4A.
Order Entry: Pharmacy/Treatment, Vaccination

Chapter Chair:	Hans Buitendijk
	Siemens Healthcare
Chapter Chair:	Robert Hausam
	Hausam Consulting
Chapter Chair:	Ken McCaslin
	Quest Diagnostics
Chapter Chair:	Lorraine Constable
	Constable Consulting
Chapter Chair:	Patrick Loyd
	Gordon Point Informatics Ltd
Editor	Scott M Robertson
	Kaiser Permanente
Sponsoring Committee:	Orders & Observations
List Server:	ord@lists.hl7.org

4A.1   CHAPTER 4A CONTENTS

4A.2   PURPOSE

This extension of chapter 4 was created because as of version 2.6 it had become too large to edit without great difficulty. Thus, the sections specific to pharmacy and vaccines were excised from that chapter and now comprise the content of this chapter.

4A.2.1 Preface (organization of this chapter)

This chapter is organized into two major sections, Pharmacy, and Vaccine. Each section contains the trigger events, message definitions, segments and examples for the specific type of order messages. Each section about a type of order is organized into background and overview, message structure, and message segments (that are specific to the order class in question). Special discussions of the use of fields, segments or messages, and examples are included. Segments are introduced in order of occurrence in a message. A list of allowable values for a field is included in the body of the text, along with the field definition for easier reference.

Section 4A.3 to 4A.6   Covers pharmacy/treatment trigger events & messages, pharmacy/treatment segments, pharmacy/treatment message examples and pharmacy/treatment message flow diagrams.

Sections 4A.7 to 4A.6   Covers vaccine trigger events & message definitions, vaccine segments and vaccine message examples.

4A.3   PHARMACY/TREATMENT TRIGGER EVENTS & MESSAGES

4A.3.1 Usage notes for pharmacy/treatment messages

For the RDS (pharmacy/treatment dispense), RGV (pharmacy/treatment give) and RAS (pharmacy/treatment administration) messages, the placer and filler order numbers are those of the parent RDE (pharmacy/treatment encoded order) message. In these messages, the filler order number does not provide a unique identification of the instance of the pharmacy/treatment action (dispense, give or administer). To correct this problem, each of the defining segments (RXD, RXG, and RXA) has an appropriately named sub-ID field (dispense sub-ID counter, give sub-ID counter, and administration sub-ID counter). The combination of the filler order number (including its application ID component) and the appropriate sub-ID counter uniquely identifies the instance of the pharmacy/treatment action(s) present in these messages.

Although the default order control code for the RDE, RDS, RGV and RAS messages is "RE," there are cases in which the pharmacy or treatment system and the receiving system must communicate changes in state. Depending on whether the pharmacy or treatment supplier's relationship to the receiving system is that of placer or filler, the appropriate order control code may be substituted for the default value of RE. The receiving system can also use an appropriate order control code to report status back to the pharmacy or treatment system.

For example, suppose that a pharmacy or treatment system is sending RGV messages to a nursing system which will administer the medication and that the pharmacy or treatment system needs to request that several instances of a give order be discontinued. To implement this request, the RGV message may be sent with a "DC" order control code (discontinue request), and the appropriate RXG segments whose give sub-ID fields identify the instances to be discontinued. If a notification back to the pharmacy or treatment supplier is needed, the nursing system can initiate

an RGV message with a "DR" order control code (discontinue as requested), and containing RXG segments whose give sub-ID fields identify the discontinued instances.

4A.3.2 IV solution groups

An order for a group of IV solutions to be given sequentially can be supported in two similar ways: Parent/Child and Separate Orders. This HL7 Standard supports both methods of ordering. The method used at a particular site must be negotiated between the site institution and the various application vendors. See Chapter 2, section 2.A.53 OSD Order Sequence Definition, "Use Case 1 Cyclic placer order groups," for further details.

4A.3.3 OMP - Pharmacy/Treatment Order Message (Event O09)

OMP^O09^OMP_O09: Pharmacy/treatment Order 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 Patient ID)		2
[{ ARV }]	Access Restrictions		3
[	--- PATIENT_VISIT begin		
PV1	Patient Visit		3
[PV2]	Patient Visit – Additional Info		3
[{ PRT }]	Participation (for Patient Visit)		7
[{ ARV }]	Access Restrictions		3
]	--- PATIENT_VISIT end		
[{	--- INSURANCE begin		
IN1	Insurance		6
[IN2]	Insurance Additional Information		6
[IN3]	Insurance Additional Information, Certification		6
}]	--- INSURANCE end		
[GT1]	Guarantor		6
[{ AL1 }]	Allergy Information		3

Segments	Description	Status	Chapter
]	--- PATIENT end		
{	--- ORDER begin		
ORC	Common Order		4
[{	--- TIMING begin		
TQ1	Timing/Quantity		4
[{ TQ2 }]	Timing/Quantity Order Sequence		4
}]	--- TIMING end		
RXO	Pharmacy/Treatment Order		4A
[{PRT}]	Participation (for RXO)		7
[{ NTE }]	Notes and Comments (for RXO)		2
{ RXR }	Pharmacy/Treatment Route		4A
[{	--- COMPONENT begin		
RXC	Pharmacy/Treatment Component		4A
[{ NTE }]	Notes and Comments (for each RXC)		2
}]	--- COMPONENT end		
[{ CDO }]	Cumulative Dosage Segment		4A
[{	--- OBSERVATION begin		
OBX	Observation/Result		7
[{PRT}]	Participation (for Observation)		7
[{ NTE }]	Notes and Comments (for OBX)		2
}]	--- OBSERVATION end		
[{ FT1 }]	Financial Transaction		6
[BLG]	Billing Segment		6
}	--- ORDER end		

4A.3.4 ORP - Pharmacy/Treatment Order Acknowledgment (Event O10)

ORP^O10^ORP_O10: Description

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 Response Header)		2
[	--- RESPONSE begin		

Segments	Description	Status	Chapter
[	--- PATIENT begin		
PID	Patient Identification		3
[{ NTE }]	Notes and Comments (for Patient ID)		2
]	--- PATIENT end		
{	--- ORDER begin		
ORC	Common Order		4
[{PRT}]	Participation (for ORC)		7
[{	--- TIMING begin		
TQ1	Timing/Quantity		4
[{ TQ2 }]	Timing/Quantity Order Sequence		4
}]	--- TIMING end		
[	--- ORDER_DETAIL begin		
RXO	Pharmacy/Treatment Order		4A
[{PRT}]	Participation (for RXO)		7
[{ NTE }]	Notes and Comments (for RXO)		2
{ RXR }	Pharmacy/Treatment Route		4A
[{	--- COMPONENT begin		
RXC	Pharmacy/Treatment Component		4A
[{ NTE }]	Notes and Comments (for each RXC)		2
}]	--- COMPONENT end		
]	--- ORDER_DETAIL end		
}	--- ORDER end		
]	--- RESPONSE end		

4A.3.5 RDE - Pharmacy/Treatment Encoded Order Message (Event O11)

This message communicates the pharmacy or treatment application's encoding of the pharmacy/treatment order ,OMP, message. It may be sent as an unsolicited message to report on either a single order or multiple pharmacy/treatment orders for a patient.

The RDE/RRE message pair can also be used to communicate a refill authorization request; however, a specific trigger event has been assigned. See section *4A.3.13 "RDE - Pharmacy/Treatment Refill Authorization Request Message* (Event O25).*"* As a site-specific variant, the original order segments (RXO, RXRs, associated RXCs, and any NTEs) may be sent optionally (for comparison).

RDE^O11^RDE_O11: Pharmacy/Treatment Encoded Order Message

Segments	Description	Status	Chapter
MSH	Message Header		2
[{ SFT }]	Software		2

Segments	Description	Status	Chapter
[UAC]	User Authentication Credential		2
[{ NTE }]	Notes and Comments (for Header)		2
[	--- PATIENT begin		
PID	Patient Identification		3
[PD1]	Additional Demographics		3
[{PRT}]	Participation (for Patient)		7
[{ NTE }]	Notes and Comments (for Patient ID)		2
[{ ARV }]	Access Restrictions		3
[	--- PATIENT_VISIT begin		
PV1	Patient Visit		3
[PV2]	Patient Visit – Additional Info		3
[{PRT}]	Participation (for Patient Visit)		7
[{ ARV }]	Access Restrictions		3
]	--- PATIENT_VISIT end		
[{	--- INSURANCE begin		
IN1	Insurance		
[IN2]	Insurance Additional Information		6
[IN3]	Insurance Additional Information, Certification		6
}]	--- INSURANCE end		
[GT1]	Guarantor		6
[{ AL1 }]	Allergy Information		3
]	--- PATIENT end		
{	--- ORDER begin		
ORC	Common Order		4
[{PRT}]	Participation (for ORC)		7
[{	--- TIMING begin		
TQ1	Timing/Quantity		4
[{ TQ2 }]	Timing/Quantity Order Sequence		4
}]	--- TIMING end		
[	--- ORDER_DETAIL begin		
RXO	Pharmacy/Treatment Prescription Order		4A
[{PRT}]	Participation (for RXO)		7
[{ NTE }]	Notes and Comments (for RXO)		2
{ RXR }	Pharmacy/Treatment Route		4A

Segments	Description	Status	Chapter
[{	--- COMPONENT begin		
RXC	Pharmacy/Treatment Component (for RXO)		4A
[{ NTE }]	Notes and Comments (for each RXC)		2
}]	--- COMPONENT end		
]	--- ORDER_DETAIL end		
RXE	Pharmacy/Treatment Encoded Order		4A
[{PRT}]	Participation (for RXE)		7
[{ NTE }]	Notes and Comments (for RXE)		2
{	--- TIMING_ENCODED begin		
TQ1	Timing/Quantity		4
[{ TQ2 }]	Timing/Quantity Order Sequence		4
}	--- TIMING_ENCODED end		
[{	--- PHARMACY_TREATMENT_INFUSION_ORDER begin		
RXV	Pharmacy/Treatment Infusion Order		4A
[{PRT}]	Participation (for RXV)		7
[{ NTE }]	Notes and Comments (for RXV)		2
{	--- TIMING_ENCODED begin		
TQ1	Timing/Quantity		4
[{ TQ2 }]	Timing/Quantity Order Sequence		4
}	--- TIMING_ENCODED end		
}]	--- PHARMACY_TREATMENT_INFUSION_ORDER end		
{ RXR }	Pharmacy/Treatment Route		4A
[{ RXC }]	Pharmacy/Treatment Component (for RXE)		4A
[{ CDO }]	Cumulative Dosage Segment		4A
[{	--- OBSERVATION begin		
OBX	Results		7
[{PRT}]	Participation (for Observation)		7
[{ NTE }]	Notes and Comments (for OBX)		2
}]	--- OBSERVATION end		
[{ FT1 }]	Financial Detail		6
[BLG]	Billing Segment		4
[{ CTI }]	Clinical Trial Identification		7
}	--- ORDER end		

Note: The RXCs which follow the RXO may not be fully encoded, but those that follow the RXE must be fully encoded.

> 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 RXV segment are intended to communicate notes and comments relative to the encoded order.
>
> 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.

4A.3.6 RRE - Pharmacy/Treatment Encoded Order Acknowledgment (Event O12)

RRE^O12^RRE_O12: Pharmacy/Treatment Encoded Order 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 PID)		2
]	--- PATIENT end		
{	--- ORDER begin		
ORC	Common Order		4
[{PRT}]	Participation (for ORC)		7
[{	--- TIMING begin		
TQ1	Timing/Quantity		4
[{ TQ2 }]	Timing/Quantity Order Sequence		4
}]	--- TIMING end		
[	--- ENCODING begin		
RXE	Pharmacy/Treatment Encoded Order		4A
[{PRT}]	Participation (for RXE)		7
[{ NTE }]	Notes and Comments (for RXE)		2
{	--- TIMING_ENCODED begin		

Segments	Description	Status	Chapter
TQ1	Timing/Quantity		4
[{ TQ2 }]	Timing/Quantity Order Sequence		4
}	--- TIMING_ENCODED end		
{ RXR }	Pharmacy/Treatment Route		4A
[{ RXC }]	Pharmacy/Treatment Component		4A
]	--- ENCODING end		
}	--- ORDER end		
]	--- RESPONSE end		

Note: *The use of RDE with the trigger of O01 and RRE with the trigger O02 is maintained for backward compatibility as of v 2.4 and is withdrawn as of v 2.7.*

4A.3.7 RDS - Pharmacy/Treatment Dispense Message (Event O13)

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 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.

Payment for the dispense event completed by a single payor:

> MSH|^&~\|Pharm|GenHosp|CIS|GenHosp|2006082911150700||RDS^O13^RDS_O13|...<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_O13|...<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)

Note: The use of RDS with the trigger of O01 and RRD with the trigger O02 is maintained for backward compatibility as of v 2.4 *and is withdrawn as of v 2.7*.

RDS^O13^RDS_O13: 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
[{ ARV }]	Access Restrictions		3
]	--- 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
[{ ARV }]	Access Restrictions		3
]	--- PATIENT_VISIT end		
]	--- PATIENT end		
{	--- ORDER begin		
ORC	Common Order		4
[{PRT}]	Participation (for ORC)		7
[{	--- TIMING begin		
TQ1	Timing/Quantity		4
[{ TQ2 }]	Timing/Quantity Order Sequence		4
}]	--- TIMING end		

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Segments	Description	Status	Chapter
[	--- ORDER_DETAIL begin		
RXO	Pharmacy /Treatment Order		4A
[{PRT}]	Participation (for RXO)		7
[	--- ORDER_DETAIL_SUPPLEMENT begin		
{ NTE }	Notes and Comments (for RXO)		2
{ RXR }	Pharmacy/Treatment Route		4A
[{	--- COMPONENT begin		
RXC	Pharmacy/Treatment Component		4A
[{ NTE }]	Notes and Comments (for each RXC)		2
}]	--- COMPONENT end		
]	--- ORDER_DETAIL_SUPPLEMENT end		
]	--- ORDER_DETAIL end		
[	--- ENCODING begin		
RXE	Pharmacy/Treatment Encoded Order		4A
[{PRT}]	Participation (for RXE)		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		4A
[{ RXC }]	Pharmacy/Treatment Component		4A
]	--- ENCODING end		
RXD	Pharmacy/Treatment Dispense		4A
[{PRT}]	Participation (for Treatment Dispense)		7
[{ NTE }]	Notes and Comments (for RXD)		2
{ RXR }	Pharmacy/Treatment Route		4A
[{ RXC }]	Pharmacy/Treatment Component		4A
[{ CDO }]	Cumulative Dosage Segment		4A
[{	--- OBSERVATION begin		
OBX	Results		7
[{PRT}]	Participation (for OBX)		7
[{ NTE }]	Notes and Comments (for OBX)		2
}]	--- OBSERVATION end		
[{ FT1 }]	Financial Transaction segment		6

Segments	Description	Status	Chapter
}	--- 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.

4A.3.8 RRD - Pharmacy/Treatment Dispense Acknowledgement Message (Event O14)

RRD^O14^RRD_O14: 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
[{PRT}]	Participation (for ORC)		7
[{	--- TIMING begin		
TQ1	Timing/Quantity		4
[{ TQ2 }]	Timing/Quantity Order Sequence		4
}]	--- TIMING end		
[	--- DISPENSE begin		
RXD	Pharmacy/Treatment Dispense		4A
[{ NTE }]	Notes and Comments (for RXD)		2

Segments	Description	Status	Chapter
{ RXR }	Pharmacy/Treatment Route		4A
[{ RXC }]	Pharmacy/Treatment Component		4A
]	--- DISPENSE end		
}	--- ORDER end		
]	--- RESPONSE end		

4A.3.9 RGV - Pharmacy/Treatment Give Message (Event O15)

The RDS message's RXD segment 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. It does not contain the given instructions or scheduling information. When this "give" (i.e., administration) information needs to be transmitted from the pharmacy or treatment application to another application, it is done with the RGV message.

The RGV message uses the RXG segment to record drug or treatment administration instructions. It may carry information about a single scheduled administration on a drug or treatment, or it may carry information about multiple administrations. If the pharmacy or treatment application (or some other application) needs to create an unambiguous MAR report where each administration is matched to a particular give date/time instruction, it may use the RGV message as described in the following way:

For each scheduled administration of the medication, the pharmacy/treatment issues either a single RGV message or a single RGV message with multiple RXG segments, one for each scheduled administration. The actual administrations (transmitted by one or more RAS messages) are matched against the scheduled ones by recording in each RXA segment the Give Sub-ID of the corresponding RXG segment. If more than one administration needs to be matched (as in the case of recording a change or rate of an IV solution) the administering application issues additional RXA segment(s) (corresponding to the same RXG segment). If no matching is needed, the Give Sub-ID of the RXA segments has the value zero (0).

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 RXG carries the scheduled administration data for either a single "give instruction" (single dose) of medication or for multiple "give instructions." The RXG 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 application to the Nursing application (or other) with drug/treatment administration instructions.

RGV^O15^RGV_O15: Pharmacy/Treatment Give

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
[{ NTE }]	Notes and Comments (for PID)		2
[{ AL1 }]	Allergy Information		2

Segments	Description	Status	Chapter
[{ ARV }]	Access Restrictions		3
[	--- PATIENT_VISIT begin		
PV1	Patient Visit		3
[PV2]	Patient Visit – Additional Info		3
[{PRT}]	Participation (for Patient Visit)		7
[{ ARV }]	Access Restrictions		3
]	--- PATIENT_VISIT end		
]	--- PATIENT end		
{	--- ORDER begin		
ORC	Common Order		4
[{PRT}]	Participation (for ORC)		7
[{	--- TIMING begin		
TQ1	Timing/Quantity		4
[{ TQ2 }]	Timing/Quantity Order Sequence		4
}]	--- TIMING end		
[	--- ORDER_DETAIL begin		
RXO	Pharmacy /Treatment Order		4A
[{PRT}]	Participation (for RXO)		7
[	--- ORDER_DETAIL_SUPPLEMENT begin		
{ NTE }	Notes and Comments (for RXO)		2
{ RXR }	Pharmacy/Treatment Route		4A
[{	--- COMPONENTS begin		
RXC	Pharmacy/Treatment Component		4A
[{ NTE }]	Notes and Comments (for each RXC)		2
}]	--- COMPONENTS end		
]	--- ORDER_DETAIL_SUPPLEMENT end		
]	--- ORDER_DETAIL end		
[	--- ENCODING begin		
RXE	Pharmacy/Treatment Encoded Order		4A
[{PRT}]	Participation (for Encoded Order)		7
[{ NTE }]	Notes and Comments (for RXE)		2
{	--- TIMING_ENCODED begin		
TQ1	Timing/Quantity		4
[{ TQ2 }]	Timing/Quantity Order Sequence		4
}	--- TIMING_ENCODED end		

Segments	Description	Status	Chapter
{ RXR }	Pharmacy/Treatment Route		4A
[{ RXC }]	Pharmacy/Treatment Component		4A
]	--- ENCODING end		
{	--- GIVE begin		
RXG	Pharmacy/Treatment Give		4A
{	--- TIMING_GIVE begin		
TQ1	Timing/Quantity		4
[{ TQ2 }]	Timing/Quantity Order Sequence		4
}	--- TIMING_GIVE end		
{ RXR }	Pharmacy/Treatment Route		4A
[{ RXC }]	Pharmacy/Treatment Component		4A
[{ CDO }]	Cumulative Dosage Segment		4A
[{	--- OBSERVATION begin		
OBX	Observation/Results		7
[{PRT}]	Participation (for Observation)		7
[{ NTE }]	Notes and Comments (for OBX)		2
}]	--- OBSERVATION end		
}	--- GIVE end		
}	--- ORDER end		

4A.3.10 RRG - Pharmacy/Treatment Give Acknowledgment Message (Event O16)

RRG^O16^RRG_O16: Pharmacy/Treatment Give 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 PID)		2
]	--- PATIENT end		

Segments	Description	Status	Chapter
{	--- ORDER begin		
ORC	Common Order		4
[{PRT}]	Participation (for ORC)		7
[{	--- TIMING begin		
TQ1	Timing/Quantity		4
[{ TQ2 }]	Timing/Quantity Order Sequence		4
}]	--- TIMING end		
[	--- GIVE begin		
RXG	Pharmacy/Treatment Give		4A
{	--- TIMING_GIVE begin		
TQ1	Timing/Quantity		4
[{ TQ2 }]	Timing/Quantity Order Sequence		4
}	--- TIMING_GIVE end		
{ RXR }	Pharmacy/Treatment Route		4A
[{ RXC }]	Pharmacy/Treatment Component		4A
]	--- GIVE end		
}	--- ORDER end		
]	--- RESPONSE end		

Note: The use of RGV with the trigger of O01 and RRG with the trigger O02 is maintained for backward compatibility as of v 2.4 *and is withdrawn as of v 2.7*.

4A.3.11 RAS - Pharmacy/Treatment Administration Message (Event O17)

The RAS message may be created by the administering application (e.g., nursing application) for each instance of administration for an existing order. If the administering application wants to report several administrations of medication/treatment for a given order with a single RAS message, each instance is reported by a separate (repeating) RXA segment. In addition, the administration records for a group of orders may be sent in a single message by creating repeating groups of segments at the ORC level.

In the most common case, the RAS messages would be sent from a nursing application to the pharmacy or treatment application (or to the ordering application or another clinical application), which could use the data to generate the medication administration reports. Multiple RXA segments, each corresponding to a separate administration instance for a given order, may be sent with a single ORC.

RAS^O17^RAS_O17: Pharmacy/Treatment Administration

Segments	Description	Status	Chapter
MSH	Message Header		2
[{ SFT }]	Software		2
[UAC]	User Authentication Credential		2
[{ NTE }]	Notes and Comments (for Header)		2

Segments	Description	Status	Chapter
[	--- 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
[{ ARV }]	Access Restrictions		3
[{ AL1 }]	Allergy Information		2
[	--- PATIENT_VISIT begin		
PV1	Patient Visit		3
[PV2]	Patient Visit – Additional Info		3
[{PRT}]	Participation (for Patient Visit)		7
[{ ARV }]	Access Restrictions		3
]	--- PATIENT_VISIT end		
]	--- PATIENT end		
{	--- ORDER begin		
ORC	Common Order		4
[{PRT}]	Participation (for ORC)		7
[{	--- TIMING begin		
TQ1	Timing/Quantity		4
[{ TQ2 }]	Timing/Quantity Order Sequence		4
}]	--- TIMING end		
[	--- ORDER_DETAIL begin		
RXO	Pharmacy /Treatment Order		4A
[	--- ORDER_DETAIL_SUPPLEMENT begin		
{ NTE }	Notes and Comments (for RXO)		2
{ RXR }	Pharmacy/Treatment Route		4A
[{	--- COMPONENTS begin		
RXC	Pharmacy/Treatment Component		4A
[{ NTE }]	Notes and Comments (for each RXC)		2
}]	--- COMPONENTS end		
]	--- ORDER_DETAIL_SUPPLEMENT end		
]	--- ORDER_DETAIL end		

Segments	Description	Status	Chapter
[	--- ENCODING begin		
RXE	Pharmacy/Treatment Encoded Order		4A
[{PRT}]	Participation (for Encoded Order)		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		4A
[{ RXC }]	Pharmacy/Treatment Component		4A
[{ CDO }]	Cumulative Dosage Segment		4A
]	--- ENCODING end		
{	--- ADMINISTRATION begin		
{ RXA }	Pharmacy/Treatment Administration		4A
[{PRT}]	Participation (for Administration)		7
RXR	Pharmacy/Treatment Route		4A
[{	--- OBSERVATION begin		
OBX	Observation/Result		7
[{PRT}]	Participation (for Observation)		7
[{ NTE }]	Notes and Comments (for OBX)		2
}]	--- OBSERVATION end		
}	--- ADMINISTRATION end		
[{ CTI }]	Clinical Trial Identification		7
}	--- ORDER end		

4A.3.12 RRA - Pharmacy/Treatment Administration Acknowledgment Message (Event O18)

RRA^O18^RRA_O18: Pharmacy/Treatment Administration 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

Segments	Description	Status	Chapter
[	--- RESPONSE begin		
[	--- PATIENT begin		
PID	Patient Identification		3
[{ NTE }]	Notes and Comments (for PID)		2
]	--- PATIENT end		
{	--- ORDER begin		
ORC	Common Order		4
[{PRT}]	Participation (for ORC)		7
[{	--- TIMING begin		
TQ1	Timing/Quantity		4
[{ TQ2 }]	Timing/Quantity Order Sequence		4
}]	--- TIMING end		
[	--- ADMINISTRATION begin		
{	--- TREATMENT begin		4
RXA	Pharmacy/Treatment Administration		4A
[{PRT}]	Participation (for Administration)		7
}	--- TREATMENT end		
RXR	Pharmacy/Treatment Route		4A
]	--- ADMINISTRATION end		
}	--- ORDER end		
]	--- RESPONSE end		

Note: *The use of RAS with the trigger of O01 and RRA with the trigger O02 is maintained for backward compatibility as of v2.4 and is withdrawn as of v2.7.*

4A.3.13 RDE - Pharmacy/Treatment Refill Authorization Request Message (Event O25)

The RDE/RRE is used to communicate a refill authorization request originating with the pharmacy. This message replicates the standard RDE message with a different trigger event code to indicate the specific use case of a refill authorization request.

RDE^O25^RDE_O11: Pharmacy/Treatment Refill Authorization Request

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

Segments	Description	Status	Chapter
[PD1]	Additional Demographics		3
[{PRT}]	Participation (for Additional Demographics)		7
[{ NTE }]	Notes and Comments (for Patient ID)		2
[{ ARV }]	Access Restrictions		3
[	--- PATIENT_VISIT begin		
PV1	Patient Visit		3
[PV2]	Patient Visit – Additional Info		3
[{PRT}]	Participation (for Patient Visit)		7
[{ ARV }]	Access Restrictions		3
]	--- PATIENT_VISIT end		
[{	--- INSURANCE begin		
IN1	Insurance		
[IN2]	Insurance Additional Information		6
[IN3]	Insurance Additional Information, Certification		6
}]	--- INSURANCE end		
[GT1]	Guarantor		6
[{ AL1 }]	Allergy Information		3
]	--- PATIENT end		
{	--- ORDER begin		
ORC	Common Order		4
[{PRT}]	Participation (for Order)		7
[{	--- TIMING begin		
TQ1	Timing/Quantity		4
[{ TQ2 }]	Timing/Quantity Order Sequence		4
}]	--- TIMING end		
[	--- ORDER_DETAIL begin		
RXO	Pharmacy/Treatment Prescription Order		4A
[{PRT}]	Participation (for RXO)		7
[{ NTE }]	Notes and Comments (for RXO)		2
{ RXR }	Pharmacy/Treatment Route		4A
[{	--- COMPONENTS begin		
RXC	Pharmacy/Treatment Component (for RXO)		4A
[{ NTE }]	Notes and Comments (for each RXC)		2

Segments	Description	Status	Chapter
}]	--- COMPONENTS end		
]	--- ORDER_DETAIL end		
RXE	Pharmacy/Treatment Encoded Order		4A
[{PRT}]	Participation (for RXE)		7
[{ NTE }]	Notes and Comments (for RXE)		2
{	--- TIMING_ENCODED begin		
TQ1	Timing/Quantity		4
[{ TQ2 }]	Timing/Quantity Order Sequence		4
}	--- TIMING_ENCODED end		
[{			
RXV	Pharmacy/Treatment Infusion Order		4A
[{PRT}]	Participation (for RXV)		7
[{ NTE }]	Notes and Comments (for RXV)		2
{	--- TIMING_ENCODED begin		
TQ1	Timing/Quantity		4
[{ TQ2 }]	Timing/Quantity Order Sequence		4
}]			
{ RXR }	Pharmacy/Treatment Route		4A
[{ RXC }]	Pharmacy/Treatment Component (for RXE)		4A
[{ CDO }]	Cumulative Dosage Segment		4A
[{	--- OBSERVATION begin		
OBX	Results		7
[{PRT}]	Participation (for OBX)		7
[{ NTE }]	Notes and Comments (for OBX)		2
}]	--- OBSERVATION end		
[{ FT1 }]	Financial Detail		6
[BLG]	Billing Segment		4
[{ CTI }]	Clinical Trial Identification		7
}	--- ORDER end		

4A.3.14 RRE - Pharmacy/Treatment Refill Authorization Request Acknowledgment (Event O26)

RRE^O26^RRE_O12: Pharmacy/Treatment Refill Authorization Request Acknowledgment Message

Segments	Description	Status	Chapter
MSH	Message Header		2

Segments	Description	Status	Chapter
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 PID)		2
]	--- PATIENT end		
{	--- ORDER begin		
ORC	Common Order		4
[{PRT}]	Participation (for ORC)		7
[{	--- TIMING begin		
TQ1	Timing/Quantity		4
[{ TQ2 }]	Timing/Quantity Order Sequence		4
}]	--- TIMING end		
[	--- ENCODING begin		
RXE	Pharmacy/Treatment Encoded Order		4A
[{PRT}]	Participation (for RXE)		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		4A
[{ RXC }]	Pharmacy/Treatment Component		4A
]	--- ENCODING end		
}	--- ORDER end		
]	--- RESPONSE end		

4A.3.15 ROR - Pharmacy/Treatment Order Response

Attention: This query/response pair was retained for backward compatibility only as of v2.4 and withdrawn as of v2.7. Please refer to Chapter 5 for detailed coverage of query/response methodology to be employed in Versions 2.4 and later.

4A.3.16 RAR - Pharmacy/Treatment Administration Information

Attention:This query/response pair was retained for backward compatibility only as of v2.4 and withdrawn as of v2.7. Please refer to Chapter 5 for detailed coverage of query/response methodology to be employed in Versions 2.4 and later.

4A.3.17 RDR - Pharmacy/Treatment Dispense Information

Attention: This query/response pair was retained for backward compatibility only as of v2.4 and withdrawn as of v2.7. Please refer to Chapter 5 for detailed coverage of query/response methodology to be employed in Versions 2.4 and later.

4A.3.18 RER - Pharmacy/Treatment Encoded Order

Attention: This query/response pair was retained for backward compatibility only as of v2.4 and withdrawn as of v2.7. Please refer to Chapter 5 for detailed coverage of query/response methodology to be employed in Versions 2.4 and later.

