Immunizations Use Case Operations Guide

For Internal Use Only

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Acronyms and Abbreviations Guide

API	Application Programming Interface
DQA	Data Quality Assurance
DSM	Direct Secure Messaging
FHIR	Fast Healthcare Interoperability Resources
HIN	Health Information Network
HL7	Health Level Seven
HD	Health Directory
NJDHS	New Jersey Department of Health and Human Services
MIDIGATE	Medical Information Direct Gateway
NJHIN	New Jersey Health Information Network Shared Services
MU	Meaningful Use
NwHIN	Nationwide Health Information Network
REST	Representational State Transfer
VPN	Virtual Private Network
XCA	Cross Community Access

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Definitions

Applicable Laws and Standards. In addition to the definition set forth in the Data Sharing Agreement, the federal Confidentiality of Alcohol and Drug Abuse Patient Records statute, section 543 of the Public Health Service Act, 42 U.S.C. 290dd-2, and its implementing regulation, 42 CFR Part 2; the applicable New Jersey Public Health Laws and Regulations that apply.

Data Sharing Agreement. Any data sharing organization agreement signed by both HIN and participating organization.

Exhibit. A use case exhibit or a pilot activity exhibit.

Health Level 7 (HL7). An interface standard and specifications for clinical and administrative healthcare data developed by the American National Standards Institute. HL7 provides a method for disparate systems to communicate clinical and administrative information in a normalized format with acknowledgement of receipt

Health Information. Any information, including genetic information, whether oral or recorded in any form or medium, that (a) is created or received by a health professional, health plan, public health authority, employer, life insurer, school or university, or health care clearinghouse; and (b) relates to the past, present, or future physical or mental health or condition of an individual; the provision of health care to an individual; or the past, present, or future payment for the provision of health care to an individual.

Health Information Network (HIN). An organization or group of organizations responsible for coordinating the exchange of protected health information (PHI) in a region, state, or nationally.

HIN Infrastructure Service. Certain services that are shared by numerous use cases. HIN Infrastructure Services include, but are not limited to, ACRS, HD, Statewide and the Medical Information DIrect GATEway (MIDIGATE®).

HIN Services. The HIN infrastructure services and additional services and functionality provided by HIN allowing the participating organization to send, receive, find, or use information to or from HIN as further set forth in an exhibit.

Immunization Information System (IIS). A model confidential, population-based, computerized database that records all immunization doses administered by participating providers to persons residing within a given geopolitical area.

For more information go to NJII.com/NJHIN

Master Use Case Agreement (MUCA). Legal document covering expected rules of engagement across all use cases. Trusted data sharing organizations sign master use case agreement one time, then sign use case exhibits for participation in specific use cases.

Meaningful Use. Using certified EHR technology to improve quality, safety and efficiency of healthcare, and to reduce health disparities.

Message. A mechanism for exchanging message content between the participating organization to HIN services, including find and retrieve.

Message Content. Information which is sent, received, found or used by a participating organization to or from HIN Services, including, but not limited to, PHI, common keys, de-identified data, metadata, Digital Credentials, and data schema. Message Content includes the Message Content Header.

Message Header. The MSH segment present in every HL7 message type that defines the message's source, purpose, destination, and certain syntax specifics such as delimiters (separator characters) and character sets. It is always the first segment in the HL7 message, with the only exception being HL7 batch messages.

New Jersey Immunization Registry. The NJIIS is the Immunization authority for the State of New Jersey.

New Jersey Health Information Network Shared Services or NJHIN. The HIN for the State of New Jersey.

Nationwide Health Information Network (NwHIN – now the eHealth Exchange). NwHIN was created to provide a secure, nationwide, interoperable health information infrastructure that connects providers, consumers, and others involved in supporting health and healthcare. Web services and protocols used by eHealth Exchange are still referred to as NwHIN services or protocols.

REST. REST stands for Representational State Transfer. (It is sometimes spelled "ReST".) It relies on a stateless, client-server, cacheable communications protocol -- and in virtually all cases, the HTTP protocol is used.

Send / Receive / Find / Use. Means sending, receiving, finding, or using message content. Sending involves transport of message content. Receiving involves accepting and possibly consuming/storing message content. Finding means querying to locate message content. Using means any use of the message content other than sending, receiving and finding.

Service Interruption. A party is unable to send, receive or find message content for any reason, including but not limited to the failure of network equipment or

software, scheduled or unscheduled maintenance, general Internet outages, and events of force majeure.

Specifications. Specifications provide a standard set of service interfaces that enable the exchange of interoperable health information among the Health Information Exchanges.

