



AIRA

AMERICAN IMMUNIZATION
REGISTRY ASSOCIATION

Administration and Coordination

IIS Interjurisdictional Exchange

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Background

Interjurisdictional data exchange among immunization information systems (IIS) is a priority for the American Immunization Registry Association (AIRA) and the immunization community. The primary goal of data exchange among IIS is to ensure that complete and accurate immunization records are available at the point of care for all individuals, including individuals who move or receive care across state or other jurisdictional borders. Data exchange allows immunization providers to work more efficiently and supports public health's mission to protect the public from vaccine-preventable diseases through timely and appropriate vaccination. This includes individuals of all ages, regardless of their place of residence, and reduces instances of overvaccination due to the lack of vaccination records. Thus, AIRA is exploring how to more fully support the IIS community and AIRA members to efficiently and sustainably exchange immunization information across jurisdictional lines.

Since 2014, AIRA has worked with the Association of State and Territorial Health Officials (ASTHO) and the Network for Public Health Law (Network) to support interjurisdictional exchange among six initial pilot states that have executed a Public Health Interjurisdictional IIS Data Sharing Memorandum of Understanding (MOU). These initial pilot states include Colorado, Idaho, Michigan, Minnesota, North Dakota, and Wisconsin. At the inception of this project in 2014, families from surrounding states were moving to North Dakota for work in the oil fields. Relocating families lacked complete vaccination histories for their children, making it difficult for health care providers, public health departments, and schools to determine vaccination status. Due to the state- or jurisdiction-based scope of IIS, a lack of complete vaccination histories at the point of care is a common problem in all jurisdictions when individuals move or when they receive care in states that border their state of residence. As of April 10, 2017, all six initial states had signed and executed the MOU. Participating states are now developing processes to transfer batch and real-time messages of immunization information for individuals in neighboring states. They are also implementing options for states to make real-time queries to obtain immunization information about their residents.

In 2018, the Centers for Disease Control and Prevention (CDC) added interjurisdictional exchange to the updated [IIS Functional Standards V4.0](#), signaling an increased emphasis and prioritization of exchange:

22.0 The IIS reliably exchanges information electronically with IISs in other jurisdictions consistent with the current CDC-endorsed HL7 Implementation Guide.

22.1 The IIS has memoranda of understanding, interagency agreements, or other documented authorization to request and receive immunization information from other IISs.

22.2 The IIS can query another IIS for an immunization history.

22.3 The IIS sends patient demographic and vaccination records to IISs in other jurisdictions for patients who reside in those jurisdictions.

These references are consistent in the most recent version of the [Functional Standards V4.1](#) as well.

In 2019, AIRA contracted with The Network to review resources, policy considerations, and content of the current MOU as well as other agreements that enable interjurisdictional exchange of public health data. AIRA asked The Network to make recommendations for improving interjurisdictional exchange through an infrastructure that includes AIRA serving as an administrator and coordinating organization. AIRA will support and encourage the development, execution, and maintenance of data sharing agreements and other activities to facilitate interjurisdictional exchange among IIS. These efforts could include any agreements or activities that support interjurisdictional exchange among the IIS community. This includes The Network providing recommendations to improve the current MOU as well as the potential for jurisdictions participating in the MOU to connect and transfer immunization information to one another through health information exchanges (HIE). Currently, under the MOU, each participating state determines how best to operationalize the exchange, including defining the frequency, format, and method of transport and/or access.

In addition, there are additional independent efforts to address the technical aspects of exchange, including several projects under the Immunization Gateway, an effort supported by Health and Human Services Office of the Chief Technology Officer (HHS CTO), and engaging partners through the Office of the National Coordinator (ONC) and others. More information about these efforts is discussed later in this document [here](#). In the creation of this document, AIRA's goal is not to hinder these or any other independent efforts to further IIS interjurisdictional exchange but would like to be aware of them and provide a central point of visibility whenever possible.

