HL7 Attachment Specification: Supplement to Consolidated CDA Templated Guide, Release 1
June 2013

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1 FOREWORD

Publication of this Technical Report that has been registered with ANSI has been approved by the accredited standards developer Health Level Seven International (HL7), 3300 Washtenaw Ave., Suite 227, Ann Arbor MI 48104, USA. This document is registered as a Technical Report according to the procedures for the Registration of Technical Reports with ANSI. This document is not an American National Standard and the material contained herein is not normative in nature. Comments on the content of this document should be sent to the HL7 Clinical Interoperability Council Work Group, 3300 Washtenaw Ave., Suite 227, Ann Arbor MI 48104-4261 or hq@hl7.org. This document was registered as a Technical Report to provide guidance in implementing the HL7 Implementation Guide for CDA R2: IHE Health Story Consolidation (Consolidated-CDA) for attachment purposes, including but not limited to claims/encounters, referrals, prior-authorizations, post-adjudicated claims audits, etc.
2 PREFACE

2.1 Revision History

The following provides a historical view of the iterations for this document and why each major revision was made.

<table>
<thead>
<tr>
<th>Date</th>
<th>Purpose</th>
</tr>
</thead>
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<tr>
<td>January 2013</td>
<td>Version 1.0</td>
</tr>
</tbody>
</table>

2.2 Acknowledgements

The writers and editors of this document want to acknowledge the years of hard work and dedicated efforts of the current and past members of the Attachments Special Interest Group (ASIG), the Structured Documents and Attachments Work Groups at HL7 in building forward the research and development needed to achieve the goal of information exchange amongst the provider community and health plans/healthcare insurance companies.

The information needs of the industry that were identified and developed over the years became key input into the foundational content found in the HL7 Implementation Guides for CDA Release 2: IHE Health Story Consolidation, DSTU Release 1.1 (C-CDA). This standard is expected to be widely used in the exchange of clinical information between providers as well as between providers and patients in satisfying many exchange criteria established under the Medicare/Medicaid EHR Incentive Program (aka, “Meaningful Use”).

This material contains content from LOINC® (http://loinc.org). The LOINC table, LOINC codes, and LOINC panels and forms file are copyright © 1995-2012, Regenstrief Institute, Inc. and the Logical Observation Identifiers Names and Codes (LOINC) Committee and are available at no cost under the license at http://loinc.org/terms-of-use.
3 INTRODUCTION

This guide is intended to be used in conjunction with the HL7 Implementation Guides for CDA Release 2: IHE Health Story Consolidation, DSTU Release 1.1 (C-CDA) to describe to HealthCare industry stakeholders how to implement components of the C-CDA for the purposes described in this guide in section 2.2 below.

This supplement will serve to direct implementers to the appropriate HL7 implementation standard used to format the content based on the clinical document being exchanged as an attachment. Currently, the C-CDA is the only implementation standard to be used. Refer to the C-CDA (Sections 1.7 & 1.8) for additional information regarding levels of constraint, conformance statements, conformance verbs, cardinality, vocabulary conformance, and null flavor.

3.1 Audience

The audiences for this supplement are implementers, such as architects and developers, responsible for the exchange of supporting/attachment information among healthcare providers (hereafter known as ‘providers’), health plans/utilization management organizations and/or their business associates (hereafter known as ‘payers’).

3.2 Purpose

This guide is intended to be used as a supplement to the C-CDA. It provides guidance to implementers as they exchange additional supporting information needed amongst payers/UMO’s (Utilization Management Organization) and providers.

Examples of Healthcare Administrative Activities requiring this supporting information include, but are not limited to, additional information:

- In support of a healthcare claim or encounter
- In support of healthcare services review (e.g., prior authorizations/precertifications, referrals)
- In support of post adjudicated claim audits

For the purposes of this supplement, healthcare supporting/additional information will be referred to as Attachments Information, historically known as “Attachments”. Additionally, a healthcare claim or encounter may be referred to as a Claim without mention of encounter. Throughout this supplement, Healthcare Administrative Activities will include any or all of the activities listed above.

Attachments are a means of electronically exchanging supporting information to augment each of the examples above. The ultimate goal of Attachments standardization in providing structured, standardized electronic data is to enable the fully automated exchange and processing of supplemental information in the various...
healthcare activities shown above. While some processes will always require human intervention, use of fully structured attachments may significantly reduce human intervention and turnaround time for adjudication or resolution.

3.3 Scope

This supplement is limited in scope to those functions which support the exchange of healthcare information among providers and payers in support of the administrative business functions of both as identified in section 2.2 of this supplement.

This supplement is limited in focus to use of the C-CDA to exchange clinical information amongst entities in a single electronic clinical document. This may already exist as is, or need to be created for this exchange.

It will also offer guidance as to how to re-associate that single clinical document with the healthcare administrative activity for which additional information was originally needed. It may describe scenarios for those business events which could be broader than the intended scope of this supplement to assist the audience in understanding the context of how the single clinical document exchange fits into the overall picture.

While the single clinical document can exist entirely on its own, this supplement will focus on the electronic exchange of that document from one point to another. This supplement will present examples of that exchange using existing standards, however, use of those standards as examples does not limit implementations to only those exchange standards.

This supplement is independent of the method for exchange (i.e., transport, networking, connectivity, security/privacy).

3.4 Overview

The sections below provide the historical background of claim attachments as well as a description of the approach used by the Attachments Work Group (AWG) to develop this supplement.

3.4.1 Background

The Administrative Simplification provision of the Health Insurance Portability and Accountability Act (HIPAA) of 1996 mandated the use of named healthcare electronic data interchange standards for the electronic conveyance of healthcare data that meets the business purposes specifically addressed under HIPAA. An NPRM was issued in 2005, but was withdrawn before a final rule generated. In 2010, the Patient Protection and Affordable Care Act (PPACA) re-instituted the original requirement under HIPAA for attachments.

