

Ohio Department of Aging EDI Information Guide

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1 Document Overview

The purpose of this guide is to help service providers of ODA who are submitting invoices to PIMS either through the Data Entry Module (DEM) or proprietary software to exchange business documents electronically with the state in ASC X12 standard formats.

Electronic Data Interchange (EDI) is the inter-organizational electronic exchange of business documents in a structured, machine-processable format. The EDI process permits the direct computer-to-computer exchange of formatted business transactions between business partners and makes it possible for organizations to generate, receive and process large volumes of information, swiftly and with limited human intervention.

The Health Insurance Portability and Accountability Act of 1996 (HIPAA) is a federal mandate for all health related businesses to standardize the exchange of administrative documents under ASC X12 standard formats. Although the State of Ohio has for some time embraced the use of EDI in as many functional areas of its business as practical, it was the enactment of HIPAA that brought the health care businesses into the fold of doing EDI.

EDI is a mutually beneficial strategy to improve customer service, improve operational effectiveness and save taxpayer dollars. Over time EDI may become the preferred method for the State to conduct business.

2 Introduction to EDI

2.1 *What is EDI?*

Basically, the electronic data interchange process is the computer-to-computer exchange of business documents between companies. EDI documents use specific computer record formats that are based on widely accepted standards. However, each company may use the flexibility allowed by the standards in a unique way that fits their business needs.

The focus of EDI since its inception in the late 1960's has been on the replacement of paper-based business documents with similarly defined machine-processable electronic forms. Since 1994 the State of Ohio has used EDI to exchange purchase order, invoice, and payment remittance information with its trading partners. A trading partner, as defined in EDI terminology, is a supplier, customer, subsidiary or any other organization with which the state of Ohio does business.

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2.2 How EDI Works - Overview

EDI involves reformatting a standard computer flat file, as produced by an organization's business application systems, into a structured EDI format. This format must comply with specific industry standards which for ODA is ASC X12 standards. The reformatting process is performed by a specialized software program called an EDI translator. Depending on volume, cost associated with file reformatting may be reduced by outsourcing the work to a Health Care Clearinghouse.

Once the file has been put into a structured format, it is transmitted by one of several communication methods directly to the intended receiver or to a third party network. The third-party network, called a Value Added Network (VAN), provides a service much like a post office. The VAN receives the transmitted documents and places these documents into an electronic mailbox for the receiving party to pick up. By dialing into the network, the receiving party can access its mailbox and retrieve the transmitted documents.

Once the electronic documents have been accessed by the receiving party, the documents once again are processed through an EDI translator. The translator receives the documents, which are still in EDI format, and translates them into a standard computer flat file. This flat file then can be formatted into a report and printed or sent directly into a company's computer application for processing.

2.3 How EDI Works-Detail Description

2.3.1 Components of an EDI System

EDI architecture is generic in that it is not dependent on any specific computer hardware, software, communications protocol, or processing environment. However it does require that trading partners agree upon a common set of standards and have a means for formatting their data into these standards and communicating the information to each other. The components of an EDI system include:

- EDI Standards
- Application Systems
- EDI Gateway
- Communication Network

2.3.1.1 EDI Standards

The American National Standards Institute (ANSI) serves as the coordinator for national standards in the United States. In 1979, ANSI formed the Accredited Standards Committee (ASC X12) to develop uniform standards for electronic interchange of business transactions. The ANSI ASC X12 set of EDI message standards, developed and maintained by the American National Standards Institute is widely used within the United States.

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HIPAA chose three standards for use within the health care industry; ASC X12 for Administrative, NCPDP for Prescription Drugs, and HL7 for Clinical. ODA will be using the ASC X12 Standard.

The success of EDI is based on the existence of standards that govern the way that data is transmitted from one trading partner to another. In addition, standards define the contents of each message and provide a finite list of codes that can be used to describe individual entries within a message. Since trading partners work from a common structure and implementation guide, exchanging electronic messages soon becomes routine.

