**ORU\_MUSE EKG\_BayCare Community App Requirements**

**Version 1.0**

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[Document Control 3](#_Toc498358602)

[Resources 3](#_Toc498358603)

[Project Distribution List 3](#_Toc498358604)

[Document Version Control 3](#_Toc498358605)

[1. Introduction 4](#_Toc498358606)

[1.1 Purpose 4](#_Toc498358607)

[1.2 Project Scope 4](#_Toc498358608)

[1.3 Terminology Standards 4](#_Toc498358609)

[1.3.1 Acronyms 4](#_Toc498358610)

[1.3.2 Glossary 4](#_Toc498358611)

[1.4 Document References 4](#_Toc498358612)

[2. Diagram 5](#_Toc498358613)

[3. Requirements 6](#_Toc498358614)

[3.1 Functional Requirements 6](#_Toc498358615)

[3.2 Non-Functional Requirements 6](#_Toc498358616)

[3.3 Messaging Protocols 7](#_Toc498358617)

[3.3.1 Inbound to the BayCare Cloverleaf 7](#_Toc498358618)

[3.3.2 Outbound to the BayCare Cloverleaf 7](#_Toc498358619)

[3.3.3 Inbound to the Vendor 7](#_Toc498358620)

[3.3.4 Outbound to the Vendor 7](#_Toc498358621)

[3.3.5 Inbound to the BayCare Cerner 7](#_Toc498358622)

[3.3.6 Outbound to the BayCare Cerner 7](#_Toc498358623)

[4. HL7 Messaging 8](#_Toc498358624)

[4.1 Messaging Format 8](#_Toc498358625)

[4.1.1 Segments 8](#_Toc498358626)

[4.1*.2* Messaging Event Types 8](#_Toc498358627)

[4.1*.*3 Cloverleaf Configuration Files 8](#_Toc498358628)

[4.1.4 Cloverleaf Site Location 8](#_Toc498358629)

[4.2 Data Transformation Requirements – N/A – raw feed 9](#_Toc498358630)

[4.3 Sample Message 11](#_Toc498358631)

[5. Testing 11](#_Toc498358632)

[5.1. Unit Testing Scenarios 11](#_Toc498358633)

[5.2 Integrated Testing Scenarios 12](#_Toc498358634)

[5.3 Testing Approvals 12](#_Toc498358635)

[5.4 Piloting 12](#_Toc498358636)

[5.5 Approvals 12](#_Toc498358637)

[6. Deployment / Implementation Model 13](#_Toc498358638)

[6.1 Alerts 13](#_Toc498358639)

[Appendix A: Risks and Concerns 13](#_Toc498358640)

[Appendix B: Issues List 13](#_Toc498358641)

# **Document Control**

## Resources

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## Project Distribution List

## Document Version Control

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| **Version** | **Date** | **Modifier** | **Description** |
| V1.0 | 4/21/2017 | Lois Whitley | Originally Created |
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|  |  |  |  |

# 1. Introduction

## 1.1 Purpose

The purpose of this document is to define the Results (ORU) interface from MUSE EKG to the BayCare Community Application (also known as Uniphy, Practice Unite, Futura and Physician Mobility).

## 1.2 Project Scope

The scope of this project is to develop an interface between MUSE EKG and the BayCare Community Application. The ORU feed is a raw feed from the cardiology site in Cloverleaf to the healthgrid site for all facilities, and then a raw feed from the healthgrid site to the Community Application (Uniphy). Only Final results are sent. A filter is in place is to block result messages with a result of “I” (In Process) or “P” (Preliminary).

## 1.3 Terminology Standards

### 1.3.1 Acronyms

ORU – Observation Result

### 1.3.2 Glossary

Uniphy Health – vendor

Practice Unite – software

BayCare Community Application – application name used in Apple Store and Google Play

BayCare Community App – SFB Pilot – full project name in Clarity

## 1.4 Document References

* PD2016IF06\_BAYCARE\_ResultsSpec\_V10 – Results Interface Specification

# 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.20XX.1.0 | 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.

|  |  |  |
| --- | --- | --- |
| **Cloverleaf** |  |  |
| **Number** | **Requirement Name** | **Requirement Description** |
| NFR.20XX.1.0 | 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

* Click here to enter text.