Trusted Data Sharing Organization. An organization that has signed any form of agreement with a HIN for data sharing.

Use Case. A specific scenario or group of scenarios for sharing patient health information.

Use Case Exhibit. The legal agreement attached as an exhibit to the Master Use Case Agreement that governs participation in any specific Use Case.

Use Case Implementation Guide. The document providing technical specifications related to Message Content and transport of Message Content between participating organizations, HIN, and other TDSOs. Use Case Implementation Guides are made available via URLs in exhibits.

Use Case Summary. The document providing the executive summary, business justification and value proposition of a use case. Use case summaries are provided by HIN upon request and are available via www.NJII.COM/NJHIN.

XCA. The IHE (Integrating the Healthcare Enterprise®) standard for Cross-Community Access to support the means to find and retrieve patient relevant healthcare data held by other communities.

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1. Immunizations Use Case Introduction

Immunizations are vital to the maintenance of public health due to their power to prevent and sometimes eradicate deadly diseases and potential epidemics. Immunizations must be closely monitored to ensure they are administered correctly and in a timely fashion because vaccination errors can hurt and possibly kill patients.

Currently on a national basis, immunization records are not collectively maintained by any one organization. Most states have an Immunization Information System (IIS) that maintains immunization records for their residents.[1] An IIS collects immunization records and makes that information accessible to authorized healthcare providers.

1.1 Sending Immunizations Scenario

Healthcare providers (including pharmacies) in New Jersey are required to report immunizations to the state immunization information system (IIS) within 72 hours of administration.[2]

Purpose of Use Case: The Immunizations use case scenario describes the requirements for healthcare providers to use the health information network (HIN) to automatically, electronically send immunization records through a state's Department of Health to the state's IIS.

1.2 Immunization History-Forecast Scenario

With this use case, an organization is able to query the NJIIS to retrieve electronic information containing a patient's immunization records, including an up-to-date list of immunizations received by the patient (history) as well as a list and schedule of vaccinations that the patient should receive in the future (forecast).

Purpose of Use Case: The Immunization History-Forecast use case scenario allows participating organizations to send electronic queries through the statewide health information network (HIN) to an Immunization Information System to retrieve electronic data containing a patient's immunization records.

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[1] In New Jersey the NJIIS is the New Jersey (NJIIS) Immunization Registry

[2] In these healthcare providers are required to report immunizations for every child born after January 1, 1998. All those before this date may voluntarily submit with submission of wavier.

For more information go to NJII.com/NJHIN

2.   Onboarding

2.1 Trusted data-sharing organization expresses interest in a use case

The interested organization may be referred to as a Trusted Data Sharing Organization (TDSO) if a HIN data-sharing legal agreement has been executed by the organization. A TDSO can express interest to participate in a HIN use case in three ways:

2.1.1 Through HIN leadership

A HIN associate director, director, and/or project manager may contact the onboarding team to inform them that a TDSO is interested in a particular use case and supply the onboarding team with the interested TDSO's contact information. The production manager then assigns an onboarding coordinator to be the point of contact with the TDSO for this use case.

2.1.2 Through an existing relationship with HIN onboarding team

A TDSO may contact the onboarding team directly through an existing relationship with an onboarding coordinator or production manager. The production manager then assigns an onboarding coordinator to be the point of contact with the TDSO for this use case.

2.1.3 Through submission of a help desk ticket

A TDSO may request help through an outreach via email. A help request can be placed by visiting the website NJII.com or contact through NJHIN@NJII.com. The request will go to the onboarding director to take action and respond to the inquiry.

2.2 HIN documents TDSO's interest within Salesforce CRM system

The onboarding coordinator will document the TDSO's interest and activities with a use case within the Salesforce Customer Relationship Management (CRM) system (henceforth referred to as "Salesforce") to track the TDSO's progress with a use case. Before creating any entries, the onboarding coordinator should use the "Search" option in Salesforce to ascertain if the Organization and/or Opportunity already exist in the system for the TDSO in order to avoid duplication.

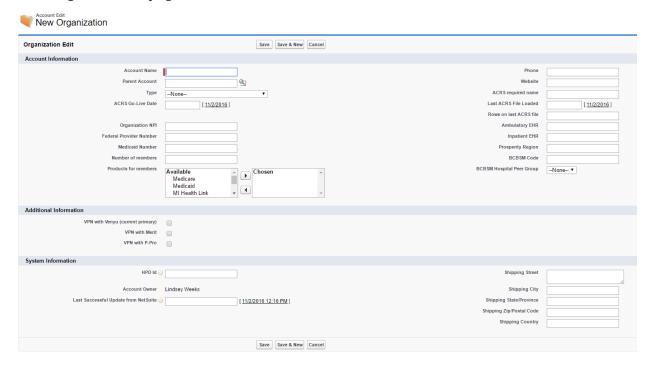### 2.2.1 Creating an "Organization" in Salesforce for a TDSO

The onboarding coordinator creates the "Organization" in Salesforce for a TDSO to log any information or actions taken by or for this TDSO related to health information exchange with the HIN. This may include actions related to use cases, help desk tickets, contact information, etc.

