**Results from Phreesia to Cerner**

**Version 1.4**

**Prepared By: Lois Whitley, Stephen Mattei, & Dan Olszewski**

**Date: 1/29/2019**

[Document Control 3](#_Toc505678669)

[Resources: (include Project Team Members, Liaisons, Vendor Contacts, etc.) 3](#_Toc505678670)

[Project Distribution List 3](#_Toc505678671)

[Document Version Control 3](#_Toc505678672)

[1. Introduction 4](#_Toc505678673)

[1.1 Purpose 4](#_Toc505678674)

[1.2 Project Scope 4](#_Toc505678675)

[1.3 Terminology Standards 4](#_Toc505678676)

[1.3.1 Acronyms 4](#_Toc505678677)

[1.3.2 Glossary 4](#_Toc505678678)

[1.4 Document References 4](#_Toc505678679)

[2. Diagram 5](#_Toc505678680)

[3. Requirements 6](#_Toc505678681)

[3.1 Functional Requirements 6](#_Toc505678682)

[3.2 Non-Functional Requirements 6](#_Toc505678683)

[3.3 Messaging Protocols 7](#_Toc505678684)

[3.3.1 Inbound to the BayCare Cloverleaf 7](#_Toc505678685)

[3.3.2 Outbound to the Vendor 7](#_Toc505678686)

[4. HL7 Messaging 8](#_Toc505678687)

[4.1 Messaging Format 8](#_Toc505678688)

[4.1.1 Segments 8](#_Toc505678689)

[4.1*.*2 Messaging Event Types 8](#_Toc505678690)

[4.1*.*3 Cloverleaf Configuration Files 9](#_Toc505678691)

[4.1.4 Cloverleaf Site Location 9](#_Toc505678692)

[4.2 Data Transformation Requirements 9](#_Toc505678693)

[4.3 Sample Message 11](#_Toc505678694)

[5. Alerts 12](#_Toc505678695)

[Appendix A: Risks and Concerns 12](#_Toc505678696)

[Appendix B: Issues List 12](#_Toc505678697)

# **Document Control**

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

|  |  |  |
| --- | --- | --- |
| **Name** | **Role** | **Email** |
| Stephen Mattei | Integration Analyst | [Stephen.mattei@baycare.org](mailto:Stephen.mattei@baycare.org) |
| Dan Olszewski | Integration Analyst | [Daniel.olszewski@baycare.org](mailto:Daniel.olszewski@baycare.org) |
| Sailaja Parimi | Integration Analayst | Sailaja.parimi@baycare.org |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

## Project Distribution List

## Document Version Control

|  |  |  |  |
| --- | --- | --- | --- |
| **Version** | **Date** | **Modifier** | **Description** |
| V1.0 | 1/17/2018 | Lois Whitley | Originally Created |
| V1.1 | 2/6/18 | Dan Olszewski & Stephen Mattei | Updated Cerner & Cloverleaf requirements |
| V1.2 | 9/19/2018 | Sarah Thies | Updated Functional Requirement for Cerner interface processing to avoid database locks. Also updated Data Transformation for CPI & MRN and added sample HL7 messages. |
| V1.3 | 12/5/2018 | Sarah Thies | Updated Com Server to a new name |
| V1.4 | 1/29/19 | Sailaja Parimi | RFC # 17660 Implemented Bloomingdale – Results from Phreesia to Cerner for Soarian patients |

# 1. Introduction

## 1.1 Purpose

The purpose of this document is to describe the results (ORU) interface requirements from Phreesia to Cerner for an outpatient setting.

Phreesia is a suite of applications that will manage the intake process in the BayCare Medical Group, BayCare Urgent Care offices. Piloted at Bardmoor imaging and Bardmoor rehab for Soarian patients as of 1/29/19. Patients can pre-register, update clinical and demographic information, sign forms and policies and pay copays and outstanding balances from their own devices or from a tablet in the waiting room.

