

Business requirements: Clinicians

Response from Intermountain Healthcare, Salt Lake City, Utah

- 1. Do you currently use external provider directories for health information exchange? What are they and how do you use them?**

Intermountain Healthcare's Master Service Provider Directory

Intermountain Healthcare maintains an "external Master provider directory" for many uses including health information exchange. The Master provider directory and the associated provider services are the authoritative source for several "slave" provider directories. For efficiencies of scale, Intermountain Healthcare is looking for sustainable means to transition much functionality of the external provider directory back into the community, state, or region. One unsolved barrier with regard to a regional directory is the issue of secure and validated exchange of provider credentials.

Intermountain Healthcare is an integrated delivery network consisting of 23 hospitals, 150 ambulatory clinics, a 750 member physician group, an affiliated insurance plan, and 20 community clinics for underserved groups and populations. For 10 years, Intermountain has maintained an "external" Master Service Provider Registry (MSPR) that uniquely identifies individual providers as well as provider organizations and manages their demographics and affiliations.

The purpose of MSPR is to provide automated services for provider ID validation and for publishing updated demographics to downstream, consuming data systems. Included in the downstream consuming systems are the enterprise LDAP, the information systems applications access management system, clinical EHR applications, the order management systems, e-prescription, departmental systems such as laboratory, pharmacy and radiology, administrative systems such as patient accounting and the multiple billing systems, the private network Health Information Exchange, and the community network Health Information Exchange. All of these applications require the authoritative, disambiguated provider ID. The suite of services available through MSPR includes ADD, UPDATE, MERGE, and LOGICAL DELETE. Not all applications leverage the automated services; some applications such as the community HIE require manual synchronization. To date, MSPR manages nearly 90,000 individual providers and provider organizations. Due to the associations with the clinical record, all validated providers are maintained in perpetuity through a life cycle of active/inactive states.

Enterprise sources for MSPR include the credentialing system, the HR system, the payer provider management system, and the master volunteer and student registries. All data sources are automated unidirectional interfaces—all corrections are initiated at the source system rather than at the MSPR. A trust

framework is operational, but all internal sources are currently set to the highest trust level. Intermountain does receive external clinical data with provider IDs through HIE interfaces. Externally supplied provider IDs which do not match directly with MSPR (such as any received through HIE interfaces today) are reconciled through a work-list process rather than through the trust framework logic. We envision, however, future inbound HIE transactions to be dependent on the trust framework.

The scope of individual providers is extensive and includes all privileged physicians (employed, affiliated, as well as non-affiliated), all nursing and auxiliary personnel both employed and outsourced, all employees, and all provisioned students and volunteers. The scope of provider organizations is not comprehensive and is maintained only for the convenience of downstream consuming applications. Information System access for non-affiliated providers is governed through a Service Level Agreement and supports electronic ordering as well as results delivery. Provider affiliation is maintained at the group or organizational level—detailed cross coverage affiliations and relationships are relegated to the various downstream clinical and administrative workflow applications.

The provider services and associated terminology services are proprietary to Intermountain but leverage licensed matching algorithms from QuadraMed Corporation. The provider services are accessible from Intermountain's e-Gate integration gateway and support current HIE interfaces to Utah Health Information Network (UHIN administrative exchange), 4-Medica (Laboratory orders exchange), and NOVO/Medicity (private directing HIE). The NPI is maintained within MSPR and is included with all appropriate outbound messages. Full time staff for managing MSPR requires 1.25 FTEs exclusive of the staffing requirements for the source systems and integration engine.

Provider IDs play a crucial part in the clinical applications facilitating provider-based schedules, patient lists, decision support alerting, and performance analytics. The master provider ID from MSPR facilitates maintenance of the patient to provider relationship as well as the provider to provider and provider to organization relationships. Provider fax number management is being phased out because of legal and compliance risk of inadvertent disclosure.

Other external provider directories.

Many of the enterprise source systems look to external reference sources for provider ID validation; some external directories are semi-automated in our workflow applications.

Credentialing has semi-automated NPI-validation with NPPES and a semi-automated validation with the Utah Division of Occupational and Professional Licensing. The connection to the Office of Attorney General is manual.

Human Resources has semi-automated validation for SSI, and uses a third party agency for semi-automated process for background and DEA checking.

E-Prescription uses a third-party pharmacy directory supported by SureScripts. We have not yet resolved how to manage the issue of credentialing authority for e-prescription of controlled substances.

