

Delaware Health Information Network



Delaware Clinical Information Exchange Utility

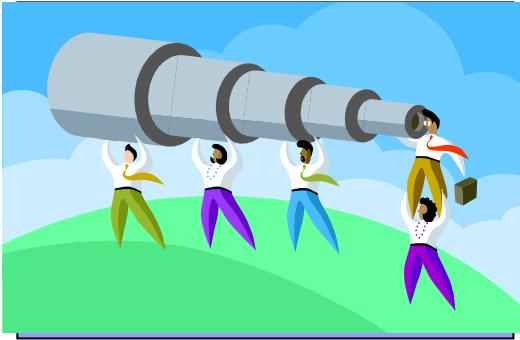
**West Virginia
Health Information Network
October 30, 2006**

Presented by:
Joseph M. Letnaunchyn
President & CEO
Delaware Healthcare Association

Purpose of the DHIN

- Created statutorily in 1997 as a public instrumentality of the State of Delaware
 - To advance the creation of a statewide health information and electronic data interchange network for public and private use.
 - To be a public-private partnership for the benefit of all citizens of Delaware.
 - To address Delaware's needs for timely, reliable and relevant health care information.





Project Vision

Develop a network to exchange real-time clinical information among all health care providers (office practices, hospitals, labs and diagnostic facilities, etc.) across the State to improve patient outcomes and patient-provider relationships, while reducing service duplication and the rate of increase in health care spending.

Executive Committee Members

- Chair:

- Joseph M. Letnaunchyn, President & CEO, Delaware Healthcare Association.

- Vice Chair:

- Ed Ratledge, Professor, University of Delaware Graduate Studies.

- Secretary:

- William Kirk, Esq., BlueCross BlueShield of Delaware.

- Other Members:

- Joe Lieberman, MD, MPH, Delaware Health Care Commission.
- Joann Hasse, Consumer/Medicare Beneficiary/Clinician.
- Mark Meister, Medical Society of Delaware.
- Rich Heffron, Delaware State Chamber of Commerce.

Board of Directors Members (at Large)

- Catherine Bonuccelli, MD
 - AstraZeneca;
- Keith Doram, MD
 - Christiana Care Health System;
- Terry Feinour
 - Bayhealth Medical Center;
- Michael Katz, MD
 - Medical Society of Delaware;
- *Vincent P. Meconi*
 - Secretary, Department of Health and Social Services;
- Linda Nemes
 - Department of Insurance;
- Faith L. Rentz
 - Office of Management and Budget;
- Scott C. Reynolds
 - Bank of America;
- Paul Silverman, DrPH
 - Division of Public Health;
- Robert J. White
 - CEO, Delaware Physicians Care, Inc.;
- Robert J. Varipapa, MD
 - Medical Society of Delaware;
- Alfred W. Redmer, Jr.
 - CEO, Coventry Health Care of Delaware.



Other DHIN Committees

- Technical Committee
- Consumer Advisory Committee
- Provider Advisory Committee
- Ad Hoc Subcommittees
 - Finance;
 - Governance;
 - RFP Workgroup;
 - Proposal Evaluation; and
 - Nominating.

National Priorities

- Inform Clinical Practice
 - Physician Adoption of Electronic Medical Records.
- Interconnect Clinicians - NHIN
 - The ability to share information among health care organizations, providers, and patients within and across regions.
- Personalize Care
 - Personal health records.
 - Electronic medical records.
- Improve Population Health
 - Public health reporting and monitoring.
 - Accelerate research.