4A.3.19 RGR - Pharmacy/Treatment Dose Information

Attention: This query/response pair was retained for backward compatibility only as of v2.4 and withdrawn as of v2.7. Please refer to Chapter 5 for detailed coverage of query/response methodology to be employed in Versions 2.4 and later.

4A.3.20 Pharmacy Query/Response Message Pair

Conformance Statement

Query Statement ID (Query ID=Q31):	Q31
Type:	Query
Query Name:	Dispense History
Query Trigger (= MSH-9):	QBP^Q31^QBP_Q11
Query Mode:	Both
Response Trigger (= MSH-9):	RSP^K31^RSP_K31
Query Characteristics:	May specify patient, medication, a date range, and how the response is to be sorted.
Purpose:	To retrieve patient pharmacy dispense history information from the Server.
Response Characteristics:	Sorted by Medication Dispensed unless otherwise specified in **SortControl.**
Based on Segment Pattern:	RDS_O01

QBP^Q31^QBP_Q11: Query Grammar: QBP Message

Segments	Description	Status	Chapter
MSH	Message Header Segment		2
[{ SFT }]	Software		2
[UAC]	User Authentication Credential		2
QPD	Query Parameter Definition		5
[	--- QBP begin		
[...]	Optional query by example segments		
]	--- QBP end		

Segments	Description	Status	Chapter
RCP	Response Control Parameter		5
[DSC]	Continuation Pointer		2

RSP^K31^RSP_K31: Response Grammar: Pharmacy Dispense Message

Segments	Description	Status	Chapter
MSH	Message Header		2
MSA	Message Acknowledgement		2
[{ ERR }]	Error		2
[{ SFT }]	Software		2
[UAC]	User Authentication Credential		2
QAK	Query Acknowledgement		5
QPD	Query Parameter Definition		5
RCP	Response Control Parameter		5
{	--- RESPONSE begin		
[	--- 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
[{ ARV }]	Access Restrictions		3
[{ AL1 }]	Allergy Information		3
[	--- PATIENT_VISIT begin		
PV1	Patient Visit		3
[PV2]	Patient Visit – Additional Info		3
[{PRT}]	Participation (for Patient Visit)		7
[{ ARV }]	Access Restrictions		3
]	--- PATIENT_VISIT end		
]	--- PATIENT end		
{	--- ORDER begin		
ORC	Common Order		4
[{PRT}]	Participation (for ORC)		7
[{	--- TIMING begin		

Segments	Description	Status	Chapter
TQ1	Timing/Quantity		4
[{ TQ2 }]	Timing/Quantity Order Sequence		4
}]	--- TIMING end		
[	--- ORDER_DETAIL begin		
RXO	Pharmacy/Treatment Order		4A
[{ NTE }]	Notes and Comments (for RXO)		2
{ RXR }	Pharmacy/Treatment Route		4A
[{	--- COMPONENTS begin		
RXC	Pharmacy/Treatment Component		4A
[{ NTE }]	Notes and Comments (for each RXC)		2
}]	--- COMPONENTS end		
]	--- ORDER_DETAIL end		
[	--- ENCODING begin		
RXE	Pharmacy/Treatment Encoded Order		4A
[{PRT}]	Participation (for RXE)		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		4A
[{ RXC }]	Pharmacy/Treatment Component		4A
]	--- ENCODING end		
RXD	Pharmacy/Treatment Dispense		4A
[{PRT}]	Participation (for RXD)		7
{ RXR }	Pharmacy/Treatment Route		A
[{ RXC }]	Pharmacy/Treatment Component		4A
[{ CDO }]	Cumulative Dosage Segment		4A
[{	--- OBSERVATION begin		
OBX	Results		7
[{PRT}]	Participation (for OBX)		7
[{ NTE }]	Notes and Comments (for OBX)		2
}]	--- OBSERVATION end		
}	--- ORDER end		
}	--- RESPONSE end		

Segments	Description	Status	Chapter
[DSC]	Continuation Pointer		2

QPD Input Parameter Specification

Field Seq (Query ID=Q31)	Name	Key/ Search	Sort	LEN	TYPE	Opt	Rep	Match Op	TBL	Segment Field Name	Service Identifier Code	Element Name
1	MessageQueryName			60	CWE	R						
2	QueryTag			32	ST	R						
	PatientList	S	Y	20	CX	O				PID.3		PID-3: Patient Identifier List
	MedicationDispensed	S	Y	100	CWE	O		=		RXD.2		RXD-2: Dispense/ Give Code
	DispenseDate.LL	S	Y	24	DTM	O		>=		RXD.3		RXD-3: Date/Time Dispensed
	DispenseDate.UL	S	Y	24	DTM	O		<=		RXD.3		RXD-3: Date/Time Dispensed

QPD Input Parameter Field Description and Commentary

Input Parameter (Query ID=Q31)	Comp. Name	DT	Description
MessageQueryName		CWE	Must be valued Q31^Dispense History^HL7nnnn.
QueryTag		ST	Unique to each query message instance.
PatientList		CX	The combination of values for *PatientList.ID, and PatientList.AssigningAuthority,* are intended to identify a unique entry on the PATIENT_MASTER table. The *PatientList.IdentifierTypeCode* is useful for further filtering or to supply uniqueness in the event that the assigning authority may have more than one coding system. (The PATIENT_MASTER table contains a constraint that prevents multiple patients from being identified by the same combination of field values.) This PATIENT_MASTER entry will be searched against on the PHARMACY_DISPENSE_TRANSACTION table to retrieve the rows fulfilling the query conditions. If this field is not valued, all values for this field are considered to be a match. If one PID.3 is specified, only 1 segment pattern will be returned.
	ID	ID	If this field, PID.3.1, is not valued, all values for this field are considered to be a match.
	Assigning Authority	HD	If this field, PID.3.4, is not valued, all values for this field are considered to be a match.
	Identifier type code	IS	If this field, PID.3.5, is not valued, all values for this field are considered to be a match.
MedicationDispensed		CWE	If this field is not valued, all values for this field are considered to be a match.
DispenseDate.LL		DTM	This is the earliest value to be returned for Date/Time Dispensed. If this field is not valued, all values for this field are considered to be a match.
DispenseDate.UL		DTM	This is the latest value to be returned for Date/Time Dispensed. If this field is not valued, all values for this field are considered to be a match.

4A.3.20.0

4A.3.20.1 Example

Example: The user wishes to know all the medications dispensed for the patient whose medical record number is "555444222111" for the period beginning 5/31/2005 and ending 5/31/2006. The following QBP message is generated.

MSH|^&~\|PCR|Gen Hosp|Pharm||200611201400-0800||QBP^Q31^QBP_Q11|ACK9901|P|2.8|

QPD|Q31^Dispense History^HL70471|Q001|555444222111^^^MPI^MR||20050531|20060531|

RCP|I|999RD|

The pharmacy system identifies medical record number "555444222111" as belonging to Adam Everyman and locates 4 prescription dispenses for the period beginning 5/31/2005 and ending 5/31/2006 and returns the following RSP message:

MSH|^&~\|Pharm|Gen hosp|PCR||200611201400-0800||RSP^K31^RSP_K31|8858|P|2.8|

MSA|AA|ACK9901|

QAK|Q001|OK|Q31^Dispense History^HL70471|4|

QPD|Q31^Dispense History^HL70471|Q001|444-33-3333^^^MPI^MR||20050531|20060531|

PID|||444-33-3333^^^MPI^MR||Everyman^Adam||19600614|M||C|2222 Home Street
    ^^Anytown^US^12345||^^^^555^5552004|

ORC|RE||89968665||||||200505121345-0700|||444-44-
    4444^HIPPOCRATES^HAROLD^^^^MD||^^^^555^5551003|

RXE|1^BID^^20050529|00378112001^Verapamil Hydrochloride 120 mg TAB^NDC |120||mgm|

RXD|1|00378112001^Verapamil Hydrochloride 120 mg TAB^NDC |200505291115-
    0700|100|||1331665|3|

RXR|PO|

ORC|RE||89968665||||||200505291030-0700|||444-44-
    4444^HIPPOCRATES^HAROLD^^^^MD||^^^^555^5551003|

RXE|1^^D100^^20070731^^^TAKE 1 TABLET DAILY --GENERIC FOR CALAN
    SR|00182196901^VERAPAMIL HCL ER TAB 180MG ER^NDC |100||180MG|TABLET
    SA|||G|||0|BC3126631^CHU^Y^L||213220929|0|0|19980821|

RXD|1|00182196901^VERAPAMIL HCL ER TAB 180MG ER^NDC
    |20050821|100|||213220929|0|TAKE 1 TABLET DAILY --GENERIC FOR CALAN SR|

RXR|PO|

ORC|RE||235134037||||||200509221330-0700|||444-44-
    4444^HIPPOCRATES^HAROLD^^^^MD||^^^^555^5551003|

RXD|1|00172409660^BACLOFEN 10MG TABS^NDC|200509221415-0700|10|||235134037|5|AS
    DIRECTED|

RXR|PO|

ORC|RE||235134030||||||200510121030-0700|||222-33-4444^PUMP^PATRICK^^^^MD
    ||^^^^555^5551027|

RXD|1|00054384163^THEOPHYLLINE 80MG/15ML SOLN^NDC|200510121145-
    0700|10|||235134030|5|AS DIRECTED|

RXR|PO|

4A.4   PHARMACY/TREATMENT SEGMENTS

4A.4.1 RXO - Pharmacy/Treatment Order Segment

This is the "master" pharmacy/treatment order segment. It contains order data not specific to components or additives. Unlike the OBR, it does not contain status fields or other data that are results-only.

It can be used for any type of pharmacy order, including inpatient (unit dose and compound unit dose), outpatient, IVs, and hyperalimentation IVs (nutritional IVs), as well as other non-pharmacy treatments, e.g., respiratory therapy, oxygen, and many nursing treatments.

In addition to the pharmaceutical/treatment information, this segment contains additional data such as provider and text comments.

A quantity/timing field is not needed in the RXO segment. The ORC segment contains the requested *ORC-7-quantity/timing* of the original order which does not change as the order is encoded, dispensed, or administered.

HL7 Attribute Table – RXO – Pharmacy/Treatment Order

SEQ	LEN	C.LEN	DT	OPT	RP/#	TBL#	ITEM #	ELEMENT NAME
1			CWE	C		9999	00292	Requested Give Code
2			NM	C			00293	Requested Give Amount - Minimum
3			NM	O			00294	Requested Give Amount - Maximum
4			CWE	C		9999	00295	Requested Give Units
5			CWE	C		9999	00296	Requested Dosage Form
6			CWE	O	Y	9999	00297	Provider's Pharmacy/Treatment Instructions
7			CWE	O	Y	9999	00298	Provider's Administration Instructions
8				W				Deliver-To Location
9	1..1		ID	O		0161	00300	Allow Substitutions
10			CWE	O		9999	00301	Requested Dispense Code
11			NM	O			00302	Requested Dispense Amount
12			CWE	O		9999	00303	Requested Dispense Units
13		3=	NM	O			00304	Number Of Refills
14			XCN	B	Y		00305	Ordering Provider's DEA Number
15			XCN	C	Y		00306	Pharmacist/Treatment Supplier's Verifier ID
16	1..1		ID	O		0136	00307	Needs Human Review
17		20=	ST	C			00308	Requested Give Per (Time Unit)
18			NM	O			01121	Requested Give Strength
19			CWE	O		9999	01122	Requested Give Strength Units
20			CWE	O	Y	9999	01123	Indication
21		6=	ST	O			01218	Requested Give Rate Amount
22			CWE	O		9999	01219	Requested Give Rate Units
23			CQ	O			00329	Total Daily Dose
24			CWE	O	Y	9999	01476	Supplementary Code
25		5#	NM	O			01666	Requested Drug Strength Volume
26			CWE	O		9999	01667	Requested Drug Strength Volume Units

SEQ	LEN	C.LEN	DT	OPT	RP/#	TBL#	ITEM #	ELEMENT NAME
27	1..1		ID	O		0480	01668	Pharmacy Order Type
28			NM	O			01669	Dispensing Interval
29			EI	O			02149	Medication Instance Identifier
30			EI	O			02150	Segment Instance Identifier
31			CNE	C		0725	02151	Mood Code
32			CWE	B		9999	01681	Dispensing Pharmacy
33			XAD	B			01682	Dispensing Pharmacy Address
34			PL	O			01683	Deliver-to Patient Location
35			XAD	O			01684	Deliver-to Address
36			XTN	O	Y		2309	Pharmacy Phone Number

4A.4.1.0   RXO field definitions

4A.4.1.1   RXO-1   Requested Give Code   (CWE)   00292

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field identifies the treatment product or treatment ordered to be given to the patient; it is analogous to *OBR-4-universal service ID* in function. Examples of treatments products include medications and certain devices or supplies, e.g., inhaler spacers, blood glucose monitors, syringes, infusion sets, which might require prescription.

Often the coded entry implies dosage form and a dosage form is required in addition to the product name. When the give code does not include the dosage form, use *RXO-5-requested dosage form*. When the give code does not include the strength, use *RXO-18-requested give strength* and the *RXO-19-requested give units*. *Realize that strengths do not apply to some such orders.*

The RXO-1, RXO-2 and RXO-4 are mandatory unless the prescription/treatment is transmitted as free text using RXO-6; then RXO-1, RXO-2, and RXO-4 may be blank and the first subcomponent of RXO-6 must be blank.

Use of the RXO-6.2 versus the RXO-1.2 for a free text order is dependent on whether or not the free text describes a product or if it is more commentary in nature.

Please refer to the request –to-dispense fields RXO-10, RXO-11, and RXO-12 for a discussion of the interrelationship with the request-to-give fields.

4A.4.1.2   RXO-2   Requested Give Amount - Minimum   (NM)   00293

Definition: This field is the ordered amount. In a variable dose order, this is the minimum ordered amount. In a non-varying dose order, this is the exact amount of the order.

The RXO-1, RXO-2 and RXO-4 are mandatory unless the prescription/treatment is transmitted as free text using RXO-6, then RXO-1, RXO-2, and RXO-4 may be blank and the first subcomponent of RXO-6 must be blank.

Note: This field is not a duplication of the first component of the quantity/timing field, since in non-pharmacy/treatment orders, that component can be used to specify multiples of an ordered amount.

Another way to say this is that, for pharmacy/treatment orders, the quantity component of the quantity/timing field refers to what is to be given out at each service interval; thus, in terms of the RX order, that first component always defaults to 1. Hence, in the actual execution of the order, the value of 1 in the first component of the quantity/timing field always refers to one administration of the amount specified in this field (the Requested Give Amount field).

4A.4.1.3   RXO-3   Requested Give Amount - Maximum   (NM)   00294

Definition: In a variable dose order, this is the maximum ordered amount. In a non-varying dose order, this field is not used.

4A.4.1.4   RXO-4   Requested Give Units   (CWE)   00295

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field indicates the units for the give amount.

The RXO-1, RXO-2 and RXO-4 are mandatory unless the prescription is transmitted as free text using RXO-6, then RXO-1, RXO-2, and RXO-4 may be blank and the first subcomponent of RXO-6 must be blank.

Note: These units can be a "compound quantity"; i.e., the units may contain the word "per." For example, micrograms per KG (micg/kg) is an acceptable value, which means that the units are micrograms per KG (of body weight). See Chapter 7 for full definition of ISO+ units.

A table of standard units is needed to define standard abbreviations for compound units. Until such a table is agreed on, a user-defined table is needed for each site. If the interpretation of a compound unit requires knowledge of some observation results (such as body weight or height), these results can be sent in the same order message using the optional OBX segments.

4A.4.1.5   RXO-5   Requested Dosage Form   (CWE)   00296

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field indicates the manner in which the treatment is aggregated for dispensing, e.g., tablets, capsules suppositories. In some cases, this information is implied by the dispense/give code in *RXO-1-requested give code* or *RXO-10-Requested dispense code*.   Required when both *RXO-1-Requested give code* and *RXO-10-Requested dispense code* do not specify the drug/treatment form; optionally included otherwise.

4A.4.1.6   RXO-6   Provider's Pharmacy/Treatment Instructions   (CWE)   00297

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field identifies the ordering provider's instructions to the pharmacy or the non-pharmacy treatment provider (e.g., respiratory therapy). If coded, a user-defined table must be used. If transmitted as a free text field, place a null in the first component and the text in the second, e.g., |^this is a free text treatment instruction|.

If the prescription is transmitted as free text using RXO-6, then RXO-1, RXO-2, and RXO-4 may be blank and the first subcomponent of RXO-6 must be blank. Otherwise, RXO-1, RXO-2 and RXO-4 are mandatory.

4A.4.1.7   RXO-7   Provider's Administration Instructions   (CWE)   00298

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field identifies the ordering provider's instructions to the patient or to the provider administering the drug or treatment. If coded, a user-defined table must be used. If transmitted as free text, place a null in the first component and the text in the second, e.g., |^this is a free text administration instruction|.

4A.4.1.8   RXO-8   Deliver-to Location

Attention: The RXO-8 field was retained for backward compatibilty only as of v 2.6 and the detail was withdrawn and removed from the standard as of v 2.8.

4A.4.1.9   RXO-9   Allow Substitutions   (ID)   00300

Definition: Coded values indicate whether substitutions are allowed, and, if yes, what type of substitutions. Refer to *HL7 Table 0161 – Allow Substitution* in Chapter 2C, Code Tables, for valid codes.

4A.4.1.10 RXO-10   Requested Dispense Code   (CWE)   00301

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field indicates what is to be/was dispensed; it is analogous to *OBR-4-universal service ID* in function. It may be present in the order or not, depending on the application. If not present, and values are given for *RXO-11-requested dispense amount* and *RXO-12-requested dispense units*, the *RXO-1-requested give code* is assumed. If the requested dispense code does not include the dosage form, then *RXO-5-requested dosage form* is required

> Note on request-to-dispense fields:
>
> Sometimes an order will be written in which the total amount of the drug or treatment requested to be dispensed has no direct relationship with the give amounts and schedule. For example, an outpatient pharmacy/treatment order might be *take four tablets a day of <drug name, value>, Q6H (every 6 hours) -- dispense 30 tablets.* An inpatient order might be *NS/D5W (normal saline with 5% dextrose) at 1000cc/hour—dispense 3 1-liter bottles of NSD5W solution.* The request-to-dispense fields support this common style of ordering.

4A.4.1.11   RXO-11   Requested Dispense Amount   (NM)   00302

Definition: This field specifies the amount to be dispensed. See above note.

4A.4.1.12   RXO-12   Requested Dispense Units   (CWE)   00303

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field identifies the units for the dispense amount. This must be in simple units that reflect the actual quantity of the substance to be dispensed. It does not include compound units. See above note.

4A.4.1.13   RXO-13   Number of Refills   (NM)   00304

Definition: This field defines the number of times the requested dispense amount can be given to the patient, subject to local regulation. Refers to outpatient only.

4A.4.1.14   RXO-14   Ordering Provider's DEA Number   (XCN)   00305

```
Components:  <Person Identifier (ST)> ^ <Family Name (FN)> ^ <Given Name (ST)>
             ^ <Second and Further Given Names or Initials Thereof (ST)> ^
             <Suffix (e.g., JR or III) (ST)> ^ <Prefix (e.g., DR) (ST)> ^
             <WITHDRAWN Constituent> ^ <DEPRECATED-Source Table (CWE)> ^
             <Assigning Authority (HD)> ^ <Name Type Code (ID)> ^ <Identifier
             Check Digit (ST)> ^ <Check Digit Scheme (ID)> ^ <Identifier Type
             Code (ID)> ^ <Assigning Facility (HD)> ^ <Name Representation Code
             (ID)> ^ <Name Context (CWE)> ^ <WITHDRAWN Constituent> ^ <Name
             Assembly Order (ID)> ^ <Effective Date (DTM)> ^ <Expiration Date
             (DTM)> ^ <Professional Suffix (ST)> ^ <Assigning Jurisdiction
             (CWE)> ^ <Assigning Agency or Department (CWE)> ^ <Security Check
             (ST)> ^ <Security Check Scheme (ID)>

Subcomponents for Family Name (FN):  <Surname (ST)> & <Own Surname Prefix
             (ST)> & <Own Surname (ST)> & <Surname Prefix from Partner/Spouse
             (ST)> & <Surname from Partner/Spouse (ST)>
```

```
Subcomponents for Source Table (CWE):  <Identifier (ST)> & <Text (ST)> & <Name
            of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate
            Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding
            System Version ID (ST)> & <Alternate Coding System Version ID (ST)>
            & <Original Text (ST)> & <Second Alternate Identifier (ST)> &
            <Second Alternate Text (ST)> & <Name of Second Alternate Coding
            System (ID)> & <Second Alternate Coding System Version ID (ST)> &
            <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set
            Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate
            Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> &
            <Second Alternate Coding System OID (ST)> & <Second Alternate Value
            Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Assigning Authority (HD):  <Namespace ID (IS)> & <Universal
            ID (ST)> & <Universal ID Type (ID)>

Subcomponents for Assigning Facility (HD):  <Namespace ID (IS)> & <Universal
            ID (ST)> & <Universal ID Type (ID)>

Subcomponents for Name Context (CWE):  <Identifier (ST)> & <Text (ST)> & <Name
            of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate
            Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding
            System Version ID (ST)> & <Alternate Coding System Version ID (ST)>
            & <Original Text (ST)> & <Second Alternate Identifier (ST)> &
            <Second Alternate Text (ST)> & <Name of Second Alternate Coding
            System (ID)> & <Second Alternate Coding System Version ID (ST)> &
            <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set
            Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate
            Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> &
            <Second Alternate Coding System OID (ST)> & <Second Alternate Value
            Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Assigning Jurisdiction (CWE):  <Identifier (ST)> & <Text
            (ST)> & <Name of Coding System (ID)> & <Alternate Identifier (ST)>
            & <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> &
            <Coding System Version ID (ST)> & <Alternate Coding System Version
            ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier
            (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate
            Coding System (ID)> & <Second Alternate Coding System Version ID
            (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value
            Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
            <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID
            (DTM)> & <Second Alternate Coding System OID (ST)> & <Second
            Alternate Value Set OID (ST)> & <Second Alternate Value Set Version
            ID (DTM)>

Subcomponents for Assigning Agency or Department (CWE):  <Identifier (ST)> &
            <Text (ST)> & <Name of Coding System (ID)> & <Alternate Identifier
            (ST)> & <Alternate Text (ST)> & <Name of Alternate Coding System
            (ID)> & <Coding System Version ID (ST)> & <Alternate Coding System
            Version ID (ST)> & <Original Text (ST)> & <Second Alternate
            Identifier (ST)> & <Second Alternate Text (ST)> & <Name of Second
            Alternate Coding System (ID)> & <Second Alternate Coding System
            Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)>
            & <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)>
            & <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID
            (DTM)> & <Second Alternate Coding System OID (ST)> & <Second
            Alternate Value Set OID (ST)> & <Second Alternate Value Set Version
            ID (DTM)>
```

Definition: ***This field is retained for backward compatibility only as of v 27.*** The reader is referred to the PRT segment described in Chapter 7.

This field identifies the provider's controlled substance number, if required, by site. It is defined as conditional because it is required when the substance being requested is a controlled substance (e.g., a narcotic). If the person referenced in this field is also referenced in PRT segment, they must contain the same information. However, if there is a difference, then PRT segment takes precedence.

4A.4.1.15   RXO-15   Pharmacist/Treatment Supplier's Verifier ID   (XCN)   00306

Components: <Person Identifier (ST)> ^ <Family Name (FN)> ^ <Given Name (ST)> ^ <Second and Further Given Names or Initials Thereof (ST)> ^ <Suffix (e.g., JR or III) (ST)> ^ <Prefix (e.g., DR) (ST)> ^ <WITHDRAWN Constituent> ^ <DEPRECATED-Source Table (CWE)> ^ <Assigning Authority (HD)> ^ <Name Type Code (ID)> ^ <Identifier Check Digit (ST)> ^ <Check Digit Scheme (ID)> ^ <Identifier Type Code (ID)> ^ <Assigning Facility (HD)> ^ <Name Representation Code (ID)> ^ <Name Context (CWE)> ^ <WITHDRAWN Constituent> ^ <Name Assembly Order (ID)> ^ <Effective Date (DTM)> ^ <Expiration Date (DTM)> ^ <Professional Suffix (ST)> ^ <Assigning Jurisdiction (CWE)> ^ <Assigning Agency or Department (CWE)> ^ <Security Check (ST)> ^ <Security Check Scheme (ID)>

Subcomponents for Family Name (FN): <Surname (ST)> & <Own Surname Prefix (ST)> & <Own Surname (ST)> & <Surname Prefix from Partner/Spouse (ST)> & <Surname from Partner/Spouse (ST)>

Subcomponents for Source Table (CWE): <Identifier (ST)> & <Text (ST)> & <Name of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding System Version ID (ST)> & <Alternate Coding System Version ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate Coding System (ID)> & <Second Alternate Coding System Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> & <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Assigning Authority (HD): <Namespace ID (IS)> & <Universal ID (ST)> & <Universal ID Type (ID)>

Subcomponents for Assigning Facility (HD): <Namespace ID (IS)> & <Universal ID (ST)> & <Universal ID Type (ID)>

Subcomponents for Name Context (CWE): <Identifier (ST)> & <Text (ST)> & <Name of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding System Version ID (ST)> & <Alternate Coding System Version ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate Coding System (ID)> & <Second Alternate Coding System Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> & <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Assigning Jurisdiction (CWE): <Identifier (ST)> & <Text (ST)> & <Name of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding System Version ID (ST)> & <Alternate Coding System Version ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate Coding System (ID)> & <Second Alternate Coding System Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> & <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

September 2015.

```
Subcomponents for Assigning Agency or Department (CWE):  <Identifier (ST)> &
        <Text (ST)> & <Name of Coding System (ID)> & <Alternate Identifier
        (ST)> & <Alternate Text (ST)> & <Name of Alternate Coding System
        (ID)> & <Coding System Version ID (ST)> & <Alternate Coding System
        Version ID (ST)> & <Original Text (ST)> & <Second Alternate
        Identifier (ST)> & <Second Alternate Text (ST)> & <Name of Second
        Alternate Coding System (ID)> & <Second Alternate Coding System
        Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)>
        & <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)>
        & <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID
        (DTM)> & <Second Alternate Coding System OID (ST)> & <Second
        Alternate Value Set OID (ST)> & <Second Alternate Value Set Version
        ID (DTM)>
```

Definition: This field is the provider ID of the pharmacist/treatment supplier verifier. Use if required by the pharmacy or treatment application or site on orders (or some subgroup of orders), in addition to *ORC-11-verified by*.

Example:

The site requires a "verified by" provider (such as a nurse) and a "verifying pharmacist/treatment supplier" on the order. In this case the first field, *ORC-11-verified by*, is already present; but the second field, *RXO-15-pharmacist/treatment supplier's verifier ID*, is needed.

4A.4.1.16   RXO-16   Needs Human Review   (ID)   00307

Definition: This field uses *HL7 Table 0136 - Yes/No Indicator* in Chapter 2C, Code Tables. The values have the following meaning for this field:

Y   Yes - Indicates that the pharmacist or non-pharmacist treatment supplier filling the order needs to pay special attention to the text in the *RXO-6-provider's pharmacy/treatment instructions*. A warning is present.

N   No - No warning is present. This is the equivalent default (null) value.

An example of the use of this field is given by the following case:

A *smart* Order Entry application knows of a possible drug or treatment interaction on a certain order, but the provider issuing the order wants to override the condition. In this case, the pharmacy or treatment application receiving the order will want to have a staff pharmacist or non-pharmacist treatment supplier review the interaction and contact the ordering physician.

4A.4.1.17   RXO-17   Requested Give Per (Time Unit)   (ST)   00308

Definition: This field identifies the time unit to use to calculate the rate at which the pharmaceutical is to be administered.

Format:

S<integer>	=	<integer> seconds
M<integer>	=	<integer> minutes
H<integer>	=	<integer> hours
D<integer>	=	<integer> days
W<integer>	=	<integer> weeks
L<integer>	=	<integer> months

Note: This is the same as the format specified for the DURATION component of the quantity/timing field, excluding the "X" specification.

This field is defined as conditional because it is required when the ordered substance is to be administered continuously at a prescribed rate (e.g., certain IVs). For example, if the "give amount/units" are 300 ml and the "give per" time unit is H1, the rate is 300ml/hr and the duration of this dose is 1 hour. Thus the give amount and give per time unit define the duration of the service.

This field is distinct from the "interval" component of the quantity/timing field, but it could be used in conjunction with it, as in *give 300ml of NS per hr for 1 hour, repeat twice a day*.

4A.4.1.18   RXO-18   Requested Give Strength   (NM)   01121

Definition: Required when RXO-1-requested give code does not specify the strength; optionally included otherwise. This is the numeric part of the strength, used in combination with *RXO-19-requested give strength units*.

The need for strength and strength unit fields in addition to the amount and amount units fields included in various RX_ segments requires explanation. Physicians can write a prescription for a drug such as Ampicillin in two ways. One way would be: "Ampicillin 250 mg capsules, 2 capsules four times a day." In this case the give amount would be 2, the give units would be capsules, the strength would be 250 and the strength units would be milligrams.

However, the provider could also write the pharmaceutical treatment as "Ampicillin 500 mg four times a day." In this case the give amount would be 500 and the give units would be milligrams. The strength would not be reported in the RXO segment because it is not specified; the drug could be given in two 250 mg caps or one 500 mg cap. But the pharmacist would dispense a specific capsule size and would record the strength in the RXE segment as 250 or 500, depending upon which capsule size was dispensed.

Some coding systems imply the strength, units, route of administration, and manufacturer of substances within a single instructional code. NDC codes, for example, usually imply not only the medical substance, but also the strength, the units, and the form, e.g., 0047-0402-30^Ampicillin 250 MG CAPS^NDC. So all of this information can also be completely specified in *RXO-1-requested give code* and in the analogous CWE/CNE fields in other pharmacy/treatment segments. In this case, it is not necessary to use the strength and strength units fields to specify this information.

4A.4.1.19   RXO-19   Requested Give Strength Units   (CWE)   01122

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: Required when both *RXO-1-requested give code* and *RXO-10-requested dispense code* do not specify the strength; optionally included otherwise. This is the unit of the strength, used in combination with *RXO-18-requested give strength*.

Note: These units can be a "compound quantity;" i.e., the units may express a quantity per unit of time. For example, micrograms per hour (micg/h) is an acceptable value. These compound units are contained in the ISO+ table. See Chapter 7 for full definition of ISO+ units.

