**ADT Patient Portal Invitations Soarian/GECB to Cerner Interface Requirements**

**Version 1.6**

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# **Document Control**

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## Project Distribution List

## Document Version Control

|  |  |  |  |
| --- | --- | --- | --- |
| **Version** | **Date** | **Modifier** | **Description** |
| V1.0 | 6/20/16 | Hope Kaczmarczyk | Originally Created |
| V1.5 | 6/13/17 | Hope Kaczmarczyk | Changes made for when zip code is null or Canadian (alpha-numeric) |
| V1.6 | 9/20/19, 9/25/19, 10/9/19 | Hope Kaczmarczyk, Sarah Thies | Added updates to support Apple, new patient portal object library fields, and to check for self-enrollment before sending an invite. |

# 1. Introduction

## 1.1 Purpose

The purpose of this document is to provide the interface configurations needed to automatically send Cerner patient portal invitations based on email addresses provided in the ADT registration messages. Cerner’s Patient Portal is where a patient can view his/her results for testing done at BayCare. The patient portal is now available through an Apple application. Also, be advised, that the patient portal invite for the proxy is no longer automated via the interface. Patient Proxy is a manual procedure done by the end-user. There is also a new manual self-enrollment feature.

## 1.2 Project Scope

To create automated patient portal invitations using the ADT registration messages from Soarian and GECB/BMG. Patient Portal invitations are sent based on the ADT registration message type and patient information. The ADT messages must contain the patient’s email address, the patient’s zip code, and the patient cannot be between the ages of 12 to 17 years old for a Patient Portal invitation to be sent.

## 1.3 Terminology Standards

### 1.3.1 Acronyms

**ADT –** Admission, Discharge, and Transfer.

Note: BayCare ADT messages are generated from two registration systems, Soarian and GE.

**BMG** – BayCare Medical Group

**BUC** – BayCare Urgent Care; part of BMG

**CPI** – Corporate Patient Identifier.

Note: BayCare CPI is a unique patient identifier used across all BayCare locations.

**DB** – Database

**DOB –** Date of Birth

**FSI** – Foreign System Interface; used by Cerner Millennium to exchange data with other Health Care Information

Systems.

**ESI –** External Systems Inbound; Cerner’s process for handling interfaced data received from a foreign system.

**ESI Log –**  The ESI log contains queue trace reports for all inbound messages to Cerner along with processing

statuses of success, failure, or warning. Failures and Warnings are accompanied by error text which describes

the issue. The ESI log is used for Cerner FSI troubleshooting by the Integration Team.

### 1.3.2 Glossary

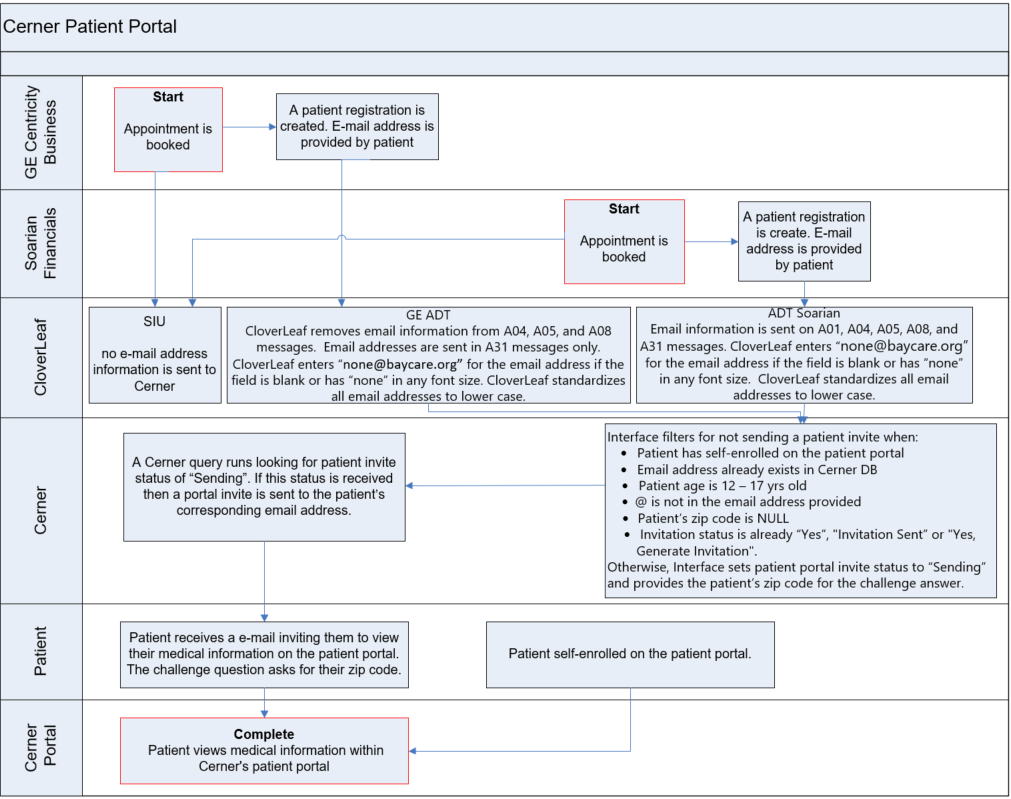
**Alias** - An identifier used to represent an item, such as a location, order, specimen type, or result.

