Michigan Health Information Network Shared Services

Exchange Continuity of Care Documents with Veterans Affairs (VA) Implementation Guide

Version 4.0

4 February 2015

Document History

Date	Version	Section(s) Revised	Description	Modifier
10/21/14	1.0	All	Initial Draft	Ward
11/11/14	2.0	All	Internal MiHIN review	Ward
12/19/14	3.0	All	Edit terms based on MiHIN's documentation rules	Vo
02/04/15	4.0	All	Edit terms based on MiHIN's documentation rules	Ward

Acronyms and Abbreviations Guide

Object	Description
AA	Assigning Authority
AD	Advance Directive
C32	HITSP Summary Documents Using HL7 Continuity of Care Document (CCD) Component - http://www.hitsp.org/ConstructSet_Details.aspx?&PrefixAlpha=4&PrefixNumeric=32
C62	The HITSP Unstructured Document Component is provided for the capture and storage of patient identifiable, unstructured document content, such as text, PDF, and images rendered in PDF. It is based on the Cross-Enterprise Sharing of Scanned Documents (XDS-SD) profile from IHE - http://www.hitsp.org/ConstructSet_Details.aspx?&PrefixAlpha=4&PrefixNumeric=62
C83	The HITSP CDA Content Modules Component. The CDA Content Modules Component defines the content modules for document based HITSP constructs utilizing clinical information- http://www.hitsp.org/ConstructSet_Details.aspx?&PrefixAlpha=4&PrefixNumeric=83
CCD	Continuity of Care Document
CGS	Common Gateway Service

Object	Description
CHDR	Clinical Data Repository / Health Data Repository
CMS	Centers for Medicare or Medicaid Services - http://www.cms.gov/
CONNECT	An open source software solution that supports health information exchange – both locally and at the national level. CONNECT uses Nationwide Health Information Network standards and governance to make sure that health information exchanges are compatible with other exchanges being set up throughout the country (http://www.connectopensource.org/). This software solution was initially developed by federal agencies to support their health-related missions, but it is now available to all organizations and can be used to help set up health information exchanges and share data using nationally-recognized interoperability standards.
CQO	Consumer Qualified Data Sharing Organization
DS Message	A message specific to the Document Submission (DS) Specification that conforms in content and format to the Integrating the Healthcare Enterprise's (IHE) Cross-enterprise Document Reliable Interchange specification.
DSO	Data Sharing Organization or Qualified Organization (QO)
EdgeSim	Simulators that are utilized in a testing environment to simulate testing with a Data Sharing Organization
EHR	Electronic Health Record
esMD	CMS Electronic Submission of Medical Documentation - http://www.cms.gov/Research-Statistics-Data-and-Systems/Computer-Data-and-Systems/ESMD/index.html?redirect=/ESMD
FedSim	Simulators that are utilized in a testing environment to simulate testing with a federal partner e.g. SSA or VA
HIE-QO	Health Information Exchange Qualified Data Sharing Organization
HITSP	Health Information Technology Standards Panel - http://hitsp.org/
IHE	IHE (Integrating the Healthcare Enterprise) is an initiative by healthcare professionals and industry to improve the way computer systems in healthcare share information (http://www.ihe.net/). IHE promotes the coordinated use of established standards such as DICOM and HL7 to address specific clinical needs in support of optimal patient care. Systems developed in accordance with IHE

Object	Description
	communicate with one another better, are easier to implement, and enable care providers to use information more effectively. The NwHIN specifications utilize underlying IHE specifications for various services for health data exchange
MDCH	Michigan Department of Community Health - http://www.michigan.gov/mdch
MiHIN	Michigan Health Information Network Shared Services - http://mihin.org/
Nationwide Health Information Network	The Nationwide Health Information Network (NwHIN) is intended to provide a secure, nationwide, interoperable health information infrastructure that connects providers, consumers, and others involved in supporting health and healthcare.
NHIO	Health Information Organizations which act as nodes on the Nationwide Health Information Network are termed as NHIOs. The NHIOs use the NwHIN web services to facilitate exchange of information with other nodes in the network.
NwHIN	Nationwide Health Information Network specified web service interfaces
NwHIN Authorization Framework Specification	The purpose of this specification is to define the required exchange of information describing the initiator of a request between HIOs participating in the NwHIN network. This enables a responding NHIO to evaluate the request based on the initiating NHIOs assertions and its own local policies and permissions.
NwHIN Document Submission (DS) Web Service Interface Specification	The purpose of this specification is to provide the ability to "submit" data for a given patient from an exchange partner to a HIE using configuration on the submission side.
NwHIN Gateway	An implementation of the Nationwide Health Information Network specified web service interfaces. These web service interfaces communicate over HTTPS secured using Public Key Infrastructure supported by the Nationwide Health Information Network Operational Infrastructure.
NwHIN interface	The gateway accepts messages from the Nationwide Health Information Network into the gateway using web services as defined by the NwHIN specifications. These messages are then processed by various components in the gateway. These components may also be configured to work in pass-through mode, in which case the message is accepted from the Nationwide Health Information Network and passed directly to the adapter without additional processing like policy checks, patient correlation checks etc.

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NwHIN Messaging Platform Specification	The purpose of this specification is to define a base set of messaging standards and web service protocols which must be implemented by each node in the NwHIN network and applies to all NwHIN transactions.
NwHIN Patient Discovery (PD) Web Service Interface Specification	The purpose of this specification is to define the mechanism by which one NwHIN node can query another to reciprocally establish patient identity and to determine if a node may be a source of information for a specific patient.
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NwHIN Retrieve Documents (RD) Web Service Interface Specification	The purpose of this specification is to define the mechanism by which an Initiating NwHIN node can retrieve specific documents from a responding node using the Document Reference IDs obtained using a prior Query for Documents (QD) transaction.
OID	Object Identifier, as issued by HL7 (http://www.hl7.org/oid/index.cfm)
ONC	Office of the National Coordinator
PO	Participating Organization - DSO onboarding to the Common Gateway Service
PD Message	A message specific to the Patient Discovery (PD) Web Services Interface Specification that references the Integrating the Healthcare Enterprise's (IHE) Cross-Community Patient Discovery (XCPD) specification.
PHR	Personal Health Record
PoM	Peace of Mind - Advance Directive Registry

Object	Description
QD Message	A message specific to the Query for Documents (QD) Web Services Interface Specification that references the Integrating the Healthcare Enterprise's (IHE) Cross-Community Access (XCA) specification.
QO	Qualified Data Sharing Organization
RD Message	A message specific to the Retrieve Documents (RD) Web Services Interface Specification that references the Integrating the Healthcare Enterprise's (IHE) Cross-Community Access (XCA) specification.
REST	REST stands for **Re**presentational **S**tate **T**ransfer. (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.
SOAP	SOAP originally defined as Simple Object Access Protocol is a lightweight protocol intended for exchanging structured information in a decentralized, distributed environment. It uses XML technologies to define an extensible messaging framework providing a message construct that can be exchanged over a variety of underlying protocols. The framework has been designed to be independent of any particular programming model and other implementation specific semantics. For the Nationwide Health Information Network to be a truly scalable, secure and interoperable network, a common transport layer is essential. The Messaging Platform is based on SOAP 1.2 messages over HTTP.
Specification	Specifications provide a standard set of service interfaces that enable the exchange of interoperable health information among the Health Information Exchanges (HIEs).
SSA	Social Security Administration - http://www.ssa.gov/
SSO	Sponsored Data Sharing Organization
SSSO	State Sponsored Data Sharing Organization
Target HIE	The HIE or Nationwide Health Information Network Node that the message or feedback is being addressed.
UCA	Use Case Agreement
UCS	Use Case Summary
VA	Department of Veterans Affairs - http://www.va.gov/
VPN	Virtual Private Network