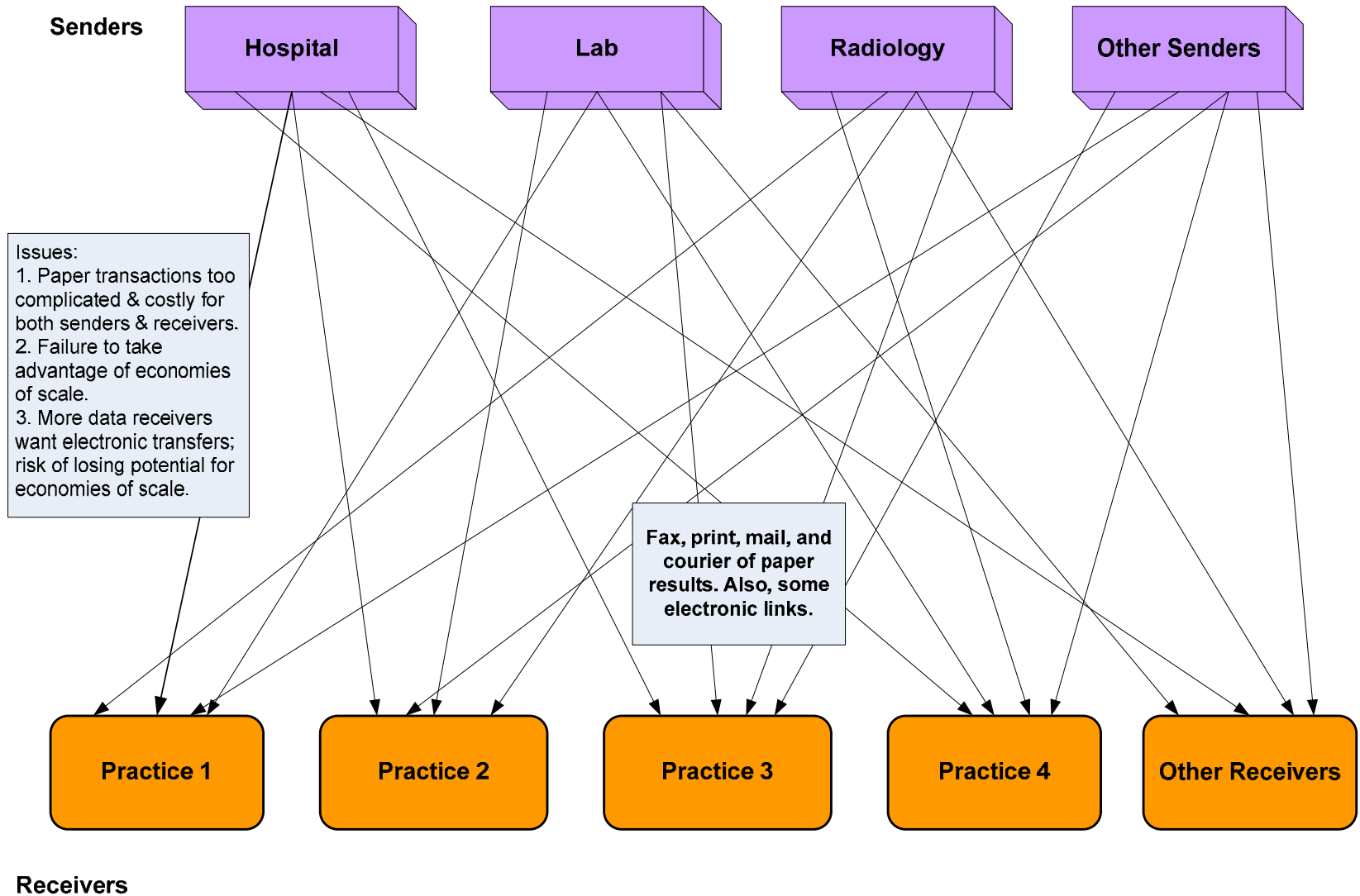


Functionality Overview

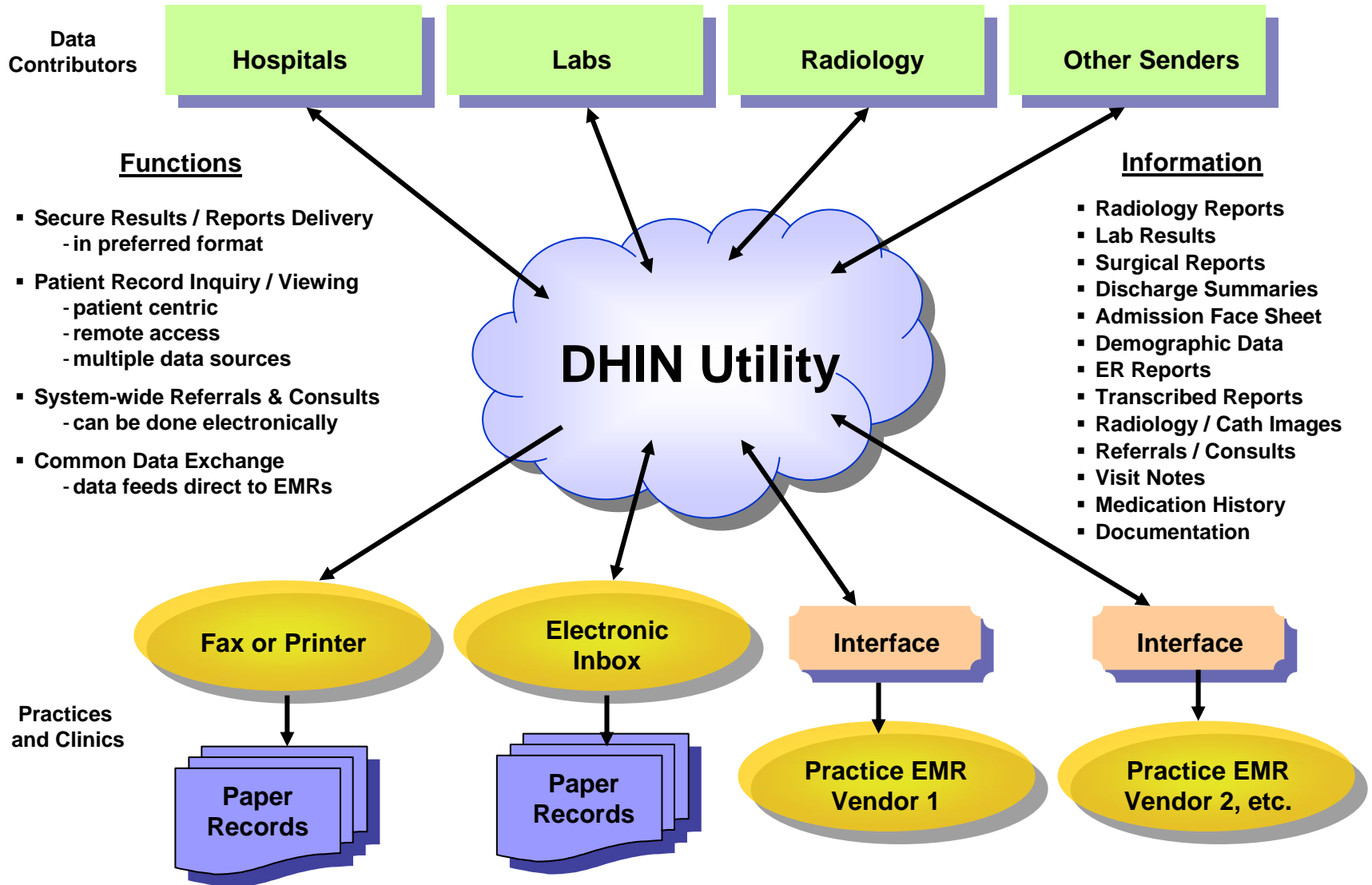
- HIPAA Compliant (privacy, security, audit trail);
- Secure Results/Reports Delivery;
- Referrals and Consults;
- Disease Management;
- Public Health Surveillance;
- Personal Health Record;
- e-Prescribing and e-Ordering;
- Medication History; and
- Drug Interaction and Allergy Alerts.

