



Guidance on Implementation of Standard Electronic Attachments for Healthcare Transactions

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I. PURPOSE

This whitepaper is intended as a resource to aid the transition from the current, largely manual exchange of health care attachments to a more efficient, electronic process. This white paper is a resource document for implementers to use to help them get started in their implementation planning for the request and receipt of electronic attachments.

Background

The Health Insurance Portability and Accountability Act of 1996 (HIPAA) listed electronic attachments (Attachments) as an electronic transaction to be standardized by the healthcare industry and enforced under the regulation. As of this white paper's date of publication, the HL7 and X12 attachment standards have not been mandated under HIPAA.

The development of standards for Attachments spans multiple standards development organizations. Over the past several years, ASC X12N and HL7 have worked together to ensure that their standards are compatible to meet the needs of the industry. Since the use of multiple standards in a single transaction is new to the industry, ASC X12N, HL7 and WEDI collaborated on a project to provide an overview on how these standards work together with business processes.

II. SCOPE

This white paper is focused on the business and operational processes of exchanging additional information (Attachments) using the HL7 standards for clinical information and the X12 transaction sets for requesting and receiving the additional information. The detailed technical requirements are not covered in this white paper as the standards development organizations have provided the technical guidance in the standards implementation documents. For definitions of abbreviations, acronyms and other terms used throughout this paper refer to Appendix A of the HL7 CDA R2 Attachment Implementation Guide: Exchange of C-CDA Based Documents, Release 1 – US Realm.

This white paper will provide the following:

- An overview of Attachments
- Resources needed to have a successful implementation of Attachments
- A review of some of the current processes for requesting and responding to the need for additional information to help understand the challenges
- Examples of implementation approaches in the industry
- A review of Electronic Attachment Business flows for Claims, Prior Authorizations¹ and Notification
- Business use cases and examples
- A guidance on how to embed additional information within the applicable ASC X12N transaction.

¹ The term “prior authorization” as defined in the ASC X12N Health Care Services Review – Request for a Review and Response (278).

III. OVERVIEW

A. Why Is Additional Information Exchanged?

In the course of doing business, payers may need additional information from a provider to determine if the service being billed or requested is consistent with medical policies. These policies may be different for each payer or vary based on State mandates. The medical policies include, but are not limited to:

- the patient's insurance benefits
- the general medical policies
- the level of service being performed
- the specific condition/diagnosis to include history and treatment that has already been rendered, but was not effective

B. What Additional Information is Exchanged?

Based on feedback from the healthcare industry, the following documentation was most commonly exchanged and is supported by structured documents in the HL7 CDA R2 Attachment Implementation Guide: Exchange of C-CDA Based Documents (hereafter referred to as the HL7 Guide):

- Consultation Note
- Discharge Summary
- History and Physical
- Operative Note
- Procedure Note
- Progress Note

In addition to the list above, the HL7 Guide also supports the following structured documents:

- Continuity of Care Document (CCD)
- Diagnostic Imaging Report (DIR)
- Care Plan
- Referral Note
- Transfer Summary
- Patient Generated Document

HL7 developed a separate implementation guide to address the dental community need for exchanging Periodontal Attachments - HL7 CDA® R2 Implementation Guide: Exchange of C-CDA Based Documents; Periodontal Attachment, Release 1 - US Realm.

Other additional information not listed above may also be exchanged using C-CDA R2.1 by taking advantage of the "Unstructured Document", as described in Section 3.5 of the HL7 CDA R2 Attachment Implementation Guide: Exchange of CDA Based Documents, Release 1-US Realm.

Following are some common payer requests sent to a provider requesting additional information based on a claim or prior authorization that is received. Each of these examples can be automated through the use of standard electronic attachments solutions, as described in the identified sections of this white paper.

Claim Examples:

A request might ask for an Operative Note or Procedure Note for unlisted procedures or a Current Procedural Terminology (CPT®)² having:

- Modifier 22 (increased procedure),
- Modifier 52 (reduced services); or
- Modifier 62 (2 surgeons).

A request may also ask for Progress Notes or Consultation Notes for high level Evaluation and Management Codes. For detailed examples see [Section IX](#).

Prior Authorization Example:

A request might ask for Progress Notes to support a request for additional occupational therapy or for an Admission Summary Report when requesting permission for an unscheduled admission. For detailed examples see [Section IX](#).

² ® CPT is a registered trademark of the American Medical Association

IV. CURRENT MANUAL PROCESS FOR ATTACHMENTS

This section provides an overview of some of the current processes for exchanging additional information between payers and providers. Before implementing standard electronic attachments, it is important to understand your current business flows in order to determine how to proceed with your implementation approach.

A. How is Additional Information Exchanged Today?

During the claims adjudication process or during utilization review the payer may determine that additional information is required, resulting in a request to the provider. The payer may also communicate a list of procedures or services that would require additional information for the claim or prior authorization allowing the provider to submit without waiting for a request. The process may be automated based on predefined rules or the request for information is systematically generated and sent to the provider.

The attachment information may be submitted using multiple methods based on payer requirements. Examples of methods used today are:

- **Paper** – the payer sends a letter to the provider and the provider returns a copy of the letter with the information requested by mail, fax, or uploaded to an electronic web portal.
- **Telephone** – the payer calls the provider and asks the questions and the provider communicates the information while on the call.
- **Website** - the payer contacts the provider and points to a URL for a document that would require completion by the provider.
- **Secure email** – the payer and provider have established a workflow to allow for the request and response to be handled through a secured email exchange.
- **Fax** – the payer faxes a form to the provider to complete and fax back. (The payer must have the provider fax number on file or obtain it before using this method).
- **Internet** –trading partners use Secure FTP or other secured protocols
- **Claim Denial** - Payer denies payment for a claim, indicating the need for additional information as requested. This would trigger an appeal or resubmission of the claim with the additional information.

B. How is Additional Information Requested by the Payer?

Today, most payers send hard copy letters to request additional information to support a claim or prior authorization submitted by the provider. These letters are typically mailed to the address on file for the provider or the payer may call the provider to request additional information for claims or prior authorizations. The request may be an automated process by some entities.

The payer may also communicate a list of procedures or services that would require additional information for the claim or prior authorization allowing the provider to submit needed information without waiting for a request.

C. How is a Request Processed by the Provider?

When a request for additional information has been received by a provider, the processing method depends on the type or size of provider.

In the case of a small physician practice, the mail typically goes to one location and the routing of documentation may not be an issue. However, larger practices and institutional facilities may receive the information into a central billing office or mailroom. The information is then routed to the appropriate provider or department within the provider's organization to determine how to respond to the request or if it is necessary to forward on to another department. This manual routing to multiple locations may result in the information getting lost.

For smaller practices, the front office staff or clinical staff may gather the information requested from the patient's medical records. Depending on whether the medical records are electronic or paper based, the information is copied or printed and sent to the payer. For privacy reasons, some information must be redacted before sending to the payer.

For larger hospital-based practices and facilities, the central billing office normally gathers the information. They work closely with the compliance area to ensure the information shared meets their internal requirements. The requested documents are pulled from the provider (clinical, practice management etc.) systems, photocopied and sent to the payer.

The provider returns the additional information along with a copy of the request letter by the due date specified in the request or they risk denial or delay of payment. When a tracking or reference number is included in the request, the provider should include it in the additional information being returned.

For prior authorizations, requests for additional information are routed to appropriate clinical staff (physicians, nurses, clinical coordinators, practice administrators) to complete before providing the requested treatment, which can often delay patient care.

D. How is Response Processed by the Payer?

Today, the information requested may be received in a central mailroom or go to a central fax machine. This requires a process for determining where to deliver the documentation within the payer organization. Often times the documents are misrouted and may be lost in the delivery, delaying the adjudication or review. Documents that are imaged or scanned may trigger an internal workflow, or may be sent to the appropriate department, or accessed through the payer's imaging system.

For claims, when the information requested is received, the claim processor will review the documentation and either forward to the medical review department for review or process the claim based on appropriate policies and benefits.

For Prior Authorizations, Internal Utilization Management (UM) workflows are unique. However, most have standard turn-around times to complete the review. The review could prompt a proactive search by the UM staff to look for specific documents received and housed in the imaging system for a specific member, or specific attachment control number.

Most Utilization Management Organizations (UMOs) have established the criteria to use when determining the medical appropriateness for specific procedures. Workflows will vary by UMO as to how information is accepted and distributed, but in most cases the workload is

distributed by service geographical locations, plan sponsor, or the type of the services being requested.

E. Where is Attachment Data Stored Today?

Payers

If the payer receives a document in response to a request the document is usually imaged or scanned and stored in an image database. If information is received as an image, the image itself is stored.

Providers

Providers store documents in various systems – (i.e., Electronic Health Records (EHR), radiology or laboratory systems). If information is in separate systems that are not connected, it may require the provider to retrieve information from more than one location. Some large enterprises have document management systems that house scanned documents from multiple systems.

V. TODAY'S CHALLENGES

Based on the current processes there are many challenges that both payers and providers have to overcome. This section provides some of the more significant challenges that should be addressed as the industry moves toward standard electronic attachments.

A. Identifying Proper Address and Routing

Payers typically send the request for additional information to the provider address on file, which is not always the address of the department or individual who will be responding to the request. This can cause a delay in getting the response in a timely manner. Because of the discrepancies often found in provider file addresses, letters are often returned or sit in dead letter files at the post office.

Providers have challenges routing the request within the facility/organization. Letters could be misrouted or not make it to the appropriate staff person resulting in denials and appeals.

B. Matching the Attachment to the Claim

When the attachment is received through fax, mail or other methods, the payer may have challenges matching it to the claim or prior authorization. This causes delay in finalizing the claim or reacting to the prior authorization. It may also result in denial due to lack of additional information, which results in delayed adjudication or patient care.

C. Cost of Mailing

Because the majority of the requests are sent on paper, the payer incurs the cost of mailing letters. Again, because of the address challenges, the cost may be incurred more than once. The provider incurs the cost of mailing the information back to the payer, which can be significant when submitting lengthy, multipage documentation. If the answer is not sufficient the first time, there may be multiple requests and responses.

D. Timeliness

Requesting, receiving and processing additional information through the Postal Service can often take weeks. This can negatively impact the provider's revenue cycle. Because of the manual workflows around the mailing and routing of the requests, information may not be received in time to prevent denials. If denied this may force the provider into an appeals process or cause the payer to reprocess the request. A delay may also affect the clinical care based on the amount of processing time for prior authorization.

E. Insufficient, Excessive or Incorrect Information

The provider may struggle with what the payer is requesting and to what degree. The provider may need to contact the payer to get clarification or the provider may send what they think is being requested – too much or too little. This may add to the turn-around time or cause the payer to accept and store unnecessary information. It may also cause the provider to send more than minimally necessary.

VI. BENEFITS OF STANDARD ELECTRONIC ATTACHMENTS

The current workflow for Attachments has significant challenges that can be addressed as the industry moves to the exchange of standard electronic attachments.