- In Salesforce, click "Organizations" at the top of the screen
- Click "New"
- Enter the Account Name: this includes the full TDSO name and the TDSO acronym.
- For reporting purposes, it is wise to enter as much information as possible into the "Organization" page fields.

2.2.2 Creating an "Opportunity" in Salesforce

Once an onboarding coordinator has been assigned to assist the TDSO, the production manager and/or onboarding coordinator may create an "Opportunity" in Salesforce to document the TDSO's interest in and progress with a particular use case.

- In Salesforce, click "Opportunities" at the top of the screen
- Click "New"
- Choose "Record type of new record" from the picklist options
- Enter information in the required categories:
    - Opportunity Name: this includes the full TDSO name, the TDSO acronym in parentheses, and the use case name (e.g. "New Jersey Health Information Network Shared Services (NJHIN) Immunization History-Forecast" or "New Jersey Health Information Network Shared Services (NJHIN) Immunizations" (for submitting immunizations))

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- o Account name: The TDSO must have an "organization" page in Salesforce before an opportunity can be created. By choosing an organization in this search bar, the opportunity will be linked to the organization page
- o Choose relevant "Use Case" from the picklist
- o Choose relevant "Associated Use Case" from picklist
- o Onboarding Coordinator: choose the onboarding coordinator assigned to this opportunity
- o Proposed Close Date: choose a date in the distant future
- o QO affiliation: choose the HIE affiliated with the QO for this use case (if applicable)
- o Payer Incentives: this category is only applicable for payer TDSOs
- o Stage:
    - Opportunity: indicates HIN knows of the TDSO but interest has not yet been expressed by the TDSO for this particular use case (0%)
    - Expressed interest: communication has begun between HIN and TDSO for this use case (25%)
    - Onboarding: TDSO's kickoff has occurred for this use case (50%)
    - In DQA: this is the data quality assurance (DQA) period (75%)
    - In production: the TDSO has passed the DQA period (100%)
    - Closed: This opportunity is closed (0%)
- Technical contact: the TDSO's primary contact
- Destination port: the HIN's port information
- Transport type: VPN, Direct (DSM) HIE, or Direct (source)

Select Opportunity Record Type

Record Type of new record	Health Information for State ▼

Continue   Cancel

The fields in "Opportunity" are customizable. Please note that for reporting purposes, it is helpful to fill in as many fields as possible.

For more information go to NJII.com/NJHIN

2.3 Kick-off Meeting

The HIN will hold a kick-off meeting with the TDSO to provide an overview of the use case and next steps. The kick-off meeting begins with a brief overview of who is involved with the project; the HIN then reviews the onboarding presentation with the TDSO. The kick-off meeting is usually a single meeting; additional meetings or email discussions between the TDSO and the HIN may occur as necessary.

2.3.1 Attendees

- HIN: onboarding coordinator; a HIN director may sit in or facilitate the meeting
- TDSO: project manager and/or technical contact
- Health Information Exchange (HIE): Occasionally a project manager from the TDSO's HIE will join the kickoff call as well.