Current State

Delivery of Results/Reports



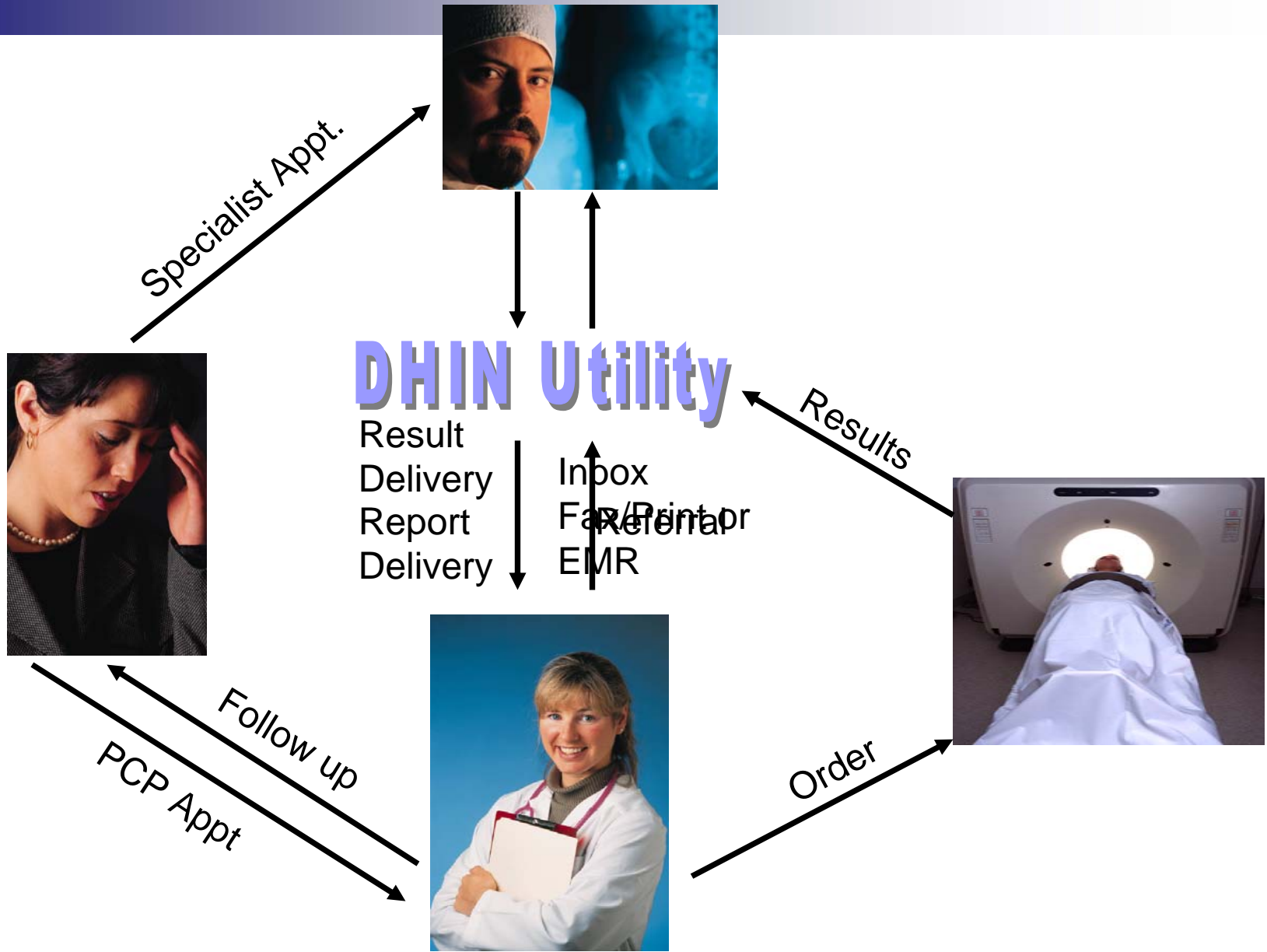
DHIN Utility Functions & Information



Scenario 1 – Physician Office Visit

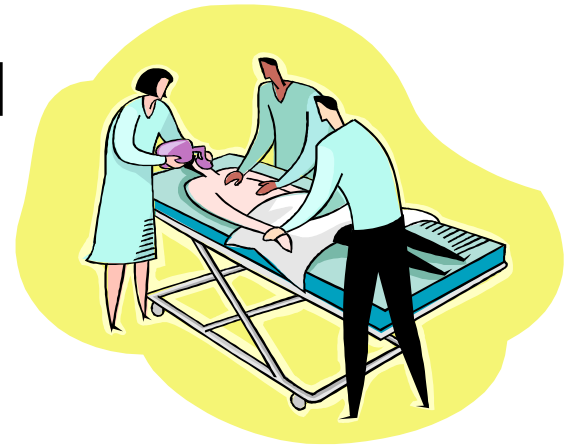
The medical practitioner in his or her office will have access to all the information needed to make good clinical judgments at the time a place of care – lab result, radiology reports, specialist visits, hospitalizations, and medications will be at his/her fingertips.





Scenario 2 – A Medical Emergency

An accident victim is unconscious and taken by ambulance to the hospital. Within seconds, the nurses and physicians in the emergency department will be able to view the patient's allergies, medications and illnesses – information vital to care for the patient and potentially save his or her life.



Operational Issues

- RFPs sent to more than 25 technical vendors – 6 proposals received.
- Cost and technical proposal reviews conducted in August: Medicity was selected as the preferred vendor and the contract was signed in mid-September.
- Medicity agreement includes five one-year contracts with one-year renewals after 2010 – approximately \$17 million through 2010.
- Governance issues are still unresolved for the creation of the Utility Corporation.



Project Deliverables

- Phase I: delivery of laboratory results to physicians from the hospitals/laboratories through the utility.
- Phase II: patient inquiry by physicians – physician offices and hospital emergency departments.
- Phase III: value added services.

Phase 1 Participants

- *Bayhealth* Medical Center;
- Beebe Medical Center;
- Christiana Care Health Services;
- LabCorp;
- Electronic Medical Records (EMR) Systems; and
- Physician Office Practices.

Current Year Milestones

