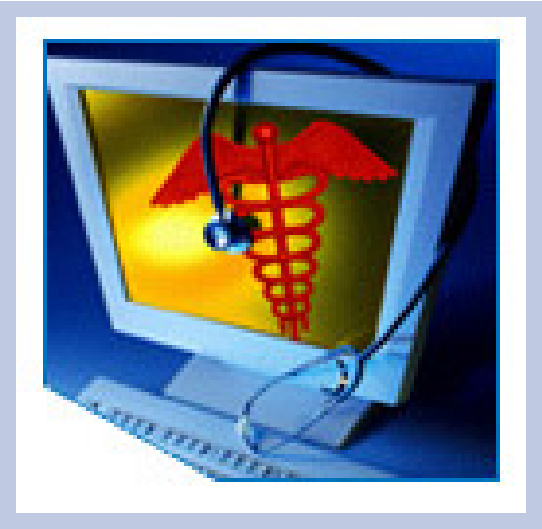
March 27, 2008
Version 1.0

HITSP Medication Orders Transaction Package

HITSP/TP43



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FIGURES AND TABLES

1.0 INTRODUCTION

As an introduction to the HITSP Medication Orders Transaction Package, this section provides a high level overview of the information sharing scenario enabled by following this specification, provides a document map of the construct relationships for the HITSP specification, acknowledges the copyright protections that pertain, and provides links to key reference documents and background material. If you are already familiar with this information, proceed to Section 2.0 Transaction Package Definition.

1.1 OVERVIEW

This section describes the contents of this specification and provides a high level definition of this Transaction Package and background information about the underlying Transactions and Components that the Transaction Package is based on.

The HITSP Medication Orders Transaction Package is used to define transactions between prescribers (who write prescriptions) and dispensers (who fill prescriptions). It is used for new prescriptions, refill requests, prescription change requests and prescription cancellations. Orders/prescriptions may occur in many different real world settings, such as inpatient, long term care and ambulatory settings.

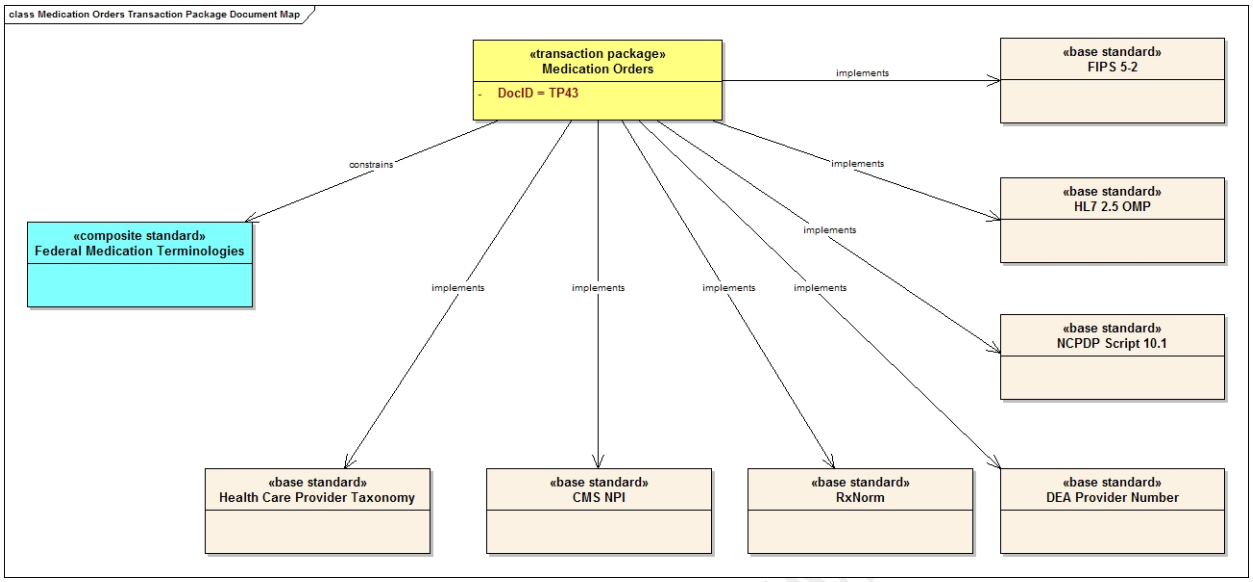
This Transaction Package specifies two methods of creating and/or managing orders. One method is using the NCPDP SCRIPT Standard Implementation Guide Version 10.1, which is used for long-term care and ambulatory settings.

The other method is using Health Level Seven (HL7) Version 2.5/2.5.1 – Pharmacy/Treatment Orders. HL7 is required for inpatient orders that can occur within an organization or with disparate inpatient organizations.

