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# HIPAA and Claims Attachments

## *Preparing for Regulation*

May 2004

Written by the Attachments Special Interest Group (ASIG) at Health Level Seven International (HL7).

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Editor's note (May 2004): This is substantially the same as the September 20, 2003 version of the document. Only the document numbers on the final page have been changed, to reflect Release 2.1 of the HL7 specifications.

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For additional information on Claims Attachments go to [www.HL7.org](http://www.HL7.org) and select “Resources – Work Groups – Attachments.”

## The Purpose of this White Paper

This white paper has been prepared to provide a plain language overview of the recommendation for Healthcare Claims Attachments, expected to be proposed under HIPAA in 2004. Within this document are overviews of the background of this initiative, as well as a definition of Healthcare Attachments (claims and other), how they work, why they are important, how they might be implemented, and specific issues for review and comment. While only “claims attachments” are mandated under HIPAA, this paper describes the standards and other relevant information for “healthcare attachments.” This is because the same standards and model(s) used for exchanging claims attachment data can also be used in other contexts, such as attachments to pre-certification /pre-authorization requests. Again, it’s important to understand that only attachments to the claim will be mandated under HIPAA, at least in the near future.

The overall goal of this document is to help prepare readers for an effective and efficient review of the standards expected to be proposed in the NPRM package for Healthcare Claims Attachments.

## What are Standard Healthcare Attachments (also referred to as Additional Information Messages) and why are they important?

For the purposes of this paper, when we talk about Standard Healthcare Attachments or claims attachments, we are talking about **electronic** attachments unless otherwise indicated. Standard Electronic Attachments, either to the claim or other healthcare transactions are a means of electronically exchanging additional information to augment another healthcare transaction, most commonly one that is named under HIPAA. Examples of such information include the clinical and administrative information often necessary to adjudicate claims for ambulance, rehabilitation, or emergency room services.

The goal of Standard Healthcare Attachments is to make the process of submitting and adjudicating healthcare claims (*and other transactions if desired*) more efficient by providing structured, standardized electronic data to payers. By doing so, payers will have the data necessary to increase the rate of automated adjudication, and may thus reduce the administrative overhead necessary to process their claim loads (by reducing human intervention) and may significantly reduce the turnaround time on claims. As the rate of automated adjudication increases and human intervention decreases, providers will be able to better predict the successful adjudication and payment of their claims. When providers are aware in advance of the need to provide the information included in healthcare attachments, the provider may, at their discretion, submit healthcare attachments with their initial claims. This will result in a much shorter and more predictable turnaround for claims, and will reduce the amount of time and effort necessary to respond when payers do request additional information via healthcare attachments. The other significant benefit to the provider community is the reduction of a very manual, paper driven process that exists today. If this data can be gathered and submitted electronically, providers will no longer have to retrieve and copy records and prepare paper (sometimes many pages of paper) attachments for the payer. At minimum the solution described in this paper will help to reduce people, paper and postage costs for both payers and providers.

Finally, as electronic claims transactions become more and more prevalent, the time and cost associated with simply delivering the information (via standardized electronic transaction instead of by copying from the health record and faxing or mailing) will diminish.

Although this initiative is focused on the definition of Healthcare Attachments in support of electronic claims, it is highly likely that, once adopted as part of the standards adopted under HIPAA, healthcare attachments may be used in other applications for a variety of other purposes. While the benefit of this flexibility is openly acknowledged, the specific rules for these alternative uses are currently left to business partner agreements and are not further addressed in the documentation to support this proposed recommendation for HIPAA.

Those readers who are familiar with the standard transaction for an electronic claim (X12N 837) will notice that some of the clinical information currently represented there is repeated in some of the healthcare claims attachments. These elements represent the minimum information required to adjudicate claims for specific types of services. Addition of these elements to the claim was a compromise to allow the electronic submission and auto-adjudication of the most frequently occurring claims requiring supporting information, until the claims attachment standard could be developed, and ultimately mandated under HIPAA. This information is extraneous to the claim itself and applies to a relatively small subset of the claims processed. Carrying this information, therefore, requires that all entities that prepare, submit or process claims maintain the ability to utilize the information regardless of whether they ever need the information. For these reasons the electronic claim transaction was not expanded to include all possible required supporting information.

As part of the process to define an attachment solution, a joint task group from HL7 and X12 developed criteria as to what constitutes claim versus attachment data. As a result of this effort, several data elements already contained in the 837 claim format were tagged for eventual migration to the attachment. It is expected that once an attachment is mandated for use under HIPAA, the duplicate data will be removed in a future version of the 837 claim format.

## Background

The Administrative Simplification provision of the Health Insurance Portability and Accountability Act (HIPAA) of 1996 mandates the use of named health care electronic data interchange standards for the electronic conveyance of health care data that meets the business purposes specifically addressed under HIPAA. This document focuses on claims attachments, one of those business purposes addressed in HIPAA. For additional information on HIPAA Administrative Simplification, in general, access the Administrative Simplification Web site at <http://aspe.os.dhhs.gov/admsimp/> or the Web site established by CMS for HIPAA <http://www.cms.hhs.gov/hipaa/hipaa2/default.asp>.

HIPAA authorizes the Secretary of the Department of Health and Human Services (HHS) in consultation with various industry organizations, to adopt a specific standard to electronically convey additional information to support a health care claim or encounter. At the time the HIPAA legislation was enacted, development of electronic claims attachment standards were in their infancy. An initial study in 1994 conducted by the Workgroup for Electronic Interchange (WEDI) examined the state of the industry as it relates to the use of and needs for claims attachments. This study resulted in a series of recommendations, including the development of an electronic standard that would do several things:

- Standardize attachment data elements
- Coordinate affected entities to develop guidelines
- Work with Medicaid to standardize/eliminate attachments
- Develop 274/275 as primary vehicle
- Create standard way to link data across transaction sets

While the standards communities did not necessarily use the WEDI findings as a basis for our development, we recognized early on that our thoughts for the development of this standard were very much in line with the WEDI recommendations.

To further this cause, the Centers for Medicare and Medicaid Services (CMS), then known as the Health Care Financing Committee (HCFA) sponsored a proof of concept (POC) that included the identification of the types of attachments needed by the health care industry. In this POC five Medicare contractors worked with providers to send electronic requests for additional information (the 277 transaction used in the claims attachment solution) to their providers. Providers were very happy with the electronic requests and cited that their main concern was how they could respond (with attachment data) electronically. This work effort eventually led to a proposed claims attachment standard combining the standards development efforts of the Accredited Standards Committee (ASC) X12N and Health Level Seven (HL7). The original solution, developed in 1997, calls for the attachment data to be sent as an HL7 version 2.4 message embedded within the ASC X12N 275 *Additional Information to Support a Health Care Claim or Encounter* transaction. The embedded HL7 message contains structured and codified attachment data using the Logical Observation Identifiers Names and Codes (LOINC) coding system.

