**Cerner to Soarian**

**ADT Requirements (CPI Fetch)**

**Version 1.5**

**Prepared By: Sarah Thies and Art Schwartz**

**Date: 6/22/2017**

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# **Document Control**

## Resources

|  |  |  |
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|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

## Project Distribution List

## Document Version Control

|  |  |  |  |
| --- | --- | --- | --- |
| **Version** | **Date** | **Modifier** | **Description** |
| V1.0 | 6/24/2015 | Sarah Thies | Originally Created |
| V1.2 | 7/22/2015 | Sarah Thies | Updating information |
| V1.3 | 3/2/2017 | Art Schwartz | Updating Cloverleaf information |
| V1.4 | 5/10/2017 | Sarah Thies | Added note that eSNF data (for skilled nursing facilities) will use this *existing* interface for fetching a CPI. Also added sample messages & screen shots from testing |
| V1.5 | 6/22/2017 | Sarah Thies | RFC-3985 - adt\_hi\_out mod obj was updated to send ADT with HI MRN identifier |

# 1. Introduction

## 1.1 Purpose

This document outlines the Cerner HealteIntent (HI) ADT Interface to Soarian for a **CPI** value. All functional requirements needed to support this solution post implementation will be included.

**Note:** Please be advised that as of May 2017, eSNF data (for skilled nursing facilities) will use this existing interface for fetching a CPI. No Cerner interface changes made.

## 1.2 Project Scope

Implement a Cerner HealteIntent ADT interface to Soarian for a CPI value.

## 1.3 Terminology Standards

### 1.3.1 Acronyms

MLLP – Minimum Lower Layer Protocol for messaging framing a HL7 message.

### 1.3.2 Glossary

List the terms that require definition

## 1.4 Document References

**Cerner Specifications:**

Unit\_08o\_-\_ADT\_Message\_Processing\_Outbound.pdf

Unit 8i ADT Message Processing Inbound.pdf

CM Create Case Workflow - BayCare.pdf

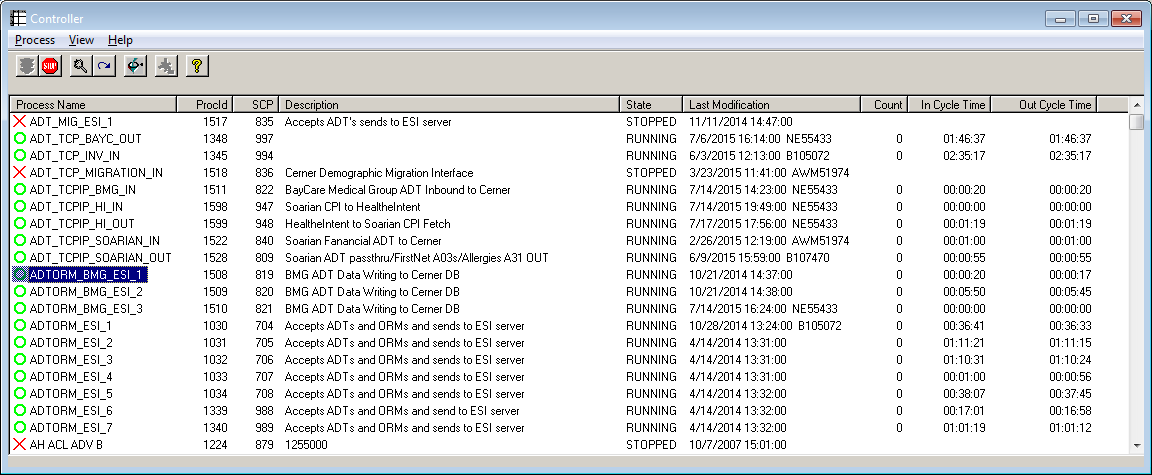
Adding+a+HealtheIntent+Person+in+Millennium.docx

**Soarian Specifications:**

SF\_PA\_Generic\_Inbound\_Interface\_V3\_4.pdf

# *2.* Diagram

Below is the ***CPI Fetch from Cerner to Soarian*** diagram.