Purpose

This document serves to draw all current interjurisdictional exchange activities together to define a process and goals for administration and coordination among AIRA's membership. This initial version defines the background and next steps for the near future in order to set a foundation that can be built on as new activities arise to meet community needs. As community needs evolve, this could also include growing or discontinuing current activities. The primary focus of this document is to provide background information, a better-defined strategy to support current and future efforts, and to support the already established Interjurisdictional Community of Practice (CoP) co-facilitated by AIRA and ASTHO. This document also includes administration and coordination of current activities to update the MOU and to determine next steps, if any, related to IIS-to-IIS exchange through state level HIEs and centralized hub/gateway models. The primary focus of these activities will be to ensure there is a forum for sharing various perspectives and working together as a

community to address common IIS interjurisdictional data exchange barriers and solutions. These efforts will include policy and legal discussions as well as solutions to help address technical issues as they relate to increasing interjurisdictional data exchange within the IIS community.

Scenarios

The CoP, in collaboration with several partner organizations, developed five overarching scenarios that outline the need for interjurisdictional immunization exchange. These scenarios represent individuals throughout the lifespan, and could be achieved through a number of different methods of data exchange:

1. An individual relocates their residence from Jurisdiction A to Jurisdiction B. For this scenario, there is a one-time need for data to be transferred to the jurisdiction where the patient newly resides. To have a complete vaccination record, Jurisdiction B will need to retrieve data from Jurisdiction A.
2. An individual crosses border from home Jurisdiction A to Jurisdiction B for care. In this scenario, there is an on-going need for consolidated data to be queried by Jurisdiction B at the point of care, and for data to be retrieved by or pushed to Jurisdiction A where the individual resides.
3. An individual who lives in Jurisdiction A, gets vaccinated while traveling in Jurisdiction B. Ideally, Jurisdiction B would query Jurisdiction A at the point of care to review the individual's current immunization record prior to vaccination. Like the prior scenario, a one-time need for data to be transferred to Jurisdiction A is needed. In addition to the one-time data need, this scenario also requires that Jurisdiction A push back data to Jurisdiction B to maintain a complete immunization history for the individual residing in their jurisdiction.
4. An individual resides in – and receives vaccinations in – multiple jurisdictions. These individuals might include, for example, snowbirds, migrant agricultural workers, or college students. This is similar to the second scenario, but borders are not necessarily contiguous and the need for exchange will likely involve multiple jurisdictions' IISs.
5. Immunization information needs to be accessed by other jurisdictions, including their health providers, for individuals who are displaced from their home jurisdictions by an emergency or disaster.

Administration and Coordination

Interjurisdictional exchange and its activities will be supported via the CoP, which operates under the Joint Development and Implementation (JDI) Advisory Workgroup. The JDI Advisory Workgroup is overseen by the AIRA Board of Directors.

Joint Development and Implementation (JDI) Advisory Workgroup

The overarching JDI Advisory Workgroup integrates representatives from each of the major systems for use across the IIS community and develops project-specific administration to

support collaborative efforts. This full group is also a forum for discussing broad centralized service opportunities for the community.

Interjurisdictional exchange activities will follow the same processes as other activities as part of the JDI Advisory Workgroup. AIRA will provide support, project management, and tools for sharing and disseminating information among the JDI Advisory Workgroup and the CoP. However, AIRA also recognizes the essential collaboration that will continue to be needed with ASTHO, who will continue to co-facilitate the CoP.

The Role of the Interjurisdictional Community of Practice

To continue the 2014 interjurisdictional work mentioned above, AIRA and ASTHO, in coordination with key partners, developed the CoP in 2015 to address barriers surrounding IIS-to-IIS data sharing. The goal was to have representatives from each interested jurisdiction participate on the CoP forum. The purpose for this forum includes, but is not limited to, continuing the work that was started in Minnesota at the ASTHO-sponsored IIS Interstate Data Sharing Meeting in August 2014. The five states targeted for team participation in this meeting were Colorado, Idaho, Michigan, Minnesota, and North Dakota. New York State, Oregon, Washington and Wisconsin also participated to share their interstate data exchange experiences. These initial states were invited to attend the CoP and over time, additional jurisdictions that request to participate are now also invited.

