



**HIT Standards Committee**  
**Vendor Discussion on Standards for Routing Health Information Data & Reaction from HITSC**  
**Members, Arien Malec, NHIN Direct, and Doug Fridsma, ONC**

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**Presentation by Surescripts, LLC**

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Surescripts created the first and largest nationwide health information network with e-prescribing as its anchor service. We connect and enable pharmacies, payers, pharmacy benefit managers (PBMs), physicians, hospitals, health information exchanges and health technology firms to easily and securely move health information. By securely and reliably providing that information during emergencies and routine care, Surescripts is committed to saving lives, improving efficiency and reducing the cost of health care for all. Our success is the result of the vision and support of the nation's pharmacies and PBMs and the contributions that have come from a diverse set of constituents and ideas.

By way of background, Surescripts is privately owned: the National Community Pharmacists Association (NCPA) and the National Association of Chain Drug Stores (NACDS) own 50 percent with the balance split evenly between CVS Caremark, Express Scripts and Medco Health Solutions. Surescripts is headquartered in Arlington, VA with major technology operations in St. Paul, MN.

I want to thank the Health IT Standards Committee for the opportunity to comment on our experience governing a network that connects over 200,000 prescribers, over 55,000 community pharmacies, six of the largest mail order pharmacies, and over 25 of the nation's largest PBMs for the purpose of exchanging prescription-related information in the ambulatory setting. Today, Surescripts provides access to prescription benefit and history information for more than 65 percent of patients in the United States on behalf of payers and pharmacies and approximately 90 percent of community pharmacies in the United States were connected for prescription routing. More than 250 technology vendors' systems have been certified to connect to and access the Surescripts network. (For a specific listing of vendors and certification status, please visit <http://surescripts.com/connect-to-surescripts.aspx>.)

As creators of the first and only nationwide means of electronically sharing health information, we feel a responsibility to state clearly and plainly who we are and what we believe. We do this by publicly stating our principles. Surescripts' principles both outline our philosophy as an organization and enable connections between the nation's health care participants.

- **Security and Privacy.** We constantly review and update all procedures and technology to guarantee the integrity of our system and to ensure everyone's privacy is protected. More information can be found at <http://surescripts.com/about-us/commitment-to-privacy.aspx>.
- **Neutrality.** Surescripts implements and consistently applies objective standards for certification and implementation of technology systems that promote an open, neutral network and interoperability.

- **Choice.** Surescripts' network is designed to support patient choice of pharmacy and prescriber choice of drug therapy. Commercial messaging is not allowed on the network. In addition, our choice to focus on the certification of e-prescribing and EHR software — and not its development or sale — helps ensure a wide choice of options for providers.
- **Transparency.** Our policies are made public to current and potential network participants through extensive participation in government and industry workgroups and through Surescripts own workshops and documentation.
- **Collaboration.** Surescripts works throughout the healthcare community to develop educational programs, quality initiatives, and certification standards, and to promote dialogue to support the future growth of e-prescribing and health information exchange.
- **Quality.** Making health information electronic is not enough – it must be accurate. Through our quality program, we measure, analyze and take action to ensure the accuracy and reliability of prescription information, from the time the prescription is prepared to the time it is dispensed.

### **Expanding the Network for Clinical Interoperability**

At the end of October, Surescripts recently announced that it will expand its nationwide e-prescribing network to support and enable the electronic exchange of all types of clinical information, including up-to-date summaries of patients' recent visits with their health care providers.

This network will enable and support several forms of connectivity. First, an existing network, like an HIE, IDN or EHR vendor-sponsored network can connect to the Surescripts network, where the Surescripts network will act as a backbone between networks. Second, a single vendor or single IDN or hospital or clinic can connect to the Surescripts network, either directly to the network API or by using Surescripts tools. Third, for a physician who does not have an EHR, we will provide co-branded portals for simple connectivity. Fourth, a participant on the network will be able to send an email to any healthcare provider alerting them that a message has been sent by a colleague which they can retrieve from a secure portal after passing an identity proofing validation.

This network allows existing regional or technology-centered networks, and individual practices and providers, to benefit from a shared network to which they can connect once, and be able to communicate with all other participants on the network, and use shared resources like security, directories and certification and support.

### **How Surescripts enables point to point connectivity**

The Surescripts network provides point to point connectivity between any e-prescriber and any pharmacy that the patient prefers. However, the Surescripts network is not a pure point to point network in the same sense that the internet is a flat point to point network.

In the e-prescribing channel of the network there are shared central resources: a physician and pharmacy directory, a master patient index, a routing engine, contract management, validation,

translation, audit trail, connectivity methods, and reporting. Formulary files are propagated and stored locally for look-up efficiency. There are specialized nodes on the network, like a PBM which holds prescription history and benefit information. There are also aggregation nodes on the network. Most EHR vendors manage e-prescribing hubs for their EHR products, and Surescripts connects to those hubs rather than each instance of an EHR in every office.

