IBM WebSphere Transformation Extender

IBM

Pack for NCPDP

Version 4.2

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Contents

Chapter 1. Introduction to the Pack for NCPDP

The IBM WebSphere Transformation Extender Pack for NCPDP is a solution for National Council of Prescription Drug Program (NCPDP) healthcare-industry participants. The NCPDT transactions are used exclusively in the retail pharmacy sector. The Pack includes type tree definitions for all of the finalized HIPAA NCPDP Telecommunications V5.1 transaction sets and Batch V1.0 format. The Pack also contains a type tree with NCPD V3.2 transactions sets and Batch V1.1 format.

Overview of the Pack for NCPDP

There are three separate IBM Healthcare Packs:
- The IBM WebSphere Transformation Extender Pack for Health HIPAA EDI
- The IBM WebSphere Transformation Extender Pack for Health Level Seven
- The IBM WebSphere Transformation Extender Pack for NCPDP

The objects (type trees and maps) in the Packs include definitions for the complete ASC X12N standard for the HIPAA, as well as NCPDP, HL7 and CMS (formerly HCFA) formats for NSF, UB-92 and 4010 flat file formats.

The Packs provide healthcare and insurance payer organizations with an infrastructure that:
- Enables compliance with government and industry mandates.
- Controls administrative costs.
- Streamlines business processes.
- Facilitates accuracy and timeliness of information.
- Offers a competitive advantage.
- Conforms to existing systems.
- Adapts to new technologies as they emerge.
- Integrates multiple systems and standards.

This Pack, and all of the other Healthcare Packs, are based on core IBM technology that allows your applications and systems to take advantage of IBM's full range of integration capabilities including:
- Powerful any-to-any and many-to-many data transformation.
- Multi-platform deployment and execution.
- Management of transaction flows between trading partners.
- Importers for interface creation from XML DTDs, copybooks, DBMS catalogs, and other metadata.
- Adapters for commercial applications, messaging middleware, Internet transports, relational databases, file systems, and utilities.

Organization of Pack for NCPDP objects

The Pack for NCPDP is a collection of objects, including type trees, sample data, map source files, and compiled image files for utility modules. The contents of the Pack for NCPDP are organized by object type with the intention of facilitating reusability and flexibility.

The Packs for NCPDP objects install in the following directory location:

*install_dir***\packs\healthcare_v***n.n**pack*

In this location *install_dir* indicates the core IBM product installation, *n.n* indicates the current product version, and *pack* indicates the actual Pack for Healthcare that is installed (**hipaa**, **hl7**, and **ncpdp**.

Following product installation, the NCPDP objects are located in the following subdirectories under **healthcare_v** *n.n***ncpdp**:

- **data**
- **maps**
- **platform_support**
- **trees**

Included in the Packs for NCPDP

The data exchange, transformation, and integration requirements of the healthcare industry range from simple to extremely complex and can vary greatly from one organization to another. The Pack for NCPDP contains predefined objects that provide the functionality and flexibility to develop a wide variety of applications and systems that meet your specific transaction and production requirements.

The Pack for PCPDP contains type trees, maps, sample data, and utility modules. These predefined, industry-specific objects are organized in a way that provides the flexibility to create and deploy a wide variety of applications and systems that address NCPDP integration requirements. These objects are constructed to allow consistent behavior and results across all supported platforms and operating systems.

The given type trees define the more commonly used healthcare industry data standards. The given maps, data, and utility modules embrace typical data validation and transformation scenarios.

Type trees

The type trees in these packages support the NCPDP standards.

Refer to the Type trees documentation for more information.

Sample data

The data files included in the Pack for NCPDP contain transaction data exchange formats associated with the National Council for Prescription Drug Program (NCPDP) health care application standard.

Maps

The NCPDP reporting maps are included in the Pack for NCPDP.

Intended use

The Pack for NCPDP is used exclusively by the retail pharmacy industry, particularly healthcare providers and insurance payers seeking to fulfill Healthcare Industry Portability and Accountability Act (HIPAA) requirements and streamline healthcare transaction data integration.

The Pack for NCPDP lets you send and receive electronic prescription drug transactions, as well as to receive and transmit data using legacy standards, and integrate with internal applications and data.

Compatibility

The executable objects that you create using this version of the Pack for NCPDP can be ported to any Windows, UNIX (AIX, HP, Solaris, and Linux), and MVS platform.

General constraints

The type trees for the Pack for NCPDP, developed by IBM, are expected to adhere to the current, official implementation guides or published standards documents.

The NCPDP reporting maps, are accurate implementations of published crosswalk or data transformation specifications. It should be noted that all type trees and maps provided are intended for use as examples only.

