Add a new event (and message type) for "Receive Notification"

V 2.9 HL7 Proposal	
Change Request ID:	Xxx
File Name:	xxx
Description:	Add message type "Receive Notification"
Status:	
HL7-Version	2.9
Chapter/Section	
Sponsoring Person	
Sponsoring Business Unit	
Date Originated:	21/08/14
Date HL7 approved:	
Backward Compatible:	**Yes**
Forward Compatible:	**Yes**
HL7 Status & Date	

Justification Detail

Currently HL7 v2 includes the mechanism to notify the dispense of items. This is sufficient for covering most administrative questions. When covering supply aspects, there is one additional concern: In several cases, the items dispensed/shipped are not the same that are accepted by the receiver. The shipment and the reception of items are different events. The only mention to this in the standard seems to cover this use case with a same RDS message and event O13:

From section 4A.3.7:

> "In the case where <u>the RDS message represents a dispense event that is in process (i.e., has not been received by the patient)</u>, the financial transactions associated with the dispense do not yet exist. Until the financial transactions associated with the dispense event have been completed, no FT1 segment may exist in the message.

> In the case where <u>the RDS message represents a dispense event that has been received by the patient</u>, and thus all financial transactions have been completed, the RDS message may contain one or more FT1 segments. „

An example use case that further underlines the difference between what is dispensed and what is received:

The paediatric ward of a hospital has a minimum stock of vaccines. Since the shelf life of these vaccines is short and they require cold storage, the ward only keeps a low stock. After ordering 10 units from the central pharmacy, the ward receives the notification (packing list) containing the quantities, and the lot numbers and expiry dates. The ward system immediately acknowledges that the shipment notification has been received, and awaits the reception of the shipment itself.

Upon receiving the items a few hours later, the ward nurse notices that only 8 units effectively arrive (the other 2 are presumed lost), and 2 from the other 8 are no longer transparent, which means that they have been exposed to ambient temperature.

The ward must inform the central pharmacy that the effectively received items are 6, and includes the lot numbers and expiry dates of these received items. These are the ones that are billed and that matter for inventory.

Optionally, the ward can register that 2 spoiled items have been received, note their identification, lot numbers, etc. Based on this, the Pharmacy can advise whether these items should be discarded on the spot or returned to the pharmacy.

This message refers to actual physical items – i.e. items with lot numbers, expiry dates, etc., so the message structure should include these elements.

The proposed solution is:

1. ~~Do not change the norm, but clarify that the same event number can represent the two different events.~~
2. **Implement a new event for the RDS message**, meaning "Dispense Received". The message structure can be kept. This is similar to the message RDE having two events – O11 and O25. The usage of each of the RDS events should be clarified.
3. ~~Implement another message type and event, similar to the RDS in content, meaning "dispense received". Clarify the intent of both the RDS and the new message.~~

The following change supports this option.

1. Add a paragraph to the intro in 4A.3.7

The RDS message may be created by the pharmacy/treatment application for each instance of dispensing a drug or treatment to fill an existing order or orders. In the most common case, the RDS messages would be routed to a Nursing application or to some clinical application, which needs the data about drugs dispensed or treatments given. As a site-specific variant, the original order segments (RXO, RXE and their associated RXR/RXCs) may be sent optionally (for comparison).

The RDS^O13 message is used to communicate the dispensing event, i.e. the event of actual dispensing. It can also be used to communicate the reception of the dispensed items. As of v2.9, there is a dedicated event for the reception: The message to be used to inform the reception of medication is RDS^OXX.

The ORC must have the filler order number and the order control code RE. The RXE and associated RXCs may be present if the receiving application needs any of their data. The RXD carries the dispense data for a given issuance of medication: thus it may describe a single dose, a half-day dose, a daily dose, a refill of a prescription, etc. The RXD is not a complete record of an order. Use the RXO and RXE segments if a complete order is needed. It is a record from the pharmacy or treatment supplier to the Nursing application (or other) with drug/treatment dispense and administration instructions.

The FT1 segment is optional and repeating in order to accommodate multiple charge, benefit and pricing situations. Example use cases demonstrating zero, one and two FT1 segments follow:

> In the case where the RDS message represents a dispense event that is in process (i.e., has not been received by the patient), the financial transactions associated with the dispense do not yet exist. Until the financial transactions associated with the dispense event have been completed, no FT1 segment may exist in the message.