### 3.3.2 Outbound to the BayCare Cloverleaf

* Click here to enter text.

### 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

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.

### 3.3.6 Outbound to the BayCare Cerner

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.

# 4. HL7 Messaging

## 4.1 Messaging Format

### 4.1.1 Segments

The segments utilized for this interface are:

MSH

PID

PV1

OBR

OBX

*Message Construction Notes:*

*MSH – Message Header*

*PID – Patient ID segment*

*PV1 – Patient Visit segment*

*OBR – Observation Request segment*

*OBX – Observation segment*

### 4.1*.2* Messaging Event Types

Below are the messages types necessary for this integration

| **Event Type** | **Description** |
| --- | --- |
| R01 | ORU/ACK - Unsolicited transmission of an observation |

### 4.1*.*3 Cloverleaf Configuration Files

Muse EKG Results (ORU\_R01).

Raw feed from the cardiology\_3\_p site (all facilities).

Raw feed outbound from the hlthgrid\_27\_p site to Uniphy.

Filters: Block result messages with a result status of “I” (in process) or “P” (prelim)

TCL Proc: tpsHL7FilterSegment. This proc deletes the ZPD segment that contains the PDF.

### 4.1.4 Cloverleaf Site Location

hlthgrid\_27\_p

## 4.2 Data Transformation Requirements – N/A – raw feed

| **Field Description** | **HL7 Field Loc.** | **Required Y/N** | **Data Type** | **Length** | **Notes** |
| --- | --- | --- | --- | --- | --- |
| Message Header Segment | MSH |  |  |  |  |
| Sending Application | MSH.3 |  |  |  | MEI MUSE |
| Sending Facility | MSH.4 |  |  |  |  |
| Receiving Application | MSH.5 |  |  |  |  |
| Receiving Facility | MSH.6 |  |  |  |  |
| Date/Time of Message | MSH.7 |  |  |  |  |
| Message Type | MSH.9 |  |  |  | ORU^R01 |
| Patient ID | PID |  |  |  |  |
| Patient ID (External) | PID.2 |  |  |  | BayCare Patient ID - MRN |
| Patient ID (Internal) | PID.3 |  |  |  | CMRN |
| Alternate Patient ID | PID.4 |  |  |  | CPI |
| Patient Name | PID.5 |  |  |  | 5.1 – Last Name; 5.2 – First Name |
| Date of Birth | PID.7 |  |  |  | YYYYMMDD |
| Gender | PID.8 |  |  |  |  |
| Race | PID.10 |  |  |  |  |
| Patient Account Number | PID.18 |  |  |  |  |
| Social Security Number | PID.19 |  |  |  |  |
| Patient Visit | PV1 |  |  |  |  |
| Set ID | PV1.1 |  |  |  |  |
| Patient Class | PV1.2 |  |  |  |  |
| Assigned Patient Location | PV1.3 |  |  |  | Current Assigned Bed Location |
| Attending Doctor | PV1.7 |  |  |  | <ID Number>^<Family name>^<Given Name>; repetitions separated by ‘~’ |
| Consulting Doctor | PV1.9 |  |  |  |  |
| Visit Number | PV1.19 |  |  |  |  |
| Admit Date/Time | PV1.44 |  |  |  |  |
| Observation Request | OBR |  |  |  |  |
| Set ID | OBR.1 |  |  |  |  |
| Placer Order Number | OBR.2 |  |  |  |  |
| Universal Service ID | OBR.4 |  |  |  | EKG^EKG 12 Lead^^^12 Lead ECG |
| Requested Date/Time | OBR.6 |  |  |  |  |
| Observation Date/Time | OBR.7 |  |  |  |  |
| Relevant Clinical Information | OBR.13 |  |  |  |  |
| Specimen Received Date/Time | OBR.14 |  |  |  |  |
| Ordering Provider | OBR.16 |  |  |  |  |
| Filler Field | OBR.20 |  |  |  |  |
| Results Report/Status Change – Date/Time | OBR.22 |  |  |  |  |
| Result Status | OBR.25 |  |  |  |  |
| Reason for Study | OBR.31 |  |  |  |  |
| Principal Result Interpreter | OBR.32 |  |  |  |  |
| Technician | OBR.34 |  |  |  |  |
| Transcriptionist | OBR.35 |  |  |  |  |
| Scheduled Date/Time | OBR.36 |  |  |  |  |
| Observation | OBX |  |  |  | May repeat for multipart, single answer results |
| Set ID | OBX.1 |  |  |  |  |
| Value Type | OBX.2 |  |  |  |  |
| Observation Identifier | OBX.3 |  |  |  |  |
| Observation Value | OBX.5 |  |  |  |  |
| Units | OBX.6 |  |  |  |  |
| Observation Result Status | OBX.11 |  |  |  |  |

