**RDE/RDS from Cerner (Pharmacy) to CAPS**

**1.1**

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**Date: 8/8/2019**

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# **Document Control**

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## Project Distribution List

## Document Version Control

|  |  |  |  |
| --- | --- | --- | --- |
| **Version** | **Date** | **Modifier** | **Description** |
| V1.0 | 3/13/2019 | Art Schwartz | Originally Created |
| V1.1 | 8/8/2019 | Charles (CJ) Markwardt | Updated Diagram |
|  |  |  |  |
|  |  |  |  |

# 1. Introduction

## 1.1 Purpose

The purpose of this document is to outline the Pharmacy Orders (RDE) and Pharmacy Dispense (RDS) interface from Cerner PharmNet to the CAPS application.

## 1.2 Project Scope

The CAPS workflow solutions standardize compounding processes such as order review, medication picking and dose preparation to improve medication safety and pharmacy workflow.

## 1.3 Terminology Standards

### 1.3.1 Acronyms

ACK – General acknowledgement message

ADT – Admission, Discharge and Transfer Message

BD – Becton, Dickinson and Company

CCE – CareFusion Coordination Engine

ORU – Observation result/unsolicited

RDE – Pharmacy encoded order message

RDS – Pharmacy dispense message

### 1.3.2 Glossary

CAPS – software

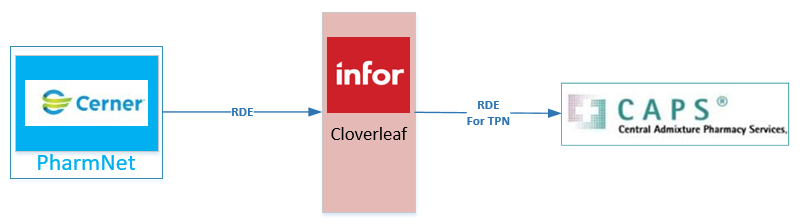
BD – vendor name

## 1.4 Document References

BD CAPS HL7 Messages Specification Guide EN.pdf

Cerner – Unit 20RX Retail Pharmacy History Upload

# 2*.* Diagram



# 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** |
| 2019.1.0 | RDE Filters | ZX1:7.1 = TPN - Only messages that contain the word “TPN” in ZX1:7 are allowed to cross to CAPS.  Discarding any ROX segments |

***2019.7.19******RDS Filter***ZX1:7.1 = TPN - Only messages that contain the word “TPN” in ZX1:7 are allowed to cross to CAPS.

keep only these segments MSH PID PV1 ORC ZRX

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

### 3.3.1 Inbound from Cerner to Cloverleaf

* Site: pharmacy\_17 Thread: rdeRds\_cer\_in\_CAPS\_xi6
* FSI Comserver: RDE\_RDS\_PHARMACY\_OUT

### 3.3.2 Outbound to CAPS

* Site: pharmacy\_17 Thread: rdeRds\_CAPS\_out

### 

# 4. HL7 Messaging

## 4.1 Messaging Format

### 4.1.1 Segments

The segments utilized for this interface are:

**Pharmacy Order (RDE) Message:**

MSH Message Header

PID Patient Identification

PV1 Patient Visit

ORC Common Order

RXO Pharmacy/Treatment Order

[{RXR}] Pharmacy/Treatment Route

[{RXC}] Pharmacy/Treatment Component

RXE Pharmacy/Treatment Encoded Order

[ZX1] Additional RX Order Information

[{OBX}] Observation Result

**Pharmacy Dispense (RDS) Message:**

MSH Message Header

PID Patient Identification

[PV1] Patient Visit

ORC Common Order

RXE Pharmacy/Treatment Encoded Order

[{RXR}] Pharmacy/Treatment Route

[ZXE] *Additional Phamacy/Treatment Encoded*

ZX1 Additional RX Order Information

RXE Pharmacy/Treatment Encoded Order

*Message Construction Notes:*

*[Square Brackets] – Optional*

*{Curly Brackets} – Repeatable*

*[{ – 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 by CAPS. Message types highlighted in green is what is supported by Cerner interface.

|  |  |  |
| --- | --- | --- |
| **Message Code** | **Event Type** | **Description** |
| RDE | O01 | Pharmacy order message |
| RDS | O01 | Pharmacy dispense message |