It is your responsibility as a user to assess suitability and perform appropriate testing before placing the Pack for NCPDP objects into a production environment. You will also need to ensure that you have adequately addressed security and privacy considerations in the applications and systems that you develop using the Pack for NCPDP.

File naming conventions

All Pack for NDPCP object filenames are lowercase and contain only alphanumeric or underscore (_) characters. For compatibility with the OS/390 batch environment, filenames for executable objects, including executable map names referenced by RUN function calls, do not contain underscore characters in the first 8 characters of the filename and the first 8 characters of executable object names are unique within the scope of the Packs for NCPDP. This restriction does not apply to objects that are not ported directly to the z/OS or UNIX environments such as type trees or map source files.

Chapter 2. Healthcare industry

The information presented here applies to the IBM WebSphere Transformation Extender Pack for NCPDP as well as all of the other healthcare Packs. Every encounter between a patient and healthcare provider involves the exchange of information. In addition to the basics of patient demographics, symptoms, diagnoses, and treatments, the typical scenario requires the exchange of claims and payment data as well as associated payer, subscriber, eligibility and authorization information. A single encounter can involve the transmission of large volumes of information among several participants.

Healthcare transactions and standards

The exchange of healthcare information can generally be viewed as a transaction between the sender and receiver participants.

Healthcare transactions include (but are not limited to):
- Healthcare claim or encounter.
- Claim payment and remittance advice.
- Healthcare claim status.
- Coordination of benefits.
- Eligibility for a health plan.
- Referral certification and authorization.
- Enrollment and un-enrollment in a health plan.
- Premium payments.

These transactions may be transmitted electronically in compliance with healthcare transaction standards.

Healthcare data exchange standards allow the accurate and timely exchange of information between healthcare organizations. For example, a simple benefits inquiry can take 20 minutes on the phone. Using electronic data interchange (EDI); this type of request can be processed almost immediately, without the need for a call to the insurer's customer service center.

Healthcare electronic data interchange initiatives

The entire healthcare industry is facing increased pressure to implement productivity and quality improvements while reducing costs. The use of electronic data interchange and industry-specific data exchange standards for healthcare transaction data is a potential source of significant benefits in these areas.

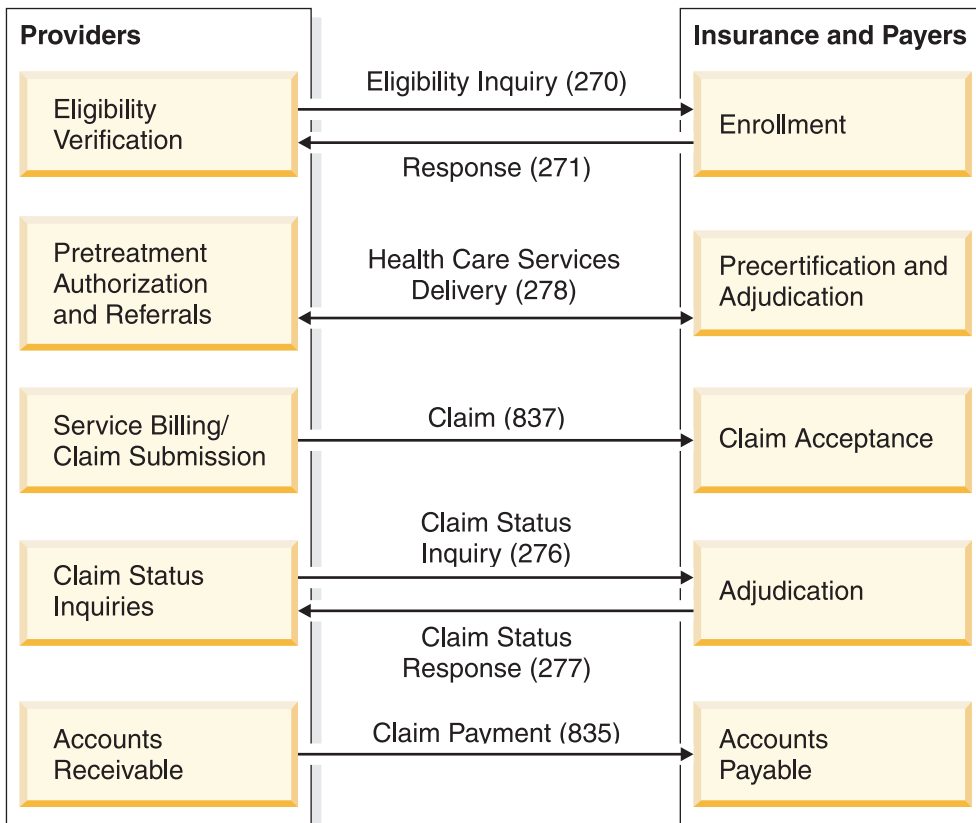### HIPAA legislation

In 1996, legislation was passed to improve the overall healthcare administrative system. This legislation is known as the Health Insurance Portability and Accountability Act (HIPAA).