A. Benefits for Payers

- Savings on printing and postage associated with paper
- Savings on mailroom costs of opening and delivering mail, as information flows more efficiently (mailroom costs)
- Savings in customer service due to fewer phone calls requesting and responding to the need for additional information
- Savings for imaging (staffing and imaging costs)
- Automating some processes when data are received in a structured format
- Savings on the cost of appeals as information flows in a more efficient manner
- Faster turn-around time as information is received electronically
- Faster decision making as information received should be more accurate due to the specificity of LOINC code requests

B. Benefits for Provider

- Savings on printing and mailing of the additional information and postage
- Savings on staff time for pulling the information
- Savings on mailroom costs of opening and delivering mail, as information flows more efficiently
- Streamlines the process of sending the information to payers in a consistent manner
- Maintaining an audit trail of who has viewed personal health information and where it has been sent
- Providing more accurate information due to the specificity of LOINC code requests
- Savings on the cost of appeals as information flows in a more efficient manner
- Ability to automate some processes when request is in a structured format
- Reduction in turn-around time for accounts receivable

C. Benefits for Patients

- Increased speed of prior authorization decisions leading to more timely treatment and planning of treatment.
- Increased efficiency in determination of financial responsibility for medical services.

VII. GETTING STARTED WITH STANDARD ELECTRONIC ATTACHMENTS

This section addresses some of the critical skills and resources needed for making the transition from the current processes outlined in [Section IV](#) to the electronic process for Attachments.

A. Skill Sets for Implementation

Before implementing standard electronic attachments, it is important to understand the skill sets and staffing requirements needed as part of the project team. The information provided is for consideration only and may or may not apply to every organization.

1. Knowledge Base:

- Understanding of internal business processes and workflows
- Technical and business understanding of the standards
 - ASC X12N Technical Reports and standards
 - HL7 CDA Clinical Document Architecture
- Basic XML
- LOINC
- Base64 Encoding
- Transport Methods

2. Staff Resources from the following areas (list is not all inclusive):

Provider

- Operations for Practice Management and other support systems (e.g., invoice, supply, utilization review)
- EHR vendor
- Practice Management vendor
- Clearinghouse
- IT (programmers, business analysts and quality assurance)
- Office Manager
- Medical Records Department
- Billing staff
- Policy
- Security and Privacy
- Cyber Security
- Training
- Legal and Contracting (Business Associate Agreements)
- Compliance
- Technical Writers
- Contractors, Consultants
- Clinical Staff

Payer

- EDI department
- Clearinghouse
- Operations
- Claims
- Medical Review (utilization)
- Imaging Systems (data warehouse)
- Appeals
- IT (programmers, business analysts and quality assurance)
- Medical Policy
- Security and Privacy
- Cyber security
- Training
- Legal and Contracting staff (Business Associate Agreement)
- Compliance
- Technical Writers
- Contractors, Consultants

Clearinghouses/Intermediaries and Health Information Exchanges

- EDI department
- Operations
- Imaging Systems (data warehouse)
- IT (programmers, business analysts and quality assurance)
- Security and Privacy
- Cyber Security
- Training
- Legal and Contracting staff (Business Associate Agreements)
- Compliance
- Technical Writers
- Contractors, Consultants

B. Reference Material

Before getting started the following documents should be included in your resource materials. The version of the HL7 documents and ASC X12N Technical Reports 3 (TR3) published for the purposes of exchanging Attachments should be the version named in regulation or agreed upon by trading partners in the absence of regulations.

HL7 Reference Materials

The following list of reference materials are essential to implementing attachments and are located on the [HL7 website](#).

- Quick Start Guide for CDA R2
- HL7 Consolidated Clinical Document Architecture Release 2 (C-CDA R2)
- HL7 CDA® R2 Attachment Implementation Guide: Exchange of C-CDA Based Documents, Release 1 – US Realm (STU) (HL7 Guide)
- HL7 CDA® R2 Implementation Guide: Exchange of C-CDA Based Documents; Periodontal Attachment, Release 1 - US Realm.
- HL7 Companion Guide for C-CDA R2
- HL7 Clinical Documents for Payers Set 1 (CDP1)
- HL7 Digital Signatures and Delegation of Rights Release 1

Logical Observation Identifiers Names and Codes (LOINC)

An overview of LOINC is covered in the HL7 Guide. The LOINC website maintains an [Attachments Page](#) documenting three methods to identify LOINC codes that are valid for attachments:

- The [LOINC Table](#) – the master database that associates codes with their component parameters (type, provider type, etc.) The table is useful when you want a copy of all 60,000+ LOINC codes)
- The [RELMA application](#) – a browsing and mapping application with a special form for attachment codes. The application is useful when you need to see a list of LOINC codes used for Attachments.
- The online [LOINC search application](#) search.loinc.org. The search is useful when you want to check on a specific LOINC code.

All three methods access the same codes. New users should become familiar with the organization of the codes using the RELMA graphical user interface.

ASC X12N Reference Materials

The following list of reference materials are essential to implementing attachments and are located in the [X12 Store](#):

- 277 Health Care Claim Request for Additional Information (RFI)
- 275 Additional Information to Support a Health Care Claim or Encounter
- 278 Health Care Services Review – Request for Review and Response
- 275 Additional Information to Support a Health Care Services Review
- 837 Health Care Claim: Professional
- 837 Health Care Claim: Institutional
- 837 Health Care Claim: Dental

Additional Resources

- Internet Engineering Task Force (IETF®) Requests for Comment (RFC)
 - MIME Encapsulation of Aggregate Documents ([RFC 2557](#))
 - The Base16, Base32 and Base64 Encodings ([RFC 4648](#))

- [XML in Wikipedia and XML in 4 Minutes](#)

C. Approach to Implementation

During implementation, entities will be faced with many decisions. In this section there are some key points to think about along with some suggestions from other implementers for consideration. It is not the intent of this paper to provide all of the decision points or options but rather to provide implementers with some things to consider. These considerations may be different depending on what type of organization implementing. The guidance in this section is not all-inclusive, but rather some things that will help implementers start planning.

1. What versions of the standard attachment transactions should be used?

This white paper is version agnostic when discussing the implementation of standard attachments. This allows the paper to provide guidance regardless of the version.

The examples in [Section IX](#) have been created using implementation specification version 006020 for the ASC X12N 277 and 275; all other examples are created using the current 005010 HIPAA adopted version of the ASC X12N transactions. The HL7 C-CDA examples are created using the **R2 version**. These versions have been recommended to the National Committee on Vital Health and Statistics (NCVHS) by both HL7 and X12 for adoption under HIPAA. At the time of publication, X12 recommended version 006020 be adopted at the NCVHS hearings in February 2016.

2. Things to Think About

As an entity begins their project for standard attachments there are many things to consider. These considerations may be different depending on the type of organization. The guidance in this section is not all-inclusive, but rather some things that will help entities start their planning.

Payers

How and when are attachments needed?

Additional information to support a claim/encounter/prior authorization is based on the payer's policy. The policies are often not standardized and the requirements tend to be different from payer to payer. Based on the payer's policy, they will request the additional information when necessary.

What and how to communicate the rules for unsolicited attachments?

Payers currently have the option to define specific situations for when providers send the additional information at the same time they send the claim/encounter or prior authorization. Payers may choose various methods to communicate the rules to the providers, i.e., Companion Guides, Trading Partner Agreements, Web Portals, Provider Contracts or Billing Guidelines.

How will the clinical data be handled?

Payers should determine whether to continue using the same document system in place for paper attachments or move to a client server application or an imaging system. Payers may also implement a documentation management system.

How will missing or incomplete data be handled?

If the clinical data received is considered incomplete due to the payer's policy, the payer will determine how to process the claim or prior authorization. For example, the payer could deny the services for incomplete information.

How will data not requested be handled?

Payers should determine whether to store the data or ignore it and at what point in the process will the decision will be made. Payers should check to see if regulations and contractual requirements exist around storing the data and whether there are other payers to whom the claim and accompanying information might be sent.

What should be the retention policy (Federal, State and internal policies)?

The payer's policy, state regulations or federal regulations should define the retention policy of the ASC X12N 275 and HL7 C-CDA data.

What type of privacy and security, including cyber security, will be incorporated into the process?

Payers should identify what types of security are required and how the privacy of the data in the payload will be protected. An evaluation of whether new procedures are needed or whether the current procedures are adequate will also need to be conducted.

What kind of file will the ASC X12N 275 input be mapped to?

There are various ways that the Attachment can be handled once received by the payer. The ASC X12N 275 file can be mapped to an internal format defined by the payer or the payer may choose to extract the C-CDA and store the information directly into an imaging system or database. Typically, the ASC X12 transactions are mapped to an internal format that can then be used for processing the file (i.e., routing, matching and validating). This same approach can be used for the attachment information as well. However, since the payload in the ASC X12N 275 transaction is HL7 C-CDA based on XML, the entire ASC X12N 275 could also be mapped to an XML based format. Since all data in the ASC X12N 275 may not be needed in downstream process, payers should decide what data is required to meet their needs.

What type of editing will be done on the incoming files?

The ASC X12 Acknowledgment Reference Model (ARM) provides guidance on the X12 pieces of Attachments. The ASC X12 824 Application Reporting for Insurance may be used to report the error codes for the HL7 content. The HL7 Guide and CDA Templates provide conformance statements for use in determining the compliant use of the C-CDA. Payers will need to decide where and when edits will be applied.

Which areas need access to the information?

Access may need to be granted to multiple areas e.g., EDI Staff for support, claims area, medical review teams and support areas. Each area may need to view the data in various states. This needs to be determined up front.

How can the 275/C-CDA data be viewed by the operational areas?

The ASC X12N 275/HL7 C-CDA can be ingested into the payer's systems using multiple methods. For example, the data can be mapped into a format that is compatible with the payer's imaging system allowing the data to be viewed in the same manner as the paper documentation and can be routed to the appropriate staff. Another example would be for the payer to develop an application for their staff to view the data and process the workload.

How will structured and unstructured data be converted to view in human readable form?

Unstructured documents are required to be Base64 encoded when the provider sends the ASC X12N 275/HL7 C-CDA to the payer. Once the unstructured document is received and un-encoded, the document is in a human readable form. When the C-CDA contains structured data a stylesheet could be used to display the data in a human readable format. ([See Base64 Encoding Section](#) for more information).

Should stylesheets be used? How and when will they be used?

A stylesheet is a specification used by browsers for controlling the display of the markup language (e.g., XML or HTML), describing how elements of a document should be displayed. For most implementers, a CDA document may simply be rendered to a common internet XML aware browser using a stylesheet, much like one might view a PDF on a personal computer application. Even in an Unstructured Document, the Header may be partially rendered using a stylesheet. However, when exchanging information using the Unstructured Document, this mechanism may not work without additional engineering. The browser must be able to recognize the body of this document or be able to separately decode the document into its binary format.

Providers

What is supported by the vendor?

The following are questions to ask the vendor(s) to assist with the implementation of electronic attachments within the practice workflow.

1. Standalone financial system /practice management system vendor: Does the system provide the ASC X12N 277RFAI in order to provide the data requested and the ASC X12N 275 transactions to support Attachments?
2. Administrative and clinical systems: Is the system integrated to effectively support the workflow for Attachments including requests and responses? Are they capable of producing the appropriate transactions (ASC X12N 277RFAI, ASC X12 278, ASC X12N 275, HL7 C-CDA or other document formats) by extracting and generating relevant clinical information in an automated manner?
3. Practice management system (PMS) and Electronic Health Record (EHR) system: Can the PMS work together with the EHR system to generate the Attachment information by integrating the clinical information into the administrative enveloping?
4. What are the capabilities for mapping received clinical information within the vendor system? Providers should evaluate existing interfaces to determine how they receive, and reconcile discrete data; build documents or impact workflows based on vendor software capabilities.