The Centers for Medicare and Medicaid Services (CMS) worked with Health Plans and key industry stakeholders to identify the types of attachments needed by the healthcare industry. This group also worked with the Accredited Standards Committee (ASC) X12 Standard Development Organization (ASC X12) to define an electronic transaction that could be used to support the request for Attachment information. The ASC X12 277
transaction was the most viable option. It was also determined that a proposed claims attachment standard combining the standards development efforts of ASC X12 and Health Level Seven (HL7) would be the best option to support sending the attachment information. The proposed solution was the ASC X12 275 transaction with the HL7 Clinical Document embedded within the BDS/Binary segment.

It was evident, that while the healthcare industry continues to evolve technically, in many cases it still relies heavily on paper based or imaged (scanned) health records for attachment data. Many healthcare delivery systems were not capable of providing discrete codified data. In addition, the healthcare industry like many other industries was moving towards using newer technologies such as Extensible Markup Language (XML) to transfer data. As all of this was occurring in the industry, parallel efforts within the HL7 organization brought forth the Clinical Document Architecture (CDA) - the first ANSI-accredited XML-based standard in the healthcare industry

The industry identified the following attachment types as the most widely used within the industry: Rehabilitation Services (10 separate disciplines), Clinical Reports, Laboratory Results, Ambulance, and Medications. The content of the attachment data for each type was documented in the Additional Information Specifications (AIS) developed by HL7. While recognizing that these five attachments did not represent all attachment data needed by the healthcare industry, the workgroups developing the attachments chose these based on industry outreach and estimated that these attachments comprise the majority of the attachment volume required by payers today.

3.4.2 Approach

With the advent of “Meaningful Use” and its clinical document exchange requirements between providers and other legally permitted entities, along with its similarity to the business model for clinical document exchange previously described in the attachments model, a re-assessment of the attachments model was undertaken. It revealed that the content found in the C-CDA (the standard named for Meaningful Use) is largely consistent with that needed for attachments purposes.

After much discussion, the AWG determined that it was not in the best interest of providers and/or their vendors to support multiple formats for this exchange based on the recipient. Rather than one standard format for the provider-to-provider information exchange and another (i.e., the original Additional Information Specification (AIS) for provider-to-payer information exchange, the AWG agreed to adapt their approach to leverage and be consistent with that of the C-CDA with respect to formatting clinical documentation.

The AWG then performed a gap analysis between the C-CDA content and the AIS content. The AIS’s were the original attachments specifications. Information needed for purposes described in section 2.2 that was present in the AIS but not in the C-CDA was identified and passed to the Structured Document Work Group for inclusion into the C-CDA. In some cases, the result was information from the original AIS’s being added to the C-CDA, and are now identified by their corresponding clinical document (attachment) types (see section 3.3). Information present in the C-CDA but not in the AIS was evaluated and found to be acceptable for the purposes of claims attachments.
The C-CDA is intended to have a broad industry footprint and not to be implementation specific. Information specific to implementations as described in section 2.2 is not included in the C-CDA. This supplement was created to capture the Attachments specifications not available in the C-CDA.

The C-CDA by itself does not fully satisfy the needs of the industry for attachment information exchange. Additional metadata/enveloping is needed to assist in the correct pairing with a healthcare administrative activity and the attachment itself. For this purpose, ASC X12 had developed a suite of standards for use with the original AIS’s. Through this supplement, references and examples of attachment activity may cite specific ASC X12 standards previously developed for this purpose, however there is no intent by the authors of this supplement to limit those metadata/enveloping standards to those provided by ASC X12, and is provided for example purposes only.

### 3.5 Organization of This Guide

This supplement specifies general information and additional conformance criteria for the implementation of attachments information exchange. The primary guidance to create attachment document types is contained within the C-CDA, with additional conformance criteria specific to attachments provided within this supplement and is organized into chapters with references to tables and figures throughout.

**Chapter 1 – Preface.** This chapter provides revision history and acknowledgements.

**Chapter 2 – Introduction.** This chapter provides foundational information about the evolution of attachments, including terminology, definitions and acronyms specific to understanding attachment.

**Chapter 3 – Understanding C-CDA.** This chapter offers introductory information about the C-CDA and for utilizing it to convey attachment information.

**Chapter 4 – Additional Information (Attachments) General.** This chapter provides information about standards, use of LOINC codes in request/response, Modifier LOINC Codes, using RELMA to navigate the LOINC database and OID’s.

**Chapter 5 – Examples (Additional Information (attachments) Use Cases).** This chapter provides representative examples for the request/response of attachment information.

**Chapter 6 – Important Information Not Previously Addressed in This Supplement.** This chapter provides insight into assumptions of the attachment model not specifically addressed elsewhere.

**Chapter 7 – Obtaining New Attachment Types.** This chapter provides basic guidance to the industry for the process of requesting new attachment types.

**Chapter 8 – Appendices.** This chapter provides additional information regarding required metadata, candidate enveloping standards and the use of stylesheets.

### 3.6 Additional Attachment Information - Request and Response

Typically, in the course of doing business payers will need additional information from a provider to determine if the level of service being performed or requested is consistent
with the patient’s insurance benefits. Payers also have general medical policies established that must be checked for consistency with the patients insurance benefits.

It is important to note that in all cases the request for additional attachment information comes in one of two forms, electronic or non-electronic. This supplement takes no position regarding the requirement to use electronic requests or responses, rather it simply addresses what information in a standardized format is to be exchanged when electronic requests or responses are used. However, while this supplement by necessity must define the complete attachment activity scenario, it **only addresses attachment scenarios where a standard electronic response is involved.**

### 3.6.1 Solicited and Unsolicited Attachments

For the purposes of this supplement, we will use the terms “solicited” and “unsolicited” to help clarify the scenarios for which one or more standards are to be used. The response, whether solicited or unsolicited, refers to the act of providing additional attachment information needed.

Solicited and unsolicited scenarios are tied closely to the response side of the attachment activity without regard to the mode of the request. They are also aligned closely with the entity establishing the attachment re-association ID that is used to match the attachment itself with either the claim, referral, or prior authorization attachment activity (more about attachment re-association ID in [section 2.6.5](#)).

A solicited attachment refers to the act of requesting and/or responding with attachment information which was requested after a healthcare entity determines a need for additional information to complete the **healthcare administrative activity**.

