



## Health Information Exchange Strategic and Operational Plan Profile

### Overview

The Delaware Health Information Network (DHIN), state-designated entity for the State of Delaware, is a public-private entity created to design, implement, and maintain public and private use of health care information. DHIN convenes a multi-stakeholder representation body, a Public-Private Board of Directors, to recommend the overall direction and policy for HIT and HIE in Delaware. As of 2007, DHIN is an operational statewide HIE with a community master patient index (CMPI) and record locator services (RLS) to enable patient record searches of laboratory data, radiology reports, transcribed reports, and admission, discharge and transfer (ADT) face sheets. An estimated 70% of health care providers in Delaware use DHIN to retrieve clinical results and search for patient-centric clinical summaries. DHIN has direct interfaces with EMR vendors to support results delivery directly into a patient's electronic chart in the provider's EMR. DHIN also supports real-time electronic reporting to the State's biosurveillance system.

Delaware plans to roll out future functionalities in the DHIN including lab order entry, bi-directional continuity of care document exchange (CCD), picture archiving and communication system (PACS) image retrieval, medication history, additional interfaces with EHR systems, and NHIN referral network implementation. Additional functionalities, targeted by 2013, include connectivity to immunization registry, administrative functions (e.g., eligibility verification, claims submissions), additional interfaces to EHR systems, medication reconciliation, quality reporting, transitions of care, radiology order entry, patient portal and PHR connectivity, and enhanced public health connectivity.

### Model and Services

DHIN offers a standardized web-based community health record, which can be customized to the workflow of the practice and job function of the end-user. As a result, authorized users with a need to know can access patient demographic data, payer information, admission discharge and transfer (ADT) data, laboratory and pathology results, radiology reports and transcribed reports. Authorized and authenticated users can receive clinical results in three ways: electronic inbox, auto printing, and a direct interface to an existing electronic health record (EHR) system.

Consistent with meaningful use requirements, DHIN plans to empower patients by introducing a patient portal that will enable consumers to access their health information, including lab results and medications; receive alerts and notifications, and obtain clinical and hospital discharge summaries at home. As an added benefit, patients will be able to complete a standardized data form at home instead of filling out



Office of the National Coordinator for Health Information Technology  
State Health Information Exchange Cooperative Agreement Program  
<http://www.HealthIT.hhs.gov>



**State:**  
Delaware

**HIT Coordinator:**

**Award Amount:**  
\$4,680,284.00

**Contact:**  
Gina Perez

**Website:**  
<http://www.dhin.org>

**Other Related ONC funding in Delaware:**

Regional Extension Centers (RECs):  
\$5,859,716.00

Beacon Community:

paperwork on clipboards in the waiting room, which will save time for both the patient and the provider, eliminating the need for manual data entry.

DHIN plans to support a variety of administrative transactions including eligibility checking and claims submission. Similar to other data aggregation approaches, DHIN offers a flexible implementation model designed to meet data providers at their current level of technology adoption. DHIN's approach to administrative transactions intends to achieve the goal of simplifying provider and provider staff interaction with public and private payers across the state of Delaware by optimizing access to administrative transactions, such as eligibility verification and claims submission, by creating a common payer framework where a variety of use types can interact with all payers statewide from a single user interface.

## Highlights

- **Delivery of Lab Results:** By providing all clinical reports and results in one standard format regardless of where the test was performed, DHIN eliminates opportunity for misinterpretation of data. The ordering provider knows who performed the test by the logo and contact information presented on the report, while preserving branding and the necessary information for CLIA certified laboratories. DHIN also offers a standardized web-based community health record, which can be customized to the workflow of the practice and job function of the end-user. Authorized and authenticated users can receive clinical results in three ways: electronic inbox, auto printing, and a direct interface to an existing electronic health record (EHR) system. The electronic inbox provides a secure mailbox for delivering reports and results to ordering physicians and anyone copied on the order, as well as face sheets for office users. The AutoPrint option sends results directly to a network printer on the basis of the practice's printing preferences (by times of day, hours between print jobs, etc.). Physician practices that choose to receive data via an existing EHR system are set up to connect directly through their EMR vendor, whereby a clinical result can be automatically matched with a patient record and presented to the physician in their EHR work list.
- **CCD Integration:** Over time the DHIN will offer a range of services to support meaningful use as well as others to support general patient care and clinical workflow. Such services include: EMR-CCD exchange as EMRs begin to support sending CCD documents to DHIN; DHIN conversion services to convert HL7 data into a CCD format, and vice-versa, in order to make it available by other systems and queries; CCD exchange for referral and consult to support the coordination of care among health care providers as well as the State mental health services for adults and children by facilitating the referral processes used to integrate the patient into community-based service providers; CCD aggregation services to support Social Security Administration workman compensation and disability claims; and distribution and integration to Personal Health Records (PHR) and health record banks.
- **Public Health:** DHIN connects to the state's public health bio-surveillance system for real-time delivery of reportable diseases and emergency chief complaint data. Via the emergency department (ED) admission (ADT transaction), DHIN receives the chief complaint for the patient's visit to the ED and routes it to the patient's provider, as well as to the Delaware Electronic Reporting and Surveillance System in real-time standardized format. During the



