



September 24, 2010

Judith Sparrow  
Office of the National Coordinator for HIT  
Department of Health and Human Services  
200 Independence Avenue, SW  
Washington, DC 20201

RE: Written Testimony to the Information Exchange Workgroup's Provider Directory Task Force

Dear Ms. Sparrow:

Thank you for extending the opportunity to address the Information Exchange Workgroup's Provider Directory Task Force regarding state and regional framing for provider directories. The commentary that follows represents the work of the New England Healthcare Exchange Network, Inc. (NEHEN) in creating such a directory for local, regional and national health information exchange for our participants.

Sincerely,

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## NEHEN Background

The New England Healthcare Exchange Network Inc. (NEHEN) is a consortium of regional payers, providers and other organizations that has designed and implemented a secure and innovative health information exchange with the intent of reducing costs and improving the quality, safety, and efficiency of patient care. Since 1998, NEHEN technology has changed the way healthcare is delivered and reimbursed in nearly 200 member organizations and subscribers, consisting of over 55 hospitals, 8 health insurance plans, over 150 small provider organizations and tens of thousands of practitioners.

Originally formed as the New England Healthcare EDI Network LLC to accelerate compliance with the transaction and code set provisions of the federal Health Insurance Portability Accountability Act (HIPAA), NEHEN merged with the separately formed MA-SHARE clinical health information exchange in July 2009 and reincorporated as a not-for-profit Delaware corporation under its current name. NEHEN has grown to become the largest health information exchange facilitator in the region and one of the most mature in the nation, with an admired self-sustaining financial model and scaled operations processing over 100 million transactions per year across three lines of service:

- Administrative Exchange, using HIPAA-mandated X12 transaction sets to support reimbursement-related activities
- Clinical Health Information Exchange, using national standards, especially in support of participants earning federal meaningful use incentives
- E-Prescribing, using national prescription routing standards to access regional and national prescription fulfillment and reimbursement networks.

Four technical solutions provide the foundation for the business applications:

- eGateway, the core transaction / message router, interfaced with participant information systems systems for “machine-to-machine” communication, providing the back-end to *NEHENExpress* and *NEHENNet*
- *NEHENExpress*, the web front-end application integrated with eGateway for standalone direct data entry, message viewing, testing, system administration and audit
- *NEHENHub*, a centralized telecommunications hub providing connectivity to all NEHEN participants for those members wanting to leverage NEHEN for managing connectivity
- *NEHENNet*, a hosted version of all other NEHEN components (eGateway, *NEHENExpress* and *NEHENHub*), typically employed by smaller organizations wanting NEHEN to manage all aspects of their technical infrastructure for participating in the network.

As Program Manager of the predecessor NEHEN since 1998, and of MA-SHARE since 2005, CSC is responsible for:

- Formulating strategy and direction
- Implementing NEHEN’s goals and priorities
- Organizing and supporting participant meetings and discussions
- Architecting, developing, piloting, and supporting core technologies
- Providing technical support
- Coordinating implementation and testing plans
- Resolving implementation issues
- Recruiting new members and subscribers
- Providing impetus and momentum
- Responding to changing market demands and trends

CSC holds no governance position in NEHEN, serving at the discretion of the NEHEN Board of Directors.

## **Clinical Health Information Exchange**

One of the NEHEN predecessor organizations, MA-SHARE, began work on clinical health information exchange in 2003 and quickly evolved into Massachusetts’ premier RHIO. Its first project, MedsInfoED, delivered limited medication history to three emergency departments using a “pull” model, but the pilot was unable to sustain itself. In 2005, CSC was invited to manage MA-SHARE in parallel with the predecessor NEHEN and began to implement an HIE architecture based on NEHEN’s.

Using a hybrid of push and pull approaches, MA-SHARE developed the Connecting for Health Record Locator Prototype, leading to CSC being named one of the four original NHIN prototype developers. MA-SHARE also developed and launched the Rx Gateway, an e-prescribing exchange combining Surescripts integration with local data and features. In 2007, MA-SHARE launched a service to deliver visit summaries from local hospitals to community health centers, physician practices and the state’s largest IPA.