An unsolicited attachment refers to the act of providing attachment information that conforms to a set of rules-based criteria invoked at the time of the submittal of a **healthcare administrative activity**. This information is based on advance knowledge of rules defined by the information receiver. An unsolicited attachment would never be sent in response to a standard electronic attachment request. A key component of both scenarios is the entity establishing the linkage to re-associate the **healthcare administrative activity** with the corresponding attachment information.

In the **solicited scenario**, the entity creating the request for attachment would assign an attachment ID used to re-associate the attachment response to the original attachment request. This attachment identifier **must** be returned with the attachment response.

In the **unsolicited scenario**, the entity that is the source for the attachment information would assign an attachment ID. This attachment identifier **must** be provided with the additional information to be re-associate with the **healthcare administrative activity**.

This supplement takes no position with respect to the business reasons that initiate unsolicited attachments. However, industry best practices suggest that in the absence of business rules established in advance, attachment information should not be sent.
3.6.2 Request Attachment Activity

A request for additional information can originate in numerous ways and may be initiated by unique triggering business events depending on the originating actor. The table below reflects some of the more common scenarios for illustrative purposes:

Table 1: Request Attachment Activity Table

<table>
<thead>
<tr>
<th>Healthcare Administrative Activity</th>
<th>Request</th>
<th>Mode</th>
<th>Timing</th>
<th>Assigning Actor</th>
<th>Attachment Activity Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Claim</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>Rule Based</strong></td>
<td></td>
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<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td><strong>Prior Authorization</strong></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Referral</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

1 Payers request criteria (rules based) for a certain type of claim for a specific health care provider, procedure, or service is known in advance to the provider.

2 Payers request criteria (rules based) for certain types of prior authorizations or referral is known in advance to the provider.
### 3.6.3 Response Attachment Activity

The act of exchanging attachment information from an information source to an information receiver is considered a response. The information source is considered the entity that possesses the attachment information needed by the receiving entity to support the healthcare administrative activity.

### 3.6.4 Understanding Attachment Activities

Because this supplement addresses all facets of the process in the requesting of and responding with attachments information, and because the actors role will vary depending on the activity type, a table (Table 2) has been developed to better illustrate these activities. Each row in the table represents a unique attachment activity that would require a unique business flow to describe that activity. Additionally, each row will call for a unique set of electronic exchange standards to be used.

As described later in Section 4.1 of this supplement, there are multiple standards available in the industry to accomplish the exchange of information for attachment purposes (i.e., request, response, acknowledgement, etc). For the purposes of this supplement, example scenarios and use cases will reference those standards, such as ASC X12, previously developed to accomplish attachments information exchange for example purposes ONLY. Out of scope are specific standards and methods for connectivity in moving the attachment information from point to point.

---

3 A response may also be thought of an attachment submittal in the unsolicited scenario
Table 2 (Attachments Activity Table) below describes all scenarios addressed by this supplement for attachment exchange purposes. Column headings and table values are described below:

- **Healthcare Administrative Activity** – The type of *healthcare administrative activity* of the originating actor for the ‘request’ activity type.

- **Activity ID** – A symbolic ID used to express, in abbreviated form, the attachment activity. (NOTE: This ID will be used to uniquely determine the *standard(s)* necessary to accomplish the attachment exchange activity described in the row of the table)

- **Activity Type** – Describes the type of activity of the originating actor.
  - **Request** – explicitly requested attachment information, either electronically or some other method.
  - **Response** – attachment information provided electronically in response to an explicit request.
  - **Attachment Submission** – attachment information provided electronically in response to an “advance rule based” request for attachment information (i.e., mutually known rules, policy or guidelines).

- **Attachment Activity Basis**
  - **Solicited** – attachment information which is:
    - an explicit request or
    - the response to an explicit request.
  - **Unsolicited** – attachment information from the Originator Actor to the Receiver Actor based ONLY on a “rules based” request and in the absence of an explicit request.

- **Actor**
  - **Originator** – the actor originating or initiating the attachment activity.
  - **Receiver** – the actor receiving the attachment activity.

- **Example Figure ID** – Identifies specific Figures/Illustrations within this Supplement that depict the specific *Healthcare Administrative Activity*.

- **Envelope/Transaction Standard Example** – Identifies examples of electronic standards available to accomplish the specific attachment activity for that table row.
Table 2: Attachments Activity Table

<table>
<thead>
<tr>
<th>Healthcare Administrative Activity</th>
<th>Activity ID</th>
<th>Originator Activity Type</th>
<th>Attachment Activity Basis</th>
<th>Actor</th>
<th>Example Figure ID</th>
<th>Envelope/Transaction Standard Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Claims Attachment</td>
<td>#1</td>
<td>Request</td>
<td>Solicited</td>
<td>X</td>
<td>Payer</td>
<td>Provider</td>
</tr>
<tr>
<td></td>
<td>#2</td>
<td>Response</td>
<td>Solicited</td>
<td>X</td>
<td>Provider</td>
<td>Payer</td>
</tr>
<tr>
<td></td>
<td>#3</td>
<td>Attachment Submission</td>
<td>Unsolicited</td>
<td></td>
<td>Provider</td>
<td>Payer</td>
</tr>
<tr>
<td>Prior Auth Attachment</td>
<td>#4</td>
<td>Request</td>
<td>Solicited</td>
<td>X</td>
<td>Payer</td>
<td>Provider</td>
</tr>
<tr>
<td></td>
<td>#5</td>
<td>Response</td>
<td>Unsolicited</td>
<td></td>
<td>Provider</td>
<td>Payer</td>
</tr>
<tr>
<td></td>
<td>#6</td>
<td>Attachment Submission</td>
<td>Unsolicited</td>
<td></td>
<td>Provider</td>
<td>Payer</td>
</tr>
<tr>
<td>Referral Attachment</td>
<td>#7</td>
<td>Request</td>
<td>Solicited</td>
<td>X</td>
<td>Payer/Referring Provider</td>
<td>Referred To Provider</td>
</tr>
<tr>
<td></td>
<td>#8</td>
<td>Response</td>
<td>Unsolicited</td>
<td></td>
<td>Referred To Provider</td>
<td>Payer/Referring Provider</td>
</tr>
<tr>
<td></td>
<td>#9</td>
<td>Attachment Submission</td>
<td>Unsolicited</td>
<td></td>
<td>Referred To Provider</td>
<td>Payer/Referring Provider</td>
</tr>
<tr>
<td>Notification Attachment</td>
<td>#10</td>
<td>Attachment Submission</td>
<td>Unsolicited</td>
<td></td>
<td>Facility provider</td>
<td>Primary care provider</td>
</tr>
<tr>
<td>Post Adjudicated Claim Attachment</td>
<td>#11</td>
<td>Request</td>
<td>Unsolicited</td>
<td></td>
<td>Payer</td>
<td>Provider</td>
</tr>
<tr>
<td></td>
<td>#12</td>
<td>Response</td>
<td>Unsolicited</td>
<td></td>
<td>Provider</td>
<td>Payer</td>
</tr>
</tbody>
</table>