What new document reconciliation workflows could be developed to increase efficiencies?

Implementers may want to look for inefficiencies in their current workflows and identify ways to improve.

Is the appropriate Business Associate Agreement in place with vendors to ensure that privacy and security requirements are met during the exchange of Attachments?

Compliance staff may need to perform some manual review to ensure requirements such as minimum necessary are met.

Where is additional clinical data stored and how will it be accessed?

A provider may have multiple sources of clinical information such as diagnostic testing reports and clinical records that are in varying formats. Some clinical information may be stored in an EHR, patient chart or out of the provider's direct control. Identifying where the information is stored, and whether it can be accessed and extracted to respond to information requests is the first consideration for clinical information exchange.

How is the workflow impacted by the implementation of electronic attachment capability? How can automation replace what is now done manually?

Work with vendors on attachment interfaces to payers either direct or through vendor partners to receive and respond to information requests.

How will authentication requirements for systematically generated documents be met?

Under the HL7 [C-CDA guide](#), all clinical documents must have a legal authenticator. In most cases, the treating physician that creates the particular clinical document attests to its contents. Systematically generated summary documents (e.g., Continuity of Care Document), however, consist of information pulled from various clinical documents. Provider organizations must develop a process to attribute legal authentication for these documents that do not have a physician author, such as creating a form of "organizational" signatory or assigning the responsibility to a particular staff member.

Are proper workflows in place to support Attachments today? The request for additional information for solicited attachments will be in the form of an ASC X12 277RFAI. Providers should consider whether the flow will be automated when the request is received and if the vendor provides a human readable rendition.

Is there a business need to support the unsolicited Attachment? If so, providers may need to manage the payer rules for sending additional information. Determine if the payer will require a trading partner agreement for unsolicited attachments based on predefined rules. (See Solicited and Unsolicited Attachments in [Section VIII.A](#))

VIII. OVERVIEW OF ATTACHMENTS

A. Solicited and Unsolicited Attachments

The HL7 Guide used for the clinical portion of the Attachment allows for two situations. The submission of additional information as a response to a request from the payer (Solicited). The additional information may also be based on a set of pre-defined rules by the payer or in state mandates without a specific request (Unsolicited).

B. Structured and Unstructured Documents

The HL7 Guide contains detailed information on structured and unstructured documents. The use of the C-CDA Templates provide the flexibility to allow for many different attachments as outlined in [Section III.B](#). It is imperative that the appropriate template be used when available. For example, if an operative note is being used, the operative note template must be used, not the progress notes template.

A structured document has a header and a structured body. The structured body is made up of section level template(s). A structured body does not necessarily require all the data to be codified and may include narrative text. The C-CDA allows for flexibility of use by the receiver. When the additional information within the body is codified it allows the receiver to either use a style sheet to render the information in a human readable form or to use the codified information to automate decisions based on the content.

C-CDA also allows for unstructured documents in formats supported by HL7 Guide for CDA®, Release 2: Unstructured Documents. Implementers should refer to the C-CDA Implementation Guides for more information about unstructured documents. The current formats supported include:

- MSWORD
- PDF
- Plain Text
- RTF Text
- HTML Text
- GIF Image
- TIF Image
- JPEG Image
- PNG Image

Note: *The ASC X12N 275 Additional Information to Support a Health Care Claim or Encounter and the ASC X12N 275 Additional Information to Support a Health Care Services Review (both ASC X12 275 transactions) allow for documents to be included in the binary segment (BDS). The Format and Version Identifier Segment (CAT) used for the Attachment Report Type Code has a qualifier in the CAT02 Attachment Information Format Code that indicates whether the document is in HL7 or non-HL7 format. This white paper is only addressing the use of HL7 documents in the binary segment.*

C. Logical Observation Identifier Names and Codes in Attachments

LOINC codes are used extensively in the exchange of Attachments. LOINC codes are used to identify the specific kind of information being communicated in both the request and response (both solicited and unsolicited.) The HL7 Guide provides a list of the codes associated with specific attachment types. In addition to the code, HL7 strongly recommends the inclusion of the published name associated with the code.

LOINC Modifier codes are also used to set variables in the request for information. For example, the Modifier may indicate a specific time period for reporting the information.

For more information about the use of LOINC codes, refer to the HL7 Guide section on Use of LOINC Codes in Attachments.

Solicited Attachments

The LOINC codes are included in both ASC X12N 275 transactions in Loop ID 2000A Status Information Segment(s) (STC) for Solicited Attachments. The LOINC codes must be the same LOINC codes included in the ASC X12N 277 or 278 Request. The LOINC codes are used as another piece for matching the response to the request. The LOINC code would also be included in each of the HL7 documents in the binary segments.

If the provider is returning an attachment that has a different LOINC code than requested (i.e., more specific), the LOINC code requested must still be returned in the ASC X12N 275 STC segment, however the specific LOINC code would be in the HL7 document in the binary segment.

LOINC Modifier codes may be included in ASC X12N 277 or 278 Request. If included in the request they must be returned in the ASC X12N 275 response along with LOINC code it modifies. The LOINC code is returned in the Loop ID 2000A STC segment, data element STC01 and the Modifiers are returned in the data elements STC10 and STC11. LOINC Modifier codes are not included in the information contained in the binary segments.

Unsolicited Attachments

The LOINC code is not used in the ASC X12N 275 for Unsolicited Attachments. For Unsolicited Attachments the LOINC code is in the HL7 documents in the binary segments of the ASC X12N 275.

D. Requesting Electronic Attachments

When a payer or UMO determines the need for additional information for a claim or prior authorization, the implementation specifications for the standards listed below are used to facilitate the request:

- ASC X12N 277 Health Care Claim Request for Additional Information
- ASC X12N 278 Health Care Services Review – Request for Review and Response

The payer or UMO first determines the appropriate LOINC code for the information required and includes that in the request. Set any applicable parameters around the information being requested (i.e., a time period) by using a LOINC Modifier code. For more information about selecting LOINC codes and LOINC Modifier codes refer to the HL7 Guide.

E. Attachment Control Number

A critical part of the exchange of the Attachment is the ability to re-associate the Attachment with the initiating transaction. A unique identifier, Attachment Control Number, must be included to help match the Attachment from the provider to the request or the associated transaction (claim, referral or prior authorization).

When the Attachment is solicited, the Attachment Control Number is used in both the request and the response and is assigned by the payer.

When the Attachment is unsolicited, the Attachment Control Number is on both the associated transaction and the Attachment and is assigned by the Provider.

The following table provides the location of the Attachment Control Number in the X12 transactions used in the request for and response to Attachments. At the time of this publication the names used within the transactions are not always consistent. The ACP Workgroup will be working with X12 to align all of the Attachment Control Numbers in future versions.

Table 1 : Attachment Control Numbers Locations in ASC X12N Transactions

Transactions	Loop	Segment	Industry Name
Version 005010 (Adopted under HIPAA)			
X222 Health Care Claim: Professional (837)	Loop 2300 Loop 2400	PWK05	Code AC Attachment Control Number
X223 Health Care Claim: Institutional (837)	Loop 2300 Loop 2400	PWK06	Attachment Control Number
X224 Health Care Claim: Dental (837)			
X217 Health Care Services Review – Request for Review and Response (278)	Loop 2000E Loop 2000F	PWK05	Code AC Attachment Control Number
	Loop 2000E Loop 2000F	PWK06	Attachment Control Number
Version 006020 (Recommended for adoption under HIPAA)			
X313 Health Care Claim Request for Additional Information (277)	Loop 2200D	TRN02	Payer Claim Control Number
X314 Additional Information to Support a Health Care Claim or Encounter (275)	Loop 2000A	TRN02	Payer Claim Control Number or Provider Attachment Control Number
X315 Health Care Services Review – Request for Review and Response (278)	Loop 2000E Loop 2000F	PWK05	Code AC Attachment Control Number
X316 Additional Information to Support a Health Care Services Review (275)	2000A	TRN02	Attachment Control Trace Number

F. Exchanging the Additional Information for Attachments

Once the additional information is pulled and ready to send to the payer/UMO, the provider must determine the transmission method. X12 has developed standards to support the exchange of the additional information for claims and prior authorizations. The ASC X12N 275 is used as the 'envelope' for the additional information. Details on how to use the information to match the original transaction to the Attachment are covered in [Section VIII.E - Attachment Control Number](#) of this white paper.

- ASC X12N 275 Additional Information to Support a Health Care Claim or Encounter
- ASC X12N 275 Additional Information to Support a Health Care Services Review

In addition to the ASC X12N 275 listed above a variety of transport options are available for exchanging any C-CDA document. For more detail on these options refer to Appendix E in the HL7 Guide.

G. Base64 Encoding

The ASC X12N 275 BDS segment doesn't currently require the HL7 standard in the BDS03 element to be Base64 encoded. However, to eliminate transaction issues that will be caused by virtually all HL7 C-CDA documents and any other types of content (e.g., image) allowed in this segment, the content of BDS03 SHALL be Base64 encoded.

When sending an unstructured body in the HL7 C-CDA standard, it is also necessary to Base64 encode the unstructured content (unless the unstructured body is only a text string) then Base64 encode the C-CDA (with the embedded Base64 encoded unstructured content). As a note, this will require that the BDS01 value be sent as 'B64'= 'Base64'.

Note: It is possible that a C-CDA document includes an asterisk (*), a colon (:), a tilde (~) or carat (^). Because of this, it is important to Base64 encode the C-CDA. The table below provides the commonly used separators and terminators in X12 transactions.

Table 2 : Separators/Terminator

CHARACTER	NAME	DELIMITER
*	Asterisk	Data Element Separator
^	Carat	Repetition Separator
:	Colon	Component Element Separator
~	Tilde	Segment Terminator

IX. BUSINESS FLOWS, USE CASES AND EXAMPLES

A. Claims Flows

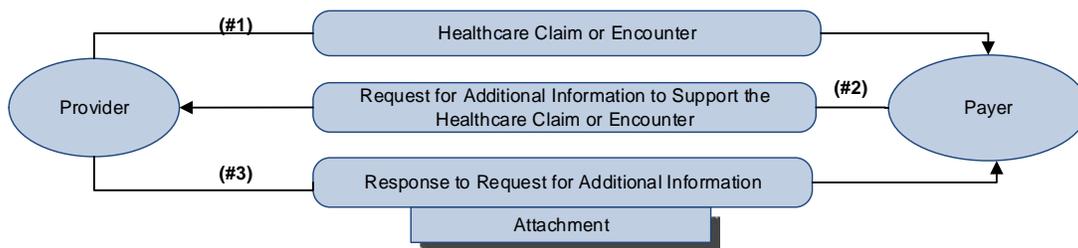
Electronic Process Flows for Solicited Claims Attachments

When a provider submits a claim for payment (triggering event), a payer may determine that additional information is needed to complete the adjudication. The payer initiates a request for that additional information. The provider receives that request, and responds to the payer with the Attachment requested.

The diagram below depicts the business flow for a solicited claim attachment.

- Arrow #1** The claim submitted by a provider to a payer is the triggering event.
- Arrow #2** The request for additional information by a payer to a provider using ASC X12N 277 Health Care Claim Request for Additional Information.
- Arrow #3** The provider responds with an Attachment using the ASC X12N 275 Additional Information to Support a Health Care Claim or Encounter.