1.2 TRANSACTION PACKAGE DOCUMENT MAP

Each HITSP specification describes a suite of constructs that, taken as a whole, define how to integrate and constrain existing standards and specifications that will satisfy the requirements for the HITSP construct. There are four types of HITSP constructs called Interoperability Specifications (IS), Transaction Packages (TP), Transactions (T) and Components (C). Interoperability Specifications define the context(s) in which any other HITSP construct may be used. The current Medication Orders Transaction Package specification is used with other constructs to meet the requirements of one or more ISs. Review Section 1.2 (Interoperability Specification Document Map) from the relevant IS to better understand the context, dependencies, and relationships between the constructs used to meet the IS requirements. The document map in Figure 1.2-1 depicts how this construct integrates and constrains HITSP constructs and existing standards selected or referenced to support the information exchange between two or more systems, within the defined context of this document. Implementers should read the documents that describe the constructs depicted in the diagram for their details and specific uses.

Figure 1.2-1 Transaction Package Document Map



1.3 COPYRIGHT PERMISSIONS

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1.4 REFERENCE DOCUMENTS

This section contains links to key reference documents and background material.

The HITSP Interoperability Specification Overview provides the background information about the HITSP and its role in the overall U.S. efforts to realize large scale interoperability of health information. The

document also provides a description of the HITSP process for healthcare standards harmonization and explains how to use the Interoperability Specifications and other related documents to inform your health IT product development or product refinement.

The conventions that are used to convey the full descriptions and usage of standards in the HITSP specifications are contained in the HITSP Conventions List.

The acronyms used in this document are contained in the HITSP Acronyms List.

The HITSP Glossary provides definitions for relevant terms used by HITSP documents.

The HITSP Harmonization Framework describes the current framework within which the Interoperability Specifications are built.

A Technical Note, TN900 - Security and Privacy, has been developed as a reference document to provide the overall context for use of the HITSP Security and Privacy constructs. It includes the following:

- The scope, reference policy background, and Security and Privacy principles used in the development of the constructs
- A detailed description and schematics of the conceptual relationship between the Security and Privacy constructs
- A mapping of existing standards and constructs to be used in meeting the stated requirements of the AHIC Use Cases
- A list of identified gaps and the recommended approaches to resolving those gaps
- A roadmap for how the Security and Privacy constructs will evolve and eventually align with other HITSP Interoperability Specifications
- A conceptual framework for Security and Privacy management, including reference information on privacy policies, risk assessment and risk management
- A glossary of terms used in all the Security and Privacy construct documents
- A description of the application of the Security and Privacy constructs to the HITSP Interoperability Specifications for the three initial AHIC Use Cases – Biosurveillance, Electronic Health Records - Laboratory Results Reporting and Consumer Empowerment

HITSP will periodically update this Technical Note as required by the introduction of new contexts for use.

2.0 TRANSACTION PACKAGE DEFINITION

Transaction Packages define how two or more Transactions are used to support a stand-alone information exchange within a defined context between two or more systems.

2.1 CONTEXT OVERVIEW

This section provides a general description of the Transaction Package. It includes a detailed definition of the Transaction Package and the reason for its use. It also provides all the necessary background information that further describes the context in which the Transaction Package is needed and the independent Transactions and Components that the Transaction Package is based on.

Implementations of this Transaction Package shall support one or both of the two medication order methods defined in this specification.

Implementations that support the method using NCPDP shall conform to the specification as defined by NCPDP SCRIPT Standard Implementation Guide Version 10.1. This includes:

- NEWRX Message (new order request), Section 6 and all applicable referenced sections
- REFREQ Message (refill request), Section 6 and all applicable referenced sections
- REFRES Message (refill response), Section 6 and all applicable referenced sections
- RXCHG Message (change request), Section 6 and all applicable referenced sections
- CHGRES Message (change response), Section 6 and all applicable referenced sections
- CANRX Message (cancel request), Section 6 and all applicable referenced sections
- CANRES Message (cancel response), Section 6 and all applicable referenced sections
- ERROR Message (status), Section 6 and all applicable referenced sections
- STATUS Message (status), Section 6 and all applicable referenced sections

Implementations shall support the additional HITSP constraints as defined in Section 2.1.1 for NCPDP SCRIPT 10.1.

Implementations that support the method using HL7 shall conform to the specification as defined by Health Level Seven (HL7) Version 2.5/2.5.1 – Pharmacy/Treatment Orders. This includes:

- OMP – Pharmacy/Treatment Order Message (Event O09), Section 4.13.3 and all applicable referenced sections
    - New Order: ORC.1 = "NW"
    - Cancel Order: ORC.1 = "DC"
- OPR – Pharmacy/Treatment Order Acknowledgment (Event O10), Section 4.13.4 and all applicable referenced sections
    - Cancel Order Response: ORC.1 = "DR" (cancelled as requested) or "DU" (unable to cancel)

- RDE – Pharmacy/Treatment Refill Authorization Request Message (Event O11), Section 4.13.5 and all applicable referenced sections
    - Change Order Request: ORC.1 = "XO"
- RRE - Pharmacy/Treatment Refill Authorization Request Acknowledgment (Event O12), Section 4.13.14 and all applicable referenced sections
    - Change Order Request Response: ORC.1 = "XR" (approved) or "UX" (denied)
- RDE – Pharmacy/Treatment Refill Authorization Request Message (Event O25), Section 4.13.13 and all applicable referenced sections
    - Refill Request: ORC.1 = "RF"
- RRE - Pharmacy/Treatment Refill Authorization Request Acknowledgment (Event O26), Section 4.13.14 and all applicable referenced sections
    - Refill Request Response: ORC.1 = "AF" (approved) or "DF" (denied)
- ACK – General Acknowledgement Message, Section 2.14.1 and all applicable referenced sections

Implementations shall support the additional HITSP constraints as defined in Section 2.1.1 for Health Level Seven (HL7) Version 2.5/2.5.1 – Pharmacy/Treatment Orders.