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VQO	Virtual Qualified Data Sharing Organization
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Introduction

Missing from the Veteran's electronic health record is important information based on care provided by private sector healthcare systems. The Department of Veteran Affairs (VA) utilizes the ONC Nationwide Health Information Network (NwHIN) specifications to acquire and share this missing health component of Virtual Lifetime Electronic Record (VLER). The VA uses a query-based exchange to request and retrieve healthcare information from other participating organizations that know the patient. In addition, VA also supports inbound query and retrieval requests for healthcare information from other participating organizations there providing immediate access to important health record information at the point of care

The purpose of this guide is to provide an overview of the Nationwide Health Information Network (NwHIN) interoperability messaging that occurs between the Department of Veteran Affairs (VA) and the Participating Organization (PO) via MiHIN.

Introduction to MiHIN

Currently there are numerous Data Sharing Organizations in Michigan (i.e. HIEs, Payers, Pharmacies, State Agencies), which have completed the necessary legal documents to become a Qualified Organization (QO) for data sharing in Michigan. These DSOs are already linked to MiHIN using various forms of transport: secure https POST or LLP over VPN, and Direct. Some of the DSOs are regionally focused while others have members throughout the state. The DSOs work with the healthcare providers in their regions to implement systems for electronically exchanging healthcare information.

MiHIN is working with DSOs from other states along with the Federal agencies VA, SSA, and CMS esMD, to promote the secure exchange of healthcare information across state lines using the eHealth Exchange (formerly Nationwide Health Information Network) and using Direct Secure Messaging, for claims and cases where someone who moves or is traveling needs health care in a different state.

This Use Case relies on MiHIN infrastructure called the Common Gateway Service. The Common Gateway Service offers the capability to both submit, request and exchange healthcare data throughout Michigan or with other states.

Common Gateway Service and Use Cases

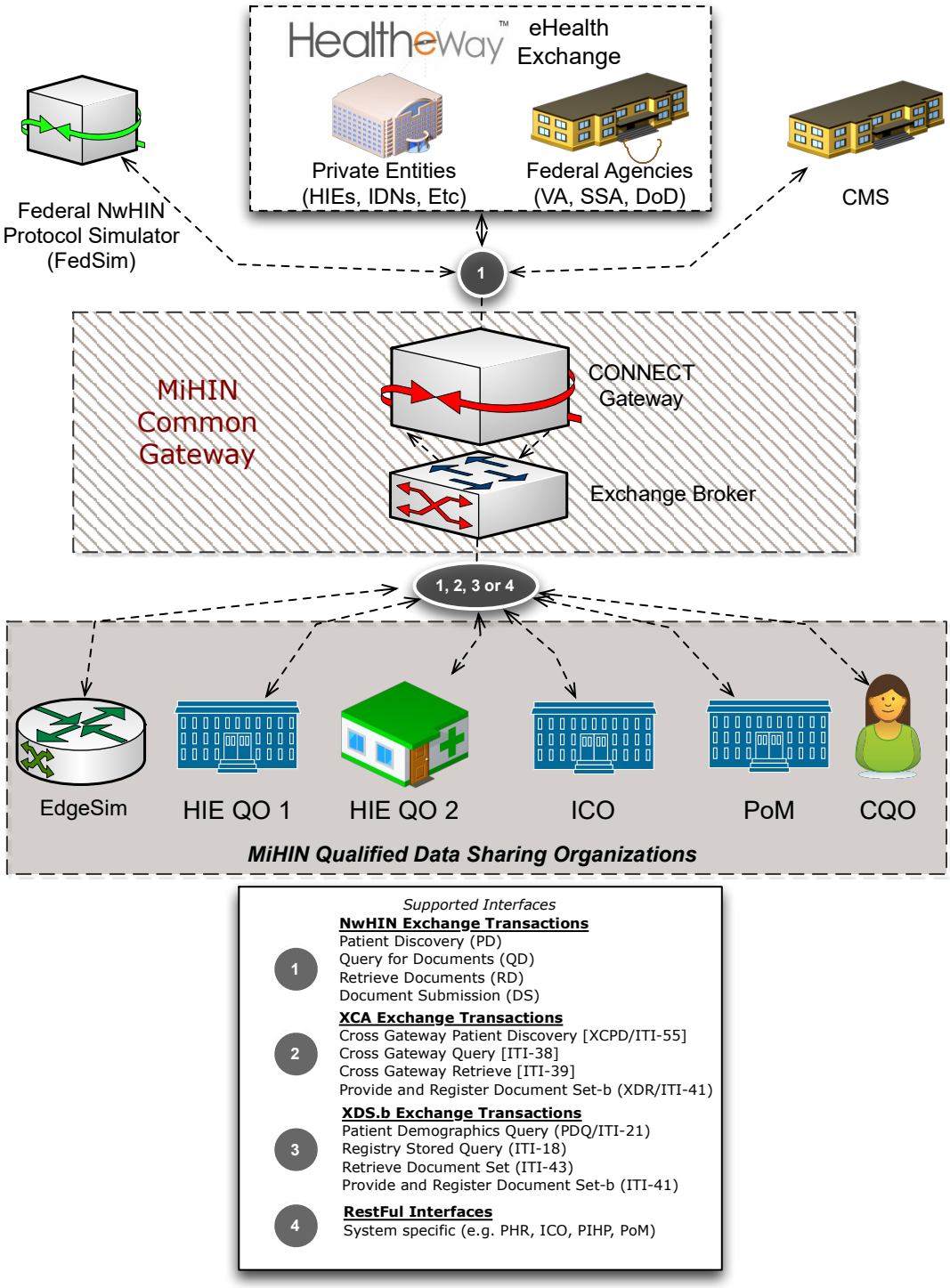
The Common Gateway Service consists of a CONNECT Gateway together with an Exchange Broker.

The CONNECT Gateway utilizes ONC Nationwide Health Information Network (NwHIN) SOAP based messaging to submit healthcare information using the Document Submission (DS) message, or healthcare information request using the Patient Discovery (PD), Document Query (DQ), and Document Retrieve (DR) messages to other eHealth Exchange participants, such as the federal agencies (SSA, VA, CMS esMD).

