**GE RIS to BUC Cerner**

**Results Requirements**

**Version 1.2**

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

**Date: 5/23/2017**

[Document Control 3](#_Toc498336409)

[Resources 3](#_Toc498336410)

[Project Distribution List 3](#_Toc498336411)

[Document Version Control 3](#_Toc498336412)

[1. Introduction 4](#_Toc498336413)

[1.1 Purpose 4](#_Toc498336414)

[1.2 Project Scope 4](#_Toc498336415)

[1.3 Terminology Standards 4](#_Toc498336416)

[1.3.1 Acronyms 4](#_Toc498336417)

[1.3.2 Glossary 4](#_Toc498336418)

[1.4 Document References 4](#_Toc498336419)

[*2.* Diagram 5](#_Toc498336420)

[3. Requirements 6](#_Toc498336421)

[3.1 Functional Requirements (Cerner FSI) 6](#_Toc498336422)

[3.2 Non-Functional Requirements 6](#_Toc498336423)

[3.2.1 Dedicated Encounter Data Flow Requirements 7](#_Toc498336424)

[3.3 Messaging Protocols 7](#_Toc498336425)

[3.3.1 Outbound to the Vendor 7](#_Toc498336426)

[3.3.2 Inbound to the BayCare Cerner EMR 7](#_Toc498336427)

[3.3.3 Outbound to the BayCare Cerner 7](#_Toc498336428)

[4. HL7 Messaging 8](#_Toc498336429)

[4.1 Messaging Format 8](#_Toc498336430)

[4.1.1 Segments 8](#_Toc498336431)

[4.1.2 Messaging Event Types 8](#_Toc498336432)

[4.1*.*3 Cloverleaf Configuration Files 8](#_Toc498336433)

[4.1.4 Cloverleaf Site Location 9](#_Toc498336434)

[4.2 Data Transformation Requirements 9](#_Toc498336435)

[4.3 Sample Messages 12](#_Toc498336436)

[5. Testing 13](#_Toc498336437)

[5.1. Unit Testing Scenarios 13](#_Toc498336438)

[5.2 Integrated Testing Scenarios 13](#_Toc498336439)

[5.3 Testing Approvals 13](#_Toc498336440)

[5.4 Piloting 14](#_Toc498336441)

[5.5 Approvals 14](#_Toc498336442)

[6. Deployment / Implementation Model 14](#_Toc498336443)

[Appendix A: Risks and Concerns 14](#_Toc498336444)

[Appendix B: Issues List 15](#_Toc498336445)

# **Document Control**

## Resources

|  |  |  |
| --- | --- | --- |
| **Name** | **Role** | **Email** |
| Sarah Thies | BayCare Integration Analyst | [Sarah.Thies@baycare.org](mailto:Sarah.Thies@baycare.org) |
| Art Schwartz | BayCare Integration Analyst | [Art.Schwartz@baycare.org](mailto:Art.Schwartz@baycare.org) |
| Reginah Musyoki-Howell | BayCare Project Manager | [Reginah.Musyoki-Howell@baycare.org](mailto:Reginah.Musyoki-Howell@baycare.org) |
| Daniel Alicea | Manager, IS Physician SYS-EPM | [Daniel.Alicea@baycare.org](mailto:Daniel.Alicea@baycare.org) |
| Cindy Barone | Supervisor Clinical Systems | [Cynthia.Barone@baycare.org](mailto:Cynthia.Barone@baycare.org) |
| Lees, Sandra | BayCare RIS Sr. System Analyst | [Sandy.Lees@baycare.org](mailto:Sandy.Lees@baycare.org) |

## 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 RESULTS interface with GE RIS. 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.

**RESULTS:**

Existing Results ***Inbound*** Cerner, ***no changes needed***

**ORU\_TCP\_IDX\_P2\_IN**

*(Invision Source)*

**ORU\_TCPIP\_IDX\_IN**

*(Soarian Source)*

## 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 | Click here to enter text. | Click here to enter text. |
| FR.2015.4.0 | Click here to enter text. | Click here to enter text. |
|  |  |  |
|  |  |  |

## 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 Outbound to the Vendor

* Click here to enter text.