4A.4.1.20   RXO-20   Indication   (CWE)   01123

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field identifies the condition or problem for which the drug/treatment was prescribed. May repeat if multiple indications are relevant.

4A.4.1.21   RXO-21   Requested Give Rate Amount   (ST)   01218

Definition: This field contains the rate at which to administer a treatment, e.g., 150 ml/hr (for an IV) or 4 liters/min for nasal oxygen.

4A.4.1.22   RXO-22   Requested Give Rate Units   (CWE)   01219

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field contains the units in which *RXO-21-requested give rate amount* is denominated.

4A.4.1.23   RXO-23   Total Daily Dose   (CQ)   00329

```
Components:  <Quantity (NM)> ^ <Units (CWE)>

Subcomponents for Units (CWE):  <Identifier (ST)> & <Text (ST)> & <Name of
             Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text
             (ST)> & <Name of Alternate Coding System (ID)> & <Coding System
             Version ID (ST)> & <Alternate Coding System Version ID (ST)> &
             <Original Text (ST)> & <Second Alternate Identifier (ST)> & <Second
             Alternate Text (ST)> & <Name of Second Alternate Coding System
             (ID)> & <Second Alternate Coding System Version ID (ST)> & <Coding
             System OID (ST)> & <Value Set OID (ST)> & <Value Set Version ID
             (DTM)> & <Alternate Coding System OID (ST)> & <Alternate Value Set
             OID (ST)> & <Alternate Value Set Version ID (DTM)> & <Second
             Alternate Coding System OID (ST)> & <Second Alternate Value Set OID
             (ST)> & <Second Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the total daily dose for this particular pharmaceutical as expressed in terms of actual dispense units.

4A.4.1.24   RXO-24   Supplementary Code   (CWE)   01476

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

This field accommodates the identification of any codes that might be associated with the pharmaceutical substance. Common codes include: the Generic Product Identifier (GPI), Generic Code Number_Sequence Number (GCN_SEQNO), National Drug Code (NDC)**.**

4A.4.1.25   RXO-25   Requested Drug Strength Volume   (NM)   01666

Description: This numeric field defines the volume measurement in which the drug strength concentration is contained. For example, Acetaminophen 120 MG/5ML Elixir means that 120 MG of the drug is in a solution with a volume of 5 ML, which would be encoded in RXO-18, RXO-19, RXO-25 and RXO-26 as:

RXO||||||||||||||||||120|mg^^ISO||||||5|ml^^ISO ...<cr>

4A.4.1.26   RXO-26   Requested Drug Strength Volume Units   (CWE)   01667

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Description: This field indicates the volumetric unit associated with *RXO-25 Requested Drug Strength Volume*. See example in RXO-25.

4A.4.1.27   RXO-27   Pharmacy Order Type   (ID)   01668

Definition: The Pharmacy Order Type field defines the general category of pharmacy order which may be used to determine the processing path the order will take. Refer to *HL7 Table 0480 — Pharmacy Order Types* in Chapter 2C, Code Tables, for valid values.

This field may also be used for grouping of related orders for processing and/or reports. For example, Medication Administration Records (MARs) often group large volume solutions, medications and small volume solutions differently based upon site-specific workflow.

Usage Rule: This field is optional for all Pharmacy transactions. When not populated, a default value of "M" is assumed.

4A.4.1.28   RXO-28   Dispensing Interval   (NM)   01669

Definition: This field specifies the minimum number of days that must occur between dispensing events

4A.4.1.29   RXO-29   Medication Instance Identifier   (EI)   02149

```
Components:  <Entity Identifier (ST)> ^ <Namespace ID (IS)> ^ <Universal ID
             (ST)> ^ <Universal ID Type (ID)>
```

Definition: This field contains a value that uniquely identifies the medication associated with this segment. Rather than identifying the product to be given, as in *RXO-1 Requested Give Code*, this field serves to identify the medication in association with the order represented by the segment instance. This identifier is persistent within and across message instances.

> Note: RXO-39 Medication Instance Identifier was introduced in v2.6 to support Patient Care messaging concepts and constructs. At this time, there are no documented use cases for this field in the context of a pharmacy/treatment orders as described in this chapter. This statement does not preclude the use of RXO-29 in pharmacy messages, but implementers should exercise caution in using this field outside of the Patient Care context until the pharmacy/treatment use cases are established.

4A.4.1.30   RXO-30   Segment Instance Identifier   (EI)   02150

```
Components:  <Entity Identifier (ST)> ^ <Namespace ID (IS)> ^ <Universal ID
             (ST)> ^ <Universal ID Type (ID)>
```

Definition: This field contains a value that uniquely identifies this segment across time and messages. This is not intended as a "Set ID", but as a unique identifier allowing references not only to segments of the same message, but also to segments of other messages and indirectly to the entities described in those segments if the necessary persistence was manageable by the applications. This identifier is persistent within and across message instances.

> Note: RXO-30 Segment Instance Identifier was introduced in v 2.6 to support Patient Care messaging concepts and constructs. At this time, there are no documented use cases for this field in the context of a pharmacy/treatment orders as described in this chapter. This statement does not preclude the use of RXO-30 in pharmacy messages, but implementers should exercise caution in using this field outside of the Patient Care context until the pharmacy/treatment use cases are established.

4A.4.1.31   RXO-31   Mood Code   (CNE)   02151

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field represents the functional state of the order represented by this segment instance. Refer to *HL7 Table 0725 – Mood Codes* in Chapter 2C, Code Tables, for valid values. This field may only be used with new trigger events and new messages from v2.6 onward.   When this field is not valued in a message that qualifies, then the value is assumed to be 'EVN'.

There may appear to be overlap between this field and *ORC-5 Order Status*. However, the intent of Mood Code is to support the description and documentation of historical events. In this context, Mood codes may clash with Order Status codes, a Mood code may apply for different Order Status values, or this segment may be being used outside of the order paradigm (e.g., in a patient care plan). Moods are meant to change the semantics of clinical data in a message when it is not inferable from the trigger event: when the data can represent a past medication, a future medication (e.g., in a patient care plan), or in a request (e.g., as a reason for referral). The reader is referred to Chapter 12, Patient Care, for further discussion of patient care plans and referrals.

> Note: RXO-31 Mood Code was introduced in v2.6 to support Patient Care messaging concepts and constructs. At this time, there are no documented use cases for this field in the context of a pharmacy/treatment orders as described in this chapter. This statement does not preclude the use of RXO-31 in pharmacy messages, but implementers should exercise caution in using this field outside of the Patient Care context until the pharmacy/treatment use cases are established. While a similar note exists for RXO-29 Medication Instance Identifier and RXO-30 Segment Instance Identifier, particular care should be taken with RXO-31 as this could modify the intent of the segment/message and create backward compatibility problems.

4A.4.1.32 RXO-32 Dispensing Pharmacy (CWE) 01681

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: *This field is retained for backward compatibility only as of v 27.* The information formerly communicated using this field should now be communicated using the PRT segment. The reader is referred to chapter 7 for a description of that segment.

This field specifies the pharmacy that will dispense or has dispensed the prescription. In the context of an order/request (i.e., in an RXO segment) this field represents the requested dispensing pharmacy. In the context of a registered order (i.e., in an RXE segment) this field represents the intended dispensing pharmacy, the pharmacy that is expected to dispense the prescription.

4A.4.1.33 RXO-33 Dispensing Pharmacy Address (XAD) 01682

```
Components:  <Street Address (SAD)> ^ <Other Designation (ST)> ^ <City (ST)> ^
             <State or Province (ST)> ^ <Zip or Postal Code (ST)> ^ <Country
             (ID)> ^ <Address Type (ID)> ^ <Other Geographic Designation (ST)> ^
             <County/Parish Code (CWE)> ^ <Census Tract (CWE)> ^ <Address
             Representation Code (ID)> ^ <WITHDRAWN Constituent> ^ <Effective
             Date (DTM)> ^ <Expiration Date (DTM)> ^ <Expiration Reason (CWE)> ^
             <Temporary Indicator (ID)> ^ <Bad Address Indicator (ID)> ^
             <Address Usage (ID)> ^ <Addressee (ST)> ^ <Comment (ST)> ^
             <Preference Order (NM)> ^ <Protection Code (CWE)> ^ <Address
             Identifier (EI)>

Subcomponents for Street Address (SAD):  <Street or Mailing Address (ST)> &
             <Street Name (ST)> & <Dwelling Number (ST)>

Subcomponents for County/Parish Code (CWE):  <Identifier (ST)> & <Text (ST)> &
             <Name of Coding System (ID)> & <Alternate Identifier (ST)> &
             <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> &
             <Coding System Version ID (ST)> & <Alternate Coding System Version
             ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier
             (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate
             Coding System (ID)> & <Second Alternate Coding System Version ID
             (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value
             Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
             <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID
             (DTM)> & <Second Alternate Coding System OID (ST)> & <Second
             Alternate Value Set OID (ST)> & <Second Alternate Value Set Version
             ID (DTM)>

Subcomponents for Census Tract (CWE):  <Identifier (ST)> & <Text (ST)> & <Name
             of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate
             Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding
             System Version ID (ST)> & <Alternate Coding System Version ID (ST)>
             & <Original Text (ST)> & <Second Alternate Identifier (ST)> &
             <Second Alternate Text (ST)> & <Name of Second Alternate Coding
             System (ID)> & <Second Alternate Coding System Version ID (ST)> &
             <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set
             Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate
             Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> &
             <Second Alternate Coding System OID (ST)> & <Second Alternate Value
             Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>
```

```
Subcomponents for Expiration Reason (CWE): <Identifier (ST)> & <Text (ST)> &
        <Name of Coding System (ID)> & <Alternate Identifier (ST)> &
        <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> &
        <Coding System Version ID (ST)> & <Alternate Coding System Version
        ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier
        (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate
        Coding System (ID)> & <Second Alternate Coding System Version ID
        (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value
        Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
        <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID
        (DTM)> & <Second Alternate Coding System OID (ST)> & <Second
        Alternate Value Set OID (ST)> & <Second Alternate Value Set Version
        ID (DTM)>

Subcomponents for Protection Code (CWE): <Identifier (ST)> & <Text (ST)> &
        <Name of Coding System (ID)> & <Alternate Identifier (ST)> &
        <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> &
        <Coding System Version ID (ST)> & <Alternate Coding System Version
        ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier
        (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate
        Coding System (ID)> & <Second Alternate Coding System Version ID
        (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value
        Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
        <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID
        (DTM)> & <Second Alternate Coding System OID (ST)> & <Second
        Alternate Value Set OID (ST)> & <Second Alternate Value Set Version
        ID (DTM)>

Subcomponents for Address Identifier (EI): <Entity Identifier (ST)> &
        <Namespace ID (IS)> & <Universal ID (ST)> & <Universal ID Type
        (ID)>
```

Definition: ***This field is retained for backward compatibility only as of v 27.*** The information formerly communicated using this field should now be communicated using the PRT segment. The reader is referred to chapter 7 for a description of that segment.

This field specifies the address of the dispensing facility.

4A.4.1.34   RXO-34   Deliver-to Patient Location   (PL)   01683

```
Components: <Point of Care (HD)> ^ <Room (HD)> ^ <Bed (HD)> ^ <Facility (HD)>
        ^ <Location Status (IS)> ^ <Person Location Type (IS)> ^ <Building
        (HD)> ^ <Floor (HD)> ^ <Location Description (ST)> ^ <Comprehensive
        Location Identifier (EI)> ^ <Assigning Authority for Location (HD)>

Subcomponents for Point of Care (HD): <Namespace ID (IS)> & <Universal ID
        (ST)> & <Universal ID Type (ID)>

Subcomponents for Room (HD): <Namespace ID (IS)> & <Universal ID (ST)> &
        <Universal ID Type (ID)>

Subcomponents for Bed (HD): <Namespace ID (IS)> & <Universal ID (ST)> &
        <Universal ID Type (ID)>

Subcomponents for Facility (HD): <Namespace ID (IS)> & <Universal ID (ST)> &
        <Universal ID Type (ID)>

Subcomponents for Building (HD): <Namespace ID (IS)> & <Universal ID (ST)> &
        <Universal ID Type (ID)>

Subcomponents for Floor (HD): <Namespace ID (IS)> & <Universal ID (ST)> &
        <Universal ID Type (ID)>

Subcomponents for Comprehensive Location Identifier (EI): <Entity Identifier
        (ST)> & <Namespace ID (IS)> & <Universal ID (ST)> & <Universal ID
        Type (ID)>

Subcomponents for Assigning Authority for Location (HD): <Namespace ID (IS)>
        & <Universal ID (ST)> & <Universal ID Type (ID)>
```

Definition: This field specifies the location of the patient to whom the pharmaceutical substance is to be delivered.

4A.4.1.35   RXO-35   Deliver-to Address   (XAD)   01684

Components: <Street Address (SAD)> ^ <Other Designation (ST)> ^ <City (ST)> ^
            <State or Province (ST)> ^ <Zip or Postal Code (ST)> ^ <Country
            (ID)> ^ <Address Type (ID)> ^ <Other Geographic Designation (ST)> ^
            <County/Parish Code (CWE)> ^ <Census Tract (CWE)> ^ <Address
            Representation Code (ID)> ^ <WITHDRAWN Constituent> ^ <Effective
            Date (DTM)> ^ <Expiration Date (DTM)> ^ <Expiration Reason (CWE)> ^
            <Temporary Indicator (ID)> ^ <Bad Address Indicator (ID)> ^
            <Address Usage (ID)> ^ <Addressee (ST)> ^ <Comment (ST)> ^
            <Preference Order (NM)> ^ <Protection Code (CWE)> ^ <Address
            Identifier (EI)>

Subcomponents for Street Address (SAD): <Street or Mailing Address (ST)> &
            <Street Name (ST)> & <Dwelling Number (ST)>

Subcomponents for County/Parish Code (CWE): <Identifier (ST)> & <Text (ST)> &
            <Name of Coding System (ID)> & <Alternate Identifier (ST)> &
            <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> &
            <Coding System Version ID (ST)> & <Alternate Coding System Version
            ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier
            (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate
            Coding System (ID)> & <Second Alternate Coding System Version ID
            (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value
            Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
            <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID
            (DTM)> & <Second Alternate Coding System OID (ST)> & <Second
            Alternate Value Set OID (ST)> & <Second Alternate Value Set Version
            ID (DTM)>

Subcomponents for Census Tract (CWE): <Identifier (ST)> & <Text (ST)> & <Name
            of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate
            Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding
            System Version ID (ST)> & <Alternate Coding System Version ID (ST)>
            & <Original Text (ST)> & <Second Alternate Identifier (ST)> &
            <Second Alternate Text (ST)> & <Name of Second Alternate Coding
            System (ID)> & <Second Alternate Coding System Version ID (ST)> &
            <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set
            Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate
            Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> &
            <Second Alternate Coding System OID (ST)> & <Second Alternate Value
            Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Expiration Reason (CWE): <Identifier (ST)> & <Text (ST)> &
            <Name of Coding System (ID)> & <Alternate Identifier (ST)> &
            <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> &
            <Coding System Version ID (ST)> & <Alternate Coding System Version
            ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier
            (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate
            Coding System (ID)> & <Second Alternate Coding System Version ID
            (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value
            Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
            <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID
            (DTM)> & <Second Alternate Coding System OID (ST)> & <Second
            Alternate Value Set OID (ST)> & <Second Alternate Value Set Version
            ID (DTM)>

Subcomponents for Protection Code (CWE): <Identifier (ST)> & <Text (ST)> &
            <Name of Coding System (ID)> & <Alternate Identifier (ST)> &
            <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> &
            <Coding System Version ID (ST)> & <Alternate Coding System Version
            ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier
            (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate
            Coding System (ID)> & <Second Alternate Coding System Version ID
            (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value
            Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
            <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID
            (DTM)> & <Second Alternate Coding System OID (ST)> & <Second
            Alternate Value Set OID (ST)> & <Second Alternate Value Set Version
            ID (DTM)>

```
Subcomponents for Address Identifier (EI): <Entity Identifier (ST)> &
            <Namespace ID (IS)> & <Universal ID (ST)> & <Universal ID Type
            (ID)>
```

Definition: This field specifies the address, either mailing or physical, to which the prescription should be mailed or delivered.

4A.4.1.36   RXO-36   Pharmacy Phone Number   (XTN)   02309

```
Components: <WITHDRAWN Constituent> ^ <Telecommunication Use Code (ID)> ^
            <Telecommunication Equipment Type (ID)> ^ <Communication Address
            (ST)> ^ <Country Code (SNM)> ^ <Area/City Code (SNM)> ^ <Local
            Number (SNM)> ^ <Extension (SNM)> ^ <Any Text (ST)> ^ <Extension
            Prefix (ST)> ^ <Speed Dial Code (ST)> ^ <Unformatted Telephone
            number  (ST)> ^ <Effective Start Date (DTM)> ^ <Expiration Date
            (DTM)> ^ <Expiration Reason (CWE)> ^ <Protection Code (CWE)> ^
            <Shared Telecommunication Identifier (EI)> ^ <Preference Order
            (NM)>

Subcomponents for Expiration Reason (CWE): <Identifier (ST)> & <Text (ST)> &
            <Name of Coding System (ID)> & <Alternate Identifier (ST)> &
            <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> &
            <Coding System Version ID (ST)> & <Alternate Coding System Version
            ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier
            (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate
            Coding System (ID)> & <Second Alternate Coding System Version ID
            (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value
            Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
            <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID
            (DTM)> & <Second Alternate Coding System OID (ST)> & <Second
            Alternate Value Set OID (ST)> & <Second Alternate Value Set Version
            ID (DTM)>

Subcomponents for Protection Code (CWE): <Identifier (ST)> & <Text (ST)> &
            <Name of Coding System (ID)> & <Alternate Identifier (ST)> &
            <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> &
            <Coding System Version ID (ST)> & <Alternate Coding System Version
            ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier
            (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate
            Coding System (ID)> & <Second Alternate Coding System Version ID
            (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value
            Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
            <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID
            (DTM)> & <Second Alternate Coding System OID (ST)> & <Second
            Alternate Value Set OID (ST)> & <Second Alternate Value Set Version
            ID (DTM)>

Subcomponents for Shared Telecommunication Identifier (EI):  <Entity
            Identifier (ST)> & <Namespace ID (IS)> & <Universal ID (ST)> &
            <Universal ID Type (ID)>
```

Definition: This field contains the telecommunication contact information for the pharmacy. Repetitions may be supplied for various device types or use codes, or multiple instances of the same type or use. This concept also exists as RXE-45 and RXD-34 to support pharmacy contact information in the context of the order, the encoded order and the dispense.

4A.4.2 RXR - Pharmacy/Treatment Route Segment

The Pharmacy/Treatment Route segment contains the alternative combination of route, site, administration device, and administration method that are prescribed as they apply to a particular order. The pharmacy, treatment staff and/or nursing staff has a choice between the routes based on either their professional judgment or administration instructions provided by the physician.

HL7 Attribute Table – RXR – Pharmacy/Treatment Route

SEQ	LEN	C.LEN	DT	OPT	RP/#	TBL#	ITEM #	ELEMENT NAME
1			CWE	R		0162	00309	Route
2			CWE	O		0550	00310	Administration Site

SEQ	LEN	C.LEN	DT	OPT	RP/#	TBL#	ITEM #	ELEMENT NAME
3			CWE	O		0164	00311	Administration Device
4			CWE	O		0165	00312	Administration Method
5			CWE	O		9999	01315	Routing Instruction
6			CWE	O		0495	01670	Administration Site Modifier

4A.4.2.0   RXR field definitions

4A.4.2.1   RXR-1   Route   (CWE)   00309

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field is the route of administration.

Some current "route codes," such as some of the NDC-derived codes include the site already. In such cases, the entire code can be included in this field as a "locally-defined code" for the CWE data type. Refer to *User-Defined Table 0162 - Route of Administration* in Chapter 2C, Code Tables, for valid values.

4A.4.2.2   RXR-2 Administration Site   (CWE)   00310

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field contains the site of the administration route. When using a post-coordinated code table in this field, RXR-6 Administration Site may be used to modify the meaning of this field.

Refer to *HL7 Table 0550 – Body Parts* in Chapter 2C, Code Tables, for valid values. Other appropriate external code sets (e.g., SNOMED) may also be employed.

4A.4.2.3   RXR-3 Administration Device   (CWE)   00311

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field contains the mechanical device used to aid in the administration of the drug or other treatment. Common examples are IV-sets of different types. Refer to *User-defined Table 0164 - Administration device* in Chapter 2C, Code Tables, for valid entries.

4A.4.2.4   RXR-4   Administration Method   (CWE)   00312

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field identifies the specific method requested for the administration of the drug or treatment to the patient. Refer To *User-defined Table 0165 – Administration Method* in Chapter 2C, Code Tables, for valid values.

4A.4.2.5   RXR-5   Routing Instruction   (CWE)   01315

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field provides instruction on administration routing, especially in cases where more than one route of administration is possible. A typical case would be designating which IV line should be used when more than one IV line is a possible route for injection.

4A.4.2.6   RXR-6   Administration Site Modifier   (CWE)   01670

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field contains a modifier which modifies the meaning of *RXR-2 Administration Site*.

The code table used in this field is dependent upon the code table used in *RXR-2 Administration site*. If RXR-2 employs *HL7 Table 0550 – Body Parts*, then this field may only be populated with values from *HL7 Table 0495 – Body Parts Modifier*. In the case of other code sets (e.g., SNOMED) in RXR-2, RXR-6 may only be populated if modifiers are defined within, or related to, that code set.

Condition Rule: This field may only be populated if *RXR-2 Administration Site* is populated. This field is not required if RXR-2 is populated.

4A.4.3 RXC - Pharmacy/Treatment Component Order Segment

If the drug or treatment ordered with the RXO segment is a compound drug OR an IV solution, AND there is not a coded value for *OBR-4-universal service ID*, which specifies the components (base and all additives), then the components (the base and additives) are specified by two or more RXC segments. The policy of the pharmacy or treatment application on substitutions at the RXC level is identical to that for the RXO level.

HL7 Attribute Table – RXC – Pharmacy/Treatment Component Order

SEQ	LEN	C.LEN	DT	OPT	RP/#	TBL#	ITEM #	ELEMENT NAME
1	1..1		ID	R		0166	00313	RX Component Type
2			CWE	R		9999	00314	Component Code
3			NM	R			00315	Component Amount
4			CWE	R		9999	00316	Component Units
5			NM	O			01124	Component Strength
6			CWE	O		9999	01125	Component Strength Units
7			CWE	O	Y	9999	01476	Supplementary Code
8		5#	NM	O			01671	Component Drug Strength Volume
9			CWE	O		9999	01672	Component Drug Strength Volume Units
10			NM	C			03314	Dispense Amount
11			CWE	C		9999	03315	Dispense Units

4A.4.3.0   RXC field definitions

4A.4.3.1   RXC-1   RX Component Type   (ID)   00313

Definition: Refer to *HL7 Table 0166 – RX Component Type* in Chapter 2C, Code Tables for valide values.

For the non-IV case, the "B" value may still apply. For example, if a custom dermatologic salve is being prepared, the "B" item might be a standard base ointment into which other components are mixed.

The amount of the "base" specified in the "B" segment(s) is defined to be the quantity into which amounts specified in the "A" components are mixed. Thus the RXC segments as a group define the "recipe" for a particular amount (defined by the base segment(s)). The give amount, as defined in the RXO, does not need to correspond to this base amount. For example, the RXC segments may specify a recipe for a liter of a standard type of saline with 1 gram of a particular antimicrobial, while the give amount (from the RXO) may specify the administration of 2 liters of this IV-solution every 24 hours.

The amount specified in each "A" segment is defined to be the quantity to be added to the amount of the base as specified in its RXC segment.

If any "base" components are present then these should be transmitted first. The first "base" component in the transmission should be considered the "primary base" if such a distinction is necessary. Similarly, the first "additive" in the transmission should be considered the "primary additive" if such a distinction is necessary.

4A.4.3.2   RXC-2   Component Code   (CWE)   00314

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field is equivalent to *OBR-4-universal service ID*. It defines the base or component in the same manner as the give and dispense codes. As with the give and dispense codes, it may contain text only, code only, text + code, or text + code + units (implied or explicit). As with the give and dispense codes, if *RXC-4-component units* is present, this overrides the units implied by the code. If only text is present, the pharmacy or treatment application must include a manual review or reentering of the component drug or treatment.

4A.4.3.3   RXC-3   Component Amount   (NM)   00315

Definition: This field identifies the amount of this component to be added to the specified amount of the base.

4A.4.3.4   RXC-4   Component Units   (CWE)   00316

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field identifies the units for the component amount. If present, this overrides the units implied by *RXC-2-component code*. This must be in simple units that reflect the actual quantity of the component being added. It does not include compound units.

4A.4.3.5   RXC-5   Component Strength   (NM)   01124

Definition: Use when *RXC-2-component code* does not specify the strength. This is the numeric part of the strength, used in combination with *RXC-6-component strength units*.

4A.4.3.6   RXC-6   Component Strength Units   (CWE)   01125

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: Use when *RXC-2-component code* does not specify the strength. This is the unit of the strength, used in combination with *RXC-5-component strength*.

> **Note:** These units can be a "compound quantity;" i.e., the units may express a quantity per unit of time. For example, micrograms per hour (micg/h) is an acceptable value. These compound units are contained in the ISO+ table. See Chapter 7 for full definition of ISO+ units.

4A.4.3.7   RXC-7   Supplementary Code   (CWE)   01476

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

This field accommodates the identification of any codes that might be associated with the pharmaceutical or other treatment substance. Common codes include: the Generic Product Identifier (GPI), Generic Code Number_Sequence Number (GCN_SEQNO), National Drug Code (NDC).

4A.4.3.8   RXC-8   Component Drug Strength Volume   (NM)   01671

Description: This numeric field defines the volume measurement in which the drug strength concentration is contained. For example, Acetaminophen 120 MG/5ML Elixir means that 120 MG of the drug is in a solution with a volume of 5, which would be encoded in RXC-5, RXC-6, RXC-8 and RXC-9 as

RXC|||||120|mg^^ISO||5|ml^^ISO ...<cr>

4A.4.3.9   RXC-9   Component Drug Strength Volume Units   (CWE)   01672

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Description: This field indicates the volumetric unit associated with *RXC-8 Component Drug Strength Volume*. See example in RXC-8.

4A.4.3.10   RXC-10   Dispense Amount   (NM)   03314

Definition: This field contains the amount to be dispensed as encoded by the pharmacy or treatment supplier.

4A.4.3.11   RXC-11   Dispense Units   (CWE)   03315

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field contains the units for the dispense amount as encoded by the pharmacy or treatment supplier. This field is required if the units are not implied by the actual dispense code. This must be in simple units that reflect the actual quantity of the substance dispensed. It does not include compound units.

4A.4.4RXE - Pharmacy/Treatment Encoded Order Segment

The RXE segment details the pharmacy or treatment application's encoding of the order. It also contains several pharmacy-specific order status fields, such as *RXE-16-number of refills remaining*, *RXE-17-number of refills/doses dispensed, RXE-18-D/T of most recent refill or dose dispensed*, and *RXE-19-total daily dose.*

Note that *ORC-7-quantity/timing* has a different meaning from *RXE-1-quantity/timing* and *RXG-3-quantity/timing*. The pharmacy or treatment department has the "authority" (and/or necessity) to schedule dispense/give events. Hence, the pharmacy or treatment department has the responsibility to encode this scheduling information in *RXE-1-quantity/timing* and *RXG-3-quantity/timing*. *ORC-7-quantity/timing* does not change: it always specifies the requested give/dispense schedule of the original order.

HL7 Attribute Table – RXE – Pharmacy/Treatment Encoded Order

SEQ	LEN	C.LEN	DT	OPT	RP/#	TBL#	ITEM #	ELEMENT NAME
1				W			00221	Quantity/Timing
2			CWE	R		0292/ 0479	00317	Give Code
3			NM	R			00318	Give Amount - Minimum
4			NM	O			00319	Give Amount - Maximum
5			CWE	R		9999	00320	Give Units
6			CWE	O		9999	00321	Give Dosage Form
7			CWE	O	Y	9999	00298	Provider's Administration Instructions
8				W			00299	Deliver-to Location
9	1..1		ID	O		0167	00322	Substitution Status
10			NM	C			00323	Dispense Amount
11			CWE	C		9999	00324	Dispense Units
12		3=	NM	O			00304	Number of Refills
13			XCN	B	Y		00305	Ordering Provider's DEA Number
14			XCN	B	Y		00306	Pharmacist/Treatment Supplier's Verifier ID
15		20=	ST	C			00325	Prescription Number
16			NM	C			00326	Number of Refills Remaining
17			NM	C			00327	Number of Refills/Doses Dispensed
18			DTM	C			00328	D/T of Most Recent Refill or Dose Dispensed
19			CQ	C			00329	Total Daily Dose
20	1..1		ID	O		0136	00307	Needs Human Review
21			CWE	O	Y	9999	00330	Special Dispensing Instructions
22		20=	ST	C			00331	Give Per (Time Unit)
23		6=	ST	O			00332	Give Rate Amount
24			CWE	O		9999	00333	Give Rate Units
25			NM	O			01126	Give Strength

SEQ	LEN	C.LEN	DT	OPT	RP/#	TBL#	ITEM #	ELEMENT NAME
26			CWE	O		9999	01127	Give Strength Units
27			CWE	O	Y	9999	01128	Give Indication
28			NM	O			01220	Dispense Package Size
29			CWE	O		9999	01221	Dispense Package Size Unit
30	1..2		ID	O		0321	01222	Dispense Package Method
31			CWE	O	Y	9999	01476	Supplementary Code
32			DTM	O			01673	Original Order Date/Time
33		5#	NM	O			01674	Give Drug Strength Volume
34			CWE	O		9999	01675	Give Drug Strength Volume Units
35			CWE	O		0477	01676	Controlled Substance Schedule
36	1..1		ID	O		0478	01677	Formulary Status
37			CWE	O	Y	9999	01678	Pharmaceutical Substance Alternative
38			CWE	O		9999	01679	Pharmacy of Most Recent Fill
39			NM	O			01680	Initial Dispense Amount
40			CWE	B		9999	01681	Dispensing Pharmacy
41			XAD	B			01682	Dispensing Pharmacy Address
42			PL	O			01683	Deliver-to Patient Location
43			XAD	O			01684	Deliver-to Address
44	1..1		ID	O		0480	01685	Pharmacy Order Type
45			XTN	O	Y		02310	Pharmacy Phone Number

4A.4.4.0   RXE field definitions

4A.4.4.1   RXE-1   Quantity/Timing

Attention: The RXE-1 field was retained for backward compatibilty only as of v 2.5 and the detail was withdrawn and removed from the standard as of v 2.7.

4A.4.4.2   RXE-2   Give Code   (CWE)   00317

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field identifies the medical substance or treatment that has been ordered to be given to the patient, as encoded by the pharmacy or treatment supplier; it is equivalent to *OBR-4-universal service ID* in function. In the RXE segment, this give code must be fully encoded. The dispense fields, which define the units and amount of what is to be issued to the patient (see *RXE-10-dispense amount* and *RXE-11-dispense units* below) do not necessarily correlate with the instructions of what amount is to be "given" or administered with each dose, and may or may not be specified with the order. For example, the "give" part of the order may convey the field-representation of *give 250 mg of Ampicillin*, while the request to dispense part of the order may convey *issue 30 tablets of generic equivalent for this outpatient prescription*.

The coding system used is conditional on both the nature of the medical substance or treatment ordered and site-specific implementation considerations. For vaccines, *HL7 Table 0292 – Vaccines Administered* is the preferred coding system. For non-vaccine products, the coding system may be a local implementation of *User-defined Table 0479 – Pharmaceutical Substances* or an external coding system. Examples of external coding systems include, but are not limited to, National Drug Codes (NDC), Medispan Generic Product Identifier (MGPI), Drug Descriptor Identifier (DDID), and other drug codes listed in *HL7 Table 0396 – Coding Systems*.   The following examples illustrate some code tables other than User-defined Table 0479:

NDC: 0006915404^Norvasc 10mg Tabs^NDC

DDID: 015189^Norvasc 10mg Tabs^DDID

CVX (HL70292):   30^HBIG^CVX

4A.4.4.3   RXE-3   Give Amount - Minimum   (NM)   00318

Definition: This field contains the ordered amount as encoded by the pharmacy or treatment supplier. In a variable dose order, this is the minimum ordered amount. In a non-varying dose order, this is the exact amount of the order.

> **Note:**   This field is not a duplication of the first component of the quantity/timing field, since in non-pharmacy/treatment orders, that component can be used to specify multiples of an ordered amount.
>
> Another way to say this is that, for pharmacy/treatment orders, the quantity component of the quantity/timing field refers to what is to be given out at each service interval; thus, in terms of the RX order, that first component always defaults to 1. Hence, in the actual execution of the order, the value of 1 in the first component of the quantity/timing field always refers to one administration of the amount specified in this field (the requested Give Amount field).

4A.4.4.4   RXE-4   Give Amount - Maximum   (NM)   00319

Definition: In a variable dose order, this is the maximum ordered amount. In a non-varying dose, this field is not used.

4A.4.4.5   RXE-5   Give Units   (CWE)   00320

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field contains the units for the give amount as encoded by the pharmacy or treatment (e.g., respiratory therapy) application.

> **Note:** These units can be a "compound quantity"; i.e., the units may contain the word "per." For example, micrograms per KG (micg/kg) is an acceptable value, which means that the units are micrograms per KG (of body weight).

A table of standard units that contains compound units is needed. Until such a table is agreed on, a user-defined table is needed for each site.

4A.4.4.6   RXE-6   Give Dosage Form   (CWE)   00321

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: The dosage form indicates the manner in which the medication or treatment is aggregated for dispensing, e.g., tablets, capsules, suppositories. In some cases, this information is implied by the give code in *RXE-2-Give Code*. Use the *RXE-6-Give Dosage Form* when the give code does not specify the dosage form.

4A.4.4.7   RXE-7   Provider's Administration Instructions   (CWE)   00298

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field contains the ordering provider's instructions to the patient or the provider administering the drug or treatment. If coded, a user-defined table must be used; if free text (describing a custom IV, mixture, or salve, for example), place the text in the second component, e.g., `|^this is a free text administration instruction|`.

4A.4.4.8   RXE-8   Deliver-to Location

Attention: The RXE-8 field was retained for backward compatibilty only as of v 2.5 and the detail was withdrawn and removed from the standard as of v 2.7.

4A.4.4.9   RXE-9   Substitution Status   (ID)   00322

Definition: Refer to *HL7 Table 0167 - Substitution Status* in Chapter 2C, Code Tables, for valid values. If a substitution has been made, and a record of the original requested give code (*RXO-1-requested give code*) is needed, the optional RXO segment can be included in the RDE message.

4A.4.4.10   RXE-10   Dispense Amount   (NM)   00323

Definition: This field contains the amount to be dispensed as encoded by the pharmacy or treatment supplier.

4A.4.4.11   RXE-11   Dispense Units   (CWE)   00324

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field contains the units for the dispense amount as encoded by the pharmacy or treatment supplier. This field is required if the units are not implied by the actual dispense code. This must be in simple units that reflect the actual quantity of the substance dispensed. It does not include compound units.

4A.4.4.12 RXE-12   Number of Refills   (NM)   00304

Definition: This field contains the total original number of refills. Outpatient only.

4A.4.4.13 RXE-13   Ordering Provider's DEA Number   (XCN)   00305