> In the case where the RDS message represents a dispense event that has been received by the patient, and thus all financial transactions have been completed, the RDS message may contain one or more FT1 segments. Examples of single and multiple FT1 segments follow.

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Payment for the dispense event completed by a single payor:
MSH|^&~\|Pharm|GenHosp|CIS|GenHosp|2006082911150700||RDS^O13^RDS_013|...<cr>

PID|...<cr>

ORC|RE|...<cr>

RXD|1|00310-0131-10^LISINOPRIL 10MG TABLET^NDC|200607150830|100|TAB|...<cr>

FT1|1|||200607151035||PY|00310-0131-10^LISINOPRIL 10MG TABLET^NDC|||100|125.43&USD|...<cr>

Payment for the dispense event involves multiple payment sources:
MSH|^&~\|Pharm|GenHosp|CIS|GenHosp|2006082213000700||RDS^O13^RDS_013|...<cr>

PID|...<cr>

ORC|RE|...<cr>

RXD|1|00340-0241-10^VERAPAMIL 120MG TABLET^NDC|200607200940|100|TAB|...<cr>

FT1|1|||200607211055||CD|00340024110^VERAPAMIL 120MG TABLET ^NDC|||100|55.43&USD|...<cr>
   (amount paid by insurance)

FT1|2|||200607211055||CP|00340024110^VERAPAMIL 120MG TABLET ^NDC|||100|5.00&USD|...<cr>
   (copay paid by patient)

The use of RDS with the trigger of O01 and RRD with the trigger O02 is maintained for backward compatibility as of v2.4 and is withdrawn as of v2.7.

2. 2. Add the following:

RDS - Pharmacy/Treatment Dispense Message (Event OXX)

The RDS^O98 message may be created to communicate the reception of items. This message supports reception of items to fill an existing order or orders, or to stock refills. In the most common case, the RDS^OXX messages would be routed to the dispensing system that issued the RDS^O13 message. The RDS message informs of the items that have been sent, while the RDS^OXX informs about the effectively received items (thus supporting any change in quantities, status,e tc., derived from transport or from a mismatch between the actually sent items and the content of the RDS^O13).

In many cases, the RDS^OXX message is an "echo" of one RDS^O13, but this is not forcibly so: Since the shipment and reception are asynchronous events, and considering variants in delivery, it is expected that one RDS^OXX message is issued for each confirmation of a reception, independently of whether there was one shipment or several shipments.

The RXD segment carries the dispense data for a given reception of the received items.

The FT1 segment is optional and repeating in order to accommodate multiple charge, benefit and pricing situations. When a message of type RDS^OXX is used, the FT1 may be included in the RDS^OXX message. If the RDS^OXX message is not used by the implementation, then the RDS^O13 may contain the FT1 segment.

RDS^OXX^RDS_OXX: Pharmacy/Treatment Dispense Message

Segments	Description	Status	Chapter
MSH	Message Header		2
[{ SFT }]	Software		2
[UAC]	User Authentication Credential		2
[{ NTE }]	Notes and Comments (for Header)		2
[	--- PATIENT begin		
PID	Patient Identification		3
[	--- ADDITIONAL_DEMOGRAPHICS begin		
PD1	Additional Demographics		3
[{PRT}]	Participation (for Additional Demographics)		7
]	--- ADDITIONAL_DEMOGRAPHICS end		
[{ NTE }]	Notes and Comments (for PID)		2
[{ AL1 }]	Allergy Information		2
[	--- PATIENT_VISIT begin		
PV1	Patient Visit		3
[PV2]	Patient Visit – Additional Info		3
[{PRT}]	Participation (for Patient Visit)		7
]	--- PATIENT_VISIT end		
]	--- PATIENT end		
{	--- ORDER begin		
ORC	Common Order		4
[{	--- TIMING begin		
TQ1	Timing/Quantity		4
[{ TQ2 }]	Timing/Quantity Order Sequence		4
}]	--- TIMING end		
[	--- ORDER DETAIL begin		
RXO	Pharmacy /Treatment Order		4
[	--- ORDER DETAIL SUPPLEMENT begin		
{ NTE }	Notes and Comments (for RXO)		2
{ RXR }	Pharmacy/Treatment Route		4
[{	--- COMPONENT begin		
RXC	Pharmacy/Treatment Component		4
[{ NTE }]	Notes and Comments (for each RXC)		2
}]	--- COMPONENT end		
]	--- ORDER_DETAIL_SUPPLEMENT end		

