**ORM & RDE Cerner to Get Well Network (Edutainment) Orders Interface Requirements**

**Version 1.4**

**Prepared By: Tiffany Bohall & Hope Kaczmarczyk**

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# **Document Control**

## Resources

|  |  |  |
| --- | --- | --- |
| **Name** | **Role** | **Email** |
| Brian Schmidt | BayCare Health Systems: Project Manager | Brian.Schmidt@baycare.org |
| Bryan Boudreau | Get Well Network: Project Manager | bboudreau@getwellnetwork.com |
| Marcia Amnay | BayCare Health Systems: SR Systems Analyst | Marcia.Amnay@baycare.org |
| Mary Oswald | BayCare Health Systems: Applications Architect | Mary.Oswald@baycare.org |
| Hope Kaczmarczyk | BayCare Health Systems: Integration Analyst | Hope.Kaczmarczyk@baycare.org |
| Tiffany Bohall | BayCare Health Systems: Integration Analyst | Tiffany.Bohall@baycare.org |
| Jennifer Hodgeman | Get Well Network: Interface Analyst II | jhodgeman@getwellnetwork.com |
| Lee Terpilowski | BayCare Health Systems: SR Systems Analyst | Leeann.Terpilowski@baycare.org |

## Project Distribution List

## Document Version Control

|  |  |  |  |
| --- | --- | --- | --- |
| **Version** | **Date** | **Modifier** | **Description** |
| V1.0 | 10/12/2015 | Tiffany Bohall | Originally Created |
| V1.1 | 06/20/2016 | Hope Kaczmarczyk | Added original Cerner Orders (ORM) documentation |
| V1.2 | 12/22/2016 | Tiffany Bohall | Updated facilities that have gone live as well as some recent enhancement requests |
| V1.3 | 2/16/2017 | Tiffany Bohall | Made some minor modifications to orders interfaces and added WHH/WHW to live facilities |
| V1.4 | 7/26/19 | Charles Markwardt | Model code changes for FSI |

# 1. Introduction

## 1.1 Purpose

The purpose of this document is to provide details on the build of the ORM and RDE interface that supports Get Well Network.

## 1.2 Project Scope

The scope of the integration for Get Well network consists of ADT from Soarian, pharmacy and video orders from Cerner solicited (videos) and unsolicited (pharmacy) results from Get Well network back to Cerner. This document is only the ORM (video orders) and RDE (pharmacy orders) portion. The ADT and Results interface requirements documents can be found in the same SharePoint folder as this document.

## 1.3 Terminology Standards

### 1.3.1 Acronyms

GWN: Get Well Network

### 1.3.2 Glossary

**Alias** - An identifier used to represent an item, such as a location, order, specimen type, or result.

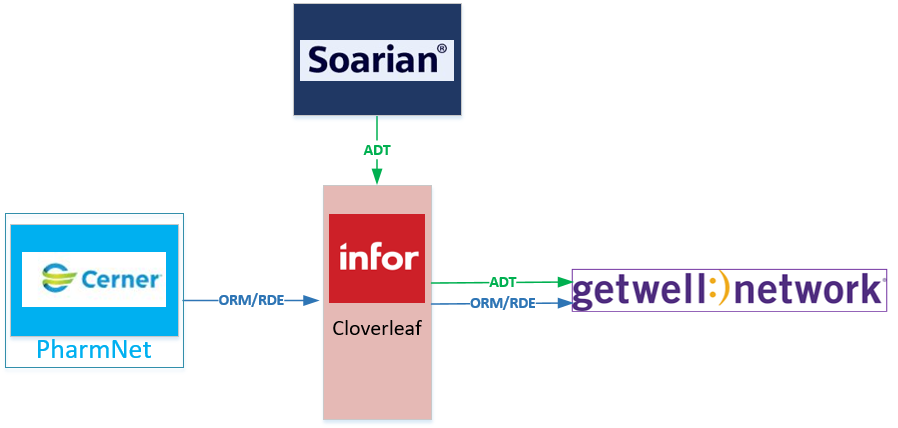
**Scripting –** Custom Cerner programs written to modify, format, and filter message transactions for the interfaces. The types of scripts used by FSI are Suppression, Route, Modify Object, Modify Original, Type, and ACK.