```
Components:  <Person Identifier (ST)> ^ <Family Name (FN)> ^ <Given Name (ST)>
             ^ <Second and Further Given Names or Initials Thereof (ST)> ^
             <Suffix (e.g., JR or III) (ST)> ^ <Prefix (e.g., DR) (ST)> ^
             <WITHDRAWN Constituent> ^ <DEPRECATED-Source Table (CWE)> ^
             <Assigning Authority (HD)> ^ <Name Type Code (ID)> ^ <Identifier
             Check Digit (ST)> ^ <Check Digit Scheme (ID)> ^ <Identifier Type
             Code (ID)> ^ <Assigning Facility (HD)> ^ <Name Representation Code
             (ID)> ^ <Name Context (CWE)> ^ <WITHDRAWN Constituent> ^ <Name
             Assembly Order (ID)> ^ <Effective Date (DTM)> ^ <Expiration Date
             (DTM)> ^ <Professional Suffix (ST)> ^ <Assigning Jurisdiction
             (CWE)> ^ <Assigning Agency or Department (CWE)> ^ <Security Check
             (ST)> ^ <Security Check Scheme (ID)>

Subcomponents for Family Name (FN):  <Surname (ST)> & <Own Surname Prefix
             (ST)> & <Own Surname (ST)> & <Surname Prefix from Partner/Spouse
             (ST)> & <Surname from Partner/Spouse (ST)>

Subcomponents for Source Table (CWE):  <Identifier (ST)> & <Text (ST)> & <Name
             of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate
             Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding
             System Version ID (ST)> & <Alternate Coding System Version ID (ST)>
             & <Original Text (ST)> & <Second Alternate Identifier (ST)> &
             <Second Alternate Text (ST)> & <Name of Second Alternate Coding
             System (ID)> & <Second Alternate Coding System Version ID (ST)> &
             <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set
             Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate
             Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> &
             <Second Alternate Coding System OID (ST)> & <Second Alternate Value
             Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Assigning Authority (HD):  <Namespace ID (IS)> & <Universal
             ID (ST)> & <Universal ID Type (ID)>

Subcomponents for Assigning Facility (HD):  <Namespace ID (IS)> & <Universal
             ID (ST)> & <Universal ID Type (ID)>

Subcomponents for Name Context (CWE):  <Identifier (ST)> & <Text (ST)> & <Name
             of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate
             Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding
             System Version ID (ST)> & <Alternate Coding System Version ID (ST)>
             & <Original Text (ST)> & <Second Alternate Identifier (ST)> &
             <Second Alternate Text (ST)> & <Name of Second Alternate Coding
             System (ID)> & <Second Alternate Coding System Version ID (ST)> &
             <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set
             Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate
             Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> &
             <Second Alternate Coding System OID (ST)> & <Second Alternate Value
             Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Assigning Jurisdiction (CWE):  <Identifier (ST)> & <Text
             (ST)> & <Name of Coding System (ID)> & <Alternate Identifier (ST)>
             & <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> &
             <Coding System Version ID (ST)> & <Alternate Coding System Version
             ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier
             (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate
             Coding System (ID)> & <Second Alternate Coding System Version ID
             (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value
             Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
             <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID
             (DTM)> & <Second Alternate Coding System OID (ST)> & <Second
             Alternate Value Set OID (ST)> & <Second Alternate Value Set Version
             ID (DTM)>
```

```
Subcomponents for Assigning Agency or Department (CWE): <Identifier (ST)> &
        <Text (ST)> & <Name of Coding System (ID)> & <Alternate Identifier
        (ST)> & <Alternate Text (ST)> & <Name of Alternate Coding System
        (ID)> & <Coding System Version ID (ST)> & <Alternate Coding System
        Version ID (ST)> & <Original Text (ST)> & <Second Alternate
        Identifier (ST)> & <Second Alternate Text (ST)> & <Name of Second
        Alternate Coding System (ID)> & <Second Alternate Coding System
        Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)>
        & <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)>
        & <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID
        (DTM)> & <Second Alternate Coding System OID (ST)> & <Second
        Alternate Value Set OID (ST)> & <Second Alternate Value Set Version
        ID (DTM)>
```

Definition: *This field is retained for backward compatibility only as of v 27.* The reader is referred to the PRT segment described in Chapter 7.

This field is defined as conditional because it is required when the substance requested is a controlled substance (e.g., a narcotic). If the person referenced in this field is also referenced in PRT segment, they must contain the same information. However, if there is a difference, then PRT segment takes precedence.

4A.4.4.14 RXE-14 Pharmacist/Treatment Supplier's Verifier ID (XCN) 00306

```
Components: <Person Identifier (ST)> ^ <Family Name (FN)> ^ <Given Name (ST)>
        ^ <Second and Further Given Names or Initials Thereof (ST)> ^
        <Suffix (e.g., JR or III) (ST)> ^ <Prefix (e.g., DR) (ST)> ^
        <WITHDRAWN Constituent> ^ <DEPRECATED-Source Table (CWE)> ^
        <Assigning Authority (HD)> ^ <Name Type Code (ID)> ^ <Identifier
        Check Digit (ST)> ^ <Check Digit Scheme (ID)> ^ <Identifier Type
        Code (ID)> ^ <Assigning Facility (HD)> ^ <Name Representation Code
        (ID)> ^ <Name Context (CWE)> ^ <WITHDRAWN Constituent> ^ <Name
        Assembly Order (ID)> ^ <Effective Date (DTM)> ^ <Expiration Date
        (DTM)> ^ <Professional Suffix (ST)> ^ <Assigning Jurisdiction
        (CWE)> ^ <Assigning Agency or Department (CWE)> ^ <Security Check
        (ST)> ^ <Security Check Scheme (ID)>

Subcomponents for Family Name (FN): <Surname (ST)> & <Own Surname Prefix
        (ST)> & <Own Surname (ST)> & <Surname Prefix from Partner/Spouse
        (ST)> & <Surname from Partner/Spouse (ST)>

Subcomponents for Source Table (CWE): <Identifier (ST)> & <Text (ST)> & <Name
        of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate
        Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding
        System Version ID (ST)> & <Alternate Coding System Version ID (ST)>
        & <Original Text (ST)> & <Second Alternate Identifier (ST)> &
        <Second Alternate Text (ST)> & <Name of Second Alternate Coding
        System (ID)> & <Second Alternate Coding System Version ID (ST)> &
        <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set
        Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate
        Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> &
        <Second Alternate Coding System OID (ST)> & <Second Alternate Value
        Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Assigning Authority (HD): <Namespace ID (IS)> & <Universal
        ID (ST)> & <Universal ID Type (ID)>

Subcomponents for Assigning Facility (HD): <Namespace ID (IS)> & <Universal
        ID (ST)> & <Universal ID Type (ID)>

Subcomponents for Name Context (CWE): <Identifier (ST)> & <Text (ST)> & <Name
        of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate
        Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding
        System Version ID (ST)> & <Alternate Coding System Version ID (ST)>
        & <Original Text (ST)> & <Second Alternate Identifier (ST)> &
        <Second Alternate Text (ST)> & <Name of Second Alternate Coding
        System (ID)> & <Second Alternate Coding System Version ID (ST)> &
        <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set
        Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate
        Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> &
        <Second Alternate Coding System OID (ST)> & <Second Alternate Value
        Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>
```

```
Subcomponents for Assigning Jurisdiction (CWE): <Identifier (ST)> & <Text
        (ST)> & <Name of Coding System (ID)> & <Alternate Identifier (ST)>
        & <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> &
        <Coding System Version ID (ST)> & <Alternate Coding System Version
        ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier
        (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate
        Coding System (ID)> & <Second Alternate Coding System Version ID
        (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value
        Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
        <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID
        (DTM)> & <Second Alternate Coding System OID (ST)> & <Second
        Alternate Value Set OID (ST)> & <Second Alternate Value Set Version
        ID (DTM)>

Subcomponents for Assigning Agency or Department (CWE): <Identifier (ST)> &
        <Text (ST)> & <Name of Coding System (ID)> & <Alternate Identifier
        (ST)> & <Alternate Text (ST)> & <Name of Alternate Coding System
        (ID)> & <Coding System Version ID (ST)> & <Alternate Coding System
        Version ID (ST)> & <Original Text (ST)> & <Second Alternate
        Identifier (ST)> & <Second Alternate Text (ST)> & <Name of Second
        Alternate Coding System (ID)> & <Second Alternate Coding System
        Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)>
        & <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)>
        & <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID
        (DTM)> & <Second Alternate Coding System OID (ST)> & <Second
        Alternate Value Set OID (ST)> & <Second Alternate Value Set Version
        ID (DTM)>
```

Definition: *This field is retained for backward compatibility only as of v 27.* The reader is referred to the PRT segment described in chapter 7.

This field contains the provider ID of Pharmacist/treatment supplier's verifier. Use if required by the pharmacy or treatment application or site on orders (or some subgroup of orders). If the person referenced in this field is also referenced in PRT segment, they must contain the same information. However, if there is a difference, then PRT segment takes precedence.

4A.4.4.15 RXE-15   Prescription Number (ST) 00325

Definition: This field contains the prescription number as assigned by the pharmacy or treatment application. Equivalent in uniqueness to the pharmacy/treatment filler order number. At some sites, this may be the pharmacy or treatment system (internal) sequential form. At other sites, this may be an external form. This is a required field in RXE when used in pharmacy/treatment messages, but it is not required when used in product experience messages (see Chapter 7).

4A.4.4.16 RXE-16   Number of Refills Remaining (NM) 00326

Definition: Number of refills remaining. This field is conditional because it is required when a prescription is dispensed to an outpatient. It is not relevant to inpatient treatment orders.

4A.4.4.17 RXE-17   Number of Refills/Doses Dispensed (NM) 00327

Definition: Number of refills remaining. This field is conditional because it is required when a prescription is dispensed to an outpatient. It is not relevant to inpatient treatment orders.

4A.4.4.18 RXE-18   D/T of Most Recent Refill or Dose Dispensed   (DTM) 00328

Definition: Date/time of the most recent refill or dose dispensed.

4A.4.4.19 RXE-19 Total Daily Dose (CQ) 00329

```
Components:  <Quantity (NM)> ^ <Units (CWE)>
```

```
Subcomponents for Units (CWE):  <Identifier (ST)> & <Text (ST)> & <Name of
        Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text
        (ST)> & <Name of Alternate Coding System (ID)> & <Coding System
        Version ID (ST)> & <Alternate Coding System Version ID (ST)> &
        <Original Text (ST)> & <Second Alternate Identifier (ST)> & <Second
        Alternate Text (ST)> & <Name of Second Alternate Coding System
        (ID)> & <Second Alternate Coding System Version ID (ST)> & <Coding
        System OID (ST)> & <Value Set OID (ST)> & <Value Set Version ID
        (DTM)> & <Alternate Coding System OID (ST)> & <Alternate Value Set
        OID (ST)> & <Alternate Value Set Version ID (DTM)> & <Second
        Alternate Coding System OID (ST)> & <Second Alternate Value Set OID
        (ST)> & <Second Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the total daily dose for this particular pharmaceutical as expressed in terms of actual dispense units.

4A.4.4.20   RXE-20   Needs Human Review   (ID)   00307

Definition: This field uses *HL7 Table 0136 - Yes/No Indicator* in Chapter 2C, Code Tables. The values have the following meaning for this field:

Y   Yes - Indicates that a warning is present. The application receiving the encoded order needs to warn the person administering the drug or treatment to pay attention to the text in *RXE-21-pharmacy/treatment special dispensing instructions*.

N   No - Indicates no warning is present. This is the equivalent default (null) value.

4A.4.4.21   RXE-21   Special Dispensing Instructions   (CWE)   00330

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
        <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
        Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
        <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
        <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
        <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
        Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
        Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
        System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
        Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
        (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
        Value Set Version ID (DTM)>
```

Definition: This field contains the pharmacy or treatment supplier's provider-generated special instructions to the provider dispensing/administering the order.

4A.4.4.22   RXE-22   Give Per (Time Unit)   (ST)   00331

Definition: This field contains the time unit to use to calculate the rate at which the pharmaceutical is to be administered.

Format:

S<integer>	=	<integer> seconds
M<integer>	=	<integer> minutes
H<integer>	=	<integer> hours
D<integer>	=	<integer> days
W<integer>	=	<integer> weeks
L<integer>	=	<integer> months
T<integer>	=	at the interval and amount stated until a total of <integer> "DOSAGE" is accumulated. Units would be assumed to be the same as in the QUANTITY field.
INDEF	=	do indefinitely - also the default

This is the same as the format specified for the DURATION component of the quantity/timing field, excluding the "X" specification.

This field is defined as conditional because it is required when the ordered substance is to be administered continuously at a prescribed rate (e.g., certain IVs). For example, if the "give amount/units" were 300 ml and the "give per" time unit were H1 (equivalent to one hour), the rate is 300ml/hr.

4A.4.4.23   RXE-23   Give Rate Amount   (ST)   00332

Definition: This field contains the rate at which the substance should be administered.

4A.4.4.24   RXE-24   Give Rate Units   (CWE)   00333

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field contains the units for *RXE-23-give rate amount*. May be composite. The ratio of the *RXE-23-give rate amount* and *RXE-24-give rate units* defines the actual rate of administration. Thus, if *RXE-23-give rate amount* = 100 and *RXE-24-give rate units* = ml/hr, the requested rate of administration is 100 ml/hr. (See ISO+ figure 7-9 in Chapter 7 for possible compound units codes.)

4A.4.4.25   RXE-25   Give Strength   (NM)   01126

Definition: Use when *RXE-2-give code* does not specify the strength. This is the numeric part of the strength, used in combination with *RXE-26-give strength units*.

4A.4.4.26   RXE-26   Give Strength Units   (CWE)   01127

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: Use when *RXE-2-Give Code* does not specify the strength. This is the unit of the strength, used in combination with *RXE-25-Give Strength*.

Note: These units can be a "compound quantity"; i.e., the units may express a quantity per unit of time. For example, micrograms per hour (micg/h) is an acceptable value. These compound units are contained in the ISO+ table. See Chapter 7 for full definition of ISO+ units.

4A.4.4.27 RXE-27 Give Indication (CWE) 01128

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field identifies the condition or problem for which the drug/treatment was prescribed. May repeat if multiple indications are relevant.

4A.4.4.28 RXE-28 Dispense Package Size (NM) 01220

Definition: This field contains the size of package to be dispensed. Units are transmitted in *RXE-29-dispense package size unit*.

4A.4.4.29 RXE-29 Dispense Package Size Unit (CWE) 01221

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field contains the units in which *RXE-28-dispense package size* is denominated.

4A.4.4.30 RXE-30 Dispense Package Method (ID) 01222

Definition: This field contains the method by which treatment is dispensed. Refer to *HL7 Table 0321 - Dispense Method* in Chapter 2C, Code Tables, for valid values.

4A.4.4.31 RXE-31 Supplementary Code (CWE) 01476

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field accommodates the identification of any codes that might be associated with the pharmaceutical substance. Common codes include: the Generic Product Identifier (GPI), Generic Code Number_Sequence Number (GCN_SEQNO), National Drug Code (NDC).

4A.4.4.32 RXE-32 Original Order Date/Time (DTM) 01673

Definition: This field contains the date/time of the original order (ORC-9) when a refill authorization is being requested. This was represented in the ORC-9 of the original order transaction.

4A.4.4.33 RXE-33   Give Drug Strength Volume   (NM)   01674

Description: This numeric field defines the volume measurement in which the drug strength concentration is contained. For example, Acetaminophen 120 MG/5ML Elixir means that 120 MG of the drug is in a solution with a volume of 5 ML, which would be encoded in RXE-25, RXE-26, RXE-33 and RXE-34 as:

RXE|||||||||||||||||||||||||120|mg^^ISO|||||||5|ml^^ISO ...<cr>

4A.4.4.34 RXE-34   Give Drug Strength Volume Units   (CWE)   01675

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Description: This field indicates the volumetric unit associated with *RXE-33 Give Drug Strength Volume*. See example in RXE-33.

4A.4.4.35 RXE-35   Controlled Substance Schedule   (CWE)   01676

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field specifies the class of the drug or other substance if its usage is controlled by legislation. In the USA, such legislation includes the federal Controlled Substance Act (CSA) or a State Uniform Controlled Substance Act. Refer to *User-defined table 0477 – Controlled Substance Schedule* in Chapter 2C, Code Tables, for valid values for USA usage. Other countries should create their own versions of this table.

Because some jurisdictions may extend the list of drugs in a particular class and may create an additional schedule, table 0477 is user-defined.

4A.4.4.36 RXE-36   Formulary Status   (ID)   01677

Definition: This field specifies whether or not the pharmaceutical substance is part of the local formulary. Refer to *HL7 table 0478 - Formulary Status* in Chapter 2C, Code Tables, for valid values.

4A.4.4.37 RXE-37 Pharmaceutical Substance Alternative (CWE) 01678

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field specifies a pharmaceutical substance that is in the formulary that could be prescribed in lieu of the substance being prescribed. In the case where the specified medication is non-formulary this field would contain therapeutic alternatives that are on the formulary.

4A.4.4.38 RXE-38 Pharmacy of Most Recent Fill (CWE) 01679

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field specifies the pharmacy that last filled the prescription.

4A.4.4.39 RXE-39 Initial Dispense Amount (NM) 01680

Definition: This field specifies the quantity dispensed on the original fill (first fill) of a prescription when that amount is not the same as the quantity to be used in refills. One use case is when a new medication is being prescribed and the prescriber wants to determine if the patient will tolerate the medication. The prescriber indicates that the medication should be filled for an initial amount of 30 tablets and, if tolerated, refilled using a quantity of 100 tablets.   In this case, RXE-39 would contain 30 and RXE-10 would contain 100.

If this field is not populated, then the initial dispense amount is the same as RXE-10.

The units are identified in RXE-11.

4A.4.4.40 RXE-40 Dispensing Pharmacy (CWE) 01681

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: ***This field is retained for backward compatibility only as of v 27.*** The information formerly communicated using this field should now be communicated using the PRT segment. The reader is referred to chapter 7 for a description of that segment.

This field specifies the pharmacy that will dispense or has dispensed the prescription. In the context of an order/request (i.e., in an RXO segment) this field represents the requested dispensing

pharmacy. In the context of a registered order (i.e., in an RXE segment) this field represents the intended dispensing pharmacy, the pharmacy that is expected to dispense the prescription.

4A.4.4.41   RXE-41   Dispensing Pharmacy Address   (XAD)   01682

```
Components:  <Street Address (SAD)> ^ <Other Designation (ST)> ^ <City (ST)> ^
             <State or Province (ST)> ^ <Zip or Postal Code (ST)> ^ <Country
             (ID)> ^ <Address Type (ID)> ^ <Other Geographic Designation (ST)> ^
             <County/Parish Code (CWE)> ^ <Census Tract (CWE)> ^ <Address
             Representation Code (ID)> ^ <WITHDRAWN Constituent> ^ <Effective
             Date (DTM)> ^ <Expiration Date (DTM)> ^ <Expiration Reason (CWE)> ^
             <Temporary Indicator (ID)> ^ <Bad Address Indicator (ID)> ^
             <Address Usage (ID)> ^ <Addressee (ST)> ^ <Comment (ST)> ^
             <Preference Order (NM)> ^ <Protection Code (CWE)> ^ <Address
             Identifier (EI)>

Subcomponents for Street Address (SAD): <Street or Mailing Address (ST)> &
             <Street Name (ST)> & <Dwelling Number (ST)>

Subcomponents for County/Parish Code (CWE):  <Identifier (ST)> & <Text (ST)> &
             <Name of Coding System (ID)> & <Alternate Identifier (ST)> &
             <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> &
             <Coding System Version ID (ST)> & <Alternate Coding System Version
             ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier
             (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate
             Coding System (ID)> & <Second Alternate Coding System Version ID
             (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value
             Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
             <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID
             (DTM)> & <Second Alternate Coding System OID (ST)> & <Second
             Alternate Value Set OID (ST)> & <Second Alternate Value Set Version
             ID (DTM)>

Subcomponents for Census Tract (CWE):  <Identifier (ST)> & <Text (ST)> & <Name
             of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate
             Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding
             System Version ID (ST)> & <Alternate Coding System Version ID (ST)>
             & <Original Text (ST)> & <Second Alternate Identifier (ST)> &
             <Second Alternate Text (ST)> & <Name of Second Alternate Coding
             System (ID)> & <Second Alternate Coding System Version ID (ST)> &
             <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set
             Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate
             Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> &
             <Second Alternate Coding System OID (ST)> & <Second Alternate Value
             Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Expiration Reason (CWE):  <Identifier (ST)> & <Text (ST)> &
             <Name of Coding System (ID)> & <Alternate Identifier (ST)> &
             <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> &
             <Coding System Version ID (ST)> & <Alternate Coding System Version
             ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier
             (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate
             Coding System (ID)> & <Second Alternate Coding System Version ID
             (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value
             Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
             <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID
             (DTM)> & <Second Alternate Coding System OID (ST)> & <Second
             Alternate Value Set OID (ST)> & <Second Alternate Value Set Version
             ID (DTM)>

Subcomponents for Protection Code (CWE):  <Identifier (ST)> & <Text (ST)> &
             <Name of Coding System (ID)> & <Alternate Identifier (ST)> &
             <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> &
             <Coding System Version ID (ST)> & <Alternate Coding System Version
             ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier
             (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate
             Coding System (ID)> & <Second Alternate Coding System Version ID
             (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value
             Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
             <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID
             (DTM)> & <Second Alternate Coding System OID (ST)> & <Second
             Alternate Value Set OID (ST)> & <Second Alternate Value Set Version
             ID (DTM)>
```

```
Subcomponents for Address Identifier (EI): <Entity Identifier (ST)> &
          <Namespace ID (IS)> & <Universal ID (ST)> & <Universal ID Type
          (ID)>
```

Definition: ***This field is retained for backward compatibility only as of v 27.*** The information formerly communicated using this field should now be communicated using the PRT segment. The reader is referred to chapter 7 for a description of that segment.

This field specifies the address of the dispensing facility.

4A.4.4.42 RXE-42 Deliver-To Patient Location (PL) 01683

```
Components: <Point of Care (HD)> ^ <Room (HD)> ^ <Bed (HD)> ^ <Facility (HD)>
          ^ <Location Status (IS)> ^ <Person Location Type (IS)> ^ <Building
          (HD)> ^ <Floor (HD)> ^ <Location Description (ST)> ^ <Comprehensive
          Location Identifier (EI)> ^ <Assigning Authority for Location (HD)>

Subcomponents for Point of Care (HD): <Namespace ID (IS)> & <Universal ID
          (ST)> & <Universal ID Type (ID)>

Subcomponents for Room (HD): <Namespace ID (IS)> & <Universal ID (ST)> &
          <Universal ID Type (ID)>

Subcomponents for Bed (HD): <Namespace ID (IS)> & <Universal ID (ST)> &
          <Universal ID Type (ID)>

Subcomponents for Facility (HD): <Namespace ID (IS)> & <Universal ID (ST)> &
          <Universal ID Type (ID)>

Subcomponents for Building (HD): <Namespace ID (IS)> & <Universal ID (ST)> &
          <Universal ID Type (ID)>

Subcomponents for Floor (HD): <Namespace ID (IS)> & <Universal ID (ST)> &
          <Universal ID Type (ID)>

Subcomponents for Comprehensive Location Identifier (EI): <Entity Identifier
          (ST)> & <Namespace ID (IS)> & <Universal ID (ST)> & <Universal ID
          Type (ID)>

Subcomponents for Assigning Authority for Location (HD): <Namespace ID (IS)>
          & <Universal ID (ST)> & <Universal ID Type (ID)>
```

Definition: This field specifies the location of the patient to whom the pharmaceutical substance is to be delivered.

4A.4.4.43 RXE-43 Deliver-to Address (XAD) 01684

```
Components: <Street Address (SAD)> ^ <Other Designation (ST)> ^ <City (ST)> ^
          <State or Province (ST)> ^ <Zip or Postal Code (ST)> ^ <Country
          (ID)> ^ <Address Type (ID)> ^ <Other Geographic Designation (ST)> ^
          <County/Parish Code (CWE)> ^ <Census Tract (CWE)> ^ <Address
          Representation Code (ID)> ^ <WITHDRAWN Constituent> ^ <Effective
          Date (DTM)> ^ <Expiration Date (DTM)> ^ <Expiration Reason (CWE)> ^
          <Temporary Indicator (ID)> ^ <Bad Address Indicator (ID)> ^
          <Address Usage (ID)> ^ <Addressee (ST)> ^ <Comment (ST)> ^
          <Preference Order (NM)> ^ <Protection Code (CWE)> ^ <Address
          Identifier (EI)>

Subcomponents for Street Address (SAD): <Street or Mailing Address (ST)> &
          <Street Name (ST)> & <Dwelling Number (ST)>

Subcomponents for County/Parish Code (CWE): <Identifier (ST)> & <Text (ST)> &
          <Name of Coding System (ID)> & <Alternate Identifier (ST)> &
          <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> &
          <Coding System Version ID (ST)> & <Alternate Coding System Version
          ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier
          (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate
          Coding System (ID)> & <Second Alternate Coding System Version ID
          (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value
          Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
          <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID
          (DTM)> & <Second Alternate Coding System OID (ST)> & <Second
          Alternate Value Set OID (ST)> & <Second Alternate Value Set Version
          ID (DTM)>
```

