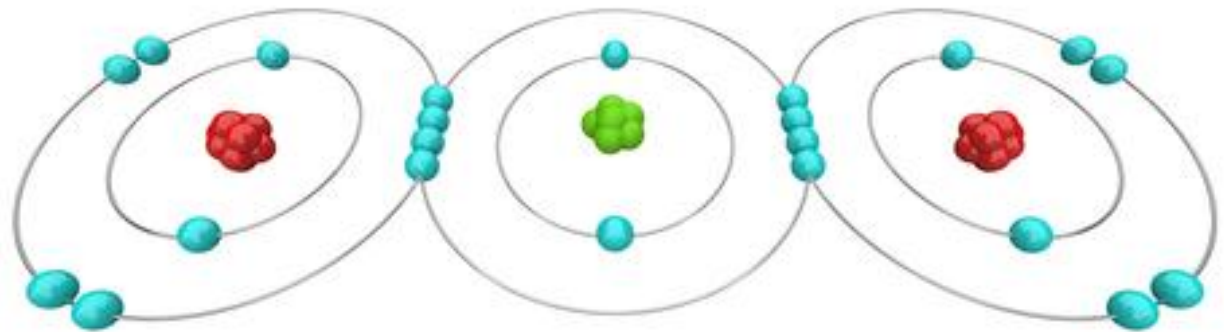
Jan Lee, MD
Chief Executive Officer
Delaware Health Information Network
09.18.2014

Once upon a time...



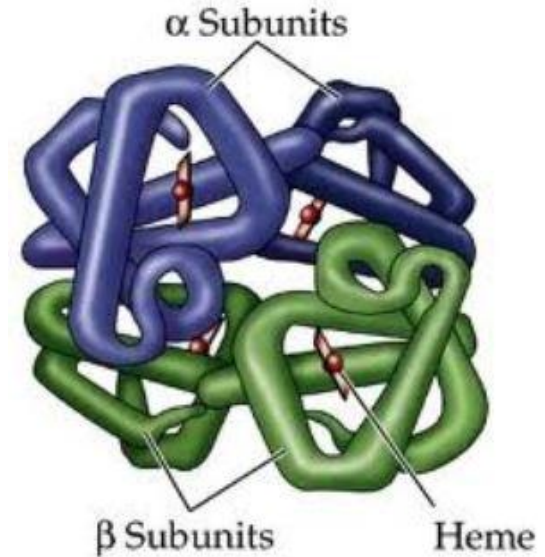
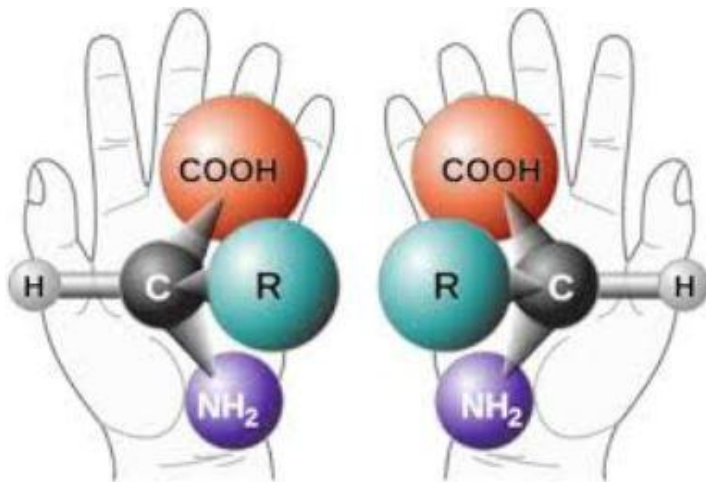
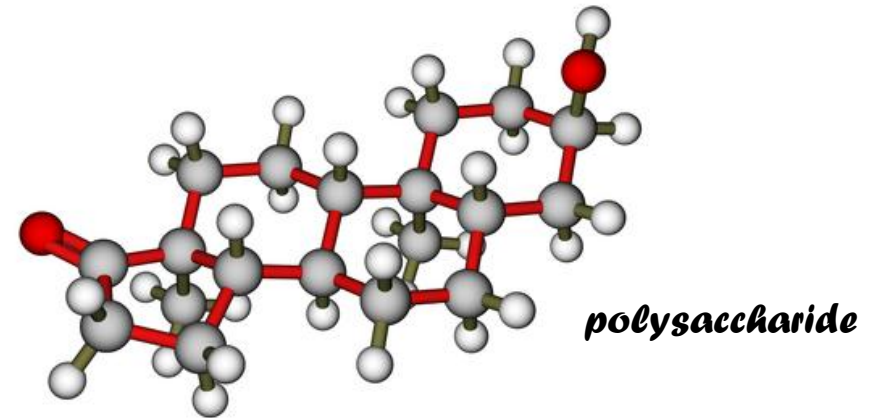
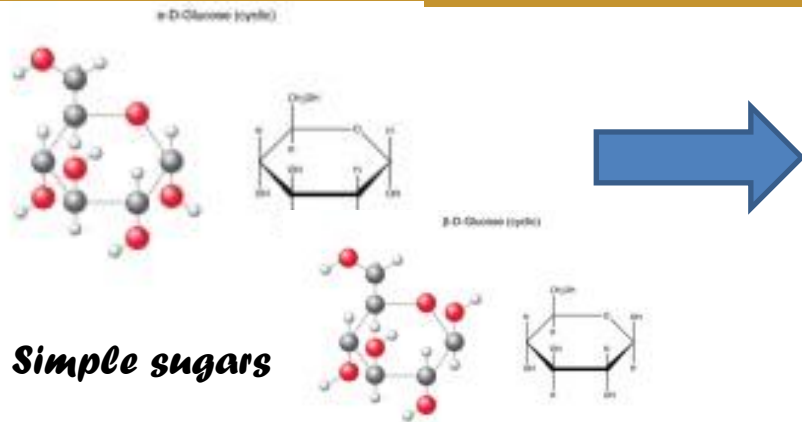
atom