The original proposal and design for claims attachments focused on increasing the use and delivery of codified data from provider's systems to a payer in order to facilitate more efficient processing. In recent years, it has become evident, that while the health care industry continues to evolve technically, in many cases they still rely heavily on paper based or imaged (scanned) health records for this attachment data. Many health care delivery systems are just not capable of providing discreet codified data. In addition, the health care industry like many other industries appears to be moving towards using newer technologies such as Extensible Markup Language (XML) to transfer data. As all of this was occurring in the industry, parallel efforts within the HL7 organization brought forth the Clinical Document Architecture (CDA) - the first ANSI-accredited XML-based standard in the healthcare industry

The first proposed rule on attachments is expected to name six attachment types: Rehabilitation Services (9 separate disciplines), Emergency Department, Clinical Reports, Laboratory Results, Ambulance, and Medications. The content of the attachment data for each type is documented in Additional Information Specifications (AIS) developed by HL7. While recognizing that these six attachments do not represent all attachment data needed by the health care industry, the workgroups developing the attachments chose these six attachments based on industry outreach and estimated that these attachments comprise the majority of the attachment volume required by payers today. Several additional attachments are currently under development by HL7 and the health care industry. These new attachments are in some instances being designed for use in requesting prior authorization of services and public health reporting as well as for support of a submitted claim. Included are attachments for sterilization and hysterectomy consent, child preventive health services, periodontal treatment assessment and plan, home health treatment and plan and a suite of durable medical equipment attachments, for example, oxygen equipment and supplies, wheel chairs, hospital beds, etc. As these attachments are developed they are presented for industry comment and amendment. Once finalized and approved by HL7, the attachments will be proposed to HHS via the DSMO process for addition to the HIPAA standards.

Members of the HL7 Attachments Special Interest Group (ASIG) have received consistent comments in various informal healthcare forums indicating that a significant number of health care organizations, payers, or providers, clearinghouses, and the vendors that support them, plan

on implementing XML based EDI tools in the near future. Building attachments using XML technology is therefore, in conformance with the direction of the health care industry. Numerous XML tool sets are already in existence and may facilitate the adoption of XML based attachments.

In answer to these trends and concerns, the Attachment Special Interest Group (ASIG) began exploring alternative approaches to conveying attachment data. The result was a proposal to use HL7's Clinical Document Architecture (CDA).

## What is CDA?

HL7 has been developing standards based on XML for many years. The HL7 Clinical Document Architecture (CDA) Release 1.0, approved as an ANSI accredited standard in November 2000, is a document markup standard (encoded in XML) that specifies the structure and semantics of "clinical documents" for the purpose of exchange. A clinical document contains observations and services and has some of the following characteristics:

- Persistence - A clinical document continues to exist in an unaltered state, for a time period defined by local and regulatory requirements.
- Stewardship - A clinical document is maintained by a person or organization entrusted with its care.
- Human readability - A clinical document is human readable.

Key aspects of the CDA include:

- CDA documents are encoded in Extensible Markup Language (XML).
- The complete CDA will include a hierarchical set of document specifications. This hierarchy is referred to as an "architecture".
- The CDA can be "rendered" in a human-readable form using Extensible Style Sheet Language (XSL).

## Some Background on XML

XML is a standard published by the World Wide Web Consortium (W3C -- see [www.w3c.org](http://www.w3c.org)). The current version, *Extensible Markup Language (XML) 1.0 (Second Edition)*, is available at ([www.w3.org/TR/REC-xml](http://www.w3.org/TR/REC-xml)). This standard describes how to structure files into logical *elements* of information by the appropriate placing of *tags*. For example, this snippet of XML shows an element called a section (the <section> and </section> tags and everything between them.) In this example a section element contains subelements "caption" and "paragraph" and "paragraph" has a subelement named "content."

```

<section>
  <caption>
    <caption_cd V="18651-0"/>Psych Medications per Plan
  </caption>
  <paragraph>
    <content>Lithium 600 mg by mouth each morning and 900 mg by mouth
    before sleeping.</content>
  </paragraph>
  <paragraph>
    <content>Thiothixene 5 mg by mouth three times a day.</content>
  </paragraph>
  <paragraph>
    <content>Benztropine 1 mg by mouth three times a day.</content>
  </paragraph>
</section>

```

By convention information properly organized with XML tags is referred to as a *document* whether it is in a file or being transmitted over the Internet or in any other technical milieu. The process of arranging information between tags is often called *document markup*.

XML has been adopted by all the major companies in Information Technology as the basis for achieving interoperability among their products. Each such company, and many smaller companies offer low-cost or free tools for creating documents in the XML format or for extracting information from XML documents.

The W3C publishes many related standards that support XML. When people speak of the features and benefits of XML they are usually referring to the entire family of XML standards. One of the related standards is *Extensible Stylesheet Language (XSL), Version 1.0* (<http://www.w3.org/TR/xsl/>). This is a standard language for describing the transformation of an XML document into other formats. One important use of an XSL processor is to transform a document in EXtensible HTML (XHTML), a language that is understood by modern Web browsers for defining Web pages. The HL7 ASIG will not only be providing the attachment standards in the CDA Release 1.0 but will also provide XSL Stylesheets for use by covered entities if they so choose.

XML is a general-purpose standard that describes how tags and other syntactic units are created. Other groups build *application standards* over XML by identifying specific tag names for elements and rules for how the named elements nest one inside the other. Literally hundreds of such standards have been created. A few of them are shown in the table below:

Topic	SDO
electronic payment	SWIFT
cash reporting	SWIFT
chemical industry	CIDX
vector graphics	W3C
real estate	RETS

Industry strongly benefits when Standards Development Organizations (SDOs) decide to build their standards on XML rather than creating their own idiosyncratic syntaxes. This is because the same tools can be used to operate on all such standards and a person who has been technically

trained in XML can apply that knowledge in many industries. Before XML, software tools to deal with application-specific standards were targeted at specialized markets and therefore had higher unit costs. Furthermore, a great deal of industry-specific training was required to work with such standards.

XML, however, is not by itself an application standard. It is a set of tools for building application standards on a common technical infrastructure. It requires an SDO with expertise specific to an industry to create an XML-based standard, i.e., a set of element/tag names and nesting pattern that correctly matches the data needs of the industry. The SDOs listed in the table above have played that role for their industries.

