**Cerner FirstNet ADT to Soarian**

**Interface Requirement**

**Version 1.2**

**Prepared By: Tiffany Bohall & Dan Olszewski**

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[Document Control 3](#_Toc4151846)

[Resources 3](#_Toc4151847)

[Project Distribution List 3](#_Toc4151848)

[Document Version Control 3](#_Toc4151849)

[1. Introduction 4](#_Toc4151850)

[1.1 Purpose 4](#_Toc4151851)

[1.2 Project Scope 4](#_Toc4151852)

[1.3 Terminology Standards 4](#_Toc4151853)

[1.3.1 Acronyms 4](#_Toc4151854)

[1.3.2 Glossary –N/A 4](#_Toc4151855)

[2. Diagram -N/A 4](#_Toc4151856)

[3. Requirements 5](#_Toc4151857)

[3.1 Functional Requirements 5](#_Toc4151858)

[3.2 Non-Functional Requirements –N/A 5](#_Toc4151859)

[3.3 Messaging Protocols 5](#_Toc4151860)

[3.3.1 Inbound to the BayCare Cloverleaf 6](#_Toc4151861)

[3.3.2 Outbound to the BayCare Cloverleaf –NA 6](#_Toc4151862)

[3.3.3 Inbound to the Vendor –N/A 6](#_Toc4151863)

[3.3.4 Outbound to Soarian 6](#_Toc4151864)

[4. HL7 Messaging 6](#_Toc4151865)

[4.1 Messaging Format 6](#_Toc4151866)

[4.1.1 Segments 6](#_Toc4151867)

[4.1.2 Messaging Event Types 7](#_Toc4151868)

[4.1*.*3 Cloverleaf Configuration Files 7](#_Toc4151869)

[4.1.4 Cloverleaf Site Location 7](#_Toc4151870)

[4.2 Data Transformation Requirements 8](#_Toc4151871)

[4.3 Sample Message 10](#_Toc4151872)

[5. Alerts 11](#_Toc4151873)

[Appendix A: Risks and Concerns –N/A 11](#_Toc4151874)

[Appendix B: Issues List –N/A 12](#_Toc4151875)

# **Document Control**

## Resources

|  |  |  |
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|  |  |  |

## Project Distribution List

## Document Version Control

|  |  |  |  |
| --- | --- | --- | --- |
| **Version** | **Date** | **Modifier** | **Description** |
| V1.0 | 5/19/2017 | Tiffany Bohall | Originally Created |
| V1.2 | 3/22/19 | CJ Markwardt |  |
|  |  |  |  |
|  |  |  |  |

# 1. Introduction

## 1.1 Purpose

The purpose of this document is to define the HL7 interface build that is in place within Cloverlead and between Cerner FristNet and Soarian. The intended audience would encompass any and all users who wish to know more about the integration around this specific interface.

## 1.2 Project Scope

The scope of the integration that is defined in this Integration Development Build Book only includes a single interface from Cerner. There are multiple other interface that are not included in this document.

## 1.3 Terminology Standards

### 1.3.1 Acronyms

**ADT** – Admission, Discharge, Transfer: mainly demographic and patient location data

### 1.3.2 Glossary –N/A

**ADT Event** – Trigger event associated with a patient event: registration, admission, discharge, transfer, update…

**Alias** - An identifier used to represent an item, such as a location, order, specimen type, or result.

**Contributor System –** External System that sends to and/or receives data from Cerner Millennium. A “Contributor System” is built on Cerner as part of an interface or data feed.

**Contributor Source –** A source created on Cerner used to identify inbound and/or outbound aliases for data sent to and received from Foreign Systems.

**Scripting –** Custom Cerner programs written to modify, format, and filter message transactions for the interfaces. The types of scripts used by FSI are Suppression, Route, Modify Object, Modify Original, Type, and ACK.

# 2. Diagram -N/A

Provide a solution diagram that depicts the integration of components specified in this IDBB. This diagram must include the data flow for the interfaces (source and target).

# 3. Requirements

## 3.1 Functional Requirements

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.

|  |  |  |
| --- | --- | --- |
| **Cloverleaf** |  |  |
| **Number** | **Requirement Name** | **Requirement Description** |
| FR.2017.05.19 | Class filter | tpsAdvHL7filter that only passes events if PV1.2 = E |

|  |  |  |
| --- | --- | --- |
| **Cerner** |  |  |
| **Number** | **Requirement Name** | **Requirement Description** |
| FR.2017.05.19 | Only Emergency Encounter Discharges go out of Cerner | Block all A03(Discharge) messages except for patient class of E when discharged on FirstNet. |

## 3.2 Non-Functional Requirements –N/A

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

|  |  |  |
| --- | --- | --- |
| **Cloverleaf** |  |  |
| **Number** | **Requirement Name** | **Requirement Description** |
| NFR.20XX.1.0 | Click here to enter text. | Click here to enter text. |

## 3.3 Messaging Protocols

Below are listed the details for the messaging protocols that will be leveraged for this integration.

