Specification [Outbound Home Medications]

MEDITECH

MEDITECH Outbound Home Medications
HL7 2.5.1 Specifications

FINAL

Introduction

General Comments

This specification is concerned with defining an interface between an other vendor anesthesia system and MEDITECH for the purpose of updating the Other Vendor system with new patient medication order information. In addition, this document covers the sequencing of records and the protocol that is to be used for communications between MEDITECH and the other vendor.

A copy of this specification should be provided to the other vendor well in advance of MEDITECH software delivery so that any questions or concerns of the other vendor can be resolved as soon as possible.

Proper cabling between the MEDITECH machine and the other vendor machine will need to be provided by the hospital. MEDITECH can assist in the specification of the correct cable configuration to be used for the inter-machine link.

It is possible that additional devices such as modems or protocol converter units (PCUs) may need to be purchased by the hospital depending on the hardware platform of the other vendor system or on the proximity of the MEDITECH machine to the other vendor machine. MEDITECH may be of some assistance in determining specific needs in this area.

The machine to machine communications will need to be thoroughly tested by MEDITECH and the other vendor prior to any application level testing.

General Message Format and Functionality

The message formats in this document are HL7 version 2.5.1 compliant.

Document references:

HL7 Version 2.5.1: RDE^O11, Draft Standard, July 2012

HL7 Messaging Standard Version 2.5.1, An Application Protocol for Electronic Data Exchange in Healthcare Environments, 2007

Use Case and Workflow

Messages will be passed from the MEDITECH PHA/OM Module to OV Anesthesia System when:

1. A new patient medication order is entered in the MEDITECH system.

In each case, a Pharmacy Treatment Order Message (RDE^O11) will be sent. Only one patient per RDE Message will be accepted. An RDE message should only contain information for a single medication per ORC/RXO/RXR set of segments sent. Multiple ORC/RXO/RXR sets can be included in each message if needed.

Message Structure

MSH	*Message Header*		
	PID	Patient Identifier	
	ORC	Common Order	
		RXO	Pharmacy/Treatment Order
		RXR	Pharmacy/Treatment Route

Messages

This section describes the attributes used to document segment and message formats.

Message Element Attributes:

Format	Description
[XXX]	Optional and singular
{XXX }	Required and may repeat
XXX	Required and singular
[{XX}]	Optional and may repeat

Optionality/Usage:

Code	Usage Description
R	Required - the application shall implement "R" elements
O	Optional
RE	Required but may be Empty - the application shall implement "RE" elements
X	Not Supported - the application shall not implement "X" elements

Code	Description
C	The element has an associated condition predicate. "a" and "b" are placeholders for usage codes representing the True "a" predicate outcome and the False "b" predicate outcome for the condition.

Cardinality:

Code	Description
[0..0]	Element never present
[0..1]	Element may be omitted and can have, at most, one occurrence.
[1..1]	Element must have exactly one occurrence.
[0..*]	Element may be omitted or repeat an unlimited number of times.
[1..*]	Element must appear at least once, and may repeat an unlimited number of times

Message Types

Pharmacy/Treatment Order Message: RDE^O11^RDE_O11

O11 messages will be passed from the **MEDITECH to OV** system

Segment	Name	Opt	Cardinality
MSH	Message Header	R	[1..1]
PID	Patient Identification	R	[1..1]
ORC	Common Order	R	[1..*]
RXO	Pharmacy/Treatment Order	R	[1..*]
RXR	Pharmacy/Treatment Route	O	[0..*]

Segment and Field Descriptions

The following tables are based on information provided in the MU2 Implementation Guide. For those items not covered in the Implementation Guide, the HL7 2.5.1 base specification was referenced.