<sup>4</sup> ASC X12 277 – Health Care Claim Request for Additional Information
<sup>5</sup> ASC X12 275 – Additional Information to Support a Health Care Claim or Encounter
<sup>6</sup> ASC X12 278 – Health Care Services Request for Review and Response
<sup>7</sup> ASC X12 275 – Additional Information to Support a Health Care Service Review
To better understand the relationship of the row values for each attachment activity, a “table interpretation template” was developed:

**Table interpretation template:**

Activity “**Activity ID**” represents the information exchange for the “**Healthcare Administrative Activity**” “**Solicited / Unsolicited**” “**Originator Activity Type**” for additional information from the “**Originator**” to the “**receiver**”.

By substituting the row values found for each of the heading column identified in “**BOLD**” type, a high level use case description can be created. The following examples are derived from the table using the template above:

3.6.4.1 Claim Attachment Scenarios [Examples](#)

- **Activity #1** represents the information exchange for the **Claims Attachment solicited request** for additional information from the **payer** to the **provider**.

- **Activity #2** represents the information exchange for the **Claims Attachment solicited response** for additional information from the **provider** to the **payer**.

- **Activity #3** represents the information exchange for the **Claims Attachment unsolicited attachment submission** for additional information from the **provider** to the **payer**.

3.6.4.2 Prior Authorization Attachment Scenarios [Examples](#)

- **Activity #4** represents the information exchange for the **prior authorization attachment solicited request** for additional information from the **payer** to the **provider**.

- **Activity #5** represents the information exchange for the **prior authorization attachment solicited response** for additional information from the **provider** to the **payer**.

- **Activity #6** represents the information exchange for the **prior authorization attachment unsolicited attachment submission** for additional information from the **provider** to the **payer**.

3.6.4.3 Referral Attachment Scenarios [Examples](#)

- **Activity #7** represents the information exchange for the **Referral Attachment solicited request** for additional information from the **payer/referred to provider** to the **referring provider**.

- **Activity #8** represents the information exchange for the **Referral Attachment solicited response** for additional information from the **referring provider** to the **payer/referred to provider**.

- **Activity #9** represents the information exchange for the **referral attachment unsolicited attachment submission** for additional information from the **referring provider** to the **payer/referred to provider**.
3.6.4.4 Notification Attachment Scenarios (Examples)

- **Activity #10**, represents the information exchange for the notification attachment unsolicited attachment submissions for additional information from the facility provider to the primary care provider.

3.6.4.5 Post Adjudicated Claims Scenarios (Examples)

- **Activity #11** represents the information exchange for the Post Adjudicated Claim solicited request for additional information from the payer to the provider.
- **Activity #12** represents the information exchange for the Post Adjudicated Claim solicited response for additional information from the provider to the payer.

3.6.4.6 Attachment Activity Table association to standards

Use of this table permits standards correlation to each of the activity ID's with a current ASC X12 standard(s), or any other future standard(s) that perform a comparable function. Future regulation could expand to other standards comparable to the ASC X12 standards, to which the activity ID could correlate.

3.6.4.7 Attachment Scenario and Scope

The activities above are not meant to reflect and/or include business events activity other than those directly related to the requesting and responding with attachment information. Triggering events which create the need for attachment request or response/submittal may be indicated in examples in Chapter 5 but are NOT in scope for this Supplement. They are present to help the implementer understand where an attachment activity may fit within the overall business process. For example, when a provider requests authorization from a payer prior to rendering a service, the act of submitting the prior authorization request is not included in scope. Only the payer's requesting additional information and the provider's subsequent submittal of that additional information are included.

3.6.5 Attachment Request/Response Re-Association using Attachment ID

An essential component of an attachment activity is the ability to re-associate the attachment with the request through the use of an attachment ID. Depending on the attachment activity, the entity responsible for assigning an attachment ID will vary. When the attachment is unsolicited, the attachment ID SHALL be used in both the attachment and the enveloping metadata. When the attachment is solicited, the attachment ID SHALL be used only in the enveloping metadata (for more information on enveloping metadata, see Appendix A - *Business Requirements for requesting and submitting attachment* (Metadata)).

The table on the next page highlights how the attachment ID will be integrated into the attachment activity processes.
Table 3: Attachments ID Re-association Table