### 4.1*.*3 Cloverleaf Configuration Files

### 4.1.4 Cloverleaf Site Location

Pharmacy\_17

## 

## 4.2 Data Transformation Requirements for RDE CL:

| **Field Description** | **HL7 Field Loc.** | **Required Y/N/RE** | **Notes** |
| --- | --- | --- | --- |
| Message Header | MSH | Y |  |
| Encoding Characters | MSH.2 | Y |  |
| Sending Application | MSH.3 | Y |  |
| Sending Facility | MSH.4 | Y | From Pv1-3.3 |
| Receiving application | MSH.5 | Y | Hard code CAPS |
| Receiving Facility | MSH.6 | Y | Hard code CAPS |
| Date/Time of Message | MSH.7 | Y | YYYYMMDDHHMMSS  Date/Time the ACK message was created |
| Message Type | MSH.9 | Y | For RDE ->RDE^O01  For RDS-> RDS^O01 |
| Message Control ID | MSH.10 | Y | Unique identifier for the message |
| Processing Id | MSH.11 | Y | Hard code P |
| Version ID | MAH.12 | Y | Hard code 2.3 |
| Patient Identification | PID | Y |  |
| Patient ID (External ID) | PID.2 | Y | ? |
| Patient ID (Internal ID) List | PID.3 | Y | Contains MRN from PID.2 |
| Patient Name | PID.5 | Y |  |
| Date of Birth | PID.7 | Y |  |
| Gender | PID.8 | Y |  |
| Race | PID.10 | Y |  |
| Address | PID.11 | Y |  |
| Patient Account Number | PID.18 | RE | FIN |
| Patient Visit | PV1 |  | Pathcopy Segment |
| Patient Visit | PV1.19 |  | Blank out |
| Service | PV1.39 |  | Blank out |
|  |  |  |  |
| here |  |  |  |
| Common Order | ORC | Y | Pathcopy |
| Order Control | ORC.1 | Y | Order Control Codes Recognized:  NW= New Order (Order add/update)  CA= Cancel Order Request (Order cancel)  DC=Discontinue Order Request (Order discontinue)  HD=Hold Order Request (Order hold)  RL=Release Previous Hold (Order resume)  XO=Change Order Request (Order add/update)  XX=Order Changed Unsolicited (Order add/update) |
| Quantity/Timing | ORC.7 |  | If ORC7.5 equal STAT  Copy 2 to ORC7.8  Blank ORC7.5 |
|  | NTE |  | Pathcopy NTE segment |
| Pharmacy/Treatment Route | RXR | Y | Pathcopy RXR segment |
| Pharmacy/Treatment Component Order | RXC | Y | Pathcopy RXC |
| Component Code | RXC.2 | Y | Null Out |
| Pharmacy/Treatment Encoded Order segment | RXE | Y | Pathcopy RXE |
| Quantity/Timing | RXE.1 | RE | ^Interval^^Start Date/Time^^^Condition  Interval=Medication Frequency  Start Date/Time=D/T medication administration is ordered to begin  Condition=Indicates if medication is to be administered PRN |
| Give Code | RXE.2.4 | Y | Copy to @RXE\_text  If RXE-2.5 = TPN Custom Formula Adult  Then: change RXE-2.1 to: T  If RXE-2.5 = TPN Custom Formula Adolescent  Then: change RXE-2.1 to: TP  If RXE-2.5 = TPN Custom Formula Child  Then: change RXE-2.1 to: TP  If RXE-2.5 = TPN Custom Formula Infant  Then: change RXE-2.1 to: TN |
| fill\_count | OBX |  | Only Copy Weight info to OBX outbound |
| admin\_count | OBX.1 | Y |  |
| admin\_dt\_tm | OBX.2 | Y |  |
| disp\_amt | OBX.3 | Y | Copy first 6 chars to @weight  Copy 7th trh 11th char to @unit  If weight = WEIGHT  Move weight fields to OBX  1 to OBX-1  NM to OBX-2  Weight to OBX-3  Null out OBX-4  If @unit = UNIT  Copy OBX-5 to OBX-6  Else  Copy OBX-5 to OBX-5 |
| disp\_units | OBX.5 | Y | If 4(0).OBX(%s5).#5(0).[0] ct =Peripheral && 4(0).OBX(%s5).#3(0).[1] eq =RxProductSelectNote  Then copy PERIPHERAL to 3(0).RXR(0).#2(0)  Copy “y” to @IV |
| site | RXR-2 |  | Copy “PERIPHERAL”  If IV = N  Copy “Central” |
|  | ZRX segment | Y | Pathcopy |
|  |  |  |  |
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### 4.2.1 Data Transformation Requirements for RDS CL:

| **Field Description** | **HL7 Field Loc.** | **Required Y/N/RE** | **Notes** |
| --- | --- | --- | --- |
| Message Header | MSH | Y |  |
| Encoding Characters | MSH.2 | Y |  |
| Sending Application | MSH.3 | Y |  |
| Sending Facility | MSH.4 | Y | From Pv1-3.3 |
| Receiving application | MSH.5 | Y | Hard code CAPS |
| Receiving Facility | MSH.6 | Y | Hard code CAPS |
| Date/Time of Message | MSH.7 | Y | YYYYMMDDHHMMSS  Date/Time the ACK message was created |
| Message Type | MSH.9 | Y | For RDS-will change to RDE^O01 |
| Message Control ID | MSH.10 | Y | Unique identifier for the message |
| Processing Id | MSH.11 | Y | Hard code P |
| Version ID | MAH.12 | Y | Hard code 2.3 |
| Patient Identification | PID | Y |  |
| Patient ID (Internal ID) List | PID.3 | Y | Contains MRN from PID.2 |
| Patient Name | PID.5 | Y |  |
| Date of Birth | PID.7 | Y |  |
| Gender | PID.8 | Y |  |
| Race | PID.10 | Y |  |
| Address | PID.11 | Y |  |
| Patient Account Number | PID.18 | RE | FIN |
| Patient Visit | PV1 |  | Pathcopy Segment |
| Religion | PV1.17 |  | Blank out, copy in ORC-12 |
| SS# | PV1.19 |  | Blank out |
| Service | PV1.39 |  | Blank out |
| Common Order | ORC | Y | Pathcopy |
| Order Control | ORC.1 | Y | Hard code XO |
| Quanity Timming | ORC-7 | Y | If 6th sub-field = STAT  Copy 2 to ORC-7 9th sub-field  Blank out ORC-7 6th sub-field |
| Ordering Provider | ORC.12 |  | Blank out, copy to PV1-17 |
| Quantity/Timing | RXE.1 | RE | ^Interval^^Start Date/Time^^^Condition  Interval=Medication Frequency  Start Date/Time=D/T medication administration is ordered to begin  Condition=Indicates if medication is to be administered PRN |
|  |  |  |  |
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## **4**.3 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

**Message examples from Cerner to Cloverleaf**

# 1 **Pharmacy ordered message:**

**RDE**

MSH|^~\&|HNAM|SJS|EICU|SJS|20180702112430||RDE^O01|Q4158902000T5403631059||2.3||||||8859/1

PID|1|7000016967^^^BCMRN^MRN^SOARIAN|7000016967^^^BCMRN^MRN^SOARIAN~810016515^^^BayCare CMRN^Community Medical Record Number^SOARIAN|810016515^^^BayCare EAD CPI^Historical CMRN^SOARIAN|CAPS^SJSONE^^^^^Current||19801025|F||W|2995 DREW STREET^^Clearwater^FL^33759^^Home||||English|S|CHR|6000036527^^^BCFN^FIN NBR^SOARIAN||||NOH|||0

PV1|1|I|A3EA^3209^A^SJS^^Bed(s)^SJS|R|||MS056973^Urzey^Bcidib^G^^^^^BayCare Dr Number|||MED||||CD:32770251||N|MS056973^Urzey^Bcidib^G^^^^^BayCare Dr Number|I|||||||||||||||||||||SJS||Active|||20180118125700

ORC|NW|13507309211^HNAM\_ORDERID|||Ordered||^q12hr (interval)^^20180625140000||20180625131841|PJK89237^Konidas^Pete^^^^^^External Id^Personnel^^^External Identifier||FJ1525089^Urzey^Bcidib^G^^^^^DEA No^Personnel^^^DOCDEA^CD:490837690~MS056973^Urzey^Bcidib^G^^^^^CD:228049736^Personnel^^^Username^CD:490837690~OTH000^Urzey^Bcidib^G^^^^^UPIN^Personnel^^^DOCUPIN^CD:490837690~1851542922^Urzey^Bcidib^G^^^^^NPI Number^Personnel^^^National Provider Identifier^CD:490837690~ME105040^Urzey^Bcidib^G^^^^^Doctor License Number^Personnel^^^LICENSENBR^CD:490837690~13889^Urzey^Bcidib^G^^^^^MCS^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~13889^Urzey^Bcidib^G^^^^^MDU^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~13889^Urzey^Bcidib^G^^^^^MPH^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~13889^Urzey^Bcidib^G^^^^^NBY^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~13889^Urzey^Bcidib^G^^^^^SJN^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~13889^Urzey^Bcidib^G^^^^^SFB^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~13889^Urzey^Bcidib^G^^^^^SAH^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~13889^Urzey^Bcidib^G^^^^^SJH^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~13889^Urzey^Bcidib^G^^^^^SJW^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~MS056973^Urzey^Bcidib^G^^^^^BayCare Dr Number^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~6359829970002^Urzey^Bcidib^G^^^^^CD:379418085^Personnel^^^SureScripts Prescriber Index~13889^Urzey^Bcidib^G^^^^^CD:1025606149^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~6359829970003^Urzey^Bcidib^G^^^^^CD:379418085^Personnel^^^SureScripts Prescriber Index~6359829970004^Urzey^Bcidib^G^^^^^CD:379418085^Personnel^^^SureScripts Prescriber Index|||20180625131840

RXO|RXCUST\_INTERMITTENT^^^^Vancocin|250|||||||||0||0||||H1.500000||||166.670000|mL/hr