2.3.1.2 Application Systems

Application systems are the computer application systems within an organization that are used to maintain and process business transactions. In EDI-based processing these systems are also used to process the data to be sent to or received from trading partners. For ODA the PASSPORT Information Management System (PIMS) is the application system which processes billings received from providers.

2.3.1.3 EDI Gateway

The purposes of an EDI Gateway are to convert application system data into a standard format and to send messages to and receive messages from trading partners. A typical EDI Gateway consists of a hardware platform and EDI translation software.

- **Hardware:** Requires a host system (e.g., a personal computer, midrange computer or mainframe computer) and communications equipment (e.g., modems and communications lines).
- **EDI Translation Software:** Specialized software required by each trading partner that performs three basic functions:
 1. **Mapping:** Reformats outgoing data from an organization-specific file format to a standard EDI format for electronic processing and reformats incoming data from a standard EDI format to an organization-specific file format that can be processed by the business application systems.
 2. **Translating:** Adds standard enveloping and delimiter protocols to the mapped data to permit the EDI message to be routed properly to the designated trading partner.
 3. **Communicating:** The process that sends an EDI message to a trading partner via a communication network

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2.3.1.4 Communication Network

A communication network is used in EDI to electronically transmit standard business documents between trading partners. Each communication network is typically used by a number of business entities, and often linked to other networks to enable them to transfer EDI messages to each other. There are several options available for transmitting EDI documents:

- **Direct Connect:** Organizations may communicate EDI messages by providing direct connects to their systems for their trading partners. In this instance, a trading partner would dial directly into an organization's EDI gateway and transmit their EDI transactions.
- **Value Added Networks (VANS):** A third party network, known as a value added network or VAN, serves as an intermediary between trading partners. A VAN is an electronic service provider that receives, stores, and transmits EDI and other electronic messages. VANS support multiple types of communications hardware and software configurations, thereby reducing an organization's burden to establish individual computer connections with each one of its trading partners.

2.3.1.5 EDI Message Components

A complete ANSI ASC X12 EDI electronic exchange between trading partners occurs in basic units called messages, or transaction sets. A transaction set may represent a single business document (e.g. a claim) or a single transaction set may contain multiple occurrences of a business document, as in the case of health care claims. (A Health Care Claim transaction set (837) may include many claims for the same provider).

Over time the business community has arrived at series of standardized transaction formats to cover a wide range of business communication needs. Each transaction set has been defined with an extensive set of data elements required for a unique business document, with specified formats and sequences for each data element. Combinations of related data elements are built up into segments or logically related groups of data.

All of the related segments for a message are then grouped together, and are preceded by a transaction header (ST) and followed by a transaction trailer (SE) record. Since more than one transaction set (ST/SE) and/or transaction type (Claim, Acknowledgement, Claim Status Request, etc) may be sent to the same trading partner, transaction sets (ST/SE) are grouped by type and each group is preceded by a functional group header (GS), and followed by a functional group trailer (GE). For transmission purposes, all the functional groups for a trading partner are enveloped together preceded by an interchange header (ISA) and followed by an interchange trailer (IEA) record. This interchange envelope includes all of the groups, transactions, segments, and data elements to be sent to one trading partner and represents an EDI message. Here's a brief description of each of these terms:

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- **Data Element** - Data elements are the smallest unit of information in an EDI message and represent a single unit of information (e.g., unit price, item description).

A data element definition will describe:

1. The type of data (numeric, alphanumeric, date, time).
 2. The minimum and maximum length allowed.
 3. Code or conditional values that must be observed with the particular type of data.
- **Data Segments** - Data segments consist of strings of related data elements in a specific order. For example, an address segment may consist of city, state and zip code data elements. Each segment is preceded by a unique two to three character Segment ID which identifies the nature of the data included in the segment. Each data element is separated one from another by a special character called a data element delimiter. The end of a segment is punctuated by another special character called a segment terminator. A city/state/zip address segment might look like this:

N4*Columbus*OH*43215~

N4 is the segment identifier that tells the translation software that the segment contains city/state/zip information. The special character "*" separates each of the unique data elements, and the special character "~" designates the end of the segment.