(September 28, 2006 to June 30, 2007)

- Go Live March 30, 2007:
 - Data Senders: 3 hospitals and 1 reference lab ;
 - Data Receivers: a minimum of 5 physician practices;
 - Functionality:
 - Results delivery;
 - Secure access controls;
 - Inbox management (printing/faxing, sorting, retrieval and reprinting, forwarding);
 - Results storage; and
 - Interfaces to 1 physician EMR.

Current Year Milestones

(continued)

- Go Live June 30, 2007:
 - Data Receivers: a minimum of 3 additional physician practices and MSDHub;
 - Functionality:
 - Results delivery;
 - Secure access controls;
 - Inbox management (printing/faxing, sorting, retrieval and reprinting, forwarding);
 - Results storage;
 - Interface to 2 additional physician EMRs; and
 - MPI harmonization for all live data senders.

Functional Priorities by Year

2006-2007	<ul style="list-style-type: none">■ Secure Results Delivery with Inbox Management■ Security Access Controls■ Charge Capture and Billing■ Audit Processing■ EMR Interfaces■ Master Patient Index
2007-2008	<ul style="list-style-type: none">■ Inquiry/Viewing of Patient-Centric Data■ Consumer Enrollment/Audit■ Medication History■ Personal Health Record

Critical Functionality – Pricing Option 1

Critical Functionality – Pricing Option 3

Critical Functionality – Pricing Option 2

Added Functionality – Other Pricing Options

Functional Priorities by Year

2008-2009	<ul style="list-style-type: none">■ e-Prescribing■ e-Signature■ e-Ordering
2009-2010	<ul style="list-style-type: none">■ Benefit Eligibility and Claims Processing■ Population Health
2010-2011	<ul style="list-style-type: none">■ Chronic Care Management■ Incentive and Outcome Management
2011-2012	<ul style="list-style-type: none">■ Data Warehouse