**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.

1.4 Document References

Cerner HL7 Specifications: Unit 08i – ADT Message Processing Inbound – Cerner 2016

# 2. Diagram



# 3. Requirements

## 3.1 Functional Requirements

|  |  |  |
| --- | --- | --- |
| **Cerner** |  |  |
| **Number** | **Requirement Name** | **Requirement Description** |
| FR.2014.03.1 | Corporate Patient Identifier (CPI )value | The CPI value is a unique number identifying the patient among all BayCare systems. The ADT mod object scripts use the CPI from PID;2 or PID;3 to verify the patient on Cerner. |
| FR.2014.03.2 | Patient’s DOB | The Patient’s DOB is sent in PID; 7. The ADT mod object scripts use the patient’s DOB to calculate the patient’s age. If a patient’s age is between the ages of 12 to 17 years old, no patient portal invitation is sent. |
| FR.2014.03.3 | Patient’s Email address | Patient’s email address is sent in the 2nd iteration of the Patient Address fields. The patient’s email address or “none” is sent in ~PID.11.1 with EMAIL as the type of address in ~PID.11.7. The ADT mod object scripts check to see if the email address sent in the message matches the one in the Cerner DB. |
|  |  |  |
| FR.204.04.1 | Script: adt\_bmg\_in  on Com Server: ADT\_BMG\_IN | |  | | --- | | Mod Object Script for GE ADT messages inbound to Cerner. Logic added  to send patient portal invitations if:   * MSH.9.2 is an A31. * Patient self-enrollment has not been populated. * Email Address field (PID.11.1) has an @ and does not already   exist in the Cerner DB.   * Patient is not between the ages of 12 to 17 years old * Patient’s zip code is not NULL * Invitation status is not “YES”, "Invitation Sent” or "Yes, Generate   Invitation".   * Mod Object script creates a ZPI and OBX segment if the   requirements above exist (See data transformation  requirements for details). | |
| FR.2014.05.1 | Script: adt\_soarian\_in  on Com Server: ADT\_SOARIAN\_IN | Mod Object Script for Soarian ADT messages inbound to Cerner. Logic added to send patient portal invitations if   * MSH.9.2 is an A01, A04, A05, A08, or A31 * Patient self-enrollment has not been populated. * Email Address field (PID.11.1) has an @ and does not already exist in the Cerner DB. * Patient is not between the ages of 12 to 17 years old * Patient’s zip code is not NULL * Invitation status is not “Yes”, "Invitation Sent” or "Yes, Generate   Invitation".   * Mod Object script creates one OBX segment if the requirements above exist (See data transformation requirements for details). |
|  | **Soarian** Contributor System  BMG Contributor System | * Contributor Source = Soarian * Organization Alias is in the MSH-06 Receiving facility * Blank out the patient relationship when HL7 values are “” * Contributor Source = BMG * ALT Contributor Source = Invision * Organization Alias is in the MSH-06 Receiving facility * Blank out the patient relationship when HL7 values are “” |

