|  |
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| ADT Interface Technical Design |

New World HIE

January 1, 2016

Version 1.0

# *Document Control Information*

**Please direct your comments and questions to:**

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**Reference Information**

|  |  |
| --- | --- |
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# *Sign Off Information*

**New World HIE:**

|  |  |
| --- | --- |
| **Name** |  |
| **Role** |  |
| **Phone** |  |
| **E-Mail** |  |
| **Signature** |  |

|  |  |
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# *Table of Contents*

[*Document Control Information* 1](#_Toc396206040)

[*Sign Off Information* 2](#_Toc396206041)

[*Table of Contents* 3](#_Toc396206042)

[*Overview* 4](#_Toc396206043)

[Introduction 4](#_Toc396206044)

[*Interface Detail* 4](#_Toc396206045)

[Source Data Description: 4](#_Toc396206046)

[Facility Table 4](#_Toc396206047)

[Patient Identifiers Table 4](#_Toc396206048)

[Message Layout Definition 4](#_Toc396206049)

[Sample Message(s) 4](#_Toc396206050)

[Destination Data Description 5](#_Toc396206051)

[*Connectivity details*: 5](#_Toc396206052)

[Data Mapping Details 6](#_Toc396206053)

[*Mapping/Lookup Tables* 11](#_Toc396206054)

[*Business Rules & Validations* 12](#_Toc396206055)

[*Issues and Resolutions* 13](#_Toc396206056)

[*Project Activities Summary* 14](#_Toc396206057)

# *Overview*

## Introduction

The purpose of this document is to describe the technical approach to the implementation of the ADT interface from the Allscripts Enterprise EHR to the Clinical Portal Health Information Exchange (HIE). This interface is part of the New World HIE Project.

# *Interface Detail*

## Source Data Description:

**Source Application:** Allscripts

**Interface engine:** Connect R

**Transaction:** ADT-Registration

**HL7 Version:** 2.3

**Triggers:** A04

## Facility Table

Table below lists the facilities that will be connected to the New World HIE Information Exchange as part of this implementation.

| **System** | **Facility Name** | **Notes** |
| --- | --- | --- |
| New World HIE |  |  |

## Patient Identifiers Table

Table below lists all patient identifiers the client sends in PID-3/PID-2.

| **Identifier** | **Format** | **Assigning Authority** |
| --- | --- | --- |
| MRN | 6 and 7 digits |  |

## Message Layout Definition

**ADT^A04**

| **segment Name** | **DESCRIPTION & Notes** |
| --- | --- |
| MSH | Message Header |
| [EVN] | Event Type |
| PID | Patient Identification |
| PV1 | Patient Visit |
| [{IN1}] | Insurance Information – optional- repeated |

## Sample Message(s)

**MSH**|^~\&|GE|FLOWCAST||N|201006070711||ADT^A04|61884\_1624\_SC6|P|||||||ASCII**PID**|1||999999|111111|LASTNAME^FIRSTNAME^^^^||19990909|M||2106-3|101010 MAIN STREET^^BOSTON^MA^02110||(617)999-9999|||MARRIED||999999^888888|999-99-9999|||||||||||N**PV1**|||||||^^^^^^^0|77777^NOT NEEDED^^^^^^7766**IN1**|1|1403||BLUE CROSS SENIOR PLAN|P.O. BOX 760^^PUEBLO^ CO^81002-0760||(505)727-5200||20001800|||20100101|||||SE|||||||||||||||||||LH100970800

### Additional Notes

## Destination Data Description

**Destination Application:** New World HIE Clinical Portal

**Transaction:** ADT-Registration

**Message Type: 2.5** HL7Delimited Structure

**Triggers:** A04

### Additional Notes

# *Connectivity details*:

**Messages Transport Mechanism:** TCP/IP

**Connectivity information:**

| **Environment** | **IP Address(TCP/IP)** | **Port number (TCP/IP)** | **File name and path (Batch)** |
| --- | --- | --- | --- |
| TEST |  |  |  |
| PROD |  |  |  |