Critical Functionality – Pricing Option 1

Critical Functionality – Pricing Option 3

Critical Functionality – Pricing Option 2

Added Functionality – Other Pricing Options

DHIN Funding

- AHRQ - \$4.7 million contract with specific requirements over a 5-year period.
 - October 1, 2005 \$700,000.
 - October 1, 2006 - \$1 million / year for four years.
- \$2 million from State of Delaware @ July 1, 2006 with requirement for 100% matching with private sector funds.
- Additional funding will be requested in State '08 budget.
- Hospitals committed \$2 million @ September 1, 2006, LabCorp \$160,000 and BCBSDE contribution is anticipated.

Governance

- Utility Corporation (Delaware Health Information Operating Corporation) issues remain unresolved.
- Options being considered include a state created entity (via General Assembly) or an independent not-for-profit 501(c) corporation – sub designation to be determined.
- Will be established as a non-profit and non-stock corporation under either option.

Governance (continued)

- Unresolved issues are the final composition of the Utility Corporation Board and the reappointment of Board members as the direction of the Utility Corporation changes in the future.
- Incorporating Board will likely be composed of 13 members, appointed/approved by the DHIN Board.
- Board will then be self-appointing after initial terms of office are completed.
- Intent is for the Board members and employees to be covered under State statute re: limitation of liability and indemnification.

Next Year Milestones

(July 1, 2007 to June 30, 2008)

- By September 20, 2007: Go Live - Lab order entry - 3 hospitals.
- By December 30, 2007: Go Live - Results delivery from an additional 2 hospitals and 1 reference lab to a minimum of 100 additional physician offices, and interfaces to 3 additional physician EMRs.
- Ongoing: MPI Harmonization for all live data sender organizations.
- By December 30, 2007: Establish Physician-Patient relationship for patient enrollment and audit (policies to be determined).
- By March 30, 2008: Go Live – Record Inquiry Viewing.
- By June 30, 2008: Go Live - Lab order entry – all live hospitals and reference labs.

