Delaware Health Information Network

Connectivity & Companion Guide

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Revision History

Name	*Date*	*Reason*
Erica Hutchinson	1/18/21	Document creation & specific Transformations
Erica Hutchinson	2/11/21	• Updated the Scope to include direction related to the addition of new reportable labs. • Updated the Error Handing section. • Updated the Process Flow diagram.

Erica Hutchinson	1/25/22	• Added
		  ○ Definitions, Abbreviations & Acronyms
		  ○ Introduction
		  ○ Getting Started

Erica Hutchinson	5/5/22	• Changed DRAFT watermark to Confidential • Added Appendix

Definitions, Abbreviations, and Acronyms

Abbreviation/acronym/term	*Meaning*
MLLP	(Minimum Lower Layer Protocol) is a protocol that is used for sharing HL7 messages using Transfer Control Protocol (TCP) and Internet Protocol (IP). It transfers information in a stream of bytes and requires a wrapping protocol for communications code.
TCP/IP	Transmission Control Protocol/Internet Protocol is a suite of communication protocols used to interconnect network devices on the internet or in a private computer network
SFTP	SSH File Transfer Protocol (also Secure File Transfer Protocol, or SFTP) is a network protocol that provides file access, file transfer, and file management over any reliable data stream
HTTPS	**Hypertext Transfer Protocol Secure** (**HTTPS**) is an extension of the Hypertext Transfer Protocol (HTTP). It is used for secure communication over a computer network and is widely used on the Internet. In HTTPS, the communication protocol is encrypted using Transport Layer Security (TLS) or, formerly, Secure Sockets Layer (SSL). The protocol is therefore also referred to as **HTTP over TLS**, or **HTTP over SSL**.
MSH	HL7 Message Header Segment - defines the intent, source, destination, and some specifics of the syntax of a message.
MSA	Message Acknowledgment - contains information sent while acknowledging another message
SFT	Software Segment - provides additional information about the software product(s) used as a Sending Application
PID	Patient Identification Segment - is used by all applications as the primary means of communicating patient identification information.
PV1	Patient Visit Segment - used by Registration/Patient Administration applications to communicate information on an account or visit-specific basis.
ORC	Common Order Segment - used to transmit fields that are common to all orders (all types of services that are requested).
OBR	Observation Request Segment - is used to transmit information specific to an order for a diagnostic study or observation, physical exam, or assessment.
OBX	Observation/Result Segment is used to transmit a single observation or observation fragment. It represents the smallest indivisible unit of a report. The OBX segment can also contain encapsulated data, e.g., a CDA document or a DICOM image.
MPI	Master Patient Index – Logic used by the DHIN to merge multiple demographic information for different data sending organizations for the same patient into a single ID
EID	Enterprise Identifier

Introduction

Scope

This guide is to be used for the development of data interfaces to transmit laboratory, radiology, pathology, cardiology, transcribed, admit/discharge/transfer, and continuity of care documents (CCD) test results to Delaware Health Information Network. As the health care industry evolves toward standards-based communications for clinical data, DHIN has recognized the need to move away from custom and proprietary methods and toward common standards that eliminate or substantially reduce the custom interface programming and program maintenance that may otherwise be required. The DHIN standard described in this companion guide is based on the Health Level Seven (HL7®) version 2.5.1 messaging standard for electronic data exchange in health care environments, which was designed to conform to the requirements of the American National Standards Institute (ANSI). During the development of the DHIN HL7 ADT & ORU result data exchange standard, a deliberate effort was made to support prior version implementations of HL7 for applications and systems that can generate HL7 release 2.2, 2.3, 2.3.1 and 2.4 extracts in addition to the 2.5.1 version that our standard is based upon. This document describes the elements of HL7 messages as they relate to the DHIN standard for data transmission of HL7 messages and is not intended to be an introduction to HL7 messages and standards. Readers unfamiliar with HL7 should first review the HL7 Version 2.5.1 Implementation Guide: Lab Results Interface (LRI) and/or the information describing the HL7 2.5.1 standard, available at hl7.org.

Audience

This document has been written to aid in designing and implementing HL7 transactions to meet DHIN processing standards. This guide is a constraint on the HL7 Version 2.5.1 Implementation Guides for both ORU & ADT messages. Submitters should refer to the implementation guides for exceptions that fall out of those standards specific to DHIN. Within this document, key data elements are identified, which DHIN requests all submitters to provide. By following these recommendations, submitters are enabled to more effectively complete testing and move to production deployment with DHIN.

Executive Summary

Connecting with the DHIN:

Submitting Admit/Discharge/Transfer (ADT), Unsolicited Observation Results (ORU) and CCD-A documents is available through multiple secure methods of data transfer.

Transmissions Options:

During the implementation process data sending organizations, must submit their files using one or more of the below listed methods.

1. SFTP – Secure File Transport Protocol using:
    a. Username/Password
    b. Public/Private Key Exchange
2. MLLP via TCP/IP – Minimal Lower Layer Protocol
    a. Secure Virtual Private Network (VPN)
3. Web Services
4. Hyper Text Protocol Secure (HTTPS)"
    a. Public/Private Key Exchange

Testing Process:

Once the initial setup has been completed, the data sender organization should begin to submit de-identified production quality messages. DHIN prefers to receive at least 20-50 messages for each ADT trigger to be sent and for each type of ORU message such as Lab, Path, Radiology etc.
Testing will also include actions such as the following but are not limited to:

1. ORU
    a. Partial to full results
    b. Results sent in error (in error processing)
    c. Correction of results
2. ADT
    a. Patient admits
    b. Patient Updates
    c. Patient Transfer
    d. Cancel Patient Transfer
    e. Patient Discharge

Once all test use cases have been successfully processed and both DHIN & the data sending organization has provided signoff on the test results. The data sending organization can request to move the interface to a production status. DHIN follows a strict change control process which occurs every Wednesday. If approved for production, the production deployment will either occur on a subsequent Thursday or Tuesday chosen by the data sender. All production deployments occur after regular hours.

Post Deployment Review:

All newly promoted technology will go through a post-production deployment review that will last at least fourteen business days. Barring any issues at the end of the specified time, the interface will then be moved to operational support. At that time, if any issues occur going forward the data sending organization should contact the DHIN Service Desk to open a ticket. Please see contact information below.

Service Desk Support
8:00 a.m. -1:00 a.m.
Phone: (32) 480-1770

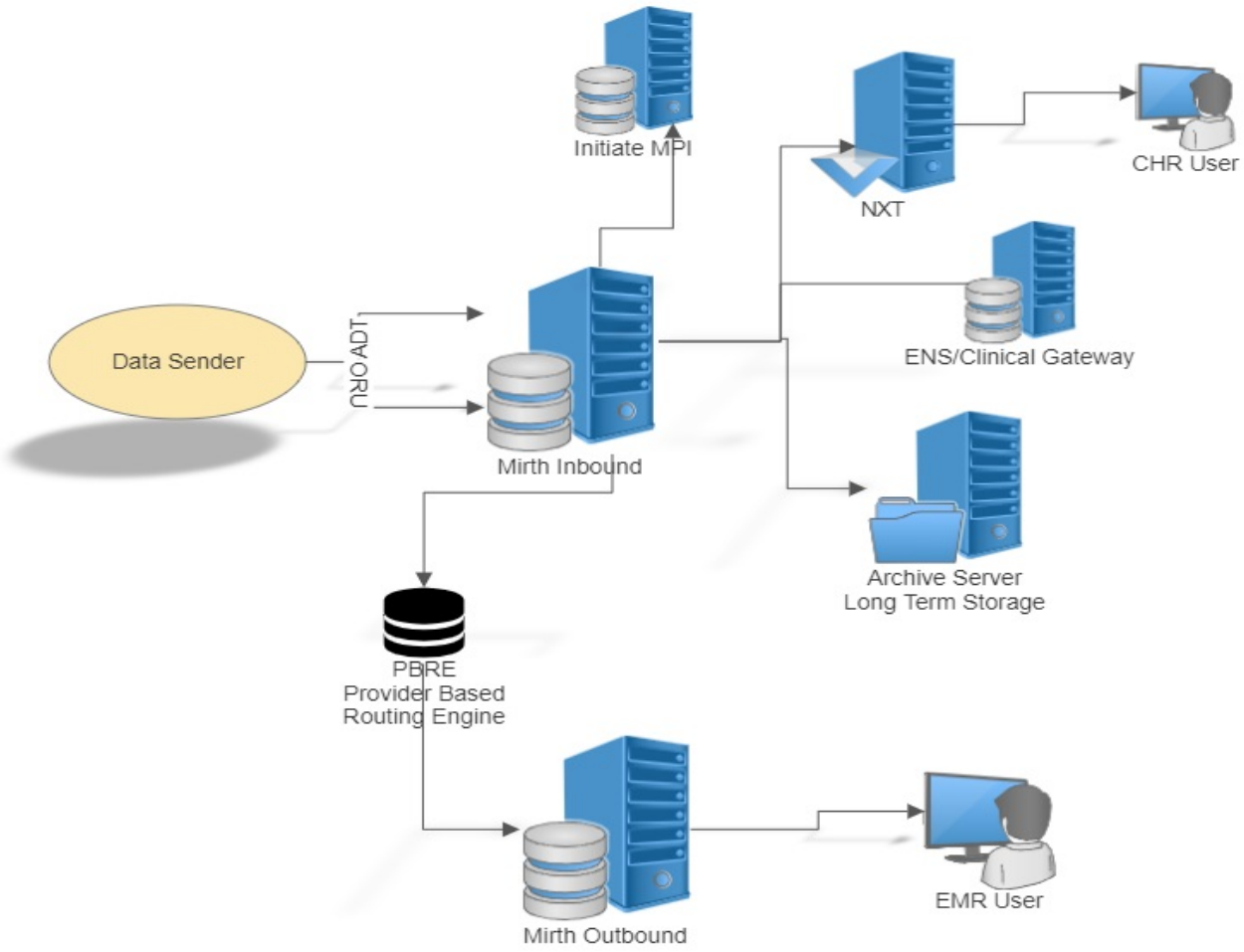
Email: servicedesk@dhin.org

Addressing File Transmission Failures

To ensure the integrity of the data received by the Health Information Exchange, The DHIN will reject messages that do not conform to the minimum standards set forth is this guide. Any message that is rejected must be corrected and resubmitted as soon as possible to ensure patient safety.

Messages received via our Mirth Connect engine will be rejected in the form of a NACK response back to the originating data sending system. All other messages received outside of the Mirth Connect environment that fail initial validation will be identified in a .csv file that will contain a message id from the original message and an error code/description.

Architecture Diagram: DHIN Standard Process Flow:



Initiate Master Patient Index (MPI)

Initiate MPI Patient Matching Rules:

The DHIN MPI uses probabilistic matching to identify patient records to add to an existing patient catalogue, create a new patient catalogue or generate a task for review by the Verato Auto Steward process. The following patient identifiers from the HL7 message are evaluated for this process. Any below listed value highlighted in red is a required field. If required fields are missing in the message the full message will be rejected using a NACK back to the originating system for correction and resubmission

1. Patient MRN ***(PID.3)***
2. Patient Name ***(PID.5)***
3. Patient Date of Birth ***(PID.7)***
4. Patient Gender **(PID.8)**
5. Patient Address **(PID.11)**
6. Patient Phone Number (PID.13 & PID.14) – Optional if PID.11 in its entirety is provided, otherwise it is required.
7. Patient Social Security No. (PID.19) ****when sent****

These values are compared to existing accounts, compiled, and assigned a weighted score. The record is considered a match and auto linked to the existing patient catalogue when the overall weighted score is 14.0 or above. If the score is between 9.1 and 13.9 a new enterprise ID (EID) is created, and a task is assigned for Verato Auto Steward. If the score is below a 9.1 a new enterprise ID is created.

Patient Demographic Data Enrichment:

Not all HL7 messages sent to the DHIN contain the necessary demographic information for display in the DHIN Community Health Record (CHR). To improve the quality of data provided to DHIN, patient enrichment is done using existing data stored in the MPI specific to the previous Data sending organizations active patient attributes. Patient enrichment is conducted on the following HL7 message segments if the field is received with a null value. If patient enrichment fails, the full message will be rejected using a NACK back to the originating system for correction and resubmission. The fields listed below can result in a rejected message if patient enrichment does not provide valid information.

1. Patient First Name, Last Name & Suffix fields
2. Patient Gender
3. Patient Social Security
4. Patient Date of Birth
5. Patient Race
6. Patient Marital Status
7. Patient Religion
8. Patient Address – Optional if PID.13 patient phone number is provided, otherwise it is required.
9. Patient Phone Numbers – Optional if PID.11 in its entirety is provided, otherwise it is.

Standard Admit/Discharge/Transfer (ADT)

ADT

MSH Message Header Segment:

MSH Seq	Name	R/O	Comments
1	Field Separator	R	Accepted value "|" ASCII(124)
2	Encoding Characters	R	**Position 1:** Component Separator "^" ASCII(94) **Position 2:** Repetition Separator "~" ASCII(126) **Position 3:** Escape "\" ASCII(92) **Position 4:** Sub-Component "&" ASCII(38)
3	Sending Application	R	Data sending organization application system
4	Sending Facility	R	Data sending organization source code
5	Receiving Application	R	"DHIN"
6	Receiving Facility	O	"DEHIE" (DE Health Information Exchange)
7	Date/Time Message	R	Date/Time messages generated from sending system. **Format:** "YYYYMMddHHmmss"
8	Security	O	
9 9.1 9.2	Message Type Type Event	R	Trigger type and event: **Ex:** ADT*^A01^ADT_A01* Example Value must = "ADT" Example Value must = "A01"
10	Message Control ID	R	Should be unique
11 11.1 11.2	Processing ID Processing ID Mode	O	Acceptable values: "P" = Production or "T" = Test
12	Version ID	R	2.5.1
13	Sequence Number	NS	Not supported
14	Continuation Pointer	NS	Not supported
15	Accept Acknowledgement Type	NS	Not supported
16	Application Acknowledgement Type	NS	Not supported
17	Country Code	R	USA
18	Character Set	NS	Not supported
19	Principal Language of Message	NS	Not supported
20	Alternate Character Set	NS	Not supported
21 21.1 21.2 21.3 21.4	Message Profile Identifier Entity Identifier Namespace ID Universal ID Universal ID Type	O	

EVN Event Type Segment:

EVN Seq	Name	R/O	Comments
1	Event Type Code	R	* Not supported by DHIN A01 - ADT/ACK - Admit/visit notification A02 - ADT/ACK - Transfer a patient A03 - ADT/ACK - Discharge/end visit A04 - ADT/ACK - Register a patient A05 - ADT/ACK - Pre-admit a patient A06 - ADT/ACK - Change an outpatient to an inpatient A07 - ADT/ACK - Change an inpatient to an outpatient A08 - ADT/ACK - Update patient information A09 - ADT/ACK - Patient departing - tracking A10 - ADT/ACK - Patient arriving - tracking A11 - ADT/ACK - Cancel admit/visit notification A12 - ADT/ACK - Cancel transfer A13 - ADT/ACK - Cancel discharge/end visit A14 - ADT/ACK - Pending admit A15 - ADT/ACK - Pending transfer A16 - ADT/ACK - Pending discharge A17 - ADT/ACK - Swap patients* A18 - ADT/ACK - Merge patient information (for backward compatibility only)* A19 - QRY/ADR - Patient query* A20 - ADT/ACK - Bed status update A21 - ADT/ACK - Patient goes on a "leave of absence" A22 - ADT/ACK - Patient returns from a "leave of absence" A23 - ADT/ACK - Delete a patient record* A24 - ADT/ACK - Link patient information* A25 - ADT/ACK - Cancel pending discharge A26 - ADT/ACK - Cancel pending transfer A27 - ADT/ACK - Cancel pending admit A28 - ADT/ACK - Add person information* A29 - ADT/ACK - Delete person information* A30 - ADT/ACK - Merge person information (for backward compatibility only) * A31 - ADT/ACK - Update person information A32 - ADT/ACK - Cancel patient arriving – tracking A33 - ADT/ACK - Cancel patient departing - tracking A34 - ADT/ACK - Merge patient information – patient ID only (For backward compatibility only) * A35 - ADT/ACK - Merge patient information – account number only (for backward compatibility only) * A36 - ADT/ACK - Merge patient information – patient ID and account number (for backward compatibility only) * A37 - ADT/ACK - Unlink patient information*
2	Recorded Date/Time	R	**Format:** "YYYYMMDDHHmmss"
3	Date/Time Planned Event	O	**Format:** "YYYYMMDDHHmmss"
4	Event Reason Code	O	**Table -** 0062
5	Operator ID	O	
6	Event Occurred	O	**Format:** "YYYYMMDDHHmmss"
7	Event Facility	O	

PID Patient Identification Segment:

PID Seq	Name	R/O	Comments
1	Set ID – PID	R	1
2 2.1 2.2 2.3 2.4 2.5	External Patient ID Patient ID Check Digit Check Digit Scheme Assigning Authority Identifier Type	O	Reserved for Initiate MPI source ID DHIN will hard code the field to "MPI"
3 3.1 3.2 3.3 3.4 3.5 3.6	Internal Patient ID (MRN) Patient ID Check Digit Check Digit Scheme Assigning Authoring Identifier Type Assigning Facility	R R O O R O O	 Source System MRN DHIN will hard code the field to "DHINXXXX"
4 4.1	Alternate Patient ID Patient ID	O	
5 5.1 5.2 5.3 5.4 5.5 5.6	Patient Name Last Name First Name Middle Name Suffix Prefix Degree	R R R O O O O	This segment is required for patient matching logic in Initiate MPI.
6	Mother's Maiden Name	O	This segment is optional and is used for patient matching logic in Initiate MPI
7	Date of Birth	R	This segment is required and is used for patient matching logic in Initiate MPI
8	Sex	R	This segment is required and is used for patient matching logic in Initiate MPI. **Acceptable Values:** • M – Male • F – Female • U – Unknown
9	Patient Alias	O	DHIN uses PID.5 Patient Name for patient matching
10	Race	R	DHIN will enrich this segment if it is null in the HL7 using active values from the MPI.
11 11.1 11.2 11.3 11.4 11.5 11.6 11.7	Patient Address Address Line 1 Address Line 2 City State Zip Code Country Type	R R O R R R R O	This segment is required for patient matching logic. The MPI evaluates data provided here to increase the probability of a positive match. Only the first iteration of this segment is evaluated.
12	Country Code	O	
13	Home Phone Number	R	This segment is required for patient matching. DHIN's patient matching algorithm evaluates data provided here to increase

			the probability of a positive match. Only the first iteration of this segment is evaluated.
14	Business Phone Number	O	This segment is optional. DHIN's patient matching algorithm evaluates data provided here to increase the probability of a positive match. Only the first iteration of this segment is evaluated.
15	Language	O	DHIN will enrich this field based on active historical information provided from this source. See both DHIN Patient Enrichment & DHIN Standard Normalization.
16	Marital Status	O	DHIN will enrich this field based on active historical information provided from this source. See both DHIN Patient Enrichment & DHIN Standard Normalization.
17	Religion	O	DHIN will enrich this field based on active historical information provided from this source. See both DHIN Patient Enrichment & DHIN Standard Normalization.
18 18.1 18.2 18.3 18.4 18.5 18.6	Patient Account Number Patient Account Number Check Digit Check Digit Scheme Assigning Authority Identifier Type Assigning Facility	R R O O O O O	This segment is required to assist in result matching
19	Patient Social Security Number	O	This segment is optional however patient matching logic evaluates data provided here to increase the probability of a positive match. Only the first iteration of this segment is evaluated.
20	Driver's License Number	NS	Not supported
21	Mother's Identifier	NS	Not supported
22	Ethnic Group	R	This field is required by the Department of Public Health.
23	Birthplace	O	
24	Multiple Birth Indicator	O	**Acceptable Values:** Y – Yes N – No
25	Birth Order	O	
26	Citizenship	O	
27	Military Status	NS	Not supported
28	Nationality	O	
29	Patient Death Date/Time	O	
30	Patient Death Indicator	O	

