**ADT from Soarian to AXIS Software PATS Cloud Requirements**

**Version 1.0**

**Prepared By: Lois Whitley and Tom Fredrickson**

**Date: 9/9/2019**

[Document Control 3](#_Toc18937268)

[Resources: (include Project Team Members, Liaisons, Vendor Contacts, etc.) 3](#_Toc18937269)

[Project Distribution List 3](#_Toc18937270)

[Document Version Control 3](#_Toc18937271)

[1. Introduction 4](#_Toc18937272)

[1.1 Purpose 4](#_Toc18937273)

[1.2 Project Scope 4](#_Toc18937274)

[1.3 Terminology Standards 4](#_Toc18937275)

[1.3.1 Acronyms 4](#_Toc18937276)

[1.3.2 Glossary 4](#_Toc18937277)

[1.4 Document References 4](#_Toc18937278)

[2. Diagram 5](#_Toc18937279)

[3. Requirements 6](#_Toc18937280)

[3.1 Functional Requirements 6](#_Toc18937281)

[3.2 Non-Functional Requirements 7](#_Toc18937282)

[3.3 Messaging Protocols 8](#_Toc18937283)

[3.3.1 Outbound to the Vendor 8](#_Toc18937284)

[4. HL7 Messaging 8](#_Toc18937285)

[4.1 Messaging Format 8](#_Toc18937286)

[4.1.1 Segments 8](#_Toc18937287)

[4.1*.*2 Messaging Event Types 9](#_Toc18937288)

[4.1*.*3 Cloverleaf Configuration Files 9](#_Toc18937289)

[4.1.4 Cloverleaf Site Location 9](#_Toc18937290)

[4.2 Data Transformation Requirements 10](#_Toc18937291)

[4.3 Sample Messages 12](#_Toc18937292)

[4.3.1 Inbound to Cloverleaf 12](#_Toc18937293)

[4.3.2 Outbound from Cloverleaf 14](#_Toc18937294)

[5. Alerts 14](#_Toc18937295)

[Appendix A: Risks and Concerns 15](#_Toc18937296)

[Appendix B: Issues List 15](#_Toc18937297)

# **Document Control**

## Resources: (include Project Team Members, Liaisons, Vendor Contacts, etc.)

|  |  |  |
| --- | --- | --- |
| **Name** | **Role** | **Email** |
| Tom Fredrickson | Integration Analyst | [Thomas.Fredrickson@baycare.org](mailto:Thomas.Fredrickson@baycare.org) |
| Linda Leon | S Application Owner, Director Clinical Outcomes - BC, Clinical Outcomes | Linda.Leon@baycare.org |
| Clay, Susan M. | BayCare PM | Sue.Clay@baycare.org |
| Axis Clinical Software | Vendor | support@axisclinical.com |
|  | Customer Support | 800-669-2497 |
| Amber Imes | Vendor - PM | AImes@AxisClinical.com |
|  |  |  |
|  |  |  |

## Project Distribution List

## Document Version Control

|  |  |  |  |
| --- | --- | --- | --- |
| **Version** | **Date** | **Modifier** | **Description** |
| V1.0 | 7/30/2019 | Lois Whitley | Originally Created |
| V1.1 | 9/9/2019 | Tom Fredrickson | Updated Technical Specifications |
|  |  |  |  |
|  |  |  |  |

# 1. Introduction

## 1.1 Purpose

The purpose of this document is to provide the HL7 ADT interface requirements currently in place in Cloverleaf between Soarian and AXIS software PATS Cloud (Patient Analysis and Tracking System).

## 1.2 Project Scope

Integration includes only an ADT interface from Soarian to AXIS PATS Cloud, with only demographic information using the MSH, EVN and PID segments.

AXIS PATS Cloud is a clinical outcomes data management software system designed for healthcare facilities to track and analyze outcomes for medical procedures or treatment. PATS supports national and state registry participation.