The interrelationship between the similar NCPDP and HL7 messages and workflow are more fully described in *NCPDP-HL7 Electronic Prescribing Coordination – Mapping Document v1.0*.

2.1.1 TRANSACTION PACKAGE CONSTRAINTS

This section describes the constraints that limit the context in which the Transaction Package construct may be used. A constraint describes a rule that limits the use of the actors, actions or data within the given context, or to which the interactions must conform to be used within the described context. It is a description of the limits and scope of the interactions and can describe actions or events that are not part of the initial definition for the context.

Table 2.1.1-1 Transaction Package Constraints

Constraint
NCPDP SCRIPT 10.1
The UIB Segment is the Interactive Interchange Control Header. Fields “Date of Initiation” and “Event Time” shall always be sent. This is required for all types of messages.
The PVD Segment is used to identify providers of this message such as the prescriber, pharmacist, clinic, etc. HITSP requires an OID be used to identify this information. When performing this Segment for the prescriber and supervisor, the field name “Referenced Qualifier” is used to identify the type of OID identifier being used. If the prescriber has an NPI, one occurrence must contain the value “HPI” (National Provider ID). If the prescriber has a DEA Number, one occurrence must contain the value “DH” (DEA Number). Not every entity allowed to prescribe may have an NPI or DEA. If this is the case, the other identifiers can be used. The values for the “HPI” (National Provider ID) OID and “DH” (DEA Number) OID roots are not encoded in the message.
The PVD Segment is used to identify providers of this message such as the prescriber, pharmacist, clinic, etc. HITSP requires an OID be used to identify this information. When performing this Segment for the pharmacy, the field name “Referenced Qualifier” is used to identify the type of OID identifier being used. One occurrence shall contain the value “HPI” (National Provider ID). One occurrence shall contain the value “D3” (NCPDP Provider ID Number). The values for the “HPI” (National Provider ID) OID and “D3” (NCPDP Provider ID Number) OID roots are not encoded in the message.

Constraint
Within the PVD Segment the “Provider Specialty, coded” field shall use the Health Care Provider Taxonomy code set as its vocabulary. This requirement is for all usage of this Segment.
Within the PVD Segment the “Country Sub-entity identification” field shall convey the U.S. State or Territory and shall use the FIPS vocabulary. This requirement is for all usage of this Segment.
Within the PVD Segment one occurrence of the “Communication Number” field shall convey the telephone number of the contact. The field Code List qualifier shall be set to “TE” for this occurrence. Other occurrences are optional and would contain other values. This requirement is for all usage of this Segment.
Within the PTT Segment the “Country Sub-entity identification” field shall convey the U.S. State or Territory and shall use the FIPS vocabulary. This requirement is for all usage of this Segment.
Health Level Seven (HL7) Version 2.5/2.5.1 – Pharmacy/Treatment Orders
If the Ordering Provider has an NPI, they shall be identified by that NPI (ORC.12 Ordering Provider with ID Type Code="NPI") in the message. The Assigning Authority should be identified by the authority's OID.
If the Ordering Provider has a DEA Number, they shall be identified by that DEA Number (RXO.14 / RXE.13 Ordering Provider's DEA with ID Type Code="DEA") in the message. The Assigning Authority should be identified by the authority's OID.
When identifying a pharmacy (MSH.04, MSH.06, RXE.40, RXD.40), NCPDP Provider ID Numbers shall be employed and presented as OIDs.
When identifying a person other than the prescriber (IN3.14, IN3.25, ORC.10, ORC.11, ORC.19, PV1.07, PV1.08, PV1.17, PV2.13, RXO.15, RXE.14, RXD.10), and that person has an NPI, the NPI shall be included in the message. The ID Type Code shall be "NPI" and the Assigning Authority should be identified by the authority's OID.
For the Ordering Provider, at least one contact telephone number shall be included in the message (ORC.14 with Telecommunication Equipment Type = "PH").
All fields conveying gender (PID.08, GT1.09, IN1.43) shall be limited to values consistent with HL7 AdministrativeGender terminology. Note: This is an imperfect match, as the terminology for these fields cannot be reassigned. The working methodology is to limit the allowed values to M, F and U. HITSP is organizing a cross SDO harmonization effort to resolve the coding of Gender and the results of this harmonization may change this constraint in future versions.
Dosage forms (RXO.05, RXE.06, RXD.06) shall be encoded using the Federal Medication Terminologies (FMT) – National Cancer Institute (NCI) – NCI Thesaurus (NCIt) - Diagnostic, Therapeutic, and Research Equipment - Pharmaceutical Dosage Form. See http://www.cancer.gov/cancertopics/terminologyresources/FMT to identity the Drug unit of Measure. The OID for this terminology is 2.16.840.1.113883.3.26.1.1.2
The unit of measure for drug strengths (RXO.19, RXO.26, RXC.06, RXC.09, RXE.26, RXE.34, RXD.29) shall be encoded using the Federal Medication Terminologies (FMT) – National Cancer Institute (NCI) – NCI Thesaurus (NCIt) - NCI Thesaurus (NCIt) – Property or Attribute - Unit of Measure - Unit by Category - Potency Unit. See http://www.cancer.gov/cancertopics/terminologyresources/FMT to identity the Drug Unit of Measure. The OID for this terminology is 2.16.840.1.113883.3.26.1.1.4
The PATIENT Segment Group, consisting of a PID Segment and an optional PATIENT_VISIT group, when present in a message structure is required in that message type.
The ORDER Segment Group does not repeat in any message type, except in the case where a replacement order is being represented where two iterations of the ORDER Segment Group are needed to convey both the order being replaced and the replacement order.
ORC.01 – Order Control Code is limited to the following values for messages originating from the Medication Order Prescriber: NW, DC, XR, UX, AF, DF, RP, RO.
ORC.01 – Order Control Code is limited to the following values for messages originating from the Medication Order Filler: DR, DU, XO, RF.