### How is XML applied within CDA?

As with any XML-based standard, the CDA defines tag names and how they nest to structure information. Some important tag names are shown in the table below. The indentation in the left column of the table shows the manner in which certain elements nest within other elements.

Tag Name	Purpose
<levelone>	outermost tag, contains an entire CDA document
<clinical_document_header>	contains information about the document arranged in subsections
<document_type_cd>	contains a code that identifies the document type (e.g., a discharge summary or cardiac rehabilitation plan)
<patient>	contains the name and identification number of the patient
<body>	contains the body of the report expressed in natural language with optional structured information
<section>	a subdivision of the body containing a logical unit of information (e.g., the discharge medications)
<caption>	a subdivision of sections and other elements that describes the contents that will follow.
<caption_cd>	a subdivision of a caption that identifies the contents that follow using a LOINC code.

The CDA allows the entire body of a CDA document to be transmitted in the form images of scanned pages.

### How Does the CDA Document Work within EDI?

XML documents can be stored and transmitted in many forms. Attachments for HIPAA transactions must be exchanged by the same parties that are exchanging other information in X12N EDI transactions. It is therefore important to ensure that the same networks and technical approaches to transferring information that are used for the other transactions can also be used to transfer attachments.

Accordingly, the CDA document will be contained within the *ASC X12N 275 Additional Information to Support a Health Care Claim or Encounter transaction* or the *ASC X12N 275 Additional Information to Support a Health Care Services Review* transaction. This transaction serves as an electronic "envelope." The characters that make up the XML document are embedded among the

characters of the X12N 275 transaction in a manner that allows the documents to be passed through EDI networks and software tools.

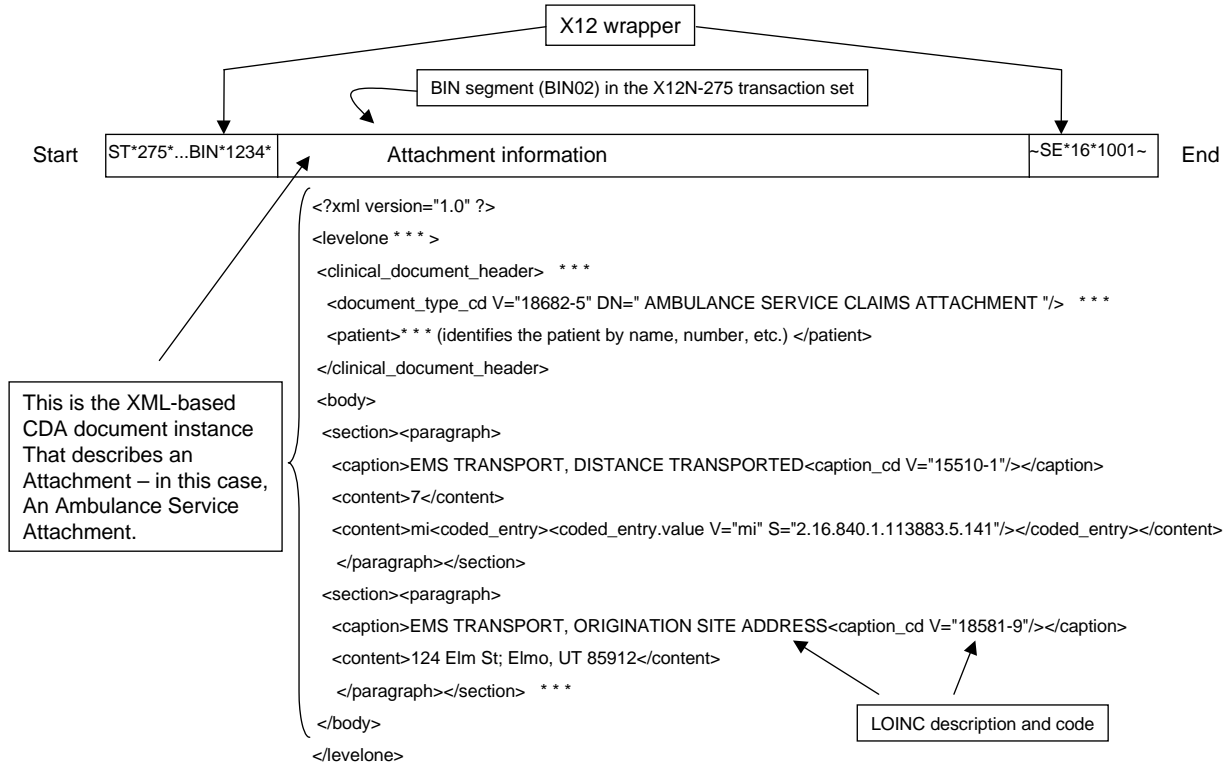


Figure 1: A schematic of the CDA Attachment within the BIN segment of a 275 transaction set ...

## How Do CDA Attachments Support Provider/Payer technology and workflow variations?

The CDA based attachment provides the best of both worlds by describing two variants for conveying attachment data within the same attachment standard. These two variants are:

- **Computer-Decision Variant** – This approach maintains the original intent for claims attachments by using codified structured data using LOINC values. For those providers and payers who can support this type of data flow, it will allow for the auto-adjudication of claims resulting in a more efficient adjudication process.
- **Human-Decision Variant** - Recognizing that many providers carry their attachment data in paper based or imaged health records, the human-decision variant of the CDA allows the provider to transmit a captured/scanned image or human readable text within the CDA framework. An XSL style sheet (which will be included with each attachment Additional Information Specification -AIS-) will allow the receiver of the data to “render” the human-readable text on an XML aware browser. It’s important to note that the stylesheets provided by HL7 are not required to be used by the receiver of the transaction and therefore would not have to be used under HIPAA. If payers choose to write their own stylesheets in order to render the human readable text they may do so.

This approach to allow two different variants within the same standard is designed to increase participation in the delivery of electronic health care attachment data. With a relatively small

investment, a provider and payer may be able to implement the human-decision variant of the CDA recommendation for attachments, enabling them to migrate from a paper based attachment delivery process to an electronic process. Both payers and providers benefit from the human-decision variant, since it expedites the exchange and eliminates some of the manual processes associated with exchanging paper attachments.

Payers and providers that recognize the increased benefit and are willing to invest in the development of the computer-decision variant would be able to do so within the same standard. It is expected that movement to the computer-decision variant could, and likely will eventually be realized by both payers and providers. Providers would be motivated toward the computer-decision variant by much quicker adjudication of their claims, and payers would be motivated by the opportunity to reduce administrative overhead by reducing human adjudication.