## 1.3 Terminology Standards

### 1.3.1 Acronyms

ADT – Admission, Discharge and Transfer; mainly demographic data

PATS – Patient Analysis and Tracking System

### 1.3.2 Glossary

AXIS – vendor

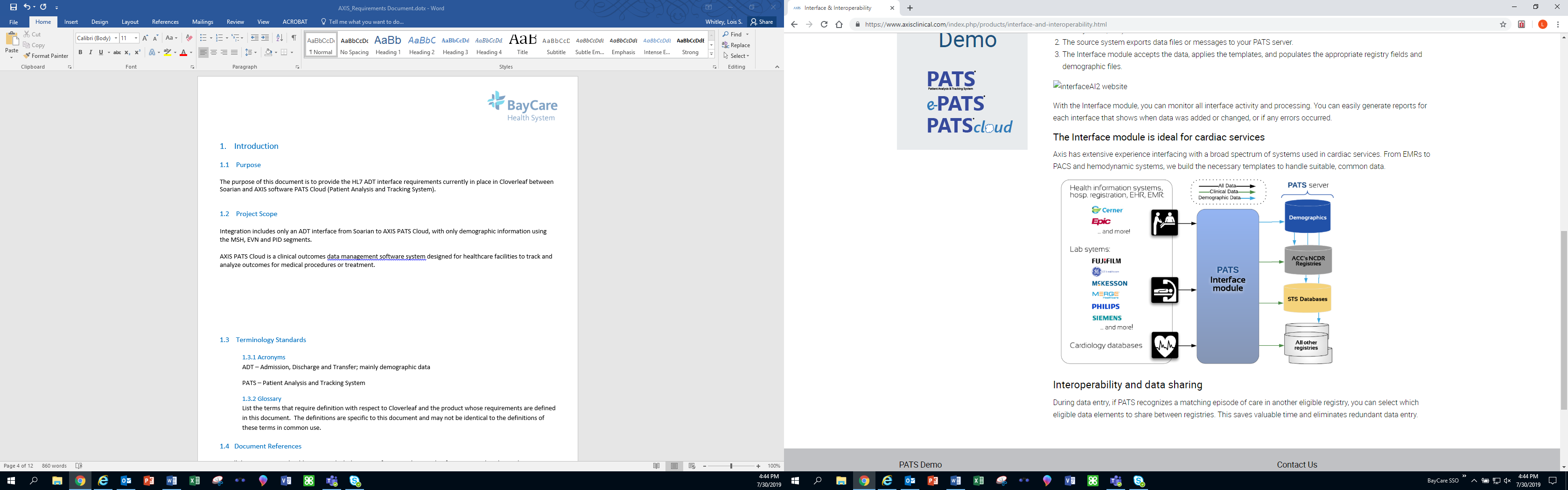
PATS Cloud – software application

## 1.4 Document References

List all documents or Web addresses to which this IDBB refers; provide enough information so that the reader can access a copy of each reference. Include the title, author, version number, date, and source or location.