PD1 Patient Additional Demographic Segment:

PD1 Seq	Name	R/O	Comments
1	Living Dependency	O	**Table - 0223**
2	Living Arrangement	O	**Table - 0220**
3	Patient Primary Facility	O	
3.1	Organization Name	O	
3.2	Organization Name Type Code	O	**Table – 0204**
3.3	ID Number	O	**Table - 0061**
3.4	Check Digit	O	**Table - 0203**
3.5	Check Digit Scheme	O	
3.6	Assigning Authority	O	
3.7	Identifier Type Code	O	
3.8	Assigning Facility	O	
3.9	Name Representation Code	O	**Table - 0465**
3.10	Organization Identifier	O	
4	Patient Primary Care Provider Name & ID		
4.1	ID Number	O	
4.2	Family Name	O	
4.3	Given Name	O	
4.4	Second & further given names or initials	O	
4.5	Suffix	O	
4.6	Prefix	O	
4.7	Degree	O	**Table - 0360**
4.8	Source Table	O	
4.9	Assigning Authority	O	
4.10	Name Type Code	O	**Table - 0200**
4.11	Identifier Check Digit	O	
4.12	Check Digit Scheme	O	**Table - 0061**
4.13	Identifier Type Code	O	**Table - 0203**
4.14	Assigning Facility	O	
4.15	Name Representation Code	O	**Table - 0465**
4.16	Name Context	O	
4.17	Name Validity Range	O	
4.18	Name Assembly Order	O	**Table - 0444**
4.19	Effective Date	O	
4.20	Expiration Date	O	
4.21	Professional Suffix	O	
4.22	Assigning Jurisdiction	O	
4.23	Assigning Agency or Department	O	
5	Student Indicator	O	**Table - 0231**
6	Handicap	O	**Table - 0295**
7	Living Will Code	O	**Table - 0315**
8	Organ Donor Code	O	**Table - 0316**
9	Separate Bill	O	**Acceptable Values:** Y – Yes N – No
10	Duplicate Patient	O	
11	Publicity Code	O	**Table - 0215**
12	Protection Indicator	O	**Acceptable Values:** Y – Yes N – No

13	Protection Indicator Effective Date	O	**Format:** YYYYMMDD
14	Place of Worship		
14.1	Organization Name	O	
14.2	Organization Name Type Code	O	**Table –** 0204
14.3	ID Number	O	
14.4	Check Digit	O	
14.5	Check Digit Scheme	O	**Table -** 0061
14.6	Assigning Authority	O	**Table -** 0363
14.7	Identifier Type Code	O	**Table -** 0203
14.8	Assigning Facility	O	
14.9	Name Representation Code	O	**Table -** 0465
14.10	Organization Identifier	O	
15	Advance Directive Code		**Table -** 0435
15.1	Identifier	O	
15.2	Text	O	
15.3	Name of Coding System	O	**Table -** 396
15.4	Alternate Identifier	O	
15.5	Alternate Text	O	
15.6	Name of Alternate Coding System	O	**Table -** 0396
16	Immunization Registry Status	O	**Table -** 0441
17	Immunization Registry Status Effective Date	O	**Format:** YYYYMMDD
18	Publicity Code Effective Date	O	**Format:** YYYYMMDD
19	Military Branch	O	**Table -** 0140
20	Military Rank/Grade	O	**Table -** 0141
21	Military Status	O	**Table -** 0142

ROL Role Segment:

ROL Seq	Name	R/O	Comments
1	Role Instance ID	C	
1.1	Entity Identifier	O	
1.2	Namespace ID	O	
1.3	Universal ID	C	
1.4	Universal ID Type	C	**Table - 0301**
2	Action Code	R	**Table - 0287**
3	Role – ROL	R	**Table - 0443**
4	Role Person	R	
4.1	ID Number	O	
4.2	Family Name	O	
4.3	Given Name	O	
4.4	Second & further given names or initials	O	
4.5	Suffix	O	
4.6	Prefix	O	
4.7	Degree	O	**Table - 0360**
4.8	Source Table	O	
4.9	Assigning Authority	O	
4.10	Name Type Code	O	**Table - 0200**
4.11	Identifier Check Digit	O	
4.12	Check Digit Scheme	O	**Table - 0061**
4.13	Identifier Type Code	O	**Table - 0203**
4.14	Assigning Facility	O	
4.15	Name Representation Code	O	**Table - 0465**
4.16	Name Context	O	
4.17	Name Validity Range	O	
4.18	Name Assembly Order	O	**Table - 0444**
4.19	Effective Date	O	
4.20	Expiration Date	O	
4.21	Professional Suffix	O	
4.22	Assigning Jurisdiction	O	
4.23	Assigning Agency or Department	O	
5	Role Begin Date/Time	O	**Format:** "YYYYMMDDHHMMss"
6	Role End Date/Time	O	**Format:** "YYYYMMDDHHMMss"
7	Role Duration	O	
8	Role Action Reason	O	
9	Provider Type	O	
10	Organization Unit Type	O	
11	Office/Home Address/Birthplace	O	
12	Phone	O	

NK1 Next of Kin Segment

NK1 Seq	Name	R/O	Comments
1	Set ID – PID	R	Starts at 1
2	NK Name	O	
2.1	Family Name	R	
2.2	Given Name	R	
2.3	Middle Name	O	
2.4	Suffix	O	
2.5	Prefix	O	
3	Relationship	O	**Table - 0063**
4	Address	O	
4.1	Address Line 1	R	
4.2	Address Line 2	O	
4.3	City	R	
4.4	State	R	
4.5	Zip Code	R	
4.6	Country	R	**Table - 0399**
4.7	Type	O	**Table - 0190**
5	Phone Number	O	
6	Business Phone Number	O	
7	Contact Role	O	**Table - 0131**
8	Start Date	O	
9	End Date	O	

PV1 Patient Visit Segment:

PV1 Seq	Name	R/O	Comments
1	Set ID – PID	R	Starts at 1
2	Patient Class	R	**Table - 0004** *Note additional code set values will be mapped to the above listed Standard Patient Administration HL7 Codes (Patient Administration Codes Patient Class (PV1.2))
3	Patient Location	O	
3.1	Point of Service Location	O	
3.2	Patient Room	O	
3.3	Patient Bed	O	
3.4	Facility ID	O	
3.5	Bed Status	O	
3.6	Location Type	O	
3.7	Building	O	
3.8	Floor	O	
3.9	Location Description	O	
3.10	Comprehensive Location Identifier	O	
3.11	Assigning Authority for Location	O	

4	Admission Type	O	**Table - 0007** *Note additional code set values will be mapped to the above listed Standard Patient Administration HL7 Codes (Patient Administration Codes Admit Type (PV1.4))
5	Pre-Admit Number	O	
5.1	Id Number	O	
5.2	Check Digit	O	
5.3	Check Digit Scheme	O	**Table - 0061**
5.4	Assigning Authority	O	
5.5	Identifier Type Code	O	**Table - 0203**
5.6	Assigning Facility	O	
5.7	Effective Date	O	
5.8	Expiration Date	O	
5.9	Assigning Jurisdiction	O	
5.10	Assigning Agency or Department	O	
6	Prior Patient Location	O	
6.1	Point of Care	O	
6.2	Room	O	
6.3	Bed	O	
6.4	Facility	O	
6.5	Location Status	O	
6.6	Person Location Type	C	**Table - 0305**
6.7	Building	O	
6.8	Floor	O	
6.9	Location Description	O	
6.10	Comprehensive Location Identifier	O	
6.11	Assigning Authority for Location	O	
7	Attending Doctor	CO	DHIN will only acknowledge the first iteration of this field. The value in this field will be used to deliver results downstream outbound to interested providers associated with the patient. If PV1.7 is sent PV1.7.1 & PV1.7.2 are required. DHIN will attempt to enrich the ORU message with ADT messages received from source if they are sent to the DHIN. See Provider Enrichment.
7.1	Attending Doctor ID	R	
7.2	Last Name	R	
7.3	First Name	R	
7.4	Middle Name	O	
7.5	Prefix	O	
7.6	Suffix	O	
8	Referring Doctor	CO	DHIN will only acknowledge the first iteration of this field. The value in this field will be used to deliver results downstream outbound to interested providers associated with the patient. If PV1.8 is sent PV1.8.1 & PV1.8.2 are required. DHIN will attempt to enrich the ORU message with ADT messages received from source if they are sent to the DHIN. See Provider Enrichment.
8.1	Referring Doctor ID	R	
8.2	Last Name	R	
8.3	First Name	R	
8.4	Middle Name	O	
8.5	Prefix	O	
8.6	Suffix	O	

9	Consulting Doctor	CO	DHIN will only acknowledge the first iteration of this field. The value in this field will be used to deliver results downstream outbound to interested providers associated with the patient. If PV1.8 is sent PV1.9.1 & PV1.9.2 are required. DHIN will attempt to enrich the ORU message with ADT messages received from source if they are sent to the DHIN. See Provider Enrichment.
9.1	Consulting Doctor ID	R	
9.2	Last Name	R	
9.3	First Name	R	
9.4	Middle Name	O	
9.5	Prefix	O	
9.6	Suffix	O	
10	Hospital Service	O	**Table - 0069** *Note additional code set values will be mapped to the above listed Standard Patient Administration HL7 Codes (Patient Administration Codes Hospital Service (PV1.10))
11	Temporary Location	N	
12	Pre-Admit Test Indicator	O	
13	Re-Admission Indicator	O	**Table - 0092**
14	Admission Source	O	**Table - 0023** *Note additional code set values will be mapped to the above listed Standard Patient Administration HL7 Codes (Patient Administration Codes Admit Source (PV1.14))
15	Ambulatory Status	O	**Table - 0009**
16	VIP Indicator	O	
17	Admitting Doctor	CO	DHIN will only acknowledge the first iteration of this field. The value in this field will be used to deliver results downstream outbound to interested providers associated with the patient. If PV1.17 is sent PV1.17.1 & PV1.17.2 are required. DHIN will attempt to enrich the ORU message with ADT messages received from source if they are sent to the DHIN. See Provider Enrichment.
17.1	Consulting Doctor ID	R	
17.2	Last Name	R	
17.3	First Name	R	
17.4	Middle Name	O	
17.5	Suffix	O	
17.6	Prefix	O	
18	Patient Type	O	DHIN will evaluate codes set information provided by the data sending organization
19	Visit Number	R	This field is used for result matching and provider enrichment. Can be populated with the value from PID.18 when applicable.
19.1	Id Number	R	
20	Financial Class	O	
20.1	Financial Class Code	R	
20.2	Effective Date	O	
21	Charge Price Indicator	NS	Not Supported
22	Courtesy Code	NS	Not Supported
23	Credit Rating	NS	Not Supported
24	Contract Code	O	
25	Contract Effective Date	O	
26	Contract Amount	O	

27	Contract Period	O	
28	Interest Code	O	
29	Transfer to Bad Debt Code	O	
30	Transfer to Bad Debt Date	O	
31	Bad Debt Agency Code	O	
32	Bad Debt Transfer Amount	O	
33	Bad Debt Recover Amount	O	
34	Delete Account Identifier	NS	Not Supported
35	Delete Account Date	NS	Not Supported
36	Discharge Disposition	O	**Table - 0112** *Note additional code set values will be mapped to the above listed Standard Patient Administration HL7 Codes (Patient Administration Codes Discharge Disposition (PV1.36))
37 37.1 37.2	Discharge to Location Discharge Location Effective Date	CO R O	
38 38.1 38.2 38.3 38.4 38.5 38.6	Diet Type Identifier Text Name of Coding System Alternate Identifier Alternate Text Name of Alternate Coding System	O O O O O O O	 **Table - 0396** **Table - 0396**
39	Servicing Facility	O	
40	Bed Status	O	**Table - 0116**
41	Account Status	O	
42	Pending Location	O	
43	Prior Temporary Location	O	
44	Admit Date/Time	R	
45	Discharge Date/Time	CO	**This field is optional, however; for ADT^03 transactions it is required.** The CHR will only display the value of "Finished" when it is populated on the discharge transaction.
46	Current Patient Balance	N	Not Supported
47	Total Charges	N	Not Supported
48	Total Adjustment	N	Not Supported
49	Total Payments	N	Not Supported
50	Alternate Visit ID	O	
51	Visit Indicator	O	**Table - 0326**
52	Other Healthcare Providers	O	

PV2 Patient Visit – Additional Information Segment:

PV2 Seq	Name	R/O	Comments
1	Prior Pending Location	O	
1.1	Point of Care	O	
1.2	Room	O	
1.3	Bed	O	
1.4	Facility	O	
1.5	Location Status	O	
1.6	Patient Location Type	C	**Table - 0305**
1.7	Building	O	
1.8	Floor	O	
1.9	Location Disposition	O	
1.10	Comprehensive Location Identifier	O	
1.11	Assigning Authority for Location	O	
2	Accommodation Code	O	
2.1	Identifier	O	
2.2	Text	O	
2.3	Name of Coding System	O	**Table - 0396**
2.4	Alternate Identifier	O	
2.5	Alternate Text	O	
2.6	Name of Alternate Coding System	O	**Table - 0396**
3	Admit Reason	O	
3.1	Identifier	O	
3.2	Text	O	
3.3	Name of Coding System	O	**Table - 0396**
3.4	Alternate Identifier	O	
3.5	Alternate Text	O	
3.6	Name of Alternate Coding System	O	**Table - 0396**
4	Transfer Reason	O	
4.1	Identifier	O	
4.2	Text	O	
4.3	Name of Coding System	O	**Table - 0396**
4.4	Alternate Identifier	O	
4.5	Alternate Text	O	
4.6	Name of Alternate Coding System	O	**Table - 0396**
5	Patient Valuables	O	
6	Patient Valuables Location	O	
7	Visit User Code	O	**Table - 0130**
8	Expected Admit Date/Time	O	
9	Expected Discharge Date/Time	O	
10	Estimated Length of Inpatient Stay	O	
11	Actual Length of Inpatient Stay	O	
12	Visit Description	O	
13	Referral Source Code	O	
14	Previous Service Date	O	
15	Employment Illness Related Indicator	O	**Table - 0136**
16	Purge Status Code	O	**Table - 0213**

17	Purge Status Date	O	
18	Special Program Code	O	**Table - 0214**
19	Retention Indicator	O	**Table - 0136**
20	Expected Number of Insurance Plans	O	
21	Visit Publicity Code	O	**Table - 0215**
22	Visit Protection Indicator	O	**Table - 0136**
23	Clinic Organization Name	O	
23.1	Organization Name	O	
23.2	Organization Type Code	O	**Table - 0204**
23.3	Id Number	O	
23.4	Check Digit	O	
23.5	Check Digit Scheme	O	**Table - 0061**
23.6	Assigning Authority	O	
23.7	Identifier Type Code	O	**Table - 0203**
23.8	Assigning Facility	O	
23.9	Name Representation Code	O	
23.10	Organization Identifier	O	**Table - 0465**
24	Patient Status Code	O	**Table - 0216**
25	Visit Priority Code	O	**Table - 0217**
26	Previous Treatment Date	O	
27	Expected Discharge Disposition	O	**Table - 0112**
28	Signature on File Date	O	
29	First Similar Illness Date	O	
30	Patient Charge Adjustment Code	O	
30.1	Identifier	O	
30.2	Text	O	
30.3	Name of Coding System	O	**Table - 0396**
30.4	Alternate Identifier	O	
30.5	Alternate Text	O	
30.6	Name of Alternate Coding System	O	**Table - 0396**
31	Recurring Service Code	O	
32	Billing Media Code	O	**Table - 0136**
33	Expected Surgery Date and Time	O	
34	Military Partnership Code	O	**Table - 0136**
35	Military Non-Availability Code	O	**Table - 0136**
36	Newborn Baby Indicator	O	**Table - 0136**
37	Baby Detained Indicator	O	**Table - 0136**
38	Mode of Arrival Code	O	
38.1	Identifier	O	
38.2	Text	O	
38.3	Name of Coding System	O	**Table - 0396**
38.4	Alternate Identifier	O	
38.5	Alternate Text	O	
38.6	Name of Alternate Coding System	O	**Table - 0396**
39	Recreational Drug Use Code	O	**Table - 0431**
39.1	Identifier	O	
39.2	Text	O	

39.3	Name of Coding System	O	**Table - 0396**
39.4	Alternate Identifier	O	
39.5	Alternate Text	O	
39.6	Name of Alternate Coding System	O	**Table - 0396**
40	Admission Level of Care Code	O	**Table - 0432**
40.1	Identifier	O	
40.2	Text	O	
40.3	Name of Coding System	O	**Table - 0396**
40.4	Alternate Identifier	O	
40.5	Alternate Text	O	**Table - 0396**
40.6	Name of Alternate Coding System	O	
41	Precaution Code	O	**Table - 0433**
41.1	Identifier	O	
41.2	Text	O	
41.3	Name of Coding System	O	**Table - 0396**
41.4	Alternate Identifier	O	
41.5	Alternate Text	O	
41.6	Name of Alternate Coding System	O	**Table - 0396**
42	Patient Condition Code	O	**Table - 0434**
42.1	Identifier	O	
42.2	Text	O	
42.3	Name of Coding System	O	**Table - 0396**
42.4	Alternate Identifier	O	
42.5	Alternate Text	O	
42.6	Name of Alternate Coding System	O	**Table - 0396**
43	Living Will Code	O	**Table - 0315**
44	Organ Donor Code	O	**Table - 0316**
45	Advance Directive Code	O	**Table - 0435**
45.1	Identifier	O	
45.2	Text	O	
45.3	Name of Coding System	O	**Table - 0396**
45.4	Alternate Identifier	O	
45.5	Alternate Text	O	
45.6	Name of Alternate Coding System	O	**Table - 0396**
46	Patient Status Effective Date	O	
47	Expected LOA Return Date/Time	O	
48	Expected Pre-Admission Testing Date/Time	O	
49	Notify Clergy Code	O	**Table - 0534**

AL1 Patient Allergy Information:

AL1 Seq	Name	R/O	Comments
1	Set ID – AL1	R	
2	Allergen Type Code	O	**Table - 0127**
2.1	Identifier	O	
2.2	Text	O	
2.3	Name of Coding System	O	**Table - 0396**
2.4	Alternate Identifier	O	
2.5	Alternate Text	O	
2.6	Name of Alternate Coding System	O	**Table - 0396**
3	Allergen Code/Mnemonic/Description	R	
3.1	Identifier	O	
3.2	Text	O	
3.3	Name of Coding System	O	**Table - 0396**
3.4	Alternate Identifier	O	
3.5	Alternate Text	O	
3.6	Name of Alternate Coding System	O	**Table - 0396**
4	Allergy Severity Code	O	
4.1	Identifier	O	
4.2	Text	O	
4.3	Name of Coding System	O	**Table - 0396**
4.4	Alternate Identifier	O	
4.5	Alternate Text	O	
4.6	Name of Alternate Coding System	O	**Table - 0396**
5	Allergy Reaction Code	O	
6	Identification Date	B	**Format:** YYYYMMDD

DG1 Diagnosis:

DG1 Seq	Name	R/O	Comments
1	Set ID – DG1	R	
2	Diagnosis Coding Method	B	
3	Diagnosis Code	O	
3.1	Identifier	O	
3.2	Text	O	
3.3	Name of Coding System	O	**Table - 0396**
3.4	Alternate Identifier	O	
3.5	Alternate Text	O	
3.6	Name of Alternate Coding System	O	**Table - 0396**
4	Diagnosis Description	B	
5	Diagnosis Date/Time	O	
5.1	Time	R	**Format:** YYYY[MM[DD[HH[MM[SS[.S[S[S[S]]]]]]]]][+/-ZZZZ]
5.2	Degree of Precision	B	**Table - 0529**
6	Diagnosis Type	R	**Table - 0052**
7	Major Diagnostic Category	B	
7.1	Identifier	O	
7.2	Text	O	
7.3	Name of Coding System	O	**Table - 0396**
7.4	Alternate Identifier	O	
7.5	Alternate Text	O	
7.6	Name of Alternate Coding System	O	**Table - 0396**
8	Diagnosis Related Group	B	
8.1	Identifier	O	
8.2	Text	O	
8.3	Name of Coding System	O	**Table - 0396**
8.4	Alternate Identifier	O	
8.5	Alternate Text	O	
8.6	Name of Alternate Coding System	O	**Table - 0396**
9	DRG Approval Indicator	B	**Table - 0136**
10	DRG Grouper Review Code	B	
11	Outlier Type	B	
11.1	Identifier	O	
11.2	Text	O	
11.3	Name of Coding System	O	**Table - 0396**
11.4	Alternate Identifier	O	
11.5	Alternate Text	O	
11.6	Name of Alternate Coding System	O	**Table - 0396**
12	Outlier Days	B	
13	Outlier Cost	B	
13.1	Price	R	
13.2	Price Type	O	**Table - 0205**
13.3	From Value	O	
13.4	To Value	O	
13.5	Range Units	O	
13.6	Range Type	O	**Table - 0298**
14	Grouper Version and Type	B	

15	Diagnosis Priority	O	**Table - 0359**
16 16.1 16.2 16.3 16.4 16.5 16.6	Diagnosing Clinician ID Number Family Name Given Name Second and Further Given Names or Initials Suffix Prefix	O O O O O O O	
17	Diagnosis Classification	O	**Table - 0228**
18	Confidential Indicator	O	**Table - 0136**
19 19.1 19.2	Attestation Date/Time Time Degree of Precision	O R B	 **Format:** YYYY[MM[DD[HH[MM[SS[.S[S[S[S]]]]]]]]][+/-ZZZZ] **Table - 0529**
20 20.1 20.2 20.3 20.4	Diagnosis Identifier Entity Identifier Namespace ID Universal ID Universal ID Type	C O O C C	 **Table - 0301**
21	Diagnosis Action Code	C	**Table - 0206**

PR1 Procedure:

PR1 Seq	Name	R/O	Comments
1	Set ID – PR1	R	
2	Procedure Coding Method	B	
3	Procedure Code	R	
3.1	Identifier	O	
3.2	Text	O	
3.3	Name of Coding System	O	**Table - 0396**
3.4	Alternate Identifier	O	
3.5	Alternate Text	O	
3.6	Name of Alternate Coding System	O	**Table - 0396**
4	Procedure Description	B	
5	Procedure Date/Time	R	
6	Procedure Functional Type	O	**Table - 0230**
7	Procedure Minutes	O	
8	Anesthesiologist	O	
8.1	Id Number		
8.2	Family Name		
8.3	Given Name		
8.4	Second and Further Given Names or Initials		
8.5	Suffix		
8.6	Prefix		
9	Anesthesia Code	O	
10	Anesthesia Minutes	O	
11	Surgeon	O	
11.1	Id Number	R	
11.2	Family Name	R	
11.3	Given Name	R	
11.4	Second and Further Given Names or Initials	O	
11.5	Suffix	O	
11.6	Prefix	O	
12	Procedure Practitioner	O	
12.1	Id Number	R	
12.2	Family Name	R	
12.3	Given Name	R	
12.4	Second and Further Given Names or Initials	O	
12.5	Suffix	O	
12.6	Prefix	O	
13	Consent Code	O	
13.1	Identifier	O	
13.2.	Text	O	
13.3	Name of Coding System	O	**Table - 0396**
13.4	Alternate Identifier	O	
13.5	Alternate Text	O	
13.6	Name of Alternate Coding System	O	**Table - 0396**
14	Procedure Priority	O	**Table - 0418**
15	Associated Diagnosis Code	O	
15.1	Identifier	O	
15.2	Text	O	

15.3	Name of Coding System	O	**Table - 0396**
15.4	Alternate Identifier	O	
15.5	Alternate Text	O	
15.6	Name of Alternate Coding System	O	**Table - 0396**
16	Procedure Code Modifier	O	
16.1	Identifier	O	
16.2	Text	O	
16.3	Name of Coding System	O	**Table - 0396**
16.4	Alternate Identifier	O	
16.5	Alternate Text	O	
16.6	Name of Alternate Coding System	O	**Table - 0396**
17	Procedure DRG Type	O	**Table - 0416**
18	Tissue Type Code	O	
18.1	Identifier	O	
18.2	Text	O	
18.3	Name of Coding System	O	**Table - 0396**
18.4	Alternate Identifier	O	
18.5	Alternate Text	O	
18.6	Name of Alternate Coding System	O	**Table - 0396**
19	Procedure Identifier	C	
19.1	Entity Identifier	O	
19.2	Namespace Id	O	
19.3	Universal Id	C	
19.4	Universal Id Type	C	**Table - 0301**
20	Procedure Action Code	C	**Table - 0206**

GT1 Guarantor:

GT1 Seq	Name	R/O	Comments
1	Set Id – GT1	R	
2	Guarantor Number	O	
2.1	Id Number	R	
2.2	Check Digit	O	
2.3	Check Digit Scheme	O	**Table - 0061**
2.4	Assigning Authority	O	
2.5	Identifier Type Code	O	**Table - 0203**
2.6	Assigning Facility	O	
2.7	Effective Date	O	
2.8	Expiration Date	O	
2.9	Assigning Jurisdiction	O	
2.10	Assigning Agency or Department	O	
3	Guarantor Name	O	
3.1	Family Name	R	
3.2	Given Name	R	
3.3	Second and Further Given Names or Initials	O	
3.4	Suffix	O	
3.5	Prefix	O	
4	Guarantor Spouse Name	O	
4.1	Family Name	R	
4.2	Given Name	R	
4.3	Second and Further Given Names or Initials	O	
4.4	Suffix	O	
4.5	Prefix	O	
5	Guarantor Address	O	
5.1	Street Address	R	
5.2	Other Designation	O	
5.3	City	R	
5.4	State	R	
5.5	Zip or Postal Code	R	
5.6	Country	O	**Table - 0399**
5.7	Address Type	O	**Table - 0190**
5.8	Other Geographical Designation	O	
5.9	County/Parish Code	O	
5.10	Census Tract	O	
5.11	Address Representation Code	O	**Table - 0465**
5.12	Address Validity Range	O	
5.13	Effective Date	O	
5.14	Expiration Date	O	
6	Guarantor Phone Number – Home	O	
6.1	Telephone Number	B	
6.2	Telecommunication Use Code	O	**Table - 0201**
6.3	Telecommunication Equipment Code	O	**Table - 0202**
6.4	Email Address	O	
6.5	Country Code	O	
6.6	Area/City Code	O	
6.7	Local Number	O	
6.8	Extension	O	
6.9	Any Text	O	

6.10	Extension Prefix	O	
6.11	Speed Dial Code	O	
6.12	Unformatted Telephone Number	C	
7	Guarantor Phone Number – Business	O	
7.1	Telephone Number	B	
7.2	Telecommunication Use Code	O	**Table - 0201**
7.3	Telecommunication Equipment Code	O	**Table - 0202**
7.4	Email Address	O	
7.5	Country Code	O	
7.6	Area/City Code	O	
7.7	Local Number	O	
7.8	Extension	O	
7.9	Any Text	O	
7.10	Extension Prefix	O	
7.11	Speed Dial Code	O	
7.12	Unformatted Telephone Number	C	
8	Guarantor Date/Time of Birth	O	
8.1	Time	R	
8.2	Degree of Precision	B	**Table - 0529**
9	Guarantor Administrative Sex	O	**Table - 0001**
10	Guarantor Type	O	
11	Guarantor Relationship	O	
11.1	Identifier	O	
11.2	Text	O	
11.3	Name of Coding System	O	**Table - 0396**
11.4	Alternate Identifier	O	
11.5	Alternate Text	O	
11.6	Name of Alternate Coding System	O	**Table - 0396**
12	Guarantor Social Security	O	
13	Guarantor Date - Begin	O	
14	Guarantor Date - End	O	
15	Guarantor Priority	O	
16	Guarantor Employer Name	O	
16.1	Family Name	R	
16.2	Given Name	O	
16.3	Second and Further Given Names or Initials	O	
16.4	Suffix	O	
16.5	Prefix	O	
17	Guarantor Employer Address	O	
17.1	Street Address	R	
17.2	Other Designation	O	
17.3	City	R	
17.4	State	R	
17.5	Zip or Postal Code	R	
17.6	Country	O	**Table - 0399**
17.7	Address Type	O	**Table - 0190**
17.8	Other Geographical Designation	O	
17.9	County/Parish Code	O	
17.10	Census Tract	O	
17.11	Address Representation Code	O	**Table - 0465**

17.12	Address Validity Range	O	
17.13	Effective Date	O	
17.14	Expiration Date	O	
18	Guarantor Employer Phone Number	O	
18.1	Telephone Number	B	
18.2	Telecommunication Use Code	O	**Table - 0201**
18.3	Telecommunication Equipment Code	O	**Table - 0202**
18.4	Email Address	O	
18.5	Country Code	O	
18.6	Area/City Code	O	
18.7	Local Number	O	
18.8	Extension	O	
18.9	Any Text	O	
18.10	Extension Prefix	O	
18.11	Speed Dial Code	O	
18.12	Unformatted Telephone Number	C	
19	Guarantor Employee ID	O	
19.1	Id Number	R	
19.2	Check Digit	O	
19.3	Check Digit Scheme	O	**Table - 0061**
19.4	Assigning Authority	O	
19.5	Identifier Type Code	O	**Table - 0203**
19.6	Assigning Facility	O	
19.7	Effective Date	O	
19.8	Expiration Date	O	
19.9	Assigning Jurisdiction	O	
19.10	Assigning Agency or Department	O	
20	Guarantor Employment Status	O	**Table - 0066**
21	Guarantor Organization Name	O	
21.1	Organization Name	O	
21.2	Organization Name Type Code	B	**Table - 0204**
21.3	Id Number	O	
21.4	Check Digit	O	
21.5	Check Digit Scheme	O	**Table - 0061**
21.6	Assigning Authority	O	
21.7	Identifier Type Code	O	**Table - 0203**
21.8	Assigning Facility	O	
21.9	Name Representation Code	O	**Table - 0465**
21.10	Organization Identifier	O	
22	Guarantor Billing Hold Flag	O	**Table - 0136**

IN1 Insurance:

IN1 Seq	Name	R/O	Comments
1	Set ID – IN1	R	
2	Insurance Plan ID	R	
2.1	Identifier	O	
2.2	Text	O	
2.3	Name of Coding System	O	
2.4	Alternate Identifier	O	
2.5	Alternate Text	O	
2.6	Name of Alternate Coding System	O	
3	Insurance Company ID	R	
3.1	Id Number	R	
3.2	Check Digit	O	
3.3	Check Digit Scheme	O	**Table - 0061**
3.4	Assigning Authority	O	
3.5	Identifier Type Code	O	**Table - 0203**
3.6	Assigning Facility	O	
3.7	Effective Date	O	
3.8	Expiration Date	O	
3.9	Assigning Jurisdiction	O	
3.10	Assigning Agency or Department	O	
4	Insurance Company Name	O	
4.1	Organization Name	O	
4.2	Organization Name Type Code	B	**Table - 0204**
4.3	Id Number	O	
4.4	Check Digit	O	
4.5	Check Digit Scheme	O	**Table - 0061**
4.6	Assigning Authority	O	
4.7	Identifier Type Code	O	**Table - 0203**
4.8	Assigning Facility	O	
4.9	Name Representation Code	O	**Table - 0465**
4.10	Organization Identifier	O	
5	Insurance Company Address	O	
5.1	Street Address	R	
5.2	Other Designation	O	
5.3	City	R	
5.4	State	R	
5.5	Zip or Postal Code	R	
5.6	Country	O	**Table - 0399**
5.7	Address Type	O	**Table - 0190**
5.8	Other Geographical Designation	O	
5.9	County/Parish Code	O	
5.10	Census Tract	O	
5.11	Address Representation Code	O	**Table - 0465**
5.12	Address Validity Range	O	
5.13	Effective Date	O	
5.14	Expiration Date	O	
6	Insurance Company Contact Person	O	
6.1	Family Name	R	
6.2	Given Name	R	
6.3	Second and Further Given Names or Initials	O	

6.4	Suffix	O	
6.5	Prefix	O	
7	Insurance Company Contact Phone Number	O	
7.1	Telephone Number	B	
7.2	Telecommunication Use Code	O	**Table - 0201**
7.3	Telecommunication Equipment Code	O	**Table - 0202**
7.4	Email Address	O	
7.5	Country Code	O	
7.6	Area/City Code	O	
7.7	Local Number	O	
7.8	Extension	O	
7.9	Any Text	O	
7.10	Extension Prefix	O	
7.11	Speed Dial Code	O	
7.12	Unformatted Telephone Number	C	
8	Group Number	O	
9	Group Name	O	
9.1	Organization Name	O	
9.2	Organization Name Type Code	B	**Table - 0204**
9.3	Id Number	O	
9.4	Check Digit	O	
9.5	Check Digit Scheme	O	**Table - 0061**
9.6	Assigning Authority	O	
9.7	Identifier Type Code	O	**Table - 0203**
9.8	Assigning Facility	O	
9.9	Name Representation Code	O	**Table - 0465**
9.10	Organization Identifier	O	
10	Insured's Group Emp ID	O	
10.1	Id Number	R	
10.2	Check Digit	O	
10.3	Check Digit Scheme	O	**Table - 0061**
10.4	Assigning Authority	O	
10.5	Identifier Type Code	O	**Table - 0203**
10.6	Assigning Facility	O	
10.7	Effective Date	O	
10.8	Expiration Date	O	
10.9	Assigning Jurisdiction	O	
10.10	Assigning Agency or Department	O	
11	Insured's Group Emp Name	O	
11.1	Organization Name	O	
11.2	Organization Name Type Code	B	**Table - 0204**
11.3	Id Number	O	
11.4	Check Digit	O	
11.5	Check Digit Scheme	O	**Table - 0061**
11.6	Assigning Authority	O	
11.7	Identifier Type Code	O	**Table - 0203**
11.8	Assigning Facility	O	
11.9	Name Representation Code	O	**Table - 0465**
11.10	Organization Identifier	O	
12	Plan Effective Date	O	

13	Plan Expiration Date	O	
14	Authorization Information	O	
14.1	Authorization Number	O	
14.2	Date	O	
14.3	Source	O	
15	Plan Type	O	
16	Name of Insured	O	
16.1	Family Name	R	
16.2	Given Name	R	
16.3	Second and Further Given Names or Initials	O	
16.4	Suffix	O	
16.5	Prefix	O	
17	Insured's Relationship to Patient	O	
17.1	Identifier	O	
17.2	Text	O	
17.3	Name of Coding System	O	
17.4	Alternate Identifier	O	
17.5	Alternate Text	O	
17.6	Name of Alternate Coding System	O	
18	Insured's Date of Birth	O	
18.1	Time	R	
18.2	Degree of Precision	B	**Table - 0529**
19	Insured's Address	O	
19.1	Street Address	R	
19.2	Other Designation	O	
19.3	City	R	
19.4	State	R	
19.5	Zip or Postal Code	R	
19.6	Country	O	**Table - 0399**
19.7	Address Type	O	**Table - 0190**
19.8	Other Geographical Designation	O	
19.9	County/Parish Code	O	
19.10	Census Tract	O	
19.11	Address Representation Code	O	**Table - 0465**
19.12	Address Validity Range	O	
19.13	Effective Date	O	
19.14	Expiration Date	O	
20	Assignment of Benefits	O	**Table - 0135**
21	Coordination of Benefits	O	**Table - 0173**
22	Coordination of Benefits Priority	O	

IN2 Insurance Additional Information:

IN2 Seq	Name	R/O	Comments
1	Insured's Employee ID	O	
1.1	Id Number	R	
1.2	Check Digit	O	
1.3	Check Digit Scheme	O	**Table - 0061**
1.4	Assigning Authority	O	
1.5	Identifier Type Code	O	**Table - 0203**
1.6	Assigning Facility	O	
1.7	Effective Date	O	
1.8	Expiration Date	O	
1.9	Assigning Jurisdiction	O	
1.10	Assigning Agency or Department	O	
2	Insured's Social Security Number	O	
3	Insured's Employer's Name and Id	O	
3.1	Id Number	O	
3.2	Family Name	R	
3.3	Given Name	R	
3.4	Second and Further Given Names or Initials	O	
3.5	Suffix	O	
3.6	Prefix	O	
4	Employer Information Data	O	
5	Mail Claim Party	O	**Table - 0137**
6	Medicare Health Ins Card Number	O	
7	Medicaid Case Name	O	
7.1	Family Name	O	
7.2	Given Name	O	
7.3	Second and Further Given Names or Initials	O	
7.4	Suffix	O	
7.5	Prefix	O	
8	Medicaid Case Number	O	

ACC Accident:

ACC Seq	Name	R/O	Comments
1	Accident Date/Time	O	
1.1	Time	R	
1.2	Degree of Precision	B	
2	Accident Code	O	
2.1	Identifier	O	
2.2	Text	O	
2.3	Name of Coding System	O	
2.4	Alternate Identifier	O	
2.5	Alternate Text	O	
2.6	Name of Alternate Coding System	O	
3	Accident Location	O	
4	Auto Accident State	O	
4.1	Identifier	O	
4.2	Text	O	
4.3	Name of Coding System	O	
4.4	Alternate Identifier	O	
4.5	Alternate Text	O	
4.6	Name of Alternate Coding System	O	
5	Accident Job Related Indicator	O	**Table - 0136**
6	Accident Death Indicator	O	**Table - 0136**
7	Entered By	O	
7.1	Id Number	O	
7.2	Family Name	R	
7.3	Given Name	R	
7.4	Second and Further Given Names or Initials	O	
7.5	Suffix	O	
7.6	Prefix	O	

Standard Unsolicited Observation Result (ORU)

ORU

MSH Message Header Segment:

MSH Seq	Name	R/O	Comments
1	Field Separator	R	Accepted value "|" ASCII(124)
2	Encoding Characters	R	Position 1: Component Separator "^" ASCII(94) Position 2: Repetition Separator "~" ASCII(126) Position 3: Escape "\" ASCII(92) Position 4: Sub-Component "&" ASCII(38)
3	Sending Application	R	Data sending organization application system
4	Sending Facility	R	Data sending organization source code
5	Receiving Application	R	"DHIN"
6	Receiving Facility	O	"DEHIE"
7	Date/Time Message	R	Date/Time messages generated from sending system **Format:** "YYYYMMddHHmmss"
8	Security	O	
9 9.1 9.2	Message Type Type Event	R	Trigger type and event: **EX:** *ORU^R1^ORU_R1* Example Value must = "ORU" Example Value must = "R1"
10	Message Control ID	R	Should be unique
11 11.1 11.2	Processing ID Processing ID Mode	O	Acceptable values: "P" = Production or "T" = Test
12	Version ID	R	2.5.1
13	Sequence Number	NS	Not supported
14	Continuation Pointer	NS	Not supported
15	Accept Acknowledgement Type	NS	Not supported
16	Application Acknowledgement Type	NS	Not supported
17	Country Code	R	USA
18	Character Set	NS	Not supported
19	Principal Language of Message	NS	Not supported
20	Alternate Character Set	NS	Not supported
21 21.1 21.2 21.3 21.4	Message Profile Identifier Entity Identifier Namespace ID Universal ID Universal ID Type	O	

PID Patient Identification Segment:

PID Seq	Name	R/O	Comments
1	Set ID – PID	R	1
2 2.1 2.2 2.3 2.4 2.5	External Patient ID Patient ID Check Digit Check Digit Scheme Assigning Authority Identifier Type	O	Reserved for Initiate MPI source ID DHIN will hard code the field to "MPI"
3 3.1 3.2 3.3 3.4 3.5 3.6	Internal Patient ID (MRN) Patient ID Check Digit Check Digit Scheme Assigning Authoring Identifier Type Assigning Facility	R R O O R O O	**Source System MRN MUST UNIQUELY IDENTIFY THE PATIENT** DHIN will hard code the field to "DHINXXXX"
4 4.1	Alternate Patient ID Patient ID	O	
5 5.1 5.2 5.3 5.4 5.5 5.6	Patient Name Last Name First Name Middle Name Suffix Prefix Degree	R R R O O O O	This segment is required for patient matching logic in Initiate MPI.
6	Mother's Maiden Name	O	This segment is optional and is used for patient matching logic in Initiate MPI
7	Date of Birth	R	This segment is required and is used for patient matching logic in Initiate MPI
8	Sex	R	This segment is required and is used for patient matching logic in Initiate MPI. Acceptable values are: • M – Male • F – Female • U – Unknown
9	Patient Alias	O	DHIN uses PID.5 Patient Name for patient matching
10	Race	R	Enrichment if null from MPI.
11 11.1 11.2 11.3 11.4 11.5 11.6 11.7	Patient Address Address Line 1 Address Line 2 City State Zip Code Country Type	R R O R R R R O	This segment is required for patient matching logic. The MPI evaluates data provided here to increase the probability of a positive match. Only the first iteration of this segment is evaluated.

12	Country Code	O	
13	Home Phone Number	R	This segment is required for patient matching. DHIN's patient matching algorithm evaluates data provided here to increase the probability of a positive match. Only the first iteration of this segment is evaluated.
14	Business Phone Number	O	This segment is optional. DHIN's patient matching algorithm evaluates data provided here to increase the probability of a positive match. Only the first iteration of this segment is evaluated.
15	Language	O	DHIN will enrich this field based on active historical information provided from this source. See both DHIN Patient Enrichment & DHIN Standard Normalization.
16	Marital Status	O	DHIN will enrich this field based on active historical information provided from this source. See both DHIN Patient Enrichment & DHIN Standard Normalization.
17	Religion	O	DHIN will enrich this field based on active historical information provided from this source. See both DHIN Patient Enrichment & DHIN Standard Normalization.
18 18.1 18.2 18.3 18.4 18.5 18.6	Patient Account Number Patient Account Number Check Digit Check Digit Scheme Assigning Authority Identifier Type Assigning Facility	R R O O O O O	This segment is required to assist in result matching
19	Patient Social Security Number	O	This segment is optional however patient matching logic evaluates data provided here to increase the probability of a positive match. Only the first iteration of this segment is evaluated.
20	Driver's License Number	NS	Not supported
21	Mother's Identifier	NS	Not supported
22	Ethnic Group	R	This field is required by the DE Department of Public Health.
23	Birthplace	O	
24	Multiple Birth Indicator	O	Acceptable Values: Y – Yes N – No
25	Birth Order	O	
26	Citizenship	O	
27	Military Status	NS	Not supported
28	Nationality	O	
29	Patient Death Date/Time	O	
30	Patient Death Indicator	O	

PV1 – Patient Visit Segment:

PV1 Seq	Name	R/O	Comments
1	Set ID – PID	R	Starts at 1
2	Patient Class	R	**Table - 0004** *Note additional code set values will be mapped to the above listed Standard Patient Administration HL7 Codes (Patient Administration Codes Patient Class (PV1.2))
3	Patient Location	O	
3.1	Point of Service Location	O	
3.2	Patient Room	O	
3.3	Patient Bed	O	
3.4	Facility ID	O	
3.5	Bed Status	O	
3.6	Location Type	O	
3.7	Building	O	
3.8	Floor	O	
3.9	Location Description	O	
3.10	Comprehensive Location Identifier	O	
3.11	Assigning Authority for Location	O	
4	Admission Type	O	**Table - 0007** *Note additional code set values will be mapped to the above listed Standard Patient Administration HL7 Codes (Patient Administration Codes Admit Type (PV1.4))
5	Pre-Admit Number	O	
5.1	Id Number	O	
5.2	Check Digit	O	
5.3	Check Digit Scheme	O	**Table - 0061**
5.4	Assigning Authority	O	
5.5	Identifier Type Code	O	**Table - 0203**
5.6	Assigning Facility	O	
5.7	Effective Date	O	
5.8	Expiration Date	O	
5.9	Assigning Jurisdiction	O	
5.10	Assigning Agency or Department	O	
6	Prior Patient Location	O	
6.1	Point of Care	O	
6.2	Room	O	
6.3	Bed	O	
6.4	Facility	O	
6.5	Location Status	O	
6.6	Person Location Type	C	**Table - 0305**
6.7	Building	O	
6.8	Floor	O	
6.9	Location Description	O	
6.10	Comprehensive Location Identifier	O	
6.11	Assigning Authority for Location	O	
7	Attending Doctor	CO	DHIN will only acknowledge the first iteration of this field. The value in this field will be used to deliver results downstream outbound to interested providers associated with the patient. If PV1.7 is sent PV1.7.1 & PV1.7.2 are required. DHIN will attempt to enrich the ORU message with ADT messages received from source if they are sent to the DHIN. See Provider Enrichment.

7.1	Attending Doctor ID	R	
7.2	Last Name	R	
7.3	First Name	R	
7.4	Middle Name	O	
7.5	Prefix	O	
7.6	Suffix	O	
8	Referring Doctor	CO	DHIN will only acknowledge the first iteration of this field. The value in this field will be used to deliver results downstream outbound to interested providers associated with the patient. If PV1.8 is sent PV1.8.1 & PV1.8.2 are required. DHIN will attempt to enrich the ORU message with ADT messages received from source if they are sent to the DHIN. See Provider Enrichment.
8.1	Referring Doctor ID	R	
8.2	Last Name	R	
8.3	First Name	R	
8.4	Middle Name	O	
8.5	Prefix	O	
8.6	Suffix	O	
9	Consulting Doctor	CO	DHIN will only acknowledge the first iteration of this field. The value in this field will be used to deliver results downstream outbound to interested providers associated with the patient. If PV1.8 is sent PV1.9.1 & PV1.9.2 are required. DHIN will attempt to enrich the ORU message with ADT messages received from source if they are sent to the DHIN. See Provider Enrichment.
9.1	Consulting Doctor ID	R	
9.2	Last Name	R	
9.3	First Name	R	
9.4	Middle Name	O	
9.5	Prefix	O	
9.6	Suffix	O	
10	Hospital Service	O	**Table - 0069** *Note additional code set values will be mapped to the above listed Standard Patient Administration HL7 Codes (Patient Administration Codes Hospital Service (PV1.10))
11	Temporary Location	N	
12	Pre-Admit Test Indicator	O	
13	Re-Admission Indicator	O	**Table - 0092**
14	Admission Source	O	**Table - 0023** *Note additional code set values will be mapped to the above listed Standard Patient Administration HL7 Codes (Patient Administration Codes Admit Source (PV1.14))
15	Ambulatory Status	O	**Table - 0009**
16	VIP Indicator	O	
17	Admitting Doctor	CO	DHIN will only acknowledge the first iteration of this field. The value in this field will be used to deliver results downstream outbound to interested providers associated with the patient. If PV1.17 is sent PV1.17.1 & PV1.17.2 are required. DHIN will attempt to enrich the ORU message with ADT messages received from source if they are sent to the DHIN. See Provider Enrichment.
17.1	Consulting Doctor ID	R	
17.2	Last Name	R	
17.3	First Name		

17.4 17.5 17.6	Middle Name Suffix Prefix	R O O O	
18	Patient Type	O	DHIN will evaluate codes set information provided by the data sending organization
19 19.1	Visit Number Id Number	R R	This field is used for result matching and provider enrichment. Can be populated with the value from PID.18 when applicable.
20 20.1 20.2	Financial Class Financial Class Code Effective Date	O R O	
21	Charge Price Indicator	NS	
22	Courtesy Code	NS	
23	Credit Rating	NS	
24	Contract Code	O	
25	Contract Effective Date	O	
26	Contract Amount	O	
27	Contract Period	O	
28	Interest Code	O	
29	Transfer to Bad Debt Code	O	
30	Transfer to Bad Debt Date	O	
31	Bad Debt Agency Code	O	
32	Bad Debt Transfer Amount	O	
33	Bad Debt Recover Amount	O	
34	Delete Account Identifier	NS	
35	Delete Account Date	NS	
36	Discharge Disposition	O	**Table - 0112** *Note additional code set values will be mapped to the above listed Standard Patient Administration HL7 Codes (Patient Administration Codes Discharge Disposition (PV1.36))
37 37.1 37.2	Discharge to Location Discharge Location Effective Date	CO R O	
38 38.1 38.2 38.3 38.4 38.5 38.6	Diet Type Identifier Text Name of Coding System Alternate Identifier Alternate Text Name of Alternate Coding System	O O O O O O O	 **Table - 0396** **Table - 0396**
39	Servicing Facility	O	
40	Bed Status	O	**Table - 0116**
41	Account Status	O	
42	Pending Location	O	
43	Prior Temporary Location	O	
44	Admit Date/Time	R	
45	Discharge Date/Time	CO	**This field is optional, however; for ADT^03 transactions it is required.** The CHR will only display the value of "Finished" when it is populated on the discharge transaction.

46	Current Patient Balance	N	
47	Total Charges	N	
48	Total Adjustment	N	
49	Total Payments	N	
50	Alternate Visit ID	O	
51	Visit Indicator	O	**Table - 0326**
52	Other Healthcare Providers	O	

ORC Common Order Segment:

ORC Seq	Name	R/O	Comments
1	Order Control	R	Starts at 1
2	Placer Order Number	R	Test specific result identifiers are stored in this field and must match OBR.2
3	Filler Order Number	R	If populated must match OBR.3
4	Placer Group Number	O	
5	Order Status	O	
6	Response Flag	O	
7	Quantity/Timing	O	
7.1	Quantity	O	
7.2	Interval	O	
7.3	Duration	O	
7.4	Start Date	O	
7.5	End Date	O	
7.6	Priority	O	
8	Parent	O	
9	Date of Transaction	O	**Format:** "YYYYMMdd"
10	Entered By	O	
11	Verified By	O	
12	Ordering Provider	O	
12.1	Identifier	R	
12.2	Last Name	R	
12.3	First Name	O	
12.4	Middle Name	O	
12.5	Prefix	O	
12.6	Suffix	O	
12.7	Degree	O	
13	Enterer's Location	NS	Not supported
14	Call Back Phone Number	NS	Not supported
15	Order Effective Date	O	
16	Order Control Code Reason	O	
17	Entering Organization	O	
18	Entering Device	O	
19	Action By	O	
20	Advanced Beneficiary Notice Code	O	
21	Ordering Facility Name	O	
22	Ordering Facility Address	R	
22.1	Street Address	R	
22.2	Other Designation	O	
22.3	City	R	
22.4	State	R	
22.5	Zip	R	
23	Ordering Facility Phone Number	R	

24	Ordering Provider Address	O	
25	Order Status Modifier	O	
26	Advance Beneficiary Notice Override	O	
27	Filler's Expected Availability Date/Time	O	
28	Confidentiality Code	CO	***Note codes received by DHIN that are highlighted in red will automatically be processed to the Advanced Patient Consent NXT** **Valid Values:** *AID - AIDS patient* EMP - Employee *ETH - Alcohol/drug treatment patient* *HIV - HIV(+) patient* *PSY - Psychiatric patient* *R - Restricted* U - Usual control UWM - Unwed mother *V - Very restricted* VIP - Very important person or celebrity
29	Order Type	O	
30	Enterer Authorization Mode	O	
31	Parent Universal Service Identifier	O	

OBR Order Detail Segment:

OBR Seq	Name	R/O	Comments
1	Set ID	R	Start at 1 and increments by 1
2	Placer Order Number	R	
3	Filler Order Number	O	
4	Universal Service ID	R	This value must be unique per test provided at the OBR level in the HL7 message.
4.1	Test Code	R	
4.2	Test Description	R	
4.3	Coding System	O	
4.4	Alternate Test Code	O	
4.5	Alternate Test Description	O	
4.6	Alternate Coding System	O	
5	Priority	O	
6	Requested Date/Time	R	**If this field is not populated the following CHR field will not display a value**
7	Observation Date/Time	R	If this field is not populated the "Observed" field in the CHR will not display a value
8	Observation End Date	O	
9	Collection Volume	N	
10	Collector Identifier	N	
11	Specimen Action Code	O	
12	Danger Code	N	
12.1	Danger Code		
12.2	Danger Text		
13	Relevant Clinical Information	N	
14	Specimen Received Date	O	If this field is not populated the "Received" field in the CHR will not display a value
15	Specimen Source	O	
15.1	Source Code	O	
15.1.1	Code	O	
15.1.2	Description	O	
15.2	Additives	O	**Table - 0371**
15.3	Free Text	O	
15.4	Body Site	O	**Table - 0163**
15.4.1	Code	O	
15.4.2	Description	O	
15.5	Site Modifier	O	**Table - 0495**
15.6	Collection Method Modifier Code	O	
15.7	Specimen Role	O	**Table - 0369**
16	Ordering Provider	O	If this field is not populated the CHR Result list will not display a physician name. If OBR.16 is sent 16.1 & 16.2 are required.
16.1	Identifier	R	
16.2	Last Name	R	
16.3	First Name	O	
16.4	Middle Name	O	
16.5	Prefix	O	
16.6	Suffix	O	
16.7	Degree	O	
17	Order Call Back Phone Number	O	

18	Placer Field 1	O	
19	Placer Field 2	O	
20	Filler Field 1	O	
21	Filler Field 2	O	
22	Result Report Change Date	R	If this field is not populated the CHR field “Report/Status Chge” will not display a value
23	Charge to Practice	N	
24	Diagnostic Service Section ID	R	See DHIN Standard Normalization. If this field is not populated appropriately results will not be sorted by type in the CHR Result List. Available types are: • LAB • PATH • RAD • TRANS • CARDIO
25	Result Status	R	**Table - 0123**
26	Parent Order ID	O	
27	Quantity/Timing	O	If this field is not populated the CHR field “Ordered” Field will not display a value
27.1	Quantity	O	
27.2	Interval	O	
27.3	Duration	O	
27.4	Start Date	O	
27.5	End Date	O	
27.6	Priority	O	
28	Result Copies To	O	This field will be used for result delivery. If OBR.28 is sent, then OBR.28.1 & OBR.28.2 are required.
28.1	Identifier	R	
28.2	Last Name	R	
28.3	First Name	O	
28.4	Middle Name	O	
28.5	Prefix	O	
28.6	Suffix	O	
28.7	Degree	O	
29	Parent Accession Number	O	
30	Transportation Mode	O	
31	Reason for Study	N	
31.1	Reason ID		
31.2	Reason Text		
32	Results Interpreter	O	If OBR.32 is sent, then OBR.32.1 & OBR.32.2 are required.
32.1	Provider Identifier	R	
32.2	Last Name	R	
32.3	First Name	O	
32.4	Middle Name	O	
32.5	Prefix	O	
32.6	Suffix	O	
32.7	Degree	O	
32.8	Source Table	O	
32.9	Assigning Authority	O	
32.9.1	Namespace ID	O	
32.9.2	Universal ID	O	

32.9.3	Universal ID Type	O	
32.10	Name Type	O	
32.11	Check Digit	O	
32.12	Check Digit Scheme	O	
32.13	Identifier Type	O	

NTE Result Comments Segment:

DHIN will accept Observation level textual comments each NTE segment will represent a separate line and be displayed in the CHR as Order Comments

NTE Seq	Name	R/O	Comments
1	Set ID	R	Start at 1 and increments by 1
2	Source of Comment	R	Acceptable source values at the OBR level comments: O – Order P – Performing Lab
3	Comment	O	Single NTE segments are limited to 250 characters per NTE. A tilde (~) can be used to represent line feed characters "\n". Blank NTE segments are ignored.