## 1.2 Project Scope

This project involves the implementation of a scheduling (SIU) interface from GE Centricity Business to Phreesia. There is also a results interface from Phreesia to Cerner that sends a PDF file to Cerner when documents are signed. This document describes the ORU interface only.

## 1.3 Terminology Standards

### 1.3.1 Acronyms

ORU– Observation Result/Unsolicited

PDF – Portable Document Format

### 1.3.2 Glossary

Phreesia – vendor and software

## 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.2018.1.0 | General formatting | Insure that messages conform to Cerner’s expectations. There are certain required fields detailed in the mapping section of the document that are required to successfully upload an ORU with an embedded PDF. |
| FR.2018.1.0 | Only Process PDFs | Insure that the only OBX forwarded on to Cerner is the one containing a PDF \ has a data format value of ED |
| FR.2018.3.0-Cerner | Cerner Source and System | New Phreesia Contributor Source and System built in Cerner |
| FR.2018.4.0-Cerner | Cerner AMB PDF Interface | New name ORU\_TCP\_AMB\_PDF\_IN (formerly ORU\_TCP\_PHREESIA\_IN) in Cerner to process *both* Ambulatory Forms from Phreesia & Millennium forms to Cerner |
| FR.2018.5.0-Cerner  FR.2019.6.0  FR.2019.6.1 | SCP 247  SCP 729  PHREESIA\_IN contributor system | These BMG/BUC results must process through the *same* ESIs in order to avoid database locks. The inbound results are load balanced and routed to 7 Openview BMG ESIs by CPI number. From there, the messages are processed by SCP247 to the database.  Results from Phreesia for Soarian patients must process through the *same* (Soarian ADT) ESIs in order to avoid database locks. The inbound results are load balanced and routed to Openview ADTSIUORM\_ESI\_1 to 7 ESIs by CPI number. From there, messages are processed by SCP 250 to the database.  For Soarian patients. |

## 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.2018.1.0 | Support Hours | This interface would be supported 7 days a week between 7 am and 10 pm. |

## 3.3 Messaging Protocols

Below are listed the details for the messaging protocols that will be leveraged for this integration. This includes: TCP/IP, FTP, Web Services, etc.

### 3.3.1 Inbound to the BayCare Cloverleaf

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

### 3.3.2 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

### 4.1.1 Segments

The segments utilized for this interface are:

MSH

PID

OBR

OBX

*Message Construction Notes:*

*[Square Brackets] – Optional*

*{Curly Brackets} – Repeatable*

*MSH – Message Header segment*

*PID – Patient ID segment*

*OBR – Observation Request segment*

*OBX – Observation / Result 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** |
| R01 | Unsolicited transmission of an observation |
|  |  |
|  |  |
|  |  |