- Connectivity with Medicaid Medical Information System (MMIS):** Connection of the Delaware MMIS to DHIN will provide statewide access to authorized practitioners to enable them to view summarized Medicaid claims data. This information provides the practitioner with medical history, chronic care conditions, current and past medications, and the patient’s care team. Combining claims data with the robust clinical results (such as lab tests) currently available to DHIN users are expected to dramatically improve patient safety, reduce duplicate test ordering and prevent patients from misusing the health care system (whether drug seeking or lack of appropriate follow-up care to the Medical Home). DHIN architecture supports a confederated model where data from Medicaid will be stored in a dedicated, secured environment. Even though automated eligibility verification is currently available through Medicaid’s fiscal agent, connectivity with the MMIS through the DHIN will enable its vast network of physicians to verify Medicaid eligibility for their clients through the same system with which they access medical information. Dates of coverage, Medical Home status, Plan Coverage, and other key details are easily viewed, printed, and navigated.

## Meaningful Use

	<u>Landscape</u>	<u>Strategy</u>
<b><u>E-Prescribing</u></b>	Based on a 2008 University of Delaware survey, 57% of surveyed physicians reported that they used electronic prescribing.	DHIN will provide electronic transmission of prescription and prescription-related information (12-months of prescriptions, fills). Through DHIN, patient-specific clinical information, can be accessed during the e-Prescribing process for provision of clinical decision support.
<b><u>Structured Lab Results</u></b>	All clinical reports and results are provided in one standard format, regardless of where the test was performed. The ordering provider knows who performed the test by the logo and contact information presented on the report. Authorized and authenticated users can receive clinical results in three ways: electronic inbox, auto printing, and a direct interface to an existing electronic health record (EHR) system. Based on a 2008 University of Delaware survey, 51% of surveyed physicians reported that they used electronic lab results.	Lab ordering will be offered by the DHIN through a traditional EHR connected with a bi-directional interface with DHIN or through a web-based orders application. Lab orders can be linked to a specific problem/ICD9 code and for EMR users, the result will be linked to the order in the EMR
<b><u>Patient Care</u></b>	Over 800,000 patients are managed across multiple organizations within the State’s	The DHIN will offer a range of services to support meaningful use as well as others to support general patient care and clinical



**Summary**

Community Master Patient Index, allowing for a composite view of the health record in standardized CCD format across multiple care locations.

workflow. Such services include: EMR-CCD exchange as EMRs begin to support sending CCD documents to DHIN; DHIN conversion services to convert HL7 data into a CCD format, and vice-versa, in order to make it available by other systems and queries; CCD exchange for referral and consult to support the coordination of care among health care providers.

## HIE Inventory

<b>Standards</b>		<b>Quality Improvement</b>	
Nationwide Health Information Network Exchange Specifications	<b>X</b>	Care Coordination	<b>X</b>
Nationwide Health Information Network CONNECT	<b>X</b>	Quality Reporting	<b>X</b>
Nationwide Health Information Network DIRECT		Behavioral Health Information Exchange	<b>X</b>
Plans to exchange with federal agencies or other states via Nationwide Health Information specifications	<b>X</b>		
<b>Public Health</b>		<b>Lab Strategy</b>	
Electronic lab reporting of notifiable conditions	<b>X</b>	Translation services	<b>X</b>
Syndromic surveillance	<b>X</b>	EHR interface	<b>X</b>
Immunization data to an immunization registry	<b>X</b>	Policy strategy	<b>X</b>
<b>Patient Engagement</b>		Order Compendium	<b>X</b>
Patient Access/PHR	<b>X</b>	Bi-Directional	<b>X</b>
Blue Button		Alignment with CLIA	<b>X</b>
Patient Outreach	<b>X</b>	<b>E-Prescribing</b>	
<b>Privacy and Security</b>		Medication History	<b>X</b>
Privacy and Security Framework based on FIPS		Incentive or grants to independents	
Individual choice (Opt In/Opt Out/hybrid)	<b>Opt Out</b>	Plan for controlled substance	
Authentication Services	<b>X</b>	Set goal for 100% participation	
Audit Log	<b>X</b>	Controlled substance strategy	<b>X</b>



Administrative Simplification		Care Summaries	
Electronic eligibility verification	X	Translation services	X
Electronic claims transactions	X	CCD/CCR Repository	X
Vendor		Directories	
Planning		Provider Directory	X
Core Services	Medicity	Master Patient Index	X
		Record Locator Services	X
		Health Plan Directory	X
		Directory of licensed clinical laboratories	X

*Information for this profile was obtained from the approved Operational and Strategic Plan submitted to the National Coordinator for Health Information Technology as a condition of the Health Information Exchange Cooperative Agreement. The complete plan can be downloaded at: <http://www.statehieresources.org>*

