**Quest Specialty Lab Acute Care Results to Cerner Requirements**

**Version 1.1**

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

**Date: 5/24/2017**

[Document Control 3](#_Toc500333357)

[Resources 3](#_Toc500333358)

[Project Distribution List 3](#_Toc500333359)

[Document Version Control 3](#_Toc500333360)

[1. Introduction 4](#_Toc500333361)

[1.1 Purpose 4](#_Toc500333362)

[1.2 Project Scope 4](#_Toc500333363)

[1.3 Terminology Standards 4](#_Toc500333364)

[1.3.1 Acronyms 4](#_Toc500333365)

[1.3.2 Glossary 4](#_Toc500333366)

[1.4 Document References 4](#_Toc500333367)

[2. Diagram 5](#_Toc500333368)

[3. Requirements 6](#_Toc500333369)

[3.1 Functional Requirements (Cerner FSI) 6](#_Toc500333370)

[3.2 Non-Functional Requirements 6](#_Toc500333371)

[3.3 Messaging Protocols 6](#_Toc500333372)

[3.3.1 Inbound to the BayCare Cloverleaf 6](#_Toc500333373)

[3.3.2 Outbound to the BayCare Cloverleaf 7](#_Toc500333374)

[3.3.3 Inbound to the Vendor 7](#_Toc500333375)

[3.3.4 Outbound to the Vendor 7](#_Toc500333376)

[3.3.5 Inbound to the BayCare Cerner EMR 7](#_Toc500333377)

[3.3.6 Outbound BayCare Cerner to Cloverleaf 8](#_Toc500333378)

[4. HL7 Messaging 8](#_Toc500333379)

[4.1 Messaging Format 8](#_Toc500333380)

[4.1.1 Segments 8](#_Toc500333381)

[4.1*.*2 Messaging Event Types 9](#_Toc500333382)

[4.1*.*3 Cloverleaf Configuration Files 9](#_Toc500333383)

[4.1.4 Cloverleaf Site Location 9](#_Toc500333384)

[4.2 Data Transformation Requirements 10](#_Toc500333385)

[4.3 Sample Messages 10](#_Toc500333386)

[5. Testing 11](#_Toc500333387)

[5.1. Unit Testing Scenarios 11](#_Toc500333388)

[5.2 Integrated Testing Scenarios 11](#_Toc500333389)

[5.3 Testing Approvals 12](#_Toc500333390)

[5.4 Piloting 12](#_Toc500333391)

[5.5 Approvals - Please see Monica Bousbar in the Lab 12](#_Toc500333392)

[6. Deployment / Implementation Model 13](#_Toc500333393)

[Appendix A: Risks and Concerns 13](#_Toc500333394)

[Appendix B: Issues List 13](#_Toc500333395)

# **Document Control**

## Resources

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|  |  |  |
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|  |  |  |
|  |  |  |

## Project Distribution List

## Document Version Control

|  |  |  |  |
| --- | --- | --- | --- |
| **Version** | **Date** | **Modifier** | **Description** |
| V1.0 | 5/9/2016 | Sarah Thies | Originally Created |
| V1.1 | 5/24/2017 | Art Schwartz | Updated |
|  |  |  |  |
|  |  |  |  |

# 1. Introduction

## 1.1 Purpose

This document outlines Quest/Specialty Labs results going inbound to Cerner.

## 1.2 Project Scope

There is an existing results interface for Quest Specialty Labs to send results back to Cerner PathNet. This project updated the **existing** Specialty results interface to include Bartow Regional Hospital (BRM).

## 1.3 Terminology Standards

### 1.3.1 Acronyms

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

### 1.3.2 Glossary

List the terms that require definition

## 1.4 Document References

**Cerner Specifications:**

[Unit 10i - Result and Document Processing Inbound](https://wiki.ucern.com/display/reference/Unit+10i+-+Result+and+Document+Processing+Inbound)

**Quest Documents/Specifications:**

50839\_mapping by Quest

# 2. Diagram

Cerner orders outbound to Quest and subsequent results are returned.