A segment definition for a specific transaction set will identify:

1. All mandatory data elements.
 2. Any optional or conditional data elements.
 3. The required sequence of data elements within the segment.
 4. The maximum number of occurrences of the segment.
- **Transaction Sets** - A transaction set, consists of logically related data segments in a specific order. Transaction sets are bounded by mandatory header and trailer segments. (The Segment ID for the Transaction Set Header is "ST" and the Segment ID for the Transaction Set Trailer is "SE").

For each transaction set, complete documentation is available to specifically define the information is required. A transaction set definition set will identify:

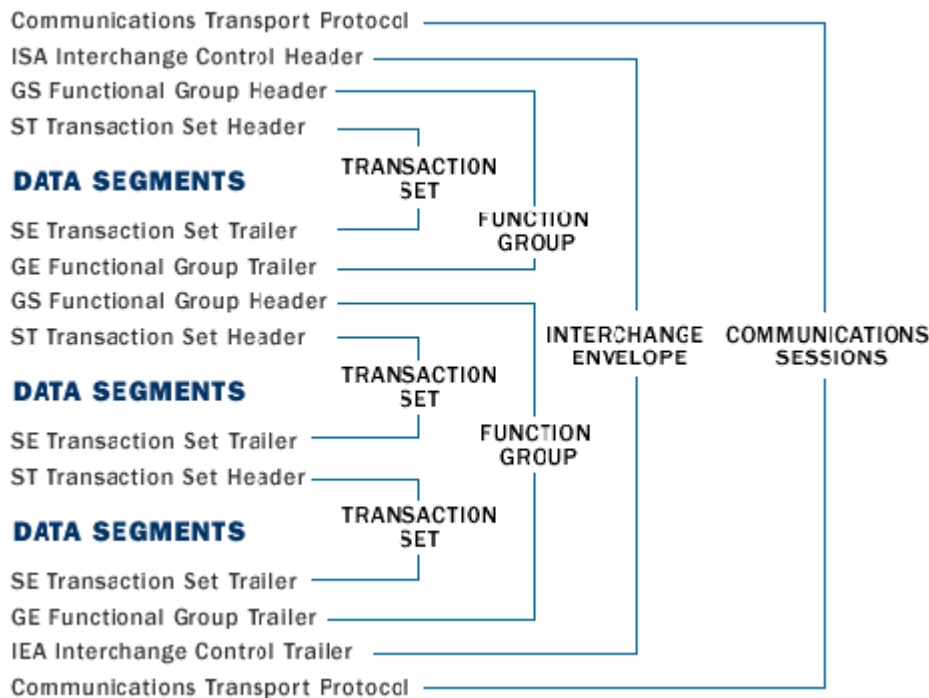
1. The segments to be used in the message.
2. The required sequence of the segments.
3. Which segments are mandatory and which are optional.
4. The number of times a segment may be repeated.

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- **Functional Groups** - A functional group is a group of similar transaction sets. Functional groups are also bounded by special header and trailer segments. (The Segment ID for the Functional Group Header is "GS" and the Segment ID for the Functional Group Trailer is "GE").
- **Interchanges** - An interchange is a complete EDI message from one trading partner to another that can include multiple functional groups and transaction sets. Interchanges are enveloped within interchange control segments which specify, among other things, the sender and receiver of the interchange identified by their respective electronic addresses. (The Segment ID for the Interchange Control Header is "ISA" and the Segment ID for the Interchange Control Trailer is "IEA").

Here is a graphical representation of the components of a standard EDI electronic message:

EDI Document



2.3.2 Benefits of EDI

Some of the cost savings typically associated with the implementation of EDI-based applications is:

- Savings in labor costs (through the elimination of data entry, paper document handling, reconciliation and other manually performed tasks).

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- Elimination of mailing costs.
- Reduction of document management costs (on site and off site storage).

Benefits of EDI implementation may be quantifiable or non-quantifiable, and include:

- Reduction in data entry error rates.
- Elimination of communication lag time between agency and customer.
- Improved customer service.
- Expendability of the system to other functions (using the same translation software for various applications such as procurement, collections, payments, etc.).