...and then by
SHARING electrons...

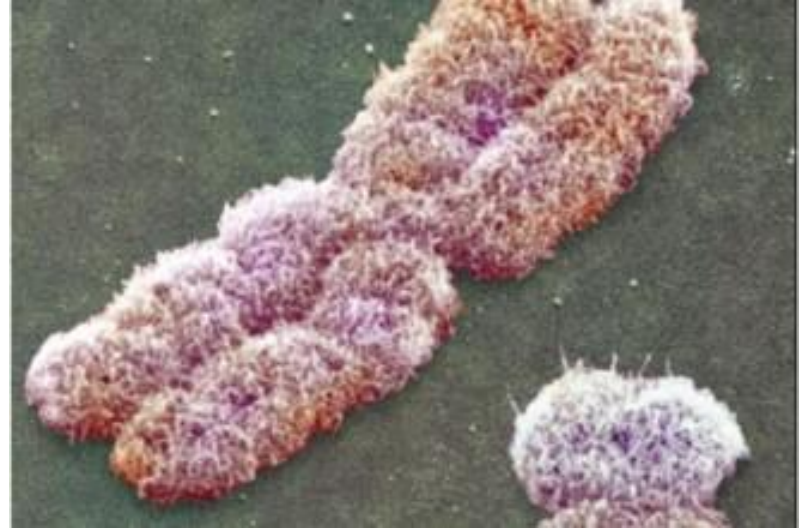
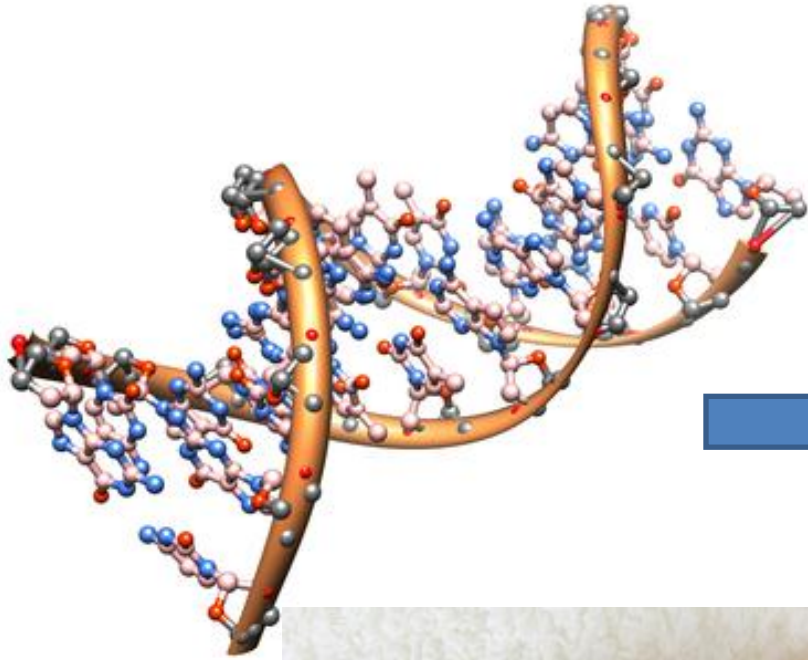


molecule

...followed by **SHARING** atoms...