The Exchange Broker manages message transformation and routing not only to and from the eHealth Exchange but also to and from Michigan's Data Sharing Organizations (DSOs). The transformation services allow DSOs to send and receive in a number of protocols whether it is NwHIN SOAP, or the more widely used IHE standards for XCA or XDS.b. While the routing services send messages to applicable DSOs and eHealth Exchange participants based on the use cases a DSO has agreed to.

The Common Gateway Service is depicted below:

Common Gateway Service Context Diagram



When DSOs agree to exchange data through MiHIN there are a number of Use Cases where the Common Gateway Service can be used as the transport method:

1. **Exchange Advance Directives** – exchanging Advance Directive documents (e.g. between MyHealthPortal (myHB)/ MyHealthButton (myHP) and Peace of Mind (PoM); and/or Hospital Systems (through HIE), and PoM and/or PHRs
2. **Exchange Integrated Care Bridge Record (ICBR)** – exchanging Integrated Care Bridge Records either internal to an Integrated Care Organization (ICO) within their associated Integrated Care Teams (ICT), or between ICOs and/or Pre-paid Inpatient Health Plans (PIHPs)
3. **Exchange Patient Continuity of Care Documents Statewide** - exchanging patient healthcare information within Michigan
4. **Exchange Continuity of Care Documents with VA** - exchanging veterans' healthcare information between DSO providers and the Department of Veterans Affairs (VA)
5. **Respond to SSA Disability Determination Requests for CCD** - Responding to Social Security Administration (SSA) eligibility claims for patients within a DSO(s) network of providers
6. **Respond to CMS Electronic Submission of Medical Documentation (eSMD) Request for CCD** - Submitting documents to the Centers for Medicare and Medicaid Services Electronic Submission of Medical Documentation System (CMS esMD) in support of eligibility determinations for patients within a DSO(s) network of providers
7. **Exchange Continuity of Care Documents Outside Michigan (non-VA/SSA)** - exchanging patient healthcare information between DSO providers and other non-federal organizations outside of Michigan

As indicated in the diagram above MiHIN has developed two simulators to aid DSOs onboarding into the Common Gateway Service by simulating either the Federal Agency Use Cases (FedSim) or other DSOs (EdgeSim). This allows MiHIN and a DSO to extensively test and verify that their systems work together and are ready enter production.

Data Flow and Actors

In this Use Case, MiHIN brokers the messaging between the Department of Veteran Affairs and the Participating Organization (PO).

VA supports both inbound and outbound query based health data exchange.

Fig below describes an outbound request from the VA to MiHIN

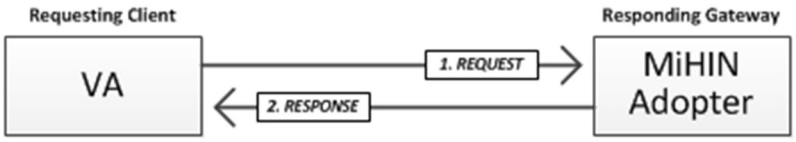


Fig below describes an inbound request to the VA from MiHIN

Web Services between MiHIN and VA

Three of the primary component web services of the document exchange process between VA and MiHIN are:

- **Patient Discovery (PD)**
- **Query for Documents (QD)**
- **Retrieve Documents (RD)**

Patient Discovery (Inbound and Outbound)

The Patient Discovery, or PD, web service interface is used by the requesting entity (VA or PO) to determine if the patient exists in the responding entity's system and has supporting documents e.g. To make that determination, the VA sends a PD request to the PO. In this case, the VA gateway acts as the requesting client with the PO's gateway acting as the responding gateway. Similarly, any PO can initiate a PD request to the VA to determine if the patient exists in the VA system.

Query for Documents (QD) (Inbound and Outbound)

The Query for Documents, or QD, web service interface is used to identify the medical documents available from the responding entity's system (PO or VA) for the patient specified by the Patient ID in the Patient Discovery transaction. e.g. the VA acts as the the requesting client querying for documents from the PO's system utilizing the patient ID from the prior PD response. Similarly, the PO's gateway can also initiate a query for documents request for patient documents from the VA system.

Retrieve Documents (RD) (Inbound and Outbound)

The Retrieve Documents, or RD, web service interface is used to obtain medical documents from the responding entity's system (PO or VA) for the patient using the document metadata in the Query for Documents response. e.g. the VA gatewayacts as the requesting client retrieving documents from the PO's system utilizing the document ID and repository ID from the prior QD response. Similarly, the PO's gateway can also initiate a retrieve documents request for patient documents from the VA system.

Web Services between PO and MiHIN

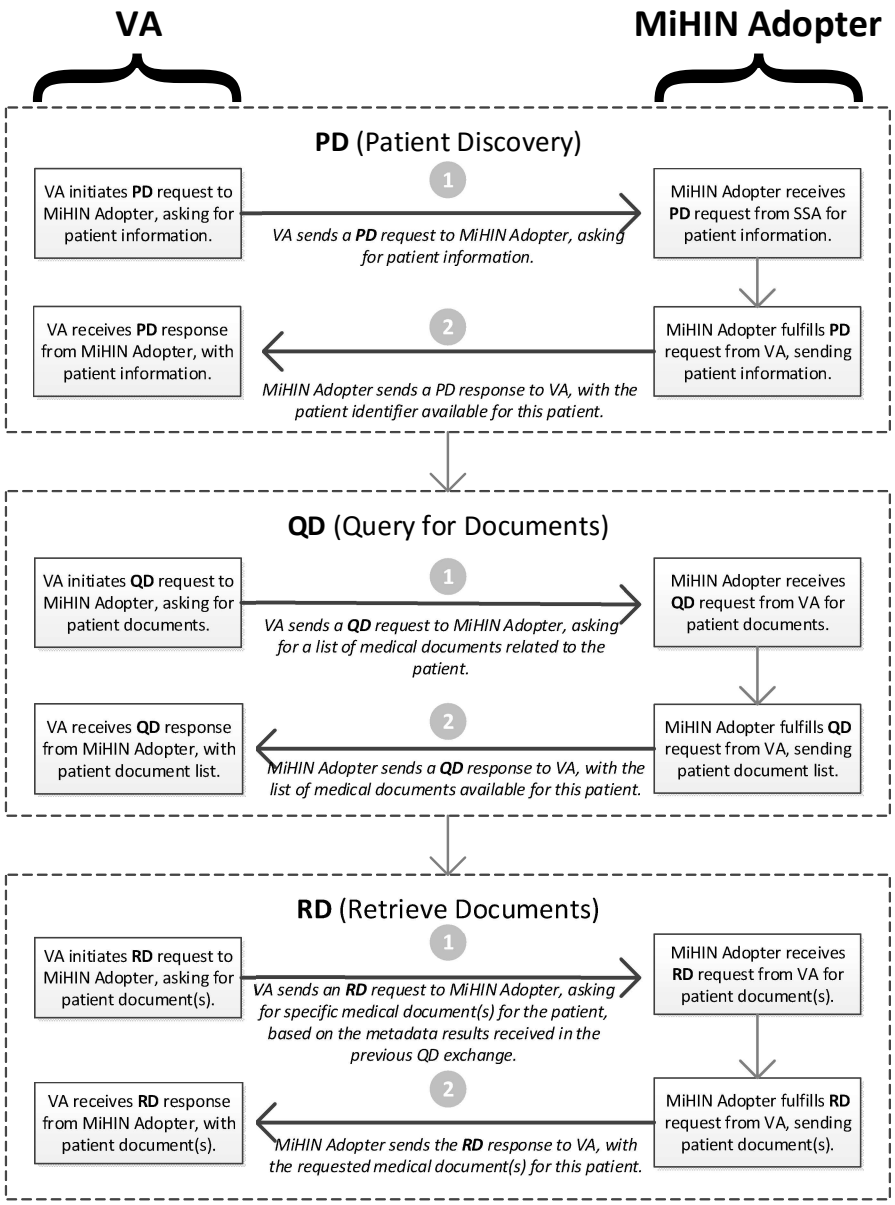
MiHIN considers itself "transport agnostic" and offers multiple options for DSOs to exchange data via MiHIN.