The network also establishes requirements that assure quality. There are certification and implementation processes that assure that each participant on the network meets transaction, operational, security, and privacy standards. There are quality and audit programs that enforce high quality standards and adherence to application and transaction requirements.

Similar to the prescribing channel of the Surescripts network, in the clinical interoperability channel of the network there are also shared resources: a physician directory, a routing engine, contract management, validation, translation, audit trail, connectivity methods, and reporting. The Surescripts Network will allow a network to connect its members to all other participants on the network.

In response to the specific questions from the Standards Committee:

- Our means for authenticating end points (and managing end-point identities and certificates)
  - Surescripts is in the process of upgrading its network from server side TLS authentication to mutual TLS authentication for all nodes on its network. Surescripts requires certified application vendors and their customers to ensure that prescribers are who they say they are and duly authorized to issue prescriptions in their jurisdiction.
- Encryption solution
  - Surescripts supports the use of AES 256 for data at rest.
  - MPLS is used for private lines connecting large network participants.
  - Surescripts Internet connectivity supports the use of TLS 1.0.
- Means of assuring that data are not modified in transit
  - Surescripts supports the use of TLS 1.0 for data in transit. Surescripts privacy policies, security controls, and QA process assure reliable and high integrity delivery of transactions. There are scenarios when translation is required (e.g., standard version transition).
- Messaging protocol (e.g., SMTP, SOAP, REST)
  - Surescripts RESTful approach uses HTTPS and SFTP protocols to message information with network participants. SOAP-based connectivity is available but not in use by any participant. SMTP/SMIME connectivity will be available to support Direct Project connectivity.
- Means of confirming the receipt of messages
  - NCPDP SCRIPT standard includes STATUS and Error transactions to verify receipt of prescriptions. Real-time eligibility transactions are synchronous transactions with response

- including aggregation of multiple coverage in less than two seconds. Medication history is provided synchronously and asynchronously with response always provided. Clinical messages provide events when transactions are received, viewed, and acted on by recipient.
- Surescripts maintains an audit trail of all messages sent over the Surescripts network.
  - Surescripts provides an administrative console that authenticated support staff of network participants can use confirm transaction routing and receipt.

You also asked us to comment on factors which affected our decision to implement P2P messaging as we did, what are essential elements for P2P exchange, and whether we exchange using the NHIN Connect Gateway.

- What factors affected your decision to implement P2P messaging as you did? Would you make the same decision if you were designing it today?

We designed P2P messaging for e-prescribing around its business requirements. This required development and operation of several backbone elements rather than pure point to point protocols. Those backbone elements include: a master patient index to verify the identity of a patient to support insurance look-up and medication history queries; and indexes of retail and mail order pharmacies which designate the particular record type that the pharmacy can receive. In addition, we use a RESTful architecture in the e-prescribing network and will use the same architecture for the backbone of our clinical network. A RESTful implementation lets us manage central shared resources, as well as bidirectional, synchronous communication required for e-prescribing.

We intend to connect our network to any qualified network that meets the conditions for participation for participation in our network including, but not limited to, openness, neutrality, privacy, and security and wants to connect, including Direct Project networks and NHIN Connect networks. Surescripts will support baseline SMTP/SMIME for its co-branded portal and to connect with HISPs when the reference implementation is completed and when pilot HISPs are prepared to connect. Our IHE interconnection tools will allow us to connect to XDS.b based systems as well as manage XDM payloads. We will also leverage existing RESTful connectivity to EHR vendors with the goal of providing a single connection point with multiple channels – e-prescribing and clinical interoperability.

- What do you consider essential requirements for simple, P2P exchanges between two provider organizations?

The essential requirements for simple P2P exchange depend on the business requirements, specifically the characteristics of the provider organizations and the types of messages to be exchanged. For example, if two organizations only want to exchange bilaterally, and if the organizations manage their own internal message delivery to specific individuals, and if the clinical business requirements can be supported by a discrete asynchronous messages, then the requirements are minimal. Protocols like FTP for batch processing, or SMTP for message push, all with appropriate security, might be sufficient.

If the requirements are more complex, for example exchange between three or more parties, more complex message delivery, synchronous bidirectional communication requirements, addition of

unknown parties over time, query and reply from some index or data store, and so on, more complex technology is required.

In this more complex scenario, one key is the presence of a trust model. Trust can have several meanings. Trust can mean security (both the process for allowing a person to obtain credentials, and the right to use credentials to send and receive messages). Trust can mean integrity, in the sense that each party on the network is known to comply with network requirements and is able to deliver a message. Trust can mean capability certification, meaning that it is possible to know what kinds of messages the receiver is capable of consuming. Implementing trust fabrics, and managing shared assets like directories, may require a network to operate with backbone elements in addition to or instead of pure point to point or peer to peer exchange.

- Do you exchange information with any federal organizations using the NHIN CONNECT gateway? If so, how is that accomplished?

To date we have not, since the e-prescribing network has not extended to federal agencies like the VA and DOD. As part of the IHE Integration work, in the future we will support the NHIN Connect Architecture and NHIN Connect payloads.