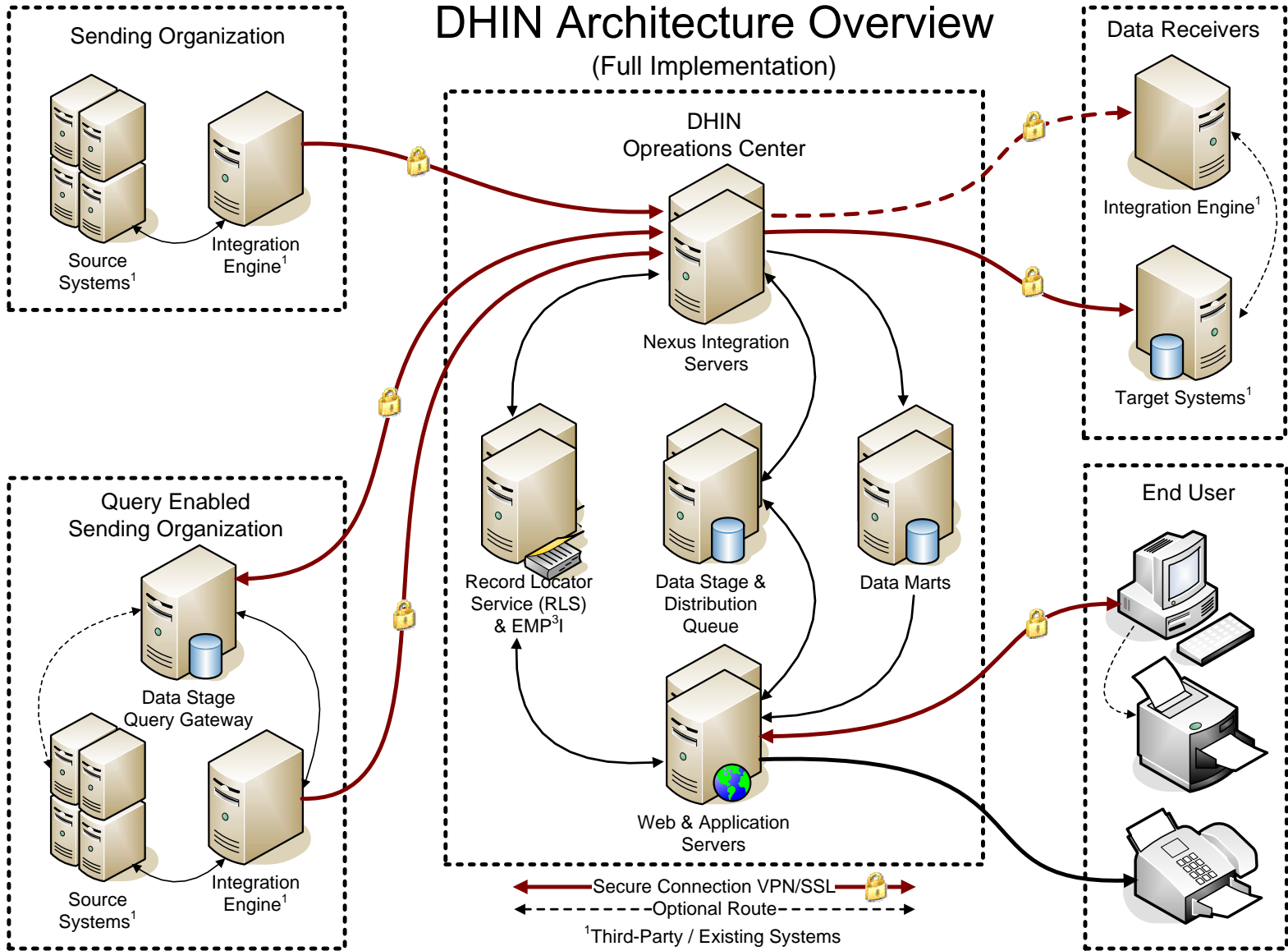


Delaware State Agencies Impacted

- Division of Public Health;
- Division of Social Services;
- Division of Medicaid and Medical Assistance;
- Division of Substance Abuse and Mental Health;
- Prison Health Services;
- Office of Management and Budget – Employee Benefits Program; and
- Dept. of Services for Children, Youth and Their Families.

DHIN Architecture Overview

(Full Implementation)



Technical Design

- Leverages existing technical infrastructure within healthcare organizations to create a utility to allow providers to retrieve data on their patients
 - Data transmitted from each data sender to a data-sender-specific DataStage (cache) via existing interface engines in current HL7 standard format using TCP/IP over a secure VPN.
 - Leverages the Internet for ubiquitous access and reduced technical needs in the provider's office.

Technical Design

- Designed around an Enterprise Architecture
 - Framework specifically designed to support the business objectives of healthcare organizations and providers.
 - SOA (Service Oriented Architecture) - Abstracts data into services that can be consumed by external sources.
 - EMRs.
 - Automatic faxing and printing.
 - Leveraged data architecture that can make data available through UI, third party EMRs, printing and faxing as required by the receiving organizations.
 - Confederated data model housing data in segregated repositories.

Data Management

- Hosting
 - Hosted in Perot's Plano Technology Center.
- Platform
 - Built on Microsoft DNA
 - .Net v2.0.
 - SQL Server 2005 Enterprise.
 - Windows Server 2003 Enterprise.
- Security
 - 128-bit SSL encryption.
 - Robust security and access control model.
 - Complete auditing and logging.
- Scalability & High Availability
 - Load balanced web servers.
 - SAN infrastructure.
 - Clustered database servers.
 - Redundant firewalls & network infrastructure.
- Disaster Recovery
 - Provided by SunGuard in coordination with Perot services.

Questions



Contact Information

<http://www.state.de.us/dhcc/information/dhin.shtml>

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