While transactions between Common Gateway Service and VA strictly follow NwHIN standards, eHealth Exchange policy and specifications; MiHIN offers support for other IHE transactions to support organizations within the Michigan qualified data sharing network that do not have capabilities to generate NwHIN transactions. MiHIN bridges the gap between the underlying IHE specifications like XCPD and the requirements or constraints additionally stipulated by NwHIN by providing additional configurations at the broker to facilitate exchange.

For more information on transactions supported by the Common Gateway Service and the specifications for Patient Discovery, Query for Documents and Retrieve Documents, see Common Gateway Service Transactions and Specifications.

General Sequence of Messages

Communication between VA and the PO where VA is the requestor begins with PD followed by QD and RD as diagrammed here:



Standard Overview

Message

The **Message Content and Notices** submitted to and received from the Common Gateway Service meets the following standards:

- the ONC NwHIN Specifications set forth on the Healtheway website - Exchange Specifications, or
- the IHE Cross-Community Access (XCA) specifications, supplemented with the message content required for a NwHIN SAML assertion.
- the IHE Cross-Enterprise Document Sharing (XDS.b) specifications, supplemented with the message content required for a NwHIN SAML assertion.

Content

The **Message Payload** submitted to and received from the Common Gateway Service meets the following standards for HITSP C32 or C62 formats or the HL7 C-CDA format, both with the underlying CCD specification as per HL7:

- Continuity of Care Document (CCD) - HL7/ASTM Implementation Guide for CDA® R2 Continuity of Care Document (CCD®) Release 1

Meaningful Use Stage 1:

- HITSP C32 - Summary Documents Using HL7 Continuity of Care Document (CCD) Component
- HITSP C62 - Unstructured Document Component

Meaningful Use Stage 2:

- Consolidated Clinical Document Architecture (C-CDA) - HL7 Implementation Guide for CDA® Release 2: IHE Health Story Consolidation, Release 1.1 - US Realm
- Consolidated Clinical Document Architecture (C-CDA R2) - HL7 Implementation Guide for CDA® Release 2: Consolidated CDA Templates for Clinical Notes

Onboarding Process and Testing

Initial Onboarding

For organizations to share data with MiHIN under this use case, the organization undergoes two onboarding processes simultaneously. The two onboarding processes are legal onboarding and technical connectivity onboarding. These may occur in parallel – i.e. the organization can review and complete legal agreements with MiHIN while simultaneously establishing and testing technical connectivity. To initiate these two parallel onboarding processes, notify MiHIN via email at **help@mihin.org**.

Initial Legal Process

The first time an organization undergoes the legal onboarding process with MiHIN, the organization negotiates and enters into a master Participating Organization agreement which then allows the Participating Organization to enter into one or more use cases via Use Case Agreements. There are numerous different kinds of master Participating Organization agreements, available at http://mihin.org/about-mihin/resources/mihin-legal-document-templates.

Once an organization has entered into a master Participating Organization agreement, the organization can enter into an unlimited number of use cases with MiHIN. All of MiHIN's use cases are available at http://mihin.org/about-mihin/resources/mihin-legal-document-templates.

Initial Technical Connectivity Process

First steps for connecting to the staging Common Gateway Service are as follows:

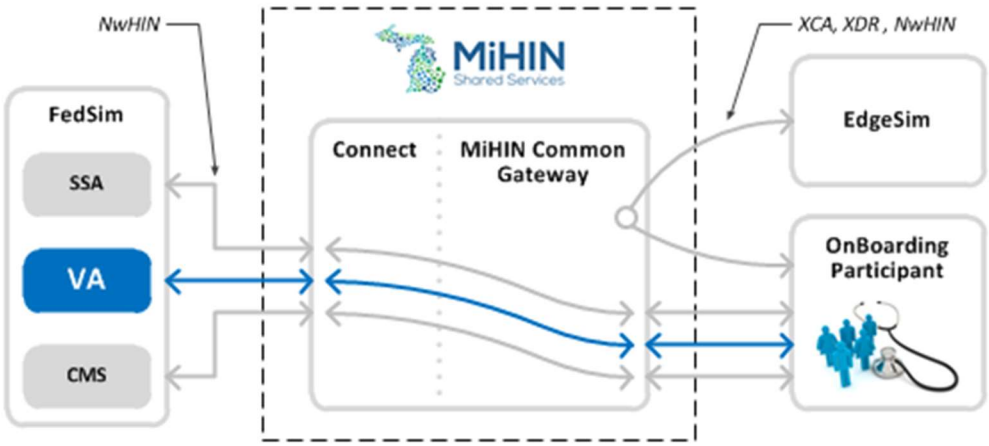
1. Request and subsequently submit the MiHIN site-to-site VPN request form. Form includes technical contacts, reason for VPN request, IP and port values for connecting server.
2. New participating organization is added onto the MiHIN VPN. (Confirmation performed using telnet from both sides).
3. Participating organization supplies the following information to MiHIN:
    1. Self-signed Certificate from organization server (to be added to Common Gateway trust store)
    2. Organization Home Community ID (unique OID)
    3. Organization Assigning Authority (unique OID)
    4. Organization Repository ID (unique OID)
    5. DS, PD, QD, RD service endpoints

6. Organization assertion information

4. Participating organization is supplied by MiHIN with:
    1. Self-signed Certificate from Common Gateway server (to be added to participating organization's server trust store)
    2. Common Gateway DS, PD, QD, RD service endpoints
    3. Staging simulators' HCID, assigning authority, and repository ID for onboard testing
5. Organizations should select one or more connectivity methods for message transport (e.g. PD, XCPD, or PDQ) based on their technical capabilities, and should communicate the selection(s)

Technical onboarding and testing

Context diagram of the Common Gateway testing environment



Technical onboarding and testing is a three step process, first starting with connectivity testing utilizing MiHIN simulators of the federal environment, followed by more focused use case testing with the simulators and finally an end to end testing between the trading partners.