```
            Subcomponents for Census Tract (CWE):  <Identifier (ST)> & <Text (ST)> & <Name
                     of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate
                     Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding
                     System Version ID (ST)> & <Alternate Coding System Version ID (ST)>
                     & <Original Text (ST)> & <Second Alternate Identifier (ST)> &
                     <Second Alternate Text (ST)> & <Name of Second Alternate Coding
                     System (ID)> & <Second Alternate Coding System Version ID (ST)> &
                     <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set
                     Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate
                     Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> &
                     <Second Alternate Coding System OID (ST)> & <Second Alternate Value
                     Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

            Subcomponents for Expiration Reason (CWE):  <Identifier (ST)> & <Text (ST)> &
                     <Name of Coding System (ID)> & <Alternate Identifier (ST)> &
                     <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> &
                     <Coding System Version ID (ST)> & <Alternate Coding System Version
                     ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier
                     (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate
                     Coding System (ID)> & <Second Alternate Coding System Version ID
                     (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value
                     Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
                     <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID
                     (DTM)> & <Second Alternate Coding System OID (ST)> & <Second
                     Alternate Value Set OID (ST)> & <Second Alternate Value Set Version
                     ID (DTM)>

            Subcomponents for Protection Code (CWE):  <Identifier (ST)> & <Text (ST)> &
                     <Name of Coding System (ID)> & <Alternate Identifier (ST)> &
                     <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> &
                     <Coding System Version ID (ST)> & <Alternate Coding System Version
                     ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier
                     (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate
                     Coding System (ID)> & <Second Alternate Coding System Version ID
                     (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value
                     Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
                     <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID
                     (DTM)> & <Second Alternate Coding System OID (ST)> & <Second
                     Alternate Value Set OID (ST)> & <Second Alternate Value Set Version
                     ID (DTM)>

            Subcomponents for Address Identifier (EI):  <Entity Identifier (ST)> &
                     <Namespace ID (IS)> & <Universal ID (ST)> & <Universal ID Type
                     (ID)>
```

Definition: This field specifies the address, either mailing or physical, to which the prescription should be mailed or delivered.

4A.4.4.44   RXE-44   Pharmacy Order Type   (ID)   01685

Definition: The Pharmacy Order Type field defines the general category of pharmacy order which may be used to determine the processing path the order will take. Refer to *HL7 Table 0480 Pharmacy Order Types* in Chapter 2C, Code Tables, for valid values.

This field may also be used for grouping of related orders for processing and/or reports. For example, Medication Administration Records (MARs) often group large volume solutions, medications and small volume solutions differently based upon site-specific workflow.

Usage Rule: This field is optional for all Pharmacy transactions. When not populated, a default value of "M" is assumed.

4A.4.4.45   RXE-45   Pharmacy Phone Number   (XTN)   02310

```
Components:  <WITHDRAWN Constituent> ^ <Telecommunication Use Code (ID)> ^
             <Telecommunication Equipment Type (ID)> ^ <Communication Address
             (ST)> ^ <Country Code (SNM)> ^ <Area/City Code (SNM)> ^ <Local
             Number (SNM)> ^ <Extension (SNM)> ^ <Any Text (ST)> ^ <Extension
             Prefix (ST)> ^ <Speed Dial Code (ST)> ^ <Unformatted Telephone
             number (ST)> ^ <Effective Start Date (DTM)> ^ <Expiration Date
             (DTM)> ^ <Expiration Reason (CWE)> ^ <Protection Code (CWE)> ^
             <Shared Telecommunication Identifier (EI)> ^ <Preference Order
             (NM)>

Subcomponents for Expiration Reason (CWE): <Identifier (ST)> & <Text (ST)> &
             <Name of Coding System (ID)> & <Alternate Identifier (ST)> &
             <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> &
             <Coding System Version ID (ST)> & <Alternate Coding System Version
             ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier
             (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate
             Coding System (ID)> & <Second Alternate Coding System Version ID
             (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value
             Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
             <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID
             (DTM)> & <Second Alternate Coding System OID (ST)> & <Second
             Alternate Value Set OID (ST)> & <Second Alternate Value Set Version
             ID (DTM)>

Subcomponents for Protection Code (CWE): <Identifier (ST)> & <Text (ST)> &
             <Name of Coding System (ID)> & <Alternate Identifier (ST)> &
             <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> &
             <Coding System Version ID (ST)> & <Alternate Coding System Version
             ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier
             (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate
             Coding System (ID)> & <Second Alternate Coding System Version ID
             (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value
             Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
             <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID
             (DTM)> & <Second Alternate Coding System OID (ST)> & <Second
             Alternate Value Set OID (ST)> & <Second Alternate Value Set Version
             ID (DTM)>

Subcomponents for Shared Telecommunication Identifier (EI):  <Entity
             Identifier (ST)> & <Namespace ID (IS)> & <Universal ID (ST)> &
             <Universal ID Type (ID)>
```

Definition: This field contains the telecommunication contact information for the pharmacy. Repetitions may be supplied for various device types or use codes, or multiple instances of the same type or use. This concept also exists as RXO-36 and RXD-34 to support pharmacy contact information in the context of the order, the encoded order and the dispense.

4A.4.5 RXD - Pharmacy/Treatment Dispense Segment

HL7 Attribute Table – RXD – Pharmacy/Treatment Dispense

SEQ	LEN	C.LEN	DT	OPT	RP/#	TBL#	ITEM #	ELEMENT NAME
1		4=	NM	R			00334	Dispense Sub-ID Counter
2			CWE	R		0292	00335	Dispense/Give Code
3			DTM	R			00336	Date/Time Dispensed
4			NM	R			00337	Actual Dispense Amount
5			CWE	C		9999	00338	Actual Dispense Units
6			CWE	O		9999	00339	Actual Dosage Form
7		20=	ST	R			00325	Prescription Number
8			NM	C			00326	Number of Refills Remaining
9		200=	ST	O	Y		00340	Dispense Notes

SEQ	LEN	C.LEN	DT	OPT	RP/#	TBL#	ITEM #	ELEMENT NAME
10			XCN	B	Y		00341	Dispensing Provider
11	1..1		ID	O		0167	00322	Substitution Status
12			CQ	O			00329	Total Daily Dose
13				W			01303	Dispense-to Location
14	1..1		ID	O		0136	00307	Needs Human Review
15			CWE	O	Y	9999	00330	Special Dispensing Instructions
16			NM	O			01132	Actual Strength
17			CWE	O		9999	01133	Actual Strength Unit
18		20=	ST	O	Y		01129	Substance Lot Number
19			DTM	O	Y		01130	Substance Expiration Date
20			CWE	O	Y		01131	Substance Manufacturer Name
21			CWE	O	Y	9999	01123	Indication
22			NM	O			01220	Dispense Package Size
23			CWE	O		9999	01221	Dispense Package Size Unit
24	1..2		ID	O		0321	01222	Dispense Package Method
25			CWE	O	Y	9999	01476	Supplementary Code
26			CWE	O		9999	01477	Initiating Location
27			CWE	O		9999	01478	Packaging/Assembly Location
28		5=	NM	O			01686	Actual Drug Strength Volume
29			CWE	O		9999	01687	Actual Drug Strength Volume Units
30			CWE	B		9999	01688	Dispense to Pharmacy
31			XAD	B			01689	Dispense to Pharmacy Address
32	1..1		ID	O		0480	01690	Pharmacy Order Type
33			CWE	O		0484	01691	Dispense Type
34			XTN	O	Y		02311	Pharmacy Phone Number
35			EI	O	Y		03392	Dispense Tag Identifier

4A.4.5.1 RXD-1 Dispense Sub-ID counter (NM) 00334

Definition: This field starts with 1 the first time that medication/treatment is delivered/dispensed for this order. Increments by one with each additional issuance.

4A.4.5.2 RXD-2 Dispense/Give Code (CWE) 00335

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field identifies the medical substance or treatment ordered to be given to the patient; it is equivalent to *OBR-4-Universal Service ID*. See the RXE segment for a complete definition of the *RXE-2-give code*. If the substance dispensed is a vaccine, CVX codes may be used to code this field (see *HL7 Table 0292 - Vaccines Administered* in Chapter 2C, Code Tables).

> **Note:** The contents of RXD-2-dispense/give code should be compatible with the comparable field in the RXE (RXE-2-give code). The RDS message refers ONLY to the dispensing of the drug or treatment by the pharmacy or treatment supplier.

4A.4.5.3 RXD-3 Date/Time Dispensed (DTM) 00336

Definition: This field indicates when the pharmaceutical/treatment is dispensed from the pharmacy or treatment supplier. Use the time stamp format.

4A.4.5.4 RXD-4 Actual Dispense Amount (NM) 00337

Definition: This field indicates the amount dispensed.

4A.4.5.5 RXD-5 Actual Dispense Units (CWE) 00338

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field indicates the units dispensed. Site-defined table. This field is required if the units are not implied by the actual dispense code. If present, it overrides units implied by the actual dispense code. This must be in simple units that reflect the actual quantity of the substance dispensed. It does not include compound units.

4A.4.5.6 RXD-6 Actual Dosage Form (CWE) 00339

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: The dosage form indicates the manner in which the medication/treatment is aggregated for dispensing, e.g., tablets, capsules, suppositories. In some cases, this information is implied by the dispense/give code in *RXD-2-dispense/give code*. Use this field when the give code and the dispense code do not specify the dosage form.

4A.4.5.7 RXD-7 Prescription Number (ST) 00325

Definition: This field is equivalent in uniqueness to the pharmacy/treatment supplier filler order number. At some sites, this may be the pharmacy/treatment supplier (internal) sequential form. At other sites, this may be an external number.

4A.4.5.8 RXD-8 Number of Refills Remaining (NM) 00326

Definition: This field is conditional because it is required when a prescription is dispensed to an outpatient. It is not relevant to inpatient treatment orders.

4A.4.5.9 RXD-9 Dispense Notes (ST) 00340

Definition: This field contains free text notes to the person dispensing the medication/treatment (may include the ordering provider's original notes, as well as any notes from the formulary or the

pharmacy or treatment supplier). This may contain free text describing a custom IV, mixture, or salve for example.

4A.4.5.10   RXD-10   Dispensing Provider   (XCN)   00341

```
Components:  <Person Identifier (ST)> ^ <Family Name (FN)> ^ <Given Name (ST)>
            ^ <Second and Further Given Names or Initials Thereof (ST)> ^
            <Suffix (e.g., JR or III) (ST)> ^ <Prefix (e.g., DR) (ST)> ^
            <WITHDRAWN Constituent> ^ <DEPRECATED-Source Table (CWE)> ^
            <Assigning Authority (HD)> ^ <Name Type Code (ID)> ^ <Identifier
            Check Digit (ST)> ^ <Check Digit Scheme (ID)> ^ <Identifier Type
            Code (ID)> ^ <Assigning Facility (HD)> ^ <Name Representation Code
            (ID)> ^ <Name Context (CWE)> ^ <WITHDRAWN Constituent> ^ <Name
            Assembly Order (ID)> ^ <Effective Date (DTM)> ^ <Expiration Date
            (DTM)> ^ <Professional Suffix (ST)> ^ <Assigning Jurisdiction
            (CWE)> ^ <Assigning Agency or Department (CWE)> ^ <Security Check
            (ST)> ^ <Security Check Scheme (ID)>

Subcomponents for Family Name (FN):  <Surname (ST)> & <Own Surname Prefix
            (ST)> & <Own Surname (ST)> & <Surname Prefix from Partner/Spouse
            (ST)> & <Surname from Partner/Spouse (ST)>

Subcomponents for Source Table (CWE):  <Identifier (ST)> & <Text (ST)> & <Name
            of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate
            Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding
            System Version ID (ST)> & <Alternate Coding System Version ID (ST)>
            & <Original Text (ST)> & <Second Alternate Identifier (ST)> &
            <Second Alternate Text (ST)> & <Name of Second Alternate Coding
            System (ID)> & <Second Alternate Coding System Version ID (ST)> &
            <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set
            Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate
            Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> &
            <Second Alternate Coding System OID (ST)> & <Second Alternate Value
            Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Assigning Authority (HD):  <Namespace ID (IS)> & <Universal
            ID (ST)> & <Universal ID Type (ID)>

Subcomponents for Assigning Facility (HD):  <Namespace ID (IS)> & <Universal
            ID (ST)> & <Universal ID Type (ID)>

Subcomponents for Name Context (CWE):  <Identifier (ST)> & <Text (ST)> & <Name
            of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate
            Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding
            System Version ID (ST)> & <Alternate Coding System Version ID (ST)>
            & <Original Text (ST)> & <Second Alternate Identifier (ST)> &
            <Second Alternate Text (ST)> & <Name of Second Alternate Coding
            System (ID)> & <Second Alternate Coding System Version ID (ST)> &
            <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set
            Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate
            Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> &
            <Second Alternate Coding System OID (ST)> & <Second Alternate Value
            Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Assigning Jurisdiction (CWE):  <Identifier (ST)> & <Text
            (ST)> & <Name of Coding System (ID)> & <Alternate Identifier (ST)>
            & <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> &
            <Coding System Version ID (ST)> & <Alternate Coding System Version
            ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier
            (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate
            Coding System (ID)> & <Second Alternate Coding System Version ID
            (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value
            Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
            <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID
            (DTM)> & <Second Alternate Coding System OID (ST)> & <Second
            Alternate Value Set OID (ST)> & <Second Alternate Value Set Version
            ID (DTM)>
```

```
Subcomponents for Assigning Agency or Department (CWE): <Identifier (ST)> &
        <Text (ST)> & <Name of Coding System (ID)> & <Alternate Identifier
        (ST)> & <Alternate Text (ST)> & <Name of Alternate Coding System
        (ID)> & <Coding System Version ID (ST)> & <Alternate Coding System
        Version ID (ST)> & <Original Text (ST)> & <Second Alternate
        Identifier (ST)> & <Second Alternate Text (ST)> & <Name of Second
        Alternate Coding System (ID)> & <Second Alternate Coding System
        Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)>
        & <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)>
        & <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID
        (DTM)> & <Second Alternate Coding System OID (ST)> & <Second
        Alternate Value Set OID (ST)> & <Second Alternate Value Set Version
        ID (DTM)>
```

Definition: *This field is retained for backward compatibility only as of v 27.* The reader is referred to the PRT segment described in Chapter.7.

This field contains the provider ID of the person dispensing the pharmaceutical. If the person referenced in this field is also referenced in PRT segment, they must contain the same information. However, if there is a difference, then PRT segment takes precedence.

4A.4.5.11   RXD-11   Substitution Status   (ID)   00322

Definition: Refer to *HL7 Table 0167 - Substitution Status* in Chapter 2C, Code Tables, for suggested values.

4A.4.5.12   RXD-12   Total Daily Dose   (CQ)   00329

```
Components:  <Quantity (NM)> ^ <Units (CWE)>
```

```
Subcomponents for Units (CWE):  <Identifier (ST)> & <Text (ST)> & <Name of
        Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text
        (ST)> & <Name of Alternate Coding System (ID)> & <Coding System
        Version ID (ST)> & <Alternate Coding System Version ID (ST)> &
        <Original Text (ST)> & <Second Alternate Identifier (ST)> & <Second
        Alternate Text (ST)> & <Name of Second Alternate Coding System
        (ID)> & <Second Alternate Coding System Version ID (ST)> & <Coding
        System OID (ST)> & <Value Set OID (ST)> & <Value Set Version ID
        (DTM)> & <Alternate Coding System OID (ST)> & <Alternate Value Set
        OID (ST)> & <Alternate Value Set Version ID (DTM)> & <Second
        Alternate Coding System OID (ST)> & <Second Alternate Value Set OID
        (ST)> & <Second Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the total daily dose being dispensed as expressed in terms of the actual dispense units.

Note: The next two fields are equivalent to the corresponding fields of the RXE segment. They are included (optionally) in the RXD so that it may "stand alone" as a dispense result instruction segment.

4A.4.5.13   RXD-13   Dispense-to Location

Definition: *This field is retained for backward compatibility only as of v 2.6 and withdrawn from the standard as of v 2.8*. The reader is referred toRXD-30 and RXD-31.

4A.4.5.14   RXD-14   Needs Human Review   (ID)   00307

Definition: Refer to *HL7 Table 0136 - Yes/no indicator* for valid values. The values have the following meaning for this field:

Y   Yes - Indicates that a warning is present. The application receiving the dispense order needs to warn the person dispensing/administering the drug or treatment to pay attention to the text in *RXD-15-Special dispensing instructions*.

N   No - Indicates no warning is present. This is the equivalent default (null) value.

4A.4.5.15 RXD-15   Special Dispensing Instructions   (CWE)   00330

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field contains pharmacy or treatment supplier-generated special instructions to the provider dispensing/administering the order.

4A.4.5.16 RXD-16   Actual Strength   (NM)   01132

Definition: Use when *RXD-2-Dispense/Give Code* does not specify the strength. This is the numeric part of the strength, of a single dosage unit of the dispensed product, used in combination with *RXD-17-actual strength unit*.

4A.4.5.17 RXD-17   Actual Strength Unit   (CWE)   01133

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: Use when *RXD-2-Dispense/Give Code* does not specify the strength. This is the unit of the strength, of a single dosage unit of the dispensed product, used in combination with *RXD-16-actual strength*.

Note: These units can be a "compound quantity;" i.e., the units may express a quantity per unit of time. For example, micrograms per hour (micg/h) is an acceptable value. These compound units are contained in the ISO+ table. See Chapter 7 for full definition of ISO+ units.

4A.4.5.18 RXD-18   Substance Lot Number   (ST)   01129

Definition: This field contains the lot number of the medical substance administered.

Note: The lot number is the number printed on the label attached to the container holding the substance and on the packaging which houses the container. If the substance is a vaccine, for example, and a diluent is required, a lot number may appear on the vial containing the diluent; however, any such identifier associated with a diluent is not the identifier of interest. The substance lot number should be reported, not that of the diluent.

4A.4.5.19 RXD-19   Substance Expiration Date   (DTM)   01130

Definition: This field contains the expiration date of the medical substance administered.

Note: Vaccine expiration date does not always have a "day" component; therefore, such a date may be transmitted as YYYYMM^L.

4A.4.5.20 RXD-20   Substance Manufacturer Name   (CWE)   01131

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field contains the manufacturer of the medical substance administered when it is a manufactured substance.

> **Note:** For vaccines, code system MVX may be used to code this field. See Section *4A.7.1*, "*Vaccine administration data*". This field may be used if the manufacturer of the substance is not identified by the code used in RXA-5-Administered code.

4A.4.5.21 RXD-21   Indication   (CWE)   01123

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field contains the identifier of the condition or problem for which the drug/treatment was prescribed. May repeat if multiple indications are relevant.

4A.4.5.22 RXD-22   Dispense Package Size   (NM)   01220

Definition: This field contains the size of package to be dispensed. Units are transmitted in *RXD-23-dispense package size unit*.

4A.4.5.23 RXD-23   Dispense Package Size Unit   (CWE)   01221

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field contains the units in which *RXE-28-dispense package size* is denominated. The advertised number of units in the manufacturer's package, i.e., the package as it comes from the supplier.

4A.4.5.24 RXD-24   Dispense Package Method   (ID)   01222

Definition: This field contains the method by which treatment is dispensed. Refer To *HL7 Table 0321 - Dispense Method* in Chapter 2C, Code Tables, for valid values.

4A.4.5.25 RXD-25   Supplementary code   (CWE)   01476

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field accommodates the identification of any codes that might be associated with the pharmaceutical substance. Common codes include: the Generic Product Identifier (GPI), Generic Code Number_Sequence Number (GCN_SEQNO), National Drug Code (NDC)**.**

4A.4.5.26 RXD-26   Initiating Location   (CWE)   01477

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field identifies the pharmacy or other treatment dispensing service (e.g., respiratory) that received the initial request.

Example: Pharmacy A (the Intake/Receiving) receives a phone call from the patient requesting a medication refill, but stipulates that the prescription will be picked up in pharmacy B. In accordance with the business process the prescription will be packaged/assembled in Pharmacy C.

4A.4.5.27 RXD-27   Packaging/Assembly Location   (CWE)   01478

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field identifies the pharmacy which packaged/assembled request.

4A.4.5.28 RXD-28   Actual Drug Strength Volume   (NM)   01686

Description: This numeric field defines the volume measurement in which the drug strength concentration is contained. For example, Acetaminophen 120 MG/5ML Elixir means that 120 MG of the drug is in a solution with a volume of 5 ML , which would be encoded in RXD-16, RXD-17, RXD-28 and RXD-29 as

```
RXD||||||||||||||||120|mg^^ISO|||||||||||5|ml^^ISO ...<cr>
```

4A.4.5.29   RXD-29   Actual Drug Strength Volume Units   (CWE)   01687

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Description: This field indicates the volumetric unit associated with *RXD-28 Actual Drug Strength Volume*. See example in RXD-28.

4A.4.5.30   RXD-30   Dispense to Pharmacy   (CWE)   01688

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: ***This field is retained for backward compatibility only as of v 27.*** The information formerly communicated using this field should now be communicated using the PRT segment. The reader is referred to chapter 7 for a description of that segment.

This field specifies the pharmacy that will dispense or has dispensed the prescription. In the context of an order/request (i.e., in an RXO segment) this field represents the requested dispensing pharmacy. In the context of a registered order (i.e., in an RXE segment) this field represents the intended dispensing pharmacy, the pharmacy that is expected to dispense the prescription.

4A.4.5.31   RXD-31   Dispense to Pharmacy Address   (XAD)   01689

```
Components:  <Street Address (SAD)> ^ <Other Designation (ST)> ^ <City (ST)> ^
             <State or Province (ST)> ^ <Zip or Postal Code (ST)> ^ <Country
             (ID)> ^ <Address Type (ID)> ^ <Other Geographic Designation (ST)> ^
             <County/Parish Code (CWE)> ^ <Census Tract (CWE)> ^ <Address
             Representation Code (ID)> ^ <WITHDRAWN Constituent> ^ <Effective
             Date (DTM)> ^ <Expiration Date (DTM)> ^ <Expiration Reason (CWE)> ^
             <Temporary Indicator (ID)> ^ <Bad Address Indicator (ID)> ^
             <Address Usage (ID)> ^ <Addressee (ST)> ^ <Comment (ST)> ^
             <Preference Order (NM)> ^ <Protection Code (CWE)> ^ <Address
             Identifier (EI)>

Subcomponents for Street Address (SAD):  <Street or Mailing Address (ST)> &
             <Street Name (ST)> & <Dwelling Number (ST)>

Subcomponents for County/Parish Code (CWE):  <Identifier (ST)> & <Text (ST)> &
             <Name of Coding System (ID)> & <Alternate Identifier (ST)> &
             <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> &
             <Coding System Version ID (ST)> & <Alternate Coding System Version
             ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier
             (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate
             Coding System (ID)> & <Second Alternate Coding System Version ID
             (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value
             Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
             <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID
             (DTM)> & <Second Alternate Coding System OID (ST)> & <Second
             Alternate Value Set OID (ST)> & <Second Alternate Value Set Version
             ID (DTM)>
```

```
Subcomponents for Census Tract (CWE):  <Identifier (ST)> & <Text (ST)> & <Name
          of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate
          Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding
          System Version ID (ST)> & <Alternate Coding System Version ID (ST)>
          & <Original Text (ST)> & <Second Alternate Identifier (ST)> &
          <Second Alternate Text (ST)> & <Name of Second Alternate Coding
          System (ID)> & <Second Alternate Coding System Version ID (ST)> &
          <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set
          Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate
          Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> &
          <Second Alternate Coding System OID (ST)> & <Second Alternate Value
          Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Expiration Reason (CWE):  <Identifier (ST)> & <Text (ST)> &
          <Name of Coding System (ID)> & <Alternate Identifier (ST)> &
          <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> &
          <Coding System Version ID (ST)> & <Alternate Coding System Version
          ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier
          (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate
          Coding System (ID)> & <Second Alternate Coding System Version ID
          (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value
          Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
          <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID
          (DTM)> & <Second Alternate Coding System OID (ST)> & <Second
          Alternate Value Set OID (ST)> & <Second Alternate Value Set Version
          ID (DTM)>

Subcomponents for Protection Code (CWE):  <Identifier (ST)> & <Text (ST)> &
          <Name of Coding System (ID)> & <Alternate Identifier (ST)> &
          <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> &
          <Coding System Version ID (ST)> & <Alternate Coding System Version
          ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier
          (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate
          Coding System (ID)> & <Second Alternate Coding System Version ID
          (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value
          Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
          <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID
          (DTM)> & <Second Alternate Coding System OID (ST)> & <Second
          Alternate Value Set OID (ST)> & <Second Alternate Value Set Version
          ID (DTM)>

Subcomponents for Address Identifier (EI):  <Entity Identifier (ST)> &
          <Namespace ID (IS)> & <Universal ID (ST)> & <Universal ID Type
          (ID)>
```

Definition: ***This field is retained for backward compatibility only as of v 27.*** The information formerly communicated using this field should now be communicated using the PRT segment. The reader is referred to chapter 7 for a description of that segment.

This field specifies the address of the dispensing facility or the patient's location where the dispensing will occur.

4A.4.5.32 RXD-32 Pharmacy Order Type (ID) 01690

Definition: The Pharmacy Order Type field defines the general category of pharmacy order which may be used to determine the processing path the order will take. Refer to *HL7 Table 0480 - Pharmacy Order Types* in Chapter 2C, Code Tables, for valid values.

This field may also be used for grouping of related orders for processing and/or reports. For example, Medication Administration Records (MARs) often group large volume solutions, medications and small volume solutions differently based upon site-specific workflow.

Usage Rule: This field is optional for all Pharmacy transactions. When not populated, a default value of "M" is assumed.

4A.4.5.33 RXD-33   Dispense Type   (CWE)   01691

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This is the type of dispensing event that occurred. Refer to *User-defined Table 0484 – Dispense Type* for suggested values.

4A.4.5.34 RXD-34   Pharmacy Phone Number   (XTN)   02311

```
Components:  <WITHDRAWN Constituent> ^ <Telecommunication Use Code (ID)> ^
             <Telecommunication Equipment Type (ID)> ^ <Communication Address
             (ST)> ^ <Country Code (SNM)> ^ <Area/City Code (SNM)> ^ <Local
             Number (SNM)> ^ <Extension (SNM)> ^ <Any Text (ST)> ^ <Extension
             Prefix (ST)> ^ <Speed Dial Code (ST)> ^ <Unformatted Telephone
             number  (ST)> ^ <Effective Start Date (DTM)> ^ <Expiration Date
             (DTM)> ^ <Expiration Reason (CWE)> ^ <Protection Code (CWE)> ^
             <Shared Telecommunication Identifier (EI)> ^ <Preference Order
             (NM)>

Subcomponents for Expiration Reason (CWE):  <Identifier (ST)> & <Text (ST)> &
             <Name of Coding System (ID)> & <Alternate Identifier (ST)> &
             <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> &
             <Coding System Version ID (ST)> & <Alternate Coding System Version
             ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier
             (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate
             Coding System (ID)> & <Second Alternate Coding System Version ID
             (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value
             Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
             <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID
             (DTM)> & <Second Alternate Coding System OID (ST)> & <Second
             Alternate Value Set OID (ST)> & <Second Alternate Value Set Version
             ID (DTM)>

Subcomponents for Protection Code (CWE):  <Identifier (ST)> & <Text (ST)> &
             <Name of Coding System (ID)> & <Alternate Identifier (ST)> &
             <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> &
             <Coding System Version ID (ST)> & <Alternate Coding System Version
             ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier
             (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate
             Coding System (ID)> & <Second Alternate Coding System Version ID
             (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value
             Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
             <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID
             (DTM)> & <Second Alternate Coding System OID (ST)> & <Second
             Alternate Value Set OID (ST)> & <Second Alternate Value Set Version
             ID (DTM)>

Subcomponents for Shared Telecommunication Identifier (EI):  <Entity
             Identifier (ST)> & <Namespace ID (IS)> & <Universal ID (ST)> &
             <Universal ID Type (ID)>
```

Definition: This field contains the telecommunication contact information for the pharmacy. Repetitions may be supplied for various device types or use codes, or multiple instances of the same type or use. This concept also exists as RXO-36 and RXE-45 to support pharmacy contact information in the context of the order, the encoded order and the dispense.

4A.4.5.35 RXD-35   Dispense Tag Identifier   (EI)   03392

```
Components:  <Entity Identifier (ST)> ^ <Namespace ID (IS)> ^ <Universal ID
             (ST)> ^ <Universal ID Type (ID)>
```

Definition: This field contains an identifier for the individual product instance for the dispense occurrence. This may represent a barcode, RFID or other means of automatically-readable product instance. Repetitions represent the same instance where more than one barcode, RFID or other identification is present.

For example, the medication preparer, e.g., a semi-automatic system, can inform the nurse that "for the 8 a.m. administration event, the medication that has been assigned and available at the patient bedside has the barcode BBBBBBBBBBBB." The nurse would scan the barcode to ensure that the right medication is being administered.