RXR|IV^IV|||INTERMITTENT

RXC|A|vancomycin^vancomycin^PYXIS^^Vancocin|1250|mg

RXC|B|Dextrose 5% in Water^Dextrose 5%^PYXIS^^Dextrose 5%|250|mL

RXE|^q12hr (interval)^^20180625140000|RXCUST\_INTERMITTENT^^^^Vancocin|250||mL|||||||||PJK89237^Konidas^Pete^^^^^^External Id^Personnel^^^External Identifier|13507309211|||||||H1.500000|166.670000|mL/hr

RXR|IV^IV|||INTERMITTENT

RXC|A|2344023^<<vancomycin 500 mg Inj^Pyxis Interface ID^^Vancocin|3|EA

RXC|B|2340930^Dextrose 5%- 250 ml^Pyxis Interface ID^^Dextrose 5%|1|EA

ZX1|||||||Intermittent CAPS

OBX|1|IS|Stop Type^Stop Type^PYXIS

OBX|2|NM|Total Volume^Total Volume^PYXIS||250

OBX|3|TS|Next Dose Dt Tm^Next Dose Dt Tm^PYXIS||20180625140000

OBX|4|ID|CD:3108491527^RT Task indiCAPSr||N

**RDS**

MSH|^~\&|HNAM|SJS|EICU|SJS|20180625131844||RDS^O01|Q4158902006T5402712027||2.3||||||8859/1

PID|1|7000016967^^^BCMRN^MRN^SOARIAN|7000016967^^^BCMRN^MRN^SOARIAN~810016515^^^BayCare CMRN^Community Medical Record Number^SOARIAN|810016515^^^BayCare EAD CPI^Historical CMRN^SOARIAN|CAPS^SJSONE^^^^^Current||19801025|F||W|2995 DREW STREET^^Clearwater^FL^33759^^Home||||English|S|CHR|6000036527^^^BCFN^FIN NBR^SOARIAN||||NOH|||0

PV1|1|I|A3EA^3209^A^SJS^^Bed(s)^SJS|R|||MS056973^Urzey^Bcidib^G^^^^^BayCare Dr Number|||MED||||CD:32770251||N|MS056973^Urzey^Bcidib^G^^^^^BayCare Dr Number|I|||||||||||||||||||||SJS||Active|||20180118125700

ORC|NW|13507309211^HNAM\_ORDERID|329752152^HNAM\_DISPENSEID|329752151^HNAM\_RUNID|Ordered||^q12hr (interval)^^20180625140000^^^^vancomycin + D5W IV q12hr (interval) 166.67 mL/hr||20180625131844||PJK89237^Konidas^Pete^^^^^^External Id^Personnel^^^External Identifier|FJ1525089^Urzey^Bcidib^G^^^^^DEA No^Personnel^^^DOCDEA^CD:490837690~MS056973^Urzey^Bcidib^G^^^^^CD:228049736^Personnel^^^Username^CD:490837690~OTH000^Urzey^Bcidib^G^^^^^UPIN^Personnel^^^DOCUPIN^CD:490837690~1851542922^Urzey^Bcidib^G^^^^^NPI Number^Personnel^^^National Provider Identifier^CD:490837690~ME105040^Urzey^Bcidib^G^^^^^Doctor License Number^Personnel^^^LICENSENBR^CD:490837690~13889^Urzey^Bcidib^G^^^^^MCS^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~13889^Urzey^Bcidib^G^^^^^MDU^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~13889^Urzey^Bcidib^G^^^^^MPH^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~13889^Urzey^Bcidib^G^^^^^NBY^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~13889^Urzey^Bcidib^G^^^^^SJN^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~13889^Urzey^Bcidib^G^^^^^SFB^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~13889^Urzey^Bcidib^G^^^^^SAH^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~13889^Urzey^Bcidib^G^^^^^SJH^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~13889^Urzey^Bcidib^G^^^^^SJW^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~MS056973^Urzey^Bcidib^G^^^^^BayCare Dr Number^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~6359829970002^Urzey^Bcidib^G^^^^^CD:379418085^Personnel^^^SureScripts Prescriber Index~13889^Urzey^Bcidib^G^^^^^CD:1025606149^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~6359829970003^Urzey^Bcidib^G^^^^^CD:379418085^Personnel^^^SureScripts Prescriber Index~6359829970004^Urzey^Bcidib^G^^^^^CD:379418085^Personnel^^^SureScripts Prescriber Index||||NW^Initial Doses

RXE|^q12hr (interval)^^20180625140000^^^^vancomycin + D5W IV q12hr (interval) 166.67 mL/hr|2344023^<<vancomycin 500 mg Inj^Pyxis Interface ID|3|250|EA^EA^^^1,250 mg|Inj^Inj||||3|EA^EA|||PJK89237^Konidas^Pete^^^^^^External Id^Personnel^^^External Identifier|13507309211|||20180625131844||||H2|166.67|mL/hr^mL/hr