# 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.2016.1.0 | MRN | The BayCare MRN value will be in field PID-2.1 with assigning authority in field PID-2.4 containing value BayCare MRN. |
| FR.2016.2.0 | FIN | The FIN value will be in field PID-18.1 with assigning authority in field PID-18.4 containing value BayCare FIN. |
| FR.2016.3.0 | Order ID | The BayCare Order ID will be in field OBR-2.1 with Application ID in OBR-2.2 containing value HNAM\_ORDERID. |
| FR.2016.4.0 | Specimen Tracking Number | This number is the code value pulled from the lab build in the Location Alias Maintenance tool and added to the FSI route script so orders will go outbound Cerner. |
| FR.2016.5.0 | Facility Alias | The Core team to alias the facility and the Cloverleaf team to add the alias to table, BCOUTRCH, so orders go outbound to Quest. |
| FR.2016.6.0 | Filler Field | ***Orders*** outbound uses OBR-20.1 with OBR-20.2 containing value HNA\_ACCN. *(Note: Cerner accession & accession id)* |
| FR.2016.7.0 | Placer Field | ***Results*** inbound uses OBR-19.1 to pass the accession number value from the order back to Cerner for a required match. |

## 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 | 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

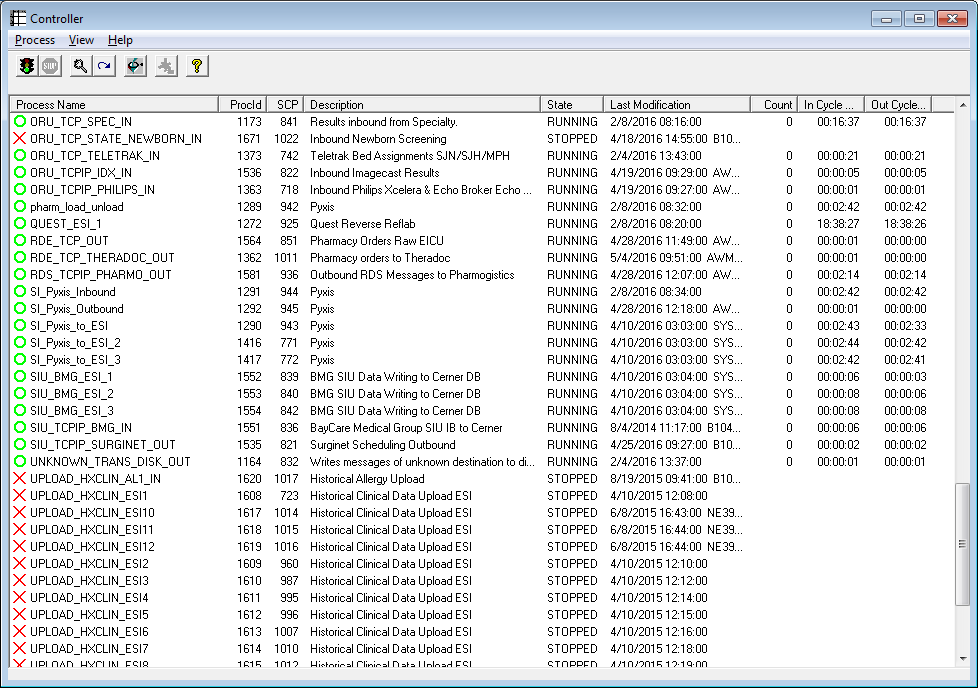
### 3.3.3 Inbound to the Vendor

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



**M30**

Port Number: 19100

**P30**

Port Number: 19001

**Special Note:**

Mod Object Script, SPECIALTY\_Trans\_Format\_v1, calls accession\_rebuild.inc located in /cerner/d\_p30/ccluserdir. If file, accession\_rebuild.inc, is ***not*** found there then the mod object will ***not*** compile. If the com server crashes and msgview has the following error:

000045 04/26 08:47 err OenFormatterNoModObj OP\_SPECIALTY\_TRANS\_FORMAT\_V1

000044 04/26 08:47 err OENGeneric (FORMATTER:OBJECT\_TO\_OBJECT)"OP\_SPECIALTY\_TRANS\_FORMAT\_V1" failed!