Table Reference

Format	Description
DT	Data Type - HL7 Data Type
Opt	HL7 Usage

MSH - Message Header Segment

S EQ	Element Name	O pt	DT	C a rd	Example	Explanation
1	Field Separator	R	ST	[1 .. 1]	'|'	This field contains the separator between the segment ID and the first real field, MSH-2-encoding characters. As such it serves as the separator and defines the character to be used as a separator for the rest of the message. Recommended value is "|" (ASCII 124).
2	Encoding Characters	R	ST	[1 .. 1]	'^~\&' or '^~\&#'	This field contains the encoding characters in the following order: the component separator, repetition separator, escape character, and subcomponent separator. Recommended values are "^~\&" (ASCII 94, 126, 92, and 38, respectively) or "^~\&#" (ASCII 94, 126, 92, 38, and 35).
3	Sending Application	RE	HD	[0 .. 1]	PCS	This field uniquely identifies the sending application among all other applications within the network enterprise. MEDITECH does not by default require this field. Configured in Outbox Message Generator dictionary: Sending Application
4	Sending Facility	O	HD	[0 .. 1]	MT	This field uniquely identifies the sending application's facility. MEDITECH does not by default require or send this field. Configured in Outbox Message Generator dictionary: Sending Facility Namespace ID
5	Receiving Application	O	HD	[0 .. 1]	LAB	This field uniquely identifies the receiving application among all other applications within the network enterprise. The network enterprise consists of all those applications that participate in the exchange of HL7 messages within the enterprise. MEDITECH does not require this field. Configured in Outbox Message Generator dictionary: Receiving Application
6	Receiving Facility	O	HD	[0 .. 1]	MT	This field identifies the receiving facility. MEDITECH does not require this field. Configured in Outbox Message Generator dictionary: Receiving Facility
7	Date/Time of Message	R	TS	[1 .. 1]		The date/time that the sending system created the message. Format: MMDDYYYYHHMM
9	Message Type	R	M SG	[1 .. 1]	RDE^O 11RD E_O11	This field contains the message type, trigger event, and the message structure ID for the message.
10	Message Control ID	R	ST	[1 .. 1]		A unique number that identifies this message.
11	Processing ID	R	PT	[1 .. 1]	P or D	"P" if LIVE, "D" for Draft
12	Version ID	R	V ID	[1 .. 1]	'2.5.1'	This field is extracted from the M-AT list message and if not available, defaults to "2.5.1".
15	Accept Acknowledge ment Type	R	ID	[0 .. 1]	'AL'	
16	Application Acknowledge ment Type	R	ID	[0 .. 1]	'NE'	

PID - Patient Identifier Segment

S EQ	Element Name	O pt	DT	C a rd	Example	Explanation
1	Set ID - PID	R	SI		'1'	
2	Patient ID	X				Only used if the HL7 version is less than 2.4
3	Patient Identifier List	R	CX			Medical Record Number^^^^MR^Facility~SS Number or Health Care Number (CAN) ^^^^SS or HC^Facility~EMR Number^^^^EMR^Facility~HIM Rec OID^^^^PI^Facility
4	Alternate Patient ID	X				Only used if the HL7 version is less than 2.4
5	Patient Name	R	X PN			Last^First^Middle^Suffix^Title^Degree
6	Mother's Maiden Name	O	X PN			HimRec.MothersName
7	Date/Time of Birth	O	TS			HimRec.Birthdate or HimRec.birthdate Computed
8	Administratio n Sex	R	IS			HimRec.Sex

9	Patient Alias	X				
10	Race	O	CE			HimRec.Race
11	Patient Address	O	X AD	Street^Street2^City^State^Zip^Country^^ ^County		HimRec.Address1^HimRec.Address2^HimRec.City^HimRec.State^HimRec. Zip^HimRec.Country^^^HimRec.County or MisZipPostal.County
12	County Code	X				
13	Phone Number - Home	O	X TN	primary phone number^"PRN"^phone type~phone number^"ORN"^phone type...		HimRec.PhoneNum^PRN^HimRec.PhoneType~HimRec.PhoneNum^ORN^HimRec. PhoneType
14	Phone Number - Business	O	X TN	employer phone number^"WPN"^"EMP"		HimRec.EplrPhone^WPN^EMP
15	Primary Language	O	CE			HimRec.Language
16	Marital Status	O	CE			HimRec.MaritalStatus
17	Religion	O	CE			HimRec.Religion
18	Patient Account Number	O	CX			RegAcct.AcctNum
19	SSN	O	HD	'123-45-6789'		Social Security Number (US) or Healthcare Number (CAN)