# 2. Diagram

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.2019.9.1 | Source system filter. | Filter down to only ADT from Soarian.  MSH-2.0 = SOARF |
| FR.2019.9.2 | Source Facility filter | Filter down to only 14 main hospitals.  MSH-3.0 = BAH BRM MCS MDU MPH NBY SAH SFB SJH SJN SJS SJW WHH WHW |
| FR.2019.9.3 | Facility code mapping. | Map the MSH-4 Sending Facility code to the PATS Namespace.  Facility Code Facility Name PATS Namespace  ###############################################  MPH Morton Plant Hospital MPM  MCS Mease Countryside Hospital MPM  MDU Mease Dunedin Hospital MPM  NBY Morton Plant North Bay Hospital MPM  BAH BayCare Alliant Hospital MPM  WHH Winter Haven Hospital WHH  WHW Winter Haven Women's Hospital WHH  BRM Bartow Regional Medical Center WHH  SJH St. Joseph's Main Hospital SJH  SJW St. Joseph's Women's Hospital SJH  SJN St. Joseph's Hospital-North SJH  SJS St. Joseph's Hospital-South SJH  SFB South Florida Baptist Hospital SJH  SAH St. Anthony's Hospital SAH |
| FR.2019.9.4 | Race field mapping. | Map the PID-10 Race field to PATS code.  BayCare Value PATS Value PATS Description  #####################################################  White 0 White  Black 1 Black/African American  Asian 2 Asian  AmInd 3 American Indian/Alaskan Native  PcfIs 4 Native Hawaiian/Pacific Islander  Other 5 Other  NR 7 Patient declined to disclose |
| FR.2019.9.5 | Ethnic Group mapping. | Map the PID-22 Ethnic Group to PATS Hispanic Ethnicity code.  BayCare Value PATS Value PATS Description  ##################################################  HIS 1 YES  Non HIS or LAT 2 NO  Unknown 3 Patient declined to disclose |
| FR.2019.9.6 | Segment filter. | Filter down to just the segments that we want: MSH EVN PID. |
| FR.2019.9.7 | Override Country Code. | For PID-11.6 Country Code we will map USA --> 237. |
|  |  |  |
|  |  |  |
|  |  |  |

## 3.2 Non-Functional Requirements

Provide concise detail for the below non-functional requirements. This would include external table ownership, hours of support, etc. 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

TCP/IP.

### 3.3.1 Outbound to the Vendor

|  |  |
| --- | --- |
| FTP |  |
| MLLP Socket Connection (TCP/IP) |  |
| Local File Drop by Midrange Team |  |
| Other | Click here to enter text. |

# 4. HL7 Messaging

## 4.1 Messaging Format

MSH

EVN

PID

### 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*

### 4.1*.*2 Messaging Event Types

Below are the messages types necessary for this integration

|  |  |
| --- | --- |
| **Event Type** | **Description** |
| A01 | Admit a patient |
| A02 | Transfer a patient |
| A03 | Discharge a patient |
| A04 | Register a patient |
| A05 | Pre-admit a patient |
| A06 | Transfer an OP to IP |
| A07 | Transfer an IP to OP |
| A08 | Update patient info |
| A28 | Add person info |
| A31 | Update person info |
|  |  |
|  |  |
|  |  |

### 4.1*.*3 Cloverleaf Configuration Files

Tcl Scripts in the procedure stack:

tpsAdvHL7Filter.tcl

tpsSoarfToPATScloud.tcl

tpsHL7FilterSegment.tcl

### 4.1.4 Cloverleaf Site Location

Production = soarf\_adt\_ent\_18\_p

Test = soarf\_adt\_ent\_18

## 4.2 Data Transformation Requirements

| **Field Description** | **HL7 Field Loc.** | **Required Y/N** | **Notes** |
| --- | --- | --- | --- |
| Message Header | MSH | Y |  |  |  |
| Sending Application | MSH.3 | Y | SOARF; used to identify the ADT system that produced the message - required |  | BCHS\_ADT; used to identify the ADT system that produced the message - required |
| Sending Facility | MSH.4 | Y | Just the hospital facilities. E.g. MPH |  | \*\*\*\_SOARIAN |
| Receiving Application | MSH.5 | Y | PATS |  | eICU |
| Receiving Facility | MSH.6 | Y | PATS |  |  |
| Date/Time of Message | MSH.7 | Y | YYYYMMDDHHMMSS |  | YYYYMMDDHHMMSS |
| Message Type | MSH.9 | Y | i.e ADT^A01, ADT^A08  used to filter and process messages based on message type and trigger event |  | i.e ADT^A01, ADT^A08  used to filter and process messages based on message type and trigger event |
| Message Control ID | MSH.10 | Y | Unique identifier for the message |  | Unique identifier for the message |
| Event Type | EVN | Y |  |  |  |
| Event Type Code | EVN.1 | Y | i.e. A08 |  |  |
| Recorded Date/Time | EVN.2 | Y | YYYYMMDDHHMM |  |  |
| Event Reason Code | EVN.4 | Y | i.e RVE |  |  |
| Operator ID | EVN.5 | N |  |  |  |
| Event Occurred | EVN.6 | N |  |  |  |
| Event Facility | EVN.7 | N |  |  |  |
| Patient Identification | PID | Y |  |  |  |
| Patient ID (External ID) | PID.2 | Y | Primary identifier that clinicians use to most commonly refer to patient: MRN |  | Primary identifier that clinicians use to most commonly refer to patient (CPI?) |
| Patient ID (Internal ID) | PID.3 | Y | Unique instance of care: FIN |  | Unique for instance of care (FIN#?) |
| Patient Name | PID.5 | Y | FamilyName^GivenName |  | FamilyName^GivenName |
| Date/Time of Birth | PID.7 | Y | YYYYMMDD |  | YYYYMMDD |
| Sex | PID.8 | Y | M=Male  F=Female  U=Unknown |  | M=Male  F=Female  U=Unknown |
| Race | PID.10 | Y | See FR.2019.4.0 |  |  |
| Patient Address | PID.11 | Y |  |  |  |
| Phone Number - Home | PID.13 | Y |  |  |  |
| Primary Language | PID.15 | Y |  |  |  |
| Marital Status | PID.16 | Y |  |  |  |
| Religion | PID.17 | Y |  |  |  |
| Patient Account Number | PID.18 | Y |  |  |  |
| Ethnic Group | PID.22 | Y | See FR.2019.5.0 |  |  |
| Multiple Birth Indicator | PID.24 | Y |  |  | Required for A03 (Discharge) |
| Birth Order | PID.25 | Y |  |  | Required for A01 (Admit) |
| Patient Death Indicator | PID.30 | Y |  |  |  |
| Identity Unknown Indicator | PID.31 | Y |  |  |  |

## 4.3 Sample Messages

### 4.3.1 Inbound to Cloverleaf

MSH|^~\&|SOARF|MCS|||201909091052||ADT^A08|3b623ceb-e4ee-419d-9e68-a1a35160d8d9|P|2.7||1

EVN|A08|201909091052||RVE|mccary01|201909091049|9017

PID|1|810120152^^^900000^PN|7000109625^^^BCHS^MR||zTEST^RTM^^^^^L^^^20190109||19600101|M||Black|22222^^Solon^OH^44139^USA^M^^Cuyahoga^^^20190109||^PRN^PH^^1^333^3333333||ZH|D|AME|6000144613^^^BCHS^VCD^^20190617||||HIS||N|0|||||N|N

PD1||||||||N

PV1|1|O||Elective|||009864^D Cunha^Prakas^Thomas^^PRN^1740275239^NPI^11027^PRDOC^MCS|||CDH|||N|RP|||009864^D Cunha^Prakas^Thomas^^PRN^1740275239^NPI^11027^PRDOC^MCS|O|5400057485^^^504^VN^^20190617|HMO|||||||||||||||||||9017|||||201906170817|||||||V

PV2|||^TEST||||~~~~false||||||||Y||||||N||MC Ancillary^L^591^^^900000^XX~^^1265419907^^^900004^NPI|Attended|||||||N|||||N

ROL||UC|PP|009864^D Cunha^Prakas^Thomas^^PRN^1740275239^NPI^11027^PRDOC^MCS|201901091234||||Phys|||^WPN^PH^^0^727^7120807~^WPN^PH^^0^727^8694070~^ORN^FX^^0^727^7976973