...complex interactions of complex structures..



...And then there was DHIN !



SHARING information for better healthcare

Health Information Exchange (HIE)

Verb

- The **act** or process of securely transmitting health related data ...
- ... using nationally recognized standards for transport and content



Noun

- HIE or HIO
- An **organization** that facilitates or oversees/governs the secure exchange of health data among independent organizations...
- ... using nationally recognized standards...
- ... in a manner that complies with applicable law and regulation (federal and state)

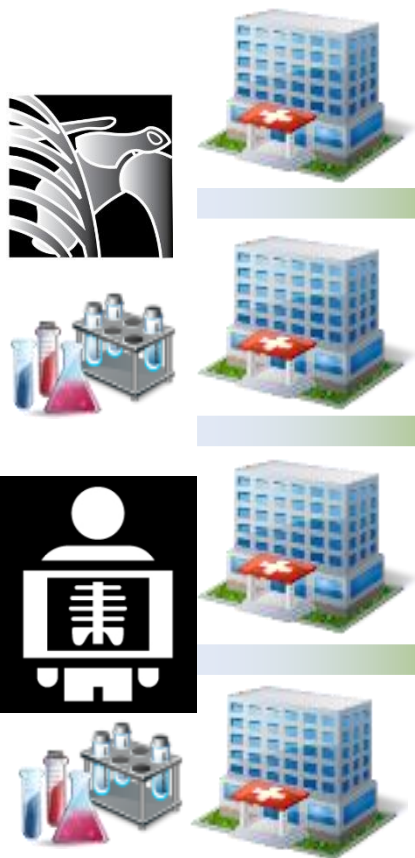


DHIN's Core Services: Results Delivery and The Community Health Record

Data Senders

Community Health Record: DHIN as the "Public Library" (Query-based exchange)

Results Delivery: DHIN as the "Post Office" (Directed exchange)



Aggregates all known data about each patient

- Lab results
- Radiology reports
- Pathology reports
- Hospital ADTs
- Transcribed reports
- +/- Medication history

Auto-print



or

Populate EMR
(interface)