Purpose: The CoP is a forum for sharing various perspectives and working together as a community to address common IIS interjurisdictional data exchange barriers and solutions. The primary focus of the group targets policy and legal issues, but technical barriers and solutions will also be addressed within the scope of the CoP.

Scope of Work: To date, the CoP has primarily been a venue for sharing lessons learned and problem-solving challenges related to interjurisdictional exchange. CoP participants also serve as advisors for AIRA and IIS community activities related to exchange. Some outputs have included an updated MOU, a compiled list of all signed MOUs accessed through a member's only features on the AIRA website, and several national presentations educating on and promoting interjurisdictional exchange to the National Vaccine Advisory Committee (NVAC), the AIRA National Meeting, and other audiences. As it becomes more established, the actual products and deliverables to emerge out of the CoP could include:

- Continuing the exploration of a uniform or model law to standardize and support interjurisdictional data exchange, and
- Developing greater coordination and consistency for operational issues surrounding IIS-to-IIS exchange.

Participation: Participation in the CoP is voluntary.

The CoP is composed of:

- A representative from each individual jurisdiction included in the initial MOU pilot that will help to guide the CoP,

- Representatives from additional IIS programs, immunization programs, IIS vendors and implementers, and other members of the IIS community,
- Representatives from partner organizations, including but not limited to HHS Office of the Chief Technology Officer, The Network, and the HHS Office of Infectious Disease and HIV/AIDS Policy (formerly the National Vaccine Program Office, or NVPO), and
- Two facilitators, one from ASTHO and one from AIRA. Facilitators will coordinate, plan, and facilitate the meetings.

Participation is ongoing and participants may remove themselves from the CoP at any time. The AIRA Executive Director or the facilitators reserve the right to remove individuals if they feel it is in the best interest of the workgroup.

Oversight: This CoP operates under the general oversight of AIRA's JDI Advisory Workgroup. See [Administration and Coordination](#) section above for more information.

Method of Business: The CoP meets monthly with additional ad hoc meetings held as deemed necessary.

Any CoP member or AIRA Member may request an issue be placed on the agenda, although the facilitators will be responsible for determining that the request is within the scope of duties that have been assigned. The facilitators establish the agenda for meetings.

The participants are encouraged to pilot the implementation of products that are developed (e.g., template MOU agreement) and work to achieve other goals as part of IIS interjurisdictional data exchange implementation.

The CoP works closely with the AIRA's JDI Advisory Workgroup and AIRA Standards team. The AIRA Standards team is comprised of individuals with programmatic, policy, and technical expertise who provide technical assistance and other IIS support and training to help IIS better align with national standards. AIRA and its sub-committees can request issues be placed on the CoP agenda.

AIRA will provide administrative assistance, a forum for meetings to occur, and a meeting scribe to track decisions/action items. Meetings will also be recorded. The recordings will be available for CoP participants to serve as a record of reference for any missed meetings. Meeting summaries may also be shared with the AIRA Board.

AIRA will also provide the following services:

- Retain a current list of CoP participants,
- As information is available, retain a current list of executed data exchange agreements and partners,
- Retain any original signed agreements pertaining to an MOU or other data exchange agreements,
- Make signed copies centrally available, and provide signed copies for data exchange partners if needed,

- Receive required notices related to the agreement from data exchange, such as written notices about changes in MOU signatory's state law, regulation, or policy that impacts the agreement or exchange partner's rescission or modification of its participation, and
- Provide notices to data exchange partners related to terms of the agreement, including changes to these terms.

Decision Making: Decisions will be made on clearly stated motions presented by a participant. Every effort will be taken to attain consensus among participants when decisions must be made. However, if the team cannot reach consensus on an item, then a simple majority vote will be held to resolve the issue.