**Additional Notes:**

## Data Mapping Details

**Source:**  Allscripts

**Destination:** New World HIE

| **SEQ** | **FIELD NAME** | **Source data analyses** | **Mapping notes** | **REQ?** |
| --- | --- | --- | --- | --- |
| **0** | **MSH** |  | **Copy MSH** | R |
| **1** | **Field Separator** | **100% “|”** | **Copy** | **R** |
| **2** | **Encoding Characters** | **100.00% "^~\&"** | **Copy** | **R** |
| **3** | **Sending Application** | **100% “GE”** | **Copy** | **R** |
| **4** | **Sending Facility** | **100% “FLOWCAST”** | **Copy** | **R** |
| 5 | Receiving Application | 100% “” | Do not copy |  |
| 6 | Receiving Facility | 100% “N” | Do not copy |  |
| **7** | **Date/Time of Message** | **No missing values.** | **Copy** | **R** |
| 8 | Security | 61884\_1624\_SC6 | Do not copy |  |
| **9** | **Message Type** | **100% "ADT^A04** | **Copy** | **R** |
| **10** | **Message Control ID** | **No missing values. No duplicates.** | **Copy** | **R** |
| 11 | Processing ID | 100% “” | Copy | O |
| 12 | Version ID | 100% “” | Copy | O |
| 13 | Sequence Number |  |  |  |
| 14 | Continuation Pointer | 100% “” | Copy | O |
| 15 | Accept Acknowledgment Type |  | Copy |  |
| 16 | Application Acknowledgment Type |  |  |  |
| 17 | Country Code |  |  |  |
| 18 | Character Set |  |  |  |
| 19 | Principal Language of Message |  |  |  |
| **0** | **EVN** |  | **Do not copy EVN** |  |
| 1 | Event Type Code |  |  |  |
| 2 | Date/Time of Event |  |  |  |
| 3 | Date/Time Planned Event |  |  |  |
| 4 | Event Reason Code |  |  |  |
| 5 | Operator ID |  |  |  |
| 6 | Event Occurred |  |  |  |
| **0** | **PID** |  | **Copy PID** |  |
| 1 | Set ID | 100% “1” |  |  |
| 2 | Patient External ID | 100% missing values |  |  |
| **3** | **Patient Internal ID** | **No missing values. MRN has 6 and 7 digits.**  **No Assigning Authority.** | **Copy** | **R** |
| 4 | Alternate Patient ID | Different from PID-3. What are these values? |  |  |
| **5** | **Patient's Name** | **No missing values** | **Copy** | **R** |
| 6 | Mother's Maiden Name | 100% missing values | Copy | O |
| **7** | **Date of Birth** | **No missing values** | **Copy** | **R** |
| **8** | **Sex** | **61.08% “F”**  **38.92% “M”** | **Copy** | **R** |
| 9 | Patient Alias |  |  |  |
| 10 | Race | 8,390 ( 69.49%) ""  78 ( 0.65%) "1002-5"  19 ( 0.16%) "2028-9"  71 ( 0.59%) "2054-5"  1,860 ( 15.41%) "2106-3"  1,655 ( 13.71%) "2131-1" | Copy | O |
| 11 | Patient Address | No missing values | Copy | O |
| 12 | County Code | 99.98% missing values  0.02% “999” | Copy | O |
| 13 | Home Phone Number | < 0.01% missing values  Note: Multiple formats, for example  (nnn) nnn-nnnn ,  nnn-nnn-nnnn,  nnn-nnnn  Note: Some invalid values, for example  (000) 000-0000  999-9999 | Copy | O |
| 14 | Business Phone Number | 69% missing values  Note: Multiple formats, for example  (nnn) nnn-nnnn,  (nnn) nnn-nnnnXnnnnn,  nnn-nnn-nnnn  nnn-nnnnXnnnnn  Note: Some invalid values, for example  999-9999 | Copy | O |
| 15 | Patient Language | 4,577 ( 37.91%) ""  7 ( 0.06%) "CHI"  3 ( 0.02%) "CRO"  7,400 ( 61.29%) "ENG"  2 ( 0.02%) "FIL"  7 ( 0.06%) "OTH"  9 ( 0.07%) "SIG"  59 ( 0.49%) "SPA"  9 ( 0.07%) "VIE" | Copy | O |