### 3.3.1 Inbound to the BayCare Cloverleaf

* From Cerner, Port 20051

### 3.3.2 Outbound to the BayCare Cloverleaf –NA

* Click here to enter text.

### 3.3.3 Inbound to the Vendor –N/A

* Click here to enter text.

### 3.3.4 Outbound to Soarian

* 64.46.218.224, port 10280

# 4. HL7 Messaging

## 4.1 Messaging Format

### 4.1.1 Segments

The segments utilized for this interface are:

MSH

[ZSH]

EVN

PID

[PV1]

[{OBX}]

[{

IN1

}]

*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** |
| A03 | Discharge |
| A13 | Cancel discharge |
|  |  |

### 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.

The Cerner FirstNet to Soarian interface utilizes the cerner\_soarf\_adt.xlt with the HL7 version 2.3 cerner\_emr\_ADT\_A01 inbound to HL7 2.6 Soarian ADT\_A01 outbound.

### 4.1.4 Cloverleaf Site Location

Soarf\_outbound\_23\_p

## 4.2 Data Transformation Requirements

| **Field Description** | **HL7 Field Loc.** | **Required Y/N** | **Notes** |
| --- | --- | --- | --- |
| Field Separator | MSH.1 | N | Hard coding | |
| Encoding Characters | MSH.2 | N | Hard coding ^~\& |
| Sneidng Application | MSH.3 | N | Hard coding FIRSTNET |
| Snedinf Facility | MSH.4 | Y | Copying from MSH.5 and sending through a table: cer\_soarf\_fac.tbl |
| Receiving Application | MSH.5 | Y | Hard coding SOARF |
| Date/Time of Message | MSH.7 | Y | Copying with a TCL preproc that drops the seconds from the times |
| Message Type Code | MSH.9.0 | Y | Copy |
| Message Type Trigger Event | MSH.9.1 | Y | Copy |
| Message Control ID | MSH.10 | Y | Copy |
| Processing ID | MSH.11 | Y | Hard coding a P |
| Version ID | MSH.12 | Y | Hard coding 2.7 |
| Processing Data Mode | ZSH.7.0  ZSH.7.1 | Y | If MSH.9.1 = A03, hard code Ins in ZSH.7.0 and Upd in ZSH.7.1 |
| Event Type Code | EVN.1 | Y | Copying from MSH.9.1 |
| Recorded Date/Time | EVN.2 | Y | Copying with a TCL preproc that drops the seconds from the times |
| Operator ID | EVN.5 | Y | Hard coding FIRSTNET |
| Event Occurred | EVN.6 | Y | Copying output from EVN.2. If MSH.9.1 = A03, copy PV1.44, with a TCL preproc that drops the seconds from the times |
| Patient Identifier List: ID Number | PID.3.0 | Y | If PID.3.3 = BayCare CMRN, copy PID.3.0 |
| Patient Identifier List: Assigning Authority | PID.3.3 | Y | Hard coding 900000 |
| Patient Identifier List: Identifier Type Code | PID.3.4 | Y | Hard coding PN |
| Patient Name: Family  Patient Name: Given  Patient Name: Second and Further  Patient Name: Suffix  Patient Name: Name Representation Code | PID.5.0  PID.5.1  PID.5.2  PID.5.3  PID.5.6 | Y | Copy and hard code an L in PID.5.6 |
| Date/Time of Birth | PID.7 | Y | Copy |
| Administrative Sex | PID.8 | Y | Copy |
| Patient Account Number: ID Number | PID.18.0 | Y | Copy |
| Patient Account Number: Assigning Authority | PID.18.3 | Y | Hard coding 504 |
| Patient Account Number: Identifier Type Code | PID.18.4 | Y | Hard coding VCD |
| Patient Class | PV1.2 | Y | Hard code @null and copy an O |
| Attending Doctor: ID Number  Attending Doctor: Assigning Authority  Attending Doctor: Identifier Type Code | PV1.7.0  PV1.7.8  PV1.7.12 | Y | Iterate through field PV1.7 and if PV1.7.8 = BayCare Dr Number, copy PV1.7.0 with a TCL pre proc that drops the MS that preceeds the physician identifier, hard code 183 in PV1.7.8 and hard code PRN in PV1.7.12 |
| Admitting Doctor: ID Number  Admitting Doctor: Assigning Authority  Admitting Doctor: Identifier Type Code | PV1.17.0  PV1.17.8  PV1.17.12 | Y | Additional logic under the PV1.7 Iterating IF statement: copy the output of PV1.7.0 into PV1.17.0, hard code 183 in PV1.17.8 and hard code PRN in PV1.17.12 |
| Discharge disposition | PV1.36 | Y | Copy |
| Set ID  Value Type  Observation Identifier: Identifier  Observation Identifier: Name of Coding System  Observation Value  Observation Result Status | OBX.1  OBX.2  OBX.3.0  OBX.3.2  OBX.5  OBX.11 | Y | If PV1.36 = AVV (patient registered in error), hard code a 1 in OBX.1, an ST in OBX.2, a 2AVV in OBX.3.0, LSFUSERDATAE in OBX.3.2, AVV in OBX.5 and an R in OBX.11 |
| Admit Date/Time | PV1.44 | Y | Copying with a TCL preproc that drops the seconds from the times |
| Discharge Date/Time | PV1.45 | Y | Copying with a TCL preproc that drops the seconds from the times |
| Insurnace Plan ID  Verification Status | IN1.2.0  IN1.45.0 | N | Iterating through IN1 group instances and IF IN1.2.0 is not null, copy IN1.2.0 and hard code true in IN1.45.0. IF IN1.2.0 = 108, @null IN1.2.0 and IN1.45.0. |

