

Lessons from Existing Implementations

The presenters on Day 1 described the characteristics, use cases, achievements, challenges, and recommendations of their provider directory implementations. Some of the most important presentation points from statewide implementations, nationwide exchange networks, and health plan initiatives are listed below.

Statewide Provider Directories

Four states – Oregon, Rhode Island, California, and Michigan – presented information on the provider directory implementations or plans in their states. In all four cases, the directories were statewide implementations related to or operated by statewide health information exchange initiatives.

- All four states emphasized the need for governance for their statewide directory initiatives.
- All four states emphasized the directory's support of health information exchange, but some states – perhaps most notably Michigan – built and continue to build upon that single use case to increase value.
- All four states emphasized data quality, but had different approaches to addressing the requirement, from scrubbing the data through centralized processes, to depending upon the quality processes of data contributors, sometimes supported or enforced by policy.
- Participants in [Oregon's](#) current provider directory export provider information in standardized comma-separated value (CSV) flat file format which is scrubbed, consolidated, and exchanged with other participants.
 - Oregon describes the method as an inelegant solution necessary until such time as there exists a widely-adopted standard for interoperable provider directories.
 - Oregon is in the process of developing a statewide directory to replace its current process. The purpose of the new directory will expand upon supporting transitions of care via Direct messaging to also create a directory that will address potential health plan penalties for inaccurate data. However, there remain questions concerning a technical standard, fee structure, and project scope.
 - The initiative is supported in part by recent legislation creating a Common Credentialing Program and allowing for fees associated with creating and maintain the provider directory.
- The goal of a new [Rhode Island](#) directory is to provide patients, doctors, hospitals, health plans, and the State with timely and accurate information about the location and affiliations of providers, whether to select a local doctor, make a referral to a provider in the patient's health plan, to send health information to support transitions of care, to attribute patients to doctors in a health network, or to understand the availability of doctors across the state.
 - Rhode Island plans to manage the provider directory much like its health information exchange, collecting and aggregating data across organizational boundaries to create a single, authoritative source of truth as a longitudinal record of provider information. Rhode Island will identify and acquire data feeds for the provider directory, create and maintain consistent reference data and master data definitions, analyze data for quality and reconcile issues, and publish relevant data to appropriate users.
- [California](#) created and operates a federated provider directory. It stores no data at the state level, but produces a logical statewide directory by consolidating information from other data sources in real time in response to a request. The primary use case is to support electronic exchange of health information for transitions of care.
 - California describes the provider directory as a component of the trust framework for statewide health information exchange. It has published a set of policies for the use of provider directory information and contribution of information to the federated structure, as well as a minimum data set for directory contributors based on the HPD data model.
 - Use of California's provider directory is decreasing as a result of dwindling vendor support for HPD; the directory had six participants in 2015 but has only two today. It anticipates a transition to a new interoperability standard as soon as 2016, but to maintain the federated structure.
 - See the section on [Technical Standards](#) for more on California's experience with HPD.
- [Michigan](#) has created a centralized provider directory with distributed management based on the Salesforce platform.
 - Michigan emphasizes support of valuable use cases as the core to achieving sustainability and high data quality. It has interfaced to NPPES through the pilot for NPPES Modernization, supports the HPD data model, has deployed an extension to the FHIR framework for RESTful APIs, and has incorporated support for provider-patient associations, care teams, and alerts.
 - See the section on [Technical Standards](#) for more on Michigan's support for multiple provider directory standard APIs.

Health Plans

Blue Shield of California and CAQH presented information on provider directory created by and for health plans and insurers. The primary use case is to facilitate consumer access to lists of and information on providers that are within a specified health plan.

- Both presenters emphasized the need for data quality, and potential penalties associated with inaccurate data.
- Both presenters cited potential penalties for inaccurate provider information, which is complicated uncoordinated and confusing federal and state regulations and reporting requirements for health plans concerning the accuracy of provider directories.
- Both presenters emphasized the consumer as the primary user of provider information, with health plans having the requirement to collect and maintain accurate data from providers.
- [Blue Shield of California](#) reported on a statewide pilot project in California that coordinates the collection of provider information for nine separate health plans. Provider data is collected through a single process for all plans, vetted for accuracy by the vendor, and made available to all the participating plans, as well as providers – the latter without cost.
 - The directory utilizes a single utility across all plans to simplify and clarify the process for submitting required information for the provider, and to produce a single source of truth for plans. The database includes metadata at the specific data attribute level that describes the means by which the data was confirmed and when.
- [CAQH](#) manages a vetted database of provider information as a product offered to health plans and insurers. Its primary purpose is to address and reduce the pain points for health plans in managing provider data. CAQH separates provider data into three tiers:

1. Level 1 Core data is used in critical, daily business transactions. Failure can cause regulatory non-compliance, significant operational inefficiency and/or member abrasion.
2. Level 2 Important data supports critical point-in-time business functions but not necessarily everyday use (e.g., contracting, credentialing).
3. Level 3 Additional data is not used in health plan operations, but may have been collected historically for populating state-mandated credentialing forms.

Nationwide Exchange Networks

The Sequoia Project and DirectTrust presented on their provider directory initiatives. For both, the primary use case was the discovery of service information in support of health information exchange.

- [The Sequoia Project](#) manages two trust networks: eHealth Exchange and Carequality. Both have requirements to discover electronic service information for (primarily) provider organizations. Both have a need for interoperable directories.
 - eHealth Exchange has operated a Service Registry as an organizational provider directory for service endpoints since its inception. However, the standard does not meet current needs and Sequoia anticipates a transition to a different standard and migration to a federated structure perhaps in 2017.
 - Carequality has no directory today, but has launched a directory initiative based on flat file exchange for 2016 until a suitable standard, most likely one based on FHIR, emerges.
 - See the section on Technical Standards for more on The Sequoia Project's current and future plans.
- [DirectTrust](#) manages a directory service which aggregates submissions from its network members using a standardized CSV flat file format into a single file that is redistributed to participating members. The model is a "white pages" for Direct addresses issued by network participants to individual or organizational providers.
 - DirectTrust does not vet any of the submitted data for accuracy beyond conformance to the file format standard and completeness. Instead it relies on the fact that it is in the best interest of its network members to maintain and submit accurate information.
 - DirectTrust noted that no one wants to pay for provider directories.

See Appendix F, [Provider Directory Workshop Materials](#), for more detail on the presented material and Workshop discussions, and Appendix G, [Provider Directory Workshop Demonstration](#), for software materials for the demonstration presented on Day 1.

Summary

Presenters agreed that provider directories are critical to many stakeholders. However, not all stakeholders value the same use cases equally, and not all stakeholders define provider directories the same way. Different stakeholders provide different data to serve different constituents using different architectures and different business processes.

Presenters described different architectures, from centralized directories managed centrally, centralized directories with distributed management, federated directories, and directories that aggregated information into a record.

Presenters also agreed that data quality is important, especially for critical data attributes. However, not all stakeholders and use cases consider the same data attributes critical. Despite these differences, there exists great opportunities to reduce effort and increase efficiency and quality by coordinating initiatives. Presenters described many models for managing data quality, from centralized data scrubbing processes, distributed processes for a centralized repository, and reliance on the processes of directory participants perhaps reinforced by policy. Health plans and insurers, in particular, have regulator mandates and reporting requirements concerning data quality.

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