OBX Observation Result Segment:

OBX Seq	Name	R/O	Comments
1	Set ID	R	Start at 1 and increments by 1
2	Value Type	R	Acceptable values to display numerical results: • NM – Numeric • CE – Coded Entry (only available on messages below v2.5.1) • CWE – Coded with Exceptions (acceptable on messages v.2.6.1 and higher) • ST - String Acceptable values to display report or textual result data: • TX – Textual Acceptable values to display encapsulated data • ED – encapsulated data
3 3.1 3.2 3.3 3.4 3.5	Observation Identifier Test Code Test Code Description Coding Schema Alternate Test Code Alternate Code Description	R R R O O O	For lab results this value must be unique. For pathology, microbiology, radiology, and transcribed reports this value should be the same to ensure that multiple instances of the same report is not created in the CHR.
4	Observation Sub-ID	O	May be sent in microbiology results to support the grouping of organisms.
5 5.1 5.2 5.3 5.4 5.5	Observation Value Observation Value Document Type Document Format Encoding Method Observation Value	O O C C C C	If OBX.2 = ST, TX, NM, CE or CWE then OBX.5.1 has a character limitation of 250 characters. If OBX.2 = ED then OBX.5 should be populated as such. |^^application/PDF^base64^base64 string|
6	Units	C	For numerical or discrete result data when OBX.2 = NM
7	Reference Range	C	For numerical or discrete result data when OBX.2 = NM
8	Abnormal Flag	C	**Table - 0078** *Note – for some values listed below they should only be used when OBX.2 is populated with a value signifying a numerical result. (Abnormal Flag Codes (OBX.8))
9	Probability	O	
10	Nature of Abnormal Test	O	**Table - 0080**
11	Observation Result Status	O	**Table - 0085** *Note – for some values listed below they should only be used when OBX.2 is populated with a value signifying a numerical result. (Observation result status codes (OBX.11))
12	Date Last Observe Normal Values	O	
13	User Access Checks	O	
14	Date/Time of Observation	R	This field is required to ensure that individual tests display a "Reported" date in the CHR
15	Producer's ID	R	Must contain the code for the performing lab location
16 16.1 16.2 16.3 16.4	Responsible Observer Provider Identifier Last Name First Name Middle Name	O R R O O	If OBX.16 is populated, then OBX.16.1 & OBX.16.2 are required

16.5	Suffix	O	
16.6	Prefix	O	
16.7	Degree	O	
16.8	Source Table	O	
16.9	Assigning Authority	O	
16.9.1	Namespace ID	O	
16.9.2	Universal ID	O	
16.9.3	Universal ID Type	O	
16.10	Name Type	O	
16.11	Check Digit	O	
16.12	Check Digit Scheme	O	
16.13	Identifier Type	O	
17	Observation Method	O	
18	Equipment Instance Identifier	NS	Not supported
19	Date/Time of the Analysis	NS	Not supported
20	Reserved for HL7 v2.6	NS	Not supported
21	Reserved for HL7 v2.6	NS	Not supported
22	Reserved for HL7 v2.6	NS	Not supported
23	Perform Organization Name	R	Required for all lab results
23.1	Organization Name	O	
23.2	Organization Name Type Code	O	**Table - 0204**
23.3	ID Number	O	
23.4	Check Digit	O	
23.5	Check Digit Scheme	O	**Table - 0061**
23.6	Assigning Authority	O	
23.7	Identifier Type Code	O	**Table - 0203**
23.8	Assigning Facility	O	
23.9	Name Representation Code	O	**Table - 0465**
23.10	Organization Identifier	O	
24	Performing Organization Address	R	Required for all lab results
24.1	Address Line 1	O	
24.2	Address Line 2	O	
24.3	City	O	
24.4	State	O	
24.5	Zip Code	O	
24.6	Country	O	
24.7	Type	O	
24.8	Other Geographic Designation	O	
24.9	County/Parish	O	
24.10	Census Tract	O	
25	Performing Organization Medical Director	R	Required for all lab results
25.1	Identifier		
25.2	Last Name		
25.3	First Name		
25.4	Middle Name		
25.5	Suffix		
25.6	Prefix		
25.7	Degree		**Table - 0360**
25.8	Source Table		
25.9	Assigning Authority		
25.9.1	Namespace ID		

25.9.2	Universal ID		
25.9.3	Universal ID Type		**Table - 0301**
25.10	Name Type		**Table - 0200**
25.11	Check Digit		
25.12	Check Digit Scheme		**Table - 0061**
25.13	Identifier Type		**Table - 0203**

SPM Specimen Segment:

SPM Seq	Name	R/O	Comments
1	Set ID_SPM	R	1
2 2.1	Specimen ID Placer Assigned Identifier	R	
3	Specimen Parent ID	O	
4	Specimen Type	R	
5	Specimen Type Modifier	NS	Not supported
6	Specimen Additives	NS	Not supported
7	Specimen Collective Method	R	
8	Specimen Source Site	R	
9	Specimen Source Site Modifier	NS	Not supported
10	Specimen Collection Site	NS	Not supported
11	Specimen Role	NS	Not supported
12	Specimen Collection Amount	NS	Not supported
13	Grouped Specimen Count	NS	Not supported
14	Specimen Description	NS	Not supported
15	Specimen Handling Code	NS	Not supported
16	Specimen Risk Code	NS	Not supported
17	Specimen Collection Date/Time	R	
18	Specimen Received Date/Time	R	
19	Specimen Expiration Date/Time	NS	Not supported
20	Specimen Availability	NS	Not supported
21	Specimen Reject Reason	NS	Not supported
22	Specimen Quality	NS	Not supported
23	Specimen Appropriateness	NS	Not supported
24	Specimen Condition	NS	Not supported
25	Specimen Current Quantity	NS	Not supported
26	Number of Specimen Containers	NS	Not supported
27	Container Type	NS	Not supported
28	Container Condition	NS	Not supported
29	Specimen Child Role	NS	Not supported

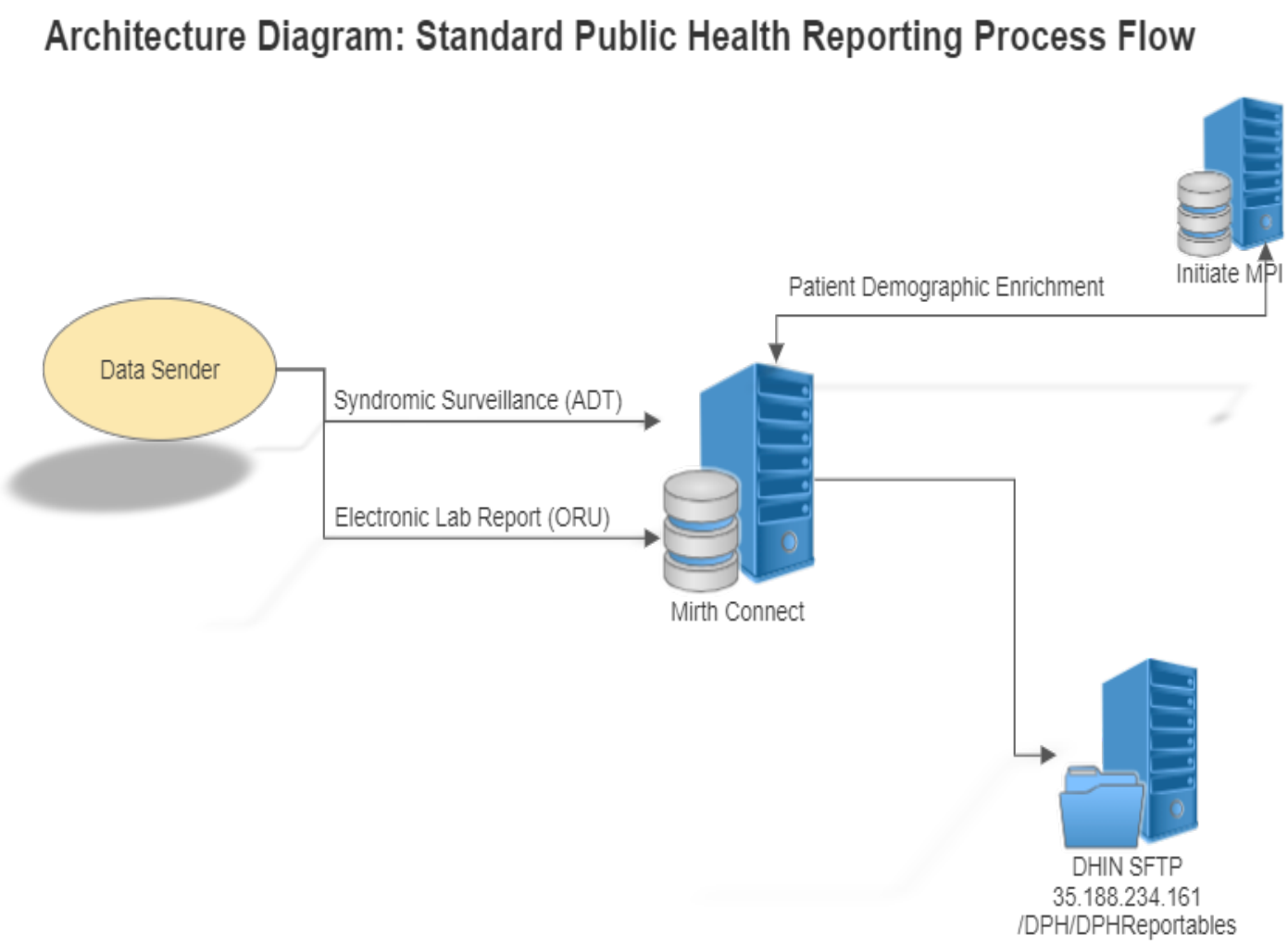
Delaware Department of Public Health Syndromic Surveillance & Electronic Lab Reporting Interface Specification

DHIN will deliver COVID-19 electronic reportable labs to the Department of Public Health(DPH) on the behalf of Data sending organizations to meet duty to report requirements for communicable diseases. The following configuration items will be used to support this initiative.

1. Mirth Connect .140 server
    a. Incoming channel configuration
    b. Destinations channel configuration
    c. Destinations ELR Reportables channel configuration
2. Initiate
3. NPPES NPI Registry **only if provider NPI/name fields missing
4. DHIN SFTP:
    a. /DPHTest/DPHReportablesTest
    b. /DPH/DPHReportables

If a data sender in the future, wants to send additional electronic reportable results to DPH. The data sender will need to open a ticket with the DHIN service desk at servicedesk@dhin.org and provide the new LOINC codes. These codes must be populated in OBX.3.1 to ensure that they will not be filtered out from the ELR process. The data sender should continue to send those reportable HL7 messages via normal methods until DHIN has provided confirmation that the LOINC codes were added to the interface. To ensure that there are no additional problems related to the new messages, DHIN will conduct a mini gap analysis to ensure that the new message type meets the ELR specifications prior to adding it to the interface and will alert DPH of the new reportable coming their way.

Architecture Diagram: DE Department of Public Health Process Flow



Syndromic Surveillance Admit/Discharge/Transfer (ADT)

MSH Message Header Segment:

MSH Seq	Name	R/O	Comments
1	Field Separator	R	Accepted value "|" ASCII(124)
2	Encoding Characters	R	**Position 1:** Component Separator "^" ASCII(94) **Position 2:** Repetition Separator "~" ASCII(126) **Position 3:** Escape "\" ASCII(92) **Position 4:** Sub-Component "&" ASCII(38)
3	Sending Application	R	Data sending organization application system
4	Sending Facility	R	Data sending organization source code
5	Receiving Application	R	"DHIN"
6	Receiving Facility	O	"DEDOH"
7	Date/Time Message	R	Date/Time messages generated from sending system **Format:** "YYYYMMddHHmmss"
8	Security	O	
9 9.1 9.2	Message Type Type Event	R	Trigger type and event: **EX:** ADT^*A01^ADT_A01* Example Value must = "ADT" Example Value must = "A01"
10	Message Control ID	R	Should be unique
11 11.1 11.2	Processing ID Processing ID Mode	O	Acceptable values: "P" = Production or "T" = Test
12	Version ID	R	2.5.1
13	Sequence Number	NS	Not supported
14	Continuation Pointer	NS	Not supported
15	Accept Acknowledgement Type	NS	Not supported
16	Application Acknowledgement Type	NS	Not supported
17	Country Code	R	USA
18	Character Set	NS	Not supported
19	Principal Language of Message	NS	Not supported
20	Alternate Character Set	NS	Not supported
21 21.1 21.2 21.3 21.4	Message Profile Identifier Entity Identifier Namespace ID Universal ID Universal ID Type	R	 PHLabReport-NoAck 2.16.840.1.113883.9.11 ISO

EVN Event Type Segment:

EVN Seq	Name	R/O	Comments
1	Event Type Code	R	* Not supported by DHIN A01 - ADT/ACK - Admit/visit notification A02 - ADT/ACK - Transfer a patient A03 - ADT/ACK - Discharge/end visit A04 - ADT/ACK - Register a patient A05 - ADT/ACK - Pre-admit a patient A06 - ADT/ACK - Change an outpatient to an inpatient A07 - ADT/ACK - Change an inpatient to an outpatient A08 - ADT/ACK - Update patient information A09 - ADT/ACK - Patient departing - tracking A10 - ADT/ACK - Patient arriving - tracking A11 - ADT/ACK - Cancel admit/visit notification A12 - ADT/ACK - Cancel transfer A13 - ADT/ACK - Cancel discharge/end visit A14 - ADT/ACK - Pending admit A15 - ADT/ACK - Pending transfer A16 - ADT/ACK - Pending discharge A17 - ADT/ACK - Swap patients* A18 - ADT/ACK - Merge patient information (for backward compatibility only)* A19 - QRY/ADR - Patient query* A20 - ADT/ACK - Bed status update A21 - ADT/ACK - Patient goes on a "leave of absence" A22 - ADT/ACK - Patient returns from a "leave of absence" A23 - ADT/ACK - Delete a patient record* A24 - ADT/ACK - Link patient information* A25 - ADT/ACK - Cancel pending discharge A26 - ADT/ACK - Cancel pending transfer A27 - ADT/ACK - Cancel pending admit A28 - ADT/ACK - Add person information* A29 - ADT/ACK - Delete person information* A30 - ADT/ACK - Merge person information (for backward compatibility only) * A31 - ADT/ACK - Update person information A32 - ADT/ACK - Cancel patient arriving – tracking A33 - ADT/ACK - Cancel patient departing - tracking A34 - ADT/ACK - Merge patient information – patient ID only (for backward compatibility only) * A35 - ADT/ACK - Merge patient information – account number only (for backward compatibility only) * A36 - ADT/ACK - Merge patient information – patient ID and account number (for backward compatibility only) * A37 - ADT/ACK - Unlink patient information*
2	Recorded Date/Time	R	**Format:** "YYYYMMDDHHmmss"
3	Date/Time Planned Event	O	**Format:** "YYYYMMDDHHmmss"
4	Event Reason Code	O	**Table -** 0062
5	Operator ID	O	
6	Event Occurred	O	**Format:** "YYYYMMDDHHmmss"
7	Event Facility	O	

MSA Message Acknowledgement Segment:

MSA Seq	Name	R/O	Comments
1	Acknowledge Code	R	**Acceptable value:** AA = ACK message accepted AE = NACK message rejected AR = NACK message rejected system error
2	Message Control ID	R	MSH.10 value
3	Text Message	O	
4	Expected Sequence Number	O	
5	Delayed ACK Type	O	
6	Error Condition	O	

SFT Software Segment (Syndromic Surveillance/Electronic Lab Report Requirement):

SFT Seq	Name	R/O	Comments
1	Software Vender Organization	R	Delaware Health Information Network
2	Software Certified Version or Release Number	R	3.7.0
3	Software Product Name	R	MIRTH CONNECT
4	Software Binary ID	R	3971c0f6-fce0-4e7f-ba80-b15df94ed1ba
5	Software Product Information	NS	Not Supported
6	Software Install Date	R	20140601

PID Patient Identification Segment:

PID Seq	Name	R/O	Comments
1	Set ID – PID	R	1
2	External Patient ID	O	Reserved for Initiate MPI source ID
2.1	Patient ID		
2.2	Check Digit		
2.3	Check Digit Scheme		
2.4	Assigning Authority		DHIN will hard code the field to "MPI"
2.5	Identifier Type		
3	Internal Patient ID (MRN)	R	
3.1	Patient ID	R	Source System MRN
3.2	Check Digit	O	
3.3	Check Digit Scheme	O	
3.4	Assigning Authoring	R	DHIN will hard code the field to "DHINXXXX"
3.5	Identifier Type	O	
3.6	Assigning Facility	O	
4	Alternate Patient ID	O	
4.1	Patient ID		
5	Patient Name	R	This segment is required for patient matching logic in Initiate MPI.
5.1	Last Name	R	
5.2	First Name	R	
5.3	Middle Name	O	
5.4	Suffix	O	
5.5	Prefix	O	
5.6	Degree	O	
6	Mother's Maiden Name	O	This segment is optional and is used for patient matching logic in Initiate MPI
7	Date of Birth	R	This segment is required and is used for patient matching logic in Initiate MPI
8	Sex	R	This segment is required and is used for patient matching logic in Initiate MPI. Acceptable values are: • M – Male • F – Female • U – Unknown
9	Patient Alias	O	DHIN uses PID.5 Patient Name for patient matching
10	Race	R	Enrichment if null from MPI. This is a required field for Syndromic Surveillance/Electronic Labs
11	Patient Address	R	This segment is required for COVID-19 labs and patient matching logic. The MPI evaluates data provided here to increase the probability of a positive match. Only the first iteration of this segment is evaluated. DHIN will enrich this field based on active historical information provided from this source. See DHIN Patient Enrichment.
11.1	Address Line 1	R	
11.2	Address Line 2	O	
11.3	City	R	
11.4	State	R	
11.5	Zip Code	R	
11.6	Country		

11.7	Type	R O	
12	Country Code	O	
13	Home Phone Number	R	This segment is required for COVID-19 electronic labs. DHIN's patient matching algorithm evaluates data provided here to increase the probability of a positive match. Only the first iteration of this segment is evaluated. DHIN will enrich this field based on active historical information provided from this source. See DHIN Patient Enrichment.
14	Business Phone Number	O	This segment is optional. DHIN's patient matching algorithm evaluates data provided here to increase the probability of a positive match. Only the first iteration of this segment is evaluated. DHIN will enrich this field based on active historical information provided from this source. See DHIN Patient Enrichment.
15	Language	O	DHIN will enrich this field based on active historical information provided from this source. See both DHIN Patient Enrichment & DHIN Standard Normalization.
16	Marital Status	O	DHIN will enrich this field based on active historical information provided from this source. See both DHIN Patient Enrichment & DHIN Standard Normalization.
17	Religion	O	DHIN will enrich this field based on active historical information provided from this source. See both DHIN Patient Enrichment & DHIN Standard Normalization.
18 18.1 18.2 18.3 18.4 18.5 18.6	Patient Account Number Patient Account Number Check Digit Check Digit Scheme Assigning Authority Identifier Type Assigning Facility	R R O O O O O	This segment is required to assist in result matching
19	Patient Social Security Number	O	This segment is optional. DHIN's patient matching algorithm evaluates data provided here to increase the probability of a positive match. Only the first iteration of this segment is evaluated. DHIN will enrich this field based on active historical information provided from this source. See DHIN Patient Enrichment.
20	Driver's License Number	NS	Not supported
21	Mother's Identifier	NS	Not supported
22	Ethnic Group	R	This field is required by the Department of Public Health for COVID-19 results
23	Birthplace	O	
24	Multiple Birth Indicator	O	**Acceptable Values:** Y – Yes N – No
25	Birth Order	O	
26	Citizenship	O	
27	Military Status	NS	Not supported
28	Nationality	O	
29	Patient Death Date/Time	O	
30	Patient Death Indicator	O	

PV1 Patient Visit Segment:

PV1 Seq	Name	R/O	Comments
1	Set ID – PID	R	Starts at 1
2	Patient Class	R	**Table - 0004** *Note additional code set values will be mapped to the above listed Standard Patient Administration HL7 Codes (Patient Administration Codes Patient Class (PV1.2))
3	Patient Location	O	
3.1	Point of Service Location	O	
3.2	Patient Room	O	
3.3	Patient Bed	O	
3.4	Facility ID	O	
3.5	Bed Status	O	
3.6	Location Type	O	
3.7	Building	O	
3.8	Floor	O	
3.9	Location Description	O	
3.10	Comprehensive Location Identifier	O	
3.11	Assigning Authority for Location	O	
4	Admission Type	O	**Table - 0007** *Note additional code set values will be mapped to the above listed Standard Patient Administration HL7 Codes (Patient Administration Codes Admit Type (PV1.4))
5	Pre-Admit Number	O	
5.1	Id Number	O	
5.2	Check Digit	O	
5.3	Check Digit Scheme	O	**Table - 0061**
5.4	Assigning Authority	O	
5.5	Identifier Type Code	O	**Table - 0203**
5.6	Assigning Facility	O	
5.7	Effective Date	O	
5.8	Expiration Date	O	
5.9	Assigning Jurisdiction	O	
5.10	Assigning Agency or Department	O	
6	Prior Patient Location	O	
6.1	Point of Care	O	
6.2	Room	O	
6.3	Bed	O	
6.4	Facility	O	
6.5	Location Status	O	
6.6	Person Location Type	C	**Table - 0305**
6.7	Building	O	
6.8	Floor	O	
6.9	Location Description	O	
6.10	Comprehensive Location Identifier	O	
6.11	Assigning Authority for Location	O	
7	Attending Doctor	CO	DHIN will only acknowledge the first iteration of this field. The value in this field will be used to deliver results downstream outbound to interested providers associated with the patient. If PV1.7 is sent PV1.7.1 & PV1.7.2 are required. DHIN will attempt to enrich the ORU message with ADT messages received from source if they are sent to the DHIN. See Provider Enrichment.