## 4.3 Sample Message

**INBOUND to CLOVERLEAF**

MSH|^~\&|HNAM|CERNER|MDU|SOARIAN|20170503093239||ADT^A03|Q3312820962T4196844544X167897||2.3||||||8859/1

EVN|A03|20170503093200|||23509813

PID|1|7000013702^^^BayCare MRN^MRN^SOARIAN|810012256^^^BayCare CMRN^Community Medical Record Number^SOARIAN~7000013702^^^BayCare MRN^MRN^SOARIAN|810012256^0^^BayCare EAD CPI^Historical CMRN^SOARIAN|MAYTEST^SEVENTEEN^^^^^Current||19800822|M||White|47 DESERT STREET^^Clearwater^FL^33759^^Home||(727)555-4683^Home1~(727)580-5974^ORN~(727)555-4683^CD:187||EN|M|Baptist|6000030100^^^BayCare FIN^FIN NBR^SOARIAN||||Non HIS or LAT|||0

NTE|1|PM\_TRANSACTION|Patient Employer: Patient Employer Number: Guarantor Employer:

ZPI|1|||||||||||||||||||||N

PV1|1|E|ERDDH^^^MDU^^Ambulatory(s)^MDU|Emergency||ERDDH^^^MDU^^^MDU|A42136^Beattie^Martin^C^^^^^UPIN^Personnel^^^DOCUPIN^CACTUS~2025^Beattie^Martin^C^^^^^External Id^Personnel^^^External Identifier~67055^Beattie^Martin^C^^^^^SFB Dr Number^Personnel^^^ORGANIZATION DOCTOR^CACTUS~AB5463459^Beattie^Martin^C^^^^^^Personnel^^^DOCDEA~ME67055^Beattie^Martin^C^^^^^Doctor License Number^Personnel^^^LICENSENBR^CACTUS~1992772230^Beattie^Martin^C^^^^^NPI Number^Personnel^^^National Provider Identifier^CACTUS~67055^Beattie^Martin^C^^^^^MCS Dr Number^Personnel^^^ORGANIZATION DOCTOR^CACTUS~67055^Beattie^Martin^C^^^^^MDU Dr Number^Personnel^^^ORGANIZATION DOCTOR^CACTUS~67055^Beattie^Martin^C^^^^^MPH Dr Number^Personnel^^^ORGANIZATION DOCTOR^CACTUS~67055^Beattie^Martin^C^^^^^NBY Dr Number^Personnel^^^ORGANIZATION DOCTOR^CACTUS~67055^Beattie^Martin^C^^^^^SJW Dr Number^Personnel^^^ORGANIZATION DOCTOR^CACTUS~67055^Beattie^Martin^C^^^^^SJN Dr Number^Personnel^^^ORGANIZATION DOCTOR^CACTUS~67055^Beattie^Martin^C^^^^^SJH Dr Number^Personnel^^^ORGANIZATION DOCTOR^CACTUS~D67055^Beattie^Martin^C^^^^^Username^Personnel^^^Username~6906404218004^Beattie^Martin^C^^^^^SureScripts Prescriber ID^Personnel^^^SureScripts Prescriber Index~MS006716^Beattie^Martin^C^^^^^Username^Personnel^^^Username^CACTUS~67055^Beattie^Martin^C^^^^^SAH Dr Number^Personnel^^^ORGANIZATION DOCTOR^CACTUS~AB5463459^Beattie^Martin^C^^^^^DEA No^Personnel^^^DOCDEA^CACTUS~MS006716^Beattie^Martin^C^^^^^BayCare Dr Number^Personnel^^^ORGANIZATION DOCTOR^CACTUS|||ERD||||EO||N|66666^AJHGGRQJNM^NZ MOTPOZ^^^^^^MCS Dr Number^Personnel^^^ORGANIZATION DOCTOR~66666^AJHGGRQJNM^NZ MOTPOZ^^^^^^MDU