<table>
<thead>
<tr>
<th>Healthcare Administrative Activity</th>
<th>Activity ID Relationship</th>
<th>Attachment Activity</th>
<th>Attachment ID creator</th>
<th>Intended Re-association linkage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Claim Attachment</strong></td>
<td>Paired together as a solicited request/response for claims attachment information</td>
<td>Activity #1 represents the information exchange for the Claims Attachment solicited request for additional information from the payer to the provider</td>
<td>Payer</td>
<td>Provider returns the ID from the request (#1) in their claims attachment information response (#2)</td>
</tr>
<tr>
<td></td>
<td>Stand alone</td>
<td>Activity #2 represents the information exchange for the Claims Attachment solicited response for additional information from the provider to the payer</td>
<td>Provider</td>
<td>Provider inserts ID into both claim and attachment submission</td>
</tr>
<tr>
<td><strong>Prior Authorization Attachment</strong></td>
<td>Paired together as a solicited request/response for prior authorization attachment information</td>
<td>Activity #4 represents the information exchange for the prior authorization attachment solicited request for additional information from the payer to the provider</td>
<td>Payer</td>
<td>Provider returns the ID from the request (#4) in their prior authorization attachment information response (#5)</td>
</tr>
<tr>
<td></td>
<td>Stand alone</td>
<td>Activity #5 represents the information exchange for the prior authorization attachment solicited response for additional information from the provider to the payer</td>
<td>Provider</td>
<td>Provider inserts ID into both prior authorization request and attachment information</td>
</tr>
<tr>
<td><strong>Referral Attachment</strong></td>
<td>Paired together as a solicited request/response for Referral attachment information</td>
<td>Activity #7 represents the information exchange for the Referral Attachment solicited request for additional information from the payer/referred to provider to the referring provider</td>
<td>Payer</td>
<td>Referring provider returns the ID from the request (#7) in their prior authorization attachment information response (#8)</td>
</tr>
<tr>
<td></td>
<td>Stand alone</td>
<td>Activity #8 represents the information exchange for the Referral Attachment solicited response for additional information from the referring provider to the payer/referred to provider</td>
<td>Provider</td>
<td>Referring provider inserts ID into both the Referral request and attachment information</td>
</tr>
<tr>
<td>Healthcare Administrative Activity</td>
<td>Activity ID Relationship</td>
<td>Attachment Activity</td>
<td>Attachment ID creator</td>
<td>Intended Re-association linkage</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>--------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>----------------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>Notification Attachment</td>
<td>Stand Alone</td>
<td>Activity #10, represents the information exchange for the notification attachment unsolicited attachment submissions for additional information from the facility provider to the primary care provider.</td>
<td>Facility Provider</td>
<td>(Unknown)</td>
</tr>
<tr>
<td>Post Adjudicated Claim Attachment</td>
<td>Paired together as a solicited request/response for post adjudicated claim attachment information</td>
<td>Activity #11 represents the information exchange for the Post Adjudicated Claim solicited request for additional information from the payer to the provider. Activity #12 represents the information exchange for the Post Adjudicated Claim solicited response for additional information from the provider to the payer</td>
<td>Payer</td>
<td>Provider returns the ID from the request (#11) in their post adjudicated claim attachment information response (#12)</td>
</tr>
</tbody>
</table>
3.7 Definitions and Acronyms

3.7.1 Definitions

**Attachment Information.** The additional information needed in support of a healthcare administrative activity.

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

**Attachment Type** – Refers to the type of document (i.e., CCD, History and Physical, Discharge Summary) describing the additional information to be exchanged.

**Attachment Type Identifier** – Refers to the LOINC code used to identify the Attachment Type.

**Claim** May represent a healthcare claim or a healthcare encounter.

**GIF** - Digital bitmap image format

**Healthcare Administrative Activity.** Healthcare activities where the need for additional information 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.


**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.

**Modifier** – Refers to the “Item Selection” or “Time Window” value used to further constrain an attachment type request.

**Modifier LOINC Code** – Refers to the LOINC Code used as the modifier in a request for an attachment type.

**Object Identifier (OID)** - An ISO Object Identifier (OID) 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.

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

**PDF** – PDF is a file format developed by Adobe as a means of distributing compact, platform-independent documents.
PNG – A bitmapped image format that employs lossless data compression.

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

**Unstructured Document** – a CDA header paired with a nonXMLbody element

3.7.2 Acronyms

To aid the implementer, this section will restate any acronyms used in this supplement in one common place.

- AIS – Additional Information Specification.
- AWG – HL7 Attachment Work Group.
- GIF - Graphics Interchange Format (See Definitions).
- JPEG – Joint Photographic Experts Group (See Definitions).
- LOINC – Logical Observation Identifiers, Names and Codes (http://loinc.org).
- OID – Object Identifier (See Definitions).
- PDF – Portable Document Format (See Definitions).
- PNG – Portable Network Graphics (See Definitions).
- UMO – Utilization Management Organization.

3.8 Health Level Seven Organization

Founded in 1987, Health Level Seven, Inc. (http://www.HL7.org) is a not-for-profit, ANSI-accredited standards developing organization dedicated to providing a comprehensive framework and related standards for the exchange, integration, sharing, and retrieval of electronic health information that supports clinical practice and the management, delivery and evaluation of health services.
For information on membership and obtaining HL7 standards, contact:

Health Level Seven
3300 Washtenaw Ave., Suite 227
Ann Arbor, MI 48104-4261
(734) 677-7777
mailto:hq@hl7.org
http://www.hl7.org
4 UNDERSTANDING C-CDA

This Section will explain the C-CDA at a high level. Implementers should rely on the detail found in the C-CDA itself to provide guidance as to how to utilize that Standard. Below you will find the basics of C-CDA.

4.1 What is Clinical Document Architecture (CDA)?

CDA is a document markup standard that specifies the structure and semantics of a clinical document (such as a discharge summary or progress note) for the purpose of exchange. A CDA document is a defined and complete information object that can include text, images, sounds, and other multimedia content.

It can be transferred within a message and can exist independently, outside the transferring message. CDA documents are encoded in Extensible Markup Language (XML), and they derive their machine processable meaning from the RIM (HL7’s Reference Information Model), coupled with terminology.

The CDA R2 model is richly expressive, enabling the formal representation of clinical statements (such as observations, medication administrations, and adverse events) such that they can be interpreted and acted upon by a computer. On the other hand, CDA R2 offers a low bar for adoption, providing a mechanism for simply wrapping a non-XML document with the CDA header or for creating a document with a structured header and sections containing only narrative content.

The intent is to facilitate widespread adoption, while providing a mechanism for incremental semantic interoperability.

Information about the components for CDA is being presented at a high level and is intended to convey only what is necessary for the implementer to understand the application with respect to attachments. Refer to the C-CDA for technical guidance on implementation of CDA for attachments.

A CDA document has two primary groupings of information, a header and a body:

- The header
  - Identifies and classifies the document and provides information on authentication, the encounter, the patient, and the involved providers.