## 3.2 Messaging Protocols

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

**BMG Registrations:**

### 3.2.1 Inbound to the BayCare Cloverleaf from GE

### 3.2.2 Inbound to the BayCare Cerner from Cloverleaf (GE)

**Soarian Registrations:**

### 3.2.3 Inbound to the BayCare Cloverleaf from Soarian

### 3.2.4 Inbound to the BayCare Cerner from Cloverleaf (Soarian)

# 4. HL7 Messaging

## 4.1 Messaging Format

ADT registration messages are sent from Soarian and GE to Cerner through CloverLeaf using the HL7 2.3 message format.

### 4.1.1 Segments

The segments utilized for this interface are:

MSH *Message Header*

EVN *Event segment*

PID *Patient ID segment*

[PD1] *Additional Demographics segment*

[{NK1}] *Next of Kin segment*

PV1 *Patient Visit segment*

[PV2] *Patient Visit Additional Info segment*

[{GT1}] *Guarantor segment*

[{

IN1 *Insurance Information segment*

[IN2] *Insurance-Additional Info segment*

[IN3] *Insurance-Certification segment*

}]

[{OBX}] *Observations- added to the ADT message by Cerner Scripting*

*Notes: [Square Brackets] – Optional*

*{Curly Brackets} – Repeatable*

### 4.1.2 Messaging Event Types

Below are the messages types necessary for this integration

|  |  |
| --- | --- |
| **Event Type** | **Description** |
| ADT^A01 | Inpatient Registration |
| ADT^A04 | Outpatient Registration |
| ADT^A05 | Pre-admit |
| ADT^A08 | Update Patient Encounter Information |
| ADT^A31 | Update Person Information |

### 4.1.3 Cloverleaf Configuration Files

**Format Email Address information only:**

Note: See “BMG GE Centricity Business to Cerner ADT Requirements” and “ADT Interface to Cerner documentation” for the complete GE and Soarian ADT data transformation requirements**.**

**For GECB:** Xlate - ge\_cer\_adt

* Email fields always go in the second iteration of PID-11
* Do not send email on A04, A05, or A08 messages
* Put Email address in PID-11 1st sub Field (convert to Lower Case)
* Put “EMAIL” in PID-11 7th sub Field
* If email = NONE, None or none: Put none@baycare.org in email field and EMAIL in 7th sub field

**For Soarian:** Xlate – soarf\_cerner\_adt

* Email fields always go in the second iteration of PID-11
* Put Email address in PID-11 1st sub Field (convert to Lower Case)
* Put “EMAIL” in PID-11 7th sub Field
* If email = NONE, None or none: Put none@baycare.org in email field and EMAIL in 7th sub field

### 4.1.4 Cloverleaf Site Location

**For GECB:**

**C30**

SITE: **bmg\_1** & THREAD: **adt\_cer\_out\_crt\_T**

**P30**

SITE: **bmg\_1\_p** & THREAD: **adt\_cer\_out**

**For Soarian:**

**C30**

SITE: **cerner\_siu\_bar\_5** & THREAD:  **adt\_cer\_out\_crt\_T**

**P30**

SITE: **cerner\_siu\_bar\_5­\_p** & THREAD: **adt\_cer\_out**

## 4.2 Data Transformation Requirements

(The ADT fields identified below are the ones needed for supporting Patient Portal Invitations. See “BMG GE Centricity Business to Cerner ADT Requirements” and “ADT Interface to Cerner documentation” for the complete GE and Soarian ADT data transformation requirements.)