### What considerations went into the formulation of the electronic Standard for Healthcare Attachments?

In the course of making decisions about the specific construct of standard electronic Healthcare Attachments, there were several junctures at which the HL7 and X12 organizations had to make key decisions.

One significant consideration was the timeline for the industry to reach full implementation; in other words, it was critical that we account for the state of electronic data exchange in healthcare both today and as it is anticipated to develop in the near future, when the industry would actually be mandated to implement this standard.

Another consideration that helped resolve outstanding issues is the guidance from HHS that defines characteristics required for additions to the standardized transaction set. These required characteristics are:

- (1) Improve the efficiency and effectiveness of the health care system by leading to cost reductions for, or improvements in benefits from, electronic health care transactions.
- (2) Meet the needs of the health data standards user community, particularly health care providers, health plans, and health care clearinghouses.
- (3) Be consistent and uniform with the other standards required under this part - their data element names, definitions, and codes and the privacy and security requirements-and with other private and public sector health data standards, to the extent possible.
- (4) Have low additional development and implementation costs relative to the benefits of using the standard.
- (5) Be supported by an ANSI-accredited standard setting organization or other private or public organization that will ensure continuity and efficient updating of the standard over time.
- (6) Have timely development, testing, implementation, and updating procedures to achieve administrative simplification benefits faster.

- (7) Be technologically independent of the computer platforms and transmission protocols used in electronic health transactions, except when they are explicitly part of the standard.
- (8) Be precise and unambiguous, but as simple as possible.
- (9) Keep data collection and paperwork burdens on users as low as is feasible.
- (10) Incorporate flexibility to adapt more easily to changes in the health care infrastructure (such as new services, organizations, and provider types) and information technology.

### How do Healthcare Attachments work?

An oversimplification of the typical reimbursement process for medical services is represented in the flow chart below. For this and the following charts, the actions taken by providers appear on the left in unshaded boxes, and the actions taken by payers appear on the right in shaded boxes.

Prov

Healthcare

*Figure 2: How the reimbursement process has historically worked (paper or electronic)...*

Historically, this has been a very manual, labor intensive and error prone process for both the provider *and* the payer. It is common for a provider to have a unique process with custom paper or electronic forms for every insurance company, Medicare intermediary and state Medicaid agency. The inefficiency of this process caused significant delays in reimbursement. When the payer requested additional information to support a claim, delays were even longer.

With the HIPAA Claims Attachment Standard this process becomes more efficient. Data can now be exchanged electronically using standard (X12N and HL7) formats. These standardized transactions were specifically designed to reduce variability between payers (i.e. develop a standard set of questions payers would ask when requesting additional information) and reduce the time and effort necessary to submit a claim.

Prov

# Healthcare

*Figure 3: How the reimbursement process has changed with the HIPAA Standardized Transaction...*

Even with these advances, HHS realized that inefficiencies still remained. One of the key inefficiencies is the payer's need for additional administrative or clinical documentation to support the claim.

In response to this need for supplemental information for rehabilitation, ambulance, laboratory, and other services, *the HL7 and X12N SDOs, have been tasked with the creation of a*

*standard for the electronic attachment to provide additional information to support an electronic claim or attachment.* This initiative will further automate the electronic claims process by establishing the administrative and clinical data elements necessary to justify a claim for services, and bundle that data in a new standard electronic attachment transaction.

Prov

Healthcare

*Figure 4: How the reimbursement process will work with the standard electronic Healthcare Attachments (solicited model)...*

Figure 4 represents one of two models in which attachment data can be exchanged. The *solicited* model shown above defines a process where the original claim is sent without additional supporting documentation. The payer subsequently (during the adjudication process) identifies additional data needs and requests that additional data using the ASC X12N 277 *Request for Additional Information* transaction. The provider in turn responds with the ASC X12N 275 *Additional Information in Support of the Health Care Claim or Encounter* transaction. The 275 transaction contains the embedded (HL7) attachment data.

Standard electronic attachments hold the promise for even greater efficiencies within the provider and payer settings. For example, for services with a high incidence of payer requests for additional

information, the *unsolicited* electronic attachment (containing all the additional information pertinent to the service being billed) can be submitted with the initial claim, thus potentially decreasing or even eliminating the incidence of resubmissions.

# Prov

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*Figure 5: Submitting a Healthcare Attachment with the initial claim (unsolicited model)...*

In figure 5 we depict the scenario where the attachment is sent electronically with the original claim. The recommendation is very specific about how this can be done and what methods are used to associate the claim with the attachment. This particular data flow has the potential to significantly diminish the effort necessary for payers to adjudicate and pay claims, as well as the time involved with resubmitting claims with additional supporting information. In this model, the provider anticipates the payers need for additional information and submits both the ASC X12N 837 *Health Care Claim or Encounter* and the ASC X12N 275 *Additional Information to Support a Health Care Claim or Encounter* transactions the with appropriate HL7 *Additional Information Specification* within the same data interchange envelope. In other words, both the claim and the attachment data are sent at the same time within the same transmission.

The *Additional Information Specification* documents define the maximum set of data that can be conveyed for a specific attachment type; however, this does not mean that payers and providers must use all data contained within the specification. In some instances, a payer may request only specific pieces of data within a given attachment, e.g. the weight of the patient – *necessary to justify number of ambulance attendants*. The provider is only required to return the requested pieces of information. When a payer requests an entire attachment, the provider should respond with all required data elements for which the provider has data.

How could Standard electronic Healthcare Attachments potentially be implemented?

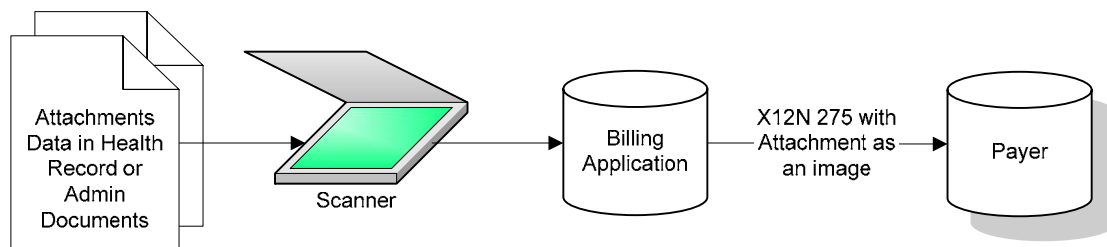
There are a variety of paths that Providers and Payers may take to comply with standardized electronic transactions for attachments. The following scenarios are offered as possible approaches to implementation that may help providers and payers select a path most appropriate to their setting and plan for compliance. These scenarios are not by any means the only options for implementation and compliance, rather they are provided in an effort to assist the industry and help organizations begin to think about the best implementation for their setting.