## 1.4 Document References

Cerner HL7 Specifications: Unit 09o – order Message Processing Outbound – Cerner 2016

# *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

|  |  |  |
| --- | --- | --- |
| **Cerner Prior to model** |  |  |
| **Number** | **Requirement Name** | **Requirement Description** |
| FR.2013.11.1 | Contributor System: GETWELL | The GETWELL contributor system was created on Cerner to handle the Video orders sent outbound and the video/pharmacy results inbound. This contributor system uses BayCare’s main contributor source of Invision for aliasing all codesets. |
| FR.2013.11.2 | Activity Type: EDUTAINMENT | All video orders for GWN need to be built with an activity type of Edutainment. This is a requirement; the CDF meaning of the activity type has to be EDUTAINMENT or the orders will be suppressed by the global ESO Orders Suppression script. (Note: Codeset 106 Activity Type) |
| FR.2013.11.3 | Global ESO Suppression Script: eso\_get\_order\_selection\_v14  .prg | Addition made to the eso\_get\_order\_selection script to un-suppress all orders with an activity type having the CDF meaning of EDUTAINMENT. |
| FR.2013.11.4 | Script: orm\_getwell\_outv1  on Com Server: ORM\_TCP\_GETWELL\_OUT | Mod Object script for video orders outbound to GWN. Mod Object Script:   * calls the generic mod object script, MSH\_FAC\_MODOBJ\_OUT, to populate MSH.5 (Receiving Application) with the facility from PV1.3.4.1 (e.g., SJH) * will suppress the education order if MSH.5 (Receiving Application) is not one of these facilities: SJH, SJN, SAH, SJW, MCS , NBY, MPH, SFB, MDU. * will change a message type of SN to NW in ORC.2. * calls the generic doctor filter script to clean up the physician field identifiers. |

|  |  |  |
| --- | --- | --- |
| **Cerner Post model** |  |  |
| **Number** | **Requirement Name** | **Requirement Description** |
|  |  |  |
| 2019.07.17 | Cerner interface | Existing interface rde\_tcp\_out is used to send both Pharmacy order (RDE) and Dispense (RDS) messages for IV fluid meds. |
|  | Contributor system | PYXISRX |
|  | Contributor Source | PYXIS |
|  | Outbound field processing | MSH 3.0 = HNAM  MSH 4.0 = HNAM  MSH 5.0 = PYXIS  MSH 6.0 = PYXIS  Send AL1 segments  Send the Pharmacy ID type = Pyxis Interface ID  Send Item Alias  Round duration and infusover to whole numbers  Repeating OBX  Max number of OBX = 2 |
|  | Global Script - ESO\_GET\_ORDER\_SELECTION | Skip if the order doesn’t have any ingredients |
|  | Mod Object – rde\_rds\_pharm\_out | Skip if there is no RDE group in the message  Skip if the order control reason (ORC 16.4) = CD:89800833  Preforms additional business logic which can be found in the section 4.3 FSI Data Transformation |

## 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.2015.10.12 | Dietary orders | The vendor has partnered directly with Computrition and receives dietary orders outside of BayCare integration. This enables the patients to see what their diet restrictions are. |

## 3.3 Messaging Protocols

Below are listed the details for the messaging protocols that will be leveraged for this integration.

### 3.3.1 Inbound to BayCare Cloverleaf from Cerner

Test –Pharmacy orders

Port Number: 18166

IP Address: Cerner NAT’d IP Address 10.100.128.66 to CloverLeaf 10.5.250.203

FSI Comserver: RDE\_RDS\_PHARMACY\_OUT

Test C30–Video orders

Comserver: ORM\_TCP\_GETWELL\_OUT

Port Number: 12066

IP Address: Cerner NAT’d IP Address 10.100.128.66 to CloverLeaf 10.5.250.203

Test M30–Video orders

Comserver: ORM\_TCP\_GETWELL\_OUT

Port Number: 8179

IP Address: Cerner NAT’d IP Address 10.100.128.66 to CloverLeaf 10.5.250.203

Prod –Pharmacy orders

Port Number: 18064

IP Address: Cerner NAT’d IP Address 10.100.128.64 to CloverLeaf 10.5.250.201

Prod –Video orders

Comserver: ORM\_TCP\_GETWELL\_OUT

Port Number: 12070

IP Address: Cerner NAT’d IP Address 10.100.128.64 to CloverLeaf 10.5.250.201

### 3.3.2 Outbound to the BayCare Cloverleaf –N/A

* Click here to enter text.