000043 04/25 13:02 err OenErrorReport W2=C Interface shutting down.

000042 04/25 13:02 err OenErrorReport W2=C. Format Failure.. See Openview.hlp - Communication Step Errors for mo...

000041 04/25 13:02 err OENGeneric %CCL-E-43-SHRCCL(0,0)160425:1302{}Could not execute program (OP\_SPECIALTY\_TR...

msg> show 41

[cmb\_0841]

entry: 41

date: 25 Apr 2016 13:02:20

user: n/a - [d\_m30]

location: baycflapp7/86810/86833

source: SRV0841\_0001\_0/OEN.ComService.1173

sourceref:

event: OENGeneric

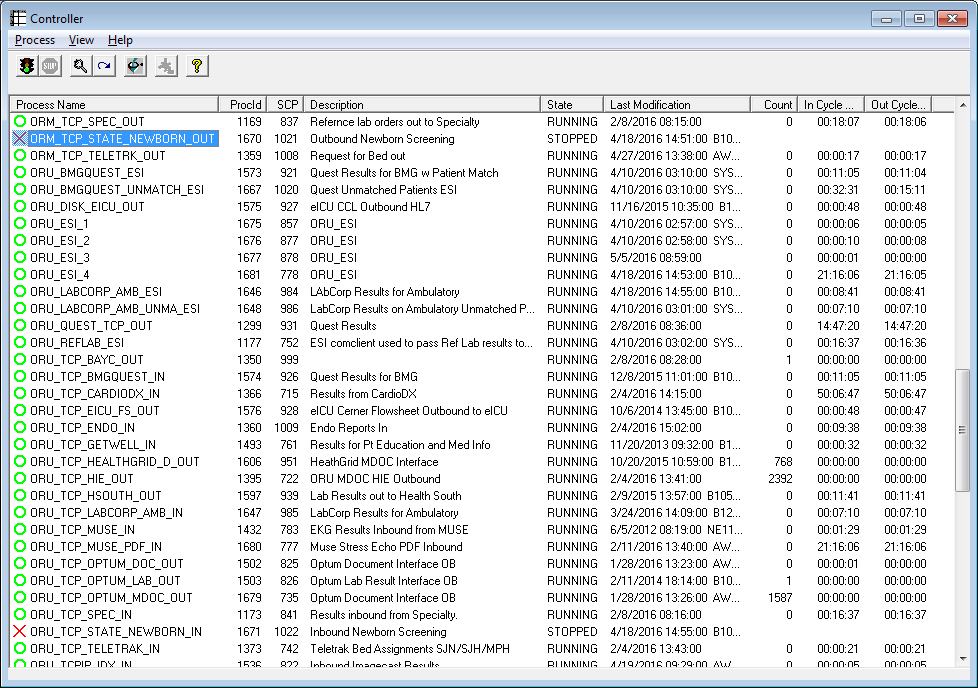
level: error

<text>

%CCL-E-43-SHRCCL(0,0)160425:1302{}Could not execute program (OP\_SPECIALTY\_TRANS\_FORMAT\_V1:0) since not found in object lib (Prot).

Then open an SR with Cerner to put the file accession\_rebuild.inc back in /cerner/d\_p30/ccluserdir. It requires root privileges. See SR 412590908 for additional details.