7.1	Attending Doctor ID	R	
7.2	Last Name	R	
7.3	First Name	R	
7.4	Middle Name	O	
7.5	Prefix	O	
7.6	Suffix	O	
8	Referring Doctor	CO	DHIN will only acknowledge the first iteration of this field. The value in this field will be used to deliver results downstream outbound to interested providers associated with the patient. If PV1.8 is sent PV1.8.1 & PV1.8.2 are required. DHIN will attempt to enrich the ORU message with ADT messages received from source if they are sent to the DHIN. See Provider Enrichment.
8.1	Referring Doctor ID	R	
8.2	Last Name	R	
8.3	First Name	R	
8.4	Middle Name	O	
8.5	Prefix	O	
8.6	Suffix	O	
9	Consulting Doctor	CO	DHIN will only acknowledge the first iteration of this field. The value in this field will be used to deliver results downstream outbound to interested providers associated with the patient. If PV1.8 is sent PV1.9.1 & PV1.9.2 are required. DHIN will attempt to enrich the ORU message with ADT messages received from source if they are sent to the DHIN. See Provider Enrichment.
9.1	Consulting Doctor ID	R	
9.2	Last Name	R	
9.3	First Name	R	
9.4	Middle Name	O	
9.5	Prefix	O	
9.6	Suffix	O	
10	Hospital Service	O	**Table - 0069** *Note additional code set values will be mapped to the above listed Standard Patient Administration HL7 Codes (Patient Administration Codes Hospital Service (PV1.10))
11	Temporary Location	N	
12	Pre-Admit Test Indicator	O	
13	Re-Admission Indicator	O	**Table - 0092**
14	Admission Source	O	**Table - 0023** *Note additional code set values will be mapped to the above listed Standard Patient Administration HL7 Codes (Patient Administration Codes Admit Source (PV1.14))
15	Ambulatory Status	O	**Table - 0009**
16	VIP Indicator	O	
17	Admitting Doctor	CO	DHIN will only acknowledge the first iteration of this field. The value in this field will be used to deliver results downstream outbound to interested providers associated with the patient. If PV1.17 is sent PV1.17.1 & PV1.17.2 are required. DHIN will attempt to enrich the ORU message with ADT messages received from source if they are sent to the DHIN. See Provider Enrichment.
17.1	Consulting Doctor ID	R	
17.2	Last Name	R	
17.3	First Name		

17.4 17.5 17.6	Middle Name Suffix Prefix	R O O O	
18	Patient Type	O	DHIN will evaluate codes set information provided by the data sending organization
19 19.1	Visit Number Id Number	R R	This field is used for result matching and provider enrichment. Can be populated with the value from PID.18 when applicable.
20 20.1 20.2	Financial Class Financial Class Code Effective Date	O R O	
21	Charge Price Indicator	NS	
22	Courtesy Code	NS	
23	Credit Rating	NS	
24	Contract Code	O	
25	Contract Effective Date	O	
26	Contract Amount	O	
27	Contract Period	O	
28	Interest Code	O	
29	Transfer to Bad Debt Code	O	
30	Transfer to Bad Debt Date	O	
31	Bad Debt Agency Code	O	
32	Bad Debt Transfer Amount	O	
33	Bad Debt Recover Amount	O	
34	Delete Account Identifier	NS	
35	Delete Account Date	NS	
36	Discharge Disposition	O	**Table - 0112** *Note additional code set values will be mapped to the above listed Standard Patient Administration HL7 Codes (Patient Administration Codes Discharge Disposition (PV1.36))
37 37.1 37.2	Discharge to Location Discharge Location Effective Date	CO R O	
38 38.1 38.2 38.3 38.4 38.5 38.6	Diet Type Identifier Text Name of Coding System Alternate Identifier Alternate Text Name of Alternate Coding System	O O O O O O O	 **Table - 0396** **Table - 0396**
39	Servicing Facility	O	
40	Bed Status	O	**Table - 0116**
41	Account Status	O	
42	Pending Location	O	
43	Prior Temporary Location	O	
44	Admit Date/Time	R	
45	Discharge Date/Time	CO	**This field is optional, however; for ADT^03 transactions it is required.** The CHR will only display the value of "Finished" when it is populated on the discharge transaction.

46	Current Patient Balance	N	
47	Total Charges	N	
48	Total Adjustment	N	
49	Total Payments	N	
50	Alternate Visit ID	O	
51	Visit Indicator	O	**Table - 0326**
52	Other Healthcare Providers	O	

PV2 Patient Visit – Additional Information Segment:

PV2 Seq	Name	R/O	Comments
1	Prior Pending Location	O	
1.1	Point of Care	O	
1.2	Room	O	
1.3	Bed	O	
1.4	Facility	O	
1.5	Location Status	O	
1.6	Patient Location Type	C	**Table - 0305**
1.7	Building	O	
1.8	Floor	O	
1.9	Location Disposition	O	
1.10	Comprehensive Location Identifier	O	
1.11	Assigning Authority for Location	O	
2	Accommodation Code	O	
2.1	Identifier	O	
2.2	Text	O	
2.3	Name of Coding System	O	**Table - 0396**
2.4	Alternate Identifier	O	
2.5	Alternate Text	O	
2.6	Name of Alternate Coding System	O	**Table - 0396**
3	Admit Reason	O	
3.1	Identifier	O	
3.2	Text	O	
3.3	Name of Coding System	O	**Table - 0396**
3.4	Alternate Identifier	O	
3.5	Alternate Text	O	
3.6	Name of Alternate Coding System	O	**Table - 0396**
4	Transfer Reason	O	
4.1	Identifier	O	
4.2	Text	O	
4.3	Name of Coding System	O	**Table - 0396**
4.4	Alternate Identifier	O	
4.5	Alternate Text	O	
4.6	Name of Alternate Coding System	O	**Table - 0396**
5	Patient Valuables	O	
6	Patient Valuables Location	O	
7	Visit User Code	O	**Table - 0130**
8	Expected Admit Date/Time	O	
9	Expected Discharge Date/Time	O	
10	Estimated Length of Inpatient Stay	O	
11	Actual Length of Inpatient Stay	O	
12	Visit Description	O	
13	Referral Source Code	O	
14	Previous Service Date	O	
15	Employment Illness Related Indicator	O	**Table - 0136**
16	Purge Status Code	O	**Table - 0213**

17	Purge Status Date	O	
18	Special Program Code	O	**Table - 0214**
19	Retention Indicator	O	**Table - 0136**
20	Expected Number of Insurance Plans	O	
21	Visit Publicity Code	O	**Table - 0215**
22	Visit Protection Indicator	O	**Table - 0136**
23	Clinic Organization Name	O	
23.1	Organization Name	O	
23.2	Organization Type Code	O	**Table - 0204**
23.3	Id Number	O	
23.4	Check Digit	O	
23.5	Check Digit Scheme	O	**Table - 0061**
23.6	Assigning Authority	O	
23.7	Identifier Type Code	O	**Table - 0203**
23.8	Assigning Facility	O	
23.9	Name Representation Code	O	
23.10	Organization Identifier	O	**Table - 0465**
24	Patient Status Code	O	**Table - 0216**
25	Visit Priority Code	O	**Table - 0217**
26	Previous Treatment Date	O	
27	Expected Discharge Disposition	O	**Table - 0112**
28	Signature on File Date	O	
29	First Similar Illness Date	O	
30	Patient Charge Adjustment Code	O	
30.1	Identifier	O	
30.2	Text	O	
30.3	Name of Coding System	O	**Table - 0396**
30.4	Alternate Identifier	O	
30.5	Alternate Text	O	
30.6	Name of Alternate Coding System	O	**Table - 0396**
31	Recurring Service Code	O	
32	Billing Media Code	O	**Table - 0136**
33	Expected Surgery Date and Time	O	
34	Military Partnership Code	O	**Table - 0136**
35	Military Non-Availability Code	O	**Table - 0136**
36	Newborn Baby Indicator	O	**Table - 0136**
37	Baby Detained Indicator	O	**Table - 0136**
38	Mode of Arrival Code	O	
38.1	Identifier	O	
38.2	Text	O	
38.3	Name of Coding System	O	**Table - 0396**
38.4	Alternate Identifier	O	
38.5	Alternate Text	O	
38.6	Name of Alternate Coding System	O	**Table - 0396**
39	Recreational Drug Use Code	O	**Table - 0431**
39.1	Identifier	O	
39.2	Text	O	

39.3	Name of Coding System	O	**Table - 0396**
39.4	Alternate Identifier	O	
39.5	Alternate Text	O	
39.6	Name of Alternate Coding System	O	**Table - 0396**
40	Admission Level of Care Code	O	**Table - 0432**
40.1	Identifier	O	
40.2	Text	O	
40.3	Name of Coding System	O	**Table - 0396**
40.4	Alternate Identifier	O	
40.5	Alternate Text	O	**Table - 0396**
40.6	Name of Alternate Coding System	O	
41	Precaution Code	O	**Table - 0433**
41.1	Identifier	O	
41.2	Text	O	
41.3	Name of Coding System	O	**Table - 0396**
41.4	Alternate Identifier	O	
41.5	Alternate Text	O	
41.6	Name of Alternate Coding System	O	**Table - 0396**
42	Patient Condition Code	O	**Table - 0434**
42.1	Identifier	O	
42.2	Text	O	
42.3	Name of Coding System	O	**Table - 0396**
42.4	Alternate Identifier	O	
42.5	Alternate Text	O	
42.6	Name of Alternate Coding System	O	**Table - 0396**
43	Living Will Code	O	**Table - 0315**
44	Organ Donor Code	O	**Table - 0316**
45	Advance Directive Code	O	**Table - 0435**
45.1	Identifier	O	
45.2	Text	O	
45.3	Name of Coding System	O	**Table - 0396**
45.4	Alternate Identifier	O	
45.5	Alternate Text	O	
45.6	Name of Alternate Coding System	O	**Table - 0396**
46	Patient Status Effective Date	O	
47	Expected LOA Return Date/Time	O	
48	Expected Pre-Admission Testing Date/Time	O	
49	Notify Clergy Code	O	**Table - 0534**

OBX Observation Result Segment:

OBX Seq	Name	R/O	Comments
1	Set ID	R	Start at 1 and increments by 1
2	Value Type	R	Acceptable values to display numerical results: • NM – Numeric • CE – Coded Entry (only available on messages below v2.5.1) • CWE – Coded with Exceptions (acceptable on messages v.2.6.1 and higher) • ST - String Acceptable values to display report or textual result data: • TX – Textual Acceptable values to display encapsulated data • ED – encapsulated data
3 3.1 3.2 3.3 3.4 3.5	Observation Identifier Test Code Test Code Description Coding Schema Alternate Test Code Alternate Code Description	R R R O O O	For lab results this value must be unique. For pathology, microbiology, radiology, and transcribed reports this value should be the same to ensure that multiple instances of the same report is not created in the CHR.
4	Observation Sub-ID	O	May be sent in microbiology results to support the grouping of organisms.
5 5.1 5.2 5.3 5.4 5.5	Observation Value Observation Value Document Type Document Format Encoding Method Observation Value	O O C C C C	If OBX.2 = ST, TX, NM, CE or CWE then OBX.5.1 has a character limitation of 250 characters. If OBX.2 = ED then OBX.5 should be populated as such. |^^application/PDF^base64^base64 string|
6	Units	C	For numerical or discrete result data when OBX.2 = NM
7	Reference Range	C	For numerical or discrete result data when OBX.2 = NM
8	Abnormal Flag	C	**Table - 0078** *Note – for some values listed below they should only be used when OBX.2 is populated with a value signifying a numerical result. (Abnormal Flag Codes (OBX.8))
9	Probability	O	
10	Nature of Abnormal Test	O	**Table - 0080**
11	Observation Result Status	O	**Table - 0085** *Note – for some values listed below they should only be used when OBX.2 is populated with a value signifying a numerical result. (Observation result status codes (OBX.11))
12	Date Last Observe Normal Values	O	
13	User Access Checks	O	
14	Date/Time of Observation	R	This field is required to ensure that individual tests display a "Reported" date in the CHR
15	Producer's ID	R	Must contain the code for the performing lab location
16 16.1 16.2 16.3 16.4	Responsible Observer Provider Identifier Last Name First Name Middle Name	O R R O O	If OBX.16 is populated, then OBX.16.1 & OBX.16.2 are required

16.5	Suffix	O	
16.6	Prefix	O	
16.7	Degree	O	
16.8	Source Table	O	
16.9	Assigning Authority	O	
16.9.1	Namespace ID	O	
16.9.2	Universal ID	O	
16.9.3	Universal ID Type	O	
16.10	Name Type	O	
16.11	Check Digit	O	
16.12	Check Digit Scheme	O	
16.13	Identifier Type	O	
17	Observation Method	O	
18	Equipment Instance Identifier	NS	Not supported
19	Date/Time of the Analysis	NS	Not supported
20	Reserved for HL7 v2.6	NS	Not supported
21	Reserved for HL7 v2.6	NS	Not supported
22	Reserved for HL7 v2.6	NS	Not supported
23	Perform Organization Name	R	Required for all lab results
23.1	Organization Name	O	
23.2	Organization Name Type Code	O	**Table - 0204**
23.3	ID Number	O	
23.4	Check Digit	O	
23.5	Check Digit Scheme	O	**Table - 0061**
23.6	Assigning Authority	O	
23.7	Identifier Type Code	O	**Table - 0203**
23.8	Assigning Facility	O	
23.9	Name Representation Code	O	**Table - 0465**
23.10	Organization Identifier	O	
24	Performing Organization Address	R	Required for all lab results
24.1	Address Line 1	O	
24.2	Address Line 2	O	
24.3	City	O	
24.4	State	O	
24.5	Zip Code	O	
24.6	Country	O	
24.7	Type	O	
24.8	Other Geographic Designation	O	
24.9	County/Parish	O	
24.10	Census Tract	O	
25	Performing Organization Medical Director	R	Required for all lab results
25.1	Identifier		
25.2	Last Name		
25.3	First Name		
25.4	Middle Name		
25.5	Suffix		
25.6	Prefix		
25.7	Degree		**Table - 0360**
25.8	Source Table		
25.9	Assigning Authority		
25.9.1	Namespace ID		

25.9.2	Universal ID		
25.9.3	Universal ID Type		**Table - 0301**
25.10	Name Type		**Table - 0200**
25.11	Check Digit		
25.12	Check Digit Scheme		**Table - 0061**
25.13	Identifier Type		**Table - 0203**

DG1 Diagnosis:

DG1 Seq	Name	R/O	Comments
1	Set ID – DG1	R	
2	Diagnosis Coding Method	B	
3	Diagnosis Code	O	
3.1	Identifier	O	
3.2	Text	O	
3.3	Name of Coding System	O	**Table - 0396**
3.4	Alternate Identifier	O	
3.5	Alternate Text	O	
3.6	Name of Alternate Coding System	O	**Table - 0396**
4	Diagnosis Description	B	
5	Diagnosis Date/Time	O	
5.1	Time	R	**Format:** YYYY[MM[DD[HH[MM[SS[.S[S[S[S]]]]]]]]][+/-ZZZZ]
5.2	Degree of Precision	B	**Table - 0529**
6	Diagnosis Type	R	**Table - 0052**
7	Major Diagnostic Category	B	
7.1	Identifier	O	
7.2	Text	O	
7.3	Name of Coding System	O	**Table - 0396**
7.4	Alternate Identifier	O	
7.5	Alternate Text	O	
7.6	Name of Alternate Coding System	O	**Table - 0396**
8	Diagnosis Related Group	B	
8.1	Identifier	O	
8.2	Text	O	
8.3	Name of Coding System	O	**Table - 0396**
8.4	Alternate Identifier	O	
8.5	Alternate Text	O	
8.6	Name of Alternate Coding System	O	**Table - 0396**
9	DRG Approval Indicator	B	**Table - 0136**
10	DRG Grouper Review Code	B	
11	Outlier Type	B	
11.1	Identifier	O	
11.2	Text	O	
11.3	Name of Coding System	O	**Table - 0396**
11.4	Alternate Identifier	O	
11.5	Alternate Text	O	
11.6	Name of Alternate Coding System	O	**Table - 0396**
12	Outlier Days	B	
13	Outlier Cost	B	
13.1	Price	R	
13.2	Price Type	O	**Table - 0205**
13.3	From Value	O	
13.4	To Value	O	
13.5	Range Units	O	
13.6	Range Type	O	**Table - 0298**
14	Grouper Version and Type	B	

15	Diagnosis Priority	O	**Table - 0359**
16 16.1 16.2 16.3 16.4 16.5 16.6	Diagnosing Clinician ID Number Family Name Given Name Second and Further Given Names or Initials Suffix Prefix	O O O O O O O	
17	Diagnosis Classification	O	**Table - 0228**
18	Confidential Indicator	O	**Table - 0136**
19 19.1 19.2	Attestation Date/Time Time Degree of Precision	O R B	 **Format:** YYYY[MM[DD[HH[MM[SS[.S[S[S[S]]]]]]]]][+/-ZZZZ] **Table - 0529**
20 20.1 20.2 20.3 20.4	Diagnosis Identifier Entity Identifier Namespace ID Universal ID Universal ID Type	C O O C C	 **Table - 0301**
21	Diagnosis Action Code	C	**Table - 0206**