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Jose Costa Teixeira 2014-10-23 7:06 AM
Comment [2]: XX = Number to be assigned

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Comment [3]: XX = Number to be assigned

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Comment [4]: XX = Number to be assigned

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Comment [5]: XX = Number to be assigned

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Comment [6]: XX = Number to be assigned

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Comment [7]: XX = Number to be assigned

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Comment [8]: Numbe to be assigned

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Comment [9]: XX = Number to be assigned

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Comment [10]: XX = Number to be assigned

Segments	Description	Status	Chapter
]	--- ORDER_DETAIL end		
[{PRT}]	Participation (for Order)		7
[	--- ENCODING begin		
RXE	Pharmacy/Treatment Encoded Order		4
[{PRT}]	Participation (for Order Encoding)		7
[{ NTE }]	Notes and Comments (for RXE)		2
{	--- TIMING_ENCODED begin		
TQ1	Timing/Quantity		4
[{ TQ2 }]	Timing/Quantity Order Sequence		4
}	--- TIMING ENCODED end		
{ RXR }	Pharmacy/Treatment Route		4
[{ RXC }]	Pharmacy/Treatment Component		4
]	--- ENCODING end		
RXD	Pharmacy/Treatment Dispense		4
[{PRT}]	Participation (for Treatment Dispense)		7
[{ NTE }]	Notes and Comments (for RXD)		2
{ RXR }	Pharmacy/Treatment Route		4
[{ RXC }]	Pharmacy/Treatment Component		4
[{	--- OBSERVATION begin		
OBX	Results		7
[{PRT}]	Participation (for Observation)		7
[{ NTE }]	Notes and Comments (for OBX)		2
}]	--- OBSERVATION end		
[{ FT1 }]	Financial Transaction segment		6
}	--- ORDER end		

> **Note:** The NTE segment(s) following the PD1 segment are intended to communicate notes and comments relative to the patient.
>
> The NTE segment(s) following the RXO segment are intended to communicate notes and comments relative to the pharmacy/treatment order.
>
> The NTE segment(s) following the RXE segment are intended to communicate notes and comments relative to the encoded order.
>
> The NTE segment(s) following the RXD segment are intended to communicate notes and comments relative to the dispense event.
>
> The NTE segment(s) following the RXC segment are intended to communicate notes and comments relative to the component(s).
>
> The NTE segment following the OBX segment is intended to communicate notes and comments relative to the results.

RRD - Pharmacy/Treatment Dispense Acknowledgement Message (Event OXY)

RRD^OXY^RRD_OXY: Pharmacy/Treatment Dispense Acknowledgment Message

Segments	Description	Status	Chapter
MSH	Message Header		2
MSA	Message Acknowledgment		2
[{ ERR }]	Error		2
[{ SFT }]	Software		2
[UAC]	User Authentication Credential		2
[{ NTE }]	Notes and Comments (for Header)		2
[	--- RESPONSE begin		
[	--- PATIENT begin		
PID	Patient Identification		3
[{ NTE }]	Notes and Comments (for Patient ID)		2
]	--- PATIENT end		
{	--- ORDER begin		
ORC	Common Order		4
[{	--- TIMING begin		
TQ1	Timing/Quantity		4

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Comment [11]: XY = Other number to be assigned

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Comment [12]: XY = Other number to be assigned

Segments	Description	Status	Chapter
[{ TQ2 }]	Timing/Quantity Order Sequence		4
}]	--- TIMING end		
[	--- DISPENSE begin		
RXD	Pharmacy/Treatment Dispense		4
[{ NTE }]	Notes and Comments (for RXD)		2
{ RXR }	Pharmacy/Treatment Route		4
[{ RXC }]	Pharmacy/Treatment Component		4
]	--- DISPENSE end		
[{PRT}]	Participation (for Order)		7
}	--- ORDER end		
]	--- RESPONSE end		

Segments	Description	Status	Chapter
[{ TQ2 }]	Timing/Quantity Order Sequence		4
}]	--- TIMING end		
[	--- DISPENSE begin		
RXD	Pharmacy/Treatment Dispense		4
[{ NTE }]	Notes and Comments (for RXD)		2
{ RXR }	Pharmacy/Treatment Route		4
[{ RXC }]	Pharmacy/Treatment Component		4
]	--- DISPENSE end		

Outstanding Issues

V3 Implications

This concept can be applied to V3 as well.

V2 Implications

v2.xml Implications