Note: NCPDP SCRIPT 10.1 does not support the use of FMT coded fields for Drug Form, Drug Strength and Drug Unit of Measure. This will be considered in future versions of this construct.

2.1.2 TECHNICAL ACTORS

This section describes the technical actors that need to be integrated in order to meet the interoperability requirements for this Transaction Package. A technical actor represents an entity internal to a software application, which is engaged in one or more specific Transactions to support a specific aspect of a real world information interchange (e.g., set of message exchanges). The table below lists the technical actors involved in the Transaction Package, a definition of their roles, an indication of their optionality, the specific Transactions and content with which they are involved and the optionality of the associated Transactions and/or content.

Table 2.1.2-1 Technical Actors

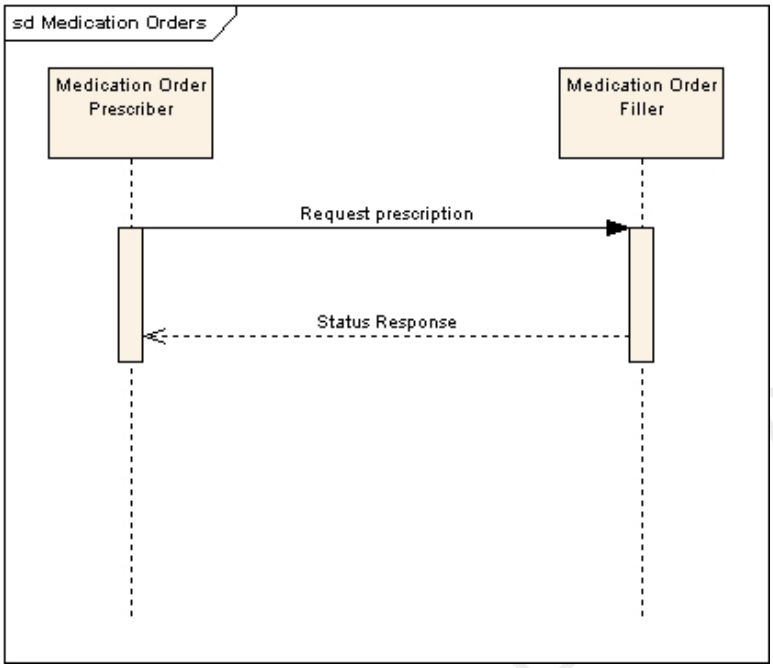
Technical Actor	Description	Used in Component/ Standard	Transaction/Content	Optionality*
Medication Order Prescriber	The Medication Order Prescriber initiates requests for medication orders/prescriptions. This includes the ability to: create new orders, refill orders, change orders and cancel orders. These requests are sent to the Medication Order Filler.	National Council for Prescription Drug Programs (NCPDP) SCRIPT Standard Implementation Guide Version 10.1 0r Health Level Seven (HL7) Version 2.5/2.5.1 – Pharmacy/Treatment Orders	Medication Order Request	R
Medication Order Filler	The Medication Order Filler responds to the requests for medication orders/prescriptions. This includes the ability to respond to: new orders, refill orders, change orders and cancel orders. These responses are sent to the Medication Order Prescriber.	National Council for Prescription Drug Programs (NCPDP) SCRIPT Standard Implementation Guide Version 10.1 0r Health Level Seven (HL7) Version 2.5/2.5.1 – Pharmacy/Treatment Orders	Medication Order Request	R

***NOTE:** Optionality **=** "R" for Required, "R2" for Required if known, "O" for Optional, or "C" for Conditional.

2.1.3 ACTOR INTERACTIONS

This section uses a Unified Modeling Language (UML) workflow diagram to depict the business and technical actors, the relevant events or actions in which they are involved and a mapping to the Transactions and Components that encapsulate the defined events/actions. It describes the underlying events that fulfill the Transaction Package, the sequence and timing of the events and the specific actors involved. Process flow diagrams are also provided to illustrate the process relationships. A description of the UML diagram is also provided below in Figure 2.1.3-1.