### 3.3.6 Outbound BayCare Cerner to Cloverleaf



**M30**

Port Number: 19154

IP Address: 10.100.128.66 (note that this is a ***Natted IP*** to Cloverleaf Test 10.5.250.203)

**P30**

Port Number: 19050

IP Address: 10.100.128.64 (note that this is a ***Natted IP*** to Cloverleaf Prod 10.5.250.201)

**Special Notes:**

1. Based on the Lab build, FSI will take the Specialty tracking number, code value, and add it to the route script. This number is ***different*** per domain and can be found in the location alias maintenance tool. Expand Location views, expand specimen tracking and find desired facility, Bartow, for example. Right click on Bartow Specialty TRK and select display alias.
2. Core must configure the Cerner outbound facility alias in source SPECIALTY.
3. The Cerner facility alias must be added to Cloverleaf table, BCOUTRCH.
4. Reminder, this interface uses trigger, ORM Reference Lab with Type ***PKL*** = Package List *(as a route script qualification)* ***Note:*** BayCare takes the specimen and sends the order with the package list because it’s a special lab ***not*** done at BayCare. Quest will process and send the result to BayCare.

# 4. HL7 Messaging

## 4.1 Messaging Format

### 4.1.1 Segments

The segments utilized for the ORM interface are:

MSH

[

PID

PV1

{ORC}

[

{OBR}

[{NTE}]

]

The segments utilized for the ORU interface are:

MSH

PID

[PV1]

{

ORC

OBR

[{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^O01 | Order |
| 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.

Xlate – speciality\_cerner\_oru

### 4.1.4 Cloverleaf Site Location

**Results**

M30

SITE: **cerner\_results\_7** & THREAD: **oru\_spec\_in\_t, oru\_cer\_out\_s\_mck\_t**

P30

SITE: **cerner\_results\_7** \_p& THREAD: **cer\_spec\_in, oru\_cer\_out\_s**

## 4.2 Data Transformation Requirements

| **Field Description** | **HL7 Field Loc.** | **Required Y/N** | **Data Type** | **Length** | **Notes** |
| --- | --- | --- | --- | --- | --- |
| MSH Segment |  | Y |  |  | Pathcopy MSH |
| PID Segment |  | Y |  |  | Pathcopy PID |
| ORC Segment |  | Y |  |  | Pathcopy ORC |
| OBR Segment |  | Y |  |  | Pathcopy OBR |
| Placer Order number | OBR-2 | Y |  |  | Copy to OBR-3 |
| Order Control | ORC-1 | Y |  |  | If not 1st hard code RE |
| Placer Order Number | ORC-2 | Y |  |  | If not 1st group NULL |
| Filler order Number | ORC-3 | Y |  |  | If not 1st group NULL |
| OBX Segment |  | Y |  |  | Pathcopy OBX |
| Responsible Observer | OBX-16 | Y |  |  | If Null hardcode A |
| NTE Segment |  | Y |  |  | Pathcopy NTE |

## 4.3 Sample Messages

**Cerner**

**Inbound Cerner *Result*:**

MSH|^~\&|dp|SLI SM,CA|rubicon|BRM|201604210934||ORU^R01|6526484|P|2.1

PID|1|2005000647^^^BayCare MRN|2005000647^^^BayCare MRN~800000669^^^BayCare CMRN||BARTOWTEST^TWO||19930303|M||||||||||1005000683^^^BayCare FIN|NOT GIVEN

ORC|RE|7677806063|AHA-26401|||||||||125^Cssxbb^Zxgdcz^K^Qg^^^^External Id^PERSONNEL^^^External Identifier

OBR|1|7677806063|7677806063|Z4875W^SELENIUM WHOLE BLOOD^L||201604210932|201604201205|||^^^^^^^L|S|||201604210932||125^Cssxbb^Zxgdcz^K^Qg^^^^External Id^PERSONNEL^^^External Identifier||Z4875W SELENIUM|**000002016111000491**|AHA-26401-FLC-0^ULTRA|SELENIUM WHOLE BLOOD~--------------------|201604210935||TM|F