3 PIMS Processing

3.1 EDI Process Overview

Listed below is the processing sequence of EDI transactions as they pass between the healthcare claims submitters (providers and billing intermediaries) and ODA.

1. Claims are submitted to PIMS System for adjudication using the ASC X12N 837 Health Care Claim standard format
 - 837 Health Care Claim-Professional

Upon receipt of claims information, the claims are translated from the EDI structured format into flat (text) file layout required for PIMS processing. Result of translation process is reported back to submitter.

- 997 Functional Acknowledgement
2. Claims are run through a Claims Edit & Load program which is a pre-processor program that validates content of claims. Invalid claims are rejected and not loaded into PIMS. Rejected claims are reported back to submitter through a claims acknowledgement. Valid claims are loaded into PIMS for adjudication.
 - 277 Claim Acknowledgement
3. PAA sites run the adjudication process for their respective claims and send an electronic remittance advice back to the provider. The remittance advice contains the claim payment information and the results of the claim adjudication process.
 - 835 Claim Payment/Advice

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3.2 PIMS EDI Transaction Sets

3.2.1 837 Health Care Claims

The 837 Health Care Claim transaction set can be used to submit health care claim billing information, encounter information, or both. It can be sent from providers of health care services to payers, either directly or via intermediary billing services and health care clearinghouses. It can also be used to transmit health care claims and billing payment information between payers with different payment responsibilities where coordination of benefits is required or between payers and regulatory agencies to monitor the rendering, billing, and/or payment of health care services within a specific health care/insurance industry segment.

For PIMS, the Ohio Department of Aging (ODA) will use the *837 Health Care Claim: Professional* EDI format for all healthcare claims.

The EDI requirements for this transaction are defined in the implementation guide, available on the ODA web site. This guide is based on the *837 Health Care Claim: Professional* requirements published by the X12N Insurance sub-committee of the Accredited Standards Committee (ASC) for the Data Interchange Standards Association (DISA). The ASC X12N *837 Health Care Claim: Professional* specification is the EDI standard mandated by the Healthcare Insurance Portability and Accountability Act of 1996 (HIPAA). Providers and health plans that trade professional (medical) health care claims electronically must use the ASC X12N 837 Health Care Claim: Professional standard. The guide shows the data elements used by PIMS processing, and the data elements required for HIPAA. Many of the data elements for HIPAA are only required for particular types of claims or situations.

3.2.2 835 Health Care Claim Payment/Advice

This transaction set can be used to make a payment, send an Explanation of Benefits (EOB) remittance advice, or make a payment and send an EOB remittance advice only from a health insurer to a health care provider either directly or via a financial institution.

3.2.3 277 Health Care Claim Acknowledgement

This transaction set is used to provide an application level acknowledgement of electronic claims or encounters to indicate the results of a pre-process content validation. Prior to loading the PIMS application database, the flat (text) file created by the EDI translator is edited by a Claim Edit & Load program. Edit validation of key fields required for adjudication such as provider id, ODA Agency ID, Consumer ID, Service Code, and Service Date are preformed. Also, checks for duplicate transmissions, consumers and claim numbers are performed against the data.

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Invalid data will cause the transaction or consumer or claim level data not to be loaded into PIMS. The Claim Acknowledgement is sent to the submitter with details of errors encountered.

3.2.4 997 Functional Acknowledgement Transaction Set

This transaction set is used to indicate (1) that an EDI document has been received and (2) the results of a syntactical analysis of that document by the EDI translator. A syntactical analysis looks at the structure of the EDI document which includes mandatory elements, segments and loops; segment sequences; conditional relationships; control numbers; and trailer (SE, GE, IEA) counts. Not covered are the semantic meaning of the information encoded in the transaction sets.

The 997 Functional Acknowledgment is always sent by the State of Ohio to its trading partners upon receipt of inbound documents. Trading partners are also required to transmit 997s upon receipt of state transactions.