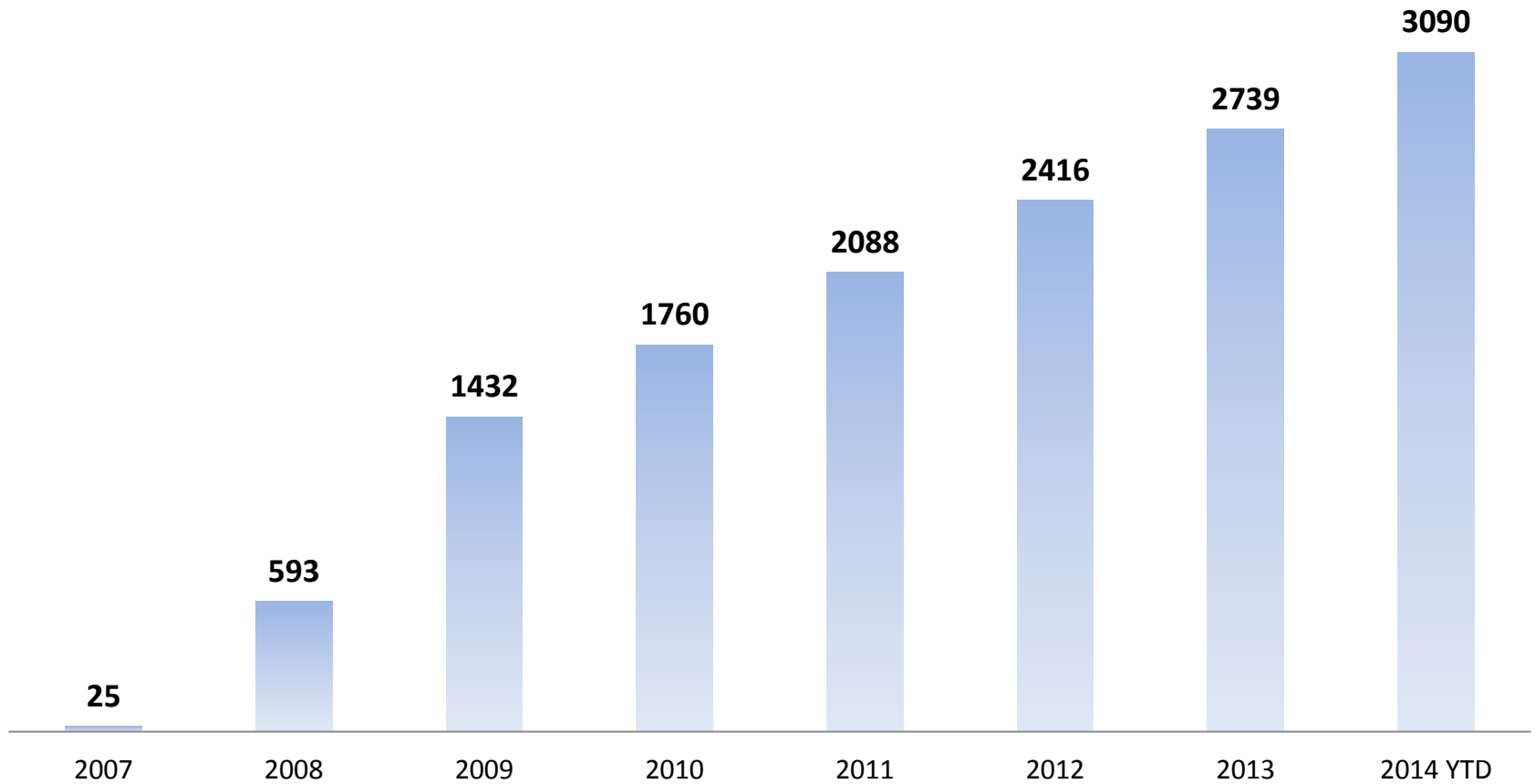
or

View data via in-
box on web portal



Provider Enrollment

(as of July 2014)



Current Participation in DHIN

(as of Aug 2014)

Data Senders



Hospitals – 100%

All DE acute care hospitals, + 2 border hospitals in MD



Laboratories – 99%

All major reference labs, + Public Health lab + several smaller independent labs, including 2 NJ based



Imaging Centers -- ~ 95%

All hospital based imaging centers, + majority of free-standing

Neighboring State HIE – 1

DHIN exchanges hospital and ED discharge information with Maryland's HIE

Pharmacies (IZ Update) -- ~35%

Data Receivers/Users



Providers – 98%

Plus a few providers in bordering states with affiliations in DE



FQHCs – 100%



Skilled Nursing Facilities – 100%

Assisted Living – 87%

Home Health – 53%



School Based Clinics – 100%

Urgent Care/Walk-In Facilities – 61%

State Agencies

- State epidemiologists
- Immunization registry
- Cancer registry
- Department of Corrections

Health Plans – 44% of DE residents covered by participating plans

Better Communication for Better Healthcare

Who Benefits?

NOTE – “Meaningful Use” incentives not included in this analysis

Independent Third Party Evaluation from 2009-2013 showed...

Data Senders (hospitals, labs, etc)

\$6.9M savings for CY13 alone in costs of results delivery to providers who utilize DHIN

Providers/Practices

Estimated savings in EHR interface implementation costs of \$3,000 per practice; collective savings of \$885K across all practices using an interface

Payers/Health Plans

Estimated 21% / 64% reduction in redundant ordering of high cost radiology studies and lab tests respectively over 4 years

- >\$10M savings per year based on Medicare reimbursement rates

Public Health

Real world outbreak of H1N1 flu detected in near real time

Patients

Numerous anecdotal reports



HIE Stages of Development

Advanced HIEs



2014
2012
2007
2005
1997

Stage 7: Innovating

- Sustainable and fully operational health information organization. Demonstration of expansion of organization to provide value-add services, such as advanced analytics, quality reporting, clinical decision support, PACs reporting, EMS services.

Stage 6: Sustaining

- Fully operational health information organization; transmitting data that is being used by healthcare stakeholders and have a sustainable business model.

Stage 5: Operating

- Fully operational health information organization; transmitting data that is being used by healthcare stakeholders.

Stage 4: Piloting

- Well under way with implementation—technical, financial and legal.

Stage 3: Planning

- Transferring vision, goals and objectives to tactics and business plan; defining your needs and requirements; securing funding.

Stage 2: Organizing

- Getting organized; defining shared vision, goals, and objectives; identifying funding sources, setting up legal and governance structures.