Connectivity and smoke test with Federal Simulator (FedSim) (non-use case specific)

If the on-boarding participant has not had any prior testing for any exchange use cases, smoke tests for connectivity are required. The smoke tests includes basic tests into the broker with the goal of hitting the Federal Simulator's PD, QD, and RD (and DS if applicable). The participants service is smoke tested as well with the Federal Simulator

sending out PD, QD, RD and possibly DS requests via the staging Common Gateway. The results of the tests and various log files in the MiHIN servers are confirmed for connectivity.

Testing utilizing Federal Simulator (inbound and outbound) - VA transaction flow

The Federal Simulator can mock the various VA workflows. The on-boarding participant is provided test data to test the VA work flows through the simulator. The goal of this testing phase is to ensure the participant can respond to an inbound patient discovery, and can subsequently have documents for that patient queried and retrieved.

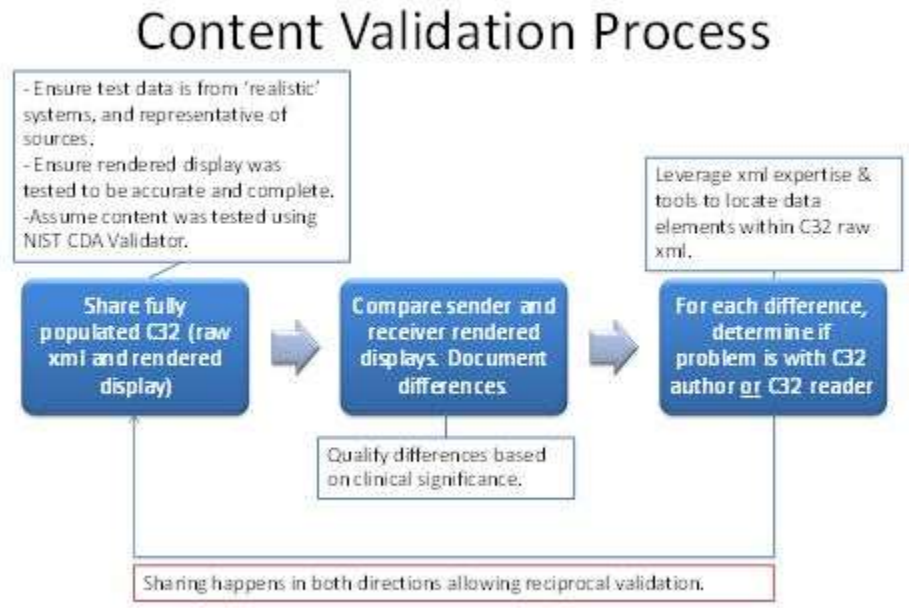
Testing with VA Contiunity of Care Exchange Use Case

On completion of testing with FedSim, the PO commences testing with the VA via MiHIN.

These test cases below provide an overview of the tests that VA tests with every partner on the Exchange. For a detailed list of test case documents and test data refer to the VA Test case documentation.

Testing with the VA involves a two-step process - content validation and technical testing

Content Validation



Content validation process is described below.

Partner will:

- Construct a test C32 xml file as fully populated as their system can achieve
- Submit this C32 to the NIST CDA Validation tool and ensure there is no error (add URL and options on how to run the NIST tool).
- The VLER Health Partner Integration team also runs the received sample against the NIST tool.
- Create a rendered display of this C32 using your own style sheet and save it as a PDF or Word document. Ensure the display is accurate and complete, reflecting all sections and data elements contained in the xml document.
- Share the xml file, PDF/Word document, and the NIST error report with VLER Health team.

VLER Health team will:

- Share the same 3 files describe above with Partner

Both Partner and VLER Health team will:

- Compare sender and receiver rendered displays and document the differences.
- For each difference, determine if problem is with C32 author or C32 reader (i.e., style sheet). XML expertise is needed to locate data elements within C32 xml files.

Technical Testing with Software Quality Assurance (SQA) environment

Phase 1 – Manual Testing:

Partner receives a welcome packet which includes the steps involved in the VLER Health on-boarding process. Assessment is done manually to determine that both partners can render usable information from the data provided.

The steps for Phase 1 are:

1. The Partner Integration team sends out the welcome package which includes all the VA data for this phase.
2. Partner sends all the required information to the VA.
3. The VA requests a VA station number for the partner.
4. The VA requests that the partner be setup in our Master Veteran Index (MVI).

5. VA and Partner teams will manually render and evaluate the C32 and C62 XMLs against the minimum requirement information.
6. Exchange and evaluation of data l continues until minimum requirements are met.
7. Upon successful evaluation, PI team sends a notice to the VLER Health Business Team asking for approval to move the Partner into the VA test environment (SQA1 software quality assurance).
8. Approval from the Business Team constitutes the beginning of Phase 2.

The requirements for Phase 1 are:

1. Needed from Partner

    a) C32 XML populated with test data and rendered style sheet.
    b) C62 XML populated with test data and rendered style sheet.
    c) C32 XPath (spreadsheet indicating data element locations).
    d) C62 XPath (spreadsheet indicating data element locations).
    e) Test, preproduction, and production OIDs (organization identifiers) and URLs (uniform resources locators).

2. Provided by the VA

    a) VistAWeb (VW) style sheet zip file.
    b) C32 and C62 domain requirements.
    c) C32 dashboard and comments template.
    d) VA fully populated C32 NWHINONE test patient in XML format.
    e) VA fully populated C32 NWHINONE test patient in rendered style sheet.
    f) C62 CHDRONE test patient in XML format.
    g) C62 CHDRONE test patient discharge summary title only in rendered style sheet.
    h) C62 CHDRONE test patient discharge summary actual summary in rendered style sheet.
    i) C32 Data Elements VW Supported Xpaths.
    j) VLER C62 unstructured document UD Xpaths.
    k) New partner test OIDs and URLs.

Phase 2 – Integration Testing:

This phase begins with connecting the VA and trading partner's test systems. Once connected, both teams begins performing a patient discovery (PD). Once a successful patient match on a test patient is achieved, then both teams performs query documents (QD) and retrieve documents (RD) from each other's test systems using the test patients and test patient data. Successful PD, QD and RD along with successful rendering of the data received constitutes successful testing.

The steps for Phase 2 are:

1. The VA enters Partner test OID and URL information in the VA test environment.
2. Partner adds the VA to Partner's test environment.
3. Partner adds NwHIN test patient data to Partner test environment with as much clinical data as possible.
4. The VA and Partner both runs test scripts on NwHIN test patient in each other's test environment.
5. PI Team electronically evaluates Partner's C32 and C62 and provide feedback. Partner must also perform these same evaluations.
6. Upon successful exchanges of NwHIN test patient data, a notice is sent to the VLER Health Business Team asking for approval to move the Partner into the VA production environment.
7. Approval from the Business Team constitutes the beginning of Phase 3.

   The requirements for Phase 2 are:

1. Needed from Partner
   a. N/A
2. Provided by the VA
   a. NwHIN test patients & required data

Phase 3 – Production Implementation:

The VA Partner Integration Team enters the Partner into the VA preproduction environment. This involves entering Partner organization information into VA preproduction systems. Once this has been completed and verified and the VA has been setup in Partner preproduction system, we begins preproduction testing with the provided CHDR test patients and information. The goal of this testing is to verify that the preproduction setups were successful and that there are no changes in the display or quality of data exchanged.