The Packs for Healthcare specifically address the administrative simplification aspects of HIPAA legislation - the standardization of electronic patient health, administrative, and financial data.

HIPAA regulations affect payers, health plans, clearinghouses, and those providers who conduct financial and administrative transactions electronically.

HIPAA transactions

The following diagram shows the flow of information between healthcare providers and insurance/payers and the associated HIPAA-mandated transaction numbers. These numbers refer to specific HIPAA X12 transaction sets that are supported in the Packs for Healthcare.

Providers		Insurance and Payers
Eligibility Verification	Eligibility Inquiry (270) → ← Response (271)	Enrollment
Pretreatment Authorization and Referrals	Health Care Services Delivery (278) ←	Precertification and Adjudication
Service Billing/ Claim Submission	Claim (837) →	Claim Acceptance
Claim Status Inquiries	Claim Status Inquiry (276) → ← Claim Status Response (277)	Adjudication
Accounts Receivable	Claim Payment (835) →	Accounts Payable

The following diagram shows the flow of information between insurance/payers and healthcare plan sponsors and the associated HIPAA-mandated transactions. Again, the parenthetical numbers refer to specific HIPAA X12 transaction sets.

Insurance and Payers		Sponsors	
Enrollment	Enrollment (834) → ← Payment Order (820)	**Enrollment**	
Precertification and Adjudication			
Claim Acceptance			
Adjudication			
Accounts Payable			
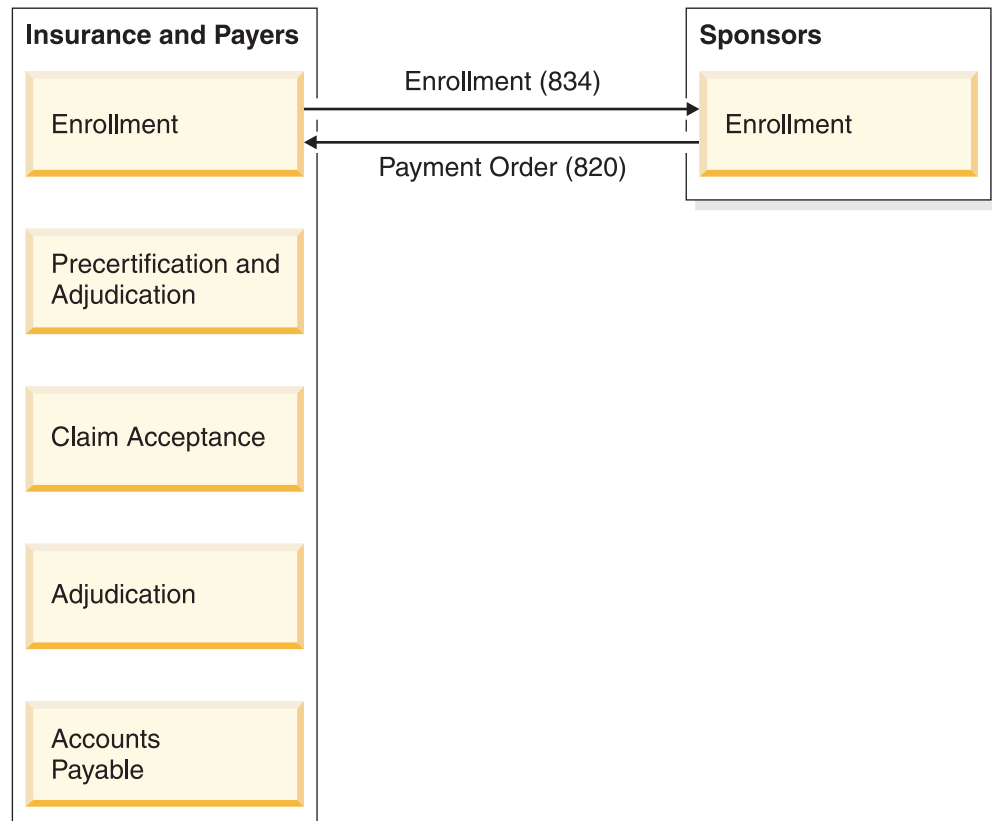
Healthcare standards organizations

There are a number of organizations that participate in the development and publication of healthcare data standards. Because of their importance in the area of healthcare data exchange standards and formats, IBM focuses on the standards and formats developed and maintained by the following four organizations:

- ANSI ASC X12N
- NCPDP
- HL7
- CMS

ANSI ASC X12N

The Accredited Standards Committee (ASC) of the American National Standards Institute (ANSI) maintains the X12 standard. X12 is the dominant EDI standard in North America. The transaction sets included in the X12 standard cover a wide range of industries and business functions - including the exchange of healthcare data. The Healthcare Task Group of the Insurance Subcommittee (also known as X12N) is the designated standards maintenance organization (DSMO) for most of the finalized HIPAA transaction set standards.