# 3. Requirements

## 3.1 Functional Requirements (Cerner FSI)

Provide detail for the below functional requirements. The message transformation requirements for the components defined in this specification should be specified in section 4.2 of this document.

|  |  |  |
| --- | --- | --- |
| **Cerner** |  |  |
| **Number** | **Requirement Name** | **Requirement Description** |
| FR.2015.1.0 | Corporate Patient Identifier (CPI )value | The CPI value is a unique number identifying the patient among all BayCare systems. The CPI is used by Cerner to load balance ***ADT inbound*** processing. Cloverleaf will kill messages ***without*** the CPI value. |
| FR.2015.2.0 | HI MRN | The HI MRN value will be used to match the Soarian CPI coming inbound to the correct patient in Cerner HealtheIntent. |
| FR.2015.3.0 |
| FR.2015.4.0 |
| FR.2015.5.0 |
| FR.2015.6.0 |  |  |

## 3.2 Non-Functional Requirements

Provide concise detail for the below non-functional requirements. The below requirements must be evaluated for every project.

|  |  |  |
| --- | --- | --- |
| **Cerner** |  |  |
| **Number** | **Requirement Name** | **Requirement Description** |
| NFR.2015.1.0 | Filter A04 outbound based on HI FIN | If HI A28 then route to ADT\_TCPIP\_HI\_OUT else if HI FIN then route to com server UNKNOWN\_TRANS\_DISK\_OUT |
| NFR.2015.2.0 | Script route\_outv34, will filter ORUs outbound based on HI FIN | If HI FIN then route to comm server UNKNOWN\_TRANS\_DISK\_OUT |
| NFR.2017.1.0 | Script adt\_hi\_out mod obj | Modified ignore logic to use HI MRN to allow eSNF ADT |

## 3.3 Messaging Protocols

Below are listed the details for the messaging protocols that will be leveraged for this integration. Please see the reference document located on the Integration SharePoint server: <insert link to document here>

### 3.3.1 Inbound to the BayCare Cloverleaf

* TCPIP

### 3.3.2 Outbound to the BayCare Cloverleaf

* TCPIP

### 3.3.3 Inbound to the Vendor

TCPIP

### 3.3.4 Outbound to the Vendor

* TCPIP

### 3.3.5 *Inbound* to the BayCare Cerner EMR

**C30**

Port Number: 8007

IP Address: Cloverleaf IP 10.5.250.203, site to\_cerner & thread crt\_health\_adt\_out

**P30**

Port Number: 8007

IP Address: Cloverleaf IP 10.5.250.201, site cerner\_prod & thread cer\_health\_adt\_out

### 3.3.6 *Outbound* BayCare Cerner to Cloverleaf

**C30**

Port Number: 23026

IP Address: 10.100.128.66 (note that this is a *Natted IP* to Cloverleaf Test 10.5.250.203), site inbound\_xfer2 & thread crt\_health\_adt\_in

**P30**

Port Number: 23026

IP Address: 10.100.128.64 (note that this is a *Natted IP* to Cloverleaf Prod 10.5.250.201) site inbound\_xfer2\_prod & thread cer\_health\_adt\_in

# 4. HL7 Messaging

## 4.1 Messaging Format

### 4.1.1 Segments

The segments utilized for this interface are:

MSH

EVN

PID

*Message Construction Notes:*

*[Square Brackets] – Optional*

*{Curly Brackets} – Repeatable*

*MSH – Message Header*

*EVN – Event segment*

*PID – Patient ID segment*

*PV1 – Patient Visit segment*

*ORC – Common Order segment*

*IN1 – Insurance segment*

*[{ – Start of optional, repeatable group*

*}] – End of optional, repeatable group*

### 4.1*.*2 Messaging Event Types

Below are the messages types necessary for this integration

|  |  |
| --- | --- |
| **Event Type** | **Description** |
| ADT^A28 | Outbound Add Person Info |
| ADT^A31 | Inbound Update Person Info |

### 4.1*.*3 Cloverleaf Configuration Files

For each HL7 interface specified in Section 2 of this document, identify the Cloverleaf Configuration Files: Variants, TCL Scripts, Xlates, etc.