| **Field Description** | **HL7 Field Loc.** | **Required Y = Yes \*** | **Data Type** | **Length** | **Notes** |
| --- | --- | --- | --- | --- | --- |
| Message Type | MSH.9 | Y | MSG | 15 |  |
| Type | MSH.9.1 | Y |  |  | ADT is the Message Type |
| Event | MSH.9.2 | Y |  |  | A01, A04, A05, A08, and A31 are the event types that will trigger Patient Portal Invitation logic for Soarian registrations.  A04 and A31 are the event types that will trigger Patient Portal Invitation logic for GE (BMG) registrations. |
| Patient ID (External ID) | PID.2 | Y | CX | 20 |  |
| Patient ID (External ID) | PID.2.1 |  | ST |  | Patient CMRN (CPI) used for BMG/GE patient match to Cerner DB in scripting |
| Patient ID (Identifier Type) | PID.2.5 |  | ID |  | BCCPI identifies the patient ID sent in PID.2.1 |
| Patient ID (Internal ID) | PID.3 | Y | CX | 20 |  |
| Patient ID (Internal ID) | PID.3.1 |  | ST |  | Patient CMRN (CPI) used for Soarian patient match to Cerner DB in scripting |
| Patient ID (Identifier Type) | PID.3.5 |  | ID |  | CPI identifies the patient ID sent in PID.3.1 “BCMRN” |
| Birth Date | PID.7 | Y | TS | 26 | YYYYMMDD |
| Patient Address | PID.11 |  | XAD | 106 | Two Iteration: Patient’s Home/Mailing Address and Patient’s Email Address |
| Address Line 1 | PID.11.1 |  |  |  | Iteration for Home/Mailing Address: Patient’s street address |
| Address Line 2 | PID.11.2 |  |  |  | Iteration for Home/Mailing Address: Additional line for patient’s street address |
| City | PID.11.3 |  |  |  | Iteration for Home/Mailing Address |
| State | PID.11.4 |  |  |  | Iteration for Home/Mailing Address |
| Zip Code | PID.11.5 | Y |  |  | Iteration for Home/Mailing Address |
| Country | PID.11.6 |  |  |  | Iteration for Home/Mailing Address: Left Blank if United States |
| Type | PID.11.7 |  |  |  | Iteration for Home/Mailing Address: Type of address =  HOME. If the field is left blank, Cerner’s default value is HOME. |
| Address Line 1 | ~ PID.11.1 | Y |  |  | Iteration for Patient’s email: Patient’s email address |
| Type | ~ PID.11.7 | Y |  |  | Iteration for Patient’s email: Type of address =  EMAIL |
|  |  |  |  |  |  |
| OBX Segment |  |  |  |  | **An OBX segment is created by the adt\_soarian\_in and the adt\_bmg\_in mod object scripts when script logic is met:** |
| Set ID – OBX | OBX.1 | Y | SI | 10 | 1 is added to the existing OBX size count. |
| Value Type | OBX.2 | Y | ID | 2 | CE is entered to identify the value in OBX.5 as a Coded Element (i.e., alias). |
| Observation Identifier | OBX.3 | Y | CE | 80 | PATIENTPORTA is an inbound alias on code set 356 for contributor sources Soarian and BMG:  PATIENTPORTA = Patient Portal Registration  On Code set 356: The “Code Value Extension” is used to identify the response expected for this field in OBX.5:  Type = CODE  Level = PERSON  Code set = 4352005 |
| Observation Value | OBX.5 | Y |  | 64k | YES or NO answer to send the patient portal invitation is entered based on script logic. These are inbound aliases on code set 4352005 for contributor sources Soarian and BMG:  YES  NO  The question/response is stored on the PERSON\_INFO table in Cerner. |
| ZPI Segment |  |  |  |  | **A ZPI segment is created by the adt\_soarian\_in and the adt\_bmg\_in mod object scripts when script logic is met:** |
| Portal Access Offered | ZPI.38 | O | CE |  | YES or NO answer to send the patient portal invitation is entered based on script logic. |
| Portal Challenge Question | ZPI.39 | O | CE |  | ZIP is populated as an alias in code set 4003353 for “Your Postal Code” based on script logic. |
| Portal Challenge Answer | ZPI.40 | O | CE |  | This is the patient’s zip code pulled from PID-11.5 based on script logic. |
| Portal Invite Status | ZPI.41 | O | CE |  | SEND is populated as an alias in code set 4352008 for “Sending” based on script logic. |