These scenarios were designed to demonstrate that both providers and payers have the latitude to select a compliance path that suits their own balance of low/high impact vs. low/high business benefit. In general, the scenarios are listed from low impact/low business benefit to high impact/high business benefit. Both payers and providers also have the latitude to analyze their own business needs and prioritize the accommodation for each individual attachment. For example, if either a payer or provider reviews their current volume of activity and determines that one or two attachments encompass a disproportionate percentage of all their attachment volume, they may choose to prioritize the accommodation of those one or two attachments as structured data to facilitate auto-adjudication.

All following scenarios represent the processing that takes place either after a payer has requested additional documentation from the provider (as shown in figure 4 above) or when the provider has elected to submit additional information in the same transmission as the initial claim (as shown in figure 5 above). Note also that the payer and provider scenarios are not dependent upon each other. Each payer and provider can choose a path most suitable to their situation independent of the means used by the others with whom they exchange standardized electronic transactions.

### **Possible paths to compliance for Providers**

**Provider Scenario 1:** The provider's billing application is adapted to accept scanned images. Once the appropriate attachments documents are scanned from the paper health record, the billing application associates that scanned image with a claim and includes the scanned image as an attachment in submission to the payer as needed.



*Figure 6: Scanning attachments documents and providing them to the billing application ...*

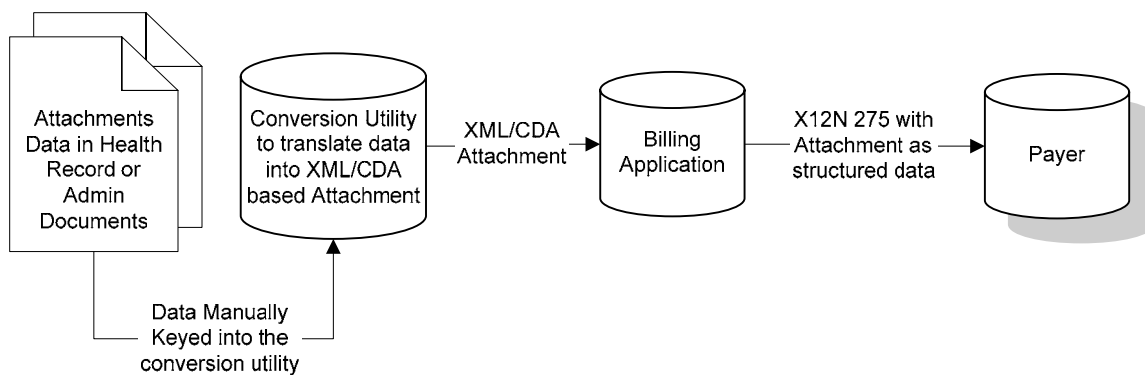
**Advantages –** This scenario requires minimal changes to the billing application. Based on feedback from the healthcare industry, this accommodation was specifically included in the specification as an interim step for providers who plan to eventually adopt one of the other scenarios that result in sending attachments as structured data, but needed an expedient alternative as an interim step.

**Disadvantages –** This scenario does not provide the payer with the structured data necessary to auto-adjudicate the claim, thus negating much of the advantage of electronic attachments. This

scenario requires a staff member to scan in the documents that contain the attachments data. Since the required attachments data may exist on forms that also include other, unnecessary data, the staff member may, for privacy reasons, also have to take whatever steps are necessary to ensure the privacy of Protected Health Information under HIPAA.

Likely changes from status quo - The provider's billing vendor would have to accommodate the new X12N 277 and 275 transaction sets, and would have to enable the attachment of a scanned image to the 275 transaction set. The provider would have to assign the new task of scanning in attachments data to staff members.

**Provider Scenario 2:** The provider adds a conversion utility to translate attachments data into a fully formatted attachment with structured data. The provider then keys the attachments data into the conversion utility. The conversion utility creates the attachment and delivers it to the billing application. The billing application then associates the formatted attachment with a claim and includes it in submission to the payer as needed.



*Figure 7: Manually entering attachments data into a conversion utility ...*

**Advantages –** This scenario provides the payer with the structured data necessary to auto-adjudicate the claim. It also requires minimal changes to the billing application. This scenario also provides a “bridge” between the Electronic Health Record (EHR) scenario described in Scenario 4 and the strictly text / image model in Scenario 1. Although this scenario introduces an additional workflow step, it also allows for the elimination of other workflow steps such as copying paper files and dealing with the US mail process.

**Disadvantages –** This scenario requires the addition of a new conversion utility application into the provider's information systems environment. Attachments data is manually typed into the conversion utility, which is an additional workflow step. Since this scenario requires an additional workflow step, the provider does not have an *automated* solution for submitting unsolicited attachments with the initial claim.

Likely changes from status quo - The provider would have to select, purchase, install and support the new conversion utility. The provider's billing vendor would have to accommodate the new request for attachment and the response (with attachment), and join the attachment from the conversion utility with the claim.

**Provider Scenario 3:** The provider's billing application is adapted to allow attachments information to be keyed directly into the billing application. The billing application then formats

the attachment information as structured data and includes it in submission to the payer as needed.

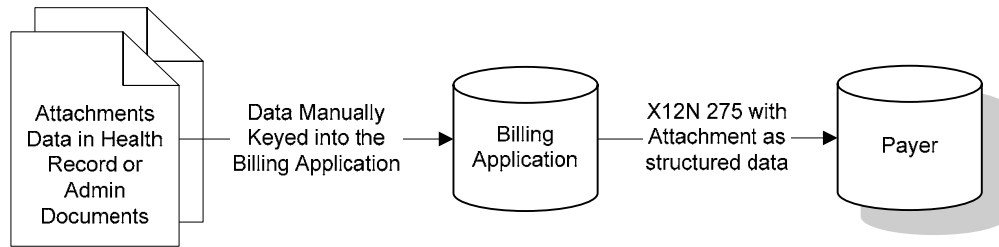


Figure 8: Manually entering attachments data directly into the billing application ...

**Advantages** – This scenario provides the payer with the structured data necessary to auto-adjudicate the claim. Only the billing application needs to be upgraded. This scenario also provides a “bridge” between the EHR scenario described in Scenario 4 and the strictly text / image model in Scenario 1. Although this scenario introduces an additional workflow step, it also allows for the elimination of other workflow steps such as copying paper files and dealing with the US mail process.