Figure 1: Solicited Claim Flow



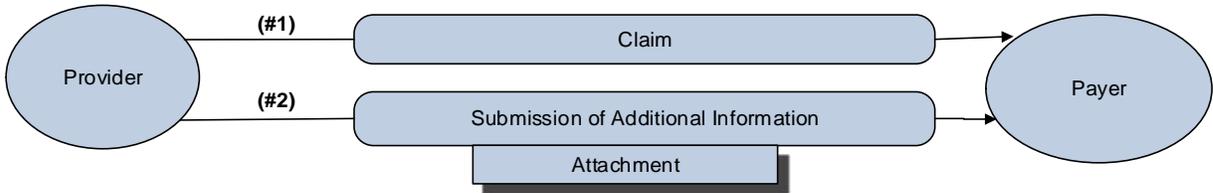
Electronic Process Flows for Unsolicited Claims Attachments

If a provider submits a claim to a payer and knows in advance that additional information is needed to complete the adjudication, the provider may submit the Attachment without waiting for the request.

The diagram below depicts the business flow for an unsolicited claim Attachment.

- Arrow #1** The claim submitted by a provider to a payer.
- Arrow #2** Provider submits additional information previously agreed to between payer and provider as an Attachment using ASC X12N 275 Additional Information to Support a Health Care Claim or Encounter.

Figure 2: Unsolicited Claim Flow



B. Claims Use Cases and Examples

Solicited Claim Attachment – Service Line Level

The provider performs a surgery on the patient. There is not a Healthcare Common Procedure Coding System (HCPCS) code for the procedure the provider performed therefore the provider submits the claim using a “Not Otherwise Classified” (NOC) procedure code. The payer requires additional information to adjudicate the claim. The payer sends the ASC X12N 277 Health Care Claim Request for Additional Information to the provider to request the operative notes for the surgery performed. The provider receives the ASC X12N 277 Health Care Claim Request for Additional Information. The provider gathers the appropriate information and returns it using the ASC X12N 275 Additional Information to Support a Health Care Claim or Encounter with HL7 C-CDA embedded in the BDS (Binary Data Segment).

Items in **Red** are key elements in the Attachment exchange.

Table 3: Solicited Claim Attachment – Service Line Example

ASC X12N 277 Healthcare Claim Request for Additional Information version 006020	Comments
ST*277*0001* 006020X313 ~ ← BHT*0085*48*AB12345*20160118*051055* RQ ~ ← HL*1**20*1~ NM1*PR*2*ABC PAYER*****PI*PAYERID~ PER*IC**TE*8551234567~ HL*2*1*21*1~ NM1*41*2*XYZ CLEARINGHOUSE*****46*SUBMITTERID~ HL*3*2*19*1~ NM1*1P*2*HOLY HILL HOSPITAL *****XX*PROVIDERNPI~ HL*4*3*PT~ NM1*QC*1*SMITH*JOHN*Q***MI*PATIENTID~ TRN*1* 0616299100010 ~ ← REF*X1* PT12345 ~ ← DTP*106*D8* 20160218 ~ ← SVC*HC:28999*150~ STC* R4:11504-8 ::LOI*20160118~ ← REF*6R* LN12345 ~ ← DTP*472*D8* 20160107 ~ ← SE*19*0001~	Implementation Convention Reference is the 006020X313 . Transaction Type Code is ' RQ ' = Request Payer Claim Control Number Provider Assigned Claim Identifier which is pulled from the inbound 837 claim Response due date – date response must be returned to the receiver Claim Status Code is ' R4 ' = Request for Additional Information and the LOINC code 11504-8 requesting an Operative note Line item control number which is pulled from the inbound 837 claim Date of Service

ASC X12N 275 Additional Information to Support a Health Care Claim or Encounter version 006020	Comments
<p>ST*275*1234*006020X314~ ←</p> <p>BGN*11*456789*20160225~ ←</p> <p>NM1*PR*2*ABC PAYER****PI*PAYERID~</p> <p>NM1*41*2*XYZ CLEARINGHOUSE****46*SUBMITTERID~</p> <p>NM1*1P*2*HOLY HILL HOSPITAL ****XX*PROVIDERNPI~</p> <p>NX1*1P~</p> <p>N3*123 MAIN ST*1~</p> <p>N4*FAIRFAX*VA*64108~</p> <p>NM1*QC*1*SMITH*JOHN*Q***MI*PATIENTID~</p> <p>REF*X1*PT12345~</p> <p>LX*1~</p> <p>TRN*2*0616299100010~ ←</p> <p>STC*R4:11504-8::LOI~ ←</p> <p>REF*6R*LN12345~</p> <p>SVC*HC:28999*150~</p> <p>DTP*472*D8*20160107~</p> <p>DTP*368*D8*20160402~</p> <p>CAT*AE*TX~ ←</p> <p>OOI*1*47*ATTACHMENT~</p> <p>BDS*B64*3117*HL7 Document~ ←</p> <p>SE*21*1234~</p>	<p>Implementation Convention Reference is the 006020X314. Transaction Type Code is '11' = Response</p> <p>Payer Claim Control Number must be returned with response LOINC code 11504-8 is the code being returned and must be the same as what was in the request.</p> <p>Filter ID Code is 'TX' specifies the content of the BDS is an HL7 XML</p> <p>Filter ID Code is 'B64' – Indicates Base64 encoding – See Appendix B for examples of HL7 documents</p>

Unsolicited Claim Attachment – Service Line Level

The provider performs a surgery on the patient which requires unusual surgical circumstances. The provider knows that the payer requires the operative notes for these types of services. The provider submits the 837 (claim) with the HCPCS code of 58952 with the 22 modifier. The provider also submits the Operative Report using the ASC X12N 275 Additional Information to Support a Health Care claim or Encounter with the HL7 C-CDA embedded in the BDS (Binary Data Segment) at the same time the claim is submitted.

Table 4: Unsolicited Claim Attachment – Service Line Level Example

ASC X12N 275 Additional Information to Support a Health Care Claim or Encounter version 006020	Comments
<p>ST*275*1234*006020X314~ ←</p> <p>BGN*02*456789*20160225~ ←</p> <p>NM1*PR*2*ABC PAYER*****PI*PAYERID~</p> <p>NM1*41*2*XYZ CLEARINGHOUSE*****46*SUBMITTERID~</p> <p>NM1*1P*2*HOLY HILL HOSPITAL*****XX*PROVIDERNPI~</p> <p>NX1*1P~</p> <p>N3*123 MAIN ST*1~</p> <p>N4*FAIRFAX*VA*64108~</p> <p>NM1*QC*1*SMITH*JOHN*Q***MI*PATIENTID~</p> <p>REF*X1*PT12345~</p> <p>LX*1~</p> <p>TRN*1*0616299100010~ ←</p> <p>REF*6R*LN12345~</p> <p>SVC*HC:58952:22*3150~</p> <p>DTP*472*D8*20160107~</p> <p>DTP*368*D8*20160402~</p> <p>CAT*AE*MB~ ←</p> <p>OOI*1*47*ATTACHMENT~</p> <p>BDS*B64*3117*Appendix B~ ←</p> <p>SE*20*1234~</p>	<p>Implementation Convention Reference is the 006020X314. Transaction Set Purpose Code Value '02' indicates unsolicited attachment response</p> <p>Provider Assigned Claim Control Number which must match PWK06 value in the 837 claim.</p> <p>'MB' specifies the content of the BDS03 is an Unstructured HL7 (structured header with an unstructured body (i.e., pdf)</p> <p>'B64' Indicates that the embedded data is Base64 encoding</p>

C. Prior Authorization and Notification Process Flows

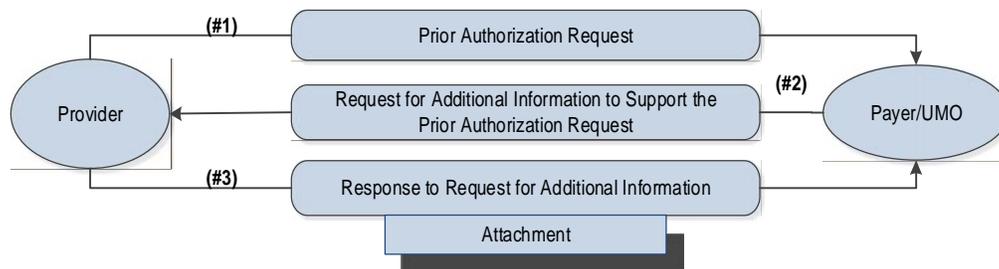
Electronic Process Flows for Solicited Prior Authorization Attachments

When a provider submits a request for prior authorization, a payer may determine that additional information is needed to complete review. The payer initiates a request for that additional information. The provider receives that request, and responds to the payer with the Attachment requested. For the purposes of the scenario below it is assumed that the Prior Authorization Request (triggering event) would be submitted using the ASC X12N 278 Health Care Services Review – Request.

The diagram below depicts the business flow for solicited Prior Authorization Attachment.

- Arrow #1** The Prior Authorization Request by a provider using the ASC X12N 278 Health Care Services Review - Request for Review and Response as the triggering event for requesting an attachment.
- Arrow #2** A Request for Additional Information in support of a Prior Authorization requested by payer to the provider using ASC X12N 278 Health Care Services Review - Request for Review and Response.
- Arrow #3** The provider's response with an Attachment using ASC X12N 275 Additional Information to Support a Health Care Services Review.

Figure 3: Solicited Prior Authorization Flow



Electronic Process Flows for Prior Authorization and Notification Unsolicited Attachments

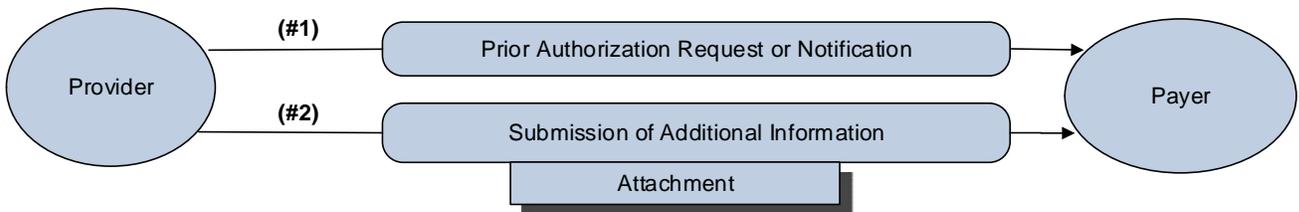
When a provider submits a request for prior authorization or notification to a payer and knows in advance that additional information is needed to complete the approval, the provider may submit the Attachment without waiting for the request.

The diagram below depicts the business flow for an unsolicited Prior Authorization or Notification Attachment.

- Arrow #1** Prior Authorization Request or Notification from a provider to a payer using the ASC X12N 278 Health Care Services Review - Request for Review and Response for Prior Authorization or the ASC X12N 278 Health Care Services Review – Notification and Acknowledgment.

- Arrow #2** Provider submits additional information previously agreed to between payer and provider as an Attachment using the ASC X12N 275 Additional Information to Support a Health Care Services Review.

Figure 4: Unsolicited Prior Authorization Flow



D. Use of the PWK Segment in the ASC X12N 278 Health Care Services Review

The PWK (Additional Patient Information) Segment can be used to report the type of additional information being sent or requested at both the event (Loop ID 2000E) and the service (Loop ID 2000F) levels. If utilizing the PWK in the ASC X12N 278 005010 version to indicate additional information is associated with the Request or Response, some workarounds are needed to support the intended workflows until the next version is adopted. (For more details, see Request for Interpretation #2160 in the X12 [RFI Portal](#).)