Figure 2.1.3-1 Example Medication Order Process Flow



This Transaction is used between prescribers (who write prescriptions) and dispensers (who fill prescriptions). It is used for new prescriptions, refill requests, prescription change requests and prescription cancellations, which may occur in many different real world settings, such as inpatient, long term care and ambulatory settings.

Two methods occur for the above Medication Order Process Flow:

Using NCPDP, the NEWRX message is used for a new order request and the status message is returned. Other messages also occur, for refills, changes, etc. All Transactions use a request/response process flow.

Using HL7, the OMP message is used for a new order request and the status message is returned. Other messages also occur, for refills, changes, etc. All Transactions use a request/response process flow.

2.1.4 PRE-CONDITIONS

This section describes the necessary conditions that must be in place prior to the start of the workings of the Transaction Package. The pre-conditions are used to convey any conditions that must be true at the onset of a Transaction Package. They describe the context that must be established before the Transaction Package is executed. They are not however the triggers that initiate the Transaction Package. Where one or more pre-conditions are not met, the behavior of the Transaction Package should be considered uncertain.

Table 2.1.4-1 Pre-conditions

Pre-condition
It is expected that the security framework under which this Transaction Package operates is in accordance with the Interoperability Specification that references this construct. Therefore all applicable HITSP Security and Privacy constructs are implemented as required

2.1.4.1 Process Triggers

This section describes the process triggers, including actors and/or processes, which are necessary to start the Transaction Package. They can invoke an automatic or manual process or result that in turn starts off the Transaction Package. A trigger is not the same as a pre-condition that describes a context that needs to be in place at the start of the event.

Table 2.1.4.1-1 Process Triggers

Process Trigger
A person needs medication

2.1.5 POST-CONDITIONS

This section provides an overview of the conditions or results that must occur at the end of the Transaction Package in order for the Transaction Package to be deemed successfully completed. This includes any required outputs from the Transaction Package, or specific actor states.

Table 2.1.5-1 Post-conditions

Post-condition
A medication order/prescription has been processed as new, refilled, canceled and/or changed

2.1.5.1 Required Outputs

This section identifies the required outputs that must be produced at the end of the Transaction Package in order for the Transaction Package to be deemed successfully completed. This includes the format and usage of the required output.

Table 2.1.5.1-1 Required Outputs

Required Output	Format/Usage
All actors internally process medication order/prescriptions	

2.1.6 DATA FLOWS

This section describes the basic data flows that are supported by this Transaction Package. It also describes the format of the data, the data sources, and the relevant actors involved in the successful flow of data for the Transaction Package. Any prevailing pre- and post-conditions are identified, as well as the purpose of each data post-condition associated with each Transaction Package. Any data that need to be

made available to particular actors are highlighted, as well as the conditions and processes that will use the data to achieve the stated post-conditions.

This Transaction Package specifies two methods of creating and managing orders. One method is using the NCPDP SCRIPT Standard Implementation Guide Version 10.1. NCPDP SCRIPT is for long-term care and ambulatory settings. The other method is using Health Level Seven (HL7) Version 2.5/2.5.1 – Pharmacy/Treatment Orders. HL7 is required for inpatient orders that can occur within an organization or with disparate inpatient organizations. The tables below describe the specific data mapping requirements and constraints for these two data flows.

2.1.6.1 NCPDP SCRIPT 10.1

Implementations of these transactions shall conform to the specification as defined by NCPDP SCRIPT 10.1. This includes the messages, NEWRX, REFREQ, REFRES, RXCHG, CHGRES, CANRX, CANRES, ERROR and STATUS. The additional HITSP constraints are as follows:

Table 2.1.6.1-1 NCPDP Script 10.1 Data Element Mapping

Data Element	Description	Limit/Range of values	Data Source	Destination	Requirements/Pre-conditions*	Additional Specification for Component
Ø8Ø-S3ØØ-Ø1-ØØ17	Date of Initiation	NA	Medication Order Prescriber	Medication Order Filler	R	Shall always be sent and filled in with a valid value for all message types
8Ø-S3ØØ-Ø2-Ø114	Event Time	NA	Medication Order Prescriber	Medication Order Filler	R	Shall always be sent and filled in with a valid value for all message types
Ø2Ø-IØØ1-Ø2-1153	Referenced Qualifier	NA	Medication Order Prescriber	Medication Order Filler	C	If the prescriber has an NPI, one occurrence shall contain the value “HPI” (National Provider ID). If the prescriber has a DEA Number, one occurrence shall contain the value “DH” (DEA Number). Not every entity allowed to prescribe may have an NPI or DEA. If this is the case, the other identifiers can be used The value for the “HPI” (National Provider ID) OID is not encoded in the message and shall always be assumed to be the OID root 2.16.840.1.113883.4.6. The value for the “DH” (DEA Number) OID is not encoded in the message and shall always be assumed to be the OID root 2.16.840.1.113883.11.19254
Ø4Ø-IØØ7-Ø2-47Ø7	Provider Specialty, coded	NA	Medication Order Prescriber	Medication Order Filler	C	Shall use the Health Care Provider Taxonomy code set as its vocabulary for all usage of PVD segments in any message type
Ø8Ø-IØØ4-Ø3-3229	Country Sub-entity identification	NA	Medication Order Prescriber	Medication Order Filler	C	This field shall convey the U.S. State or Territory and shall use the FIPS vocabulary for all usage of PVD segments in any message type