4A.4.6 RXG - Pharmacy/Treatment Give Segment

HL7 Attribute Table – RXG – Pharmacy/Treatment Give

SEQ	LEN	C.LEN	DT	OPT	RP/#	TBL#	ITEM #	ELEMENT NAME
1		4=	NM	R			00342	Give Sub-ID Counter
2		4=	NM	O			00334	Dispense Sub-ID Counter
3				W			00221	Quantity/Timing
4			CWE	R		0292	00317	Give Code
5			NM	R			00318	Give Amount - Minimum
6			NM	O			00319	Give Amount - Maximum
7			CWE	R		9999	00320	Give Units
8			CWE	O		9999	00321	Give Dosage Form
9			CWE	O	Y	9999	00351	Administration Notes
10	1..1		ID	O		0167	00322	Substitution Status
11				W			01303	Dispense-To Location
12	1..1		ID	O		0136	00307	Needs Human Review
13	1..250		CWE	O	Y	9999	00343	Special Administration Instructions
14		20=	ST	C			00331	Give Per (Time Unit)
15		6=	ST	O			00332	Give Rate Amount
16			CWE	O		9999	00333	Give Rate Units
17			NM	O			01126	Give Strength
18			CWE	O		9999	01127	Give Strength Units
19		20=	ST	O	Y		01129	Substance Lot Number
20			DTM	O	Y		01130	Substance Expiration Date
21			CWE	O	Y		01131	Substance Manufacturer Name
22			CWE	O	Y	9999	01123	Indication
23		5#	NM	O			01692	Give Drug Strength Volume
24			CWE	O		9999	01693	Give Drug Strength Volume Units
25			CWE	O		9999	01694	Give Barcode Identifier
26	1..1		ID	O		0480	01695	Pharmacy Order Type
27			CWE	B		9999	01688	Dispense to Pharmacy
28			XAD	B			01689	Dispense to Pharmacy Address
29			PL	O			01683	Deliver-to Patient Location
30			XAD	O			01684	Deliver-to Address
31			EI	O	Y		03393	Give Tag Identifier

SEQ	LEN	C.LEN	DT	OPT	RP/#	TBL#	ITEM #	ELEMENT NAME
32			NM	C			03316	Dispense Amount
33			CWE	C		9999	03317	Dispense Units

4A.4.6.0   RXG fields definitions

4A.4.6.1   RXG-1   Give Sub-ID Counter   (NM)   00342

Definition: Use if this RXG segment carries information about a single administration. This field must contain a unique number for the placer order number. This field along with the placer order number provides a unique reference to the specific scheduled give date/time transmitted by the pharmacy/treatment supplier for this order.

If the RXG segment carries information about multiple administrations, this field's value is zero (0), since in this case a one-to-one matching with the RXA segment is ambiguous.

4A.4.6.2   RXG-2   Dispense Sub-ID Counter   (NM)   00334

Definition: This is the dispense sub-ID to which this give message is related.

4A.4.6.3   RXG-3   Quantity/Timing

Attention: The RXG-3 field was retained for backward compatibilty only as of v 2.5 and the detail was withdrawn and removed from the standard as of v 2.7.

> **Note:** The contents of fields 3-8 should be identical to the comparable fields in the RXE (RXE-2 thru 5).

4A.4.6.4   RXG-4   Give Code   (CWE)   00317

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field is the identifier of the medical substance/treatment ordered to be given to the patient; it is equivalent to *OBR-4-Universal service ID* in function. See the RXE segment for a complete definition of the *RXE-2-Give code*. If the substance given is a vaccine, CVX codes may be used to code this field (see *HL7 Table 0292 - Vaccines administered* in Chapter 2C, Code Tables).

4A.4.6.5   RXG-5   Give Amount – Minimum   (NM)   00318

Definition: This field contains the ordered amount as encoded by the pharmacy/treatment supplier. In a variable dose order, this is the minimum ordered amount. In a non-varying dose order, this is the exact amount of the order.

> **Note:** This field is not a duplication of the first component of the quantity/timing field, since in non-pharmacy/treatment orders, that component can be used to specify multiples of an ordered amount.
>
> Another way to say this is that, for pharmacy/treatment orders, the quantity component of the quantity/timing field refers to what is to be given out at each service interval; and thus, in terms of the RX order, that first component always defaults to 1. Hence, in the actual execution of the order, the value of 1 in the first component of the quantity/timing field always refers to one administration of the amount specified in this field (the requested Give Amount field).

4A.4.6.6   RXG-6   Give Amount - Maximum   (NM)   00319

Definition: In a variable dose order, this is the maximum ordered amount. In a non-varying dose order, this field is not used.

4A.4.6.7   RXG-7   Give Units   (CWE)   00320

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field contains the units for the give amount.

> **Note:** These units can be a "compound quantity;" i.e., the units may contain the word "per." For example, micrograms per KG (micg/kg) is an acceptable value, which means that the units are micrograms per KG (of body weight).

A table of standard units that contains compound units is needed. Until such a table is agreed on, a user-defined table is needed for each site.

4A.4.6.8   RXG-8   Give Dosage Form   (CWE)   00321

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: The dosage form indicates the manner in which the medication/treatment is aggregated for dispensing, e.g., tablets, capsules, suppositories. In some cases, this information is implied by the give code in *RXG-4-Give Code*. Use this field when the give code does not specify the dosage form.

4A.4.6.9   RXG-9   Administration Notes   (CWE)   00351

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field contains notes to the person administering the medication/treatment (may include the ordering provider's original notes, as well as any notes from the formulary or the pharmacy or treatment supplier). If coded, a user-defined table must be used. If free text, place a null in the first component and the text in the second, e.g., `|^this is a free text administration note|`.

4A.4.6.10   RXG-10   Substitution Status   (ID)   00322

Definition: Refer to *HL7 Table 0167 - Substitution Status* in Chapter 2C, Code Tables, for valid values.

> **Note:** The next two fields are equivalent to the corresponding fields of the RXE segment. They are included (optionally) in the RXG so that it may "stand alone" as a "give" instruction segment.

4A.4.6.11 RXG-11 Dispense-to Location

Definition: ***This field is retained for backward compatibility only as of v 2.6 and removed from the standard as of v 2.8.*** The reader is referred to RXG-27 and RXG-28.

4A.4.6.12 RXG-12 Needs Human Review (ID) 00307

Definition: Refer to *HL7 Table 0136 - Yes/No Indicator* for valid values. The values have the following meaning for this field:

Y   Yes - Indicates that a warning is present. The application receiving the dispense order needs to warn the person dispensing/administering the drug or treatment to pay attention to the text in *RXG-13-Special administration instructions*.

N   No - Indicates no warning is present. This is the equivalent default (null) value.

4A.4.6.13 RXG-13 Special Administration Instructions (CWE) 00343

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field contains pharmacy/treatment supplier-generated special instructions to the provider administering the order.

4A.4.6.14 RXG-14 Give Per (Time Unit) (ST) 00331

Definition: This field contains the time unit to use to calculate the rate at which the pharmaceutical/treatment is to be administered.

Format:

S<integer>	=	<integer> seconds
M<integer>	=	<integer> minutes
H<integer>	=	<integer> hours
D<integer>	=	<integer> days
W<integer>	=	<integer> weeks
L<integer>	=	<integer> months
T<integer>	=	at the interval and amount stated until a total of <integer> "DOSAGE" is accumulated. Units would be assumed to be the same as in the QUANTITY field.
INDEF	=	do indefinitely - also the default

This is the same as the format specified for the DURATION component of the quantity/timing field, excluding the "X" specification.

Required when relevant (e.g., certain IVs). For example, if the "give amount/units" were 300 ml and the "give per" time unit were H1 (equivalent to one hour), the rate is 300ml/hr.

4A.4.6.15 RXG-15 Give Rate Amount (ST) 00332

Definition: This field contains the amount (number) of substance/treatment to be administered.

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4A.4.6.16   RXG-16   Give Rate Units   (CWE)   00333

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field contains the units for *RXG-15-give rate amount*. May be composite. The ratio of the *RXG-15-give rate amount* and *RXG-16-give rate units* fields define the actual rate of administration. Thus, if *RXG-15-give rate amount* = 100 and *RXG-16-give rate units* = ml/hr, the requested rate of administration is 100 ml/hr.

4A.4.6.17   RXG-17   Give Strength   (NM)   01126

Definition: Use when *RXG-4-Give code* does not specify the strength. This is the numeric part of the strength, used in combination with *RXG-18-Give strength units*.

4A.4.6.18   RXG-18   Give Strength Units   (CWE)   01127

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: Use when *RXG-4-Give Code* does not specify the strength. This is the unit of the strength, used in combination with *RXG-17-Give Strength*.

Note: These units can be a "compound quantity"; i.e., the units may express a quantity per unit of time. For example, micrograms per hour (micg/h) is an acceptable value. These compound units are contained in the ISO+ table. See Chapter 7 for full definition of ISO+ units.

4A.4.6.19   RXG-19   Substance Lot Number   (ST)   01129

Definition: This field contains the lot number of the medical substance administered.

Note: The lot number is the number printed on the label attached to the container holding the substance and on the packaging which houses the container. If the substance is a vaccine, for example, and a diluent is required, a lot number may appear on the vial containing the diluent; however, any such identifier associated with a diluent is not the identifier of interest. The substance lot number should be reported, not that of the diluent.

4A.4.6.20   RXG-20   Substance Expiration Date   (DTM)   01130

Definition: This field contains the expiration date of the medical substance administered.

Note: Vaccine expiration date does not always have a "day" component; therefore, such a date may be transmitted as YYYYMM.

4A.4.6.21 RXG-21   Substance Manufacturer Name   (CWE)   01131

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field contains the manufacturer of the medical substance administered.

> **Note:** For vaccines, code system MVX may be used to code this field (see section *4A.7.1*, "*Vaccine administration data*"). This field may be used if the manufacturer of the substance is not identified by the code used in RXA-5-administered code.

4A.4.6.22 RXG-22   Indication   (CWE)   01123

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field contains the identifier of the condition or problem for which the drug/treatment was prescribed. May repeat if multiple indications are relevant.

4A.4.6.23 RXG-23   Give Drug Strength Volume   (NM)   01692

Description: This numeric field defines the volume measurement in which the drug strength concentration is contained. For example, Acetaminophen 120 MG/5ML Elixir means that 120 MG of the drug is in a solution with a volume of 5 ML, which would be encoded in RXG-17, RXG-18, RXG-23 and RXG-24 as:

RXG||||||||||||||||120|mg^^ISO|||||5|ml^^ISO ...<cr>

4A.4.6.24 RXG-24   Give Drug Strength Volume Units   (CWE)   01693

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Description: This field indicates the volumetric unit associated with *RXG-23 Give Drug Strength Volume*. See example in RXG-23.

4A.4.6.25   RXG-25   Give Barcode Identifier   (CWE)   01694

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field contains the pharmacy system's assigned barcode number for the give occurrence. For IV orders, many pharmacy systems generate a barcode number to identify a specific bag/bottle of the order. This number can be an instance identifier; unique for the patient, drug combination, and schedule instance or it may be just a drug identifier.

The composition and use of the barcode number is dependent on application negotiation. An example of this field follows: The barcode number is in the following format, 9XXXXXXX000. The number '9' is a constant, XXXXXXX is seven (7) characters for a unique identifier assigned or derived from the patient account and order ID and 000 is the zero-filled three (3) character IV bottle number.

The maximum length of the first component of this field is 40 characters to allow for the maximum existing barcode length in use today. The second component contains the description of the item being coded and the third component may define the barcode type.

12345678901^IV bottle^3X9

4A.4.6.26   RXG-26   Pharmacy Order Type   (ID)   01695

Definition: The Pharmacy Order Type field defines the general category of pharmacy order which may be used to determine the processing path the order will take. Refer to *HL7 Table 0480 Pharmacy Order Types* in Chapter 2C, Code Tables, for valid values.

This field may also be used for grouping of related orders for processing and/or reports. For example, Medication Administration Records (MARs) often group large volume solutions, medications and small volume solutions differently based upon site-specific workflow.

Usage Rule: This field is optional for all Pharmacy transactions. When not populated, a default value of "M" is assumed.

4A.4.6.27   RXG-27   Dispense to Pharmacy   (CWE)   01688

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: ***This field is retained for backward compatibility only as of v 2.7.*** The information formerly communicated using this field should now be communicated using the PRT segment. The reader is referred to Chapter 7 for a description of that segment.

This field specifies the pharmacy that will dispense the prescription.

4A.4.6.28   RXG-28   Dispense to Pharmacy Address   (XAD)   01689

```
Components:  <Street Address (SAD)> ^ <Other Designation (ST)> ^ <City (ST)> ^
             <State or Province (ST)> ^ <Zip or Postal Code (ST)> ^ <Country
             (ID)> ^ <Address Type (ID)> ^ <Other Geographic Designation (ST)> ^
             <County/Parish Code (CWE)> ^ <Census Tract (CWE)> ^ <Address
             Representation Code (ID)> ^ <WITHDRAWN Constituent> ^ <Effective
             Date (DTM)> ^ <Expiration Date (DTM)> ^ <Expiration Reason (CWE)> ^
             <Temporary Indicator (ID)> ^ <Bad Address Indicator (ID)> ^
             <Address Usage (ID)> ^ <Addressee (ST)> ^ <Comment (ST)> ^
             <Preference Order (NM)> ^ <Protection Code (CWE)> ^ <Address
             Identifier (EI)>

Subcomponents for Street Address (SAD):  <Street or Mailing Address (ST)> &
             <Street Name (ST)> & <Dwelling Number (ST)>

Subcomponents for County/Parish Code (CWE):  <Identifier (ST)> & <Text (ST)> &
             <Name of Coding System (ID)> & <Alternate Identifier (ST)> &
             <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> &
             <Coding System Version ID (ST)> & <Alternate Coding System Version
             ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier
             (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate
             Coding System (ID)> & <Second Alternate Coding System Version ID
             (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value
             Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
             <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID
             (DTM)> & <Second Alternate Coding System OID (ST)> & <Second
             Alternate Value Set OID (ST)> & <Second Alternate Value Set Version
             ID (DTM)>

Subcomponents for Census Tract (CWE):  <Identifier (ST)> & <Text (ST)> & <Name
             of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate
             Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding
             System Version ID (ST)> & <Alternate Coding System Version ID (ST)>
             & <Original Text (ST)> & <Second Alternate Identifier (ST)> &
             <Second Alternate Text (ST)> & <Name of Second Alternate Coding
             System (ID)> & <Second Alternate Coding System Version ID (ST)> &
             <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set
             Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate
             Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> &
             <Second Alternate Coding System OID (ST)> & <Second Alternate Value
             Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Expiration Reason (CWE):  <Identifier (ST)> & <Text (ST)> &
             <Name of Coding System (ID)> & <Alternate Identifier (ST)> &
             <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> &
             <Coding System Version ID (ST)> & <Alternate Coding System Version
             ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier
             (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate
             Coding System (ID)> & <Second Alternate Coding System Version ID
             (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value
             Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
             <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID
             (DTM)> & <Second Alternate Coding System OID (ST)> & <Second
             Alternate Value Set OID (ST)> & <Second Alternate Value Set Version
             ID (DTM)>

Subcomponents for Protection Code (CWE):  <Identifier (ST)> & <Text (ST)> &
             <Name of Coding System (ID)> & <Alternate Identifier (ST)> &
             <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> &
             <Coding System Version ID (ST)> & <Alternate Coding System Version
             ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier
             (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate
             Coding System (ID)> & <Second Alternate Coding System Version ID
             (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value
             Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
             <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID
             (DTM)> & <Second Alternate Coding System OID (ST)> & <Second
             Alternate Value Set OID (ST)> & <Second Alternate Value Set Version
             ID (DTM)>
```

```
Subcomponents for Address Identifier (EI): <Entity Identifier (ST)> &
        <Namespace ID (IS)> & <Universal ID (ST)> & <Universal ID Type
        (ID)>
```

Definition: ***This field is retained for backward compatibility only as of v 2.7.*** The information formerly communicated using this field should now be communicated using the PRT segment. The reader is referred to Chapter 7 for a description of that segment.

This field specifies the address of the dispensing facility or the patient's location where the dispensing will occur.

4A.4.6.29 RXG-29 Deliver-to Patient Location (PL) 01683

```
Components: <Point of Care (HD)> ^ <Room (HD)> ^ <Bed (HD)> ^ <Facility (HD)>
        ^ <Location Status (IS)> ^ <Person Location Type (IS)> ^ <Building
        (HD)> ^ <Floor (HD)> ^ <Location Description (ST)> ^ <Comprehensive
        Location Identifier (EI)> ^ <Assigning Authority for Location (HD)>

Subcomponents for Point of Care (HD): <Namespace ID (IS)> & <Universal ID
        (ST)> & <Universal ID Type (ID)>

Subcomponents for Room (HD): <Namespace ID (IS)> & <Universal ID (ST)> &
        <Universal ID Type (ID)>

Subcomponents for Bed (HD): <Namespace ID (IS)> & <Universal ID (ST)> &
        <Universal ID Type (ID)>

Subcomponents for Facility (HD): <Namespace ID (IS)> & <Universal ID (ST)> &
        <Universal ID Type (ID)>

Subcomponents for Building (HD): <Namespace ID (IS)> & <Universal ID (ST)> &
        <Universal ID Type (ID)>

Subcomponents for Floor (HD): <Namespace ID (IS)> & <Universal ID (ST)> &
        <Universal ID Type (ID)>

Subcomponents for Comprehensive Location Identifier (EI): <Entity Identifier
        (ST)> & <Namespace ID (IS)> & <Universal ID (ST)> & <Universal ID
        Type (ID)>

Subcomponents for Assigning Authority for Location (HD): <Namespace ID (IS)>
        & <Universal ID (ST)> & <Universal ID Type (ID)>
```

Definition: This field specifies the location of the patient to whom the pharmaceutical substance is to be delivered.

4A.4.6.30 RXG-30 Deliver-to Address (XAD) 01684

```
Components: <Street Address (SAD)> ^ <Other Designation (ST)> ^ <City (ST)> ^
        <State or Province (ST)> ^ <Zip or Postal Code (ST)> ^ <Country
        (ID)> ^ <Address Type (ID)> ^ <Other Geographic Designation (ST)> ^
        <County/Parish Code (CWE)> ^ <Census Tract (CWE)> ^ <Address
        Representation Code (ID)> ^ <WITHDRAWN Constituent> ^ <Effective
        Date (DTM)> ^ <Expiration Date (DTM)> ^ <Expiration Reason (CWE)> ^
        <Temporary Indicator (ID)> ^ <Bad Address Indicator (ID)> ^
        <Address Usage (ID)> ^ <Addressee (ST)> ^ <Comment (ST)> ^
        <Preference Order (NM)> ^ <Protection Code (CWE)> ^ <Address
        Identifier (EI)>

Subcomponents for Street Address (SAD): <Street or Mailing Address (ST)> &
        <Street Name (ST)> & <Dwelling Number (ST)>
```

```
Subcomponents for County/Parish Code (CWE): <Identifier (ST)> & <Text (ST)> &
        <Name of Coding System (ID)> & <Alternate Identifier (ST)> &
        <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> &
        <Coding System Version ID (ST)> & <Alternate Coding System Version
        ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier
        (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate
        Coding System (ID)> & <Second Alternate Coding System Version ID
        (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value
        Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
        <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID
        (DTM)> & <Second Alternate Coding System OID (ST)> & <Second
        Alternate Value Set OID (ST)> & <Second Alternate Value Set Version
        ID (DTM)>

Subcomponents for Census Tract (CWE): <Identifier (ST)> & <Text (ST)> & <Name
        of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate
        Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding
        System Version ID (ST)> & <Alternate Coding System Version ID (ST)>
        & <Original Text (ST)> & <Second Alternate Identifier (ST)> &
        <Second Alternate Text (ST)> & <Name of Second Alternate Coding
        System (ID)> & <Second Alternate Coding System Version ID (ST)> &
        <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set
        Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate
        Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> &
        <Second Alternate Coding System OID (ST)> & <Second Alternate Value
        Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Expiration Reason (CWE): <Identifier (ST)> & <Text (ST)> &
        <Name of Coding System (ID)> & <Alternate Identifier (ST)> &
        <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> &
        <Coding System Version ID (ST)> & <Alternate Coding System Version
        ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier
        (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate
        Coding System (ID)> & <Second Alternate Coding System Version ID
        (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value
        Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
        <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID
        (DTM)> & <Second Alternate Coding System OID (ST)> & <Second
        Alternate Value Set OID (ST)> & <Second Alternate Value Set Version
        ID (DTM)>

Subcomponents for Protection Code (CWE):  <Identifier (ST)> & <Text (ST)> &
        <Name of Coding System (ID)> & <Alternate Identifier (ST)> &
        <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> &
        <Coding System Version ID (ST)> & <Alternate Coding System Version
        ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier
        (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate
        Coding System (ID)> & <Second Alternate Coding System Version ID
        (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value
        Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
        <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID
        (DTM)> & <Second Alternate Coding System OID (ST)> & <Second
        Alternate Value Set OID (ST)> & <Second Alternate Value Set Version
        ID (DTM)>

Subcomponents for Address Identifier (EI):  <Entity Identifier (ST)> &
        <Namespace ID (IS)> & <Universal ID (ST)> & <Universal ID Type
        (ID)>
```

Definition: This field specifies the address, either mailing or physical, to which the prescription should be mailed or delivered.

4A.4.6.31   RXG-31   Give Tag Identifier   (EI)   03393

```
Components:  <Entity Identifier (ST)> ^ <Namespace ID (IS)> ^ <Universal ID
        (ST)> ^ <Universal ID Type (ID)>
```

Definition: This field contains an identifier for the individual product instance for the dispense occurrence. This may represent a barcode, RFID or other means of automatically-readable product instance. Repetitions represent the same instance where more than one barcode, RFID or other identification is present.

For example, the medication preparer, e.g., a semi-automated system, can inform the nurse that "for the 8.am administration event, the medication that has been assigned and available at the patient bedside has the barcode BBBBBBBBBBBB." The nurse would scan the barcode to ensure that the right medication is being administered.

This differs from *RXG-25 Give Barcode Identifier* in that RXG-25 may include other workflow content or the product at various levels of granularity. RXG-31 specifically identifies the product instance.

4A.4.6.32 RXG-32 Dispense Amount (NM) 03316

Definition: This field contains the amount to be dispensed as encoded by the pharmacy or treatment supplier.

4A.4.6.33 RXG-33 Dispense Units (CWE) 03317

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field contains the units for the dispense amount as encoded by the pharmacy or treatment supplier. This field is required if the units are not implied by the actual dispense code. This must be in simple units that reflect the actual quantity of the substance dispensed. It does not include compound units.

4A.4.7 RXA - Pharmacy/Treatment Administration Segment

The ORC must have the filler order number and the order control code RE. As a site-specific variant, the RXO and associated RXCs and/or the RXE (and associated RXCs) may be present if the receiving application needs any of their data. The RXA carries the administration data.

HL7 Attribute Table – RXA – Pharmacy/Treatment Administration

SEQ	LEN	C.LEN	DT	OPT	RP/#	TBL#	ITEM #	ELEMENT NAME
1		4=	NM	R			00342	Give Sub-ID Counter
2		4=	NM	R			00344	Administration Sub-ID Counter
3			DTM	R			00345	Date/Time Start of Administration
4			DTM	R			00346	Date/Time End of Administration
5			CWE	R		0292	00347	Administered Code
6			NM	R			00348	Administered Amount
7			CWE	C		9999	00349	Administered Units
8			CWE	O		9999	00350	Administered Dosage Form
9			CWE	O	Y	9999	00351	Administration Notes
10			XCN	B	Y		00352	Administering Provider
11				W			00353	Administered-at Location
12		20=	ST	C			00354	Administered Per (Time Unit)
13			NM	O			01134	Administered Strength
14			CWE	O		9999	01135	Administered Strength Units

SEQ	LEN	C.LEN	DT	OPT	RP/#	TBL#	ITEM #	ELEMENT NAME
15		20=	ST	O	Y		01129	Substance Lot Number
16			DTM	O	Y		01130	Substance Expiration Date
17			CWE	O	Y		01131	Substance Manufacturer Name
18			CWE	O	Y	9999	01136	Substance/Treatment Refusal Reason
19			CWE	O	Y	9999	01123	Indication
20	2..2		ID	O		0322	01223	Completion Status
21	1..1		ID	O		0206	01224	Action Code – RXA
22			DTM	O			01225	System Entry Date/Time
23		5=	NM	O			01696	Administered Drug Strength Volume
24			CWE	O		9999	01697	Administered Drug Strength Volume Units
25			CWE	O		9999	01698	Administered Barcode Identifier
26	1..1		ID	O		0480	01699	Pharmacy Order Type
27			PL	O			02264	Administer-at
28			XAD	O			02265	Administered-at Address
29			EI	O	Y		03396	Administered Tag Identifier

4A.4.7.0   RXA field definitions

4A.4.7.1   RXA-1   Give Sub-ID Counter   (NM)   00342

Definition: Use this field if matching this RXA segment to its corresponding RXG segment. If the two applications are not matching RXG and RXA segments, this field's value is zero (0).

4A.4.7.2   RXA-2   Administration Sub-ID Counter   (NM)   00344

Definition: This field starts with 1 the first time that medication/treatment is administered for this order. Increments by one with each additional administration of the medication/treatment.

> **Note:** More than one RXA segment can be "matched" to a single RXG segment, as is the case when recording a change of the rate of administration of an IV solution.

4A.4.7.3   RXA-3   Date/Time Start of Administration   (DTM)   00345

Definition: If the order is for a continuous administration (such as an IV), and the rate is changed at a certain time after the start, an RAS message can be issued to record the change. For such an RAS message, this field records the time the rate was changed to the new value recorded in the *RXA-12-Administered Per (time unit)* of the same message.

4A.4.7.4   RXA-4   Date/Time End of Administration   (DTM)   00346

Definition: If null, the date/time of *RXA-3-Date/Time Start of Administration* is assumed.

4A.4.7.5   RXA-5   Administered Code   (CWE)   00347

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
         <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
         Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
         <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
         <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
         <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
         Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
         Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
         System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
         Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
         (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
         Value Set Version ID (DTM)>
```

Definition: This field contains the identifier of the medical substance/treatment administered. It is equivalent to *OBR-4-universal service ID* in function. If the substance administered is a vaccine, CVX codes may be used to code this field (see *HL7 Table 0292 - Vaccines Administered*). If CVX code is used to identify vaccines, the coding system component (RXA-5.3) should be valued as "CVX", not as "HL70292."

4A.4.7.6   RXA-6   Administered Amount   (NM)   00348

Definition: This field contains the amount administered.

4A.4.7.7   RXA-7   Administered units   (CWE)   00349

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field is conditional because it is required if the administered amount code does not imply units. This field must be in simple units that reflect the actual quantity of the substance administered. It does not include compound units.

4A.4.7.8   RXA-8   Administered Dosage Form   (CWE)   00350

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: The dosage form indicates the manner in which the medication/treatment is aggregated for dispensing, e.g., tablets, capsules, suppositories. In some cases, this information is implied by the dispense/give code in *RXA-5-Administered Code*. Use this field when the administered code does not specify the dosage form.

4A.4.7.9   RXA-9   Administration Notes   (CWE)   00351

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field contains notes from the provider administering the medication/treatment. If coded, requires a user-defined table. If free text (describing a custom IV, mixture, or salve, for example) place a null in the first component and the text in the second, e.g., `|^this is a free text administration note|`.

4A.4.7.10   RXA-10   Administering Provider   (XCN)   00352

Components: <Person Identifier (ST)> ^ <Family Name (FN)> ^ <Given Name (ST)> ^ <Second and Further Given Names or Initials Thereof (ST)> ^ <Suffix (e.g., JR or III) (ST)> ^ <Prefix (e.g., DR) (ST)> ^ <WITHDRAWN Constituent> ^ <DEPRECATED-Source Table (CWE)> ^ <Assigning Authority (HD)> ^ <Name Type Code (ID)> ^ <Identifier Check Digit (ST)> ^ <Check Digit Scheme (ID)> ^ <Identifier Type Code (ID)> ^ <Assigning Facility (HD)> ^ <Name Representation Code (ID)> ^ <Name Context (CWE)> ^ <WITHDRAWN Constituent> ^ <Name Assembly Order (ID)> ^ <Effective Date (DTM)> ^ <Expiration Date (DTM)> ^ <Professional Suffix (ST)> ^ <Assigning Jurisdiction (CWE)> ^ <Assigning Agency or Department (CWE)> ^ <Security Check (ST)> ^ <Security Check Scheme (ID)>

Subcomponents for Family Name (FN): <Surname (ST)> & <Own Surname Prefix (ST)> & <Own Surname (ST)> & <Surname Prefix from Partner/Spouse (ST)> & <Surname from Partner/Spouse (ST)>

Subcomponents for Source Table (CWE): <Identifier (ST)> & <Text (ST)> & <Name of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding System Version ID (ST)> & <Alternate Coding System Version ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate Coding System (ID)> & <Second Alternate Coding System Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> & <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Assigning Authority (HD): <Namespace ID (IS)> & <Universal ID (ST)> & <Universal ID Type (ID)>

Subcomponents for Assigning Facility (HD): <Namespace ID (IS)> & <Universal ID (ST)> & <Universal ID Type (ID)>

Subcomponents for Name Context (CWE): <Identifier (ST)> & <Text (ST)> & <Name of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding System Version ID (ST)> & <Alternate Coding System Version ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate Coding System (ID)> & <Second Alternate Coding System Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> & <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Assigning Jurisdiction (CWE): <Identifier (ST)> & <Text (ST)> & <Name of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding System Version ID (ST)> & <Alternate Coding System Version ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate Coding System (ID)> & <Second Alternate Coding System Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> & <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

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```
Subcomponents for Assigning Agency or Department (CWE): <Identifier (ST)> &
        <Text (ST)> & <Name of Coding System (ID)> & <Alternate Identifier
        (ST)> & <Alternate Text (ST)> & <Name of Alternate Coding System
        (ID)> & <Coding System Version ID (ST)> & <Alternate Coding System
        Version ID (ST)> & <Original Text (ST)> & <Second Alternate
        Identifier (ST)> & <Second Alternate Text (ST)> & <Name of Second
        Alternate Coding System (ID)> & <Second Alternate Coding System
        Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)>
        & <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)>
        & <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID
        (DTM)> & <Second Alternate Coding System OID (ST)> & <Second
        Alternate Value Set OID (ST)> & <Second Alternate Value Set Version
        ID (DTM)>
```

Definition: *This field is retained for backward compatibility only as of v 2.7.* The reader is referred to the PRT segment described in Chapter 7.

This field contains the provider ID of the person administering the pharmaceutical/treatment. If the person referenced in this field is also referenced in PRT segment, they must contain the same information. However, if there is a difference, then PRT segment takes precedence.

4A.4.7.11   RXA-11   Administered-at Location

Definition: *This field is retained for backward compatibility only as of v 2.6 and withdrawn from the standard as of v 2.8*. The reader is referred to RXA-27 and RXA-28..

4A.4.7.12   RXA-12   Administered Per (Time Unit)   (ST)   00354

Definition: This field contains the rate at which this medication/treatment was administered as calculated by using *RXA-6-administered amount* and *RXA-7-administered units*. This field is conditional because it is required when a treatment is administered continuously at a prescribed rate, e.g., certain IV solutions.

4A.4.7.13   RXA-13   Administered Strength   (NM)   01134

Definition: Use when *RXA-5-Administered Code* does not specify the strength. This is the numeric part of the strength, used in combination with *RXA-14-Administered Strength Units*.