Participation and Costs to Exchange Data

Participation in all interjurisdictional exchange activities is voluntary from IIS/Immunization Programs and partner organizations alike. Participation can occur in several different ways, including:

- Regular attendance at either the monthly JDI Advisory Workgroup or CoP meetings,
- Implementation of a signed MOU that may include jurisdiction level HIEs or hub/gateway models, and
- Expertise or consultation to decrease data exchange barriers for any interjurisdictional project or activity.

AIRA will not charge fees for any of the support services related to interjurisdictional exchange or the CoP. AIRA, the JDI Advisory Workgroup, the CoP, and ASTHO expenses will be limited to staff time for helping IIS move towards interoperability. This may include, but is not limited to, developing and vetting an interjurisdictional agreement among membership, coordinating efforts to execute an agreement, and technical, policy and legal subject matter expertise to decrease barriers. IIS programs may incur internal costs if technical modifications are necessary to operationalize exchange.

Current Activities

There are several activities that are in different stages of development that are incorporated in the interjurisdictional exchange work identified in this document. The CoP will continue to be facilitated by AIRA and ASTHO, as a forum for sharing various perspectives and working together as a community to address common IIS interjurisdictional data exchange barriers and solutions.

Future CoP work should explore a formal workplan with goals, objectives, activities and deliverables for the CoP.

Additional activities can be found in appendices A-D. As community needs or gaps arise, it is expected that activities and/or projects will change.

Future Work

As AIRA formalizes its supporting role in providing administration and coordination for interjurisdictional exchange, it will continue to explore opportunities to accelerate exchange efforts and to make transparent those efforts that are already underway.

Additional work is also needed to craft a nationwide strategy for interjurisdictional exchange that extends beyond support and information sharing. A clear vision and strategy should be informed by IIS and Immunization Programs, CDC partners, IIS vendors, HHS partners, and other interested stakeholders that wish to collaborate with AIRA on growing and sustaining cross-jurisdictional exchange.

Appendix A – Multijurisdictional Memorandum of Understanding for IIS Interjurisdictional Exchange

Background: The initial version of the MOU was drafted in collaboration with ASTHO, AIRA and immunization program staff and attorneys for the six original states, as noted above. Additionally, research was conducted to review existing resources that included several agreements from the National Association for Public Health Statistics and Information Systems (NAPHSIS) and the North American Association of Central Cancer Registries (NAACCR), the IIS Model Interstate Immunization Information Sharing Statute documents, the IIS exchange agreement between Washington state and Oregon health departments, a draft IIS exchange agreement among New York state, New York City, New Jersey and Pennsylvania health departments, and several more general documents concerning exchange of data by governmental agencies.

The initial MOU was completed on June 23, 2015 and the first of the six states executed it on August 21, 2015. The MOU was subsequently revised, effective March 7, 2016. As of April 10, 2017, all six states had executed the 2015 version. Five of these states subsequently executed the 2016 revised MOU. Additionally, the MOU is being used as the model agreement for jurisdictions participating in the HHS CTO's Public Health Immunization Gateway Projects and has been executed by several states participating in the IZ Gateway IIS to IIS data exchange.

Purpose: Ultimately, AIRA and the IIS community hope to decrease data exchange barriers by facilitating policy and legal agreements between jurisdictions. This MOU supports public health interjurisdictional IIS data sharing. An IIS helps ensure that complete and accurate immunization records are available at the point of care for all individuals, including individuals who move or receive care across state or other jurisdictional borders. Data exchange allows immunization providers to work more efficiently and supports public health's mission to protect the public from vaccine-preventable diseases through timely and appropriate vaccination of individuals of all ages, regardless of their place of residence, and reduces instances of overvaccination due to the lack of vaccination records.