Data Element	Description	Limit/Range of values	Data Source	Destination	Requirements/Pre-conditions*	Additional Specification for Component
Ø9Ø-IØ16-Ø1-3148	Communication Number	NA	Medication Order Prescriber	Medication Order Filler	C	This is required whenever the PVD Segment is used in any message type One occurrence of this field shall convey the telephone number of the contact. The field Code List qualifier Ø9Ø-Ø1 shall be set to "TE" for this occurrence Other occurrences are optional and would contain other values
Ø8Ø-IØØ4-Ø3-3229	Country Sub-entity identification	NA	Medication Order Prescriber	Medication Order Filler	C	This field shall convey the U.S. State or Territory and shall use the FIPS vocabulary for all usage of PVD segments in any message type

*__NOTE__: Optionality = "R" for Required, "R2" for Required if known, "O" for Optional, "C" for Conditional

2.1.6.2 HL7 2.5/2.5.1

Implementations of this transaction shall support the specification as defined by HL7 V2.5/2.5.1. This includes the message, OMP. The additional HITSP constraints are in Section 2.2.2:

Table 2.1.6.2-1 HL7 2.5/2.5.1 Data Element Mapping

Data Element	Description	Limit/Range of values	Data Source	Destination	Requirements/Pre-conditions*	Additional Specification for Component
MSH.04 MSH.06	Sending Facility Receiving Facility		Medication Order Prescriber -or- Medication Order Filler	Medication Order Filler -or- Medication Order Prescriber	R	When identifying a pharmacy, NCPDP Provider ID Numbers shall be employed and presented as OIDs These fields have a data type of HD. Support for representing OIDs in HD data types can be found in HL7 V2.5.1 Chap 2A Section 2.A.33. The NCPDP OID root is 2.16.840.1.113883.3.79
ORC.01	Order Control Code	DR, DU, XO, RF	Medication Order Filler	Medication Order Prescriber	C	Required for messages that are initiated by the Medication Order Filler. Shall have a value of DR, DU, XO or RF
ORC.01	Order Control Code	NW, DC, XR, UX, AF, DF, RP, RO	Medication Order Prescriber	Medication Order Filler	C	Required for messages that are initiated by the Medication Order Prescriber. Shall have a value of NW, DC, XR, UX, AF, DR, RP or RO
ORC.12	Ordering Provider		Medication Order Prescriber	Medication Order Filler	C	Required for all instances of OMP, RDE. At least one repetition shall contain the prescriber's National Provider Identifier (ORC.12.09 = "NPI"), if the provider has an NPI. The NPI OID root is 2.16.840.1.113883.4.6
ORDER-Group	Order Segment Group		Medication Order Prescriber	Medication Order Filler	R	Not more than 2 instances of this segment group in one message instance Generally, each message instance is limited to one order (one ORDER-Group). The exception is in the case of a replacement order, where one order is replaced (RP) with another order (RO)
PATIENT-Group	Patient Segment Group		Medication Order Prescriber	Medication Order Filler	C	Required for all instances of OMP, RDE

Data Element	Description	Limit/Range of values	Data Source	Destination	Requirements/Pre-conditions*	Additional Specification for Component
PID	Patient Information Segment		Medication Order Prescriber	Medication Order Filler	C	Required for all instances of OMP, RDE Note: Implied by requiring PATIENT-group
PID.08 GT1.09 IN1.43	Administrative Sex Guarantor's Administrative Sex Subscriber's Administrative Sex	M, F, U	Medication Order Prescriber -or- Medication Order Filler	Medication Order Filler -or- Medication Order Prescriber	R	Shall contain the value M, F or U Note: This is an imperfect match as the terminology for these fields cannot be reassigned. The working methodology is to limit the allowed values to M, F and U. HITSP is organizing a cross SDO harmonization effort to resolve the coding of Gender and the results of this harmonization may change this constraint in future versions
RXE.40, RXD.40	Dispensing Pharmacy Dispense to Pharmacy		Medication Order Filler	Medication Order Prescriber	C	When identifying a pharmacy, NCPDP Provider ID Numbers shall be employed and presented as OIDs These fields have a data type of CWE. While it is atypical to represent an identifier as a coded concept, it can be by placing the OID extension in the Code Value and the OID root in the Name of Coding System. The NCPDP OID root is 2.16.840.1.113883.3.79
RXO.05 RXE.06 RXD.06	Requested Dosage Form Give Dosage Dorm Actual Dosage Form		Medication Order Prescriber -or- Medication Order Filler	Medication Order Filler -or- Medication Order Prescriber	R	Shall be encoded using *Federal Medication Terminologies (FMT) – National Cancer Institute (NCI)* Pharmaceutical Dosage Form See http://www.cancer.gov/cancertopics/terminologyresources/FMT to identify the Drug Form
RXO.14 RXE.13	Ordering Provider's DEA Number		Medication Order Prescriber -or- Medication Order Filler	Medication Order Filler -or- Medication Order Prescriber	C	If the Prescriber has a DEA Number, it shall be conveyed in at least one of these fields. (RXO.14.09="DEA" / RXE.13.09="DEA") The DEA OID root 2.16.840.1.113883.11.19254
RXO.19 RXO.26 RXC.06 RXC.09 RXE.26 RXE.34 RXD.29	Requested Give Strength Units Requested Drug Strength Volume Units Component Strength Units Component Drug Strength Volume Units Give Strength Units Give Drug Strength Volume Units Actual Drug Strength Volume Units		Medication Order Prescriber -or- Medication Order Filler	Medication Order Filler -or- Medication Order Prescriber	R	Shall be encoded using the *Federal Medication Terminologies (FMT) – National Cancer Institute (NCI)* –Potency Unit. See http://www.cancer.gov/cancertopics to identify the Drug Strength This field shall use the *Federal Medication Terminologies (FMT) – National Cancer Institute (NCI)* – NCI Thesaurus (NCIt) – Property or Attribute - Unit of Measure - Unit by Category - Potency Unit. See http://www.cancer.gov/cancertopics to identity the Drug unit of Measure.

