**BUC Cerner to GE RIS**

**ORDERS Requirements**

**Version 1.3**

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

**Date: 5/30/2017**

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# **Document Control**

## Resources

|  |  |  |
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## Project Distribution List

## Document Version Control

|  |  |  |  |
| --- | --- | --- | --- |
| **Version** | **Date** | **Modifier** | **Description** |
| V1.0 | 4/29/2015 | Sarah Thies | Originally Created |
| V1.1 | 5/19/2015 | Sarah Thies | Added ***historical*** location to script blocking Allergies outbound |
| V1.2 | 5/23/17 | Art Schwartz | Updated Cloverleaf information |
| V1.3 | 5/30/2017 | Sarah Thies | Dithered the step to update new locations in Cerner scripts because it’s no longer need. The locations automatically flow. |
|  |  |  |  |

# 1. Introduction

## 1.1 Purpose

This document outlines the BayCare Urgent Care (BUC) ORDERS and RESULTS interface with GE RIS. The **existing** orders interfaces will be modified to include the BayCare Urgent Care messages. The order can be placed in Cerner and in the GE RIS. All **results** will flow inbound to Cerner **without** **changes** to the existing results interface. Subsequently, the functional requirements needed to support this solution post implementation will be included.

## 1.2 Project Scope

Update **existing** orders and results interfaces for the BayCare Urgent Care (BUC) providers.

**ORDERS:**

Existing Orders Interface ***Outbound*** Cerner ***TO*** RIS

**ORM\_TCP\_IDX\_OUT**

**Script: orm\_idx\_outv10** *(added BUC locations)*

**Script: msh\_fac\_modobj\_out** *(added BUC locations)*

Existing Orders Interface ***Inbound*** Cerner ***FROM*** RIS

**ORM\_TCP\_IDX\_IN**

**SI Manager Configuration** *(update ESI Alias Translation, Person Match, Encounter Match, Personnel Alias with BUC values)*

## 1.3 Terminology Standards

### 1.3.1 Acronyms

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

CPI – Corporate Patient Identifier

Soarian EMPI = Enterprise Master Patient Index = CPI

### 1.3.2 Glossary

List the terms that require definition

## 1.4 Document References

**Cerner Specifications:**

Unit\_09o\_-\_\_ORDER\_Message\_Processing\_Outbound.pdf

Unit\_09i\_-\_\_ORDER\_Message\_Processing\_Inbound.pdf

Unit\_10i\_-\_RESULT\_and\_Document\_Processing\_Inbound.pdf

**GE RIS Specifications:**

# *2.* Diagram

ORDERS & RESULTS diagram created by Tony McArtor



# 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. Cloverleaf will kill messages ***without*** the CPI value. |
| FR.2015.2.0 | Scripts: orm\_idx\_outv10 and msh\_fac\_modobj\_out on Com Server: ORM\_TCP\_IDX\_OUT | Updating these scripts is no longer needed. New BUC locations are required |
| FR.2015.3.0 | Filter to only allow BUC locations | tpsAdvHL7Filter {{PATH {PV1:3.0}} {VALUE {{CLU CLW CSU CTR CWU HCU MLK MTU NPU NSP SBU STU TYU VAU WAU WCU}}} {MATCHDISP CONTINUE} {NOMATCHDISP KILL}} |
| FR.2015.4.0 |  |  |

## 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 | Script: adt\_master\_outv17 on Com Server: ADT\_TCP\_BAYC\_OUT | Filter Allergies Outbound by patient type and historical location |
| NFR.2015.2.0 | Script: orm\_lab\_outv14 on Com Server: ORM\_TCP\_BAYC\_OUT | Filter Height and Weight Outbound |
| NFR.2015.3.0 | Click here to enter text. | Click here to enter text. |
|  |  |  |

### 3.2.1 Dedicated Encounter Data Flow Requirements

**\*** Field values in PV1-18 are available ***Outbound*** Cerner for patient population tracking.

|  |  |  |
| --- | --- | --- |
| **Cerner** |  |  |
| **Number** | **Requirement Name** | **Requirement Description** |
| FR.2015.1.0 | PV1-18 Visit Type | Cerner will send the value OFFW (Workers’ Comp) and OFFO (Occupational Medicine) ***outbound*** to track these specific encounters. Cerner will alias them in code set 71. |
| FR.2015.2.0 | PV1-3 Location | If a historical encounter is updated with an Allergy then block it from going outbound based on the location value ***historical***. |
| FR.2015.x.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. Please see the reference document located on the Integration SharePoint server: <insert link to document here>

### 3.3.1 Inbound to the BayCare Cloverleaf

Test

Port Number: Click here to enter text.