Solicited Prior Authorization Attachments

The PWK Segment is required when indicating attachments are needed to support the Request. When the PWK is reported on the ASC X12N 278 in response to a request for authorization it is an indication that the UMO will do one of the following:

1. Send the requester the types of forms that are required to be completed
2. Point the requester to where the forms can be accessed
3. Include LOINC codes to obtain the information

Unsolicited Prior Authorization or Notification

When the PWK is reported on the ASC X12N 278 Request or Notification, it is an indication that the submitter is sending the additional information to support the request or notification.

005010 Workarounds

PWK01 (Attachment Report Type Code) is required when using the PWK and indicates the type of report, document or supporting information. The 005010 does not have a value for LOINC code in the PWK01. When sending a LOINC code always use a PWK01 value '77' = 'Support Data for Verification'. The next ASC X12N 278 version will have a value 'UL' = 'Other Type of Report'. This code will have a code note of "Use when type of report is being identified in an HI segment using a LOINC code".

PWK02 (Report Transmission Code) is required when using the PWK and indicates the method by which the additional information is being sent. When using the Response, there is not a value to support the situation where the submitter can obtain the forms at a specific URL and/or website. When submitting a URL use a PWK02 value 'EM'='E-mail' as a workaround along with adding the actual URL versus the e-mail in the PWK07 (Attachment Description). Since this is a common workflow for UMO's, a value of 'OL' = 'On-Line' – has been added to the code list in the next version.

Since the PWK02 is required in the 005010 TR3, but is not needed if LOINC codes are being returned in the HI Segments in the ASC X12N 278 Response, use 'EL' = 'Electronically Only' - until the next version of the ASC X12N 278 makes the element situational. The situational rule will only require the PWK02 when the UMO is sending the requesting entity specific documentation requirements, formats or forms.

E. Prior Authorization and Notification Use Cases and Examples

Solicited Prior Authorization Event Level Use Case:

Patient goes to the emergency department as the result of feeling shortness of breath. Physician examines the patient and determines that he should be admitted for observation. The patient’s status doesn’t change after the 23 hours of observation so a request for prior authorization is sent to the payer for the admission using the ASC X12N 278 (Health Care Services Review — Request for Review and Response). The payer receives the request to admit the patient and determines that additional information is required before authorizing the admission. The payer returns the ASC X12N 278 (Health Care Services Review — Request for Review and Response) requesting additional information from the facility. If pending and requesting additional information the following response could be used by the payer as shown below. The provider pulls the requested information from the appropriate application (i.e., EHR, PMS, paper files) and creates an ASC X12N 275 Additional Information to Support a Health Care Services Review to send to the payer.

Table 5: Solicited Prior Authorization Event Level Request Example

ASC X12N 278 Health Care Services Review - Request and Response version 005010	Comments
<pre> ST*278*0001*005010X217~ BHT*0007*11*614571989898*20160118*05105949*AT~ HL*1**20*1~ NM1*X3*2*PAYER*****PI*PAYERID~ HL*2*1*21*1~ NM1*1P*2*REQUESTINGNAME*****XX*NPI~ HL*3*2*22*1~ NM1*IL*1*LASTNAME*FIRSTNAME****MI*MEMBERID~ DMG*D8*19310131*U~ HL*4*3*EV*1~ UM*AR*I**21:B**03~ HCR*A4**0U~ REF*NT*5623558800000000~ DTP*435*D8*20160117~ HI*ABF:R0602*LOI: 11488-4~ PWK*77*EL***AC*5623558800000000~ MSG*ADDITIONAL INFORMATION THAT THE PAYER MAY WANT~ NM1*71*1*PROVIDER*ATTENDING****XX*ATTENDINGNPI~ NM1*AAJ*1*PROVIDER*ADMITTING****XX*ADMITTINGNP~ NM1*FA*2*FACILITY*****XX*FACILITYNPI~ HL*5*4*SS*0~ </pre>	<p>Implementation Convention Reference is the 005010X217. Transaction Type Code should be reported as 'AT' = Administrative Action</p> <p>The 2000E HCR Segment reports that the request has been Pended (HCR01='A4') and additional information is required (HCR03= '0U')</p> <p>The HI Segment at the Patient Event Level can report LOINC code(s) (LOI) for the additional information that is being requested at a diagnosis code level. LOINC code 11488-4 is requesting the Consult Note</p> <p>The Attachment Control Number (PWK06=5623558800000000) is assigned by the payer which must be returned in the ASC X12N 275 submission. In addition, the PWK segment is reporting that a "Support Data for Verification" (PWK01= '77') is being sent electronically (PWK02= 'EL'). In future versions a new PWK01= 'UL' (Other Type of Report) will be utilized along with PWK02 not populated when the LOINC code is used.</p>

UM*HS*I*1~ HCR*A4**0V~ DTP*472*D8*20160117~ SE*24*0001~	
--	--

Table 6: PWK Segment Options

Below are additional PWK options that could be utilized by the Payer when LOINC codes were not used:

Additional PWK Segment Options	Comments
PWK*15*BM***AC*5623558800000000~	The PWK segment is reporting that a “Justification for Admission” (PWK01 = ‘15’) will be sent via mail (PWK02= ‘BM’) and the Attachment control number (PWK06) should be referenced along with the documentation when sending back to the Payer.
PWK*15*FX***AC*5623558800000000*PLEASE FAX ADDITIONAL DOCUMENTATION TO XXX-XXX-XXXX~	The PWK segment is reporting that a “Justification for Admission” (PWK01 = ‘15’) is being sent via FAX (PWK02 = ‘FX’) and the Attachment control number (PWK06) should be referenced along with the documentation when sending to the Payer. All of the additional information could be returned via FAX at XXX XXX XXXXX if preferred.
PWK*AS*EM**AC*5623558800000000*Return completed document from www.payer.com/prior_auth_forms/Form1234 ~	The PWK segment is reporting that an “Admission Summary” (PWK01 = ‘AS’) can be found at the following URL “ www.payer.com/priorauthforms/Form1234 ”and should be completed and returned to the Payer (with the Attachment control number (PWK06). The PWK02 = ‘EM’ (E-mail) can be used until OL (On-Line) is added to support this scenario.

Table 7: Solicited Prior Authorization Event Level Response

ASC X12N 275 Additional Information to Support Health Care Services	Comments
<p>ST*275*1234*006020X316~ ←</p> <p>BGN*11*456789*20160502*0632~ ←</p> <p>NM1*ACV*1*REQUESTINGNAME****XX*NPI*67*1P~ ←</p> <p>NM1*40*2*PAYER NAME****PI*PAYERID*67*PR~ ←</p> <p>NM1*IL*1*LASTNAME*FIRSTNAME****MI*MEMBERID~ LX*1~</p> <p>TRN*2*5623558800000000~ ←</p> <p>STC*R4:11488-4::LOI~ ←</p> <p>HI*ABF:R0602~</p> <p>DTP*368*D8*20160502~ ←</p> <p>CAT*AE*HL~ ←</p> <p>OOI*1*47*ATTACHMENT~</p> <p>BDS*B64*3117* see Appendix B~ ←</p> <p>SE*14*1234~</p>	<p>Implementation Convention Reference is the 006020X316.</p> <p>Indicates that the this is a response to a request for additional information</p> <p>The provider that requested the original preauthorization</p> <p>The Payer or UMO that will be receiving the transaction</p> <p>The Attachment Control Number (PWK06) that was originally returned in the 278 response requesting additional information</p> <p>The response LOINC code (LOI) for the information that was being requested. LOINC code 11488-4 is requesting the Consult Note</p> <p>The date the additional information was submitted</p> <p>'HL' specifies the content of the BDS03 is structured HL7</p> <p>'B64' – Indicates Base64 encoding</p>

Solicited Prior Authorization Event and Service Level Use Case

An Orthopedic Surgeon is submitting a preauthorization request to perform a total hip replacement for one of his patients. The services will require a limited inpatient stay to complete the services. A request for prior authorization is sent to the payer for approval using the ASC X12N 278 (Health Care Services Review — Request for Review and Response). The payer receives the request for the elective admission and determines that additional information is needed as to why the patient is being admitted on 17th of March, but the surgery is not scheduled until the 18th of March. The payer also needs medical necessity for the total hip surgery. The payer sends a request for this additional information using the ASC X12N 278 (Health Care Services Review — Request for Review and Response). The provider receives the request for additional information from the Payer and submits the ASC X12N 275 Additional Information to Support a Health Care Services Review with the requested information.

Table 8: Solicited Prior Authorization Event and Service Level Request Example

ASC X12 278 Response and Request for Additional Information - (triggered by a Request for Prior Authorization)	Comments
<pre> ST*278*0001*005010X217~ ← BHT*0007*11*614571989898*20160502*05105949*AT~ ← HL*1**20*1~ NM1*X3*2*PAYER****PI*PAYERID~ HL*2*1*21*1~ NM1*1P*2*REQUESTINGNAME*****XX*NPI~ HL*3*2*22*1~ NM1*IL*1*LASTNAME*FIRSTNAME****MI*MEMBERID~ DMG*D8*19310131*U~ HL*4*3*EV*1~ UM*AR*I**21:B**03~ HCR*A4*0U~ ← REF*NT*5623558800000000~ DTP*435*D8*20160817~ HI*ABF:M160~ MSG*ADDITIONAL INFORMATION THAT THE PAYER MAY WANT TO GIVE BACK TO ASSIST WITH THE UM DECISION PROCESS~ NM1*71*1*PROVIDER*ATTENDING****XX*NPI~ NM1*AAJ*1*PROVIDER*ADMITTING****XX*NPI~ NM1*FA*2*FACILITY*****XX* FACILITYNPI~ HL*5*4*SS*0~ UM*HS*I*2~ </pre>	<p>Implementation Convention Reference is the 005010X217. Transaction Type Code should be reported as 'AT' = Administrative Action)</p> <p>The 2000E HCR Segment reports that the request has been Pended (HCR01= 'A4') and additional information is required (HCR03= '0U')</p>

HCR*A4**0U~
DTP*472*D8*20160817~
HI*LOI:11488-4~
PWK*77*EL***AC*5623558800000000~
HL*6*5*SS*0
UM*HS*I
HCR*A4**0U~
DTP*472*D8*20160818
HI*LOI: 11488-4*LOI: 34117-2*LOI:56447-6~
SV1*HC|27130
HSD*FL*1
PWK*77*EL***AC*5623558800000000~
SE*35*0001~

The HI Segment at the Service Level can report LOINC code(s) for the additional information that is being requested for that **specific service** only. This could be a **LOINC** code to report a justification for the day before surgery admission. LOINC code **11488-4** is requesting the Consult Note

PWK06 - **Attachment Control Number (5623558800000000)** is assigned by the payer which should be reported in the ASC X12N 275 submission. In addition, the PWK segment is reporting that a **“Support Data for Verification”** (PWK01= **‘77’**) is being sent **electronically** (PWK02= **‘EL’**).

These service level **LOINC** codes (**LOI**) are being reported to obtain additional information related to the procedure code **“27130”** for the total hip replacement surgery LOINC code **11488-4** is requesting the Consult Note, **34117-2** is requesting the History and Physical and **456447-6** is requesting the Care Plan.