PR1 Procedure:

PR1 Seq	Name	R/O	Comments
1	Set ID – PR1	R	
2	Procedure Coding Method	B	
3	Procedure Code	R	
3.1	Identifier	O	
3.2	Text	O	
3.3	Name of Coding System	O	**Table - 0396**
3.4	Alternate Identifier	O	
3.5	Alternate Text	O	
3.6	Name of Alternate Coding System	O	**Table - 0396**
4	Procedure Description	B	
5	Procedure Date/Time	R	
6	Procedure Functional Type	O	**Table - 0230**
7	Procedure Minutes	O	
8	Anesthesiologist	O	
8.1	Id Number		
8.2	Family Name		
8.3	Given Name		
8.4	Second and Further Given Names or Initials		
8.5	Suffix		
8.6	Prefix		
9	Anesthesia Code	O	
10	Anesthesia Minutes	O	
11	Surgeon	O	
11.1	Id Number	R	
11.2	Family Name	R	
11.3	Given Name	R	
11.4	Second and Further Given Names or Initials	O	
11.5	Suffix	O	
11.6	Prefix	O	
12	Procedure Practitioner	O	
12.1	Id Number	R	
12.2	Family Name	R	
12.3	Given Name	R	
12.4	Second and Further Given Names or Initials	O	
12.5	Suffix	O	
12.6	Prefix	O	
13	Consent Code	O	
13.1	Identifier	O	
13.2.	Text	O	
13.3	Name of Coding System	O	**Table - 0396**
13.4	Alternate Identifier	O	
13.5	Alternate Text	O	
13.6	Name of Alternate Coding System	O	**Table - 0396**
14	Procedure Priority	O	**Table - 0418**
15	Associated Diagnosis Code	O	
15.1	Identifier	O	
15.2	Text	O	

15.3	Name of Coding System	O	**Table - 0396**
15.4	Alternate Identifier	O	
15.5	Alternate Text	O	
15.6	Name of Alternate Coding System	O	**Table - 0396**
16	Procedure Code Modifier	O	
16.1	Identifier	O	
16.2	Text	O	
16.3	Name of Coding System	O	**Table - 0396**
16.4	Alternate Identifier	O	
16.5	Alternate Text	O	
16.6	Name of Alternate Coding System	O	**Table - 0396**
17	Procedure DRG Type	O	**Table - 0416**
18	Tissue Type Code	O	
18.1	Identifier	O	
18.2	Text	O	
18.3	Name of Coding System	O	**Table - 0396**
18.4	Alternate Identifier	O	
18.5	Alternate Text	O	
18.6	Name of Alternate Coding System	O	**Table - 0396**
19	Procedure Identifier	C	
19.1	Entity Identifier	O	
19.2	Namespace Id	O	
19.3	Universal Id	C	
19.4	Universal Id Type	C	**Table - 0301**
20	Procedure Action Code	C	**Table - 0206**

IN1 – Insurance:

IN1 Seq	Name	R/O	Comments
1	Set ID – IN1	R	
2	Insurance Plan ID	R	
2.1	Identifier	O	
2.2	Text	O	
2.3	Name of Coding System	O	
2.4	Alternate Identifier	O	
2.5	Alternate Text	O	
2.6	Name of Alternate Coding System	O	
3	Insurance Company ID	R	
3.1	Id Number	R	
3.2	Check Digit	O	
3.3	Check Digit Scheme	O	**Table - 0061**
3.4	Assigning Authority	O	
3.5	Identifier Type Code	O	**Table - 0203**
3.6	Assigning Facility	O	
3.7	Effective Date	O	
3.8	Expiration Date	O	
3.9	Assigning Jurisdiction	O	
3.10	Assigning Agency or Department	O	
4	Insurance Company Name	O	
4.1	Organization Name	O	
4.2	Organization Name Type Code	B	**Table - 0204**
4.3	Id Number	O	
4.4	Check Digit	O	
4.5	Check Digit Scheme	O	**Table - 0061**
4.6	Assigning Authority	O	
4.7	Identifier Type Code	O	**Table - 0203**
4.8	Assigning Facility	O	
4.9	Name Representation Code	O	**Table - 0465**
4.10	Organization Identifier	O	
5	Insurance Company Address	O	
5.1	Street Address	R	
5.2	Other Designation	O	
5.3	City	R	
5.4	State	R	
5.5	Zip or Postal Code	R	
5.6	Country	O	**Table - 0399**
5.7	Address Type	O	**Table - 0190**
5.8	Other Geographical Designation	O	
5.9	County/Parish Code	O	
5.10	Census Tract	O	
5.11	Address Representation Code	O	**Table - 0465**
5.12	Address Validity Range	O	
5.13	Effective Date	O	
5.14	Expiration Date	O	
6	Insurance Company Contact Person	O	
6.1	Family Name	R	
6.2	Given Name	R	

6.3	Second and Further Given Names or Initials	O	
6.4	Suffix	O	
6.5	Prefix	O	
7	Insurance Company Contact Phone Number	O	
7.1	Telephone Number	B	
7.2	Telecommunication Use Code	O	**Table - 0201**
7.3	Telecommunication Equipment Code	O	**Table - 0202**
7.4	Email Address	O	
7.5	Country Code	O	
7.6	Area/City Code	O	
7.7	Local Number	O	
7.8	Extension	O	
7.9	Any Text	O	
7.10	Extension Prefix	O	
7.11	Speed Dial Code	O	
7.12	Unformatted Telephone Number	C	
8	Group Number	O	
9	Group Name	O	
9.1	Organization Name	O	
9.2	Organization Name Type Code	B	**Table - 0204**
9.3	Id Number	O	
9.4	Check Digit	O	
9.5	Check Digit Scheme	O	**Table - 0061**
9.6	Assigning Authority	O	
9.7	Identifier Type Code	O	**Table - 0203**
9.8	Assigning Facility	O	
9.9	Name Representation Code	O	**Table - 0465**
9.10	Organization Identifier	O	
10	Insured's Group Emp ID	O	
10.1	Id Number	R	
10.2	Check Digit	O	
10.3	Check Digit Scheme	O	**Table - 0061**
10.4	Assigning Authority	O	
10.5	Identifier Type Code	O	**Table - 0203**
10.6	Assigning Facility	O	
10.7	Effective Date	O	
10.8	Expiration Date	O	
10.9	Assigning Jurisdiction	O	
10.10	Assigning Agency or Department	O	
11	Insured's Group Emp Name	O	
11.1	Organization Name	O	
11.2	Organization Name Type Code	B	**Table - 0204**
11.3	Id Number	O	
11.4	Check Digit	O	
11.5	Check Digit Scheme	O	**Table - 0061**
11.6	Assigning Authority	O	
11.7	Identifier Type Code	O	**Table - 0203**
11.8	Assigning Facility	O	
11.9	Name Representation Code	O	**Table - 0465**
11.10	Organization Identifier	O	

12	Plan Effective Date	O	
13	Plan Expiration Date	O	
14	Authorization Information	O	
14.1	Authorization Number	O	
14.2	Date	O	
14.3	Source	O	
15	Plan Type	O	
16	Name of Insured	O	
16.1	Family Name	R	
16.2	Given Name	R	
16.3	Second and Further Given Names or Initials	O	
16.4	Suffix	O	
16.5	Prefix	O	
17	Insured's Relationship to Patient	O	
17.1	Identifier	O	
17.2	Text	O	
17.3	Name of Coding System	O	
17.4	Alternate Identifier	O	
17.5	Alternate Text	O	
17.6	Name of Alternate Coding System	O	
18	Insured's Date of Birth	O	
18.1	Time	R	
18.2	Degree of Precision	B	**Table - 0529**
19	Insured's Address	O	
19.1	Street Address	R	
19.2	Other Designation	O	
19.3	City	R	
19.4	State	R	
19.5	Zip or Postal Code	R	
19.6	Country	O	**Table - 0399**
19.7	Address Type	O	**Table - 0190**
19.8	Other Geographical Designation	O	
19.9	County/Parish Code	O	
19.10	Census Tract	O	
19.11	Address Representation Code	O	**Table - 0465**
19.12	Address Validity Range	O	
19.13	Effective Date	O	
19.14	Expiration Date	O	
20	Assignment of Benefits	O	**Table - 0135**
21	Coordination of Benefits	O	**Table - 0173**
22	Coordination of Benefits Priority	O	

Electronic Lab Report (ORU)

MSH Message Header Segment:

MSH Seq	Name	R/O	Comments
1	Field Separator	R	Accepted value "|" ASCII(124)
2	Encoding Characters	R	**Position 1:** Component Separator "^" ASCII(94) **Position 2:** Repetition Separator "~" ASCII(126) **Position 3:** Escape "\" ASCII(92) **Position 4:** Sub-Component "&" ASCII(38)
3	Sending Application	R	Data sending organization application system
4	Sending Facility	R	Data sending organization source code
5	Receiving Application	R	"DHIN"
6	Receiving Facility	O	"DEDOH"
7	Date/Time Message	R	Date/Time messages generated from sending system **Format:** "YYYYMMddHHmmss"
8	Security	O	
9 9.1 9.2	Message Type Type Event	R	Trigger type and event: **EX:** *ORU^R01^ORU_R01* Example Value must = "ORU" Example Value must = "R01"
10	Message Control ID	R	Should be unique
11 11.1 11.2	Processing ID Processing ID Mode	O	Acceptable values: "P" = Production or "T" = Test
12	Version ID	R	2.5.1
13	Sequence Number	NS	Not supported
14	Continuation Pointer	NS	Not supported
15	Accept Acknowledgement Type	NS	Not supported
16	Application Acknowledgement Type	NS	Not supported
17	Country Code	R	USA
18	Character Set	NS	Not supported
19	Principal Language of Message	NS	Not supported
20	Alternate Character Set	NS	Not supported
21 21.1 21.2 21.3 21.4	Message Profile Identifier Entity Identifier Namespace ID Universal ID Universal ID Type	R	 PHLabReport-NoAck 2.16.840.1.113883.9.11 ISO

MSA Message Acknowledgement Segment:

MSA Seq	Name	R/O	Comments
1	Acknowledge Code	R	**Acceptable value:** AA = ACK message accepted AE = NACK message rejected AR = NACK message rejected system error
2	Message Control ID	R	MSH.10 value must be unique
3	Text Message	O	
4	Expected Sequence Number	O	
5	Delayed ACK Type	O	
6	Error Condition	O	

SFT Software Segment (Syndromic Surveillance/Electronic Lab Report Requirement):

SFT Seq	Name	R/O	Comments
1	Software Vender Organization	R	Delaware Health Information Network
2	Software Certified Version or Release Number	R	3.7.0
3	Software Product Name	R	MIRTH CONNECT
4	Software Binary ID	R	3971c0f6-fce0-4e7f-ba80-b15df94ed1ba
5	Software Product Information	NS	Not Supported
6	Software Install Date	R	20140601

PID Patient Identification Segment:

PID Seq	Name	R/O	Comments
1	Set ID – PID	R	1
2 2.1 2.2 2.3 2.4 2.5	External Patient ID Patient ID Check Digit Check Digit Scheme Assigning Authority Identifier Type	O	Reserved for Initiate MPI source ID DHIN will hard code the field to "MPI"
3 3.1 3.2 3.3 3.4 3.5 3.6	Internal Patient ID (MRN) Patient ID Check Digit Check Digit Scheme Assigning Authoring Identifier Type Assigning Facility	R R O O R O O	Source System MRN DHIN will hard code the field to "DHINXXXX"
4 4.1	Alternate Patient ID Patient ID	O	
5 5.1 5.2 5.3 5.4 5.5 5.6	Patient Name Last Name First Name Middle Name Suffix Prefix Degree	R R R O O O O	This segment is required for patient matching logic in Initiate MPI.
6	Mother's Maiden Name	O	This segment is optional and is used for patient matching logic in Initiate MPI
7	Date of Birth	R	This segment is required and is used for patient matching logic in Initiate MPI
8	Sex	R	This segment is required and is used for patient matching logic in Initiate MPI. Acceptable values are: • M – Male • F – Female • U – Unknown
9	Patient Alias	O	DHIN uses PID.5 Patient Name for patient matching
10	Race	R	Enrichment if null from MPI. This is a required field for Syndromic Surveillance/Electronic Labs
11 11.1 11.2 11.3 11.4 11.5 11.6	Patient Address Address Line 1 Address Line 2 City State Zip Code Country	R R O R R R	This segment is required for COVID-19 labs and patient matching logic. The MPI evaluates data provided here to increase the probability of a positive match. Only the first iteration of this segment is evaluated. DHIN will enrich this field based on active historical information provided from this source. See DHIN Patient Enrichment.

11.7	Type	R O	
12	Country Code	O	
13	Home Phone Number	R	This segment is required for COVID-19 electronic labs, patient matching logic evaluates data provided here to increase the probability of a positive match. Only the first iteration of this segment is evaluated. DHIN will enrich this field based on active historical information provided from this source. See DHIN Patient Enrichment.
14	Business Phone Number	O	This segment is optional however patient matching logic evaluates data provided here to increase the probability of a positive match. Only the first iteration of this segment is evaluated. DHIN will enrich this field based on active historical information provided from this source. See DHIN Patient Enrichment.
15	Language	O	DHIN will enrich this field based on active historical information provided from this source. See both DHIN Patient Enrichment & DHIN Standard Normalization.
16	Marital Status	O	DHIN will enrich this field based on active historical information provided from this source. See both DHIN Patient Enrichment & DHIN Standard Normalization.
17	Religion	O	DHIN will enrich this field based on active historical information provided from this source. See both DHIN Patient Enrichment & DHIN Standard Normalization.
18 18.1 18.2 18.3 18.4 18.5 18.6	Patient Account Number Patient Account Number Check Digit Check Digit Scheme Assigning Authority Identifier Type Assigning Facility	R R O O O O O	This segment is required to assist in result matching
19	Patient Social Security Number	O	This segment is optional however patient matching logic evaluates data provided here to increase the probability of a positive match. Only the first iteration of this segment is evaluated. DHIN will enrich this field based on active historical information provided from this source. See DHIN Patient Enrichment.
20	Driver's License Number	NS	Not supported
21	Mother's Identifier	NS	Not supported
22	Ethnic Group	R	This field is required by the Department of Public Health for COVID-19 results
23	Birthplace	O	
24	Multiple Birth Indicator	O	**Acceptable Values:** Y – Yes N – No
25	Birth Order	O	
26	Citizenship	O	
27	Military Status	NS	Not supported
28	Nationality	O	
29	Patient Death Date/Time	O	
30	Patient Death Indicator	O	

PV1 Patient Visit Segment:

PV1 Seq	Name	R/O	Comments
1	Set ID – PID	R	Starts at 1
2	Patient Class	R	**Table - 0004** *Note additional code set values will be mapped to the above listed Standard Patient Administration HL7 Codes (Patient Administration Codes Patient Class (PV1.2))
3	Patient Location	O	
3.1	Point of Service Location	O	
3.2	Patient Room	O	
3.3	Patient Bed	O	
3.4	Facility ID	O	
3.5	Bed Status	O	
3.6	Location Type	O	
3.7	Building	O	
3.8	Floor	O	
3.9	Location Description	O	
3.10	Comprehensive Location Identifier	O	
3.11	Assigning Authority for Location	O	
4	Admission Type	O	**Table - 0007** *Note additional code set values will be mapped to the above listed Standard Patient Administration HL7 Codes (Patient Administration Codes Admit Type (PV1.4))
5	Pre-Admit Number	O	
5.1	Id Number	O	
5.2	Check Digit	O	
5.3	Check Digit Scheme	O	**Table - 0061**
5.4	Assigning Authority	O	
5.5	Identifier Type Code	O	**Table - 0203**
5.6	Assigning Facility	O	
5.7	Effective Date	O	
5.8	Expiration Date	O	
5.9	Assigning Jurisdiction	O	
5.10	Assigning Agency or Department	O	
6	Prior Patient Location	O	
6.1	Point of Care	O	
6.2	Room	O	
6.3	Bed	O	
6.4	Facility	O	
6.5	Location Status	O	
6.6	Person Location Type	C	**Table - 0305**
6.7	Building	O	
6.8	Floor	O	
6.9	Location Description	O	
6.10	Comprehensive Location Identifier	O	
6.11	Assigning Authority for Location	O	
7	Attending Doctor	CO	DHIN will only acknowledge the first iteration of this field. The value in this field will be used to deliver results downstream outbound to interested providers associated with the patient. If PV1.7 is sent PV1.7.1 & PV1.7.2 are required. DHIN will attempt to enrich the ORU message with ADT messages received from source if they are sent to the DHIN. See Provider Enrichment.

7.1	Attending Doctor ID	R	
7.2	Last Name	R	
7.3	First Name	R	
7.4	Middle Name	O	
7.5	Prefix	O	
7.6	Suffix	O	
8	Referring Doctor	CO	DHIN will only acknowledge the first iteration of this field. The value in this field will be used to deliver results downstream outbound to interested providers associated with the patient. If PV1.8 is sent PV1.8.1 & PV1.8.2 are required. DHIN will attempt to enrich the ORU message with ADT messages received from source if they are sent to the DHIN. See Provider Enrichment.
8.1	Referring Doctor ID	R	
8.2	Last Name	R	
8.3	First Name	R	
8.4	Middle Name	O	
8.5	Prefix	O	
8.6	Suffix	O	
9	Consulting Doctor	CO	DHIN will only acknowledge the first iteration of this field. The value in this field will be used to deliver results downstream outbound to interested providers associated with the patient. If PV1.8 is sent PV1.9.1 & PV1.9.2 are required. DHIN will attempt to enrich the ORU message with ADT messages received from source if they are sent to the DHIN. See Provider Enrichment.
9.1	Consulting Doctor ID	R	
9.2	Last Name	R	
9.3	First Name	R	
9.4	Middle Name	O	
9.5	Prefix	O	
9.6	Suffix	O	
10	Hospital Service	O	**Table - 0069** *Note additional code set values will be mapped to the above listed Standard Patient Administration HL7 Codes (Patient Administration Codes Hospital Service (PV1.10))
11	Temporary Location	N	
12	Pre-Admit Test Indicator	O	
13	Re-Admission Indicator	O	**Table - 0092**
14	Admission Source	O	**Table - 0023** *Note additional code set values will be mapped to the above listed Standard Patient Administration HL7 Codes (Patient Administration Codes Admit Source (PV1.14))
15	Ambulatory Status	O	**Table - 0009**
16	VIP Indicator	O	
17	Admitting Doctor	CO	DHIN will only acknowledge the first iteration of this field. The value in this field will be used to deliver results downstream outbound to interested providers associated with the patient. If PV1.17 is sent PV1.17.1 & PV1.17.2 are required. DHIN will attempt to enrich the ORU message with ADT messages received from source if they are sent to the DHIN. See Provider Enrichment.
17.1	Consulting Doctor ID	R	
17.2	Last Name	R	
17.3	First Name		

17.4 17.5 17.6	Middle Name Suffix Prefix	R O O O	
18	Patient Type	O	DHIN will evaluate codes set information provided by the data sending organization
19 19.1	Visit Number Id Number	R R	This field is used for result matching and provider enrichment. Can be populated with the value from PID.18 when applicable.
20 20.1 20.2	Financial Class Financial Class Code Effective Date	O R O	
21	Charge Price Indicator	NS	Not Supported
22	Courtesy Code	NS	Not Supported
23	Credit Rating	NS	Not Supported
24	Contract Code	O	
25	Contract Effective Date	O	
26	Contract Amount	O	
27	Contract Period	O	
28	Interest Code	O	
29	Transfer to Bad Debt Code	O	
30	Transfer to Bad Debt Date	O	
31	Bad Debt Agency Code	O	
32	Bad Debt Transfer Amount	O	
33	Bad Debt Recover Amount	O	
34	Delete Account Identifier	NS	Not Supported
35	Delete Account Date	NS	Not Supported
36	Discharge Disposition	O	**Table - 0112** *Note additional code set values will be mapped to the above listed Standard Patient Administration HL7 Codes (Patient Administration Codes Discharge Disposition (PV1.36))
37 37.1 37.2	Discharge to Location Discharge Location Effective Date	CO R O	
38 38.1 38.2 38.3 38.4 38.5 38.6	Diet Type Identifier Text Name of Coding System Alternate Identifier Alternate Text Name of Alternate Coding System	O O O O O O O	 **Table - 0396** **Table - 0396**
39	Servicing Facility	O	
40	Bed Status	O	**Table - 0116**
41	Account Status	O	
42	Pending Location	O	
43	Prior Temporary Location	O	
44	Admit Date/Time	R	
45	Discharge Date/Time	CO	**This field is optional, however; for ADT^03 transactions it is required.** The CHR will only display the value of "Finished" when it is populated on the discharge transaction.