Challenges: After the MOU was completed and signed, one major challenge that arose was the need to amend the agreement to include language regarding other agreements that may have already been in place prior to the new MOU being signed. Language was added, but this posed a problem with version control. All of the states that signed the original MOU did not subsequently sign the updated (2016) version. Another major challenge that arose was complying with the requirements of the sending jurisdictions. While the MOU contemplates that the receiving jurisdiction will use, disclose and protect information consistent with its own law, it recognizes that exceptions might be necessary. As the MOU is expanded to include more states, challenges from variation in state law will be compounded. Variation in law creates logistical challenges in implementing the MOU. Before accepting immunization information into its IIS from another state, each state

would need to examine the sending state's restrictions to determine whether it is able to comply with them.

Next Steps: Challenges found when implementing the initial MOU need to be considered before expanding the MOU to include other states. AIRA contracted with The Network to address these issues and has an updated (2019) template version of the MOU published and available [here](#). The updated version addresses the following challenges from the previous version:

- AIRA support for execution, maintenance and implementation of MOU as the administrator
- Affirm authority and clarify data sharing
- Streamline execution and amendment of MOU
- Address data privacy, confidentiality, and security
- Minimize while recognizing impact of variation in state law on data sharing, data use and disclosure, and providing clarification by eliminating appendices

Signed versions currently operationalized across 15 jurisdictions can be found on the [members-only section of the AIRA website](#). Future work may explore a more seamless process for signing and submitting multijurisdictional MOUs.

Appendix B – Jurisdictional Level Health Information Exchanges

Background: AIRA contracted with The Network to review the current MOU and other models to facilitate interjurisdictional exchange of public health data and provide recommendations to improve the current structure. In particular, AIRA is exploring the potential for jurisdictions participating in the MOU to connect and transfer immunization information to one another through a Health Information Exchange, or HIE. HIE is sometimes used to refer to the electronic movement of health-related information among organizations. HIE is also used to refer to the organization or system that facilitates this exchange; for the purposes of this section, HIE will be referred to as an organization or system. HIEs allow public health agencies, health care providers, and patients to appropriately access and securely share a patient's medical information electronically. Currently, under the MOU, each participating jurisdiction determines the frequency of exchange, method of exchange, and method of transport and/or access.

The North Dakota Department of Health (NDDoH) and the Michigan Department of Health and Human Services (MDHHS) are working to exchange immunization information between their IIS, the North Dakota Immunization Information System (NDIIS) and the Michigan Care Improvement Registry (MCIR). NDDoH and MDHHS each participate in their state level HIE, the North Dakota Health Information Network (NDHIN) and the Michigan Health Information Network (MiHIN). Both states are currently testing the exchange between their state-wide HIEs and each state reports on their progress during CoP meetings.

Purpose: HIEs are in the business of making connections and exchanging health information, so most may be better suited to more easily achieve interjurisdictional connections. The purpose of exploring the work done by North Dakota and Michigan is to better understand connections made through state level HIEs and to determine if there are lessons learned or valuable information to help other states exchange data.

Next Steps: HIEs vary in their organizational leadership, architecture, governance, method(s) of communication, and options and tools they offer to participants for information exchange. Thus, the experiences from North Dakota and Michigan, although they contain valuable information for the use of HIE for data exchange, may have limited generalizability. Each jurisdiction will need to evaluate whether the use of its HIE will meet its short-term and long-term goals for interjurisdictional exchange of immunization information.

In addition, the use of HIEs to achieve IIS-to-IIS exchange must be evaluated in the context of the use cases described earlier in this document. Based on the use cases and the individual circumstances, some models of HIEs will facilitate interjurisdictional data exchange, while others might not.

AIRA, the CoP, and the JDI Advisory Workgroup will facilitate the use of HIEs to enhance interjurisdictional data exchange as opportunities arise that meet the need of the community and are within the scope of this interjurisdictional data exchange plan.