Table 9: Solicited Prior Authorization Event and Service Level Response

ASC X12N 275 Additional Information in Support of Health Care Services Review	Comments
<p>ST*275*1234*006020X316~ ←</p> <p>BGN*11*456789*20160502*0632~</p> <p>NM1*ACV*1*PROVIDER*REQUESTING****XX*NPI*67*1P~ ←</p> <p>NM1*40*2*PAYER NAME****PI*PAYERID*67*PR~ ←</p> <p>NM1*IL*1*LASTNAME*FIRSTNAME****MI*MEMBERID~</p> <p>LX*1~</p> <p>TRN*2*5623558800000000~ ←</p> <p>STC*R4:11488-4::LOI~ ←</p> <p>HI*ABF: M160~</p> <p>DTP*368*D8*20160502~ ←</p> <p>CAT*AE*HL~ ←</p> <p>OOI*1*47*ATTACHMENT~</p> <p>BDS*B64*3117* see Appendix B ~</p> <p>LX*2~</p> <p>TRN*2*5623558800000000~</p> <p>STC*:11488-4::LOI~ ←</p> <p>SVC*HC:27130*0~</p> <p>DTP*368*D8*20160502~</p> <p>CAT*AE*HL~</p> <p>OOI*1*47*ATTACHMENT~</p> <p>BDS*B64*3117* see Appendix B~</p> <p>LX*3~</p> <p>TRN*2*5623558800000000~</p> <p>STC*R4:34117-2::LOI~ ←</p> <p>SVC*HC:27130*0~</p> <p>DTP*368*D8*20160502~</p> <p>CAT*AE*HL~</p> <p>OOI*1*47*ATTACHMENT~</p> <p>BDS*B64*3117* see Appendix B ~</p> <p>LX*4~</p> <p>TRN*2*5623558800000000~</p> <p>STC*R4:56447-6::LOI~ ←</p> <p>SVC*HC:27130*0~</p> <p>DTP*368*D8*20160502~</p> <p>CAT*AE*HL~</p> <p>OOI*1*47*ATTACHMENT~</p> <p>BDS*B64*3117* see Appendix B~</p> <p>SE*14*1234~</p>	<p>Implementation Convention Reference is 006020X316.</p> <p>The provider that requested the original preauthorization The Payer or UMO that will be receiving the transaction</p> <p>The Attachment Control Number (PWK06) that was originally returned in the 278 response requesting additional information The first LOINC code for the information that was being requested about the day before surgery admission. LOINC code 11488-4 is requesting the Consult Note</p> <p>The date the additional information was submitted 'HL' indicates that the data in information in the BDS03 is structured.</p> <p>The second LOINC code (LOI) for the information that was being requested about procedure code 27130. LOINC code 11488-4 is requesting the Consult Note</p> <p>The third LOINC code (LOI) for the information that was being requested about procedure code 27130. LOINC 34117-2 is requesting the History and Physical</p> <p>The fourth LOINC code (LOI) for the information that was being requested about procedure code 27130. LOINC code 56447-6 is requesting the Care Plan</p>

Notification Unsolicited Event Level

A provider wants to notify the payer of a future elective inpatient admission. Based on previous encounters with a specific payer, a review of the patient’s medical records will be needed before the admission can be preauthorized. In this instance the provider will be sending both a Notification using the ASC X12N 278 (Health Care Services Review — Notification and Acknowledgment) and an ASC X12N 275 (Additional Information to Support a Health Care Services Review). The payer receives the notification for the elective admission and determines that a “Treatment Plan” has already been sent electronically as reported in the PWK. This information will be captured to assist with the ongoing utilization review process. The ASC X12N 278 Health Care Services Review - Notification and Acknowledgment will be returned to indicate that the notification was received and processed.

Table 10: Unsolicited Notification Event Level

ASC X12N 278 Health Care Services Review - Notification and Acknowledgment	Comments
<p>ST*278*000000001*005010X216~ ←</p> <p>BHT*0007*14*614571989898*20160717*051055*NO~</p> <p>HL*1**20*1~</p> <p>NM1*1P*1*****XX*NPI~</p> <p>PER*IC*INFORMATION SOURCE CONTACT NAME*TE*5555556310~</p> <p>HL*2*1*21*1~</p> <p>NM1*PR*2*****PI*PAYERID~</p> <p>HL*3*2*22*1~</p> <p>NM1*IL*4*****MI*MEMBERID~</p> <p>DMG*D8*19310131*U~</p> <p>HL*4*3*EV*0~</p> <p>UM*AR*I*1*21:B**E- ←</p> <p>DTP*435*D8*20160717~ ←</p> <p>HI*ABF:R079- ←</p> <p>HSD*DY*2- ←</p> <p>CL1*3*30~</p> <p>PWK*08*EL***AC*1234567~ ←</p> <p>NM1*71*1*PROVIDER*ATTENDING****XX*ATTENDINGNPI~</p> <p>NM1*AAJ*1*PROVIDER*ADMITTING****XX*ADMITTINGNPI~</p> <p>NM1*FA*2*FACILITY*****XX*FACILITYNPI~</p> <p>SE*20*000000001~</p>	<p>Implementation Convention Reference is the 005010X216.</p> <p>Initial elective notification for an inpatient admission The admission date will be 20160717 The admitting diagnosis The request is for 2 days</p> <p>The Attachment Control Number (PWK06 = 1234567) is assigned by the provider which will also be reported in the X12N 275 submission. In addition, the PWK segment is reporting that a “Plan of Treatment” (PWK01= ‘08’) was sent electronically (PWK02 = ‘EL’) to assist with the Utilization Review process.</p>

Table 11: Unsolicited Notification Event Level Additional Information

ASC X12N 275 Additional Information in Support of Health Care Services	Comments
<p>ST*275*1234*006020X316~ ←</p> <p>BGN*22*456789*20160502*0632~</p> <p>NM1*ACV*1*PROV*REQUESTING***XX*NPI*67*1P~ ←</p> <p>NM1*40*2*PAYER NAME****PI*PAYERID*67*PR~ ←</p> <p>NM1*IL*1*LASTNAME*FIRSTNAME****MI*MEMBERID~</p> <p>LX*1~</p> <p>TRN*1*1234567~ ←</p> <p>STC*R4:11488-4::LOI~ ←</p> <p>HI*ABF:R079~</p> <p>DTP*368*D8*20160502~</p> <p>CAT*AE*HL~</p> <p>OOI*1*47*ATTACHMENT~</p> <p>BDS*B64*3117* see Appendix B~</p> <p>SE*14*1234~</p>	<p>Implementation Convention Reference is the 006020X316.</p> <p>The provider that submitted the original Notification The Payer or UMO that will be receiving the transaction</p> <p>The Attachment Control Number (PWK06) that was originally submitted with the 278 Notification. The TRN01=1 reports that this is an unsolicited 275. The LOINC code (LOI) for the information that was sent to support the Notification LOINC code 11488-4 is requesting the Consult Note.</p>

X. RECOGNITION IN DEVELOPMENT OF WHITE PAPER

A special thanks to the following organizations for their contributions to this paper:

- ASC X12N
- Health Level 7 International
- Work Group for Electronic Data Interchange

The following individuals have contributed to the leadership in the development of this white paper:

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- Lenel James, Blue Cross Blue Shield Association
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- Penny Probst, Highmark
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- Sherry Wilson, Jopari Solutions

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APPENDIX A

ABBREVIATIONS, ACRONYMS, AND DEFINITIONS³

AIS – Additional Information Specification

ANSI – American National Standards Institute is the organization that accredits U.S. Standards Development Organizations, ensuring that their methods for creating standards are open and follow due process.

X12 - ANSI accredited standards development organization, and one of the six Designated Standards Maintenance Organizations (DSMO) tasked to develop, update and maintain the administrative and financial transactions standards.

X12N – Insurance Sub-Committee within X12 responsible for developing standards and related technical reports for the insurance industry.

ASC X12N 277 – Health Care Information Status Notification - Technical Report Type 3 for Health Care Claim Request for Additional Information

ASC X12N 275 – Patient Information – Technical Report 3 for Additional Information to Support a Health Care Claim or Encounter

ASC X12N 278 – Health Care Services Review Information Technical Report 3 for Health Care Services Request for Review and Response

ASC X12N 275 – Patient Information – Technical Report 3 for Additional Information to Support a Health Care Service Review

Attachments - The additional information needed in support of a healthcare administrative activity

Attachment Submission - Refers to additional information submitted to a payer either as a result of a request or based on advance knowledge of this information need (e.g., rules based on medical policy).

Attachment Control Number – A unique identifier assigned to the Request for Attachment and/or the Attachment used for linking the request to the response.

AWG – HL7 Attachment Work Group

CAQH CORE - Council for Affordable Quality Health Care Committee on Operating Rules for Information Exchange is a group organized to develop operating rules that align with adopted administrative healthcare standards transactions to encourage adoption. The goal is to improve the quality of healthcare and reduce administrative burdens for physicians and payers.

C-CDA - Consolidated Clinical Document Architecture

³ These Abbreviations, Acronyms and Definitions were developed by the HL7 Attachment Workgroup for the HL7 CDA® Attachment Implementation Guide: Exchange of C-CDA Based Documents, Release 1

CDA Documents for Attachments – Document level templates defined in the CDA Implementation Guides for Attachments.

CDA Implementation Guides for Attachments – Balloted HL7 Implementation guides that define documents that conform to the requirements of the HL7 US Realm Header which is specified in HL7 Implementation Guide for CDA® Release 2: Consolidated CDA Templates for Clinical Notes (US Realm).

CDA R2 - The HL7 Version 3 Clinical Document Architecture (CDA®) is a document markup standard that specifies the structure and semantics of "clinical documents" for the purpose of exchange between healthcare providers and patients. It defines a clinical document as having the following six characteristics: 1) Persistence, 2) Stewardship, 3) Potential for authentication, 4) Context, 5) Wholeness and 6) Human readability.

C-CDA R1.1 – HL7 Implementation Guides for CDA Release 2: IHE Health Story Consolidation, DSTU Release 1.1

C-CDA R2.1 - HL7 Implementation Guides for CDA Release 2: Consolidated CDA Templates for Clinical Notes Volume 1 Introductory Material and Volume 2 Templates and Supporting Material

CDA – Clinical Document Architecture

CDP1 - HL7 Implementation Guides for CDA Release 2: Additional CDA R2 Documentation Templates -- Clinical Documents for Payers – Set 1

Claim – A bill for healthcare services or healthcare encounter.

CMS – Centers for Medicare & Medicaid Services.

Compression - File compression is commonly used when sending a file from one computer to another over a connection that has limited bandwidth. The compression basically makes the file smaller and, therefore, the sending of the file is faster. For the purposes of Attachments compression using Request for Comment (RFC) 1951 is recommended.

DSTU – Draft Standard for Trial Use – an HL7 designation for a standard or implementation guide that is on a path to become a normative standard. In mid-2016 HL7 changed the title of publications for trial use from 'Draft Standard for Trial Use (DSTU)' to 'Standard for Trial Use (STU)'. Existing publications have maintained the original designation. Functionally, the two status designations are identical.

esMD - Electronic Submission of Medical Documentation – a CMS and ONC S&I initiative to identify specific standards to support the electronic exchange of medical documentation for administrative purposes.