46	Current Patient Balance	N	Not Supported
47	Total Charges	N	Not Supported
48	Total Adjustment	N	Not Supported
49	Total Payments	N	Not Supported
50	Alternate Visit ID	O	
51	Visit Indicator	O	**Table - 0326**
52	Other Healthcare Providers	O	

ORC Common Order Segment:

ORC Seq	Name	R/O	Comments
1	Order Control	R	Starts at 1
2	Placer Order Number	R	Test specific result identifiers are stored in this field and must match OBR.2
3	Filler Order Number	O	If populated must match OBR.3
4	Placer Group Number	O	
5	Order Status	O	
6	Response Flag	O	
7	Quantity/Timing	O	
7.1	Quantity	O	
7.2	Interval	O	
7.3	Duration	O	
7.4	Start Date	O	
7.5	End Date	O	
7.6	Priority	O	
8	Parent	O	
9	Date of Transaction	O	**Format:** "YYYYMMdd"
10	Entered By	O	
11	Verified By	O	
12	Ordering Provider	R	***Public Health Syndromic Surveillance Validations:*** Pre-validate that ORC.12 exists. If ORC.12.1 is missing validate that ORC.12.2 & ORC.12.3 exists if the values are missing fail the message and add to end of day list to be sent to data sender for correction & resubmission
12.1	Identifier	R	
12.2	Last Name	R	
12.3	First Name	O	
12.4	Middle Name	O	
12.5	Prefix	O	
12.6	Suffix	O	
12.7	Degree	O	
13	Enterer's Location	NS	Not supported
14	Call Back Phone Number	NS	Not supported
15	Order Effective Date	O	
16	Order Control Code Reason	O	
17	Entering Organization	O	
18	Entering Device	O	
19	Action By	O	
20	Advanced Beneficiary Notice Code	O	
21	Ordering Facility Name	O	
22	Ordering Facility Address	R	***Public Health Syndromic Surveillance Validations:*** Pre-validate that the segment exists and is populated. If it is null process message through the "Get Ordering Doctor Info" connector in Mirth to obtain the Ordering Facility Address.
22.1	Street Address	R	
22.2	Other Designation	O	
22.3	City	R	
22.4	State	R	
22.5	Zip	R	
23	Ordering Facility Phone Number	R	***Public Health Syndromic Surveillance Validations:***

			Pre-validate that the segment exists and is populated. If it is null process the message through the "Get Ordering Doctor Info" connector in Mirth to obtain the Ordering Facility Phone
24	Ordering Provider Address	O	
25	Order Status Modifier	O	
26	Advance Beneficiary Notice Override	O	
27	Filler's Expected Availability Date/Time	O	
28	Confidentiality Code	O	**Valid Values:** *AID - AIDS patient* EMP - Employee *ETH - Alcohol/drug treatment patient* *HIV - HIV(+) patient* *PSY - Psychiatric patient* *R - Restricted* U - Usual control UWM - Unwed mother *V - Very restricted* VIP - Very important person or celebrity
29	Order Type	O	
30	Enterer Authorization Mode	O	
31	Parent Universal Service Identifier	O	

OBR Order Detail Segment:

OBR Seq	Name	R/O	Comments
1	Set ID	R	Start at 1 and increments by 1
2	Placer Order Number	R	
3	Filler Order Number	O	
4	Universal Service ID	O	This value must be unique per test provided at the OBR level in the HL7 message.
4.1	Test Code	O	
4.2	Test Description	O	
4.3	Coding System	O	
4.4	Alternate Test Code	O	
4.5	Alternate Test Description	O	
4.6	Alternate Coding System	O	
5	Priority	O	
6	Requested Date/Time	R	**If this field is not populated the following CHR field will not display a value**
7	Observation Date/Time	R	If this field is not populated the "Observed" field in the CHR will not display a value
8	Observation End Date	O	
9	Collection Volume	N	
10	Collector Identifier	N	
11	Specimen Action Code	O	
12	Danger Code	N	
12.1	Danger Code		
12.2	Danger Text		
13	Relevant Clinical Information	N	
14	Specimen Received Date	O	If this field is not populated the "Received" field in the CHR will not display a value
15	Specimen Source	R	
15.1	Source Code	R	
15.1.1	Code	R	
15.1.2	Description	R	
15.2	Additives	O	**Table - 0371**
15.3	Free Text	O	
15.4	Body Site	O	**Table - 0163**
15.4.1	Code	O	
15.4.2	Description	O	
15.5	Site Modifier	O	**Table - 0495**
15.6	Collection Method Modifier Code	O	
15.7	Specimen Role	O	**Table - 0369**
16	Ordering Provider	O	
16.1	Identifier	R	
16.2	Last Name	R	
16.3	First Name	O	
16.4	Middle Name	O	
16.5	Prefix	O	
16.6	Suffix	O	
16.7	Degree	O	
17	Order Call Back Phone Number	O	
18	Placer Field 1	O	
19	Placer Field 2	O	

20	Filler Field 1	O	
21	Filler Field 2	O	
22	Result Report Change Date	R	
23	Charge to Practice	N	
24	Diagnostic Service Section ID	R	
25	Result Status	R	
26	Parent Order ID	O	
27	Quantity/Timing	O	
27.1	Quantity	O	
27.2	Interval	O	
27.3	Duration	O	
27.4	Start Date	O	
27.5	End Date	O	
27.6	Priority	O	
28	Result Copies To	O	
28.1	Identifier	R	
28.2	Last Name	R	
28.3	First Name	O	
28.4	Middle Name	O	
28.5	Prefix	O	
28.6	Suffix	O	
28.7	Degree	O	
29	Parent Accession Number	O	
30	Transportation Mode	O	
31	Reason for Study	N	
31.1	Reason ID		
31.2	Reason Text		
32	Results Interpreter	O	If OBR.32 is sent, then OBR.32.1 & OBR.32.2 are required.
32.1	Provider Identifier	R	
32.2	Last Name	R	
32.3	First Name	O	
32.4	Middle Name	O	
32.5	Prefix	O	
32.6	Suffix	O	
32.7	Degree	O	
32.8	Source Table	O	
32.9	Assigning Authority	O	
32.9.1	Namespace ID	O	
32.9.2	Universal ID	O	
32.9.3	Universal ID Type	O	
32.10	Name Type	O	
32.11	Check Digit	O	
32.12	Check Digit Scheme	O	
32.13	Identifier Type	O	

NTE Result Comments Segment:

NTE Seq	Name	R/O	Comments
1	Set ID	R	Start at 1 and increments by 1
2	Source of Comment	R	Acceptable source values at the OBR level comments:

			O – Order P – Performing Lab
3	Comment	O	Single NTE segments are limited to 250 characters per NTE. Tilde (~) can be used to represent line feed characters \n. Blank NTE segments are ignored.

OBX Observation Result Segment:

OBX Seq	Name	R/O	Comments
1	Set ID	R	Start at 1 and increments by 1
2	Value Type	R	Acceptable values to display numerical results: • NM – Numeric • CE – Coded Entry (only available on messages below v2.5.1) • CWE – Coded with Exceptions (acceptable on messages v.2.6.1 and higher) • ST - String Acceptable values to display report or textual result data: • TX – Textual Non-Acceptable result data • ED – Encapsulated data is not accepted by the Department of Public Health it will be stripped from the message. Please ensure that the observation data is sent using either a string "ST" or textual "TX" formatted data
3 3.1 3.2 3.3 3.4 3.5	Observation Identifier Test Code Test Code Description Coding Schema Alternate Test Code Alternate Code Description	R R R O O O	For lab results this value must be unique. For pathology, microbiology, radiology, and transcribed reports this value should be the same to ensure that multiple attachment references to reports are not created.
4	Observation Sub-ID	O	May be sent in microbiology results to support the grouping of organisms.
5 5.1 5.2 5.3 5.4 5.5	Observation Value Observation Value Document Type Document Format Encoding Method Observation Value	O O C C C C	If OBX.2 = ST, TX, NM, CE or CWE then OBX.5.1 has a character limitation of 250 characters.
6	Units	C	For numerical or discrete result data when OBX.2 = NM
7	Reference Range	C	For numerical or discrete result data when OBX.2 = NM
8	Abnormal Flag	C	**Table - 0078**
9	Probability	O	
10	Nature of Abnormal Test	O	**Table - 0080**
11	Observation Result Status	O	**Table - 0085**
12	Date Last Observe Normal Values	O	
13	User Access Checks	O	
14	Date/Time of Observation	R	
15	Producer's ID	R	Must contain the code for the performing lab location
16 16.1 16.2 16.3 16.4 16.5 16.6	Responsible Observer Provider Identifier Last Name First Name Middle Name Suffix Prefix	O R R O O O O	If OBX.16 is populated, then OBX.16.1 & OBX.16.2 are required

16.7	Degree	O	
16.8	Source Table	O	
16.9	Assigning Authority	O	
16.9.1	Namespace ID	O	
16.9.2	Universal ID	O	
16.9.3	Universal ID Type	O	
16.10	Name Type	O	
16.11	Check Digit	O	
16.12	Check Digit Scheme	O	
16.13	Identifier Type	O	
17	Observation Method	O	
18	Equipment Instance Identifier	NS	Not supported
19	Date/Time of the Analysis	NS	Not supported
20	Reserved for HL7 v2.6	NS	Not supported
21	Reserved for HL7 v2.6	NS	Not supported
22	Reserved for HL7 v2.6	NS	Not supported
23	Perform Organization Name	O	
23.1	Organization Name	O	
23.2	Organization Name Type Code	O	
23.3	ID Number	O	
23.4	Check Digit	O	
23.5	Check Digit Scheme	O	
23.6	Assigning Authority	O	
23.7	Identifier Type Code	O	
23.8	Assigning Facility	O	
23.9	Name Representation Code	O	
23.10	Organization Identifier	O	
24	Performing Organization Address	O	
24.1	Address Line 1	O	
24.2	Address Line 2	O	
24.3	City	O	
24.4	State	O	
24.5	Zip Code	O	
24.6	Country	O	
24.7	Type	O	
24.8	Other Geographic Designation	O	
24.9	County/Parish	O	
24.10	Census Tract	O	
25	Performing Organization Medical Director	O	
25.1	Identifier		
25.2	Last Name		
25.3	First Name		
25.4	Middle Name		
25.5	Suffix		
25.6	Prefix		
25.7	Degree		
25.8	Source Table		
25.9	Assigning Authority		
25.9.1	Namespace ID		
25.9.2	Universal ID		
25.9.3	Universal ID Type		

25.10	Name Type		
25.11	Check Digit		
25.12	Check Digit Scheme		
25.13	Identifier Type		

SPM Specimen Segment:

SPM Seq	Name	R/O	Comments
1	Set ID_SPM	R	1
2 2.1	Specimen ID Placer Assigned Identifier	R	
3	Specimen Parent ID	O	
4	Specimen Type	R	
5	Specimen Type Modifier	NS	Not supported
6	Specimen Additives	NS	Not supported
7	Specimen Collective Method	R	
8	Specimen Source Site	R	
9	Specimen Source Site Modifier	NS	Not supported
10	Specimen Collection Site	NS	Not supported
11	Specimen Role	NS	Not supported
12	Specimen Collection Amount	NS	Not supported
13	Grouped Specimen Count	NS	Not supported
14	Specimen Description	NS	Not supported
15	Specimen Handling Code	NS	Not supported
16	Specimen Risk Code	NS	Not supported
17	Specimen Collection Date/Time	R	
18	Specimen Received Date/Time	R	
19	Specimen Expiration Date/Time	NS	Not supported
20	Specimen Availability	NS	Not supported
21	Specimen Reject Reason	NS	Not supported
22	Specimen Quality	NS	Not supported
23	Specimen Appropriateness	NS	Not supported
24	Specimen Condition	NS	Not supported
25	Specimen Current Quantity	NS	Not supported
26	Number of Specimen Containers	NS	Not supported
27	Container Type	NS	Not supported
28	Container Condition	NS	Not supported
29	Specimen Child Role	NS	Not supported

DPH Reportable Specific Validations:

Mirth Connect Channel	Field	Field Name / Required?	Validation Result / Error Message
Data sender channel	PID.5.1	Last Name / Y	Pre-validation in source if missing fail message / "Message can't be processed, patient first and/or last name are required."
	PID.5.2	First Name / Y	Pre-validation in source if missing fail message / "Message can't be processed, patient first and/or last name are required."
	PID.11.1	Street Address 1 / Y	Pre-validation in source if missing fail message / "Message can't be processed, the patient's full address is required"
	PID.11.3	City / Y	Pre-validation in source if missing fail message / "Message can't be processed, the patient's full address is required"
	PID.11.4	State / Y	Pre-validation in source if missing fail message / "Message can't be processed, the patient's full address is required"
	PID.11.5	Zip Code / Y	Pre-validation in source if missing fail message / "Message can't be processed, the patient's full address is required"
	PID.13.1	Patient Phone Number / Y	Pre-validation in source if missing fail message / "Message can't be processed the patient's phone number is required"
Validating Ordering Physician ID & Name			
	ORC.12.1 & OBR.16.1, ORC.12.2 & OBR.16.2, ORC.12.3 & OBR.16.3	Physician ID Physician Last Name Physician Frist Name	If the following fields are all populated ORC.12.1, ORC.12.2, ORC.12.3, ORC.22.1, ORC.22.3, ORC.22.4, ORC.22.5 & ORC.22.6 then filter out of: • "Get Ordering Doctor Info by NPI." • "Get Ordering Doctor Info by Name." If all the following fields are null ORC.12.1, ORC.12.2, ORC.12.3, OBR.16.1, OBR.16.2 & OBR.16.3 then fail the message "Message failed Ordering Physician ID & Name validation checks. Please correct the message and resend to DHIN". If ORC.12.1 is populated and any one of the following fields are null (ORC.12.2, ORC.12.3, ORC.22.1, ORC.22.3, ORC.22.4, ORC.22.5 or ORC.23.1) then process through "Get Doctor Information by NPI" transformation. *See Ordering Physician Transformations Logic*. If ORC.12.1 is null and both ORC.12.2 & ORC.12.3 are populated and any one of the following fields are null (ORC.12.1, ORC.22.1, ORC.22.3, ORC.22.4, ORC.22.5 & ORC.23.1) then process through "Get Doctor Information by Name" transformation. *See Ordering Physician Transformations Logic.*

DPH Reportable Data Sender Special Logic (mirth connect channel):

Mirth Connect Connector	Transformation Title	Transformation
Source Connector		
Destination Connector		
queryInitiateEID (This connector will query the DHIN's MPI to obtain existing race values stored for the patient)	Filter	
	Transformers	
	Response	***Obtain Race from MPI when PID.10 is null*** – DHIN will use the returned value from the MPI and if PID.10.1 is null DHIN will set PID.10.1 to value from MPI. DHIN will normalize the value received from the MPI to a standardized value: '1' = 'WHITE' '2' = 'BLACK' '3' = 'AMERICAN INDIAN' '4' = 'CHINESE' '5' = 'JAPANESE' '6' = 'FILIPINO' '7' = 'HAWAIIAN' '8' = 'KOREAN' '9' = 'ASIAN INDIAN' '10' = 'VIETNAMESE' '11' = 'LAOTIAN' '12' = 'HMONG' '13' = 'KAMPUCHEAN' '14' = 'THAI' '20' = 'MICRONESIAN NOS' '21' = 'CHIMORRAN' '22' = 'GUAMANIAN NOS' '25' = 'POLYNESIAN NOS' '26' = 'TAHITIAN' '27' = 'SAMOAN' '28' = 'TONGAN' '30' = 'MELANESIAN NOS' '31' = 'FIJI ISLANDER' '32' = 'NEW GUINEAN' '96' = 'OTHER ASIAN NOS' '97' = 'PACIFIC ISLANDER NOS' '98' = 'OTHER': '99' = ''
Initiate API (adds or updates existing patient demographics)	Filter	
	Transformation	***Check SSN*** Validates that the patient social security if it exists in the message is formatted properly. ***Update Patient Demographics*** Checks to ensure that PID.10.1 patient race is populated

DPH Reportable Error Handling:

All messages that fail will be processed through the “Error File” connector. This connector will generate a .csv file that will contain information needed for DATA SENDING ORGANIZATION to research the message in their system, make the necessary corrections and resubmit to the DHIN for processing. The .csv files will not contain any PHI and will be sent via email to a person identified by DATA SENDING ORGANIZATION to handle failures to ensure they are corrected and resubmitted in a timely manner to the DPH. DHIN would request that when DATA SENDING ORGANIZATION resubmits this message that they identify this is a corrected message so DHIN will only process the message through the ELR process flow.

- .CSV file ‘Daily DATA SENDING ORGANIZATION ELR Error Report’
  - MSH.10 (Control ID)
  - MSH.7 (File Date)
  - Error Code
  - Error Description
  - DHIN Mirth Connect msg ID.

Appendix

Attachment	Document
 DHIN Technical Readiness Assessmer	Technical Readiness Assessment
 DHIN VPN Worksheet.xlsx	VPN Worksheet
Request	Object Identifier (OID) Request
Request	Code set Worksheet
Request	Security Documents