2.3.2 Onboarding Presentation

The onboarding presentation includes a review of the following Onboarding Agenda topics:
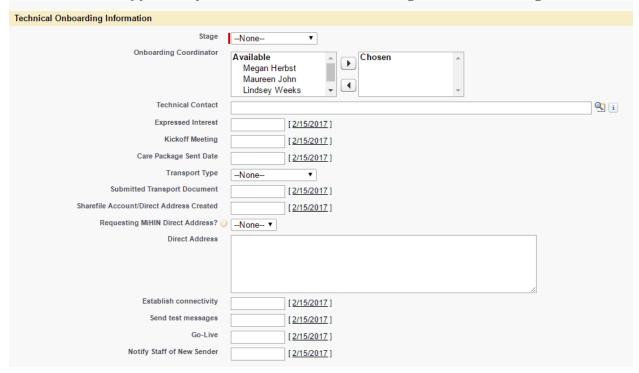
- Contact information for HIN onboarding team, TDSO, and HIE team (if applicable)
- Care Package items
  - Onboarding presentation
    - Public Health Onboarding Presentation *(for Sending Immunizations Scenario)*
    - Immunization History-Forecast Onboarding Presentation
  - Use Case Implementation Guide
    - Immunizations UCIG *(for Sending Immunizations Scenario)*
    - Immunization History-Forecast UCIG
  - MDHHS Implementation Guide
    - Immunizations UCIG *(for Sending Immunizations Scenario)*
    - Immunization History-Forecast UCIG
  - Use Case Summary
    - Immunizations Summary *(for Sending Immunizations Scenario)*
    - Immunization History-Forecast Summary
  - VPN Transport Document (if applicable) - this document must be completed by the TDSO and returned to the onboarding coordinator before the TDSO may enter production for this use case
- Contact information for HIN legal (NJII.com/NJHIN)
  - Note: Production data cannot be shared between the HIN and TDSO until the necessary legal documentation has been fully executed.
- Connectivity options
  - Virtual Private Network (VPN)
  - Direct Secure Message (DSM) *(only for Sending Immunizations Scenario)*

2.3.3 After the kick-off meeting

The onboarding coordinator adds completion dates for the following milestones into the TDSO's use case opportunity in Salesforce: "Kickoff Meeting" and "Care Package Sent Date."

For more information go to NJII.com/NJHIN

2.4 Technical Onboarding

After the kick-off meeting, the TDSO's technical onboarding begins in parallel with the legal onboarding.

2.4.1 HIN creates OIDs for the TDSO

The TDSO will complete an OID request form if the OIDs required by the HIN for the TDSO do not exist. The HIN onboarding team should verify that the necessary OIDs do not already exist on the HL7 OID registry or the state OID repository.

- If the required OID does not exist, one can be created. An OID request form is sent by the HIN to the organization.
  - Using this form, the onboarding coordinator or business analyst checks the HL7 website to see if an OID already exists https://www.hl7.org/oid/index.cfm
  - If not, a new OID is created in the state OID repository
- Once all required OIDs are created for the TDSO, a copy of the completed OID list is returned to the TDSO for their records.

2.4.2 The TDSO transport mechanism to receive data: VPN (or DSM)

- VPN
  TDSOs onboarding to Immunization History-Forecast may only use VPN as a transport mechanism. The TDSO will fill out the VPN form provided in the care package to the TDSO and return to the HIN.

- DSM
  TDSOs onboarding to the Sending Immunizations Scenario may use either VPN or DSM as a transport mechanism.
  - If a TDSO needs a Direct Secure Messaging address, the HIN will send a DSM form to the TDSO's contact to fill out and return.
  - If the organization already has an existing Direct Secure Messaging address, the onboarding coordinator adds this address to the TDSO's use case opportunity in Salesforce.

For more information go to NJII.com/NJHIN

3. Legal Onboarding

The onboarding team verifies the necessary legal agreements are fully executed prior to moving into production.

In most circumstances, organizations onboard through an HIE. In that case, the onboarding coordinator must verify that the Master Use Case Agreement (MUCA) and the relevant Use Case Exhibit have all been fully executed by the HIE prior to moving into production.

Additionally, the organization onboarding through an HIE must sign with NJHIN an attestation that they have agreed with all of the terms of the MUCA and the Use Case Exhibit with their HIE.

In other circumstances, organizations connect to NJHIN directly. In that case, the onboarding coordinator must verify that a data sharing agreement (either the Qualified Data Sharing Organization Agreement (QDSOA) or the Simple Data Sharing Organization Agreement (SDSOA)), the Master Use Case Agreement (MUCA), and the relevant Use Case Exhibit have all been fully executed by the organization prior to moving into production.

There may be certain circumstances in which exceptions apply. These will be brought to the attention of the onboarding coordinator by the associate director.

Under no circumstance shall the onboarding coordinator deviate without approval of the associate director.

The onboarding coordinator can verify the organization's full execution of these documents in Salesforce CRM.

- In Salesforce CRM, type the name of the organization into the Search bar at the top of the screen.
- On the organization's page, scroll down to the Opportunities section. All technical and legal opportunities are listed in this section. The onboarding coordinator may have to click "See More" to view all organization opportunities. Legal agreements will have the name of the organization, the name of the legal agreement, and the word "Legal" in the title of the opportunity.
- Click on the name of the legal agreement to open the page for the legal agreement opportunity.
- The status of the legal agreement can be noted in two places:
    - In the "Legal Stage" field, a signed legal agreement will show as "Fully Executed". The "Probability" field will read "100%."