| 16 | Marital Status | 647 ( 5.36%) "DIVORCED"  5,395 ( 44.69%) "MARRIED"  972 ( 8.05%) "OTHER"  58 ( 0.48%) "SEPARATED"  4,161 ( 34.47%) "SINGLE"  840 ( 6.96%) "WIDOWED" | Copy | O |
| 17 | Religion | 10,284 ( 85.18%) ""  102 ( 0.84%) "BAP"  16 ( 0.13%) "BUD"  756 ( 6.26%) "CAT"  189 ( 1.57%) "CHR"  9 ( 0.07%) "COC"  22 ( 0.18%) "EPI"  3 ( 0.02%) "JEH"  10 ( 0.08%) "JEW"  25 ( 0.21%) "LUT"  56 ( 0.46%) "MET"  287 ( 2.38%) "OTH"  10 ( 0.08%) "PEN"  27 ( 0.22%) "PRE"  129 ( 1.07%) "PRO"  2 ( 0.02%) "UNI"  146 ( 1.21%) "UNK" | Copy | O |
| 18 | Patient Account Number | 13% missing values  Note: Multiple formats, for example  6 digits^8 digits  7 digits^8 digits  6 digits  7 digits  ^8 digits | Copy | O |
| 19 | Patient SSN Number | 6.3% missing values  Note: Some invalid values, for example  000-00-0000  000-000-0001 | Copy | O |
| 20 | Patient Drivers License | 100% missing values | Copy | O |
| 21 | Mother's Identifier |  | Copy | O |
| 22 | Ethnic Group | 100% missing values | Copy | O |
| 23 | Birth Place |  |  |  |
| 24 | Multiple Birth Indicator |  |  |  |
| 25 | Birth Order |  |  |  |
| 26 | Citizenship | 100% missing values | Copy | O |
| 27 | Veteran’s Military Status | 100% missing values | Copy | O |
| 28 | Nationality | 100% missing values | Copy | O |
| 29 | Patient Death Date/Time | 100% missing values | Copy | O |
| 30 | Patient Death Indicator | 4,783 ( 39.62%) ""  7,290 ( 60.38%) "N" | Copy | O |
| **0** | **PV1** |  |  |  |
| 1 | Set Id - PV1 | 100% missing values |  |  |
| 2 | Patient Class | 100% missing values | Copy | O |
| 3 | Assigned Patient Location | 100% missing values | Copy | O |
| 4 | Admission Type |  |  |  |
| 5 | Pre-Admit Number |  |  |  |
| 6 | Prior Patient Location |  |  |  |
| 7 | Attending Doctor | 48% missing values | Copy | O |
| 8 | Referring Doctor | 0.17% missing values | Copy | O |
| 9 | Consulting Doctor | 100% missing values | Copy | O |
| 10 | Hospital Service |  |  |  |
| 11 | Temporary Location |  |  |  |
| 12 | Pre-Admit Test Indicator |  |  |  |
| 13 | Re-Admission Indicator |  |  |  |
| 14 | Admit Source |  |  |  |
| 15 | Ambulatory Status | 100% missing values | Copy | O |
| 16 | VIP Indicators | 12,024 ( 99.59%) ""  6 ( 0.05%) "100"  1 ( 0.01%) "107"  29 ( 0.24%) "108"  13 ( 0.11%) "5" | Copy | O |
| 17 | Admitting Doctor | 100% missing values | Copy | O |
| 18 | Patient Type |  |  |  |
| 19 | Visit Number | 100% missing values | Copy | O |
| 20 | Financial Class |  |  |  |
| 21 | Charge Price Indicator |  |  |  |
| 22 | Courtesy Code |  |  |  |
| 23 | Credit Rating |  |  |  |
| 24 | Contract Code |  |  |  |
| 25 | Contract Effective Date |  |  |  |
| 26 | Contract Amount |  |  |  |
| 27 | Contract Period |  |  |  |
| 28 | Interest Code |  |  |  |
| 29 | Transfer to Bad Debt Code |  |  |  |
| 30 | Transfer to Bad Debt Date |  |  |  |
| 31 | Bad Debt Agency Code |  |  |  |
| 32 | Bad Debt Transfer Amount |  |  |  |
| 33 | Bad Debt Recovery Amount |  |  |  |
| 34 | Delete Account Indicator |  |  |  |
| 35 | Delete Account Date |  |  |  |
| 36 | Discharge Disposition | 100% “” | Copy | O |
| 37 | Discharged to Location |  |  |  |
| 38 | Diet Type |  |  |  |
| 39 | Servicing Facility |  |  |  |