IP Address: Click here to enter text.

Prod

Port Number: Click here to enter text.

IP Address: Click here to enter text.

### 3.3.2 Outbound Cerner EMR to the BayCare Cloverleaf

**C30 FSI**

ORDERS:

Existing Orders Interface ***Outbound*** Cerner ***TO*** RIS

Server **ORM\_TCP\_IDX\_OUT**

Port 13194

IP 10.100.128.66

**P30 FSI**

ORDERS:

Existing Orders Interface ***Outbound*** Cerner ***TO*** RIS

Server **ORM\_TCP\_IDX\_OUT**

Port 15050

IP 10.100.128.64

### 3.3.3 Inbound to the Vendor

Click here to enter text.

### 3.3.4 Outbound to the Vendor

* Click here to enter text.

### 3.3.5 Inbound to the BayCare Cerner EMR

**C30 FSI**

ORDERS:

Existing Orders Interface **Inbound** Cerner **FROM** RIS

**ORM\_TCP\_IDX\_IN**

Port 13141

**P30 FSI**

ORDERS:

Existing Orders Interface ***Inbound*** Cerner ***FROM*** RIS

**ORM\_TCP\_IDX\_IN**

Port 15000

# 4. HL7 Messaging

## 4.1 Messaging Format

### 4.1.1 Segments

The segments utilized for this interface are:

**ORDERS Outbound**

MSH

[PID

PV1

[{AL1

ZAL

{NTE}

ORC

[{NTE}]

[{DG1}]

[{OBX}]

[{NTE}]

[{ZCT}]

*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** |
| ORM^001 | Order |
| ORR^002 | Order Reply |
|  |  |
|  |  |
|  |  |

### 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.

### 4.1.4 Cloverleaf Site Location

**C30**

SITE: **Imaging\_12** THREAD: **orm\_c30\_in**

**P30**

SITE **Imaging\_12\_p** THREAD **orm\_cerner\_in**

## 4.2 Data Transformation Requirements

| **Field Description** | **HL7 Field Loc.** | **Required Y/N** | **Data Type** | **Length** | **Notes** |
| --- | --- | --- | --- | --- | --- |
| Message Segment Header | MSH | Y | Varies | Varies | Pathcopy the entire segment. |
| Sending Facility | MSH.4 | Y | HD | 227 | Pass MSH-5 thru Table cerner\_idx\_soarf\_facility |
| Continuation pointer | MSH-13 |  |  |  | If MRN is 14 chars long hardcode 14 |
| Patient Identifier List | PID.3 | Y | CX | 250 | Copying PID-2, suppress if Null |
| Patient Name: last, first, suffix | PID.5.0  PID.5.1  PID.5.3 |  |  |  | Copy |
| Date/time of Birth | PID.7 |  |  |  | Copy |
| Sex | PID.8 |  |  |  | Copy |
| Patient Account Number | PID.18 |  |  |  | Copy |
| SS# | PID-19 |  |  |  | copy |
| Patent Class | PV1.2 |  |  |  | Copy |
| Assigned Patient Location | PV1.3 | Y | PL | 80 | Concatenate 1st 3 subfields into 2nd into subfield.  If urgent Care hard code RADUC into 2nd into subfield.  If fac = BCMCH and OBR.24 = PT, hard code NUICM outbound. |
| Attending Doctor | PV1.7.0  PV1.7.1  PV1.7.2  PV1.7.3 | Y |  |  | Iterate thru field and Find Baycare Dr Number in 9th subfield and copy first 4 subfields |
| Referring Doctor | PV1.8.0  PV1.8.1  PV1.8.2  PV1.8.3 | Y |  |  | Iterate thru field and Find Baycare Dr Number in 9th subfield and copy first 4 subfields |
| Consulting Doctor | PV1.9.0  PV1.9.1  PV1.9.2  PV1.9.3 | Y |  |  | Iterate thru field and Find Baycare Dr Number in 9th subfield and copy first 4 subfields |
| admitting Doctor | PV1.17.0  PV1.17.1  PV1.17.2  PV1.7.3 | Y |  |  | Iterate thru field and Find correct facility in 9th subfield and copy first 4 subfields |
| Servicing Facility | PV1.39 | R | IS |  | Field is populated either by Cerner default logic OR by Cloverleaf logic.  Cerner default logic is to populate this field with PV1-3.4(Facility).  Cloverleaf overrides Cerner default logic for some locations where they have crosswalk table cerner\_idx\_soarf\_facility to populate this field based on the value received in MSH-5 from Cerner in the orm message. |
| Admit Date/Time | PV1.44 | N | DTM | 24 | Copy |
| ORC segment | ORC |  |  |  | Pathcopy Segment |
| Order Control | ORC.1 | Y |  |  | if ORC.1 = CA, copy “99899” to ORC-11. |
| Placer Order Number namespace | ORC.3.2 |  |  |  | Null out |
| Filler Order Number namespace | ORC.3.2 |  |  |  | Null out |
| Entered By | ORC-10 |  |  |  | Hardcode “HISUSER” |
| Ordering Provider | ORC-12 |  |  |  | Iterate thru field and Find Baycare Dr Number in 9th subfield and copy first 4 subfields |
| Placer order number entity ID | OBR.2.0 |  |  |  | Copy |
| Universal service identifier ID | OBR.4.0 |  |  |  | Copy |
| Universal service identifier text | OBR.4.1 |  |  |  | See modifier logic |
| Ordering provider ID, last name, first name, middle initial | OBR.16.0  OBR.16.1  OBR.16.2  OBR.16.3 | Y |  |  | If OBR.16.0 does not = null, copy OBR.16.0, OBR.16.1, OBR.16.2 and OBR.16.3 outbound. |
| Quantity timing priority | OBR.27.5 |  |  |  | Copy |
| Reason for study text | OBR.31.1 |  |  |  | If any iteration of OBX.3.0 contains “Reason for Procedure” copy OBX.5.0 into OBR.31.1 outbound. |