4A.4.7.14   RXA-14   Administered Strength Units   (CWE)   01135

```
Components: <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
        <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
        Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
        <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
        <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
        <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
        Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
        Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
        System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
        Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
        (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
        Value Set Version ID (DTM)>
```

Definition: Use when *RXA-5-Administered Code* does not specify the strength. This is the unit of the strength, used in combination with *RXA-13-Administered Strength*.

Note: These units can be a "compound quantity;" i.e., the units may express a quantity per unit of time. For example, micrograms per hour (micg/h) is an acceptable value. These compound units are contained in the ISO+ table. See Chapter 7 for full definition of ISO+ units.

4A.4.7.15   RXA-15   Substance Lot Number   (ST)   01129

Definition: This field contains the lot number of the medical substance administered.

Note: The lot number is the number printed on the label attached to the container holding the substance and on the packaging which houses the container. If the substance is a vaccine, for example, and a diluent is required, a lot number may appear on the vial containing the diluent; however, any such identifier associated with a diluent is not the identifier of interest. The substance lot number should be reported, not that of the diluent.

4A.4.7.16   RXA-16   Substance Expiration Date   (DTM)   01130

Definition: This field contains the expiration date of the medical substance administered.

> **Note:** Vaccine expiration date does not always have a "day" component; therefore, such a date may be transmitted as YYYYMM.

4A.4.7.17   RXA-17   Substance Manufacturer Name   (CWE)   01131

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field contains the manufacturer of the medical substance administered.

> **Note:** For vaccines, code system MVX may be used to code this field.   See section *4A.7.1*, "*Vaccine administration data*." This field may be used if the manufacturer of the substance is not identified by the code used in RXA-5- administered code. When using this code system to identify vaccines, the coding system component of the CWE field should be valued as "MVX", not as "HL70227."

4A.4.7.18   RXA-18   Substance/Treatment Refusal Reason   (CWE)   01136

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field contains the reason the patient refused the medical substance/treatment. Any entry in the field indicates that the patient did not take the substance.

4A.4.7.19   RXA-19   Indication   (CWE)   01123

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field contains the identifier of the condition or problem for which the drug/treatment was prescribed. May repeat if multiple indications are relevant.

4A.4.7.20   RXA-20   Completion Status   (ID)   01223

Definition: Status of treatment administration event. Refer to *HL7 Table 0322 - Completion Status* in Chapter 2C, Code Tables, for valid values.

4A.4.7.21 RXA-21   Action Code – RXA   (ID)   01224

Definition: Status of record. The information in this field enables the use of the RXA in the vaccine messages (see Section *4A.8*, "*Vaccine Segments*"), where a method of correcting vaccination information transmitted with incorrect patient identifying information is needed. Refer To *HL7 Table 0206 - Segment Action Code* in Chapter 2C, Code Tables, for valid values.

4A.4.7.22 RXA-22   System Entry Date/Time   (DTM)   01225

Definition: Date/time the administration information was entered into the source system. This field is used to detect instances where treatment administration information is inadvertently entered multiple times by providing a unique identification field. Under usual circumstances, this field would be provided automatically by the computer system rather than being entered by a person.

4A.4.7.23 RXA-23   Administered Drug Strength Volume   (NM)   01696

Description: This numeric field defines the volume measurement in which the drug strength concentration is contained. For example, Acetaminophen 120 MG/5ML Elixir means that 120 MG of the drug is in a solution with a volume of 5 ML , which would be encoded in RXA-13, RXA-14, RXA-23 and RXA-24 as:

RXA||||||||||||||120|mg^^ISO|||||||||5|ml^^ISO ...<cr>

4A.4.7.24 RXA-24   Administered Drug Strength Volume Units   (CWE)   01697

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Description: This field indicates the volumetric unit associated with *RXA-23 Administered Drug Strength Volume*. See example in RXA-23.

4A.4.7.25 RXA-25   Administered Barcode Identifier   (CWE)   01698

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field contains the pharmacy system's assigned barcode number for the give occurrence. For IV orders, many pharmacy systems generate a barcode number to identify a specific bag/bottle of the order. This number can be an instance identifier; unique for the patient, drug combination, and schedule instance or it may be just a drug identifier.

The composition and use of the barcode number is dependent on application negotiation. An example of this field follows: The barcode number is in the following format, 9XXXXXXX000. The number '9' is a constant, XXXXXXX is seven (7) characters for a unique identifier assigned or derived from the patient account and order ID and 000 is the zero-filled three (3) character IV bottle number.

The maximum length of the first component of this field is 40 characters to allow for the maximum existing barcode length in use today. The second component contains the description of the item being coded and the third component may define the barcode type.

Example: 12345678901^IV bottle^3X9

4A.4.7.26   RXA-26   Pharmacy Order Type   (ID)   01699

Definition: The Pharmacy Order Type field defines the general category of pharmacy order which may be used to determine the processing path the order will take. Refer to *HL7 Table 0480 - Pharmacy Order Types* in Chapter 2C, Code Tables, for valid values.

This field may also be used for grouping of related orders for processing and/or reports. For example, Medication Administration Records (MARs) often group large volume solutions, medications and small volume solutions differently based upon site-specific workflow.

Usage Rule: This field is optional for all Pharmacy transactions. When not populated, a default value of "M" is assumed.

4A.4.7.27   RXA-27   Administered-At   (PL)   02264

```
Components:  <Point of Care (HD)> ^ <Room (HD)> ^ <Bed (HD)> ^ <Facility (HD)>
           ^ <Location Status (IS)> ^ <Person Location Type (IS)> ^ <Building
           (HD)> ^ <Floor (HD)> ^ <Location Description (ST)> ^ <Comprehensive
           Location Identifier (EI)> ^ <Assigning Authority for Location (HD)>

Subcomponents for Point of Care (HD):  <Namespace ID (IS)> & <Universal ID
           (ST)> & <Universal ID Type (ID)>

Subcomponents for Room (HD):  <Namespace ID (IS)> & <Universal ID (ST)> &
           <Universal ID Type (ID)>

Subcomponents for Bed (HD):  <Namespace ID (IS)> & <Universal ID (ST)> &
           <Universal ID Type (ID)>

Subcomponents for Facility (HD):  <Namespace ID (IS)> & <Universal ID (ST)> &
           <Universal ID Type (ID)>

Subcomponents for Building (HD):  <Namespace ID (IS)> & <Universal ID (ST)> &
           <Universal ID Type (ID)>

Subcomponents for Floor (HD):  <Namespace ID (IS)> & <Universal ID (ST)> &
           <Universal ID Type (ID)>

Subcomponents for Comprehensive Location Identifier (EI):  <Entity Identifier
           (ST)> & <Namespace ID (IS)> & <Universal ID (ST)> & <Universal ID
           Type (ID)>

Subcomponents for Assigning Authority for Location (HD):  <Namespace ID (IS)>
           & <Universal ID (ST)> & <Universal ID Type (ID)>
```

Definition: This field specifies the location where the drug or treatment was administered.

4A.4.7.28   RXA-28   Administered-at Address   (XAD)   02265

```
Components:  <Street Address (SAD)> ^ <Other Designation (ST)> ^ <City (ST)> ^
           <State or Province (ST)> ^ <Zip or Postal Code (ST)> ^ <Country
           (ID)> ^ <Address Type (ID)> ^ <Other Geographic Designation (ST)> ^
           <County/Parish Code (CWE)> ^ <Census Tract (CWE)> ^ <Address
           Representation Code (ID)> ^ <WITHDRAWN Constituent> ^ <Effective
           Date (DTM)> ^ <Expiration Date (DTM)> ^ <Expiration Reason (CWE)> ^
           <Temporary Indicator (ID)> ^ <Bad Address Indicator (ID)> ^
           <Address Usage (ID)> ^ <Addressee (ST)> ^ <Comment (ST)> ^
           <Preference Order (NM)> ^ <Protection Code (CWE)> ^ <Address
           Identifier (EI)>

Subcomponents for Street Address (SAD):  <Street or Mailing Address (ST)> &
           <Street Name (ST)> & <Dwelling Number (ST)>
```

```
Subcomponents for County/Parish Code (CWE):  <Identifier (ST)> & <Text (ST)> &
          <Name of Coding System (ID)> & <Alternate Identifier (ST)> &
          <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> &
          <Coding System Version ID (ST)> & <Alternate Coding System Version
          ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier
          (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate
          Coding System (ID)> & <Second Alternate Coding System Version ID
          (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value
          Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
          <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID
          (DTM)> & <Second Alternate Coding System OID (ST)> & <Second
          Alternate Value Set OID (ST)> & <Second Alternate Value Set Version
          ID (DTM)>

Subcomponents for Census Tract (CWE):  <Identifier (ST)> & <Text (ST)> & <Name
          of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate
          Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding
          System Version ID (ST)> & <Alternate Coding System Version ID (ST)>
          & <Original Text (ST)> & <Second Alternate Identifier (ST)> &
          <Second Alternate Text (ST)> & <Name of Second Alternate Coding
          System (ID)> & <Second Alternate Coding System Version ID (ST)> &
          <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set
          Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate
          Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> &
          <Second Alternate Coding System OID (ST)> & <Second Alternate Value
          Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Expiration Reason (CWE):  <Identifier (ST)> & <Text (ST)> &
          <Name of Coding System (ID)> & <Alternate Identifier (ST)> &
          <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> &
          <Coding System Version ID (ST)> & <Alternate Coding System Version
          ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier
          (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate
          Coding System (ID)> & <Second Alternate Coding System Version ID
          (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value
          Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
          <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID
          (DTM)> & <Second Alternate Coding System OID (ST)> & <Second
          Alternate Value Set OID (ST)> & <Second Alternate Value Set Version
          ID (DTM)>

Subcomponents for Protection Code (CWE):  <Identifier (ST)> & <Text (ST)> &
          <Name of Coding System (ID)> & <Alternate Identifier (ST)> &
          <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> &
          <Coding System Version ID (ST)> & <Alternate Coding System Version
          ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier
          (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate
          Coding System (ID)> & <Second Alternate Coding System Version ID
          (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value
          Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
          <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID
          (DTM)> & <Second Alternate Coding System OID (ST)> & <Second
          Alternate Value Set OID (ST)> & <Second Alternate Value Set Version
          ID (DTM)>

Subcomponents for Address Identifier (EI):  <Entity Identifier (ST)> &
          <Namespace ID (IS)> & <Universal ID (ST)> & <Universal ID Type
          (ID)>
```

Definition: This field specifies the address of the location where the drug or treatment was administered.

4A.4.7.29 RXA-29 Administration Tag Identifier (EI) 03396

```
Components:  <Entity Identifier (ST)> ^ <Namespace ID (IS)> ^ <Universal ID
          (ST)> ^ <Universal ID Type (ID)>
```

Definition: This field contains an identifier for the individual product instance for the dispense occurrence. This may represent a barcode, RFID or other means of automatically-readable product instance. Repetitions represent the same instance where more than one barcode, RFID or other identification is present.

For example, the medication preparer, e.g., a semi-automatic system, can inform the nurse that "for the 8.am administration event, the medication that has been assigned and available at the patient bedside has the barcode BBBBBBBBBBB." The nurse would scan the barcode, to ensure that the right medication is being administered.

This differs from *RXA-25 Administered Barcode Identifier* in that RXA-25 may include other workflow content or the product at various levels of granularity. RXA-29 specifically identifies the product instance.

4A.4.8RXV - Pharmacy/Treatment Infusion Segment

The RXV segment details the pharmacy or treatment application's encoding of specific infusion order parameters

HL7 Attribute Table – RXV – Pharmacy/Treatment Infusion

SEQ	LEN	C.LEN	DT	OPT	RP/#	TBL#	ITEM #	ELEMENT NAME
1			SI	O			03318	Set ID - RXV
2	1..1		ID	R		0917	03319	Bolus Type
3			NM	O			03320	Bolus Dose Amount
4			CWE	O		9999	03321	Bolus Dose Amount Units
5		20=	NM	O			03322	Bolus Dose Volume
6			CWE	O		9999	03323	Bolus Dose Volume Units
7	1..2		ID	R		0918	03324	PCA Type
8		20=	NM	O			03325	PCA Dose Amount
9			CWE	O		9999	03326	PCA Dose Amount Units
10		20=	NM	O			03327	PCA Dose Amount Volume
11			CWE	O		9999	03328	PCA Dose Amount Volume Units
12		20=	NM	O			03329	Max Dose Amount
13			CWE	O		9999	03330	Max Dose Amount Units
14		20=	NM	O			03331	Max Dose Amount Volume
15			CWE	O		9999	03332	Max Dose Amount Volume Units
16			CQ	R			03333	Max Dose per Time
17			CQ	O			03334	Lockout Interval
18			CWE	O			03339	Syringe Manufacturer
19			CWE	O			03385	Syringe Model Number
20		20=	NM	C			03386	Syringe Size
21			CWE	C			03431	Syringe Size Units
22	2..2		ID	O		0206	00816	Action Code

4A.4.8.0   RXV Field Definitions

4A.4.8.1   RXV-1   Set ID   (SI)   03318

Definition: For the first timing specification transmitted, the sequence number shall be 1; for the second timing specification, it shall be 2; and so on.

4A.4.8.2   RXV-2   Bolus Type   (ID)   03319

Definition: This field identifies the type of bolus being ordered. See *HL7 Defined Table 0917 – Bolus Type* in Chapter 2C, Code Tables, for example values.

4A.4.8.3   RXV-3   Bolus Dose Amount   (NM)   03320

Definition: This field contains the ordered bolus amount. For example, if the ordered bolus is 50 mg, this field contains the value of 50.

4A.4.8.4   RXV-4   Bolus Dose Amount Units   (CWE)   03321

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field indicates the amount units associated with the bolus dose amount. The preferred coding system is MDC; UCUM are also acceptable.

Examples:

263890^MDC_DIM_MILLI_G^MDC

mg^milligram^UCUM

4A.4.8.5   RXV-5   Bolus Dose Volume   (NM)   03322

Definition: This field defines the volume measurement for the ordered bolus amount. For example, if the ordered bolus is 5 ml, this field contains the value of 5.

4A.4.8.6   RXV-6   Bolus Dose Volume Units   (CWE)   03323

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field indicates the amount units associated with the bolus dose volume. The preferred coding system is MDC; UCUM are also acceptable.

Examples:

263890^MDC_DIM_MILLI_G^MDC

mg^milligram^UCUM

4A.4.8.7   RXV-7   PCA Type   (ID)   03324

Definition: This field identifies the type of bolus being ordered. See *HL7 Defined Table 0918 – PCA Type* in Chapter 2C, Code Tables, for example values.

4A.4.8.8   RXV-8   PCA Dose Amount   (NM)   03325

Definition: This field contains the order's PCA dose amount. Example: if the ordered bolus is 3 mg, this field contains the value of 3.

4A.4.8.9   RXV-9   PCA Dose Amount Units   (CWE)   03326

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field indicates the amount units associated with the PCA dose amount. The preferred coding system is MDC; UCUM are also acceptable.

Examples:

> 263890^MDC_DIM_MILLI_G^MDC

> mg^milligram^UCUM

4A.4.8.10   RXV-10   PCA Dose Amount Volume   (NM)   03327

Definition: This field defines the volume measurement for the ordered PCA amount volume.   For example, if the ordered bolus is 5 ml, this field contains the value of 5.

4A.4.8.11   RXV-11   PCA Dose Amount Volume Units   (CWE)   03328

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field indicates the amount units associated with the PCA dose volume. The preferred coding system is MDC; UCUM are also acceptable.

Examples:

> 263890^MDC_DIM_MILLI_G^MDC

> mg^milligram^UCUM

4A.4.8.12   RXV-12   Max Dose Amount   (NM)   03329

Definition: This field contains the order's maximum dose amount. For example, if the ordered bolus is 50 mg, this field contains the value of 50.

4A.4.8.13   RXV-13   Max Dose Amount Units   (CWE)   03330

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
             Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
             <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
             <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
             <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
             Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
             Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
             System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
             Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
             (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
             Value Set Version ID (DTM)>
```

Definition: This field indicates the amount units associated with the maximum dose volume. The preferred coding system is MDC; UCUM are also acceptable.

Examples:

> 263890^MDC_DIM_MILLI_G^MDC

> mg^milligram^UCUM

4A.4.8.14   RXV-14   Max Dose Amount Volume   (NM)   03331

Definition: This field defines the volume measurement for the ordered max dose amount. For example, if the ordered bolus is 5 ml, this field contains the value of 5.

4A.4.8.15   RXV-15   Max Dose Amount Volume Units   (CWE)   03332

```
Components: <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
           <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
           Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
           <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
           <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
           <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
           Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
           Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
           System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
           Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
           (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
           Value Set Version ID (DTM)>
```

Definition: This field indicates the amount units associated with the maximum dose volume. The preferred coding system is MDC; UCUM are also acceptable.

Examples:

> 263890^MDC_DIM_MILLI_G^MDC

> mg^milligram^UCUM

4A.4.8.16   RXV-16   Max Dose per Time   (CQ)   03333

```
Components:  <Quantity (NM)> ^ <Units (CWE)>

Subcomponents for Units (CWE):  <Identifier (ST)> & <Text (ST)> & <Name of
           Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text
           (ST)> & <Name of Alternate Coding System (ID)> & <Coding System
           Version ID (ST)> & <Alternate Coding System Version ID (ST)> &
           <Original Text (ST)> & <Second Alternate Identifier (ST)> & <Second
           Alternate Text (ST)> & <Name of Second Alternate Coding System
           (ID)> & <Second Alternate Coding System Version ID (ST)> & <Coding
           System OID (ST)> & <Value Set OID (ST)> & <Value Set Version ID
           (DTM)> & <Alternate Coding System OID (ST)> & <Alternate Value Set
           OID (ST)> & <Alternate Value Set Version ID (DTM)> & <Second
           Alternate Coding System OID (ST)> & <Second Alternate Value Set OID
           (ST)> & <Second Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the time unit expression of the lock out parameter. For example, if the ordered max dose per time is 4 hours, this field format is "4^h&hours&UCUM".

4A.4.8.17   RXV-17   Lockout Interval   (CQ)   03334

```
Components:  <Quantity (NM)> ^ <Units (CWE)>
```

```
Subcomponents for Units (CWE): <Identifier (ST)> & <Text (ST)> & <Name of
      Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text
      (ST)> & <Name of Alternate Coding System (ID)> & <Coding System
      Version ID (ST)> & <Alternate Coding System Version ID (ST)> &
      <Original Text (ST)> & <Second Alternate Identifier (ST)> & <Second
      Alternate Text (ST)> & <Name of Second Alternate Coding System
      (ID)> & <Second Alternate Coding System Version ID (ST)> & <Coding
      System OID (ST)> & <Value Set OID (ST)> & <Value Set Version ID
      (DTM)> & <Alternate Coding System OID (ST)> & <Alternate Value Set
      OID (ST)> & <Alternate Value Set Version ID (DTM)> & <Second
      Alternate Coding System OID (ST)> & <Second Alternate Value Set OID
      (ST)> & <Second Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the length of time that must expire between deliveries of PCA doses. For example, if the ordered max dose per time is 10 minutes, this field format is "10^min&minute&UCUM".

4A.4.8.18 RXV-18   Syringe Manufacturer   (CWE) 03339

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
      <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
      Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
      <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
      <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
      <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
      Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
      Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
      System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
      Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
      (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
      Value Set Version ID (DTM)>
```

Definition: This field contains the manufacturer of the syringe containing the ordered medication.

4A.4.8.19 RXV-19   Syringe Model Number   (CWE) 03385

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
      <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
      Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
      <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
      <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
      <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
      Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
      Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
      System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
      Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
      (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
      Value Set Version ID (DTM)>
```

Definition: This field contains the model number of the syringe containing the ordered medication.

4A.4.8.20 RXV-20   Syringe Size   (NM) 03386

Definition: This field contains the syringe's numeric total volume size.

4A.4.8.21 RXV-21   Syringe Size Units   (CWE) 03431

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
      <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of
      Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^
      <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^
      <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^
      <Name of Second Alternate Coding System (ID)> ^ <Second Alternate
      Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value
      Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding
      System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate
      Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID
      (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate
      Value Set Version ID (DTM)>
```

Definition: This field indicates the amount units associated with the syringe size. The preferred coding system is MDC; UCUM are also acceptable.

Examples:

263890^MDC_DIM_MILLI_G^MDC

mg^milligram^UCUM

4A.4.8.22   RXV-22   Action Code   (ID)   00816

Definition: The intended handling by the receiver of the infusion order is represented by this segment. Refer to *HL7 Table 0206 – Segment Action Code* in Chapter 2C, Code Tables, for valid values.

4A.4.9 CDO – Cumulative Dosage Segment

The Cumulative Dosage segment allows for the communication of cumulative dosage limits that administrations against this medication order should stay within. As part of one of the pharmacy messages, one may want to indicate one or more limits that apply, e.g., limit for the duration of the order, lifetime limit, or weekly limit.

HL7 Attribute Table – CDO – Cumulative Dosage

SEQ	LEN	C.LEN	DT	OPT	RP/#	TBL#	ITEM #	ELEMENT NAME
1	1..4		SI	O			03430	Set ID – CDO
2			ID	O		0206	00816	Action Code
3			CQ	O			03397	Cumulative Dosage Limit
4			CQ	O		0924	03398	Cumulative Dosage Limit Time Interval

4A.4.9.0   CDO fields definitions

4A.4.9.1   CDO-1   Set ID – CDO   (SI)   03430

Definition: For the first cumulative dose specification transmitted, the sequence number shall be 1; for the second cumulative dose, it shall be 2; and so on.

4A.4.9.2   CDO-2   Action Code   (ID)   00816

Definition: The Action Code indicates whether the cumulative dosage segment is intended to be added, deleted, updated, or did not change. If the field is not valued in any CDO segments for the order, the segments are considered to have been sent in snapshot mode. If some but not all CDO segments for the order do not have the action code valued, the default value is Add. Refer to *HL7 Table 0206 - Segment Action Code* in Chapter 2C, Code Tables, for valid values.

4A.4.9.3   CDO-3   Cumulative Dosage Limit   (CQ)   03397

```
Components:  <Quantity (NM)> ^ <Units (CWE)>

Subcomponents for Units (CWE):  <Identifier (ST)> & <Text (ST)> & <Name of
            Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text
            (ST)> & <Name of Alternate Coding System (ID)> & <Coding System
            Version ID (ST)> & <Alternate Coding System Version ID (ST)> &
            <Original Text (ST)> & <Second Alternate Identifier (ST)> & <Second
            Alternate Text (ST)> & <Name of Second Alternate Coding System
            (ID)> & <Second Alternate Coding System Version ID (ST)> & <Coding
            System OID (ST)> & <Value Set OID (ST)> & <Value Set Version ID
            (DTM)> & <Alternate Coding System OID (ST)> & <Alternate Value Set
            OID (ST)> & <Alternate Value Set Version ID (DTM)> & <Second
            Alternate Coding System OID (ST)> & <Second Alternate Value Set OID
            (ST)> & <Second Alternate Value Set Version ID (DTM)>
```

Definition: The Cumulative Dosage indicates the total dosage that may be administered within the scope of this order or within the interval indicated in *CDO-4 Cumulative Dosage Time Interval*, if supplied

4A.4.9.4   CDO-4   Cumulative Dosage Limit Time Interval   (CQ)   03398

```
Components:  <Quantity (NM)> ^ <Units (CWE)>
```

```
Subcomponents for Units (CWE):  <Identifier (ST)> & <Text (ST)> & <Name of
        Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text
        (ST)> & <Name of Alternate Coding System (ID)> & <Coding System
        Version ID (ST)> & <Alternate Coding System Version ID (ST)> &
        <Original Text (ST)> & <Second Alternate Identifier (ST)> & <Second
        Alternate Text (ST)> & <Name of Second Alternate Coding System
        (ID)> & <Second Alternate Coding System Version ID (ST)> & <Coding
        System OID (ST)> & <Value Set OID (ST)> & <Value Set Version ID
        (DTM)> & <Alternate Coding System OID (ST)> & <Alternate Value Set
        OID (ST)> & <Alternate Value Set Version ID (DTM)> & <Second
        Alternate Coding System OID (ST)> & <Second Alternate Value Set OID
        (ST)> & <Second Alternate Value Set Version ID (DTM)>
```

Definition: The Cumulative Dosage Time Interval indicates the interval over which the cumulative dosage in *CDO-3 Cumulative Dosage Limit* is measured. If this field is not valued, the Cumulative Dosage Limit applies to the scope of the order.

Refer to *HL7 Table 924 – Cumulative Dosage Limit UoM* in Chapter 2C, Code Tables, for a list of suggested values, including applicable values from UCUM.

4A.5   PHARMACY/TREATMENT MESSAGE EXAMPLES

The purpose of this section is to show how certain specific situations would be handled using the pharmacy/treatment protocol. The ellipses represent uncompleted details. The symbol // precedes comments for clarification.

4A.5.1 Example of various levels of coding in an order

The order "*give 500 mg Ampicillin P.O. Q6H for 10 days for a total of 40 tablets*" is sent to the RX application from the OE application. This order can be coded with various levels of precision by an ordering application:

a)   E-mail only version (uses only free text, *RXO-6-provider's pharmacy/treatment instructions* or *RXO-7-provider's administration instructions* only); fully encoded version must be re-entered or verified manually by the pharmacy or treatment application.

b)   With *RXO-2-requested give amount-minimum*, *RXO-4-requested give units*, and *ORC-7-quantity/timing coded*, and *RXO-1-requested give code* as free text.

c)   With *RXO-1-requested give code*, *RXO-2-requested give amount-minimum*, *RXO-4-requested give units*, and *ORC-7-quantity/timing coded*, but where *RXO-1-requested give code* does not include units.

d)   With *RXO-1-requested give code*, *RXO-2-requested give amount-minimum*, *RXO-4-requested give units*, and *ORC-7-quantity/timing coded*, and where *RXO-1-requested give code* does include units.

In this case, the units are optional. The rule for this case (on orders, dispense results, give results, and administration results) is as follows: if units are coded, they override or supersede the units value implied by the give code.

e)   The E-mail only version of the order: no coded fields exist in the RXO.

> MSH|^&~\|Pharm|GenHosp|CIS|GenHosp|2006052911150700||OMP^O09^OMP_O09|...<cr>
>
> PID|...<cr>
>
> ORC|NW|1000^OE||||E|...<cr>
>
> RXO||||||500 mg Polycillin Q6H for 10 days, dispense 40 Tablets|...<cr>

f)   A partially coded version of the order. This version has the *RXO-2-requested give amount-minimum*, *RXO-4-requested give units*, and *ORC-7-quantity/timing coded*, but the *RXO-1-requested give code* as free text.

> MSH|^&~\|Pharm|GenHosp|CIS|GenHosp|2006052911150700||OMP^O09^OMP_O09|...<cr>

PID|...<cr>

ORC|NW|1000^OE||||E|^Q6H^D10^^^R|...<cr>

RXO|^Polycillin 500 mg TAB^|500||MG|||||Y||40|...<cr>

RXR|PO|...<cr>

g) A more completely coded version of the order, with the *RXO-1-requested give code*, *RXO-2-requested give amount-minimum*, *RXO-4-requested give units*, and *ORC-7-quantity/timing coded*, but where *RXO-1-requested give code* does not imply units.

MSH|^&~\|Pharm|GenHosp|CIS|GenHosp|2006052911150700||OMP^O09^OMP_O09|...<cr>

PID|...<cr>

ORC|NW|1000^OE||||E|^Q6H^D10^^^R|...<cr>

RXO|RX1001^Polycillin^L|500||MG|||||Y||40|...<cr>

RXR|PO|...<cr>

h) A completely encoded version, with the *RXO-1-requested give code*, *RXO-2-requested give amount-minimum*, *RXO-4-requested give units*, and *ORC-7-quantity/timing coded*, and where *RXO-1-requested give code* does imply units.

MSH|^&~\|Pharm|GenHosp|CIS|GenHosp|2006052911150700||OMP^O09^OMP_O09|...<cr>

PID|...<cr>

ORC|NW|1000^OE||||E|^Q6H^D10^^^R|...<cr>

RXO|RX1001^Polycillin 500 mg TAB^L|500||MG|||||G||40|...<cr>

RXR|PO|...<cr>

i) Pharmacy or treatment supplier's encoded version (RDE message) sent to nursing application (a generic substitution).

MSH|^&~\|Pharm|GenHosp|CIS|GenHosp|2006052911150700||RDE^O11^RDE_O11|...<cr>

PID|...<cr>

ORC|RE|1000^OE|9999999^RX|||E|^Q6H^D10^^^R|...<cr>

RXE|^^^200612100600^^R|0047-0402-30^Ampicillin 250 MG

   TAB^NDC|2||TAB|||||G|80||||123456|rx#1001|...<cr>

RXR|PO|...<cr>

j) Pharmacy or treatment supplier's dispense results (RDS message).

MSH|...<cr>

PID|...<cr>

ORC|RE|1000^OE|9999999^RX|||E|^Q6H^D10^^^R|...<cr>

RXD|1|0047-0402-30^Ampicillin 250 MG TAB^NDC|199012100400|8|TAB||RX#1001|

   123456|G|8|...<cr>

k) Pharmacy or treatment supplier's give results (RGV message).

MSH|^&~\|Pharm|GenHosp|CIS|GenHosp|2006052911150700||RGV^O15^RGV_O15|...<cr>

PID|...<cr>

ORC|RE|1000^OE|9999999^RX|||E|^Q6H^D10^^^R|...<cr>

RXG|1|1|^^200612100600^^R|0047-0402-30^Ampicillin 250 MG TAB^NDC|500||MG|||G|...<cr>

RXR|PO|...<cr>

l) Nursing application Medications Administration results to pharmacy, treatment, or Order Entry application.

MSH|^&~\|Pharm|GenHosp|CIS|GenHosp|2006052911150700||RAS^O17^RAS_O17|...<cr>

PID|...<cr>

ORC|RE|1000^OE|9999999^RX|||E|^Q6H^D10^^^R|...<cr>

RXA|1|1|200612100615||0047-0402-30^Ampicillin 250 MG TAB^NDC|2|TAB|...<cr>

RXR|PO|...<cr>

4A.5.2RXO segment field examples

4A.5.2.0   RXO segment field examples

4A.5.2.1   RXO-1 Requested Give code example

RXO|58160040000110^Fluoxetine HCL 10mg Capsule^GPI^00777310402^Prozac 10 mg caps^NDC|...<cr>

4A.5.2.2   RXO-18 and RXO-19 Requested Strength and Strength Unit examples

The need for strength and strength unit fields in addition to the amount and amount units fields included in various RX_ segments requires explanation. Physicians can write a prescription for a drug such as Ampicillin in two ways. One way would be: "Ampicillin 250 mg capsules, 2 capsules four times a day." In this case the give amount would be 2, the give units would be capsules, the strength would be 250 and the strength units would milligrams.