RXR|IV^IV|||IVP

ZXE|1|1|1|20180625140000|3|EA^EA

ZX1|||||||Intermittent CAPS||JS CAPS Non-Sterile

RXE|^q12hr (interval)^^20180625140000^^^^vancomycin + D5W IV q12hr (interval) 166.67 mL/hr|2340930^Dextrose 5%- 250 ml^Pyxis Interface ID|1|250|EA^EA^^^250 mL|Inj^Inj||||1|EA^EA|||PJK89237^Konidas^Pete^^^^^^External Id^Personnel^^^External Identifier|13507309211|||20180625131844||||H2|166.67|mL/hr^mL/hr

RXR|IV^IV|||IVP

ZXE|1|1|1|20180625140000|1|EA^EA

**Message # 2 PRN med Initial dose**

**RDE**

MSH|^~\&|HNAM|MCS|EICU|MCS|20180709101008||RDE^O01|Q4159849037T5404564595||2.3||||||8859/1

PID|1|7000057822^^^BCMRN^MRN^SOARIAN|7000057822^^^BCMRN^MRN^SOARIAN~810068421^^^BayCare CMRN^Community Medical Record Number^SOARIAN||CAPS^TESTONE^^^^^Current||19820704|F||W|2995 DREW STREET^^Clearwater^FL^33759^^Home||||English|S|CHR|6000087981^^^BCFN^FIN NBR^SOARIAN||||NOH|||0

PV1|1|I|5EMC^5342^P^MCS^^Bed(s)^Mease Countrysi|R|||MS063863^Urzey^Dida^Z^^^^^BayCare Dr Number|||MED||||CD:32770251||N|MS063863^Urzey^Dida^Z^^^^^BayCare Dr Number|I||8|||||||||||||||||||MCS||Active|||20180612102800

ORC|NW|13525613037^HNAM\_ORDERID|||Ordered||^q12hr^^20180709100500^^^PRN||20180709101004|PJK89237^Konidas^Pete^^^^^^External Id^Personnel^^^External Identifier||FJ3709512^Urzey^Dida^Z^^^^^DEA No^Personnel^^^DOCDEA^CD:490837690~17964^Urzey^Dida^Z^^^^^MCS^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~17964^Urzey^Dida^Z^^^^^MDU^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~17964^Urzey^Dida^Z^^^^^MPH^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~17964^Urzey^Dida^Z^^^^^NBY^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~17964^Urzey^Dida^Z^^^^^SJN^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~17964^Urzey^Dida^Z^^^^^SJH^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~17964^Urzey^Dida^Z^^^^^SJW^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~17964^Urzey^Dida^Z^^^^^SFB^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~17964^Urzey^Dida^Z^^^^^SAH^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~MS063863^Urzey^Dida^Z^^^^^CD:228049736^Personnel^^^Username^CD:490837690~1063649937^Urzey^Dida^Z^^^^^NPI Number^Personnel^^^National Provider Identifier^CD:490837690~OS11855^Urzey^Dida^Z^^^^^Doctor License Number^Personnel^^^LICENSENBR^CD:490837690~MS063863^Urzey^Dida^Z^^^^^BayCare Dr Number^Personnel^^^ORGANIZATION DOCTOR^CD:490837690|||20180709101005

RXO|levetiracetam^levetiracetam^PYXIS^^Keppra|500||mg^^^^500 mg / 5 mL|Soln^Soln||||||0||0

RXR|PO^PO|||MED

RXE|^q12hr^^20180709100500^^^PRN|2342019^levetiracetam 500 mg/5 mL soln^Pyxis Interface ID^^Keppra|500||mg^^^^500 mg / 5 mL|Soln^Soln|^Concentration = 100mg/mL|||1|EA|||PJK89237^Konidas^Pete^^^^^^External Id^Personnel^^^External Identifier|13525613037

RXR|PO^PO|||MED

ZX1|||||||Med CAPS

OBX|1|IS|Stop Type^Stop Type^PYXIS

OBX|2|ID|CD:3108491527^RT Task indiCAPSr||N

**RDS**

MSH|^~\&|HNAM|MCS|EICU|MCS|20180709101010||RDS^O01|Q4159849047T5404564615||2.3||||||8859/1

PID|1|7000057822^^^BCMRN^MRN^SOARIAN|7000057822^^^BCMRN^MRN^SOARIAN~810068421^^^BayCare CMRN^Community Medical Record Number^SOARIAN||CAPS^TESTONE^^^^^Current||19820704|F||W|2995 DREW STREET^^Clearwater^FL^33759^^Home||||English|S|CHR|6000087981^^^BCFN^FIN NBR^SOARIAN||||NOH|||0

PV1|1|I|5EMC^5342^P^MCS^^Bed(s)^Mease Countrysi|R|||MS063863^Urzey^Dida^Z^^^^^BayCare Dr Number|||MED||||CD:32770251||N|MS063863^Urzey^Dida^Z^^^^^BayCare Dr Number|I||8|||||||||||||||||||MCS||Active|||20180612102800