### 3.3.3 Inbound to the Vendor –N/A

* Click here to enter text.

### 3.3.4 Outbound to Get Well Network

Test

Port Number: 9010

IP Address: 68.71.224.169

Prod

Port Number:

IP Address: 10.111.245.30

### 3.3.5 Inbound to the BayCare Cerner –N/A

Click here to enter text.

### 3.3.6 Outbound from BayCare Cerner

Test –Pharmacy orders

Port Number: 18166

IP Address: Can’t access

Test C30–Video orders

Port Number: 12066

IP Address: Can’t access

Test M30–Video orders

Port Number: 8179

IP Address: Can’t access

Prod –Pharmacy orders

Port Number: 12070

IP Address: can’t access

Prod –Video orders

Port Number: 18064

IP Address: can’t access

# 4. HL7 Messaging

## 4.1 Messaging Format

HL7 v. 2.3, cerner\_emr ORM\_O01

HL7 v. 2.3, gwnet RDE\_O01

### 4.1.1 Segments

The segments utilized for the ORM interface are:

MSH

PID

PV1

ORC

OBR

The segments utilized for the RDE interface are:

MSH

PID

[PV1]

ORC

RXC

RXE

*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 | Video order |

|  |  |
| --- | --- |
| **Event Type** | **Description** |
| RDE\_O01 | Pharmacy order |

### 4.1*.*3 Cloverleaf Configuration Files

Cerner\_gwnet\_orm translation file

Cerner\_gwnet\_rde translation file

### 4.1.4 Cloverleaf Site Location

Patient\_ed

## 4.2 Data Transformation Requirements –Video ORM’s

| **Field Description** | **HL7 Field Loc.** | **Required Y/N** | **Data Type** | **Length** | **Notes** |
| --- | --- | --- | --- | --- | --- |
| MSH Segment | MSH | Y | ST, HD, TS, CM, PT, ID, NM, CE | 1-180 | Copy the entire segment |
| Encoding Characters | MSH.2 | Y | ST | 4 | Hard coding “^~\&” |
| Sending Application | MSH.3 | N | HD | 180 | Hard coding “BAYCARE” |
| Sending Facility | MSH.4 | N | HD | 180 | Copy from MSH.5. These are the hospital facility codes (e.g., SJH) |
| Receiving Application | MSH.5 | N | HD | 180 | Hard coding “GWN” |
| Receiving Application | MSH.6 | N | HD | 180 | Hard coding “CERNER” |
| Version ID | MSH.12 | Y | ID | 8 | Hard coding “2.3” |
| Patient ID (Internal) | PID.3.0 | Y | CX | 25 | Iterating through PID.3.3 to find “BayCare CMRN” and copy its associated subfield value into PID.3.0. There is also a TCL pre proc which pads left 9 digits in the event there needs to be a leading 0 on the CPI number (will come out of Cerner as 8 digits). |
| Patient Identifier Check Digit | PID.3.1 | Y | CX | 25 | Hard coding “CPI” |
| Patient Name: last, first, middle initial | PID.5 | Y | XPN | 48 | Copy |
| Patient date of birth | PID.7 | Y | TS | 26 | Copy |
| Patient account number ID | PID.18.0 | Y | CX | 30 | Copy |
| Patient class | PV1.2 | Y | IS | 1 | Copy |
| Assigned patient location | PV1.3 | Y | PL | 80 | Copy |
| Servicing Facility | PV1.39 | N | IS | 12 | Copy |
| Order Control | ORC.1 | Y | ID | 2 | Copy |
| Placer order Number | ORC.2.0 | Y | EI | 25 | Copy- This is Cerner’s internal order ID number. |
| Entered By | ORC.10 | N | XCN | 120 | Copy |
| Set ID sequence | OBR.1 | Y | SI | 4 | Copy |
| Placer Order Number | OBR.2.0 | Y | EI | 25 | Copy- This is Cerner’s internal order ID number. |
| Universal Service Identifier | OBR.4 | Y | CE | 200 | Copy |
| Requested Date/Time | OBR.6 | Y | TS | 26 | Copy |
| Result Status | OBR.25 | Y | ID | 1 | Copy |