- The body
  - Contains the clinical report, organized into sections whose narrative content can be encoded using standard vocabularies.
  - Can be represented using a nonXMLBody or a structuredBody element.
**nonXMLBody** is used when the content is an external file such as a TIFF image, MS RTF document, PDF, etc. The NonXMLBody class is provided for those applications that can do no more than simply wrap an existing non-XML document with the CDA Header.

**structuredBody** is used when the body will be XML structured content. XML structured content is always inserted into the structuredBody element, never as an external file. The StructuredBody contains one or more Section components.

For the purposes of this supplement:
- A header paired with a **structuredBody** element will be referred to as a “Structured Document”.
- A header paired with a **nonXMLBody** element will be referred to as an “Unstructured Document”.

More information about CDA can be found on the HL7 website [www.hl7.org](http://www.hl7.org).

### 4.2 Taking Advantage of Structured/Unstructured Content

Use of the CDA standard allows for a wide-range of implementation flexibility with respect to the implementers (CDA originator and consumer) technical abilities.

For the most of implementers, a CDA document may simply be rendered to a common internet XML aware browser using a stylesheet⁹, much like one might view a PDF on a personal computer application. Even in an unstructured document <nonXMLBody>, 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 body of this document must either be made referenceable by the browser in a URL scheme it recognizes, or separately decoded into its binary format. In this instance where the body type is in an Unstructured Document and the body content contains a media type (i.e., JPEG, GIF, PDF, etc), that content would require additional software to interpret and render this encapsulated data using an appropriate viewer for the type of document (i.e., image viewer, adobe reader, etc).

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⁸ It is important to note that the header in either structured or unstructured scenarios is always considered structured and as such, available for computer processing(parsing) to occur with its content.

⁹ The stylesheet in the C-CDA (See Appendix “C”) is provided by HL7 to the implementer as an option and not required to be used by the implementer. The implementer may choose to create their own customized stylesheet to render the information to a browser.
This requires several steps, including configuring the browser to display the non-HTML content if needed (e.g., for application/pdf, application/msword or text/rtf content), linking to externally referenced content, or linking to and decoding the embedded base-64 encoded content. In addition, considerations should be given to security concerns that might be introduced by displaying content such as application/pdf, application/msword, text/rtf or text/html which could include scripts.

The use of a stylesheet to render a CDA document to a browser sets a low technical bar for the receiver of a CDA document. No matter what the technical level of the originator, the receiver will have the choice of leveraging the originator’s highest level of technical sophistication or simply choose to render using a stylesheet and a browser. This will enable receivers of attachments to interpret the content of a clinical document without having to be an expert on CDA.

Initially the limited capability of participants to support fully structured attachments and the need for further development of attachment content requires the use of the unstructured content capability of the C-CDA. For attachment purposes, even though a structured document template may be defined in C-CDA (attachment types where a document level template exists, excluding Unstructured Document), the use of the unstructured version of that document (i.e., nonXMLbody) is permitted, provided that the required content defined for the equivalent structured document conformance is present in the unstructured (nonXMLbody) document representation.

4.2.1 Structured Content

Chapter 3 in the C-CDA is devoted to Document Level Templates which describe the document types and conformance requirements for each of the fully structured documents listed in Section 3.3 of this supplement. Conformance criteria for each of those document types, their sections and any applicable entries are found in the appropriate section for that document type in Chapter 3 of the C-CDA.

4.2.2 Unstructured Content

In addition to the eight (8) document types described in 3.2.1 Structured Content, there is a ninth document type which is available to be used for exchange of ANY document type. This is the Unstructured Document (described specifically in Section 3.9 of the C-CDA).

The Unstructured Document:

- Must be at the document level and limited to document types defined in Regenstrief’s LOINC database “external value set” (See section 4.5 “Using the LOINC Database to Identify Valid Attachment Types” for more information).
- May include document content for document types already defined in C-CDA as structured, but unstructured content must adhere to conformance statements described in the structured content (both Header and Body). This is designed to
assure that the use of unstructured content cannot be substituted for a structured document to circumvent the minimum conformance requirements of a structured document.

In the C-CDA, Appendix I entitled “Mime Multipart/Related Messages” are instructions for the use of MIME encapsulation and Base64 encoding. These were solutions to transmission issues where other standards are used in conjunction with the C-CDA and are considered outside of the scope of this supplement. Additional information may be available to address these issues, should they occur, through operating rules or other industry guidance.

While the information found in the C-CDA, Appendix I may be informative, it should be considered deprecated for the purposes of this supplement.

4.3 What is C-CDA?

C-CDA is a guide defining clinical information format based on CDA, constrained by conformance statements consistent with industry best practices for specific types of clinical documents. Some broadly used clinical document types have been more fully developed in CDA than others. Examples of those clinical document types are:

- Continuity of Care Document (CCD)
- Consultation Note
- Diagnostic Imaging Report (DIR)
- Discharge Summary
- History and Physical
- Operative Note
- Procedure Note
- Progress Note

Other clinical information not listed above may also be exchanged using C-CDA by taking advantage of the “Unstructured Document”, as described in Section 3.9 of the C-CDA.

Throughout the C-CDA implementers will see references to sending and receiving EHR systems. This is because the C-CDA was written from the perspective of exchange between EHR systems. For the purposes of this supplement there is no assumption that exchange will occur between two EHR systems. Instead, as you will see in the use case portion of this supplement (Chapter 5), the
additional information a payer is seeking may exist in a provider's electronic repository, such as an EHR system, and may/may not be passed through a practice management system or be sourced directly from the EHR.

Section 1.5 of the C-CDA describes at a high level how templates are used to represent the organization of CDA structure in a document. Metadata found in the Header as well as specific clinical information found in the Body components as Documents, Sections within those documents, and entries within those sections are explained are described in Sections 3.1 through 3.8 of the C-CDA.
5 ADDITIONAL INFORMATION (ATTACHMENTS) GENERAL

Neither this Supplement nor the C-CDA requires a specific standard for enveloping, however the industry best practices for required metadata to be contained in that envelope are specified in Appendix “A” of this Supplement.