ROL||UC|AT|009864^D Cunha^Prakas^Thomas^^^MD^^183^L^^^PRN^^^^20181203~2690^^^^^^^^900000^^^^DN~ME89756^^^^^^^^195^^^^LN~1740275239^^^^^^^^900004^^^^NPI~11027^^^^^^^^769^^^^PRN~78204^^^^^^^^777^^^^PRN~11027^^^^^^^^745^^^^PRN~78204^^^^^^^^779^^^^PRN~78204^^^^^^^^2127^^^^PRN~78204^^^^^^^^781^^^^PRN~11027^^^^^^^^748^^^^PRN~11027^^^^^^^^771^^^^PRN~78204^^^^^^^^783^^^^PRN~11027^^^^^^^^772^^^^PRN~11027^^^^^^^^737^^^^PRN~11027^^^^^^^^684^^^^PRN~11027^^^^^^^^1316^^^^PRN~11027^^^^^^^^775^^^^PRN~78204^^^^^^^^2077^^^^PRN~11027^^^^^^^^581^^^^PRN~11027^^^^^^^^1505^^^^PRN~11027^^^^^^^^757^^^^PRN~78204^^^^^^^^2078^^^^PRN~11027^^^^^^^^1325^^^^PRN~78204^^^^^^^^2076^^^^PRN~11027^^^^^^^^1395^^^^PRN~11027^^^^^^^^1395^^^^PRN|201906170817||||Phys||29296 US Highway 19 N Ste 3^^Clearwater^FL^337612189^^M|^WPN^PH^^0^727^7120807~^WPN^PH^^0^727^8694070~^ORN^FX^^0^727^7976973

ROL||UC|AD|009864^D Cunha^Prakas^Thomas^^^MD^^183^L^^^PRN^^^^20181203~2690^^^^^^^^900000^^^^DN~ME89756^^^^^^^^195^^^^LN~1740275239^^^^^^^^900004^^^^NPI~11027^^^^^^^^769^^^^PRN~78204^^^^^^^^777^^^^PRN~11027^^^^^^^^745^^^^PRN~78204^^^^^^^^779^^^^PRN~78204^^^^^^^^2127^^^^PRN~78204^^^^^^^^781^^^^PRN~11027^^^^^^^^748^^^^PRN~11027^^^^^^^^771^^^^PRN~78204^^^^^^^^783^^^^PRN~11027^^^^^^^^772^^^^PRN~11027^^^^^^^^737^^^^PRN~11027^^^^^^^^684^^^^PRN~11027^^^^^^^^1316^^^^PRN~11027^^^^^^^^775^^^^PRN~78204^^^^^^^^2077^^^^PRN~11027^^^^^^^^581^^^^PRN~11027^^^^^^^^1505^^^^PRN~11027^^^^^^^^757^^^^PRN~78204^^^^^^^^2078^^^^PRN~11027^^^^^^^^1325^^^^PRN~78204^^^^^^^^2076^^^^PRN~11027^^^^^^^^1395^^^^PRN~11027^^^^^^^^1395^^^^PRN|201906170817||||Phys||29296 US Highway 19 N Ste 3^^Clearwater^FL^337612189^^M|^WPN^PH^^0^727^7120807~^WPN^PH^^0^727^8694070~^ORN^FX^^0^727^7976973

OBX|1|ST|2REPAUDT^^LSFUSERDATAE||replicated by mccary01 201906170819||||||R

OBX|2|CE|AdditionalData1^^LSFUSERDATAE||N||||||R

OBX|3|NM|9272-6^Apgar 1^LN||0

OBX|4|NM|9274-2^Apgar 5^LN||0

GT1|1|7000109625^^^504^MR^^20190109~810120152^^^900000^PN^^20190109|zTEST^RTM^^^^^L^^^20190109||22222^^Solon^OH^44139^USA^M^^Cuyahoga^^^20190109|^PRN^PH^^1^333^3333333||19600101|M|P|6||||||||||||||N||2500.00&USD|||D||||||ZH|||||AME|||HIS|||||||||||Black