## 4.3 Data Transformation Requirements –Pharmacy RDE’s CL

| **Field Description** | **HL7 Field Loc.** | **Required Y/N** | **Data Type** | **Length** | **Notes** |
| --- | --- | --- | --- | --- | --- |
| MSH Segment | MSH | Y | ST, HD, TS, CM, PT, ID, NM, CE | 1-180 | Copy the entire segment |
| Encoding Characters | MSH.2 | Y | ST | 4 | Hard coding “^~\&” |
| Sending Application | MSH.3 | N | HD | 180 | Hard coding “BAYCARE” |
| Sending Facility | MSH.4 | N | HD | 180 | Copy from MSH.5 |
| Receiving Application | MSH.5 | N | HD | 180 | Hard coding “GWN” |
| Receiving Application | MSH.6 | N | HD | 180 | Hard coding “CERNER” |
| Version ID | MSH.12 | Y | ID | 8 | Hard coding “2.3” |
| Patient ID (Internal) | PID.3.0 | Y | CX | 25 | Iterating through PID.3.3 to find “BayCare CMRN” and copy its associated subfield value into PID.3.0. There is also a TCL pre proc which pads left 9 digits in the event there needs to be a leading 0 on the CPI number (will come out of Cerner as 8 digits). |
| Patient Identifier Check Digit | PID.3.1 | Y | CX | 25 | Hard coding “CPI” |
| Patient Name: last, first, middle initial | PID.5 | Y | XPN | 48 | Copy |
| Patient date of birth | PID.7 | Y | TS | 26 | Copy |
| Patient account number ID | PID.18.0 | Y | CX | 30 | Copy |
| Assigned patient location | PV1.3 | Y | PL | 80 | Copy |
| Servicing Facility | PV1.39 | N | IS | 12 | Copy |
| Order Control | ORC.1 | Y | ID | 2 | If ORC.1 = CM or ORC.1 = NW and ORC.5 = Completed, hard code DC (for discontinued) in ORC.1. Else, copy outbound. |
| Placer order Number | ORC.2.0 | Y | EI | 22 | Copy |
| Date/time of Transaction | ORC.9 | Y | TS | 26 | Copy |
| Order Effective date/time | ORC.15 | Y | TS | 26 | Copy |
| Order Control Code reason | ORC.16 | Y | CE | 200 | Copy |
| Pharmacy treatment component order segment | RXC | Y | ID, CE, NM | 1-100 | Iterate through RXC and populate all repeating segments outbound |
| Quantity/timing | RXE.1 | Y | TQ | 200 | Copy |
| Give Code | RXE.2 | Y | CE | 100 | Copy |
| Give Dosage Form | RXE.6 | Y | CE | 60 | Copy |

FSI Data Transformation Requirements

| **Field Description** | **HL7 Field Loc.** | **Required Y/N/RE** | **Notes** |
| --- | --- | --- | --- |
| Sending Application | MSH.3 | Y | MSH 3.0 = HNAM |
| Sending Facility | MSH.4 | Y | MSH 4.0 = HNAM |
| Receiving application | MSH.5 | Y | MSH 5.0 = PYXIS |
| Receiving Facility | MSH.6 | Y | MSH 5.0 = PYXIS |
| Date/Time of Message | MSH.7 | Y | YYYYMMDDHHMMSS  Date/Time the ACK message was created |
| Common order | ORC | Y |  |
| Quantity/Timing | ORC.7 | Y |  |
| Quantity | ORC.7.1 | N | If the order\_detail table has the value of oe\_field\_display\_value = “Soft Stop” and oe\_field\_meaning = “STOPTYPE” this field will be blank. |
| Interval | ORC.7.2 | N | If frequency is present this field will be populated |
| End Date/Time | ORC.7.5 | N | If the order\_detail table has the value of oe\_field\_display\_value = “Soft Stop” and oe\_field\_meaning = “STOPTYPE” this field will be blank. |
| Pharmacy Encoded Order Segment | RXE | Y |  |
| Quantity/Timing | RXE.1 |  |  |
| Interval | RXE.1.2 | N | If frequency is present this field will be populated |
| Duration | RXE.1.3 | N | If the order\_detail table has the value of oe\_field\_display\_value = “Soft Stop” and oe\_field\_meaning = “STOPTYPE” this field will be blank. |
| End Date/Time | RXE.1.5 | N | If the order\_detail table has the value of oe\_field\_display\_value = “Soft Stop” and oe\_field\_meaning = “STOPTYPE” this field will be blank. |
| Give Amount - Minimum | RXE.3 | N | Copied from RXC.3 |
| Give Amount – Maximum | RXE.4 |  | Copied from RXC.4 |
| Pharmacy Order Component | RXC |  |  |
| Component Code – Name of Alternate Coding System | RXC.2.6 | N | If the medication identifier has a value on the med\_identifier table in Cerner |
| Custom segment | ZX1 |  |  |
| Dispense category | ZX1.7 |  | Populate if present |