### 3.3.2 Inbound to the BayCare Cerner EMR

**C30 FSI**

ORDERS:

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

**ORM\_TCP\_IDX\_IN**

Port 13141

RESULTS:

Existing Results ***Inbound*** Cerner

**ORU\_TCP\_IDX\_P2\_IN** *(Invision Source)*

Port 9130

**ORU\_TCPIP\_IDX\_IN** *(Soarian Source)*

Port 10026

### 3.3.3 Outbound to the BayCare Cerner

Port Number: Click here to enter text.

IP Address: Click here to enter text.

# 4. HL7 Messaging

## 4.1 Messaging Format

### 4.1.1 Segments

The segments utilized for this interface are:

**RESULTS Inbound**

MSH

PID

[PV1]

ORC

OBR

[{NTE}]

OBX

[{NTE}]

*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 |
| ORU^R01 | Result |
|  |  |
|  |  |

### 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: **oru\_idx\_in**

**P30**

SITE **imaging\_in\_p** THREAD oru\_idx\_in

## 4.2 Data Transformation Requirements

| **Field Description** | **HL7 Field Loc.** | **Required Y/N** | **Data Type** | **Length** | **Notes** |
| --- | --- | --- | --- | --- | --- |
| Message Header | MSH |  |  |  | Pathcopy MSH |
| Sending Application | MSH.3 |  |  |  | IDX |
| Sending Facility | MSH.4 |  |  |  | BAYCARE |
| Receiving Application | MSH.5 |  |  |  |  |
| Date/Time of Message | MSH.7 |  |  |  |  |
| Message Type | MSH.9 |  |  |  | ORU^R01 |
| Message Control ID | MSH.10 |  |  |  |  |
| Patient Identification | PID |  |  |  |  |
| Set ID | PID.1 |  |  |  |  |
| Patient ID (Internal ID) | PID.3 |  |  |  | Copy from PID-2 to second iteration  Copy  Copy BCCPI to subfield 5 second iteration  If urgent care copy BMGMRN to fifth subfield first iteration else BCMRN |
| Alternate Patient ID | PID.4 |  |  |  | Check to see if urgent care facility |
| Patient Name | PID.5 |  |  |  | FamilyName^GivenName |
| Date/Time of Birth | PID.7 |  |  |  | YYYYMMDD; calculates current age of patient |
| Sex | PID.8 |  |  |  | M=Male  F=Female  U=Unknown |
| Patient Account Number | PID.18 |  |  |  |  |
| Social Security Number | PID.19 |  |  |  |  |
| Patient Visit | PV1 |  |  |  |  |
| Patient Class | PV1.2 |  |  |  | If Oupatient copy CC providers to ZDS segment |
| Common Order | ORC |  |  |  |  |
| Order Control | ORC.1 |  |  |  | RE |
| Placer Order Number | ORC.2 |  |  |  | Copy OBR-2 |
| Filler Order Number | ORC.3 |  |  |  | copy |
| Ordering Provider | ORC.12 |  |  |  | Copy, copy Baycare Dr Number to 13th sub field |
| Observation Request | OBR |  |  |  |  |
| Placer Order Number | OBR.2 |  |  |  |  |
| Filler Order Number | OBR.3 |  |  |  | Unique number to identify order |
| Result Status | OBR.25 |  |  |  | If ORC—5 = Y, copy “22” |
| Reason for Study | OBR.31 |  |  |  | copy |
| Principal Result Interpreter | OBR.32 |  |  |  | copy Baycare Dr Number to 13th sub field |
| Asst Result Interpreter | OBR.33 |  |  |  |  |
| Observation Result | OBX |  |  |  |  |
| Set ID | OBX.1 |  |  |  |  |
| Value Type | OBX.2 |  |  |  |  |
| Observation Identifier | OBX.3 |  |  |  | Identifier^Text^^Alternate Identifier^Alternate Text |
| Observation Value | OBX.5 |  |  |  | Value of OBX.5 of each OBX segment provides one line of text in the report |
| Observation Result Status | OBX.11 |  |  |  |  |
| Date/Time of Observation | OBX.14 |  |  |  |  |