IN1|1|1336^Avmed HMO|1507^^^900000^XX^^20130605~592742907^^^900001^TX^^20140328|Avmed^L^1507^^^900000^XX|PO BOX 569000^^Miami^FL^33256^USA^M^^^^POLCS-M~PO Box 569000^^Miami^FL^33256^USA^M^^^^HRefund|^^^^^^^POLCS-M~Avmed^^^^^^^HRefund|^WPN^PH^^0^800^4528633^^POLCS-M||Avmed HMO||||||Health|zTEST^RTM^^^^^L^^^20190109|6|19600101|22222^^Solon^OH^44139^USA^M^^Cuyahoga|||1||||||||||||||32434343434|||||||M||false||||7000109625^^^504^MR^^20190109~810120152^^^900000^PN^^20190109  
IN2|||||||||||||||||||||||||59274|NOCD||||||||ZH|||||AME|||HIS|D||||||||||||||||||||^PRN^PH^^1^333^3333333||||||||Black|6

ZIN||||||||||||||||||||||||||||||||||||||||||||||||||||^^policyPlanName^policyPlanName^Avmed HMO||||||1336^^^900000^HPI^20130613~HMO^^^183^NHPI^20140313

IN1|2|1834^General Amer Life|2204^^^900000^XX^^20140428|General Amer Life^L^2204^^^900000^XX|1000 Great West Dr^^Kennett^MO^63857^USA^M^^^^POLCS-M|^^^^^^^POLCS-M|^WPN^PH^^0^800^3255079^^POLCS-M||General Amer Life||||||Health|||||||2|||||||||||||||||||||||false||||89523^^^900000^XX^^20160829

IN2|||||||||||||||||||||||||99999|0000|||||||||||||||||||||||||||||||||||||||||||FAR REACH MANAGEMENT^L^89523^^^900000^XX

ZIN||||||||||||||||||||||||||||||||||||||||||||||||||||^^policyPlanName^policyPlanName^General Amer Life||||||Indemnity^^^183^NHPI^20140428~1834^^^900000^HPI^20140428

PDA||||||N|||N  
ZPV|||||||||||||||||||||||||||||||||||||||||||||||||""|W1858083|||||||||||^^mostCurrEncTypeCd^mostCurrEncTypeCd^

OP||||||||5400057485^^No SCD^504^ZAVN^^20190617||201906170817

ZID|7000109625^^^504^MR^^20190109~810120152^^^900000^PN^^20190109

### 4.3.2 Outbound from Cloverleaf

MSH|^~\&|SOARF|MPM|PATS|PATS|201909091052||ADT^A08|3b623ceb-e4ee-419d-9e68-a1a35160d8d9|P|2.7||1

EVN|A08|201909091052||RVE|mccary01|201909091049|9017

PID|1|810120152|7000109625||zTEST^RTM^^^^^L^^^20190109||19600101|M||1|22222^^Solon^OH^44139^237^M^^Cuyahoga^^^20190109||333-333-3333||ZH|D|AME|6000144613||||1||N|0|||||N|N

# 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** |
|  |  |  |  |
| soarf\_adt\_ent\_18\_p | Mon - Fri 7am-5pm PST, BayCare Mon - Fri 7am – 5pm EST | [cloverleafteam@baycare.org](mailto:cloverleafteam@baycare.orgLori.Green@baycare.org)  [Lori.Green@baycare.org](mailto:cloverleafteam@baycare.orgLori.Green@baycare.org)  [Lawanna.Hurst@baycare.org](mailto:Lawanna.Hurst@baycare.org)  [Mollie.Carpenter@baycare.org](mailto:Mollie.Carpenter@baycare.org) | SUPPORT:  IS Application Owner: Linda Leon, Director Clinical Outcomes - BC, Clinical Outcomes  Primary Support Contact Name: Customer Support  Primary Support Contact Phone: 800-669-2497  Primary Support Contact E-mail: support@axisclinical.com  Primary Support Contact Time Available: Monday thru Friday 7am-5pm PST |

# 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