Healthi\_soarf\_adt.xlt

### 4.1.4 Cloverleaf Site Location

bmg\_1\_p

Soarf\_outbound\_23\_p

## 4.2 Data Transformation Requirements

| **Field Description** | **HL7 Field Loc.** | **Required Y/N** | **Data Type** | **Length** | **Notes** |
| --- | --- | --- | --- | --- | --- |
| MSH segment | MSH |  |  |  | Pathcopy Segment |
| Encoding Characters | MSH-2 |  |  |  | =^~\{ |
| Sending Application | MSH-3 |  |  |  | =HealtheIntent |
| Sending Facility | MSH-4 |  |  |  | = F0A5 |
| Receiving Application | MSH-5 |  |  |  | Null out |
| Receiving Facility | MSH-6 |  |  |  | Null out |
| Message type | MSH-9 |  |  |  | =A31 |
| Processing ID | MSH-11 |  |  |  | =P |
| Version ID | MSH-12 |  |  |  | =2.7 |
| Sequence Number | MSH-13 |  |  |  | Null out |
| Character set | MSH-18 |  |  |  | Null out |
| Event type Code | EVN-1 |  |  |  | =A31 |
| Date time of Event | EVN-2 |  |  |  | Copy |
| Operator ID | EVN-5 |  |  |  | Concatenate =HEALTHI and EMPI (from PID-3) |
| Set ID | PID-1 |  |  |  | Copy |
| Patient ID | PID-3 |  |  |  | Copy EMPI  Copy 30190 to 4th sub field  Copy ZPN to 5th sub field  Copy SS number from PID-19  To third iteration  Copy 900001to 4th sub field  Copy SS to 5th sub field |
| Patient Name | PID-5 |  |  |  | Copy, code L in 6th sub field |
| DOB | PID-7 |  |  |  | Copy |
| Sex | PID-8 |  |  |  | Copy |
| Race | PID-10 |  |  |  | Copy |
| Address | PID-11 |  |  |  | Copy, code M in 7th sub field |
| SS Number | PID-19 |  |  |  | Copy |

## 4.3 Sample Messages

**Cerner**

**Standard *Outbound* Cerner:**

MSH|^~\&|HI|HI|SOARIAN||20150720110225||ADT^A28|Q1919004469T2203319741X469699||2.3||||||8859/1

EVN|A28|20150720110225

PID|1||40000025^^^HI MRN^MRN|2DCB4990-E4B7-40BE-9BBC-FD5818F263CB^0^^CD:1200610177^Health Exchange Patient Identifier|Doe^Jason^Jon^^^^Current||19800504|M|||123 Some Street^^Kansas City^MO^98765^US^Home||6746278364^Home1^CD:30508397|789656245^Work|||||||||||0

ZPI|1

ZEI|1

MSH|^~\&|HI|HI|SOARIAN||20150720110648||ADT^A28|Q1919004502T2203319774X469703||2.3||||||8859/1

EVN|A28|20150720110648

PID|1||40000026^^^HI MRN^MRN|2DCB4990-E4B7-40BE-9BBC-FD5818F263CB^0^^CD:1200610177^Health Exchange Patient Identifier|Doe^Jason^Jon^^^^Current||19800504|M|||123 Some Street^^Kansas City^MO^98765^US^Home||6746278364^Home1^CD:30508397|789656245^Work|||||||||||0