**Disadvantages** – This scenario requires the attachments data to be manually typed into the billing application, which is an additional workflow step. Since this scenario requires an additional workflow step, the provider does not have an *automated* solution for submitting unsolicited attachments with the initial claim.

**Likely changes from status quo** - The provider’s billing vendor would have to enable the provider’s billing application to accept keyed in attachment data, and would have to accommodate the new request for attachment and the response (with attachment), as well as the creation of the structured data attachment itself. The provider would have to reassign staff members that once copied charts and sent them to the mailroom to the new task of keying in attachment data.

**Provider Scenario 4:** The provider’s Electronic Health Record (EHR) or clinical information system provides a fully formatted attachment with the appropriate attachment information to the billing application. The billing application then associates the formatted attachment and includes it in submission to the payer as needed.

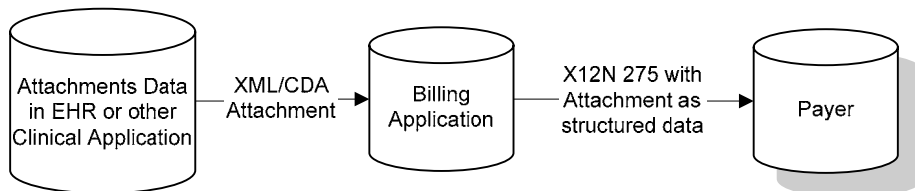


Figure 9: Attachments are created by the EHR or clinical application and sent to the billing application ...

**Advantages** – This scenario provides the payer with the structured data necessary to auto-adjudicate the claim. This is considered the best case scenario.

Disadvantages – This scenario requires capabilities for data exchange to be present in the provider’s billing and one or more EHR/clinical applications.

Likely changes from status quo - The provider's billing application would have to accept attachments as XML documents and transmit them to payers. Various provider systems would have to produce structured attachments in CDA format and route them to the billing system. Examples of potential source systems include the electronic health record, lab, radiology (for reports), rehab, and general transcription. Where the source system already produces HL7 version 2 messages the provider may use an integration broker to convert the HL7 message into a CDA document. In a few cases the provider may choose to use desktop productivity applications to accept input.

### **Possible paths to compliance for Payers**

**Payer Scenario 1:** If the attachment is sent as an image instead of structured data using CDA, manual adjudication may be done by viewing the image using a web browser or image viewer.

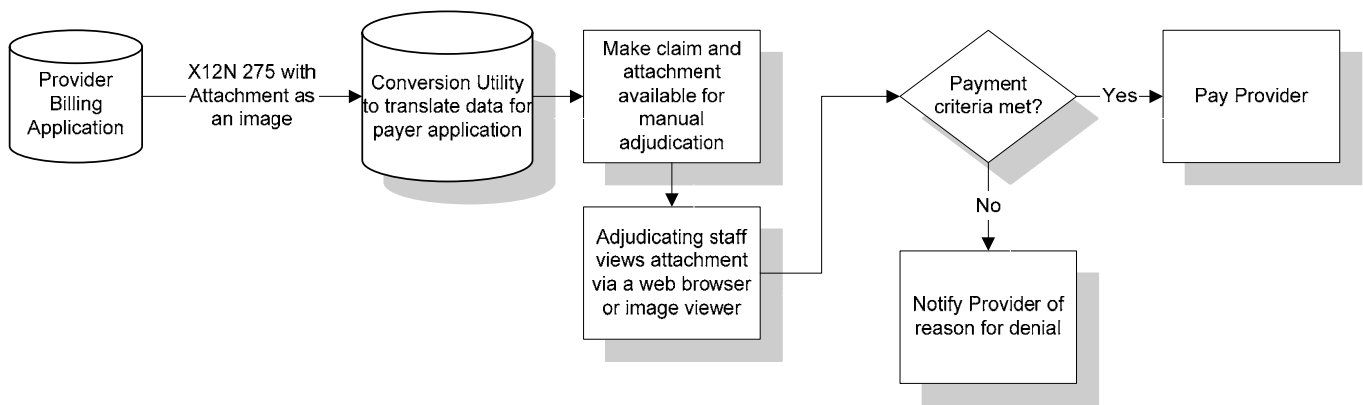


Figure 10: When the attachment is sent as an image, manual adjudication is accomplished using a web browser or image viewer ...

Advantages – This option represents the least organizational change for the payer.

Disadvantages – None of the benefits of auto-adjudication are realized.

Changes to the Status Quo – Elements of the payer’s application suite are modified to associate the CDA (XML) based attachment for human viewing via a browser.

**Payer Scenario 2:** If the payer already uses a conversion utility to translate X12N transaction sets, and that conversion utility is capable of also translating CDA based attachments, the claim may be auto-adjudicated. Exceptional claims may be manually adjudicated and attachments viewed using a web browser.

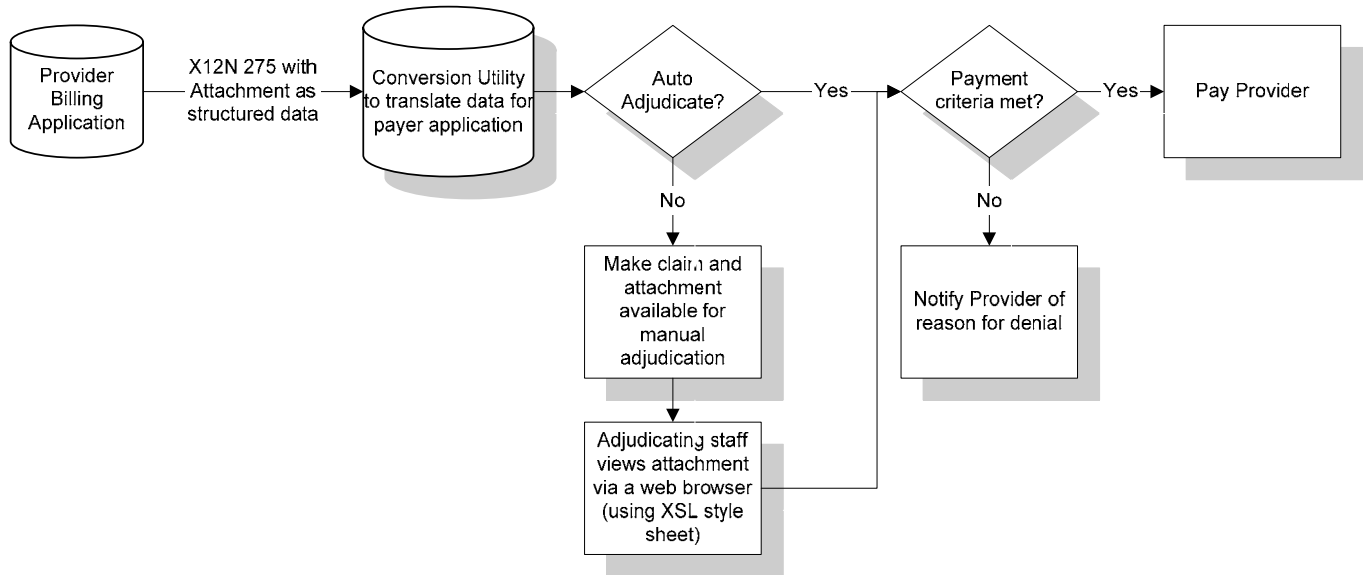


Figure 11: Payer application uses a conversion utility capable of translating both X12N 275 and CDA based attachments...