GIF – Graphics Interchange Format is a digital bitmap image format

Healthcare Administrative Activity - Healthcare activities where the need for Attachments may be required (e.g., Claims, Referrals, Prior Authorizations, etc). This includes but is not limited to establishing coverage, conforming with treatment protocols, providing historical documentation for future treatment or other administrative functions

HL7 – Health Level 7 International is an ANSI-accredited standards development organization that develops data definitions and message formats that allow for the integration of healthcare information systems.

HTML -- Hypertext Markup Language, a standardized system for tagging text files to achieve font, color, graphic, and hyperlink effects on World Wide Web pages.

IETF® - Internet Engineering Task Force - The mission of the IETF is to make the Internet work better by producing high quality, relevant technical documents that influence the way people design, use, and manage the Internet.

JPEG – Joint Photographic Experts Group is a compressed digital photography Image compressed using the Joint Photographic Experts Group method

LOINC – Logical Observation Identifiers, Names and Codes (<http://loinc.org>). Logical Observation Identifiers Names and Codes is a database and universal standard for identifying medical laboratory observations. First developed in 1994, it was created and is maintained by the Regenstrief Institute, a US nonprofit medical research organization.

LOINC Document Type Code - Refers to the LOINC code for a specific type of document (i.e., CCD, History and Physical, Discharge Summary) to be exchanged

LOINC Document Type - Refers to a specific document type (i.e., CCD, History and Physical, Discharge Summary) to be exchanged

LOINC Implementation Guide Modifier Code – Requests that the LOINC Document Type use the corresponding template as defined in the specified implementation guide (including the specific version).

LOINC Range Modifier Code -- A modifier that refers to the “Item Selection” or “Time Window” value used to further constrain a LOINC Document Type Code request.

MIME – Multipurpose Internet Mail Extensions - is an extension of the original Internet e-mail protocol that lets people use the protocol to exchange different kinds of data files on the Internet: audio, video, images, application programs, and other kinds, as well as the ASCII text handled in the original protocol, the Simple Mail Transport Protocol (SMTP).

Mod-10 – Algorithm applied to a series of numbers to arrive at a single (0-9) digit (check digit). When used in LOINC codes, the algorithm is applied to the digits to left of the hyphen to compute the check digit to the right of the hyphen

MSWORD – Microsoft Word file format

OID - An ISO Object Identifier is a globally unique string consisting of numbers and dots (e.g., 2.16.840.1.113883.3.1). This string expresses a tree data structure, with the left-most number representing the root and the right-most number representing a leaf

ONC – Office of the National Coordinator

S&I – Standards and Interoperability – initiatives supported by ONC to identify and promote standards for interoperability

Solicited Attachment - Refers to additional information submitted to a payer in response to a near-term request from the payer

STU –Standard for Trial Use – an HL7 designation for a standard or implementation guide that is on a path to become a normative standard. In mid-2016 HL7 changed the title of publications for trial use from 'Draft Standard for Trial Use (DSTU)' to 'Standard for Trial Use (STU)'. Existing publications have maintained the original designation. Functionally, the two status designations are identical.

Payer - Refers to a healthcare entity, such as a health insurance company or UMO, that receives and process claims, prior authorizations and referrals

PDF – Portable Document Format is a file format developed by Adobe as a means of distributing compact, platform-independent documents

Plain Text – text with no embedded formatting codes

PNG – Portable Network Graphics is a bitmapped image format that employs lossless data compression.

RFC – Request for Comments in the context of this document refers to Internet Engineering Task Force tools.

RTF – Rich Text Format -- a proprietary document file format with published specification developed by Microsoft Corporation

Style sheet - Specification used by browsers for controlling the display of the markup language (e.g., XML or HTML), describing how elements of a document should be displayed.

Structured Document – a CDA header paired with a structuredBody element.

TIFF – Tagged Image Format used for scanned images

Triggering Event – an event such as a claim submission or request for prior authorization that may result in a request for additional information. Triggering Events in this document are for reference only and out of scope.

UMO – Utilization Management Organization - an organization that manages healthcare costs by influencing patient care decision-making through case-by-case assessments of the appropriateness of care prior to its provision.

Unsolicited Attachment - Refers to additional information submitted to a payer but done so based on advance knowledge of this information need (e.g., rules based on medical policy) rather than in response to a near-term request from the payer.

Unstructured Document – a CDA header paired with a nonXMLbody element

XML – eXtensible Markup Language is a software- and hardware-independent tool for storing and transporting data.

APPENDIX B HL7 C-CDA EXAMPLES

The following examples are not complete and are only meant to show what a Base64 encoded document looks like.

A. Unstructured Operative Report using JPEG

This is an example of an unstructured attachment with a JPEG document which is Base64 encoded. In this example the HL7 C-CDA is not Base64 encoded so the industry can see what the HL7 C-CDA looks like. When a file is sent, the data in BDS03 must be Base64 encoded. Items that are in the **red headers** are critical parts of the HL7 message.

XML Meta Data
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CDA Header
<pre><realmCode code="US"/> <typeId root="2.16.840.1.113883.1.3" extension="POCD_HD000040"/> <!-- US General Header Template --> <templateId root="2.16.840.1.113883.10.20.22.1.1" extension="2014-06-09"/> <!-- *** Note: The next templateId, code and title will differ depending on what type of document is being sent. *** --> <!-- conforms to the document specific requirements --> <templateId root="2.16.840.1.113883.10.20.22.1.10" extension="2014-06-09"/> <id extension="TT988" root="2.16.840.1.113883.19.5.99999.1"/> <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" code="11504-8" displayName="Surgical Operation Note"/> <title>Community Health and Hospitals: Operative Note</title> <effectiveTime value="201209161910-0400"/> <confidentialityCode code="N" codeSystem="2.16.840.1.113883.5.25"/> <languageCode code="en-US" /> <recordTarget> <patientRole> <id extension="998991" root="2.16.840.1.113883.19.5"/> <!-- Fake ID using HL7 example OID. --> <id extension="111-00-2330" root="2.16.840.1.113883.4.1"/> <!-- Fake Social Security Number using the actual SSN OID. --> <telecom nullFlavor="NI"/> <patient> <name use="L"> <!-- L is "Legal" from HL7 EntityNameUse 2.16.840.1.113883.5.45 --> <given>Isabella</given> <given>Isa</given> <!-- CL is "Call me" from HL7 EntityNamePartQualifier 2.16.840.1.113883.5.43 --> <family>Jones</family> </name> <administrativeGenderCode code="F" codeSystem="2.16.840.1.113883.5.1" displayName="Female"/> <birthTime value="20050501"/> <raceCode nullFlavor="NI"/> <ethnicGroupCode nullFlavor="NI"/></pre>

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3UfY83L0eU73WRFYjclPRARpdqM2cKWrf4FGnmIC9I5nZpEMfbskgm8u6BHaLcKmjYfdSxv8Hzp+qcod80p

```

OU8x4f6CZX/WsoaZBX+tXliRKw6qlzJXtF+RYsfEZef4FuiMJpVmoi9u3rFc77zrthyu2rXRnQrYnKNk+p3KZ1Iosl
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fDXIDFxK1XdTu95hoKe/p8mHtTfGJiEPO3U1SDVKTIvpeMoZZbE45NW2cOc4pledhrLBEncsVpda197Y1suO
OWrTVvqFeyaO2=</text>
    </nonXMLBody>
  </component>
</ClinicalDocument>

```

B. Non-XML Operative Notes Using Text

This is an example of an unstructured attachment with XML text. In this example the HL7 C-CDA is not Base64 encoded so the industry can see what the HL7 C-CDA looks like. When a file is sent, the data in BDS03 must be Base64 encoded. Items that are in **red headers** are critical parts of the HL7 message.

Meta Data
<pre> <?xml version="1.0" encoding="UTF-8" standalone="yes"?> <?xml-model href=" ../IGs/CDAR2_IG_CCDA_CLINNOTES_R2_D1_2014NOV/C-CDA-R2.sch" type="application/xml" schematypens="http://purl.oclc.org/dsdl/schematron"?> <?xml-stylesheet type="text/xsl" href="CDA.xsl"?> <ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:hl7-org:v3 ../IGs/CDAR2_IG_IHE_CONSOL_DSTU_R1dot1_2012JUL/Updated_CDA_Schema_Files_Extension_ Support/CDA_Schema_Files/infrastructure/cda/CDA_SDTC.xsd" xmlns="urn:hl7-org:v3" xmlns:cda="urn:hl7-org:v3" xmlns:sdct="urn:hl7-org:sdct"> </pre>
CDA Header
<pre> <realmCode code="US"/> <typeId root="2.16.840.1.113883.1.3" extension="POCD_HD000040"/> <!-- US General Header Template --> <templateId root="2.16.840.1.113883.10.20.22.1.1" extension="2014-06-09"/> <!-- *** Note: The next templateId, code and title will differ depending on what type of document is being sent. *** --> <!-- conforms to the document specific requirements --> <templateId root="2.16.840.1.113883.10.20.22.1.7" extension="2014-06-09"/> <id extension="TT988" root="2.16.840.1.113883.19.5.99999.1"/> <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" code="11504-8" displayName="Surgical Operation Note"/> <title>Community Health and Hospitals: Operative Note</title> <effectiveTime value="201209161910-0400"/> <confidentialityCode code="N" codeSystem="2.16.840.1.113883.5.25"/> <languageCode code="en-US" /> <recordTarget> <patientRole> <id extension="998991" root="2.16.840.1.113883.19.5"/> <!-- Fake ID using HL7 example OID. --> <id extension="111-00-2330" root="2.16.840.1.113883.4.1"/> <!-- Fake Social Security Number using the actual SSN OID. --> <telecom nullFlavor="NI"/> <patient> <name use="L"> <!-- L is "Legal" from HL7 EntityNameUse 2.16.840.1.113883.5.45 --> <given>Isabella</given> <given>Isa</given> </pre>

```

2.16.840.1.113883.5.43 -->          <!-- CL is "Call me" from HL7 EntityNamePartQualifier
                                     <family>Jones</family>
                                     </name>
                                     <administrativeGenderCode code="F"
codeSystem="2.16.840.1.113883.5.1" displayName="Female"/>
                                     <birthTime value="20050501"/>
                                     <raceCode nullFlavor="NI"/>
                                     <ethnicGroupCode nullFlavor="NI"/>
                                     <languageCommunication>
                                     <languageCode code="en-US" />
                                     </languageCommunication>
    </patient>
    <providerOrganization>
    <id root="2.16.840.1.113883.19.5.9999.1393"/>
    <name>Community Health and Hospitals</name>
    <telecom nullFlavor="NI"/>
    <addr>
    <streetAddressLine>1001 Village
Avenue</streetAddressLine>
    <city>Portland</city>
    <state>OR</state>
    <postalCode>99123</postalCode>
    <country>US</country>
    </addr>
    </providerOrganization>
    </patientRole>
</recordTarget>
<author>
    <time value="20050329224411+0500"/>
    <assignedAuthor>
    <id extension="99999999" root="2.16.840.1.113883.4.6"/>
    <code code="200000000X" codeSystem="2.16.840.1.113883.6.101"
displayName="Allopathic & Osteopathic Physicians"/>
    <telecom nullFlavor="NI"/>
    <assignedPerson>
    <name>
    <given>Henry</given>
    <family>Seven</family>
    </name>
    </assignedPerson>
    </assignedAuthor>
</author>
<custodian>
    <assignedCustodian>
    <representedCustodianOrganization>
    <id extension="99999999" root="2.16.840.1.113883.4.6"/>
    <name>Community Health and Hospitals</name>
    <telecom nullFlavor="NI"/>
    </representedCustodianOrganization>
    </assignedCustodian>
</custodian>
<documentationOf typeCode="DOC">
    <serviceEvent classCode="PCPR">
    <code code="73761001" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED CT" displayName="Colonoscopy"/>