ZPI|1

ZEI|1

MSH|^~\&|HI|HI|SOARIAN||20150720110800||ADT^A28|Q1919004509T2203319781X469705||2.3||||||8859/1

EVN|A28|20150720110800

PID|1||40000027^^^HI MRN^MRN|B8BE6B5E-6878-4586-BF0F-1B03CFCB85DF^0^^CD:1200610177^Health Exchange Patient Identifier|Waters^Roger^Richard^^^^Current||19640130|M|||123 Some Street^^Baton Rouge^LA^98765^US^Home|||789656245^Work|||||||||||0

ZPI|1

ZEI|1

MSH|^~\&|HI|HI|SOARIAN||20150720110800||ADT^A28|Q1919004511T2203319783X469706||2.3||||||8859/1

EVN|A28|20150720110800

PID|1||40000028^^^HI MRN^MRN|1457009B-FCD0-4F2B-9909-D66812E7BF48^0^^CD:1200610177^Health Exchange Patient Identifier|Dickinson^Bruce^Roger^^^^Current||19800504|M|||123 Some Street^^Los Angeles^CA^98765^US^Home|||789656245^Work|||||||||||0

ZPI|1

ZEI|1

MSH|^~\&|HI|HI|SOARIAN||20150720111412||ADT^A28|Q1919004634T2203319935X469712||2.3||||||8859/1

EVN|A28|20150720111412

PID|1||40000030^^^HI MRN^MRN|1457009B-FCD0-4F2B-9909-D66812E7BF48^0^^CD:1200610177^Health Exchange Patient Identifier|Dickinson^Bruce^Roger^^^^Current||19800504|M|||123 Some Street^^Los Angeles^CA^98765^US^Home|||789656245^Work|||||||||||0

ZPI|1

ZEI|1

MSH|^~\&|HI|HI|SOARIAN||20150720111413||ADT^A28|Q1919004636T2203319937X469713||2.3||||||8859/1

EVN|A28|20150720111413

PID|1||40000031^^^HI MRN^MRN|A3E94D73-9E45-4C6C-B0C4-1B1F8473F6C3^0^^CD:1200610177^Health Exchange Patient Identifier|Newsted^Jason^Keith^^^^Current||19800504|M|||123 Some Street^^Los Angeles^CA^98765^US^Home|||789656245^Work|||||||||||0

ZPI|1

ZEI|1

**Standard *Inbound* Cerner:**

MSH|^~\&|HI|BAYCARE|HNAM|HI|201507201102||ADT^A31|67c77210-bc5a-4dfa-8e66-4c5943d14c7b|P|2.6

EVN|A31|201507201102|||HEALTHI

PID|1|300141150^^^^BCCPI|300141150^^^^CPI~40000025^^^^HI MRN||DOE^JASON^JON||19800504|M|||123 Some Street^""^Kansas City^MO^98 765

MSH|^~\&|HI|BAYCARE|HNAM|HI|201507201106||ADT^A31|2f7b28cb-b5be-4103-918c-37d308bbd5d1|P|2.6

EVN|A31|201507201106|||HEALTHI

PID|1|300141152^^^^BCCPI|300141152^^^^CPI~40000026^^^^HI MRN||DOE^JASON^JON||19800504|M|||123 Some Street^""^Kansas City^MO^98 765

MSH|^~\&|HI|BAYCARE|HNAM|HI|201507201107||ADT^A31|2f2c04f2-5db5-43ba-8456-1dd1478ffc1e|P|2.6

EVN|A31|201507201107|||HEALTHI

PID|1|300141154^^^^BCCPI|300141154^^^^CPI~40000027^^^^HI MRN||WATERS^ROGER^RICHARD||19640130|M|||123 Some Street^""^Baton Roug e^LA^98765

MSH|^~\&|HI|BAYCARE|HNAM|HI|201507201107||ADT^A31|7bcaf342-656d-43e5-8e4a-c5a71243f95b|P|2.6