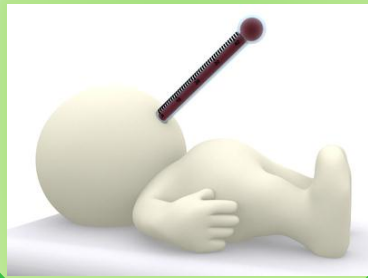
Stage 1: Starting

- Recognition of the need for health information exchange among multiple stakeholders in your state, region or community.

New Directions



Community Health
Record



CHR – where it all began; our core value proposition

- Data model is patient centric
- Continue to expand data types
 - Ambulatory
 - Medical Device
 - Non-text based information
- Expand across continuum of care
 - Behavioral health
 - Long-term care input
 - First responders

New Directions



Provider-Centric Tools



Next level– additional provider tools

- Common scorecard
 - Aggregate data sourced by practice, payers, DelVax, etc.
 - Generate and deliver scorecard; full practice and by payer
 - Dashboard and drill-downs
- Tools to support care coordination, practice transformation
 - Event Notification
 - Clinical quality reporting
 - Care gaps

New Directions, New Needs



Population Views

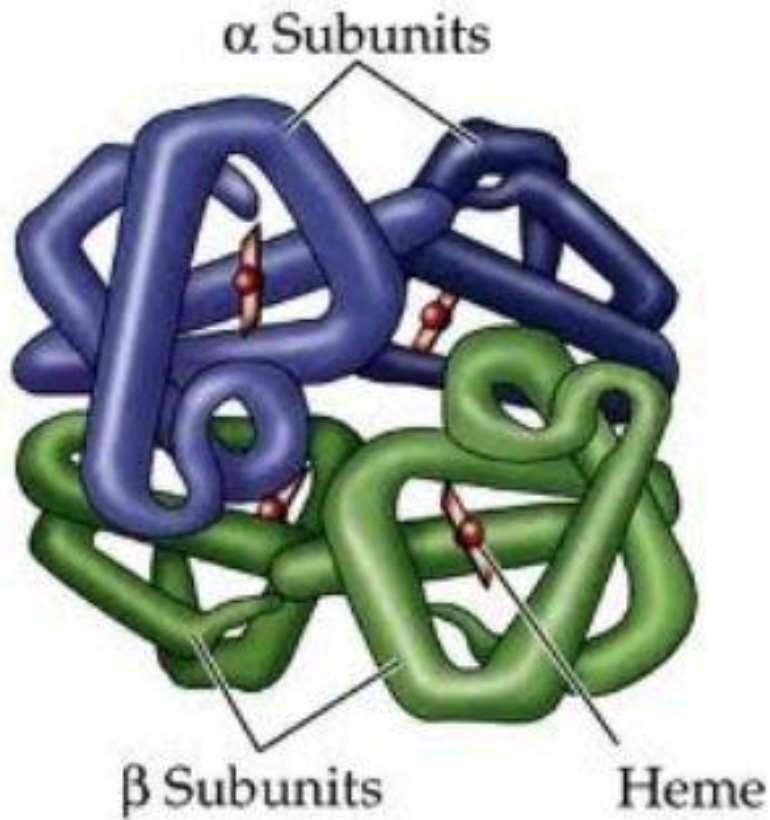


The Triple Aim:

- Healthier population
- Better experience of care
- Lower cost of care
- System-wide scorecard
- Consumer engagement tools
- Clinical/claims warehouse with analytics



The patient at the center...



...surrounded and supported by an ecosystem sharing information

Long Term Vision: Integrate clinical/financial/patient satisfaction data sources to inform decisions (16 Del Code § 10303)

A community-based health information network for the benefit of all citizens of Delaware

Benefits Desired

- Improved **communication** within the healthcare community
- **Efficiency**; eliminate redundancy
- Monitor community health status (**population health**)
- **Reduce healthcare costs**
- Trusted information source for consumers, purchasers, and providers of care

Users of DHIN

- All members of the healthcare community
(Hospitals, labs, pharmacies, imaging centers, physicians and staff, nursing homes, home health, allied health professionals, etc.)
- Consumers (patients)
- Purchasers (to include employers)
- Health Plans
- Public Health (and other State agencies)

Learn More: www.DHIN.org



Better Communication for Better Healthcare

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100% of Delaware acute care hospitals participate in the DHIN.



[DHIN Focus](#)

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Encounter Notification System is Win/Win for Both Patients and Providers

The recent launch of DHIN's Event Notification System (ENS) closes a large gap in patient care by providing real-time alerts to medical providers who have care coordination responsibility.

Take the DHIN Poll

Name the hospital featured in May's DHIN Dialogue, www.dhin.org/dialogue/May2014