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▼ Legal Onboarding Information

Legal Stage	Fully Executed
Stage	in Production

4. Establishing Connectivity and Go-Live

If the TDSO does not have an existing connection with NJHIN, a connectivity call is arranged. If the TDSO is working with an HIE, the TDSO sends messages to their HIE before being passed to the HIN.

4.1 The TDSO establishes connectivity with HIN:

- LLP over IPsec VPN – HIN's site-to-site VPN request form must be completed, sent and approved by HIN. Send a request via NJHIN@NJII.com to obtain the VPN request form. A pre-shared key is then exchanged between the TDSO, HIE (if applicable), and HIN to initialize the connection. The LLP over IPsec VPN is the most efficient transport for very high volumes of messages.
- Direct Secure Messaging – HIN accepts Direct Secure Messages from Health Internet Service Provider (HISPs) that have EHNAC-DTAAP (DirectTrust) accreditation. Test messages are sent to verify HISP connectivity ("ping pong"). The Message Header section in the test messages is verified for appropriate routing configuration. If working with an HIE, messages would be sent from the TDSO to the HIE before being passed to the HIN. Please refer to NJIIS guidelines for message and connection details at https://njiis.nj.gov/njiis/html/documents.html Interface Specifications for HL7 Message Type 2.5.1 .

4.2 Test messages are sent by the TDSO to the HIN:

- All test messages must follow NJIIS guidelines set forth in Interface Specifications for HL7 Message Type 2.5.1 document (see above).
- All test messages must have a "T" in the Message Header – field 11
- Test traffic is routed via HIN to the appropriate destination. For Immunization Records, the destination is the NJIIS via the state data hub.
- The end destination monitors for inbound test traffic and confirms receipt with the HIN, which confirms with the HIE and/or TDSO.
- For Immunization History-Forecast, a query will be sent by the TDSO and a "response" will be returned by the state data hub through the HIN to the TDSO as part of the testing process.

For more information go to NJII.com/NJHIN

- If connectivity is not successful, trouble-shooting begins on the call or may be continued offline.

4.3 The IIS deems the TDSO to have entered into test status with the submission of the Enrollment form and response from NJIIS:

- Upon completion of the Enrollment form and submission of the Smoke Test successfully responded to by NJIIS a test period will begin for submission of additional immunizations.
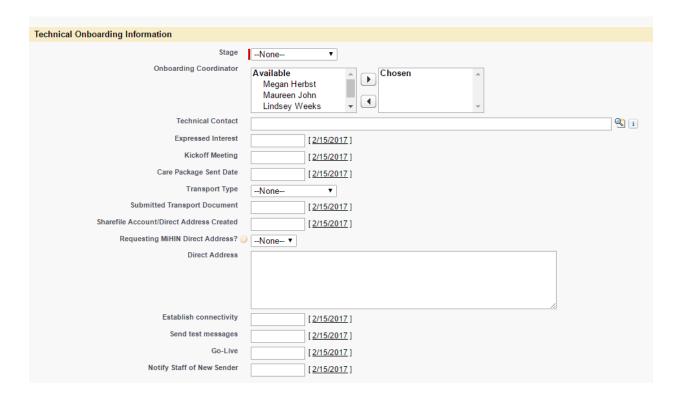
4.4 The IIS declares the TDSO to be at production status after another period of successful testing and participation in a production meeting with NJIIS.

- At this time, the TDSO may then send production messages through the HIE (if applicable) to HIN. The sending facility now places a "P" (for production) value in the MSH-11 instead of the "T" used during testing.

4.5 Onboarding coordinator updates Salesforce opportunity

The date of the connection call is reported in the Salesforce opportunity for this use case in the "Establish Connectivity" field. The onboarding coordinator also records the date that HIN staff is notified of a new participant (in the field "Notify Staff of New Sender").

Technical Onboarding Information

Stage	--None-- ▼
Onboarding Coordinator	**Available**: Megan Herbst, Maureen John, Lindsey Weeks ▶ ◀ **Chosen**
Technical Contact	
Expressed Interest	[2/15/2017]
Kickoff Meeting	[2/15/2017]
Care Package Sent Date	[2/15/2017]
Transport Type	--None-- ▼
Submitted Transport Document	[2/15/2017]
Sharefile Account/Direct Address Created	[2/15/2017]
Requesting MiHIN Direct Address?	--None-- ▼
Direct Address	
Establish connectivity	[2/15/2017]
Send test messages	[2/15/2017]
Go-Live	[2/15/2017]
Notify Staff of New Sender	[2/15/2017]

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Version	Date	Author	Description
1	3/15/2017		Initial draft