When the State sends outbound documents, trading partners are required to return functional acknowledgments within 48 hours of their receipt of the transmission. After the functional acknowledgment is received by the State, it is reconciled with the outbound documents originally transmitted.

4 Becoming a Trading Partner

The Ohio Department of Aging (ODA) has prepared these guidelines to assist providers and billing intermediaries in their efforts to establish an EDI Trading Partner relationship with the ODA.

4.1 Getting Started

Initially, a provider that is considering becoming an EDI trading partner should review the ODA EDI requirements presented in this document and then make a careful assessment of the changes that will be needed in both their business and technical operations to meet ODA's EDI processing requirements.

This assessment may take several weeks or months depending on the organization's prior experience with EDI.

4.1.1 Trading Partner Profile

ODA asks that the EDI Trading Partner Profile Form be submitted during this initial assessment period. The information requested on the form includes:

- Company name and Provider Number

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- Technical contact information
- EDI enveloping identifiers
- Networking preferences
- ANSI transaction sets/version selection

4.1.2 Trading Partner Agreement

An EDI Trading Partner Agreement (TPA) is a contract between parties who have chosen to become electronic business partners. The TPA stipulates the general terms and conditions under which the partners agree to exchange information electronically. The document defines participant roles, communication and security requirements and identifies the electronic documents to be exchanged. The PASSPORT Administrative Agencies will work with the potential trading partner to exchange and analyze both business and technical information.

Testing between ODA and a provider may take place prior to TPA signature approval, but EDI production exchanges will not be initiated until all testing has been successfully completed and a Trading Partner Agreement has been signed.

4.2 EDI Hardware/Software Selection

The provider/trading partner needs to determine which modifications and additions to their technical infrastructure will be needed to perform and support EDI functions. (If the organization is currently EDI-enabled, this step may already be completed.) Assuming that the current platform is adequate to meet the new processing requirements, the primary focus for evaluation and selection will be for an EDI translator and for telecommunications hardware and software.

An EDI translation software package converts data from a proprietary application system format to a standard EDI format and transmits it to the trading partner after adding all of the standard enveloping and delimiter protocols. EDI translation software also converts standard EDI messages received from trading partners into a file that can be used to update in-house application systems.

There are a number of commercially available translator packages on the market. Trading Partners need to evaluate and select the translator that will meet their needs.

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4.2.1 Data Transport

ODA through an agreement with the Office of Information Technology (OIT)/ Enterprise Shared Services (ESS) / Electronic Commerce Center (ECC) will be using the State of Ohio Direct Mailbox for data transport. State of Ohio Direct Mailbox is an internet based system that permits secure FTP transmissions for uploading and downloading EDI files. Other means of EDI file transmission will be considered on a case by case basis.

The provider/trading partner is responsible for any scripting required to automate their client environment.

4.2.2 Translator Mapping and Coding

A provider/trading partner needs to match their application requirements with the specific transaction set requirements from ODA and modify their translator maps to process this information. ODA web site provides Companion and Implementation Guides in PDF format needed to complete the mapping process in this guide.

4.2.3 Application Development

The provider/trading partner will need to modify their business application systems and test their accuracy to ensure that the systems will effectively process all of the required data from transactions received and also provide the data that will ultimately be transmitted in an EDI format.

4.2.4 Connectivity Testing

ODA and the provider/trading partner will test their communications links. A successful test will occur when transaction sets can be sent and received.

4.2.5 End-to-End Testing

ODA and the provider/trading partner will ensure that all participants in the process are communicating with each other properly. ODA and the provider/trading partner will mutually agree to the test period for this phase. The provider/trading partner cannot begin production transmissions until end-to-end testing has been successfully completed and the Trading Partner Agreement is signed.

4.2.6 Production and Maintenance

Once production has begun, ODA will give providers/trading partners a 30-day notice prior to any changes being made to any of the EDI transaction sets. Updates may or may not involve software changes. EDI update notification will be sent to the provider's designated EDI contact. ODA requires notification if there is a change in the provider/trading partner representative or location to which EDI updates are sent.