Advantages – A conversion utility may be more flexible and may more readily accommodate the new tasks for parsing XML based attachments than the payer’s main system. This option allows the potential for auto-adjudication and minimal administrative costs.

Disadvantages – Additional responsibility is placed on the conversion utility. This may or may not be a disadvantage.

Changes to the Status Quo – Existing conversion utilities have to be either reconfigured or modified to parse CDA (XML based) attachments.

**Payer Scenario 3:** If the payer already uses a conversion utility to translate X12N transaction sets, and that conversion utility is not capable of also translating CDA based attachments, a second conversion utility may be used and the claim may be auto-adjudicated. Exceptional claims may be manually adjudicated and attachments viewed using a web browser.

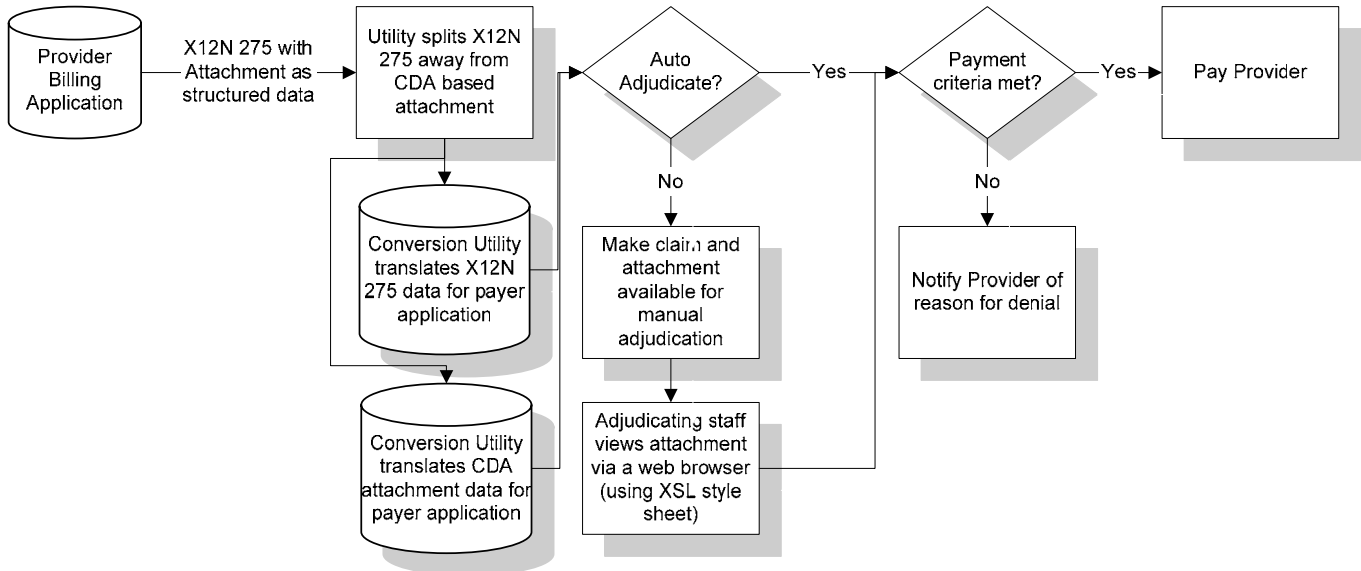


Figure 12: Payer application uses two different conversion utilities to translate X12N 275 and CDA based attachments...

Advantages – Existing components continue to function with little or no modification. Auto-adjudication may still be used to its potential.

Disadvantages – This adds one or more utilities to split the attachment from its X12N transaction set, parse the attachment, and maintain the association between the attachment and its X12N transaction set. This may add significant complexity to the flow of electronic transaction sets.

Changes to the Status Quo – One or more utilities are added to the payer’s application suite to split the attachment from its X12N transaction set, parse the attachment, and maintain the association between the attachment and its X12N transaction set.

**Payer Scenario 4:** If the payer is capable of parsing both X12N 275 transaction sets and CDA based attachments, the claim may be auto-adjudicated. Only exceptional claims are manually adjudicated. When necessary, attachments are viewed using a web browser.

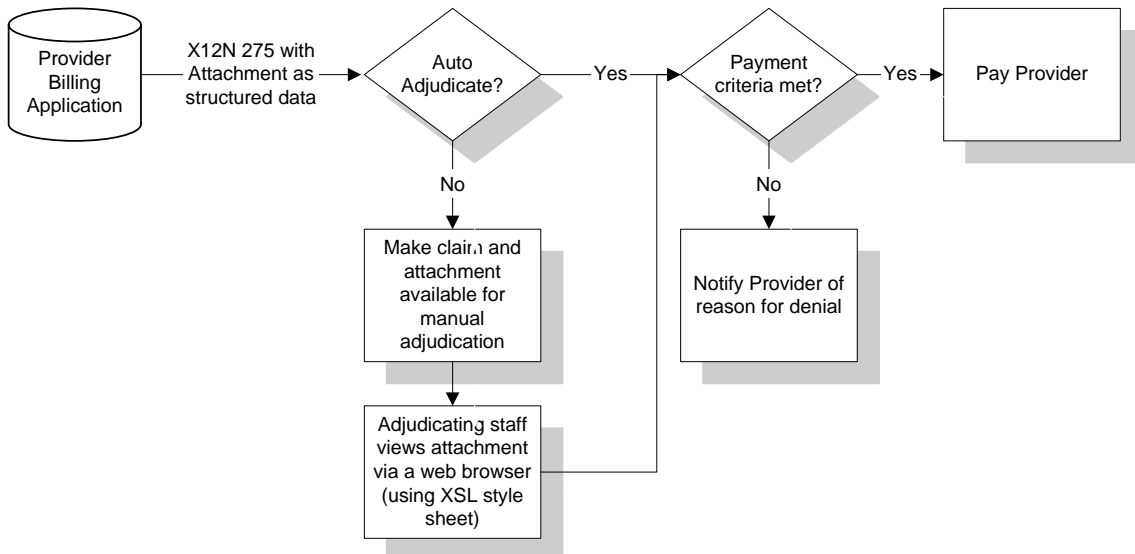


Figure 13: Payer application is capable of parsing both X12N 275 and CDA based attachments ...