ORC|||||||1^QID|...<cr>

RXO|01200020200105^Ampicillin 250 mg capsule^GPI^00047040230^Ampicillin 250 mg caps^NDC|2||caps^capsule^FDB||||||||||||||250|mg|...<cr>

However, the provider could also write the prescription as "Ampicillin 500 mg four times a day." In this case the give amount would be 500 and the give units would be milligrams. The strength would not be reported in the RXO segment because it is not specified; the drug could be given in two 250 mg caps or one 500 mg cap. But the pharmacist would dispense a specific capsule size and would record the strength in the RXE segment as 250 or 500, depending upon which pill size was dispensed.

ORC|||||||1^QID|...<cr>

RXO|012000202001^Ampicillin capsule^GPI |500||mg^milligram^ISO||...<cr>

4A.5.3RXD segment field examples

4A.5.3.0   RXD segment field examples

4A.5.3.1   RXD-4 and RXD-5 Dispense amount and Actual dispense units

The RXD-4 and RXD-5 together might say

100 tabs:

RXD||||100|TAB^tablet^FDB|...<cr>

Or, 100 each

RXD||||100|EA^each^FDB|...<cr>

Or, perhaps a volume, 3 liters

RXD||||3|L^liter^ISO|...<cr>

4A.5.3.2   Actual dispense amount, Actual dispense units, Actual strength, Actual strength units

For example, the RXD-4, RXD-5, RXD-16 and RXD-17 together might say

 100 tabs of 240 mg strength:

RXD||||100|tab^tablet^FDB||||||||||||240|mg|...<cr>

Or, 100 each of 60 units per cc

RXD||||100|EA||||||||||||60|iu/ml^^ISO+|...<cr>

Or, perhaps a volume, 3 liters with 60 grams per liter

> RXD||||3|L^liter^ISO|||||||||||60|g/L^^ISO+|...<cr>

4A.5.3.3   Valuing the Dispense Package Size Unit

If the package given to the patient is 2, 4 ounce bottles with a strength of 100/5ml, but the cough suppressant is stocked in 1 gallon bottles, then the field contains 1 gallon.

> RXD||||8|ounce^^ISO|||||||||||20|mg/ml|||||1|gal^gallon^ISO|...<cr>

If one were to dispense Mevacor 100 tablets with a strength of 20 mg/tablet, and the package from the manufacturer is a 60 tablet package, then the fields reflect 60 tablets (the size of the package stocked by the pharmacy).

> RXD||||100|tab^^FDB|||||||||||20|mg|||||60|tab|...<cr>

4A.5.4 RDS with FT1 segments example

Example: Adam Everyman appears in the Pharmacy with a prescription for Veramil 120 mgm B.I.D. The prescription is filled and the $5 co-pay is collected. The following RDS message is generated:

> MSH|^&~\|Pharm|GenHosp|IE||2006052911150700||RDS^O13^RDS_O13||...<cr>
>
> PID||||444-33-3333^^^MPI&GenHosp&L^MR||Everyman^Adam||19600614|M||C|2222 Home St^^Anytown^US^12345||^^^^^555^5552004| ...<cr>
>
> ORC|RE||89968665||||||2006052910300700|||444-44-4444^HIPPOCRATES^HAROLD^^^^MD||^^^^^555^ 5551004|...<cr>
>
> RXE|1^BID^^20060529|^Verapamil|120||mg^milligram^FDB.MDDB||...<cr>
>
> RXD|1|00378112001^Verapamil Hydrochloride 120 mg TAB^NDC |200605291115-0700|100|||1331665|3|...<cr>
>
> RXR|PO|...<cr>
>
> FT1|1|||200605291115-0700||CO^Co-Pay^HL70017 |00378112001^Verapamil Hydrochloride 120 mg TAB^NDC |||1|5&USD^TP|...<cr>
>
> FT1|2|||200605291115-0700||PY^Payment^HL70017 |00378112001^Verapamil Hydrochloride 120 mg TAB^NDC |||1|5&USD|...<cr>

4A.5.5 Alternating IV order messages

Encoding Note: For readability, these examples do not show encoding of the subcomponents of the Give Codes (CWE data type) in the RXC and RXO segments. In practice, the subcomponents should be encoded as described in the HL7 specification.

   a)   Example #1

D5/0.45NaCl 1000mL with 20mEq KCl in every 3rd bottle. Start the KCl in the 3rd bottle of this order. Run in at a rate of 100mL/hr.

(Other message data: placer order #123, placer application ID=SMS, interval=continuous, start date/time=11/28/94 0900, no stop date/time, priority=Routine, order sequencing=Cyclical.)

This order may be expressed using a parent/child relationship. The parent order consists of an ORC (and a RXO, incompletely elaborated in this example) that contains order level information. The repeating bottle cycle of D5/0.45NaCl 1000mL followed by D5/0.45NaCl 1000mL followed by D5/0.45NaCl + 20mEq KCL 1000mL is represented by three child segments. The placer system may be treating this as a single order with two bottles, A (D5/0.45NaCl 1000mL @ 100mL/hr) and B (D5/0.45NaCl + 20mEq KCL 1000mL @ 100mL/hr), repeating in the cycle of A-A-B.

The parent:

> ORC|NW|123^SMS||||||1^C^^200611280900^^R^^^^C|...<cr>

RXO|Cyclic IV|...<cr>

The first child:

ORC|CH|123A1^SMS|||||1^C^^^^^^^^C&123B&SMS&&&*ES+0M|123|...<cr>

RXO Segment, Requested Give Amount-Minimum: ...|100||ML|...

Requested Give Per (Time Unit): ...|H1|...<cr>

RXR|IV|...<cr>

RXC|B|D5/.45NACL|1000|ML|...<cr>

The second child:

ORC|CH|123A2^SMS|||||1^C^^^^^^^^C&123A1&SMS&&&ES+0M|123|...<cr>

RXO Segment, Requested Give Amount-Minimum: ...|100||ML|...

Requested Give Per (Time Unit): ...|H1|...<cr>

RXR|IV|...<cr>

RXC|B|D5/.45NACL|1000|ML|...<cr>

The third child:

ORC|CH|123B^SMS|||||1^C^^^^^^^^C&123A2&SMS&&&#ES+0M|123|...<cr>

RXO Segment, Requested Give Amount-Minimum: ...|100||ML|...

Requested Give Per (Time Unit): ...|H1|...<cr>

RXR|IV|...<cr>

RXC|B|D5/.45NACL|1000|ML|...<cr>

RXC|A|KCL|20|MEQ|...<cr>

Discussion points:

Placer Order Number - Three alternatives must be discussed for placer order number.

1) Each child could have its own placer order number.

2) Each child could have the order number of the parent plus some appended identifier (for examples, 123A or 123.A or 123.1 etc.) that labels each child or each unique combination of ingredients.

3) In addition to the appended identifier discussed in 'B' above, a further suffix could be attached to uniquely identify each repetition of a particular member of the sequence. The example (a cycle of bottles 'A' and 'B' in the sequence A-A-B) identified the order numbers of the children as 123A1, 123A2, and 123B, thereby enabling the quantity/timing to be completely unambiguous. This could be expressed many other ways, such as 123A.1 or 123.A.1 or 123.A#1 etc. HL7 does not specify a format for the expression of order number suffixes, nor does it specify a delimiter to use for such a purpose.

Sequence Condition Value - In this example, the first child contains an asterisk (*) as the first character of the Sequence Condition Value and the third (last) child contains a pound sign (#).

The asterisk and pound sign are important for designating the first and last bottles especially when children are sent in separate messages, although this example is not constructed that way.

Note that computing the duration of the bottle is dependent upon the presence of <u>all</u> of the following fields:

- RXO-2-requested give amount-minimum

- RXO-4-requested give units

- RXC-3-component amount

- RXC-4-component units

For cyclic IV orders, these fields are all required in order to determine how long each occurrence of a child will last.

While HL7 allows either sending the parent and children in one message or sending the parent and children in separate messages, it appears simpler and therefore recommended to have the parent and all children included in a single message.   The example is constructed that way.

b)   Example #2

D5W + 40mEq KCl 1000mL alternating with D5/LR + 20mEq KCl 1000mL at 125mL/hr

(Other message data: placer order #124, placer application ID=SMS, interval=continuous, start date/time=11/28/94 0900, no stop date/time, priority=Routine, order sequencing=Cyclical)

This example is a variation on the first example where two different base solutions are used. In this example, the placer system deals with this as one order with two alternating bottles, A (D5W + 40mEq KCl 1000mL @ 125mL/hr) and B (D5/LR + 20mEq KCl 1000mL @ 125mL/hr) in the cycle A-B. The principles discussed in Example #1 apply equally to this example.

The parent:

```
ORC|NW|124^SMS|||||1^C^^200611280900^^R^^^^C|...<cr>

RXO|Cyclic IV|...<cr>
```

The first child:

```
ORC|CH|124A^SMS|||||1^C^^^^^^^^C&124B&SMS&&&*ES+0M|124|...<cr>

RXO Segment,   Requested Give Amount-Minimum: ...|125||ML|...

                    Requested Give Per (Time Unit): ...|H1|...<cr>

RXR|IV|...<cr>

RXC|B|D5W|1000|ML|...<cr>

RXC|A|KCL|40|MEQ|...<cr>
```

The second child:

```
ORC|CH|124B^SMS|||||1^C^^^^^^^^C&124A&SMS&&&#ES+0M|124|...<cr>

RXO Segment,   Requested Give Amount-Minimum: ...|125||ML|...

                    Requested Give Per (Time Unit): ...|H1|...<cr>

RXR|IV|...<cr>

RXC|B|D5/LR|1000|ML|...<cr>

RXC|A|KCL|20|MEQ|...<cr>
```

c)   Example #3

D5/0.45NaCl 1000mL with 20mEq KCl in every 3rd bottle. Start the KCl in the 3rd bottle of this order. Add 10mL of multi-vitamins to the one bag daily. Run in at a rate of 100mL/hr.

(Other message data: placer order #134, placer application ID=SMS, interval=continuous, start date/time=11/28/94 0900, no stop date/time, priority=Routine, order sequencing=Cyclical. Note that the encoding of the multi-vitamins statement in the above order, adding multi-vitamins to one IV bag each day, may vary by institution to put it into the first or last bottle of the day.)

This order may be expressed using a parent/child relationship. The parent order consists of an ORC (and a RXO, although one is not completely elaborated in this example) that contains order level information. The repeating bottle cycle of D5/0.45NaCl 1000mL followed by D5/0.45NaCl 1000mL followed by D5/0.45NaCl + 20mEq KCL 1000mL is represented by three child segments. This order is complicated by the request to add one component into any one of the three repeating bottles, depending upon which of the bottles will occur first on any particular day. Further

complicating this order is a rate of infusion (10 hours for a 1000mL bottle) which results in a fractional number of daily administrations. Most legacy systems have a great deal of trouble accommodating orders like this within their existing database structures; however there a few vendors who now are able to handle the situation. The placer system may be treating this as a single order with two bottles, A (D5/0.45NaCl 1000mL @ 100mL/hr) and B (D5/0.45NaCl + 20mEq KCL 1000mL @ 100mL/hr), repeating in the cycle of A-A-B with a cyclical component (multi-vitamins).

The parent:

> ORC|NW|134^SMS||||||1^C^^200611280900^^R^^^^C|...<cr>
>
> RXO|Cyclic IV|...<cr>

The first child:

> ORC|CH|134A1^SMS||||||1^C^^^^^^^^C&134B&SMS&&&*ES+0M|134|...<cr>
>
> RXO Segment,   Requested Give Amount-Minimum: ...|100||ML|...
>
>   Requested Give Per (Time Unit): ...|H1|...<cr>
>
> RXR|IV|...<cr>
>
> RXC|B|D5/.45NACL|1000|ML|...<cr>

The second child:

> ORC|CH|134A2^SMS||||||1^C^^^^^^^^C&134A1&SMS&&&ES+0M|134|...<cr>
>
> RXO Segment,   Requested Give Amount-Minimum: ...|100||ML|...
>
>   Requested Give Per (Time Unit): ...|H1|...<cr>
>
> RXR|IV|...<cr>
>
> RXC|B|D5/.45NACL|1000|ML|...<cr>

The third child:

> ORC|CH|134B^SMS||||||1^C^^^^^^^^C&134A2&SMS&&&#ES+0M|134|...<cr>
>
> RXO Segment,   Requested Give Amount-Minimum: ...|100||ML|...
>
>   Requested Give Per (Time Unit): ...|H1|...<cr>
>
> RXR|IV|...<cr>
>
> RXC|B|D5/.45NACL|1000|ML|...<cr>
>
> RXC|A|KCL|20|MEQ|...<cr>

The fourth child:

> ORC|CH|134X^SMS||||||1^Q1D^^^^^^^^|134|...<cr>
>
> RXO|MULTIVITAMINS|10||ML|INJECTABLE|...<cr>

Discussion points:

This method for accommodating the Multi-vitamins Daily scenario does not pretend to be the best or only way to express the message, but simply demonstrates adapting the current specification to a highly complex order without adding new components.

The Multi-vitamins component may be sent as a fourth child.

In this example, its *ORC-7-quantity/timing* includes an interval of "Q1D" (every 1 days).

Its order number consists of the placer's parent order number plus an appended identifier ('X' in the above example) that labels this child as a special case. This convention would need to be agreed upon by sending and receiving applications.

> d)   Example #4

D5W + 40mEq KCl 1000mL alternating with D5/LR + 20mEq KCl 1000mL alternating with D5/0.45NaCl 1000mL. Infuse the D5W and D5/0.45 at 125mL/hr, and the D5/LR at 100mL/hr.

(Other message data: placer order #177, placer application ID=SMS, interval=continuous, start date/time=11/28/94 0900, no stop date/time, priority=Routine, order sequencing=Cyclical)

This example is another variation of Example 1 where the rate for each bottle is different, and this can be expressed within the RX segments of the children using current components. In this example, the placer system deals with this as one order with three alternating bottles, A (D5W + 40mEq KCl 1000mL @ 125mL/hr) , B (D5/LR + 20mEq KCl 1000mL @ 100mL/hr) , and C (D5/0.45NaCl 1000mL @ 125mL/hr) in the cycle A-B-C. The principles discussed in Example #1 apply equally to this example.

The parent:

ORC|NW|177^SMS||||||1^C^^200611280900^^R^^^^C|...<cr>

RXO|Cyclic IV|...<cr>

The first child:

ORC|CH|177A^SMS||||||1^C^^^^^^^^^C&177C&SMS&&&*ES+0M|177|...<cr>

   RXO Segment, Requested Give Amount-Minimum: ...|125||ML|...

   Requested Give Per (Time Unit): ...|H1|...<cr>

RXR|IV|...<cr>

RXC|B|D5W|1000|ML|...<cr>

RXC|A|KCL|40|MEQ|...<cr>

The second child:

ORC|CH|177B^SMS||||||1^C^^^^^^^^^C&177A&SMS&&&ES+0M|177|...<cr>

RXO Segment,   Requested Give Amount-Minimum: ...|100||ML|...

         Requested Give Per (Time Unit): ...|H1|...<cr>

RXR|IV|...<cr>

RXC|B|D5/LR|1000|ML|...<cr>

RXC|A|KCL|20|MEQ|...<cr>

The third child:

ORC|CH|177C^SMS||||||1^C^^^^^^^^^C&177B&SMS&&&#ES+0M|177|...<cr>

RXO Segment,   Requested Give Amount-Minimum: ...|125||ML|...

         Requested Give Per (Time Unit): ...|H1|...<cr>

RXR|IV|...<cr>

RXC|B|D5/0.45NACL|1000|ML|...<cr>

4A.5.6 Query examples

> **Attention:** The original mode query, including QRD and QRF segments were retained for backward compatibility only as of v 2.4 and withdrawn as of v2.7. The reader is therefore referred to chapter 5, section 5.4, for the current query/response message structure.

4A.6   PHARMACY/TREATMENT TRANSACTION FLOW DIAGRAM

The following are possible routes at a generic site.
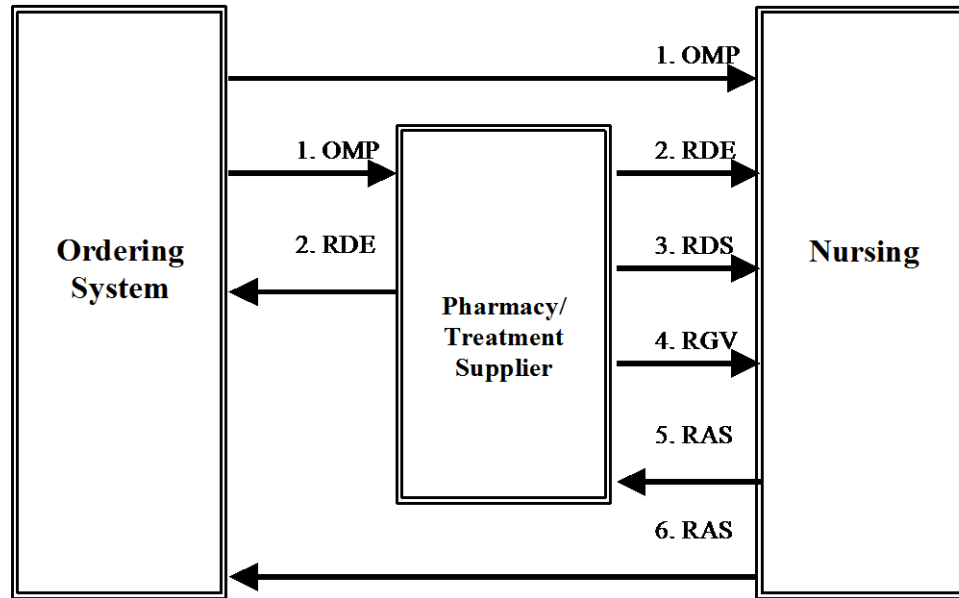
4A.6.1 OMP:

The Ordering application generates a pharmacy/treatment OMP and sends it to the pharmacy or treatment application, Nursing application, and/or other applications as appropriate at the site.

4A.6.2 RDE:

The pharmacy/treatment application may send the RDE, the Pharmacy/Treatment Encoded Order message, a fully encoded order to the Nursing application, Ordering application, and/or other system applications as appropriate at the site.

4A.6.3 RDS:

The pharmacy/treatment application may send the RDS, the Pharmacy/Treatment Dispense message, to the Nursing application or other applications as appropriate at the site, each time a medication is dispensed for this order. This message may occur multiple times for each order.

4A.6.4 RGV:

The pharmacy application may send the RGV, the Pharmacy/Treatment Give message, to the Nursing application or other applications as appropriate at the site, for each scheduled date/time of administration of a medication for a given order. This message may occur multiple times for each order.

4A.6.5 RAS:

The Nursing application (and other applications) can generate the RAS, the pharmacy/treatment Administration Results message, whenever a medication is given to the patient. This message may occur multiple times for each order.

> **Note:** Sites having a long term clinical data repository may wish to route data to the data repository from copies of all or any of the five messages.

4A.7 VACCINE TRIGGER EVENTS & MESSAGE DEFINITIONS

The message header segment will carry one of four event types at *MSH-9-Message Type*:

Event	Description
V01	Query for Vaccination Record
V02	Response to Vaccination Query (V01) Returning Multiple PID Matches
V03	Response to Query (V01) Returning Vaccination Record
V04	Unsolicited Update to Vaccination Record

4A.7.1 Vaccine administration data

Immunization information systems (IIS) that maintain vaccination records need to be able to transmit patient-specific records of vaccine administration to other health information systems to provide access to the record at the time healthcare is given and to allow tracking of progress in reaching age-appropriate immunization coverage. The transmissions will occur as the result of four activities: (1) a query from one system for a patient's vaccination record that is held in another system, (2) a response to a query containing multiple patient matches to the query, (3) a response to a query containing the vaccination record, and (4) an unsolicited update to an immunization information system.

These messages permit the transmission of immunization records from care providers to immunization registries, queries of these registries for immunization records, and the return of these immunization records to care providers. Messages containing immunization records carry patient identifying information in the PID segment. They may also carry parent or guardian information in the NK1 segments to help identify a child. The RXA segment is used to report the details of the immunization event: the type of vaccine (e.g., DPT, polio, MMR), the date administered, the sequence (1st, 2nd, etc.), the amount (e.g., 0.5 ml), and location and provider of the immunization. In addition, the RXA provides a place to record the lot number, manufacturer and date of expiration of the immunization. The RXA can also be used to report the fact that a specified immunization was refused. This section references two tables (CVX and MVX as referenced in *HL7 Table 0396 – Coding Systems* in Chapter 2C, Code Tables) maintained by the U.S. Centers for Disease Control and Prevention (CDC). These tables are recommended in the U.S. for identifying the immunization in field *RXA-5-Administered Code* and the vaccine manufacturer in field *RXA-17-substance manufacturer name*.

4A.7.2 Queries for immunization records (QRF Segments)

Attention: Retained for backwards compatibility only as of v 2.4.and withdrawn as of v 2.7. Refer to Chapter 5, section 5.4, for the current query/response message structure.

4A.7.3 XQ - Query for Vaccination Record (Event V01)

Attention: Retained for backwards compatibility only as of v 2.4.and withdrawn as of v 2.7. Refer to Chapter 5, section 5.4, for the current query/response message structure.

4A.7.4 VXX - RESPONSE TO VACCINATION QUERY RETURNING MULTIPLE PID MATCHES (EVENT V02)

Attention: Retained for backwards compatibility only as of v 2.4.and withdrawn as of v 2.7. Refer to Chapter 5, section 5.4, for the current query/response message structure.

4A.7.5 VXR - Vaccination Record Response (Event V03)

Attention: Retained for backwards compatibility only as of v 2.4.and withdrawn as of v 2.7. Refer to Chapter 5, section 5.4, for the current query/response message structure.

4A.7.6VXU - Unsolicited Vaccination Record Update (Event V04)

Definition: When a provider wishes to update the patient's vaccination record being held in a registry, the provider will transmit an unsolicited update of the record (a V04 trigger event).

An unsolicited update will follow this format. The three-letter code in the leftmost column indicates the segment that is included; the column on the right specifies the chapter in which that segment is fully defined.

VXU^V04^VXU_V04: Unsolicited Vaccination Update

Segments	Description	Status	Chapter
MSH	Message Header Segment		2
[{ SFT }]	Software		2
[UAC]	User Authentication Credential		2
PID	Patient Identification Segment		3
[PD1]	Additional Demographics		3
[{ NK1 }]	Next of Kin/Associated Parties		3
[{ ARV }]	Access Restrictions		3
[	--- PATIENT_VISIT begin		
PV1	Patient Visit		3
[PV2]	Patient Visit – Additional Info		3
[{ ARV }]	Access Restrictions		3
]	--- PATIENT_VISIT end		
[{ GT1 }]	Guarantor		6
[{	--- INSURANCE begin		
IN1	Insurance		6
[IN2]	Insurance Additional Information		6
[IN3]	Insurance Additional Information, Certification		6
}]	--- INSURANCE end		
[{	--- PERSON_OBSERVATION begin		
OBX	Observation/Result		7
[{ PRT }]	Participation (for Observation)		7
[{ NTE }]	Notes (Regarding Patient Observation)		2
}]	--- PERSON_OBSERVATION end		
[{	--- ORDER begin		
ORC	Common Order		4
[{PRT}]	Participation (for ORC)		7
[{	--- TIMING begin		
TQ1	Timing/Quantity		4

Segments	Description	Status	Chapter
[{ TQ2 }]	Timing/Quantity Order Sequence		4
}]	--- TIMING end		
RXA	Pharmacy Administration Segment		4A
[RXR]	Pharmacy Route		4A
[{	--- OBSERVATION begin		
OBX	Observation/Result		7
[{ PRT }]	Participation (for Observation)		7
[{ NTE }]	Notes (Regarding Immunization)		2
}]	--- OBSERVATION end		
}]	--- ORDER end		

4A.8   VACCINE SEGMENTS

4A.8.1 RXA - segment usage in vaccine messages

With the exception of *RXA-5-Administered code* and *RXA-17-Substance manufacturer name*, the structure for the RXA segment below is identical to that documented in section *4A.4.7*, "*RXA - Pharmacy/Treatment Administration Segment*." When using the RXA segment for vaccine messages, *HL7 Table 0292- Vaccines Administered*, should be used for *RXA-5- Administered code*, as noted in Section *4A.8.1.1*, "*Using RXA-5 in vaccine messages*." *Imported Table 0227- Manufacturers of Vaccines*, should be used for *RXA-17- Substance manufacturer name*, as noted in Section *4A.8.1.2*, "*Using RXA-17 in vaccine messages*."

HL7 Attribute Table – RXA – Segment Uses in Vaccine Messages

SEQ	LEN	C.LEN	DT	OPT	RP/#	TBL#	ITEM #	ELEMENT NAME
1		4=	NM	R			00342	Give Sub-ID Counter
2		4=	NM	R			00344	Administration Sub-ID Counter
3			DTM	R			00345	Date/Time Start of Administration
4			DTM	R			00346	Date/Time End of Administration
5			CWE	R		0292	00347	Administered Code
6			NM	R			00348	Administered Amount
7			CWE	C		9999	00349	Administered Units
8			CWE	O		9999	00350	Administered Dosage Form
9			CWE	O	Y	9999	00351	Administration Notes
10			XCN	O	Y		00352	Administering Provider
11				W			00353	Administered-at Location
12		20=	ST	C			00354	Administered Per (Time Unit)
13			NM	O			01134	Administered Strength
14			CWE	O		9999	01135	Administered Strength Units
15		20=	ST	O	Y		01129	Substance Lot Number
16			DTM	O	Y		01130	Substance Expiration Date
17			CWE	O	Y	0227	01131	Substance Manufacturer Name

SEQ	LEN	C.LEN	DT	OPT	RP/#	TBL#	ITEM #	ELEMENT NAME
18			CWE	O	Y	9999	01136	Substance/Treatment Refusal Reason
19			CWE	O	Y	9999	01123	Indication
20	2..2		ID	O		0322	01223	Completion Status
21	1..1		ID	O		0206	01224	Action Code – RXA
22			DTM	O			01225	System Entry Date/Time
23		5=	NM	O			01696	Administered Drug Strength Volume
24			CWE	O		9999	01697	Administered Drug Strength Volume Units
25			CWE	O		9999	01698	Administered Barcode Identifier
26	1..1		ID	O		0480	01699	Pharmacy Order Type
27			PL	O			02264	Administer-at
28			XAD	O			02265	Administered-at Address

4A.8.1.1 Using RXA-5 in vaccine messages

Use in *RXA-5- administered code* to identify the particular vaccine administered. The codes listed are used by immunization by immunization registries in the U.S. Entries will be added as needed to accommodate international requirements. Refer to chapter 2C *Imported Table 0292 – Vaccines administered* in Chapter 2C, Code Tables, for valid values. If CVX code is used to identify vaccines, the coding system component (RXA-5.3) should be valued as "CVX", not as "HL70292."

4A.8.1.2 Using RXA-17 in vaccine messages

Use in *RXA-17-substance manufacturer name* to identify the manufacturer or distributor of the particular vaccine administered. The codes listed are used by immunization registries in the U.S. Entries will be added as needed to accommodate international requirements. Refer to chapter 2C *Imported Table 0227 – manufacturers of Vaccines* in Chapter 2C, Code Tables, for valid values. If using an MVX, Manufacturer, code, the coding system component (RXA-17.3) should be valued as "MVX", not as "HL70227."

4A.9 VACCINATION MESSAGE EXAMPLES

4A.9.1 VXQ - query for vaccination record

Attention: The original mode query, including QRD and QRF segments were retained for backward compatibility only as of v 2.4 and withdrawn as of v 2.7. The reader is therefore referred to Chapter 5, section 5.4, for the current query/response message structure.

4A.9.2 VXX - response to vaccination query with multiple PID matches

Attention: The original mode query, including QRD and QRF segments were retained for backward compatibility only as of v 2.4 and withdrawn as of v 2.7. The reader is therefore referred to Chapter 5, section 5.4, for the current query/response message structure.

4A.9.3 VXR - vaccination record response

Attention: The original mode query, including QRD and QRF segments were retained for backward compatibility only as of v 2.4 and withdrawn as of v 2.7. The reader is therefore referred to Chapter 5, section 5.4, for the current query/response message structure.

4A.9.4 VXU - unsolicited vaccination record update

MSH|^~\&||AZVACREC||GAVACREC|200605221606||VXU^V04^VXU_V04|...<cr>

PID|...<cr>

NK1|...<cr>

NK1|...<cr>

PV1|...<cr>

PV2|...<cr>

IN1|...<cr>

IN2|||||||NUCLEAR^NANCY^D|909686637A|...<cr>

ORC|...<cr>

RXA|0|1|20060901115500|20060901115500|03^MMR^CVX|.5|MG^^ISO+|
222557777^KIDDER^KAREN^K^^DR|^^^ CHILD HEALTHCARE CLINIC^^^^^1044
Healthcare Drive^^METROPOLIS^AZ||||W23487909876456|20061125|MSD^Merck \T\ Co.,
Inc.^MVX|...<cr>

RXR|IM^INTRAMUSCULAR^HL70162|LG^LEFT GLUTEUS MEDIUS^HL70163|...<cr>

OBX|1|NM|1000.3^TEMP.RECTAL^AS4||102.9|DEGF^^ANSI+|||||F|||20060901153000|...<cr>

NTE|||PATIENT DEVELOPED HIGH FEVER APPROX 3 HRS AFTER VACCINE INJECTION. PROBABLE
ADVERSE REACTION|...<cr>

This message shows an unsolicited update of a vaccination record. The message type is VXU-Unsolicited Vaccination Record Update, with event code V04 (unsolicited vaccination record update). This example is given to show possible uses for some of the optional segments in the message.

4A.9.5 Query acknowledgment with no records found

Attention: The original mode query, including QRD and QRF segments were retained for backward compatibility only as of v 2.4 and withdrawn as of v 2.7. The reader is therefore referred to Chapter 5, section 5.4, for the current query/response message structure.