Appendix C – Immunization Gateway Portfolio of Projects

The IZ Gateway is the centralized technical infrastructure that supports bidirectional exchange of immunization data. The IZ Gateway includes a portfolio of projects that support data exchange between IIS and provider organizations. The portfolio is sponsored by the Centers for Disease Control and Prevention through an Inter-Agency Agreement with the HHS Office of the Chief Technology Officer. The IZ Gateway is hosted on the secure AIMS-APHL (Association of Public Health Laboratories) platform, which meets the FISMA¹ Moderate baseline requirements.

IZ Gateway Portfolio Goal - Increase the availability and volume of complete and accurate immunization data stored within IIS and available to providers and consumers regardless of their jurisdictional boundaries.

The Immunization Gateway infrastructure supports the following projects:

IZ Gateway Share: Cross-jurisdictional IIS to IIS

IZ Gateway Connect: Multi-jurisdictional Provider Organizations to Multiple IIS

IZ Gateway Access: Consumer Access to IIS

For the purposes of this plan, the relevant project under the Immunization Gateway is Immunization Gateway Share: Cross-jurisdictional IIS to IIS.

IZ Gateway Share Project Goal – This project serves to improve the immunization information available to health care providers when patients cross state or jurisdictional borders. For example, a patient may reside in a neighboring state/jurisdiction or has relocated from another region and they or their provider need access to their immunization record. Immunization Gateway Share enables immunization data exchange between jurisdictional IIS using a hub and spoke model.

IIS Participation Requirements for Immunization Gateway Share: Cross-jurisdictional IIS to IIS:

Technology:

1. Support Immunization Implementation Guide HL7 2.5.1, release 1.5 and Addendum
2. Use IZ Gateway issued client-side certificate
3. Use existing server-side certificate on the destination
4. Implement the IIS to send a query message to the modified CDC WSDL
5. Implement triggers for sending historical VXUs to home IIS

¹S.2521 - Federal Information Security Modernization Act of 2014:

<https://www.congress.gov/bill/113th-congress/senate-bill/2521>

Policy:

1. MOU: <https://repository.immregistries.org/resource/template-memorandum-of-understanding-for-iis-interjurisdictional-exchange/>
2. APHL Data Use Agreement (DUA): <https://app.box.com/file/594412803417>

Current IZ Gateway Share Participants:

1. Delaware
2. Philadelphia
3. Maryland
4. Mississippi
5. Louisiana
6. West Virginia
7. Arkansas (testing)
8. Kansas (testing)
9. Oregon (testing)
10. Missouri (testing)

Project Activities:

- Support signing of Data Use Agreement (between IIS and APHL) and MOU (among multiple IIS) to permit exchange of IIS data through the IZ Gateway
- Enable manual and automated sharing or querying of data for patients seeing a provider in one jurisdiction who live or have lived in, another jurisdiction.

Appendix D – Acronyms

- AIMS – Association of Public Health Laboratories Informatics Messaging Service
- AIRA – American Immunization Registry Association
- APHL – Association of Public Health Laboratories
- ASTHO – Association of State and Territorial Health Officials
- CDC - Centers for Disease Control and Prevention
- CoP - Community of Practice
- DOD - Department of Defense
- HHS CTO – Health and Human Services Office of the Chief Technology Officer
- HIE - Health Information Exchange
- IHS – Indian Health Services
- IIS – Immunization Information System
- IT – information Technology
- IZ Gateway - Immunization Gateway
- JDI – Joint Development and Implementation
- MCIR - Michigan Care Improvement Registry
- MDHHS - Michigan Department of Health and Human Services
- MiHIN - Michigan Health Information Network
- MHS - Military Health System
- MOU – Memorandum of Understanding
- NAACCR - North American Association of Central Cancer Registries
- NAPHSIS - National Association for Public Health Statistics and Information Systems
- NDDoH - North Dakota Department of Health
- NDHIN - North Dakota Health Information Network
- NDIIS - North Dakota Immunization Information System
- NVAC – National Vaccine Advisory Committee
- ONC - Office of the National Coordinator
- PHIZ or hub - Public Health Immunization
- The Network – Network for Public Health Law
- VA - Veterans Administration