The steps for Phase 3 are:

1. The Partner Integration Team enters Partner into the VA preproduction and production environment.
2. The VA offers preproduction/production CHDR test patients and CHDR test patient required data.
3. Partner setup VA in the Partner's preproduction environment.
4. Partner adds preproduction/production CHDR test patient data to Partner preproduction and production environments with VA required data and as much additional clinical data as possible.
5. The VA Business team and Partner both runs test scripts on preproduction CHDR test patient in each other's preproduction environment.
6. PI and VA Business Team electronically evaluates Partner's C32 and C62 and provide feedback. Partner must also perform these same evaluations.
7. Upon successful exchanges of preproduction CHDR test patient data (PD, QD, RD), the VA Business team givesapproval for the Partner to go live in the production environment.
8. The VA Business team and Partner both runs test scripts on production CHDR test patient in each other's production environment.
9. PI and Business team electronically evaluates Partner's C32 and C62 and provide feedback. Partner must also perform these same evaluations.
10. Upon successful exchanges of production CHDR test patient data (PD, QD, RD), the integration is considered complete and the partner successfully on-boarded.

The requirements for Phase 3 are:

1. Needed from Partner
   a. N/A
2. Provided by the VA
   a. CHDR test patient and CHDR test patient data for preproduction.

VA VLER Test cases

Test script	Test description	Request parameters	Expected results
TSB010.1 Patient Discovery VA Initiates (Successful Request)	This test verifies the VA's ability to capture the patient's permission to share VA health data across the NwHIN and exercises the VA's ability to initiate a Patient Discovery Request to a NHIE.	Patient Last Name Patient First Name Patient Middle Name Patient Social Security Number	A patient match should be found and a patient correlation to the NHIE partner should be added after a patient discovery request is initiated by the VA for a patient that is opted out at the VA.
TSB010.1.1 Patient Discovery VA Responds (Match Of Twin Patients)	The object of this test is to verify that the VA can successfully respond to a Patient Discovery request from an NHIE for a twin patient.	Record Patient Last Name: NHINZZZTESTPATIENT Record Patient First Name: NHINMARK Record Patient Middle Initial: C Record Birth Date Trait: 2/2/1982 Record Patient Last Name: NHINZZZTESTPATIENT Record Patient First Name: NHINMARC Record Patient Middle Initial: A Record Birth Date Trait: 2/2/1982	A patient match should be found and a patient correlation to the NHIE partner should be added after a patient discovery request is initiated each for 2 twin patients.
TSB010.1.2 Patient Discovery VA Responds (Match Of Father and Son Patients)	The object of this test is to verify that the VA can successfully respond to a Patient Discovery request from an NHIE for a father/son patient.	Record Patient Last Name: NHINZZZTESTPATIENT SR. Record Patient First Name: NHINBOB Record Patient Middle Initial: D Record Birth Date Trait: 12/15/1960	A patient match should be found and a patient correlation to the NHIE partner should be added after patient discovery requests are initiated for both a father and a son patient.

Test script	Test description	Request parameters	Expected results
		Record Patient Last Name: NHINZZZTESTPATIENT JR. Record Patient First Name: NHINBOB Record Patient Middle Initial: D	
TSB010.1.3 Patient Discovery VA Responds (Match Of Patient With ICN In Temp State)	The object of this test is to verify that the VA can successfully respond to a Patient Discovery request from the NHIE for a patient with an ICN in a temp state.	Record Patient Last Name: NWHINZZZTESTPATIENT Record Patient First Name: PATIENT Record Patient Middle Name: BOB	A patient match should fail and a patient correlation should not be added after a patient discovery is initiated for a patient with an ICN in a temporary state.
TSB010.1.4 Patient Discovery VA Responds (Match Of Unlinked DNL Patient)	The object of this test is to verify that the VA does not successfully respond to a Patient Discovery request from an NHIE for a patient whose correlation to the NHIE is unlinked.	Record Patient Last Name: Record Patient First Name: Record Patient Middle Initial: Record Birth Date Trait:	The NHIE partner receives a response but no demographic data after the patient discovery request is initiated by the NHIE partner for a patient with a patient correlation unlinked to the NHIE partner
TSB010.3 Patient Discovery VA Initiates (No Response Patient Opted Out At NHIE)	This is the No Response test. This test validates that no response is sent from an NHIE if a patient is opted in at the VA, and Opted Out at the NHIE.	Record Patient Last Name: Record Patient First Name: Record Patient Middle Name: Record Patient Social Security Number:	A patient match should be found and a patient correlation to the NHIE partner should be added after a patient discovery request is initiated by the VA for a patient that is opted out at the NHIE partner. The NHIE partner is listed in the patient's sites and notices page in VistaWeb after the patient discovery request is initiated.

Test script	Test description	Request parameters	Expected results
TSB010.4 Patient Discovery VA Initiates (No Response Patient Does Not Exist At NHIE)	This is another No Response test. This test validates that no response is sent from an NHIE if a patient does not exist at that NHIE. Opt patient in on the VA side and initiate Patient Discovery request to another NHIE. To validate, go to the VW page and check there is no NHIE listed as a site.	Patient does not exist in NHIE test environment	A patient match should not be found and a patient correlation to the NHIE partner should not be added after a patient discovery request is initiated by the VA for a patient that is does not exist at the NHIE partner. The NHIE partner is not listed in the patient's sites and notices page in VistaWeb after the patient discovery request is initiated.
TSB011.2 Patient Discovery VA Responds (Successful Response)	In this test the user verifies that the VA can successfully respond to a Patient Discovery request initiated by an NHIE partner.	Record Patient Last Name: Record Patient First Name: Record Patient Middle Name: Record Patient Social Security Number:	A patient match should be found and a patient correlation to the NHIE partner should be added after a patient discovery request is initiated by the NHIE partner for a patient that is opted out at the NHIE partner.
TSB011.3 Patient Discovery VA Responds (Patient Opted Out At VA)	The object of this test is to verify that the VA can successfully respond to a Patient discovery request from an NHIE when the requested patient is opted out at the VA.	Record Patient Last Name: Record Patient First Name: Record Patient Middle Name: Record Patient Social Security Number:	A patient match should be found and a patient correlation to the NHIE partner should be added after a patient discovery request is initiated by the NHIE partner for a patient that is opted out at the VA.
TSB011.4 Patient Discovery VA Responds (Patient Does Not Exist At VA)	The object of this test is to verify that the VA can successfully respond to a Patient Discovery request from an external NHIE when the patient is does not exist at the VA.	Record Patient Last Name: Record Patient First Name: Record Patient Middle Name: Record Patient Social Security Number:	A patient match should not be found and a patient correlation to the NHIE partner should not be added after a patient discovery request is initiated by the NHIE partner for a patient that is does not exist at the VA. The patient is not