## 4.3 Sample Message

Inbound Soarian ADT Message (From CloverLeaf):

MSH|^~\&|SOARIAN|BAYCARE|HNAM|MDU|201606171210||ADT^A04|2ec14e20-5914-4785-bf00-991f9e0f689b|P|2.6

EVN|A04|201606171210|||TRN90005

PID|1|810002228^^^^BCCPI|810002228^^^^CPI~7000001819^^^^BCMRN||VINT^JODIE^A||19640813|F||White|13434 HOBSON SIMMONS RD^""^Lithia^FL^33547^^HOME~vintvint@gmail.com^^^^^^EMAIL||(727)505-0505^^PRN~(917)939-8202^^ORN~(727)505-0505^^PREF||EN|S||6000015438^^^^BCFN||||Non HIS or LAT

NTE|1|2|Patient Employer: DISNEY WORLD

NTE|2|2|Patient Employer Number: (813)505-0505

NTE|3|3|Guarantor Employer: DISNEY WORLD

NK1|1|VELEZ^JENNIFER|T||(727)555-5555|(813)222-2222|Emergency Contact 1

NK1|2|LEAZETTE^TORRES|R||(813)647-6471||Emergency Contact 2

PV1|1|O|RADDH^^^MDU^^^MDU|Elective|||MS007456^Sabatino^Kenneth^C|||RAD||||RP||N|MS007456^Sabatino^Kenneth^C|O|5100136935|HMO||||||||||||||||AHR|||RADDH|||||201606171137||||||||MS011794^Fogarty^Julie^Bard^^^^^^^^^PCPE

PV2|||^R LEG PAIN|||||||||||||||||||CONFID

GT1|1||VINT^JODIE^A||13434 HOBSON SIMMONS RD^""^Lithia^FL^33547|(727)505-0505|||||6

IN1|1|375|425|Humana|||(800)523-0023^EPR|575717|Humana HMO POS|||||""|Health|VINT^JODIE^A|6|19640813|13434 HOBSON SIMMONS RD^""^Lithia^FL^33547|||1||||||||||||||009405783|||||||F|1212 LANE AVE^^ORLANDO^FL^33569^^EPR|false

IN2|||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||(727)505-0505

Inbound Soarian Message (After Mod Object Script Changes):

MSH|^~\&|SOARIAN|BAYCARE|HNAM|MDU|201606171210||ADT^A04|2ec14e20-5914-4785-bf00-991f9e0f689b|P|2.6

EVN|A04|201606171210|||TRN90005

PID|1|810002228^^^^BCCPI|810002228^^^^CPI~7000001819^^^^BCMRN||VINT^JODIE^A||19640813|F||White|13434 HOBSON SIMMONS RD^""^Lithia^FL^33547^^HOME~vintvint@gmail.com^^^^^^EMAIL||(727)505-0505^^PRN~(917)939-8202^^ORN~(727)505-0505^^PREF||EN|S||6000015438^^^^BCFN||||Non HIS or LAT

NTE|1|2|Patient Employer: DISNEY WORLD

NTE|2|2|Patient Employer Number: (813)505-0505

NTE|3|3|Guarantor Employer: DISNEY WORLD

ZPI||||||||||||||||||||||||||||||||||||||YES|ZIP|33558|||SEND

NK1|1|VELEZ^JENNIFER|T||(727)555-5555|(813)222-2222|Emergency Contact 1

NK1|2|LEAZETTE^TORRES|R||(813)647-6471||Emergency Contact 2

PV1|1|O|RADDH^^^MDU^^^MDU|Elective|||MS007456^Sabatino^Kenneth^C|||RAD||||RP||N|MS007456^Sabatino^Kenneth^C|O|5100136935|HMO||||||||||||||||AHR|||RADDH|||||201606171137||||||||MS011794^Fogarty^Julie^Bard^^^^^^^^^PCPE