5.1 Standards to Accomplish Information Exchange of The Request and Response

The authors of this Supplement acknowledge that there may be more than one standard that could accomplish the information exchange. They further acknowledge the development of a full suite of standard transactions was developed by ASC X12 specifically for requesting additional information, responding to that request, and the acknowledgment of the response and conforming to the business requirements found in Appendix “A”. Additional information regarding those standard transactions can be found in Appendix “B” of this document.

For the purposes of this document, references to requests and responses to requests in examples and/or use cases will include a reference to the specific ASC X12 transaction that could be used. As the technologies mature, we expect additional standards to be developed and are open to adapting this supplement to include them as well.

5.2 LOINC (Logical Observation Identifiers Names and Codes)

The HL7 encoding of attachments makes extensive use of the code set Logical Observation Identifier Names and Codes (LOINC®). LOINC provides a universal set of codes and names for identifying laboratory and clinical tests, measures, documents, and other clinical observations. LOINC is an openly developed vocabulary standard used worldwide to facilitate the exchange and pooling of clinical results for care delivery, outcomes management, public health reporting, and research purposes. LOINC achieves these aims by creating a unique identifier code and a structured name for each observation. When used in conjunction with widely adopted messaging standards, LOINC can be an essential ingredient for efficient electronic processing and storage of clinical data that comes from many independent sources.

LOINC is a controlled terminology that contains unique identifiers and “fully specified” names constructed in a formal structure that distinguishes among tests and observations that are clinically different. LOINC creates codes and a formal name for each concept that corresponds to a single kind of document, observation, measurement, or test result. For example, LOINC code 18842-5 (Discharge Summary) identifies a document with a formal name:

10 It is anticipated that regulations for HIPAA Attachments will initially mandate the use of the ASC X12 Standards found in Appendix “B” of this Supplement.
The display name (called the LOINC Long Common Name) for this term is the familiar “Discharge Summary”.

The formal LOINC name is “fully-specified” in the sense that it contains the features necessary to disambiguate among similar clinically distinct observations. The fully-specified name is constructed according to a six-part semantic model that produces an aggregate or pre-coordinated expression that intentionally does not capture all possible information about the testing procedure or result – only enough to unambiguously identify it.

More information about the LOINC naming conventions can be found in the LOINC Users’ Guide and other resources available from the LOINC website (http://loinc.org).

5.2.1 Obtaining LOINC and Other Resources From the Regenstrief Institute

LOINC is produced, distributed, and copyrighted by the Regenstrief Institute, and is made available for both commercial and non-commercial use without charge under the license at http://loinc.org/terms-of-use. LOINC is published in regular releases, typically twice per year (in June and December).

The LOINC database and many other resources are available from the LOINC website:

http://loinc.org

Regenstrief also develops and distributes the RELMA desktop mapping program. RELMA is available from the LOINC website at no cost and provides tools for browsing the LOINC database and mapping local terms to LOINC. In addition, Regenstrief also provides the online LOINC search application (http://search.loinc.org) that enables searching of the LOINC database from a web browser.

The LOINC website has a variety of useful documentation resources including Users’ Guides for LOINC and RELMA, an FAQ, and some online tutorials that are available to download for offline review. From the LOINC website, you can also subscribe to the LOINC mailing list and find out about upcoming meetings and training events.

5.2.2 Use of LOINC for Attachments

In the context of attachments, LOINC codes are used for several purposes. At a high level, LOINC codes are used to identify the specific kind of information being communicated in both a request and response (e.g., a discharge summary or diagnostic imaging report (DIR)).
LOINC codes may also be used to specify certain modifier variables in fulfilling the request for information (e.g. variables that indicate a modification to the default time period). In attachment responses that use HL7 CDA, LOINC codes are used to identify the attachment (document) type, sections, and sometimes the individual entries (tests or observations). While a LOINC code can identify information at the section and sometimes the entry level, a request for additional information (attachment) should always be requested at the document level. In a structured document, the section/entry LOINC code may be helpful to the recipient in extracting/parsing information within the document.

In this way, LOINC codes are used to identify:

- An electronic attachment in its entirety (e.g., Discharge Summary Report), as an **Attachment Type Identifier**.
- A category of clinical report (e.g., send any reports of CAT scans of the head that are related to the claim or a specific service), as an **Attachment Type Identifier** appearing in the CDA Header.
- The implicit scope of a request activity; e.g., to modify a request for serology lab values to specify only the abnormal results for a period 30 days prior to treatment, as a **Modifier LOINC Code**.

### 5.3 Using the LOINC Code As An Identifier In Messages

Each term in the LOINC database is assigned a unique, permanent code called the LOINC code. This is the code that systems should use to identify test results in electronic reports. The LOINC code has no intrinsic structure except that the last character in the code is a Mod-10 check digit. Consistent with the use of LOINC allowed by the LOINC License, this supplement guide requires that LOINC codes be used as published in the LOINC database, without leading zeroes and with the hyphen that precedes the check digit (e.g., "8709-8" and "10154-3").

Along with the code, this supplement guide strongly recommends that one of the published LOINC names also be transmitted in the message. For most purposes, the LOINC Long Common Name is the best name to include in electronic messages.

### 5.4 Requesting/Responding/Submitting Attachment Information

LOINC codes play a critical role in the requesting/responding/submitting of attachment information, especially when the recipients EHR system is capable of interpreting a codified request and generating/creating the attachment information being requested automatically and without human intervention.
A LOINC code may be used to:

a) Identify the specific document type constituting the attachment information being requested.

b) Identify which document(s) to respond with when multiple document types exist that could satisfy the request. These LOINC codes, Known as “**Modifier LOINC Codes**”, may be used to “modify” the request in “a” above. More about these may be found in Section 4.4.4, “Using Modifier LOINC Codes to Constrain the Request.”

### 5.4.1 Using LOINC Code to Request/Respond Attachment Information (Solicited)

When requesting attachment information, a single LOINC code is used to codify the specific document type being requested. In C-CDA, there could be multiple LOINC codes which represent a single document type (i.e., Operative Note) in general or that are further specialized (depending on “setting” and “Specialty/Training/Professional Level”). The LOINC Codes that are valid for each document type are defined in C-CDA in Chapter 3 “Document Level Templates” (sections 3.1 through 3.8). Those tables identify the general LOINC code as “preferred”, and LOINC codes specialized by speciality/training/professional level as “additional codes”\(^{11}\).