## 4.4 Sample Message

Video Orders:

MSH|^~\&|BAYCARE|SJH|GWN|CERNER|20151006092604||ORM^O01|Q1919535341T22040927|P|2.3||||||8859/1

PID|||300134506^CPI||GETWELL^FNSTESTPT||19500214|||||||||||6000003266

PV1||I|ADMH^ADMX^99^SJH^^Bed(s)^SJH||||||||||||||||||||||||||||||||||||SJH

ORC|NW|4422522357

OBR|1|4422522357||VID1059^V:Medications: Advair

MSH|^~\&|BAYCARE|SJH|GWN|CERNER|20151006104125||ORM^O01|Q1919535493T22040929|P|2.3||||||8859/1

PID|||300126101^CPI||WORLDSTEST^FLORIDA||19561118|||||||||||6000008584

PV1||I|2E^B201^A^SJH^^Bed(s)^SJH||||||||||||||||||||||||||||||||||||SJH

ORC|NW|4422522827

OBR|1|4422522827||VID275^V:Diabetes Choosing Proper Footwear

Pharmacy orders:

MSH|^~\&|BAYCARE|PYXIS|GWN|CERNER|20151006131429||RDE^O01|Q1919535812T22040932|P|2.3||||||8859/1

PID|||||Test3^Healthgrid^^^^^Current||19770226|||||||||||80195666

PV1|||A3E^3105^A^SJN^^Bed(s)^SJN||||||||||||||||||||||||||||||||||||SJN

ORC|NW|4422551055|||||||20151006131427||||||20151006131427

RXE|^q3hr^0000,0300,0600,0900,1200,1500,1800,2100^^20151005150000|2344404^ampicillin 50mg/mL susp^Pyxis Interface ID^^Principen||||Susp^Susp

MSH|^~\&|BAYCARE|PYXIS|GWN|CERNER|20151006153127||RDE^O01|Q1919536272T22040938|P|2.3||||||8859/1

PID|||||DOWNTIME^MPHINPT^^^^^Current||19921013|||||||||||1005000167

PV1|||ICU1^0281^01^MPH^^Bed(s)^MPH||||||||||||||||||||||||||||||||||||MPH

ORC|NW|4422555473|||||||20151006151613||||||20151006151734

RXE|^1xDaily^0900^^20151007090000^^Routine|2340285^atenolol 25 mg tab^Pyxis Interface ID^^atenolol||||Tab^Tab

# **5. Testing**

## 5.1. Unit Testing Scenarios –N/A

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

## 5.2 Integrated Testing Scenarios –N/A

|  |  |
| --- | --- |
| **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

Completion Dates of Successful Go-Lives

SJWH and SJCH on November 20, 2013

SJHN on December 4, 2013

SJH on December 18, 2013

SAH on September 3, 2014

SFBH on October 22, 2014

MPNBH on December 17, 2014

SJHS on February 2, 2015

MDH on July 15, 2015

MCH on September 9, 2015

MPH on October 7, 2015

BRM on December 19, 2016

WHH/WHW on February 14, 2017

# Appendix A: Risks and Concerns *–N/A*

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Project Name** |  |  | | |  |  |  |  |
| **Number** | **Risk / Concern** | **Comment** | **Mitigation** | | |  |  |  |
| RC.2013.1.0 |  |  | |  | |  |  |  |

# Appendix B: Issues List *–N/A*

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