Advantages – This scenario is the best case and has the best potential to maximize auto-adjudication and minimize administrative costs.

Disadvantages – This may involve the most significant changes to the primary information systems used for processing claims.

Changes to the Status Quo – Most large primary management information systems are legacy based mainframe systems. These systems would need to integrate with XML aware browsers to view XSL “rendered” attachment data.

## Topics for Attention

### ***Solicitation of comments during the NPRM process***

*Unsolicited Claims* - For an unsolicited claims attachment, the 275 Implementation Guide has taken a position that the provider shall include electronic attachments at the time of billing when the attachments transaction (275) can be included in the same X12 interchange header (ISA-IEA) as the 837 with the attachment control number recorded in both the 837 PWK06 field and the 275. It is the opinion of the X12 Work Group 9 and Work Group 5 that this offers the payer the best opportunity to correctly route the attachments and the claims together to facilitate claims processing.

It has been brought to the work group’s attention that some payer’s current and anticipated work flows and related hardware and software may not easily accommodate the 275 in the same interchange as the 837 since the transactions need to route to different internal systems. The work groups would welcome input from the EDI community as to how significant a concern this may be.

*Requests for New Data Elements* - During the recent process to re-cast the HL7 documentation relating to claims attachments, HL7 made a conscious decision to not change the content of any of the Additional Information Specifications (AIS). HL7 will address new data element requests during the NPRM comment period rather than change the content of the AIS documents during the re-cast process.

### ***What are LOINC® and RELMA and why are they important?***

The purpose of the LOINC database is to facilitate the exchange and pooling of results, such as blood hemoglobin, serum potassium, or vital signs, for clinical care, outcomes management, and research. Currently, most laboratories and other diagnostic services use HL7 to send their results electronically from their reporting systems to their care systems. However, most laboratories and other diagnostic care services identify tests in these messages by means of their internal and idiosyncratic code values. Thus, the care system cannot fully "understand" and properly file the results they receive unless they either adopt the producer's laboratory codes (which is impossible if they receive results from multiple sources), or invest in the work to map each result producer's code system to their internal code system. LOINC codes are universal identifiers for laboratory and other clinical observations that solve this problem. While the description above talks about the need for and use of LOINC for its original and intended scope, this code set has also been expanded specifically for use with electronic claims attachments developed in HL7. For attachments, LOINC identifies both the question (asked by the payer) and the answer (given by the provider).

The LOINC database and its supporting utilities and documentation are maintained by the Regenstrief Institute and the LOINC committee and are available free for use. You can obtain a

copy of the database in multiple formats, the RELMA™ utility (see below), and a user's guide by accessing the Regenstrief Institutes web site at <http://www.regenstrief.org/loinc/>. Only a substantially restricted subset of LOINC codes are actually used for electronic claims attachments.

RELMA is a computer program that allows the user to navigate the LOINC database and create relationships between LOINC and the user's local codes.

This tool, and its documentation, is available at no cost, from the Regenstrief Institute. See: <http://www.loinc.org/relma>

## A Description of Package Contents

Table 1, below, describes the documents contained within the Attachments NPRM

Informal Name	Purpose	Formal Document Name	Document Number
Attachment IG	Created by HL7-ASIG, describes (to Provider) how to create attachment information using the XML-based Clinical Document Architecture Release 1 (CDA R1), where to place it in the X12-275 transaction set, and how the receiver (Payer) may use it.	HL7 Additional Information Specification Implementation Guide	CDAR1AIS0000R021
Ambulance AIS	Created by HL7-ASIG, and dependent upon the Attachment IG, includes the LOINC codes and specific guidance on how to create attachments for ambulance services.	Additional Information Specification 0001: Ambulance Service Attachment	CDAR1AIS0001R021
ED AIS	Created by HL7-ASIG, and dependent upon the Attachment IG, includes the LOINC codes and specific guidance on how to create attachments for Emergency Department services.	Additional Information Specification 0002: Emergency Department Attachment	CDAR1AIS0002R021
Rehab Services AIS	Created by HL7-ASIG, and dependent upon the Attachment IG, includes the LOINC codes and specific guidance on how to create attachments for rehabilitation services.	Additional Information Specification 0003: Rehabilitation Services Attachment	CDAR1AIS0003R021
Clinical Reports AIS	Created by HL7-ASIG, and dependent upon the Attachment IG, includes the LOINC codes and specific guidance on how to create attachments for clinical reports.	Additional Information Specification 0004: Clinical Reports Attachment	CDAR1AIS0004R021
Lab Results AIS	Created by HL7-ASIG, and dependent upon the Attachment IG, includes the LOINC codes and specific guidance on how to create attachments for laboratory test results.	Additional Information Specification 0005: Laboratory Results Attachment	CDAR1AIS0005R021
Medications AIS	Created by HL7-ASIG, and dependent upon the Attachment IG, includes the LOINC codes and specific guidance on how to create attachments for medication administration.	Additional Information Specification 0006: Medications Attachment	CDAR1AIS0006R021
LOINC Modifiers	Created by HL7- Describes the LOINC codes that help qualify the amount of, and time period for, the additional information being requested. E.g., if the basic request is for hematology test results, the LOINC Modifiers might be used to narrow the request to only the abnormal results (if any) for the 3 months prior to the claim date.	LOINC Modifier Codes – For use with ASC X12N 277 Implementation Guides when Requesting Additional Information	(A document number has not been assigned by the HL7 Attachments Committee.)
277 Request IG	Created by X12N, describes how to use the X12-277 transaction set for the purpose of requesting additional information to support a claim. LOINC codes and modifiers are used within the transaction to request specific information.	ASC X12N 277 Health Care Claim Request for Additional Information Implementation Guide	004050X150
275 Response IG	Created by X12N, describes how to use the X12-275 transaction set to contain the additional information ("the attachment").	ASC X12N 275 Additional Information to Support a Health Care Claim or Encounter Implementation Guide	004050X151

For additional information on Claims Attachments go to [www.HL7.org](http://www.HL7.org) and select “committees – special interest groups – attachments.”