Test script	Test description	Request parameters	Expected results
			found in VistaWeb after the patient discovery request is initiated.
TSB021.5 Patient Discovery VA Responds (Match of Patient Demographics When SSN Not Sent)	The VA includes SSN as part of the Patient Traits sent to the NHIE for the purposes of establishing and accurate match for the exchange of Veteran Patient Care information. The testing using this script is dependent on the patient traits identified within the MPI of the Technical Partner.	Record Patient Last Name: Record Patient First Name: Record Patient Middle Name Record Missing Trait (s):	A patient match should be found and a patient correlation to the NHIE partner should be added after a patient discovery request is initiated by the NHIE partner for a patient with no SSN.
TSB021.6 Patient Discovery VA Responds (Match of Patient Demographics When Traits Not Sent)	The VA includes SSN, Street Address, City, State, and Zip Code as part of the Patient Traits sent to the NHIE for the purposes of establishing an accurate match for the exchange of Veteran Patient Care information. The testing using this script is dependent on the patient traits identified within the MPI of the Technical Partner. The object of this test is to verify that the VA can successfully respond to a Patient Discovery request from an NHIE when Social Security Number (SSN), Street Address, City, State, and Zip Code are not patient traits sent by the NHIE.	Record Patient Last Name: Record Patient First Name: Record Patient Middle Name Record Missing Trait (s):	A patient match should be found and a patient correlation to the NHIE partner should be added after a patient discovery request is initiated by the NHIE partner for a patient with no SSN, Street Address, City, State, and Zip Code
TSB021.7 Patient Discovery VA Responds (Match Of Patient	VA includes SSN and Phone Number as part of the Patient Traits sent to NHIE for the purposes of establishing and accurate match for the exchange of Veteran Patient Care information. The testing using this script is	Record Patient Last Name: Record Patient First Name: Record Patient Middle Name Record Missing Trait (s):	A patient match should be found and a patient correlation to the NHIE partner should be added after a patient discovery request is initiated by the

Test script	Test description	Request parameters	Expected results
Demographics When Traits Not Sent)	dependent on the patient traits identified within the MPI of the Technical Partner. The object of this test is to verify that the VA can successfully respond to a Patient Discovery request from an NHIE when Social Security Number (SSN) and Phone Number are not patient traits sent by the NHIE.		NHIE partner for a patient with no SSN and Phone Number.
TSB002.1 Document Query VA Initiates (Successful Query)	The object of this test is to verify a user in the VA system can initiate a query for NwHIN documents to another Nationwide Health Information Exchange (NHIE). This test is conducted by using VistA Web and by accessing the Adapter Audit logs and the Adapter cache.	Record Patient Last Name: Record Patient First Name: Record Patient Middle Name: Record Patient Social Security Number:	In the VistaWeb NwHIN Documents page, a link to the patient's C32 document from the NHIE partner should display after the document query request is initiated by the VA.
TSB002.9 Document Query VA Initiates (No Reply Patient Opted Out At NHIE)	The object of this test is to verify that a user in the VA system can query another NHIE for a document. The external NHIE **will not** return document meta data for the patient because the patient is opted out at the external NHIE.	Record Patient Last Name: Record Patient First Name: Record Patient Middle Name: Record Patient Social Security Number:	In the VistaWeb NwHIN Documents page, a link to the patient's C32 document from the NHIE partner should not display after the document query request is initiated by the VA for a patient opted out at the NHIE partner.
TSB003.1 C32 Document Retrieve VA Initiates (Successful Retrieve)	This test validates the VA can successfully retrieve a NwHIN C32 document using VistAWeb. The retrieved NwHIN document can be displayed as a whole, single document containing the VA supported content modules. The data from the NwHIN document may be viewed under the VistA Web clinical domains	Record Patient Last Name: Record Patient First Name: Record Patient Middle Name: Record Patient Social Security Number	The patient's C32 document from the NHIE partner should display with all the C32 data modules populated that have been identified within the partner's technical assessment report. Also, the data displays under the VistaWeb clinical domains where NwHIN data is

Test script	Test description	Request parameters	Expected results
	where the NwHIN data is aggregated (as notated by the double dagger icon).		aggregated with data from the VA Vista facilities.
TSB003.2 C62 Document Retrieve VA Initiates (Successful Retrieve)	This test validates the VA can successfully retrieve data from an NwHIN C62 document using VistAWeb. The data from the NwHIN document may be viewed under the VistA Web clinical domains where the NwHIN data is aggregated (as notated by the double dagger icon).	Record Patient Last Name: Record Patient First Name: Record Patient Middle Name: Record Patient Social Security Number:	The patient's C62 document displays for each of the following C62 document types retrieved: Consults and Procedures, Discharge Summaries, Radiology Reports, Progress Notes, Surgery Reports, and Surgical Pathology Reports. The data displays under the VistaWeb clinical domains where NwHIN data is aggregated with data from the VA Vista facilities.
TSB004.2 Document Query VA Responds (Successful Query)	The object of this test is to verify the VA can successfully respond to a document query request from a requesting Nationwide Health Information Exchange (NHIE) by providing the VA document information (meta data) that could be used in a subsequent document retrieve request to retrieve the VA document. The VA system dynamically-generates the NwHIN Document for the requested patient and stores the document and its meta data into the Adapter's temporary storage/cache.	Record Patient Last Name: Record Patient First Name: Record Patient Middle Name: Record Patient Social Security Number:	NHIE partner confirms that they receive a document query response from the VA and receive VA document meta data after a document query request has been initiated by the NHIE partner.
TSB004.9 Document Query VA_Responds (No Reply Patient Opted Out At VA)	The object of this test is to verify that the VA can successfully enforce the patient's data sharing permission (do not share = opt out) and correctly respond to the document query request from the NHIE by returning an	Record Patient Last Name: Record Patient First Name: Record Patient Middle Name:	NHIE partner confirms that they do not receive the VA document meta data after a document query request has been

Test script	Test description	Request parameters	Expected results
	acknowledgement to the document query request but not returning VA document meta data for the patient.	Record Patient Social Security Number:	initiated by the NHIE partner for a patient opted out at the VA.
TSB005.2 Document Retrieve VA Responds (Successful Retrieve)	This test validates the VA can successfully respond to a request from a Nationwide Health Information Exchange (NHIE) for a VA document by sending the requested document.	NwHIN Document that was requested in the NHIE's Document Query has been stored in the Adapter cache Record Patient Last Name: Record Patient First Name: Record Patient Middle Name: Record Patient Social Security Number:	NHIE partner confirms that they can retrieve a patient's C32 document from the VA.
TSB012.1 Document Retrieve VA Initiates (Successful Retrieve and Clinical Content Validation)	No corresponding test data	No corresponding test data	Data content for the patient's C32 and C62 documents from the NHIE partner is validated successfully with no missing data and fields and no differences between the data displayed in VAP and VistaWeb for each of the C32 and C62 data modules within the documents.
TSB012.2 Dynamic C32 Retrieve VA Initiates (Successful Retrieve)	The object of this test is to verify that a user in the VA system can initiate a query for a NwHIN document to another Nationwide Health Information Exchange (NHIE) and successfully retrieve a NwHIN document using VistAWeb after test patient data is added in the NHIE. The NHIE dynamically-	Record Patient Last Name: Record Patient First Name Record Patient Middle Name: Record Patient Social Security Number:	The patient's C32 document from the NHIE partner should display with the test data(allergy or problem) added by the NHIE partner.