This version of the Packs for Healthcare includes type tree definitions for all of the finalized HIPAA X12 transaction sets and the HIPAA X12 Addenda.

Also included are maps and applications for transforming and validating HIPAA X12 transaction data.

NCPDP

The National Council for Prescription Drug Programs (NCPDP) is another HIPAA-designated standards maintenance organization (DSMO) for finalized HIPAA transactions. NCPDP standards are used exclusively in the retail pharmacy sector.

The Packs for Healthcare include type tree definitions for all of the finalized HIPAA NCPDP Telecommunications V5.1 transaction sets and Batch V1.0 format. The package also contains a type tree with NCPDP V3.2 transaction sets and Batch V1.1 format.

HL7

Health Level Seven (HL7) is an ANSI-accredited standards organization operating in the healthcare arena. HL7's domain is clinical and administrative data.

The HL7 produces standards for the exchange, management, and integration of data, intended to promote interoperability between healthcare information systems.

The Pack for HL7 includes type tree definitions for Version 2.1, 2.2, and 2.3 of the HL7 standards.

CMS

The Center for Medicare and Medicaid Services (CMS), formerly known as "HCFA", is the supervisory organization for all public expenditures for healthcare. CMS provides health insurance for over 74 million Americans through Medicare, Medicaid, and the State Child Health Insurance Program. CMS is not a standards organization but their published interface formats are used extensively throughout the United States.

The Packs for Healthcare include type tree definitions for the following formats:
- NSF Claims and Coordination of Benefits - Version 3.01
- UB-92 Claims and Coordination of Benefits - Versions 5.0 and 6.0
- 4010 Flat Files for Professional and Institutional Claims and Coordination of Benefits (837), Payments (835) and Claim Status Request/Response (276/277)

> **Note:** CMS was formerly the Healthcare Financing Administration (HCFA). Because many CMS documents, standards, and Web sites still refer to HCFA, both CMS and HCFA are used in this guide and in the Packs for Healthcare.

Other healthcare data exchange organizations

Another key participant in the development and interpretation of Healthcare data exchange standards, HIPAA transaction standards in particular, is the Workgroup for Electronic Data Interchange (WEDI) Strategic National Implementation Process (SNIP) Transactions Work Group. WEDI/SNIP has documented an approach for classifying the various HIPAA transaction compliance requirements into types (formerly referred to as "levels") of testing. This approach has gained widespread acceptance in the healthcare industry. The Compliance Check application and the HIPAA X12 type tree definitions in this package adhere to WEDI/SNIP guidelines.

Chapter 3. Type trees

The discusses the type trees included with the Pack for NCPDP.

The type trees in this chapter are organized under the following headings:

What the type trees support

The set of type trees included with the Packs for Healthcare support WEDI/SNIP Type 1, Type 2, Type 3, Type 4, and HIPAA finalized (round 2) Addenda.

The type tree variants that enforce the HIPAA Type 2, Type 3, and Type 4 tests are designed to work interchangeably (that is, "plug-and-play") in data transformation maps. Wherever possible, HIPAA X12 transaction set definitions and their corresponding addenda definitions are consistent, with the intent to preserve the ability to merge and modify HIPAA X12 transaction set definitions and allow maximum flexibility.

Note: The type trees do not produce acknowledgment responses. In order to generate acknowledgment responses, you must use the Compliance Check application map.

NCPDP type trees

The NCPDP type trees describe the retail pharmacy telecommunications and batch data interchange formats as specified by the National Council for Prescription Drug Programs.

The following trees are included with the Packs for Healthcare:
- "ncpdp_v3_2.mtt"
- "ncpdp_v5_1.mtt"

ncpdp_v3_2.mtt

Developed in accordance with NCPDP specifications, the **ncpdp_v3_2.mtt** type tree contains the input data definitions for the NCPDP Version 3.2 transactions and Batch Version 1.1.