| 40 | Bed Status |  |  |  |
| 41 | Account Status |  |  |  |
| 42 | Pending Location |  |  |  |
| 43 | Prior Temporary Location |  |  |  |
| 44 | Admit Date/Time | 100.00% “” | Copy | O |
| 45 | Discharge Date/Time | 100.00% “” | Copy | O |
| 46 | Current Patient Balance |  |  |  |
| **0** | **IN1** |  | **Copy IN1** |  |
| 1 | Set ID - Insurance | 9,627 ( 84.85%) "1"  1,658 ( 14.61%) "2"  61 ( 0.54%) "3" | Do not copy |  |
| 2 | Insurance Plan ID | No missing values 4 digit ID | Copy | O |
| 3 | Insurance Company ID | 100% missing values | Copy | O |
| 4 | Insurance Company Name | No missing values | Copy | O |
| 5 | Insurance Company Address | 1.48% missing values | Copy | O |
| 6 | Insurance Co. Contact Ppers |  |  |  |
| 7 | Insurance Co Phone Number | 40% missing values  Note: Multiple formats, for example  (nnn) nnn-nnnn  (nnn) nnn-nnnnXnnnnn  nnn-nnn-nnnn  nnn-nnn-nnn<13><10>  Note: Some invalid values, for example  (000) 000-0000 | Copy | O |
| 8 | Group Number | 100% missing values | Copy | O |
| 9 | Group Name | 22% missing values | Copy | O |
| 10 | Insured's group employer ID | 100% missing values | Copy | O |
| 11 | Insured's Group Emp Name | 100% missing values | Copy | O |
| 12 | Plan Effective Date | 44 % missing values  YYYYMMDD | Copy | O |
| 13 | Plan Expiration Date | 98.70% missing values  YYYYMMDD | Copy | O |
| 14 | Authorization Information | 100% missing values | Copy | O |
| 15 | Plan Type | 100% missing values | Copy | O |
| 16 | Name of Insured | 80% missing value | Copy | O |
| 17 | Insured's Relationship to Patient | 153 ( 1.35%) ""  3 ( 0.03%) "DAD"  711 ( 6.27%) "DC"  3 ( 0.03%) "LP"  9 ( 0.08%) "MD"  3 ( 0.03%) "MOM"  7 ( 0.06%) "NC"  32 ( 0.28%) "OTH"  5 ( 0.04%) "SC"  9,023 ( 79.53%) "SE"  1,397 ( 12.31%) "SP" | Copy | O |
| 18 | Insured's Date of Birth | 77% missing values | Copy | O |
| 19 | Insured's Address | 79.89% missing values | Copy | O |
| 20 | Assignment of Benefits |  |  |  |
| 21 | Coordination of Benefits |  |  |  |
| 22 | Coord of Ben. Priority |  |  |  |
| 23 | Notice of Admission Code |  |  |  |
| 24 | Notice of Admission Date |  |  |  |
| 25 | Rpt of Eigibility Code |  |  |  |
| 26 | Rpt of Eligibility Date |  |  |  |
| 27 | Release Information Code |  |  |  |
| 28 | Pre-Admit Cert (PAC) |  |  |  |
| 29 | Verification Date/Time |  |  |  |
| 30 | Verification By |  |  |  |
| 31 | Type of Agreement Code |  |  |  |
| 32 | Billing Status |  |  |  |
| 33 | Lifetime Reserve Days |  |  |  |
| 34 | Delay before lifetime reserve days |  |  |  |
| 35 | Company Plan Code |  |  |  |
| 36 | Policy Number | 1.8% missing values | Copy | O |
| 37 | Policy Deductible |  |  |  |
| 38 | Policy Limit - Amount |  |  |  |
| 39 | Policy Limit - Days |  |  |  |
| 40 | Room Rate - Semi-Private |  |  |  |
| 41 | Room Rate - Private |  |  |  |
| 42 | Insured's Employment Status |  |  |  |
| 43 | Insured's Sex |  |  |  |
| 44 | Insured's Employer Address |  |  |  |
| 45 | Verification Status |  |  |  |
| 46 | Prior Insurance Plan ID |  |  |  |
| 47 | Coverage Type | 100% missing values | Copy | O |
| 48 | Handicap |  |  |  |
| 49 | Insured's ID Number | 100% missing values | Copy | O |

