

**Utah Health Information Network  
Testimony to the National Committee on Vital and Health Statistics  
July 26, 2006**

**Introduction:**

UHIN thanks the NCVHS for the opportunity to give testimony on the important topic of the National Health Information Network. Because of the short time line prior to the hearing, this testimony is somewhat briefer than optimal. However, we believe we have made the critical points in our testimony.

**UHIN's definition of a RHIO:** To date, there is no accepted definition of a regional health information organization. For the purposes of this testimony UHIN will be using this definition of a RHIO: A community-centric non-profit company that exchanges standardized secure electronic messages between the various health information silos represented by its members. Hence, organizations that are educational in nature, organizations that do not actually operate a network are not RHIOs in our view. They can perform critical educational or governance activities but they are not RHIOs.

There is the question of whether national organizations such as the VA or LabCorp are RHIOs. For the purposes of this discussion, the VA and LabCorp are not themselves RHIOs. However, UHIN believes it would be in their best interest to participate with RHIOs because these connections could substantially reduce their connectivity costs. The alternative is for these large entities to connect individually in a proprietary manner to over 300,000 different endpoints, a costly and wasteful approach to exchanging information. That strategy also places a unnecessary burden upon the provider community because it force them to maintain proprietary links to multiple entities further wasting precious health care dollars.

**1. What are the "minimum but essential" network functional requirements for the initial roll out of the NHIN, i.e. the functions for the nationwide network itself, not for specific edge systems or entities?**

UHIN believes that the core sustainable business function of a RHIO and the NHIN is to act as a means to electronically securely exchange standardized information for low cost across independent data silos within a defined market area. RHIOs and the NHIN may elect to perform additional services but being exchanging messages is the core sustainable commodity offered by RHIOs and the NHIN.

UHIN envisions the NHIN to be not an actual stand-alone network or an independent company. Instead UHIN sees the NHIN as being a coalition of RHIOs. UHIN envisions the NHIN as a collection of standards that allow exchange between RHIOs; data between is exchanged according to NHIN standards. Similar to the internet, at its core the NHIN is not operated by a single network company; it is a set of standards determined by its users, the RHIOs, which allow the RHIOs to interoperate encompass four areas: (1) NHIN message formats and codes for exchanging

messages between RHIOs, (2) NHIN communications protocols linking RHIOs, (3) NHIN privacy and security policies including authentication of endpoints and users in RHIOs, and (4) a RHIO-to-RHIO (NHIN) business associate agreement/contract. Essentially these are interoperability standards.

*Step one: Business Case for the NHIN:*

The first requirement for the NHIN is to determine a viable business case for such an exchange. It is necessary to first determine what it is economically viable for the NHIN to do before designing architecture and answering the question posed by NCVHS. In our experience, networks such as RHIOs or an NHIN must be first and foremost based upon a viable business strategy.

Hence, the first questions for the NHIN are:

- **What business need does the NHIN meet?**
  - Who will want to exchange messages at a national level?
  - What messages will they want to exchange?
  - What volume of messages will they want to exchange?
  - What value does such an exchange bring to the RHIOs and their users?

*Expected RHIO and NHIN Transaction Traffic Patterns*

It is UHIN's experience that the bulk of all clinical health care occur within a natural health care market area (which may or may not span state lines). Hence, the RHIO is likely to be the most easily supported entity if it meets its members' data exchange needs.

The next most common exchanges are between areas that immediately border the central market area. Hence, RHIOs must develop the capacity to exchange messages with other neighboring RHIOs. This will probably form the driving force for the economic viability of an NHIN.

The least common exchanges are between areas that are not contiguous, with notable exceptions such as snowbird migration patterns. These functionalities of the NHIN may be most difficult to support financially.

As shown in Figure 1, the expected highest NHIN traffic for Utah will be in the surrounding states. Volume with the rest of the country is expected to be much lower.

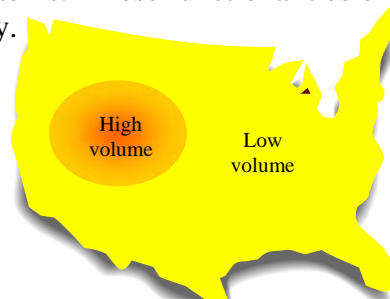


Figure 1- Anticipated Utah RHIO & NHIN traffic levels

Hence UHIN sees the NHIN as a set of agreements that support traffic between neighboring RHIOs with a secondary function of supporting traffic between RHIOs that are more geographically disparate.

*Record Locator Service: Is it Sustainable for an NHIN?*

UHIN always begins the design of a new product or function (such as the NHIN) with a business evaluation. UHIN is aware that most of the discussion about the NHIN has focused upon the development of some form of record locator service: the ability for a physician in Boston to obtain information about their patient in California via a query through the NHIN. UHIN is unconvinced that such exchanges are economically supportable primarily because, on a national scale, there is not sufficient volume of such exchanges.

UHIN has not been able to envision a financially supportable 'record locator' function for the NHIN. Before the architecture of an NHIN was based upon a record locator function, UHIN would require a rigorous business evaluation from all the functioning RHIOs:

- What is the traffic for exchanging information about patients beyond your market area?
- What documents are most commonly exchanged?
- What would having an NHIN save your members in exchange costs?
- What would you be willing to pay for such a service?

These questions would have to be answered and the answers would have to indicate a sustainable business case before UHIN would support the development of a record locator service at the NHIN level.

*Meet existing needs for deliver documents: Sustainable business model for NHIN*

UHIN envisions that a supportable NHIN exchange might be to handle any and all existing document exchange needs (such as a patient from Utah being admitted to the Mayo Clinic in Phoenix for example) between providers and between payers and providers. Currently most clinical documents are sent haphazardly in a variety of ways (postal mail, fax, telephone, using the patient as the courier, professional courier, email, etc) and often they are sent more than once. All this adds up to unnecessary expense and decreases the quality of care.