OBX|1|NM|53388^Selenium Whole Blood^L||53|mcg/L|120-200|L|||F|||201604210934|SLI^^L|ahatz

NTE|1|L| @ Test Performed By:

NTE|2|L| Quest Diagnostics Nichols Institute

NTE|3|L| Basel Kashlan M.D., FCAP., Laboratory Director

NTE|4|L| 27027 Tourney Road

NTE|5|L| Valencia, CA 91355-5386

NTE|6|L| CLIA #05D0550302

ORC|RE|||||||||||125^Cssxbb^Zxgdcz^K^Qg^^^^External Id^PERSONNEL^^^External Identifier

OBR|2|7677806061|7677806061|Z1392^ALDOLASE^L||201604210932|201604201205|||^^^^^^^L|S|||201604210932||125^Cssxbb^Zxgdcz^K^Qg^^^^External Id^PERSONNEL^^^External Identifier||Z1392 ALDOLASE|**000002016111000491**|AHA-26401-CIK-0^ULTRA|ALDOLASE~--------|201604210935||AL|F

OBX|1|NM|34401^Aldolase^L||8.1|U/L|< 8.2||||F|||201604210934|SLI^^L|ahatz

NTE|1|L| @ Test Performed By:

NTE|2|L| Quest Diagnostics Nichols Institute

NTE|3|L| Basel Kashlan M.D., FCAP., Laboratory Director

NTE|4|L| 27027 Tourney Road

NTE|5|L| Valencia, CA 91355-5386

NTE|6|L| CLIA #05D0550302

# **5. Testing**

## 5.1. Unit Testing Scenarios

Please see Monica Bousbar in the Lab

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

## 5.2 Integrated Testing Scenarios

Please see Monica Bousbar in the Lab

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

## 5.3 Testing Approvals

Please see Monica Bousbar in the Lab

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

Per 5/4/2016 email:

I don’t need additional testing.

Thanks.

**Monica Bousbar**

Supervisor Clinical Systems/

Lab-I.S/Cerner PathNet

Office (727) 394-6492 |

**From:** Hatzopoulos, Ann M [<mailto:Ann.M.Hatzopoulos@questdiagnostics.com>]   
**Sent:** Wednesday, May 04, 2016 4:02 PM  
**To:** Dowell, Janet; Thies, Sarah B.; Bousbar, Monica; Kaczmarczyk, Hope E.; Buterbaugh, Donna; Allison, Richard C.  
**Cc:** Wentz, Jackie L  
**Subject:** RE: M30 Testing for BRM Quest Specialty Labs

I never received a response from anyone.  Is there any other testing that you would like to do on the new account?

Ann M. Hatzopoulos

Implementation Analyst

**Quest Diagnostics**| **Action from Insight**| 27027 Tourney Rd. | Valencia, CA 91355 USA | **phone**661.799.6633 | **fax** 661.799.6847 | [Ann.M.Hatzopoulos@QuestDiagnostics.com](mailto:Ann.M.Hatzopoulos@QuestDiagnostics.com) | [QuestDiagnostics.com](https://urldefense.proofpoint.com/v2/url?u=http-3A__questdiagnostics.com_&d=CwMFAg&c=MS-5dKql6qjhmD6zBX8NdQ&r=2APL3fJ7sMCKR58lu9jPLkj_QxxwbHSloPkALOQS1p8&m=4JlED-U2tywb-2JFNPp33yZIsm7_tPzNNp-xnJlZTkE&s=FaZ7RcQJ4Uq0QqnEGlqMqLrLw9eUqzYwsMEC_VzJCkM&e=)

## 5.4 Piloting

NA

## 5.5 Approvals - Please see Monica Bousbar in the Lab

|  |  |  |  |
| --- | --- | --- | --- |
| **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.

This change was implemented when Bartow Regional Hospital was added to the BayCare Health System. **CAB # 11022**

# 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