Dr Number^Personnel^^^ORGANIZATION DOCTOR~66666^AJHGGRQJNM^NZ MOTPOZ^^^^^^MPH Dr Number^Personnel^^^ORGANIZATION DOCTOR~66666^AJHGGRQJNM^NZ MOTPOZ^^^^^^NBY Dr Number^Personnel^^^ORGANIZATION DOCTOR~66666^AJHGGRQJNM^NZ MOTPOZ^^^^^^SFB Dr Number^Personnel^^^ORGANIZATION DOCTOR~66666^AJHGGRQJNM^NZ MOTPOZ^^^^^^SAH Dr Number^Personnel^^^ORGANIZATION DOCTOR~66666^AJHGGRQJNM^NZ MOTPOZ^^^^^^SJH Dr Number^Personnel^^^ORGANIZATION DOCTOR~66666^AJHGGRQJNM^NZ MOTPOZ^^^^^^SJW Dr Number^Personnel^^^ORGANIZATION DOCTOR~66666^AJHGGRQJNM^NZ MOTPOZ^^^^^^SJN Dr Number^Personnel^^^ORGANIZATION DOCTOR~MS666666^AJHGGRQJNM^NZ MOTPOZ^^^^^^BayCare Dr Number^Personnel^^^ORGANIZATION DOCTOR|E||H||||||||||||||||AHR|||MDU||Discharged|||20170501091600|20170503093200

PV2||KIOSK|^EYE PAIN PERSISTENT HEADACHES|||||||0||||||||||||CONFID|^^589744

ZVI|||||||||W||||20170501145600

OBX|1|CD|HIECONSENT||CD:660809829

OBX|2||CWAUTOENROLL

GT1|1|7000013702~810012256~810012256|MAYTEST^SEVENTEEN^^^^^Current||47 DESERT STREET^^Clearwater^FL^33759^^Home|(727)555-4683^Home1||19800822|M|CD:1150|CD:158

IN1|1|375^HUMANA HMO POS^^^HUMANA HMO POS|1050053|Humana|||||Humana HMO POS|0||20170501000000|21001231000000||CD:675160|MAYTEST^SEVENTEEN^^^^^Current|CD:158|19800822|47 DESERT STREET^^Clearwater^FL^33759^^Home|||1|||||||||||||H||||||||M||||||H387549

IN2|||||||||||||||||||||||||H387549||||||||||||||||||||||||||||||||||||H387549||(727)555-4683^Home1

**OUTBOUND to SOARIAN**

MSH|^~\&|FIRSTNET|70A0|SOARF||201705030932||ADT^A03|Q3312820962T4196844544X167897|P|2.7ZSH|||||||Ins^UpdEVN|A03|201705030932|||FIRSTNET|201705010916PID|||810012256^^^900000^PN||MAYTEST^SEVENTEEN^^^^^L||19800822|M||||||||||6000030100^^^504^VCDPV1||O|||||006716^^^^^^^^183^^^^PRN||||||||||006716^^^^^^^^183^^^^PRN|||||||||||||||||||AHR||||||||201705010916|201705030932IN1||375|||||||||||||||||||||||||||||||||||||||||||true

# 5. Alerts

Are you going to need alerting on this connection?

|  |  |
| --- | --- |
| Yes |  |
| No |  |

If the answer is yes, please complete the table below:

|  |  |  |  |
| --- | --- | --- | --- |
| **Site Name** | **Hours of Support** | **Distribution Group** | **Comments** |
|  |  |  |  |
|  |  |  |  |

# Appendix A: Risks and Concerns –N/A

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

# Appendix B: Issues List –N/A

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