*__NOTE__: Optionality = “R” for Required, “R2” for Required if known, “O” for Optional, “C” for Conditional

2.2 LIST OF CONSTRUCTS

The following list of constructs and their definitions are used by the Transaction Package specification.

Table 2.2-1 List of Constructs

Construct Name	Description	Content
No applicable constructs		

2.2.1 CONSTRUCT DEPENDENCIES

The following table shows a list of constructs with their existing dependencies. Dependencies usually exist when there are some additional pre-requisites for a specific Transaction specification.

Table 2.2.1-1 Construct Dependencies

Construct	Depends On (Name of Component that it depends on)	Dependency Type (Pre-condition, post-condition, general)	Purpose
No applicable construct dependencies			

2.2.2 ADDITIONAL CONSTRAINTS ON REQUIRED CONSTRUCTS

This section describes the constraints that further limit the constructs that are used by this Transaction Package.

Table 2.2.2-1 Additional Constraints on Required Constructs

Data Element	Construct	Constraint	Constraint Type (Pre-condition, post-condition, general)	Purpose (Reason for this constraint)
No applicable constraints				

2.3 LIST OF STANDARDS

It is important to understand that the standards selected here are within the context of the specific Use Case requirements and do not necessarily reflect selection in other contexts. The following standards are used to implement the Transaction Package specification:

Table 2.3-1 List of Standards

Standard	Description
Centers for Medicare and Medicaid Services (CMS) National Provider Identifier (NPI)	NPI is a unique 10-digit identification number issued to healthcare providers in the United States by the Centers for Medicare and Medicaid Services (CMS). All individual HIPAA covered healthcare providers (physicians, nurses, dentists, chiropractors, physical therapists, etc.) or organizations (hospitals, home healthcare agencies, nursing homes, residential treatment centers, group practices, laboratories, pharmacies, medical equipment companies, etc.) must obtain an NPI for use in all HIPAA standard transactions, even if a billing agency prepares the transaction. Once assigned, a provider's NPI is permanent and remains with the provider regardless of job or location changes. For more information visit www.cms.gov.
Drug Enforcement Administration (DEA) Prescriber Number	The Drug Enforcement Administration (DEA) is a United States Department of Justice law enforcement agency tasked with enforcing the Controlled Substances Act of 1970. It shares concurrent jurisdiction with the Federal Bureau of Investigation in narcotics enforcement matters. A DEA number is a series of numbers assigned to a healthcare provider (such as a dentist, physician, nurse practitioner, or physician assistant) allowing them to write prescriptions for controlled substances. Legally the DEA number is solely to be used for tracking controlled substances. The DEA number, however, is often used by the industry as a general "prescriber" number that is a unique identifier for anyone who can prescribe medication.
Federal Information Processing Standards (FIPS) Codes for the Identification of the States, the District of Columbia and the Outlying Areas of the United States, and Associated Areas Publication # 5-2, May, 1987	A set of two-digit numeric codes and a set of two-letter alphabetic codes for representing the 50 states, the District of Columbia and the outlying areas of the United States, and associated areas. The standard covers all land areas under the sovereignty of the United States, the freely associated states of Federated States of Micronesia and Marshall Islands, and the trust territory of Palau. For more information visit www.itl.nist.gov. NOTE: ASC X12 transactions and ASC X12N Implementation Guides do not allow use of this standard; instead they require use of the U.S. Postal Service's National Zip Code and Post Office Directory -- which provides similar alphabetic code values.
Federal Medication Terminologies	A set of controlled terminologies and code sets developed and maintained as part of a collaboration between the Food and Drug Administration, National Library of Medicine, Veterans Health Administration, National Cancer Institute and Agency for Healthcare Research and Quality related to medications, including medication proprietary and nonproprietary names, clinical drug code (RxNorm); ingredient names and Unique Ingredient Identifiers (UNII); routes of administration, dosage forms, and units of presentation from the NCI Thesaurus (NCIt); and certain pharmacological drug classes from the National Drug File Reference Terminology (NDF-RT). The Federal Medication Terminology leverages medication models maintained by the Food and Drug Administration (ex. UNII, NDC Codes), National Library of Medicine (RxNorm), the Veterans Health Administration (NDF-RT), and the National Cancer Institute (NCIt). Information on the Federal Medication Terminologies may be found and downloaded from the NCI Web portal terminology resources page at www.cancer.gov/cancertopics.
Health Care Provider Taxonomy	The Health Care Provider Taxonomy code set is a collection of unique alphanumeric codes, ten characters in length. The Health Care Provider Taxonomy code set includes specialty categories for individuals, groups of individuals, and non-individuals. The National Uniform Claims Committee maintains this code set. The complete code set is available from the Washington Publishing Company at www.wpc-edi.com.