Test script	Test description	Request parameters	Expected results
	generates the NwHIN Document for the requested patient.		
TSB012.3 Dynamic C32 Retrieve VA Responds (Successful Retrieve)	The object of this test is to verify that a user in the Nationwide Health Information Exchange (NHIE) can initiate a query for NwHIN documents to the VA and successfully retrieve a NwHIN document using VistAWeb after test patient data is added in the VA. The VA system dynamically-generates the NwHIN Document for the requested patient.	Record Patient Last Name: Record Patient First Name Record Patient Middle Name: Record Patient Social Security Number:	The NHIE partner confirms that the patient's C32 document from the VA displays with the test data(allergy or problem) added by the VA.
TSB010.1.5 Document Query VA Initiates (Patient With Merged EPID)	The object of this test is to verify a user in the VA system can initiate a query for NwHIN documents to another Nationwide Health Information Exchange (NHIE) for a patient with a merged EPID (Enterprise Patient ID).	Record Patient Last Name: Record Patient First Name: Record Patient Middle Name: Record Patient Social Security Number:	In the VistaWeb NwHIN Documents page, a link to the patient's C32 document from the NHIE partner should display after the document query request is initiated by the VA for a patient with a merged EPID.
TSB010.1.6 Document Retrieve VA Initiates (Patient With Merged EPID)	This test validates the VA can successfully retrieve an NwHIN C32 document using VistAWeb for a patient with a merged EPID (Enterprise Patient ID). The retrieved NwHIN document can be displayed as a whole, single document containing the VA supported content modules.	Patient's EPID has been merged by the MVI team Record Patient Last Name: Record Patient First Name: Record Patient Middle Name: Record Patient Social Security Number	The patient's C32 document from the NHIE partner displays after the document retrieve request is initiated for a patient with a merged EPID.
TSB010.1.7 Document Query VA	The object of this test is to verify a user in the VA system can initiate a query for NwHIN	Record Patient Last Name: Record Patient First Name:	In the VistaWeb NwHIN Documents page, a link to the patient's C32

Test script	Test description	Request parameters	Expected results
Initiates (Patient With Merged ICN)	documents to another Nationwide Health Information Exchange (NHIE) for a patient with a merged ICN (Identification Control Number).	Record Patient Middle Name: Record Patient Social Security Number:	document from the NHIE partner should display after the document query request is initiated by the VA for a patient with a merged ICN.
TSB010.1.8 Document Retrieve VA Initiates (Patient With Merged ICN)	This test validates the VA can successfully retrieve a NwHIN C32 document using VistAWeb for a patient with a merged ICN (Identification Control Number). The retrieved NwHIN document can be displayed as a whole, single document containing the VA supported content modules.	Patient's ICN has been merged by the MVI team Record Patient Last Name: Record Patient First Name: Record Patient Middle Name: Record Patient Social Security Number	The patient's C32 document from the NHIE partner displays after the document retrieve request is initiated for a patient with a merged ICN.

Specifications

Message and Content Format

For messaging and content requirements related to VA use case refer to VA VLER Health Exchange VBTR 02102014.docx.

The document lists additional constraints and requirements for VLER health related to

1. Constraints on the SAML assertions for both inbound and outbound messages e.g. PurposeOfUse values or SubjectRole constrained values.
2. Query parameters used in Query for Documents - Document class codes supported, Service Start and Stop times usage, Document Entry status, Format codes and error codes
3. Retrieve documents for unstructured documents
4. Content/document for payload - HITSP C32, C62

For more information on Common Gateway Service supported transactions and specifications - Common Gateway Service Transactions and Specifications.

Message Example

Sample Common Gateway Service transaction messages can be found here - Common Gateway Service Sample Messages.

Troubleshooting

A list of common questions regarding VA Query can be found at:

http://mihin.org/about-mihin/faqs/

If experiencing difficulties or have questions, please contact the MiHIN Help Desk:
Email: help@mihin.org
Phone: (517) 336-1430
Monday – Friday 8:00 AM – 5:00 PM (Eastern)

Legal Advisory Language

This reminder applies to all Use Cases covering the exchange of electronic health information:
The Data Sharing Agreement ("DSA") establishes the legal framework under which Participating Organizations can exchange messages through the HIN Platform, and sets forth the following approved reasons for which messages may be exchanged:

(a) By health care providers for Treatment, Payment and/or Health Care Operations consistent with the requirements set forth in HIPAA;
(b) Public health activities and reporting as permitted by HIPAA and other Applicable Laws and Standards;
(c) To facilitate the implementation of "Meaningful Use" criteria as specified in the American Recovery and Reinvestment Act of 2009 and as permitted by HIPAA;
(d) Uses and disclosures pursuant to an Authorization provided by the individual who is the subject of the Message or such individual's personal representative in accordance with HIPAA;
(e) By Data Sharing Organizations for any and all purposes, including but not limited to pilot programs and testing, provided that such purposes are consistent with Applicable Laws and Standards; and
(f) **For any additional purposes as specified in any Use Case, provided that such purposes are consistent with Applicable Laws and Standards**.

Under the DSA, "***Applicable Laws and Standards***" means all applicable federal, state, and local laws, statutes, acts, ordinances, rules, codes, standards, regulations and judicial or administrative decisions promulgated by any governmental or self-regulatory agency, including the State of Michigan, the Michigan Health Information Technology Commission, or the Michigan Health and Hospital Association, as any of the foregoing may be amended, modified, codified, reenacted, promulgated or published, in whole or in part, and in effect from time to time. "Applicable Laws and Standards" includes but is not limited to HIPAA; 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 Michigan Mental Health Code, at MCLA §§ 333.1748 and 333.1748a; and the Michigan Public Health Code, at MCL § 333.5131, 5114a.

It is each DSO's obligation and responsibility to ensure that it is aware of Applicable Laws and Standards as they pertain to the content of each message sent, and that its delivery of each message complies with the Applicable Laws and Standards. This means, for example, that if a Use Case is directed to the exchange

of physical health information that may be exchanged without patient authorization under HIPAA, the DSO must not deliver any message containing health information for which an express patient authorization or consent is required (e.g., mental or behavioral health information).

Disclaimer: The information contained in this implementation guide was current as of the date of the latest revision in the Document History in this guide. However, Medicare and Medicaid policies are subject to change and do so frequently. HL7 versions and formatting are also subject to updates. Therefore, links to any source documents have been provided within this guide for reference. MiHIN applies its best efforts to keep all information in this guide up-to-date. It is ultimately the responsibility of the Participating Organization and Sending Facilities to be knowledgeable of changes outside of MiHIN's control.