EVN|A31|201507201107|||HEALTHI

PID|1|300141155^^^^BCCPI|300141155^^^^CPI~40000028^^^^HI MRN||DICKINSON^BRUCE^ROGER||19800504|M|||123 Some Street^""^Los Angel es^CA^98765

MSH|^~\&|HI|BAYCARE|HNAM|HI|201507201114||ADT^A31|a9c7fc1e-f07e-4927-8a04-e7dcdde77b83|P|2.6

EVN|A31|201507201114|||HEALTHI

PID|1|300141158^^^^BCCPI|300141158^^^^CPI~40000030^^^^HI MRN||DICKINSON^BRUCE^ROGER||19800504|M|||123 Some Street^""^Los Angel es^CA^98765

MSH|^~\&|HI|BAYCARE|HNAM|HI|201507201114||ADT^A31|b6129d58-9756-4438-be29-8ec7ad6d9731|P|2.6

EVN|A31|201507201114|||HEALTHI

PID|1|300141159^^^^BCCPI|300141159^^^^CPI~40000031^^^^HI MRN||NEWSTED^JASON^KEITH||19800504|M|||123 Some Street^""^Los Angeles ^CA^98765

**5/3/2017 *eSNF* samples**

Machine generated alternative text:
Records Returned
Trigger ID I DEN Queue ID
Use SpeciFied Dates [ J 5/3/2017 0:00 To 5/3/2017 23:59
InterFace ID
Message String I 4000026
TX Key String I
Clear
AD T_T CPI P_H I_OUT Outbound
UNKNOWN_T RAN S_DISK_uu I Outbound
ADTORM_BMG_ESI_3 Outbound
ADT_TCPIP_HI_IN Inbound
Search
CREATE DT TM EVENTID1iVENT DESCRIPTION IINTERFACEID ISERVER NAME
5/3/201711:04:00 2001
Loutbound transaction
1643
5/3/2017 11:04:00
2001
outbound transaction
1164
5/3/2017 11:05:00
2001
outbound transaction
1549
5/3/2017 11:05:00
1001
inbound transaction
1844
LJIfltL I PUIN I Mt3IV ML2 iZE
016430000000001422
011640000000018 785
5490156438556 253
018441735549275 253
I MSGDATE MSGTIME TXKEY -
05/03/2017 11:04:15 1 6437938339055420000000033
05/03/2017 11:04:15 11647938339855210000099665
05/03/2017 11:05:53 154979383399522200000671 33
05/03/2017 11:05:51 16447938339951990000056019

**ADT\_TCPIP\_HI\_OUT**

MSH|^~\&|HI|HI|SOARIAN||20170503110413||ADT^A28|Q3312822285T4196846445X168006||2.3||||||8859/1

EVN|A28|20170503110413|||^Mafoip^Ghzhy^T^^^^^^Personnel

PID|1||40000262^^^**HI MRN**^MRN|2DCB4990-E4B7-40BE-9BBC-FD5818F263CB^0^^HI EMPI^Health Exchange Patient Identifier|Doe^Jason^Jon^^^^Current||19800504|M|||123 Roe Avenue^^Kansas City^MO^64117^US^Home||6746278364^Home1^CD:30508397|789656245^Work^CD:30508397|||||||||||0

ZPI|1

**UNKNOWN\_TRANS\_DISK\_OUT**

MSH|^~\&|HNAM|CERNER|MPH|BAYCARE|20170503110414||ADT^A04|Q3312822290T4196846456X168007||2.3||||||8859/1

EVN|A04|20170503110412|||^Mafoip^Ghzhy^T^^^^^^Personnel

PID|1|40000262^^^CD:1673103083^MRN|40000262^^^CD:1673103083^MRN|2DCB4990-E4B7-40BE-9BBC-FD5818F263CB^0^^CD:1673089907^CD:598897938|Doe^Jason^Jon^^^^Current||19800504|M|||123 Roe Avenue^^Kansas City^MO^64117^UNITED STATES^Home~jason.doe@example.com^jason.doe12@example.com^^^^^e-mail||6746278364^PRN^CD:30508397|789656245^WPN^CD:30508397||||40033485^^^CD:1673094813^FIN NBR|||||||0