## 4.3 Sample Messages

**Cerner**

**Standard Outbound:**

***Order Outbound:***

MSH|^~\&|HNAM|CERNER|NPU|BAYCARE|20150518091959||ORM^O01|Q9993401179T2775574750||2.3||||||8859/1

PID|1|9970585^^^BMGMRN^MRN^CD:1054310291|9970585^^^BMGMRN^MRN^CD:1054310291~999573114^^^BayCare CMRN^Community Medical Record Number^CD:1054310291|999573114^^^BayCare EAD CPI^Historical CMRN^CD:1054310291|LN^FN^^^^^Current||19991008|F||CD:1064513545|2425 MOORLIN RD^^HOLIDAY^FL^34691^^Home~NONE^^^^^^e-mail||(727)888-8888^PRN||SPR|U||999687^^^BMGFN^FIN NBR^CD:1054310291||||HIS|||0

PV1|1|O|NPU^^^NPU^^Ambulatory(s)^NPU||||RS9934^BUCPROV^NPU^^^^^^BayCare Dr Number|MS999936^PLN^PFN^M^^^^^BayCare Dr Number||CD:1066006381||||RP||N||OFFU|||||||||||||||||||||NPU||Active|||20150518074100

PV2||S|^PHYSICAL|||||20150518090000||0||||||||||||CONFID|^^6223834

ORC|NW|6129732255^HNAM\_ORDERID|||IX||||20150518091857|9998559562^PLN-PLN^PFN^M^^^^^NPI Number^Personnel^^^National Provider Identifier^CACTUS~<more provider data can repeat her>

OBR|1|6129732255^HNAM\_ORDERID||DCH1V^DX Chest 1 View||||||||||||MS885546^PLN^PFN^M^^^^^BayCare Dr Number||||||20150518071922||DX|||1^^0^20150518071800^^Routine|||ST|^TB screen

OBX|1|ID|Pregnant^Pregnant||N

**Standard Inbound *(Post Cloverleaf)*:**

***Order Inbound:***

MSH|^~\&|IDX|BAYCARE|HNAM|NPU|20150202081602||ORM^O01|388888888|P|2.3

PID|||999999999^^^^BCCPI||LN^FN^I|||||||||||||111111^^^^BMGFN|222-22-2222

ORC|SC|3333333331|44444441||C||||20150204105000|RISUSER||MS000001^LN^FN^M^^^^^^^^^BayCare Dr Number

OBR||3333333331|44444441|DCH2V||||||||||||MS004936^LN^FN^M^^^^^^^^^BayCare Dr Number||||||20150204105000|||6||||||cough

MSH|^~\&|IDX|BAYCARE|HNAM|VAU|20150405021602||ORM^O01|377777777|P|2.3

PID|||999999999^^^^BCCPI||LN^FN^I|||||||||||||111111^^^^BMGFN|222-22-2222

ORC|SC|3333333332|44444442||C||||20150504113000|RISUSER||MS999999^SYSTEM UNASSIGNED^DOCTOR^^^^^^^^^^BayCare Dr Number