ORC|NW|13525613037^HNAM\_ORDERID|329752473^HNAM\_DISPENSEID|329752472^HNAM\_RUNID|Ordered||^q12hr^^20180709100500^^^PRN^levetiracetam 500 mg / 5 mL Soln PO q12hr PRN Other: SEE COMMENT||20180709101009||PJK89237^Konidas^Pete^^^^^^External Id^Personnel^^^External Identifier|FJ3709512^Urzey^Dida^Z^^^^^DEA No^Personnel^^^DOCDEA^CD:490837690~17964^Urzey^Dida^Z^^^^^MCS^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~17964^Urzey^Dida^Z^^^^^MDU^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~17964^Urzey^Dida^Z^^^^^MPH^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~17964^Urzey^Dida^Z^^^^^NBY^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~17964^Urzey^Dida^Z^^^^^SJN^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~17964^Urzey^Dida^Z^^^^^SJH^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~17964^Urzey^Dida^Z^^^^^SJW^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~17964^Urzey^Dida^Z^^^^^SFB^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~17964^Urzey^Dida^Z^^^^^SAH^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~MS063863^Urzey^Dida^Z^^^^^CD:228049736^Personnel^^^Username^CD:490837690~1063649937^Urzey^Dida^Z^^^^^NPI Number^Personnel^^^National Provider Identifier^CD:490837690~OS11855^Urzey^Dida^Z^^^^^Doctor License Number^Personnel^^^LICENSENBR^CD:490837690~MS063863^Urzey^Dida^Z^^^^^BayCare Dr Number^Personnel^^^ORGANIZATION DOCTOR^CD:490837690||||NW^**Initial Doses**

RXE|^q12hr^^20180709100500^^^PRN^levetiracetam 500 mg / 5 mL Soln PO q12hr PRN Other: SEE COMMENT|2342019^levetiracetam 500 mg/5 mL soln^Pyxis Interface ID|1||EA^EA^^^500 mg / 5 mL|Soln^Soln|^Concentration = 100mg/mL|||1|EA^EA|||PJK89237^Konidas^Pete^^^^^^External Id^Personnel^^^External Identifier|13525613037|||20180709101010

RXR|PO^PO|||MED

ZXE|1|1|1||1|EA^EA

ZX1|||||||Med CAPS||MC CAPS Non-Sterile

**# 3 PRN med Extra Dose e.g. RDS**

MSH|^~\&|HNAM|MCS|EICU|MCS|20180709102017||RDS^O01|Q4159849816T5404566090||2.3||||||8859/1

PID|1|7000057822^^^BCMRN^MRN^SOARIAN|7000057822^^^BCMRN^MRN^SOARIAN~810068421^^^BayCare CMRN^Community Medical Record Number^SOARIAN||CAPS^TESTONE^^^^^Current||19820704|F||W|2995 DREW STREET^^Clearwater^FL^33759^^Home||||English|S|CHR|6000087981^^^BCFN^FIN NBR^SOARIAN||||NOH|||0

PV1|1|I|5EMC^5342^P^MCS^^Bed(s)^Mease Countrysi|R|||MS063863^Urzey^Dida^Z^^^^^BayCare Dr Number|||MED||||CD:32770251||N|MS063863^Urzey^Dida^Z^^^^^BayCare Dr Number|I||8|||||||||||||||||||MCS||Active|||20180612102800

ORC|CD:2344|13525613037^HNAM\_ORDERID|329752479^HNAM\_DISPENSEID|329752478^HNAM\_RUNID|Ordered||^q12hr^^20180709100500^^^PRN^levetiracetam 500 mg / 5 mL Soln PO q12hr PRN Other: SEE COMMENT||20180709102017||PJK89237^Konidas^Pete^^^^^^External Id^Personnel^^^External Identifier|FJ3709512^Urzey^Dida^Z^^^^^DEA No^Personnel^^^DOCDEA^CD:490837690~17964^Urzey^Dida^Z^^^^^MCS^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~17964^Urzey^Dida^Z^^^^^MDU^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~17964^Urzey^Dida^Z^^^^^MPH^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~17964^Urzey^Dida^Z^^^^^NBY^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~17964^Urzey^Dida^Z^^^^^SJN^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~17964^Urzey^Dida^Z^^^^^SJH^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~17964^Urzey^Dida^Z^^^^^SJW^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~17964^Urzey^Dida^Z^^^^^SFB^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~17964^Urzey^Dida^Z^^^^^SAH^Personnel^^^ORGANIZATION DOCTOR^CD:490837690~MS063863^Urzey^Dida^Z^^^^^CD:228049736^Personnel^^^Username^CD:490837690~1063649937^Urzey^Dida^Z^^^^^NPI Number^Personnel^^^National Provider Identifier^CD:490837690~OS11855^Urzey^Dida^Z^^^^^Doctor License Number^Personnel^^^LICENSENBR^CD:490837690~MS063863^Urzey^Dida^Z^^^^^BayCare Dr Number^Personnel^^^ORGANIZATION DOCTOR^CD:490837690||||CD:2344^**Extra Dose**