File Batch Request/Response NCPDP and **FlatFile Batch Request/Response NCPDP** are the top-level groups in this type tree.

ncpdp_v5_1.mtt

The **ncpdp_v5_1.mtt** type tree contains the input and output definitions for the NCPDP Telecommunications Version 5.1 transactions and Batch Version 1.0.

File Batch Input/Output Request/Response NCPDP and **FlatFile Batch Input/Output Request/Response NCPDP** are the top-level groups in this type tree.

The **ncpdp_v5_1.mtt** type tree is used in the following maps:
- ncpdp_v5_1_request_report.mms
- ncpdp_v5_1_response_report.mms

The **ncpdp_v5_1.mtt** type tree analyzes with 100 distinguish ability warnings that you can ignore. The analysis warnings appear similar to the following:

```
L199 - COMPONENT 2 may not be distinguishable from COMPONENT 6 that may follow in TYPE
'CoordOfBenefitsOtherPayments Count FunctionalMapRepeatInput Input Field NCPDP' (warning)
```

Chapter 4. Maps

The data validation maps included in the Pack for NCPDP are pass-through maps used for NCPDP reporting.

NCPDP reporting

This section describes the following maps:
- "ncpdp_v5_1_request_report.mms"
- "ncpdp_v5_1_response_report.mms"

ncpdp_v5_1_request_report.mms

The **ncpdp_v5_1_request_report.mms** map source file contains the executable maps shown in the following:

The **ncpdp_v5_1_request_report** is the top-level executable map. This map performs the following functions:
- Validates NCPDP request transmission data against definitions in the **ncpdp_v5_1.mtt** type tree.
- Generates a summary report or reject file from the transaction.
- Uses the **REQ_** (request) executable maps to map repeating group fields.

The **REQ_*** (request) executable maps are executed via RUN function calls from the **ncpdp_v5_1_request_report** executable map. All input and output data required for these maps is passed (echoed in/out) via the RUN function call.

You must build all of the following request executable maps to create the compiled map files (***.mmc**) used by the RUN function calls before you run the **ncpdp_v5_1_request_report.mmc** executable map:
- **REQ_Clinical_Information**
- **REQ_COB_Other_Payer_Amount_Paid**
- **REQ_COB_Other_Payments**
- **REQ_Compound_Ingredient**
- **REQ_Diagnosis_Codes**
- **REQ_DUR_PPS_Code-+**
- **REQ_Other_Amount_Claimed_Sub**

  In the request executable maps, **passed_via_run.dat** and **returned_via_run.dat** are used as the file specifications for input and output cards. If you attempt to execute these maps directly, you will receive the message Source Not Available.

ncpdp_v5_1_response_report.mms

The **ncpdp_v5_1_response_report.mms** map source file contains the executable maps.

The **ncpdp_v5_1_response_report** is the top-level executable map. This map performs the following functions:
- Validates NCPDP response transmission data against definitions in the **ncpdp_v5_1.mtt** type tree.

- Generates a summary report or a reject file from the transaction.
- Uses the **RSP_** (response) maps to map repeating group fields.

The **RSP_*** (response) executable maps are executed via RUN function calls from the **ncpdp_v5_1_response_report** executable map. All input and output data required for these maps is passed (echoed in/out) via the RUN function call.

You must build all of the following response executable maps to create the compiled map files (***.mmc**) used by the RUN function calls before you run the **ncpdp_v5_1_request_report.mmc** executable map:
- **RSP_DUR_PPS_Response_Code**
- **RSP_Other_Amount_Paid**
- **RSP_Preferred_Product**
- **RSP_Reject_Codes**

    In the response executable maps, **passed_via_run.dat** and **returned_via_run.dat** are used as the file specifications for input and output cards. If you attempt to execute these maps directly, you will receive the message Source Not Available.

Chapter 5. Sample Data

Sample data is provided for use with the type trees and maps in the Pack for NCPDP.

Transaction data

The Healthcare Pack for NCPDP includes sample transaction data for NCPDP.

NCPDP sample data

The NCPDP sample data includes request and response data for four of the retail pharmacy transactions as specified by the National Council for Prescription Drug Programs. The NCPDP sample data files include the following:

- ncpdp_v5_1_billing_request.dat
- ncpdp_v5_1_billing_response_reject.dat
- ncpdp_v5_1_billing_reversal_request.dat
- ncpdp_v5_1_billing_reversal_response_accept.dat
- ncpdp_v5_1_eligibility_request.dat
- ncpdp_v5_1_eligibility_response_accept.dat
- ncpdp_v5_1_rebill_request.dat
- ncpdp_v5_1_rebill_response_accept.dat
- 275_4050_ig_examples.dat
- 277_4050_ig_examples.dat

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