OBR||3333333332|44444442|DTOE||||||||||||MS999999^SYSTEM UNASSIGNED^DOCTOR^^^^^^^^^^BayCare Dr Number||||||20150402113000|||6||||||TOE PAIN LEFT #2

OBX|1|IS|LT||LT

MSH|^~\&|IDX|BAYCARE|HNAM|WAU|20150108081603||ORM^O01|367676767|P|2.3

PID|||999999999^^^^BCCPI||LN^FN^I|||||||||||||111111^^^^BMGFN|222-22-2222

ORC|SC|3333333334|44444443||C||||20150504152000|RISUSER||MS000001^LN^FN^I^^^MEDICAL DOCTOR^^^^^^BayCare Dr Number

OBR||3333333334|44444443|DSHOULDER||||||||||||MS055555^LN^FN^M^^^MEDICAL DOCTOR^^^^^^BayCare Dr Number||||||20150108152000|||6||||||pain

OBX|1|IS|LT||LT

***Result Inbound:***

MSH|^~\&|IDX|BAYCARE|HNAM|WAU|201505180925||ORU^R01|398646140|P|2.3

PID|||001306988^^^^BMGMRN~102727788^^^^BCCPI||LN^FN^R||19990910|M||||||||||490888^^^^BMGFN|099496070

ORC|RE|6129278327|22485333|||||||||MS888581^PLN^PFN^^^^^^^^^^BayCare Dr Number

OBR||6129278327|22485333|DFOOT^FOOT COMPLETE 3 OR MORE VIEWS|||20150518085800|||||||||MS888581^PLN^PFN^MI^^^PA PHYSICIAN ASSI^^^^^^BayCare Dr Number||||||20150518072200||RAD|P||^^^20150518063000|||||MS889809&PLN&PFN&Nmn&&&&&&&&&BayCare Dr Number

OBX|1|RP|DFOOT||https://mpmpacs.baycare.org/ami/html/webviewer.html?viewall&un=IDXRAD&pw=GOPACS&ris\_exam\_id=22485333^URL^URL|||||||||||^^^^^^^^BAYCARE Dr Number

OBX|1|TX|DFOOT||Accession #: 22485333 Exam Date/Time: 05/18/2015 08:58 Preliminary On: 05/18/2015 09:22

OBX|2|TX|DFOOT||LEFT FOOT COMPLETE 3 OR MORE VIEWS||||||P|||20150518092200||^^^^^^^^BAYCARE Dr Number

OBX|3|TX|DFOOT|| ||||||P|||20150518092200||^^^^^^^^BAYCARE Dr Number

OBX|4|TX|DFOOT||CLINICAL INDICATION: Left foot injury - patient is cheerleader||||||P|||20150518092200||^^^^^^^^BAYCARE Dr Number

OBX|5|TX|DFOOT|| ||||||P|||20150518092200||^^^^^^^^BAYCARE Dr Number

OBX|6|TX|DFOOT||FINDINGS: Bony structures of left foot are intact without fracture or ||||||P|||20150518092200||^^^^^^^^BAYCARE Dr Number

OBX|7|TX|DFOOT||dislocation.||||||P|||20150518092200||^^^^^^^^BAYCARE Dr Number

OBX|8|TX|DFOOT|| ||||||P|||20150518092200||^^^^^^^^BAYCARE Dr Number

OBX|9|TX|DFOOT||IMPRESSION: NO FRACTURE.||||||P|||20150518092200||^^^^^^^^BAYCARE Dr Number

OBX|10|TX|DFOOT|| ||||||P|||20150518092200||^^^^^^^^BAYCARE Dr Number

OBX|11|TX|DFOOT||Electronically signed by Robert Krupa, M.D. RADIOLOGIST on 5/18/2015 ||||||P|||20150518092200||^^^^^^^^BAYCARE Dr Number

OBX|12|TX|DFOOT||9:23 AM||||||P|||20150518092200||^^^^^^^^BAYCARE Dr Number

OBX|13|TX|DFOOT||INTERPRETED BY: Robert Nmn Krupa Preliminary On: 05/18/2015 09:22||||||P|20150518092200

# **5. Testing**

## 5.1. Unit Testing Scenarios

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

## 5.2 Integrated Testing Scenarios

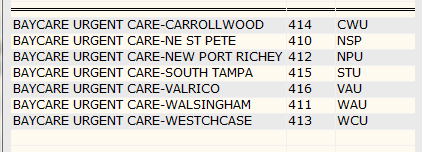
|  |  |
| --- | --- |
| **Scenario** | **Expected Result** |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

## 5.3 Testing Approvals

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

## 5.4 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