```

```

    <effectiveTime>
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      <high value="201209161910-0400"/>
    </effectiveTime>
    <performer typeCode="PPRF">
      <functionCode code="PCP" codeSystem="2.16.840.1.113883.5.88"
codeSystemName="ParticipationFunction" displayName="Primary Care Provider">
        <originalText>Primary Care Provider</originalText>
      </functionCode>
    </performer>
    <time>
      <low value="201209091910-0400"/>
      <high value="201209161910-0400"/>
    </time>
    <assignedEntity>
      <id extension="PseudoMD-3" root="2.16.840.1.113883.4.6"/>
      <code code="207RG0100X"
displayName="Gastroenterologist" codeSystemName="Provider Codes"
codeSystem="2.16.840.1.113883.6.101"/>
      <addr>
        <streetAddressLine>1001 Village
Avenue</streetAddressLine>
        <city>Portland</city>
        <state>OR</state>
        <postalCode>99123</postalCode>
        <country>US</country>
      </addr>
      <telecom value="tel:+1-555-555-5000" use="HP"/>
      <assignedPerson>
        <name>
          <prefix>Dr.</prefix>
          <given>Henry</given>
          <family>Seven</family>
        </name>
      </assignedPerson>
      <representedOrganization>
        <id root="2.16.840.1.113883.19.5.9999.1393"/>
        <name>Community Health and Hospitals</name>
        <telecom value="tel:+1-555-555-5000" use="HP"/>
        <addr>
          <streetAddressLine>1001 Village
Avenue</streetAddressLine>
          <city>Portland</city>
          <state>OR</state>
          <postalCode>99123</postalCode>
          <country>US</country>
        </addr>
      </representedOrganization>
    </assignedEntity>
  </performer>
</serviceEvent>
</documentationOf>
<!--
CDA Body
***** -->
  <component>
    <structuredBody>

```

```

<!--
*****
OPERATIVE NOTE SURGICAL PROCEDURE
*****
-->
      <component>
        <section>
          <code code="10164-2" codeSystem="2.16.840.1.113883.6.1"
            codeSystemName="LOINC"/>
          <title>History of Present Illness</title>
          <text>
            <content styleCode="Bold">Henry Levin, the
7<sup>th</sup></content>
            is a 67 year old male referred for further asthma
management.
            Onset of asthma in his <content
revised="delete">twenties</content>
            <content revised="insert">teens</content>.
            He was hospitalized twice last year, and already twice
this year.
            He has not been able to be weaned off steroids for
the past several
            months.
          </text>
        </section>
      </component>
      <component>
        <section>
          <templateId root="2.16.840.1.113883.10.20.22.2.25"
extension="2014-06-09"/>
          <code code="59774-0" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC"/>
          <title>Anesthesia</title>
          <text>No Information</text>
        </section>
      </component>
      <component>
        <section>
          <templateId root="2.16.840.1.113883.10.20.22.2.37"
extension="2014-06-09"/>
          <code code="55109-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC"/>
          <title>Complications</title>
          <text>No Information</text>
        </section>
      </component>
      <component>
        <section>
          <templateId root="2.16.840.1.113883.10.20.22.2.34"
extension="2014-06-09"/>
          <code code="10219-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC"/>
          <title>Preoperative Diagnosis</title>
          <text>No Information</text>
        </section>
      </component>

```

```

        <component>
          <section>
            <templateId root="2.16.840.1.113883.10.20.18.2.9"/>
            <code code="59770-8" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC"/>
            <title>Procedure Estimated Blood Loss</title>
            <text>No Information</text>
          </section>
        </component>
        <component>
          <section>
            <templateId root="2.16.840.1.113883.10.20.22.2.28"
extension="2014-06-09"/>
            <code code="59776-5" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC"/>
            <title>Procedure Findings</title>
            <text>No Information</text>
          </section>
        </component>
        <component>
          <section>
            <templateId root="2.16.840.1.113883.10.20.22.2.31"/>
            <code code="59773-2" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC"/>
            <title>Procedure Findings</title>
            <text>No Information</text>
          </section>
        </component>
        <component>
          <section>
            <templateId root="2.16.840.1.113883.10.20.22.2.27"/>
            <code code="29554-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC"/>
            <title>Procedure Description</title>
            <text>No Information</text>
          </section>
        </component>
        <component>
          <section>
            <templateId root="2.16.840.1.113883.10.20.22.2.35"/>
            <code code="10218-6" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC"/>
            <title>Postoperative Diagnosis</title>
            <text>No Information</text>
          </section>
        </component>
      </structuredBody>
    </component>
  </ClinicalDocument>

```

C. Structured C-CDA_R2_Operative-Note

This is an example of a structured attachment. In this example, the HL7 C-CDA is not Base64 encoded so the industry can see what the HL7 C-CDA looks like. When a file is sent, the data in BDS03 must be Base64 encoded. Items that are in **red headers** are critical parts of the HL7 message.

Please note that while this is a structured attachment the code narratives are required.

Meta Data
<pre><?xml version="1.0" encoding="UTF-8" standalone="yes"?> <?xml-model href=" ../IGs/CDAR2_IG_CCDA_CLINNOTES_R2_D1_2014NOV/C-CDA-R2.sch" type="application/xml" schematypens="http://purl.oclc.org/dsdl/schematron"?> <?xml-stylesheet type="text/xsl" href="CDA.xsl"?> <ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:hl7-org:v3 ../IGs/CDAR2_IG_IHE_CONSOL_DSTU_R1dot1_2012JUL/Updated_CDA_Schema_Files_Extension_Support/CDA_Schema_Files/infrastructure/cda/CDA_SDTC.xsd" xmlns="urn:hl7-org:v3" xmlns:cda="urn:hl7-org:v3" xmlns:sdtc="urn:hl7-org:sdtc"></pre>
CDA Header
<pre><realmCode code="US"/> <typeId root="2.16.840.1.113883.1.3" extension="POCD_HD000040"/> <!-- US General Header Template --> <templateId root="2.16.840.1.113883.10.20.22.1.1" extension="2014-06-09"/> <!-- *** Note: The next templateId, code and title will differ depending on what type of document is being sent. *** --> <!-- conforms to the document specific requirements --> <templateId root="2.16.840.1.113883.10.20.22.1.7" extension="2014-06-09"/> <id extension="TT988" root="2.16.840.1.113883.19.5.99999.1"/> <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" code="11504-8" displayName="Surgical Operation Note"/> <title>Community Health and Hospitals: Operative Note</title> <effectiveTime value="201209161910-0400"/> <confidentialityCode code="N" codeSystem="2.16.840.1.113883.5.25"/> <languageCode code="en-US" /> <recordTarget> <patientRole> <id extension="998991" root="2.16.840.1.113883.19.5"/> <!-- Fake ID using HL7 example OID. --> <id extension="111-00-2330" root="2.16.840.1.113883.4.1"/> <!-- Fake Social Security Number using the actual SSN OID. --> <telecom nullFlavor="NI"/> <patient> <name use="L"> <!-- L is "Legal" from HL7 EntityNameUse 2.16.840.1.113883.5.45 --> <given>Isabella</given> <given>Isa</given> <!-- CL is "Call me" from HL7 EntityNamePartQualifier 2.16.840.1.113883.5.43 --> <family>Jones</family> </name> <administrativeGenderCode code="F" codeSystem="2.16.840.1.113883.5.1" displayName="Female"/></pre>

```

        <birthTime value="20050501"/>
        <raceCode nullFlavor="NI"/>
        <ethnicGroupCode nullFlavor="NI"/>
        <languageCommunication>
            <languageCode code="en-US" />
        </languageCommunication>
    </patient>
    <providerOrganization>
        <id root="2.16.840.1.113883.19.5.9999.1393"/>
        <name>Community Health and Hospitals</name>
        <telecom nullFlavor="NI"/>
        <addr>
            <streetAddressLine>1001 Village
Avenue</streetAddressLine>
            <city>Portland</city>
            <state>OR</state>
            <postalCode>99123</postalCode>
            <country>US</country>
        </addr>
    </providerOrganization>
</patientRole>
</recordTarget>
<author>
    <time value="20050329224411+0500"/>
    <assignedAuthor>
        <id extension="99999999" root="2.16.840.1.113883.4.6"/>
        <code code="200000000X" codeSystem="2.16.840.1.113883.6.101"
displayName="Allopathic & Osteopathic Physicians"/>
        <telecom nullFlavor="NI"/>
        <assignedPerson>
            <name>
                <given>Henry</given>
                <family>Seven</family>
            </name>
        </assignedPerson>
    </assignedAuthor>
</author>
<custodian>
    <assignedCustodian>
        <representedCustodianOrganization>
            <id extension="99999999" root="2.16.840.1.113883.4.6"/>
            <name>Community Health and Hospitals</name>
            <telecom nullFlavor="NI"/>
        </representedCustodianOrganization>
    </assignedCustodian>
</custodian>
<documentationOf typeCode="DOC">
    <serviceEvent classCode="PCPR">
        <code code="73761001" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED CT" displayName="Colonoscopy"/>
        <effectiveTime>
            <low value="201209091910-0400"/>
            <high value="201209161910-0400"/>
        </effectiveTime>
    </serviceEvent>
    <performer typeCode="PPRF">

```

```

        <functionCode code="PCP" codeSystem="2.16.840.1.113883.5.88"
codeSystemName="ParticipationFunction" displayName="Primary Care Provider">
        <originalText>Primary Care Provider</originalText>
    </functionCode>
    <time>
        <low value="201209091910-0400"/>
        <high value="201209161910-0400"/>
    </time>
    <assignedEntity>
        <id extension="PseudoMD-3" root="2.16.840.1.113883.4.6"/>
        <code code="207RG0100X"
displayName="Gastroenterologist" codeSystemName="Provider Codes"
codeSystem="2.16.840.1.113883.6.101"/>
        <addr>
            <streetAddressLine>1001 Village
Avenue</streetAddressLine>
            <city>Portland</city>
            <state>OR</state>
            <postalCode>99123</postalCode>
            <country>US</country>
        </addr>
        <telecom value="tel:+1-555-555-5000" use="HP"/>
        <assignedPerson>
            <name>
                <prefix>Dr.</prefix>
                <given>Henry</given>
                <family>Seven</family>
            </name>
        </assignedPerson>
        <representedOrganization>
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Avenue</streetAddressLine>
                <city>Portland</city>
                <state>OR</state>
                <postalCode>99123</postalCode>
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</serviceEvent>
</documentationOf>
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CDA Body

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*****
OPERATIVE NOTE SURGICAL PROCEDURE
*****
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              <content styleCode="Bold">Henry Levin, the
                is a 67 year old male referred for further asthma
                Onset of asthma in his <content
                  <content revised="insert">teens</content>.
                  He was hospitalized twice last year, and already twice
                  He has not been able to be weaned off steroids for
                  months.
                </text>
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