## 4.3 Sample Messages

**Cerner**

***Result Inbound:***

MSH|^~\&|IDX|WCU|||20170523090500||ORU^R01|519820891|P|2.3PID||810012912|005006912^9^5^^^WCU||MAYTESTB^EIGHT^^^^||19870408000000|M||||||||||3466360^^^|555-90-9099PV1||O|||||MS999999^SYSTEM UNASSIGNED^DOCTOR^^^^^|||||||||||||||||||||||||||||||||||||20170522092000ORC|RE|10256484683|25863678|||||||||MS004355^Gostigian^John^J^^^DOCTOR OF OSTEOPA^1659327500^727^851^9650^OBR|1|10256484683|25863678|DSPLLTD^LUMBAR SPINE LIMITED 2 OR 3 VIEWS|||20170523085200||||||back pain,|||MS004355^Gostigian^John^J^^^DOCTOR OF OSTEOPA||||||20170523090400|||P||^^15^20170522155000^^ROUT^ROUTINE|^~^~^~^~^||||MS007961^Shaw^Michael^Charles^^^M.D. Radiologist|~|^TEMP^BC^^^^|^Abbey^Jason^^^^Systems AnalystOBX|1|RP|DSPLLTD&GDT||https://pacstest.baycare.org/ami/html/webviewer.html?viewall&un=IDXRAD&pw=GOPACS&ris\_exam\_id=25863678OBX|1|FT|DSPLLTD&GDT||TEST, TEST JJA 5/23/2017||||||P|||20170523090400

***Result Outbound:***

MSH|^~\&|IDX|BAYCARE|HNAM|WCU|201705230905||ORU^R01|519820891|P|2.3PID|||005006912^^^^BMGMRN~810012912^^^^BCCPI||MAYTESTB^EIGHT||19870408|M||||||||||3466360^^^^BMGFN|555909099ORC|RE|10256484683|25863678|||||||||MS004355^Gostigian^John^^^^^^^^^^BayCare Dr NumberOBR||10256484683|25863678|DSPLLTD^LUMBAR SPINE LIMITED 2 OR 3 VIEWS|||20170523085200|||||||||MS004355^Gostigian^John^J^^^DOCTOR OF OSTEOPA^^^^^^BayCare Dr Number||||||20170523090400||RAD|P||^^^20170522155000|||||MS007961&Shaw&Michael&Charles&&&&&&&&&BayCare Dr NumberOBX|1|RP|DSPLLTD||https://pacstest.baycare.org/ami/html/webviewer.html?viewall&un=IDXRAD&pw=GOPACS&ris\_exam\_id=25863678^URL^URL|||||||||||^^^^^^^^BAYCARE Dr NumberOBX|1|TX|DSPLLTD||Accession #: 25863678 Exam Date/Time: 05/23/2017 08:52 Preliminary On: 05/23/2017 09:04OBX|2|TX|DSPLLTD||TEST, TEST JJA 5/23/2017||||||P|||20170523090400||^^^^^^^^BAYCARE Dr NumberOBX|3|TX|DSPLLTD||INTERPRETED BY: Michael Charles Shaw Preliminary On: 05/23/2017 09:04||||||P|20170523090400

# **5. Testing**

## 5.1. Unit Testing Scenarios

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

## 5.2 Integrated Testing Scenarios

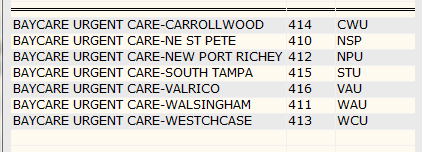
|  |  |
| --- | --- |
| **Scenario** | **Expected Result** |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

## 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