### 4.1*.*3 Cloverleaf Configuration Files

tsp\_phreesia\_cer\_oru.tcl

### 4.1.4 Cloverleaf Site Location

bmg\_1\_p

## 4.2 Data Transformation Requirements

| **Field Description** | **HL7 Field Loc.** | **Required Y/N** | **Notes** |
| --- | --- | --- | --- |
| Sending Application | MSH:3.1 | Y | “PHREESIA” sent in all caps for GE patients with BMGFN  “PHREESIA\_IN” sent in all caps for Soarian patients with BCFN. |
| Sending Facility | MSH:4.1 | Y | “MEDITRON” sent in al caps |
| Receiving Application | MSH:5.1 | Y | “POSTIMAGE” sent in al caps |
| Receiving Facility | MSH:6.1 | Y | “BAYCARE” sent in al caps |
| Vendor Created Field, Not HL7 Compliant | MSH:20 | N | Set this field to blank because it was causing issues for Cerner |
| **All other MSH fields** | **MSH:\*** | **N/A** | **All other MSH fields sent as received** |
| Set ID | PID:1 | Y | This is forced to a value of “1” |
| Patient ID External | PID:2.\* | Y | BayCare Health System enterprise identifier \ CPI formatted to Cerner’s specifications: 888888888^^^^BCCPI |
| Patient ID Internal | PID:3.\* | Y | GE generated MRN formatted to Cerner specifications: 999999999^^^^BMGMRN |
| Patient FIN \ Account Number | PID:18.\* | Y | The GE financial number \ account number formatted to Cerner’s expectations: 111111111^^^^BMGFN  Soarian patients are sent with BCFN tag. |
| **All other PID fields** | **PID:\*** | **N/A** | **All other PID fields are sent as received.** |
| Visit Number | PV1:19 | N | Insure that this value is not sent to Cerner by setting the contents to blank |
| **All other PV1 fields** | **PV1:\*** | **N/A** | **All other PV1 fields are sent as received** |
| Placer Order Number | OBR:2.1 | Y | Copy value from OBR:1 to this field |
| Ordering Provider | OBR:16.\* | N | Insure that the ordering provider is formatted to Cerner’s expectations: MS77777^^^^^^^^^BayCare Dr Number. |
| \*\*Specimen Action Code\*\* | OBR:11 | Y | Format and copy the observation date and time from OBR:7 to this field. The format is changed to: ^^^20180117082301 from 20180117082301 |
| Diagnostic Serv Sect ID | OBR:24 | Y | This value is hard coded to MDOC |
| **All other OBR fields** | **OBR:8** | **N/A** | **All other OBR fields are sent as received** |
| Set ID | OBX:1 | Y | Insure that this is set to a value of 1. We only received on PDF document per messages so the value is always going to be 1. |
| Report Name | OBX:3.5 | Y | We must insure that something is valued for this field because it is used at the display name. If it is not valued for some reason we would then default to OBX:3.3 value sent by Phreesia |
| Observation Value | OBX:5.1 | N | Insure that this is set to a blank field |
| Observation Value | OBX:5.2 | Y | Default value to “APPLICATION” |
| Observation Value | OBX:5.3 | Y | Default value to “PDF” |
| **All other OBX Fields** | **OBX:\*** | **N/A** | **All other OBX fields are sent as received** |

## 4.3 Sample Message

**As of September 2018:**

Cerner messages with CPI in PID-2 & MRN in PID-3. CPI is used to load balance the messages across the *same* BMG ESIs that are handed off to SCP247.

***C30* HL7 MESSAGES:**

MSH|^~\&|PHREESIA|MEDITRON|POSTIMAGE|BAYCARE|20180905122332||ORU^R01|63671747012992|P|2.3|1||NE|NE|US|ASCII|en||

PID|1|810069413^^^^BCCPI|6012695^^^^BMGMRN||BARB^CERNER-FOUR^^^||19800101|F||DEC|111 1ST ST^^SAINT PETERSBURG^FL^33706^||727-631-3828^PRN^Cell^barb.muino@baycare.org||8|U||6241634^^^^BMGFN|999-99-9999|||3||||

OBR|1|1|75082614|BMGFINRES^**BMG Financial Responsibility**|||20180905122332||||^^^20180905122332|||||MS064481^TRAN^LYLY^^^^^^^^^BayCare Dr Number||||||||MDOC

OBX|1|ED|BMGFINRES^BMG Financial Responsibility^||^APPLICATION^PDF^Base64 **… ETC**

MSH|^~\&|PHREESIA|MEDITRON|POSTIMAGE|BAYCARE|20180905122332||ORU^R01|63671747012992|P|2.3|1||NE|NE|US|ASCII|en||

PID|1|810069413^^^^BCCPI|6012695^^^^BMGMRN||BARB^CERNER-FOUR^^^||19800101|F||DEC|111 1ST ST^^SAINT PETERSBURG^FL^33706^||727-631-3828^PRN^Cell^barb.muino@baycare.org||8|U||6241634^^^^BMGFN|999-99-9999|||3||||

OBR|1|1|75082640|BMGREG^**OFC Patient Registration**|||20180905122332||||^^^20180905122332|||||MS064481^TRAN^LYLY^^^^^^^^^BayCare Dr Number||||||||MDOC