ORC - Common Order Segment

SEQ	Element Name	Opt	DT	Card	Example	Explanation
1	Order Control	R	ID		'NW'	'NW' or 'CA' possibilities for new or cancelled home medications
2	Internal OID	R	EI	[1..1]	EC0-B20160329141312132	Internal MEDITECH identifier for order
3	Order Number	O	EI	[1..X]	2052-913593941200	Unique order identifier in placer system.
5	Order Status	R	ID	[1..1]	'Verified'	The status of the Rx.
7	Quantity /Timing	R	TQ	[1..1]	'10&MG^BID^10^20160204'	Quantity&Units^Frequency^Number of Days^Start Date. Quantity and Units can also be sent in the RXO segment.
9	Order Date /Time	O	TS	[0..1]	'201602021123'	YYYYMMDDhhmm
10	Ordering User	O	XCN	[0..1]	ID^La^Fi^Mi^SU^TI^DE	Name of the provider/user who has entered the order.
11	Verified User	R	XCN	[0..1]	ID^La^Fi^Mi^SU^TI^DE	Name of the provider who has verified the order
12	Provider Name	R	XCN	[0..1]	ID^La^Fi^Mi^SU^TI^DE	Name of the provider who is responsible for the order
13	Order Location	O	HD	[0..1]	'PCVINAC4'	OmOrd.OrderLocation
16	Order Reason	O	FT	[0..1]	'Complaint of Headache'	
18	Entering Device	R	ID	[1..1]	'BG01'	Computer mnemonic where order was entered.
19	Action By User	O	XCN	[0..1]	ID^La^Fi^Mi^SU^TI^DE	Name of the provider/user who has entered the order.

RXO - Pharmacy/Treatment Order Segment

SEQ	Element Name	Opt	DT	Card	Example	Explanation

					Example	
1	RXCUI Code / Med Name	R	SI	[1..1]	'200809^Furosemide [Lasix]^RXNORM'	RXCUI Code^Medication Name^Code system
2	Quantity	C	NM	[0..1]	'40'	Dose Quantity
4	Units	C	CE	[0..1]	'MG'	Dose Units
5	Dispense Form	R	CE	[1..1]	'Tablet'	Definition: This field indicates the manner in which the treatment is aggregated for dispensing, e.g., tablets, capsules suppositories.
7	Administration Instructions	O	CE	[0..1]	'Take right before bed'	Instruction for administration of home medication.
18	Requested Strength	O	NM	[0..1]	40	
19	Requested Strength Units	O	CE	[0..1]	mg	

RXR - Pharmacy/Treatment Route

SEQ	Element Name	Opt	DT	Card	Example	Explanation
1	Route	R	CE	[1..1]	'PO'	This field transmits information on house the home medication is intended to be administered. Entries are populated within the route of administration dictionary and linked in PHA build.

Sample Messages

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MSH|^~\&||C|||201603291413||RDE^O11^RDE_O11|880253|D||||AL|NE|
PID|1||IA00002147^^^^MR^C~005-55-1950^^^^SS^C~I0-
B20160329131506744^^^^PI^C~I00002313^^^^EMR^C||Testington^Geoff^^^^^L||19500704|M||CA|3200 Mout Vernon
Highway^^MOUNT VERNON^VA^22121||||(555)555-5555||
||EC0000009610|005-55-1950|
ORC|NW|EC0-B20160329141312132|6032-
914131213200||Verified||^BID||201603291412|JAGM^Jagminas^Liudas^^^^^^^^^^XX|JAGM^Jagminas^Liudas^^^^^^^^^^XX|JA
GM^Jagminas^Liudas^^^^^^^^^^XX||||||MKTWPL-AS1|JAGM^Jag
minas^Liudas^^^^^^^^^^XX|EC0-B20160329141312132|
RXO|310964^Ibuprofen [Advil Liqui-gels]^RXNORM|400||MG|capsule||||||||||||||200|mg|
RXR|PO|
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