PV2|||^R LEG PAIN|||||||||||||||||||CONFID

OBX|1|CE|PATIENTPORTA||YES

GT1|1||VINT^JODIE^A||13434 HOBSON SIMMONS RD^""^Lithia^FL^33547|(727)505-0505|||||6

IN1|1|375|425|Humana|||(800)523-0023^EPR|575717|Humana HMO POS|||||""|Health|VINT^JODIE^A|6|19640813|13434 HOBSON SIMMONS RD^""^Lithia^FL^33547|||1||||||||||||||009405783|||||||F|1212 LANE AVE^^ORLANDO^FL^33569^^EPR|false

IN2|||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||(727)505-0505

# **5. Testing**

## 5.1. Unit Testing Scenarios

|  |  |
| --- | --- |
| **Scenario** | **Expected Result** |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

## 5.2 Integrated Testing Scenarios

|  |  |
| --- | --- |
| **Scenario** | **Expected Result** |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

## 5.3 Testing Approvals

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

## 5.4 Approvals

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

# 6. Deployment / Implementation Model

The implementation of sending patient portal invitations automatically based on patient data found in the ADT messages from Soarian and GE is a BayCare Cerner custom scripting process with a few modifications applied to the ADT messages in Cloverleaf.

## 6.1 Alerts

Are you going to need alerting on this connection?

|  |  |
| --- | --- |
| Yes | ☐ |
| No | **X** |

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

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

# Appendix A: Risks and Concerns

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Project Name** |  |  | | |  |  |  |  |
| **Number** | **Risk / Concern** | **Comment** | **Mitigation** | | |  |  |  |
| RC.2014.6.1  RC.2018.3.1 | Initial go-live of sending the patient portal invites based on A01 and A04 messages may cause some patients to never get a patient portal invitation.  Patient Portal access on Apple App: The go-live is scheduled before Cerner has the new patient portal segments/fields available in the Object Library. Potential timing issues. | Patient email addresses that are not entered at the time of registration (A01 and A04) may be sent in an A05, A08, or A31 message. The email addresses will post to the Cerner DB and patient invitations will not be sent since logic is not build for these message types. This prevents invites from happening with future A01 or A04 messages if the patient’s email address has not changed.  FSI had to write coding to populate the appropriate tables directly for the patient portal invites. The majority of timing issues were resolved by adding extra coding to check the DB until Cerner updates the Object Library. | | After go-live of sending patient portal invites with A05, A08, and A31 messages, a report was created to identify all patients who had an email address, but did not receive a patient portal invitation. The patients’ data was collected and put in A31 message formats and migrated into Cerner with the email check against the Cerner DB turned off.  3/27/19: Cerner package with the updated Object Library was added to p30 along with FSI Mod Object script modifications- timing issues were resolved. | |  |  |  |