ZPI|1

PV1|1|Skilled Nursing|CD:2601497795^^^CD:1672988451^^Nurse Unit(s)^CD:2601316797|||||||||||||||CD:1673175053|||||||||||||||||||||CD:1672988451||Active|||20170503110412

PV2||||||||||0|||||||||||||^^6372751

ZVI|||||||||||||||20170503110412

**ADT\_TCPIP\_HI\_IN**

MSH|^~\&|HI|BAYCARE|HNAM|HI|201705031104||ADT^A31|2a6983e5-fa9e-4961-901d-49a310f9d68b|P|2.6

EVN|A31|201705031104|||HEALTHI

PID|1|**810012383^^^^BCCPI**|810012383^^^^CPI~40000262^^^^HI MRN||DOE^JASON^JON||19800504|M|||123 Roe Avenue^""^Kansas City^MO^64117

Machine generated alternative text:
ecords Returned 1100
ersoni
erson Alias I
ontributor System
tatus r
essage Type I
essage Control ID II
rderlD
chedule ID Accession ID
Use Specilied Dates I
Encounter r
Encounter Alias r
HEALTHEINTENT
No Error Status Selected
z] Message Tñgger [
Error T ext
Event ID
-J
5/3/2017 0:00 To 5/3/2017 23:53
HL7 Entity Alias [
z]
I _____________________________________________________________________________
I ______________________________________________________________________________
Clear j
Search
E HL7ENTITYALIAS IERRDR STAT
....HI,M.CPI.HI MRN.BCCF-i.MO, ESI STAT SUCCE

# **5. Testing**

## 5.1. Unit Testing Scenarios

|  |  |
| --- | --- |
| **Scenario** | **Expected Result** |
| In C30 but limited please see project manager/testing team | Outbound without a CPI but with HI MRN value  Inbound CPI and HI MRN value returned |
|  |  |
|  |  |
|  |  |
|  |  |

## 5.2 Integrated Testing Scenarios

|  |  |
| --- | --- |
| **Scenario** | **Expected Result** |
| In C30 but limited please see project manager/testing team | GE (BMG) receives A31 from Soarian (upon CPI Fetch) |
|  |  |

## 5.3 Testing Approvals

|  |  |  |  |
| --- | --- | --- | --- |
| **Testing Phase** | **Date** | **Department** | **Team Member** |
| PH1.UNIT |  |  |  |
| PH1.INTEGRATED |  |  |  |

## 5.4 Piloting

List the facilities and associated networks in scope for pilot testing.

## 5.5 Approvals

|  |  |  |  |
| --- | --- | --- | --- |
| **Testing Phase** | **Date** | **Department** | **Team Member** |
| PH1.0 |  |  |  |
|  |  |  |  |
|  |  |  |  |

# 6. Deployment / Implementation Model

Provide the detail as to how to deploy the solution defined in the IDBB from both the BAYCARE and vendor perspective.

# Appendix A: Risks and Concerns

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Project Name** |  |  | | |  |  |  |  |
| **Number** | **Risk / Concern** | **Comment** | **Mitigation** | | |  |  |  |
| RC.2013.1.0 |  |  | |  | |  |  |  |

# Appendix B: Issues List

This is a dynamic list of the open issues related to the IDBB that remain to be solved, including but not limited to TBDs, pending decisions, information needed, conflict awaiting resolution, and the like.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Project Name** |  |  | | |  |  |  |  |
| **Number** | **Issue** | **Comment** | **Fix** | | |  |  |  |
| I.2013.1.0 |  |  | |  | |  |  |  |

* End of document