OBX|1|ED|BMGREG^OFC Patient Registration^||^APPLICATION^PDF^Base64 **… ETC**

MSH|^~\&|PHREESIA|MEDITRON|POSTIMAGE|BAYCARE|20180905122332||ORU^R01|63671747012992|P|2.3|1||NE|NE|US|ASCII|en||

PID|1|810069413^^^^BCCPI|6012695^^^^BMGMRN||BARB^CERNER-FOUR^^^||19800101|F||DEC|111 1ST ST^^SAINT PETERSBURG^FL^33706^||727-631-3828^PRN^Cell^barb.muino@baycare.org||8|U||6241634^^^^BMGFN|999-99-9999|||3||||

OBR|1|1|75082647|BMGPHI^**BMG Consent for Privacy Practices**|||20180905122332||||^^^20180905122332|||||MS064481^TRAN^LYLY^^^^^^^^^BayCare Dr Number||||||||MDOC

OBX|1|ED|BMGPHI^BMG Consent for Privacy Practices^||^APPLICATION^PDF^Base64 **… ETC**

MSH|^~\&|PHREESIA|MEDITRON|POSTIMAGE|BAYCARE|20180905122332||ORU^R01|63671747012992|P|2.3|1||NE|NE|US|ASCII|en||

PID|1|810069413^^^^BCCPI|6012695^^^^BMGMRN||BARB^CERNER-FOUR^^^||19800101|F||DEC|111 1ST ST^^SAINT PETERSBURG^FL^33706^||727-631-3828^PRN^Cell^barb.muino@baycare.org||8|U||6241634^^^^BMGFN|999-99-9999|||3||||

OBR|1|1|75082663|HIECON^**HIE Consent**|||20180905122332||||^^^20180905122332|||||MS064481^TRAN^LYLY^^^^^^^^^BayCare Dr Number||||||||MDOC

OBX|1|ED|HIECON^HIE Consent^||^APPLICATION^PDF^Base64 **… ETC**

MSH|^~\&|PHREESIA|MEDITRON|POSTIMAGE|BAYCARE|20180905122332||ORU^R01|63671747012992|P|2.3|1||NE|NE|US|ASCII|en||

PID|1|810069413^^^^BCCPI|6012695^^^^BMGMRN||BARB^CERNER-FOUR^^^||19800101|F||DEC|111 1ST ST^^SAINT PETERSBURG^FL^33706^||727-631-3828^PRN^Cell^barb.muino@baycare.org||8|U||6241634^^^^BMGFN|999-99-9999|||3||||

OBR|1|1|75082634|BMGCON^**BMG Consent for Treatment**|||20180905122332||||^^^20180905122332|||||MS064481^TRAN^LYLY^^^^^^^^^BayCare Dr Number||||||||MDOC

OBX|1|ED|BMGCON^BMG Consent for Treatment^||^APPLICATION^PDF^Base64 **… ETC**

**Cerner message at *original* go live:**

MSH|^~\&|PHREESIA|MEDITRON|POSTIMAGE|BAYCARE|20180117082301||ORU^R01|63651774181897|P|2.3|1||NE|NE|US|ASCII|en||

PID|1|6007999^^^^BMGMRN|810016478^^^^BCCPI||PHREESIA^THIRTYSIX^^^||20160306|F||HAW|432 PARK AVE^456^New York^NY^10016||727-840-2016^PRN^Cell||8|S||4612261^^^^BMGFN||||2||||

OBR|1|1|30772729|PTDATA^OFC Adult Health Questionnaire|||20180117082301||||^^^20180117082301|||||^^||||||||MDOC

OBX|1|ED|PTDATA^OFC Adult Health Questionnaire^||^APPLICATION^PDF^Base64^……………. DMNCiUlRU9GDQo=||||||F||phreesia.pdf

# 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** |
| Phreesia\_33\_p | 24/7 | IS PHYSICIAN REVENUE CYCLE SYS | Standard queue depth alerts |
|  |  |  |  |

# 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