Standard	Description
Health Level Seven (HL7) Version 2.5/2.5.1 – Pharmacy/Treatment Orders (OMP)	The HL7 Version 2.5 and 2.5.1 Messaging Standard is an application protocol for electronic data exchange in healthcare. It and prior versions have widespread use in the U.S. and internationally. Both message formats and value sets / code tables (e.g., diagnosis type, gender, patient class, result status, specimen collection method, abnormal flags, observation result status codes interpretation, timestamp format) are contained in the standard. Of particular focus for HITSP Interoperability Specifications are message formats described in Chapters 2, 3, 4, 5, and 7 including patient demographic (ADT), Pharmacy/Treatment Orders and lab result reporting. These are also used within composite standards from IHE for Patient Identity Cross-Referencing and Feed (PIX), Patient Demographics Query (PDQ), and Acknowledgements. They are also used in HL7 order messages. For more information visit www.hl7.org.
National Council for Prescription Drug Programs (NCPDP) SCRIPT Standard Implementation Guide Version 10.1	Provides for the realtime electronic transfer of prescription data between pharmacies and providers. Functions supported include communication of new prescriptions, prescription changes, refill requests, prescription fill status notifications, and prescription cancellations. For more information visit www.ncpdp.org.
National Library of Medicine (NLM) Unified Medical Language System (UMLS) RxNorm	Provides standard names for (1) clinical drugs and (2) drug dose forms as administered to a patient. Also provides links from clinical drugs, both branded and generic, to their active ingredients, drug components (active ingredient + strength), and related brand names. Food and Drug Administration (FDA) National Drug Codes (NDCs) for specific drug products and many of the drug vocabularies commonly used in pharmacy management and drug interaction software are additionally linked to RxNorm. For more information visit www.nlm.nih.gov.

3.0 TECHNICAL IMPLEMENTATION

3.1 CONFORMANCE

This section describes the conformance criteria, which are objective statements of requirements that can be used to determine if a specific behavior, function, interface or code set has been implemented correctly.

3.1.1 CONFORMANCE CRITERIA

In order to claim conformance to this construct specification, an implementation must satisfy all the requirements and mandatory statements listed in this specification, the associated HITSP Interoperability Specification, its associated construct specifications, as well as conformance criteria from the selected base and composite standards. A conformant system must also be constrained as specified in Table 2.1.1-1 and implement all of the required actors from Table 2.1.2-1, within the scope, subset or implementation option that is selected from the associated Interoperability Specification.

Claims of conformance may only be made for the overall HITSP Interoperability Specification with which this construct is associated.

3.1.2 CONFORMANCE SCOPING, SUBSETTING AND OPTIONS

A HITSP Interoperability Specification must be implemented in its entirety for an implementation to claim conformance to the specification. HITSP may define the permissibility for actor scoping, subsetting or implementation options by which the specification may be implemented in a limited manner. Such scoping, subsetting and options may extend to associated constructs, such as this construct. This construct must implement all requirements within the selected scope, subset or options as defined in the associated Interoperability Specification to claim conformance.

4.0 APPENDIX

The following sections include relevant materials referenced throughout this document.

No additional information at this time.

5.0 CHANGE HISTORY

The following sections provide the history of changes made to this document.

5.1 DECEMBER 7, 2007

No changes. This is the first published version of the document.

5.2 MARCH 19, 2008

The changes in this cycle address the following comment:

3064

The full text of the comments along with the Technical Committee's disposition can be reviewed on the HITSP Public Web Site.

The following changes have been made to the construct:

- Made editorial changes based on comments
- Removed constraint on RXFILL PTT segment “Gender, coded” field
- Removed constraint on RXFILL DRU segment “Free text code list qualifier” field requiring use of FMT coded fields
- Set Requirements column in Tables 2.1.6.1-1 and 2.1.6.2-1 to R, R2, C or O as appropriate
- Added additional comments in Table 2.1.6.2-1

5.3 MARCH 27, 2008

Upon approval by the HITSP Panel on March 27, 2008, this document is now Released for Implementation.