RXE|^q12hr^^20180709100500^^^PRN^levetiracetam 500 mg / 5 mL Soln PO q12hr PRN Other: SEE COMMENT|2342019^levetiracetam 500 mg/5 mL soln^Pyxis Interface ID|1||EA^EA^^^500 mg / 5 mL|Soln^Soln|^Concentration = 100mg/mL|||1|EA^EA|||PJK89237^Konidas^Pete^^^^^^External Id^Personnel^^^External Identifier|13525613037|||20180709102017

RXR|PO^PO|||MED

**ZXE**|1|1|1|**20180709102014**|1|EA^EA

ZX1|||||||Med CAPS||MC CAPS Non-Sterile

**Test messages from Prod after the build on 7/23, which posted messages to CAPS accurately:**

MSH|^~\&|HNAM|SJS|EICU|SJS|20180724090719||RDE^O01|Q4643421507T6147172563||2.3||||||8859/1

PID|1|2104653073^^^BCMRN^MRN^SOARIAN|1116400^^^SJH MRN^MRN^SJH~102830371^^^BayCare CMRN^Community Medical Record Number^SOARIAN~907609^^^SAH MRN^MRN^SAH~2104653073^^^BCMRN^MRN^SOARIAN~981752870^^^MPH MRN^MRN^MPH~960384649^^^MCS MRN^MRN^MCS~2667274^^^CD:1069890483^MRN^CD:1054310291|102830371^^^BayCare EAD CPI^Historical CMRN^SOARIAN~A722FC6E1A994CD3A9B84BC727303DF7^^^CD:798794899^Messaging|TEST^TEST^^^^^Current||19010101|M||W|1167 Peter [Blvd^^Clearwater^FL^33755^^Home~none@baycare.org^^^^^^e-mail||^PRN^^none@baycare.org~(813)555-5555^PRN||English|S|UNK|1100830763^^^BCFN^FIN](mailto:Blvd%5e%5eClearwater%5eFL%5e33755%5e%5eHome~none@baycare.org%5e%5e%5e%5e%5e%5ee-mail||%5ePRN%5e%5enone@baycare.org~(813)555-5555%5ePRN||English|S|UNK|1100830763%5e%5e%5eBCFN%5eFIN) NBR^SOARIAN||||NOH|||0

PV1|1|O|RADSH^^^SJS^^Ambulatory(s)^SJS||||MS006981^Woeste^Troy^A^^^^^BayCare Dr Number|||RAD||||||N|MS006981^Woeste^Troy^A^^^^^BayCare Dr Number|O|||||||||||||||||||||SJS||Active|||20150630080000

ORC|NW|15189277877^HNAM\_ORDERID|||Ordered||^q12hr^^20180724210000||20180724090718|^Walton^Joseph^R^^^^^^Personnel||^SYSTEM^Donotchange^^^^^^^Personnel|||20180724090719

RXO|RXCUST\_INTERMITTENT^^^^vancomycin|250|||||||||0||0||||H1.500000||||166.670000|mL/hr

RXR|IV^IV|||INTERMITTENT

RXC|A|vancomycin^vancomycin^PYXIS^^vancomycin|1250|mg

RXC|B|Dextrose 5% in Water^Dextrose 5%^PYXIS^^Dextrose 5%|250|mL

RXE|^q12hr^^20180724210000|RXCUST\_INTERMITTENT^^^^vancomycin|250||mL|||||||||^Walton^Joseph^R^^^^^^Personnel|15189277877|||||||H1.500000|166.670000|mL/hr

RXR|IV^IV|||INTERMITTENT

RXC|A|2344023^<<vancomycin 500 mg Inj^Pyxis Interface ID^^vancomycin|3|EA

RXC|B|2340930^Dextrose 5%- 250 ml^Pyxis Interface ID^^Dextrose 5%|1|EA

ZX1|||||||Intermittent DEMAND CAPS

OBX|1|IS|Stop Type^Stop Type^PYXIS

OBX|2|NM|Total Volume^Total Volume^PYXIS||250

MSH|^~\&|HNAM|SJS|EICU|SJS|20180724090719||RDS^O01|Q4643421529T6147172595||2.3||||||8859/1

PID|1|2104653073^^^BCMRN^MRN^SOARIAN|1116400^^^SJH MRN^MRN^SJH~102830371^^^BayCare CMRN^Community Medical Record Number^SOARIAN~907609^^^SAH MRN^MRN^SAH~2104653073^^^BCMRN^MRN^SOARIAN~981752870^^^MPH MRN^MRN^MPH~960384649^^^MCS MRN^MRN^MCS~2667274^^^CD:1069890483^MRN^CD:1054310291|102830371^^^BayCare EAD CPI^Historical CMRN^SOARIAN~A722FC6E1A994CD3A9B84BC727303DF7^^^CD:798794899^Messaging|TEST^TEST^^^^^Current||19010101|M||W|1167 Peter [Blvd^^Clearwater^FL^33755^^Home~none@baycare.org^^^^^^e-mail||^PRN^^none@baycare.org~(813)555-5555^PRN||English|S|UNK|1100830763^^^BCFN^FIN](mailto:Blvd%5e%5eClearwater%5eFL%5e33755%5e%5eHome~none@baycare.org%5e%5e%5e%5e%5e%5ee-mail||%5ePRN%5e%5enone@baycare.org~(813)555-5555%5ePRN||English|S|UNK|1100830763%5e%5e%5eBCFN%5eFIN) NBR^SOARIAN||||NOH|||0