**Other Mapping Notes**

# *Mapping/Lookup Tables*

### N/A

# *Business Rules & Validations*

|  |  |  |  |
| --- | --- | --- | --- |
| **Rule #** | **Rule Description** | **Condition** | **Expected Result** |
| 1 | Filter out messages with no MRN | If PID-3.1 = “” | Send to BadMessageHandler |
| 2 | Filter out messages with no patient last name | If PID-5.1 = “” | Send to BadMessageHandler |
| 3 | Filter out messages with no DOB | If PID-7 = “” | Send to BadMessageHandler |
| 4 | Filter out messages with no gender | If PID-8 = “” | Send to BadMessageHandler |
| 5 | Apply ADT DTL on A04 messages | If PID-9.2 = “A04” | Apply ADT DTL and send to Postprocess |

# *Issues and Resolutions*

For details on each of these issues, please see the appropriate Field Analysis

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | **Requested** | **Assigned** | **Issue** | Date opened | **Status** | **Resolution** | Date closed |
| 1 |  |  | Client to send NWH | 1/1/14 | open | 6/30: Complete: To be validated. |  |
| 2 |  |  | Client to send “NWH” in PID-3.4 | 1/1/14 | open | 6/30: Complete: To be validated. |  |
| 3 |  |  | Client to send Code or description race in PID-10 | 1/1/14 | open | 6/30: Client: Need to follow-up with GE as to what codes mean. |  |
| 4 |  |  | Client to filter out invalid phone # in PID-13,14 and In1-7 | 1/1/14 | open | 6/30: Complete: To be validated. |  |
| 5 |  |  | Client to filter out invalid ss # in PID-19 | 1/1/14 | open | 6/30: Complete: To be validated. |  |
| 6 |  |  | follow up on missing values in PV1-7and matches between PV1-7 and PV1-8 | 1/1/14 | open |  |  |
| 7 |  |  | Client to follow up (send scheduling date/time) in PV1-44 | 1/1/14 | open | 6/30: Complete: To be validated. |  |
| 8 |  |  | IN1-3 is a required field now. Could it be populated? | 1/1/14 | open | 6/30: Client: This was mapped to the value in IN1.2 |  |
| 9 |  |  | This field is a required field now. Could null values be defaulted to a value like “Unknown” or “NotAvailable”? | 1/1/14 | open | 6/30: Client: If blank, defaulted to “Unknown” |  |
| 10 |  |  | Client to find out if appointment reason, diagnoses and problems (DG1, PR1, etc..) can be extracted and sent in the ADT message. | 1/1/14 | open | 6/30: Client: This is not easily extracted as was the case for the original ADT interface (non-encounter) deployed last year. |  |

# *Project Activities Summary*

|  |  |  |
| --- | --- | --- |
| **Step** | **Activities** | **Notes** |
| Data Sample | Receive at least 1 week’s worth of production data | Received 1/1/2014 |
| Analyze data file | Data mapping design document | Version 1.0: 1/1/2014 |
| Sign Off | Close all open items |  |
| Complete the Build | Build necessary interface components |  |
| Unit Testing |  |  |
| Integrated Validation |  |  |
| Activate in production |  |  |