2. What specific uses would you have for these two types of provider directory services? Would you register with such a service and use them? If not, why not?

a. Yellow pages: An authoritative resource listing clinicians and entities that is used to “look up” providers and point to routing directories

- i. We would use an external reference provider directory in our proactive MSPR validation processes as well as in our internal source validation processes for credentialing, payer panel, and HR.
- ii. We envision that the E-prescription credentialing authority could be an authoritative reference.
- iii. A reference provider directory would not replace the automated ID validation and update publishing services currently performed by MSPR, but would likely reduce the operational costs and improve accuracy.
- iv. The reference provider directory may potentially solve our current validation problem with provider fax number accuracy. Despite our desire to eliminate fax communication for the transmission of directed results, we understand that it is useful for other communication purposes.

b. Routing directory: routing registrar to provide addressing hierarchy/service to enable machine-to-machine routing in the context of health information exchange activities

- i. Intermountain would like to further automate the receipt of inbound clinical data through HIE. An external service that validates the provider ID and issues credential authority would facilitate the current work-list process that requires manual review. The external services would improve timeliness and accuracy of a composite view of clinical data across provider networks.
- ii. The external provider ID validation and credential authority services would be mandatory for inbound composite views that use a passive, listening/subscription mode to accrue composite data and support population analytics.
- iii. The external services would reduce the workload and improve accuracy of our MSPR process but would probably not replace the publishing functionality to downstream consuming systems of provider demographics.
- iv. The external services could potentially support E-prescription credentialing authority.
- v. Alert acknowledgement across provider networks would require service connectivity for provider ID management assuming we could sufficiently solve the cross coverage or organizational associations.
- vi. Some systems may have improved Fax number accuracy if supported by external provider ID services.

- 3. What set of clinicians and entities would need to be included to make this service valuable to you?**
 - a. Would you only need to know how to identify and send messages to the individual clinician, or is a listing of the legal organization (practice, clinic, hospital, etc.) sufficient?
 - i. We would use the external service at the credentialing authority level, not for employees, volunteers and students.
- 4. What information about clinicians and entities needs to go into the provider directory in order to make it useful for you?**
 - a. For example, provider type, specialties, credentials, demographics and service locations.
 - i. Name, demographics, NPI, organization/affiliation, specialty, credentials/credentialing authority, role/privilege set by affiliation
 - ii. Real-time cross coverage affiliation such as group—where to send the acknowledgeable alert.
- 5. What data or information about your organization or your clinicians could be made available to establish directories?**
 - a. Issues to be resolved?
 - i. We have no issue with publishing demographics or organizational affiliations; we currently openly share this information.
 - ii. There may be a potential liability issue with cross-coverage alert acknowledgement if not validated in real-time.
- 6. What “trust framework” is needed for populating, maintaining and using provider directories?**
 - a. Are there specific issues (reliability, trust, privacy, uses of data, others) you would like to make sure are addressed with respect to provider directories
 - i. Timeliness and completeness of updates has to be considered in addition to the source of the data; the rules have to be adaptable within the context of the transaction.
 - ii. Fax number maintenance is in the process of being disabled due to opportunity to proactively prevent disclosure breach
- 7. In what areas could this workgroup provide useful recommendations?**
 - a. Standard formats
 - b. Central disambiguation/matching services
 - c. Central provider validation services
 - d. Credentialing authority formats and services

Questions primarily targeting yellow pages

- 8. What data and level of data accuracy is needed for your use of a yellow pages resource?**
 - a. Is it important that it identify all practice locations for a clinician and all organizations the clinician may be associated with and practice at?

- Completeness would be relative to the sending organization; we would only require the locations and affiliations necessary for the accurate routing of alerts.
 - b. How important is it that it be authoritative and complete, for instance containing all licensed physicians in a state?
 - The more timely, accurate, and complete the more valuable the reference would be. Indicators of timeliness, accuracy and completeness would be very useful. Some non-demographic attributes such as NPI or state provider numbers would need to be authoritative.
 - Complete coverage would always be the responsibility of the consuming organization for students, volunteers, and employees.
 - c. What data elements are critical?
 - Name, demographics, NPI, specialty, credentialing authority
- 9. How do you currently maintain the accuracy of your information in third party directories, such as those maintained by medical boards, health plans, NPPEs and commercial services (lab, pharmacy, etc)?**
- a. We have dedicated staff, 1.25 FTEs, who proactively scrub, and resolve errors.
- 10. What's the best way to motivate providers to keep directory information up to date (e.g., link to licensing, plan participation, health information exchange activities)?**
- a. We require a service level agreement for both directed and non-directed HIE; as a compensatory byproduct, their demographics and specialties become available through our patient portals and public websites.
- 11. What data or information about your organization or clinicians could be made available to establish a directory?**
- a. Issues to be resolved?
 - i. We have no issue with publishing demographics or organizational affiliations; we currently openly share this information.
 - ii. There may be a potential liability issue with cross-coverage alert acknowledgement if not validated in real-time.
 - b. If your organization maintains a provider directory, would you allow it to be accessed by outside parties in a federated structure? If so, what requirements would be necessary?
 - i. For physicians and other credentialed providers we would participate in a federated directory. We prefer the economies of scale in maintaining providers across networks. The information is already available today except for the cross coverage guarantees and the internal IDs, SSNs, etc.
- 12. What do you expect from your EHR system related to provider directories? How do you expect your EHR system would interact with provider directories?**
- a. Full automation and integration
 - b. Update synchronization messages to consuming downstream systems
 - c. Service integration for departmental systems that can connect to a central master without having to maintain a slave copy for the application
 - d. Error management with alert routing
 - e. Inbound HIE provider ID management, de-duplication
 - f. Support automated application access management systems and the central LDAP