## 4.3 Sample Message

MSH|^~\&|MEI MUSE|SFB|HIS SYSTEM|SFB|20170420203038||ORU^R01|20170420203038|P|2.2

PID|1|776732720|776732720|33508672685|STEPHANIE^JOAN||19451206|F||0||||||||1254551162^^^^BCFN|893-18-7408

PV1|1|I|SF2E^5^05^SI||||NO404111^MCNIEL^DIANN||HR455708^AYKROID^FERNANDO||||||||||1254551162|||||||||||||||||||||||||20170420042003

OBR|1|11093881969||EKG^EKG 12 Lead^^^12 Lead ECG||20170420203038|20170420051712||||||User Defined|20170420203034||VT866374^STUEVE^NICOLE||||2325447||20170420203038|||F||||||Chest Pain|IE378284^SAMMON^ASHLEE^^^^^^^^4107||^HAVAS^^^^^^^^^58835|IE378284^SAMMON^ASHLEE^ASHLEE^^^^^^^4107|20170420061903

OBX|1|ST|93000.2^Ventricular Rate||85|BPM|||||F

OBX|2|ST|93000.3^Atrial Rate||85|BPM|||||F

OBX|3|ST|93000.4^P-R Interval||162|ms|||||F

OBX|4|ST|93000.5^QRS Duration||86|ms|||||F

OBX|5|ST|93000.6^Q-T Interval||402|ms|||||F

OBX|6|ST|93000.7^QTC Calculation(Bezet)||478|ms|||||F

OBX|7|ST|CPT4^P Axis||40|degrees|||||F

OBX|8|ST|CPT4^R Axis||-24|degrees|||||F

OBX|9|ST|CPT4^T Axis||46|degrees|||||F

OBX|10|TX|CPT4^Diagnosis||Normal sinus rhythm||||||F

OBX|11|TX|CPT4^Diagnosis||Low voltage QRS, consider pulmonary disease, pericardial effusion, or normal variant||||||F

OBX|12|TX|CPT4^Diagnosis||Nonspecific T wave abnormality||||||F

OBX|13|TX|CPT4^Diagnosis||Prolonged QT interval or tu fusion, consider myocardial disease, electrolyte imbalance, or drug effects||||||F

OBX|14|TX|CPT4^Diagnosis||Abnormal ECG||||||F

OBX|15|TX|CPT4^Diagnosis||When compared with ECG of 17-APR-2017 15:07, (unconfirmed)||||||F

OBX|16|TX|CPT4^Diagnosis||Nonspecific T wave abnormality has replaced inverted T waves in Lateral leads||||||F

OBX|17|TX|CPT4^Diagnosis||Confirmed by SAMMON, ASHLEE (4107) on 4/18/2017 11:35:31 AM||||||F

# **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.

## 6.1 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** |
|  |  |  |  |
|  |  |  |  |

# 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