PV1|1|O|RADSH^^^SJS^^Ambulatory(s)^SJS||||MS006981^Woeste^Troy^A^^^^^BayCare Dr Number|||RAD||||||N|MS006981^Woeste^Troy^A^^^^^BayCare Dr Number|O|||||||||||||||||||||SJS||Active|||20150630080000

ORC|NW|15189277877^HNAM\_ORDERID|359543187^HNAM\_DISPENSEID|359543182^HNAM\_RUNID|Ordered||^q12hr^^20180724210000^^^^vancomycin + D5W  IV q12hr 166.67 mL/hr||20180724090719||^Walton^Joseph^R^^^^^^Personnel|^SYSTEM^Donotchange^^^^^^^Personnel||||NW^Initial Doses

RXE|^q12hr^^20180724210000^^^^vancomycin + D5W  IV q12hr 166.67 mL/hr|2344023^<<vancomycin 500 mg Inj^Pyxis Interface ID|3|250|EA^EA^^^1,250 mg|Inj^Inj||||3|EA^EA|||^Walton^Joseph^R^^^^^^Personnel|15189277877|||20180724090720||||H2|166.67|mL/hr^mL/hr

RXR|IV^IV|||IVP-

ZXE|1|1|1|20180724210000|3|EA^EA

ZX1|||||||Intermittent DEMAND CAPS||JS CAPS Non-Sterile

RXE|^q12hr^^20180724210000^^^^vancomycin + D5W  IV q12hr 166.67 mL/hr|2340930^Dextrose 5%- 250 ml^Pyxis Interface ID|1|250|EA^EA^^^250 mL|Inj^Inj||||1|EA^EA|||^Walton^Joseph^R^^^^^^Personnel|15189277877|||20180724090720||||H2|166.67|mL/hr^mL/hr

RXR|IV^IV|||IVP

# **5. Testing**

## 5.1. Unit Testing Scenarios

|  |  |
| --- | --- |
| **Scenario** | **Expected Result** |
| Add Pharmacy orders for IV Fluids in Cerner Pharmnet app. | Ensure that both ORDER and DISPENSE messages are processed to BD CAPS system via Cerner /Cloverleaf engine. |
| Add Extra Dose to the existing Pharmacy orders | Ensure that DISPENSE message is processed from Cerner Pharmnet to BD CAPS system |
| Pharmacy orders for PRN IV fluids | Ensure that both ORDER and DISPENSE messages are processed to BD CAPS system |
| Add Extra Dose to the existing Pharmacy PRN orders | Ensure that DISPENSE message is processed to BD CAPS system |

## 5.2 Integrated Testing Scenarios

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

## 5.3 Testing Approvals

|  |  |  |  |
| --- | --- | --- | --- |
| **Testing Phase** | **Date** | **Department** | **Team Member** |
| PH1.UNIT |  | Pharmnet | Pete Konidas, Joseph Walton. |
| PH1.INTEGRATED | 06/01/2019 | Project Manager | Luis Lopez |

### 

## 5.4 Piloting

List the facilities and associated networks in scope for pilot testing.

## 5.5 Approvals

|  |  |  |  |
| --- | --- | --- | --- |
| **Testing Domain** | **Date** | **Department** | **Team Member** |
| C30 | 05/30/19 | Pharmnet | Joseph Walton |
| P30 | 07/16/19 | Pharmnet | Joseph Walton |
|  |  |  |  |

# 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.

FSI:

Build comserver: RDE\_RDS\_PHARMACY

Attach script: rde\_rds\_pharm\_out

Start the new comserver

## 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** |
|  |  |  |  |
|  |  |  |  |

Cloverleaf

Build Routes from rdeMfn\_cer\_in to rde-caps\_out for RDE and RDS

Deploy Xlates cerner\_caps\_rde.xlt and cerner\_caps\_rds.xlt

# Appendix A: Risks and Concerns

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Project Name** |  |  | | |  |  |  |  |
| **Number** | **Risk / Concern** | **Comment** | **Mitigation** | | |  |  |  |
| RC.2019.05.30 | RDE may not generate if the correct Dispense Category is not setup or the Order build is not setup correctly |  | |  | |  |  |  |
| RC.2019.05.30 | Medication will need to be verified before the messages will trigger to go outbound |  | |  | |  |  |  |

# 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