Because of this expected traffic pattern it is critical that the NHIN standards be developed and adopted by ALL RHIOs and not superimposed from above by the federal government. Standards work best and achieve the greatest adoption rates when they are developed by the users.

As such RHIOs, as members of the NHIN, need to convene to adopt standards for message formats (e.g., use the HL7 version being proposed by ELINCS for Lab results), codes within the messages, communications (e.g., details of the use of web services, the development of standardized error and response messages for routine exchanges), and security including a range of acceptable processes to authenticate users.

So, the “minimum but essential” network functional requirements for the initial roll out of the NHIN needs to begin with convening currently functioning RHIOs (planning RHIOs would be welcome but not have a vote) to begin the process of adopting standards in these three areas.

UHN understands that this testimony is contrary to the current direction which the Office of the National Coordinator has taken. However, it is our considered opinion that this approach has the highest probability of success for the NHIN.

**2. For specific edge systems or entities, what functions would be ‘minimum but essential’ for linking to the network?**

The diagram that was attached in the powerpoint represents, in UHN’s opinion, a diagram of a RHIO. It is the RHIO’s job to connect to the various entities in its market space. Hence the ‘edge systems’ for the NHIN are RHIOs.

As explained in Question #1, the minimum but essential functions for linking RHIOs together as an NHIN encompass (1) message formats and codes, (2) communications, (3) privacy and security policies including authentication of endpoints and users, and (4) a RHIO-to-RHIO business associate agreement/contract. These four topics need to be proposed and adopted by the RHIOs to create a viable means of exchanging health data.

**3. Where possible, please organize your suggestions by functional category from the June NHIN Forum document [see attached powerpoint].**

UHN believes that the core function of a RHIO and the NHIN is to act as a means to electronically securely exchange standardized information for low cost. RHIOs and the NHIN may elect to perform additional services but being the ‘post office’ is the core sustainable commodity offered by RHIOs and the NHIN. We have reviewed the functional categories and find it difficult to allocate all of them because some of the labels are unclear. For example: does ‘credentialing’ mean that the RHIO or NHIN actually do credentialing or just deliver credentialing information? The functional categories from the June NHIN forum would be distributed between these four categories as follows:

**(1) Message formats and codes**

- Data content – choice of messages/services (lab results? Credentialing? Claims? Discharge summaries?)
- Data source – depends upon what kinds of messages/services are offered

**(2) Communications**

- Data routing
- Audit and logging (this would also contribute to the privacy and security issues)
- Authentication (this would also contribute to the privacy and security issues)
- Authorization (this would also contribute to the privacy and security issues)

- Data transmission (push or pull depending upon the message)

In addition UHIN would add as important functions:

- Encryption
- Performance monitoring
- Security monitoring

**(3) Privacy and Security including authentication of endpoints and users**

- Confidentiality
- Security monitoring
- Encryption
- Audit and logging
- Authentication
- Authorization

**(4) A RHIO-to-RHIO business associate agreement/contract.**

**(5) Variable:** topics that will vary depending upon the type(s) of services offered by the various RHIOs. Not all RHIOs will be identical. Some RHIOs will be able to offer centralized patient data bases and some will not; some will be able to offer record locator service and some will not. What all RHIOs do share is the capacity to electronically exchange standardized messages in a non-profit community-centric business environment.

- Credentialing: Does this refer to shipping credentialing data or to actually doing credentialing? UHIN does not ‘do’ credentialing but we ship credentialing data. Some RHIOs may offer this exchange service and others may not.
- Data access and update:
- Data filtering
- Data mapping/translation
- Data quality/data integrity
- Data rendering
- Data retrieval (pull)
- Data usage
- Identity/information correlation
- Persistent data storage
- Record location
- Transient data

**4. Please reference the draft NHIN discussion template developed by the NCVHS Ad hoc Workgroup on the NHIN to establish the context of your suggestions [see attached powerpoint].**

**5. The Health Information Technology Standards Panel (HITSP) is identifying standards for the NHIN and for specific use cases. In addition to HITSP’s**

**considerations, are there other standards that you would like to bring forward for consideration to support the functional requirements you are recommending?**

### **HITSP identified SDO Message Standards that could be used by a RHIO**

#### **HL7**

- CDA Release 2
- V2.x MDM document messages
- V2.5 MDM document messages
- V2.5 ADT messages
- V2.5 Lab messages
- V2.6 Lab messages
- V2.5 patient management messages
- Continuity of Care Document (CCD)

#### **NCPDP**

- NCPDP SCRIPT v8.1
- NCPDP Telecommunication Standard

#### **X12**

- 270/271
- 837/835
- 275
- 277
- 824

#### **ASTM**

- CCR

#### **Standards which are Missing**

- NCPDP Formulary and Benefit
- X12 277 Front-end Claim Acknowledgment
- X12 Error handling (TA1, 997, 999, etc)
- HL7 Error handling messages
- NCPDP Error handling messages
- Other XML messages (e.g. Provider Enrollment/credentialing data exchange)
- HL7 Message documents (i.e. Discharge Summary, History & Physical, OP note, progress note, etc).
- Rendered images (pdf, tif, etc)
- Password standards
- User authentication standards
- Encryption standards

#### **Notes**

1. May need to use lower HL7 version(s) (e.g. 2.2, 2.3, 2.4) in order for broad adoption to occur.

2. HL7 Version 3 has not been used by a sufficient number of entities to adopt as a national standard.
3. UHIN suggests, to the greatest extent possible, that message be used for multiple purposes. E.g., the message standard for a lab result should be useable as a clinical report, a claim attachment and a public health report.