With the merger of MA-SHARE into NEHEN and the passage of the HITECH provisions of ARRA in 2009, NEHEN developed a comprehensive plan to offer services to its members and subscribers that will help them fulfill meaningful use requirements related to health information exchange. This is focused in two areas:

1. Expand the clinical message types supported by NEHEN, in addition to the currently supported Push Pilot and e-prescribing capabilities:

- CCD-based clinical summary for multiple use cases (discharge summary, admission notification, care transition / referral tracking, quality reporting, disparities analysis)
  - HL7-based transport for public health and results delivery (syndromic surveillance, lab results and immunizations)
2. Expand the NEHEN Gateway for supporting processes and uses
- Expanded self-managed participant / provider registration and directory
  - New clinical message viewing
  - Expanded logging and new audit report viewing
  - Expanded network monitoring and reporting

## Participant / Provider Registration and Directory

NEHEN administrative message handling and e-prescribing are based on preconfigured addressing schemes designed to deliver a message to a predetermined organization. Program management staff maintain addressing tables and distribute them with NEHEN software. This method easily supports routing an insurance eligibility request or claim to a payer, for example, or an electronic prescription to Surescripts for machine-to-machine processing.

Clinical health information exchange, however, is not nearly as straightforward. There are multiple orders of magnitude more potential recipients, making centralized maintenance impractical and costly. Many recipients may not be known to the sender, requiring a lookup capability akin to using an online Yellow Pages or White Pages directory. In addition, not all processing by the recipient will be machine-to-machine, requiring some knowledge of the receiver's preferences for fax, e-mail, human readable documents or EHR integration. Recipients may delegate processing to certain staff, requiring knowledge of individuals rather than simply organizations. Finally, the more sensitive nature of clinical information requires more complex access control to track and determine who at a recipient organization has been authorized to handle and view the information.

NEHEN has developed and deployed a Community Participant / Provider Directory to support these aspects of clinical HIE, along with tools to allow delegated, self-managed registration and maintenance of directory entries. The NEHEN directory supports both Yellow Page / White Page lookup and HIE routing. Participants can use the NEHEN toolset to:

- Register and maintain organization, location, provider, clinical affiliation (practice hierarchies, etc.), receiving / message delivery preferences and other data using the *NEHENExpress* web-based user interface

- Delegate a person or destination specified by a provider to receive an electronic clinical message in addition to or instead of the provider (e.g., another covering physician, a practice assistant or practice e-mail inbox, a fax number an EHR URL, etc.)
- Upload provider, delegation and preference data in bulk (new and updates) via a NEHEN-specified web service
- Search for participating organizations, individual providers and delegates to add and maintain affiliations and delegate instructions

NEHEN participants can now use the data in the directory in the course of data exchange to:

- Determine whether another provider is eligible to participate in clinical data exchange via NEHEN
- Obtain routing information for a provider
- Select among multiple clinical affiliations to determine where an electronic message should be routed
- View provider data, clinical affiliation data, delivery preference and delegate data

These capabilities enable a number of functions critical to solving for the complexities inherent in clinical exchange:

- Allowing a patient or other person, such as a registration clerk, to accurately identify a patient's provider of care to whom clinical messages should be routed. For example, if two physicians named Smith practice in the same town, the practice name or address may be used to identify the Dr. Smith who provides care for the patient.
- Allowing a receiving participant to route an incoming clinical message to the correct internal system for the provider to whom the message is addressed. For example, if a participant's providers use separate physical instances of an EMR, the location identified on an incoming message may be used to identify the EMR instance the message should be routed to. If Dr. Smith is associated with Location A, a message for Dr. Smith can be routed to the EMR instance associated with Location A.
- Discovering information about other participants' availability for clinical HIE and their routing requirements. This is equivalent to looking up a financial institution's Bank Routing Number to determine how to accomplish a wire transfer, etc.

In designing the Community Participant / Provider Directory and functionality, NEHEN determined that no standards or comprehensive data sources are present today in the industry or cross-industry. This led to the design of a simple data scheme, the elements of which are consistent with HL7 naming and data types.

NEHEN is now in discussion with leading providers of self-managed sources of provider data to pre-populate provider tables via web services for a richer data set for NEHEN users and to simplify database maintenance. In pursuing this strategy, which NEHEN anticipates executing on in late-2010, NEHEN intends to provide its participants with provider, organization and routing data on a national level to enable data exchange across the NHIN.