# Appendix B: Issues List

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Patient Portal Invites** |  |  | |  |  |  |  |
| **Number** | **Issue** | **Comment** | **Fix** | |  |  |  |
| I.2014.6.1 | Cerner may receive two A04s within seconds of each other on the same patient from Invision. This is a common occurrence which causes duplicate patient portal invites. | Issue discovered following go-live. Possible resolution for A04 messages sent at the same time would be for Cloverleaf to delete patient email addresses on Z03 messages from Invision when converting them to an A04 message. | Added coding to the Cerner inbound comclient mod object script to check to see if the email address already exists in the Cerner database. If the email address is in the database, then do not send a patient portal invite. This resolution works for patient's A04 messages that are as close to each other as 1 second apart, however, it will not work if the patient's A04 messages have the same exact time (not as common, but this does happen). Note: Why two A04 messages from Invision? Invision sends an A04. If there is additional visit info, Invision will send a Z03 message that CloverLeaf converts to the second A04 message for Cerner. | |  |  |  |
| I.2014.6.2 | Duplicate patient portal invites are occurring with patients having old CPI numbers beginning with zero. Cerner strips the zero and stores the patient's CPI in the database. The inbound ADT messages on these patients have CPI numbers beginning with zero. When the script tries to find a matching CPI in the Cerner database, it cannot and treats each of the patient's ADT messages as a new patient sending a patient portal invite each time. |  | Cloverleaf added coding to strip leading zeros from the CPI numbers in the ADT messages from Invision to Cerner. This process was also added to Cloverleaf for Soarian and BMG messages after go-lives. | |
| I.2014.6.3 | Duplicate patient portal invites are occurring with BMG registrations following go-live. Script tries to find a matching patient alias in PID:3.1 of the ADT message. This is where Invision and Soarian send the patient's CPI number. BMG is sending the BMG MRN in this field and it begins with a leading zero. The script cannot match the MRN in the message with the MRN stored in Cerner's database because Cerner strips leading zeros. Each BMG ADT message on a patient is treated like a new patient causing multiple patient portal invites. | Patient Portal was tested with BMG registrations prior to go-live, however, the duplicate patient portal invite was not caught in testing. | Added coding to the Cerner inbound comclient mod object script for BMG to match patient ID on PID:2 where BMG sends the patient's CPI number and not on PID:3.1 where BMG sends the BMG MRN. | |
| I.2014.10.1 | Duplicate patient portal invites are occurring because the three registration systems (Invision, Soarian, and BMG) are not sending the patient's email address in the same case (i.e., upper, lower, or mixed case). Cerner is case sensitive and sees the same email address in a different case as a new email address and will send a patient portal invite. | Issue discovered after Soarian and BMG registration systems went live. Issue has been fixed, however, there will be a period of time where a single duplicate patient portal invite is sent because the email address that was stored in Cerner is upper or mixed case. | Standardize email addresses to lower case. CloverLeaf added coding to change email addresses from all three registration systems- Invision, Soarian, and BMG to lower case. | |
| I.2014.10.2 | Duplicate patient portal invites are occurring with Mother-Baby Linking. An A01 message for the baby sends a patient portal invite for the baby's account. If no link exists in Cerner for the Mother-Baby, ESI scripting uses the baby's A01 message to build an A31 message for the Mom and an A31 message for the baby to create the link. The A31 messages built pull the patient portal invite data from the baby's A01 message creating a duplicate invite for the mother and a duplicate invite for the baby. | Modification to the ESI script needs to be made to stop the patient portal OBXs from being pulled into the A31 messages that are created for the Mother-Baby link. |  | |
| I.2014.10.3 | Zip Code is missing on the Home address. This will cause the script to not set up the challenge question/answer and to not answer "YES" or "NO" to send Patient Portal Invite |  | This is working as designed. The patient's zip code is needed for the challenge question answer so the patient can access their data on the Patient Portal. However, since the patient's email address is saved in the database, a new patient portal invite will not be sent if the email address is the same in additional ADT messages even if the zip code has been added. | |
| I.2014.10.4 | Issue with Invision email addresses that are none. Cloverleaf coding was using the @ sign to identify and send email addreses. This casued the email addresses of None from Invision to not show up on Cerner. |  | Cloverleaf fixed the coding and the email addresses of "none" | |
| I.2014.10.5 | Issue with Soarian echoes none with @provider.com |  | Cloverleaf added coding to change "none@provider.com" to none for GE(BMG ) echo messages from Soarian to Cerner | |
| I.2014.10.6 | HIE identified an issue where the patient's email address was sometimes posting to Medicity as the Home address | This could be an issue for other downstream systems; further investigation needed. It was identified as an issue for Florida State Immunization messages-coding added to the VXU\_TCPIP\_BAYC\_OUT interface to fix the issue. | Coding was added to the HIE outbound feeds on Cerner to remove the email addresses and move the home address to the first iteration of PID:11 if it was originally in the second iteration. | |
| I.2014.10.7 | GE sends echo ADT messages to Soarian then Soarian sends the message to Cerner.  If the echo ADT message hits Cerner at the exact same time as the original GE ADT message, a duplicate patient portal invite will be sent. | Resolution is for Cloverleaf to blank out email addresses for GE messages echoed from Soarian to Cerner. |  | |

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