Examples of those clinical document types, their preferred LOINC Code and the table in C-CDA they are referenced in are found in the table below:

<table>
<thead>
<tr>
<th>Clinical document Type</th>
<th>&quot;Preferred&quot; LOINC</th>
<th>LOINC Long Description</th>
<th>C-CDA Table Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCD</td>
<td>34133-9</td>
<td>Summarization of episode note</td>
<td>Table #20(^{12})</td>
</tr>
<tr>
<td>Consultation Note</td>
<td>11488-4</td>
<td>Consult note</td>
<td>Table #22</td>
</tr>
<tr>
<td>Diagnostic Imaging Report (DIR)</td>
<td>18748-4</td>
<td>Diagnostic imaging study</td>
<td>Table #25</td>
</tr>
<tr>
<td>Discharge Summary</td>
<td>18842-5</td>
<td>Discharge summary</td>
<td>Table #28</td>
</tr>
<tr>
<td>History and Physical</td>
<td>34117-2</td>
<td>History and physical note</td>
<td>Table #31</td>
</tr>
</tbody>
</table>

\(^{11}\) The exception is Consultation Notes that may represent the “preferred” code as ‘Root Level Document Type Code’ and “additional codes” as either Specialized by Setting, Specialized by Setting and Specialty or Specialized by Specialty…this is being corrected in an upcoming version.

\(^{12}\) Table #20 includes all of the Document Types available for usage by this Supplement. In this case, it is referencing only the LOINC specific for CCD since CCD is only document type with one and only one LOINC.
As mentioned in C-CDA, use of the "preferred" LOINC is recommended but not required. For the purposes of attachments, the use of the "preferred" LOINC is recommended as the single LOINC used in the request for attachment information. However, use of the "additional" LOINC code in the request may also be permitted if the requestor deems it appropriate for their business purposes.

To accommodate both Payer/UMO needs for attachment information and the flexibility afforded the EHR Systems by C-CDA, special rules for requesting and responding have been developed for attachments.

Special request/response rules for solicited Structured attachments are described in Table 5 below.

Table 5: Request and Response LOINC Code Usage for Solicited Structured Attachments

<table>
<thead>
<tr>
<th>Request LOINC</th>
<th>Responding EHR System</th>
<th>Payer/UMO System</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Preferred&quot; LOINC</td>
<td>Respond with &quot;preferred&quot; LOINC if able. If EHR system only capable of creating specialized LOINC, respond with &quot;additional&quot; LOINC code closest to matching request for that document type(^{13}).</td>
<td>If response contains &quot;preferred&quot; LOINC code, consider response a match to request. If response not a match, cross-walk &quot;additional&quot; LOINC code to 'preferred' code for document type and consider a match if identical to the Request LOINC.</td>
</tr>
<tr>
<td>&quot;Additional&quot; LOINC</td>
<td>Respond with same &quot;additional&quot; LOINC as in the request if able. If unable, respond with other &quot;additional&quot; LOINC or &quot;preferred&quot; LOINC closest to the matching request for that document type(^{13}).</td>
<td>If response contains &quot;additional&quot; LOINC Code identical to request, consider response a match to request. If response not a match, cross-walk &quot;additional&quot; LOINC Code to &quot;preferred&quot; and/or other &quot;additional&quot; LOINC code for document type</td>
</tr>
</tbody>
</table>

\(^{13}\) Document Type for “setting” and “Specialty/Training/Professional Level”
and consider a match if either the "preferred" or "additional" LOINC for document type found.

For solicited unstructured attachment type request and response, the LOINC Code used in the request SHALL be returned in the response.

Information on locating valid unstructured LOINC codes from the Regenstrief LOINC database is available in section 4.5.1.1.

5.4.2 Using LOINC Code to Submit Attachment Information (Unsolicited)

When submitting attachment information in an unsolicited model, the specific LOINC code to be used as the attachment type ID follows these rules:

- In the C-CDA there are LOINC codes specified as “Preferred” and “Additional”. For structured documents and their unstructured counterparts, the attachment type ID SHOULD be the “Preferred” LOINC Code, but the “Additional” LOINC Codes are permitted.
- For unstructured documents that do not have a structured counterpart, refer to section 4.5.1.1 for determining valid LOINC codes for unstructured attachment types.

5.4.3 Using “Modifier LOINC Codes” to Constrain The Request

Modifier LOINC Codes are used to further inform the recipient of the request for attachment information if a specific “Time Window” or “Item Selection” criteria should be applied to constrain which document types within that time window or item selection criteria should be responded with.

Below you will find a table of “Time Window” Modifier LOINC Codes and “Item Selection” Modifier LOINC Codes. These should be considered as illustrative purposes, with the full set of LOINC modifier codes available for use indicated as such on the LOINC database.
<table>
<thead>
<tr>
<th>LOINC code</th>
<th>Long Description</th>
<th>Example (if appropriate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>18789-8</td>
<td>Include <em>all</em> data of the selected type within the date window associated with the service.</td>
<td>Tests performed during a hospital stay or a note written to describe a clinic visit.</td>
</tr>
<tr>
<td></td>
<td><strong>NOTE:</strong> This is the default value; it will be assumed if no time window modifier code is included.</td>
<td></td>
</tr>
<tr>
<td>18790-6</td>
<td>Include all data of the selected type <em>on or before the date of service</em>.</td>
<td>A pathology report to verify the diagnosis for the claim, or per-operative test results.</td>
</tr>
<tr>
<td>18791-4</td>
<td>Include all data of the selected type <em>within or aligned to a service</em>.</td>
<td>Radiology report for test performed during a visit or ordered during the visit and performed within five days.</td>
</tr>
<tr>
<td>18792-2</td>
<td>Include all data of the selected type <em>on or after the date of service</em>.</td>
<td>Status on follow-up.</td>
</tr>
<tr>
<td>18803-7</td>
<td>Include all data of the selected type that represents observations made 30 days or fewer before the starting date of service.</td>
<td></td>
</tr>
<tr>
<td>18804-5</td>
<td>Include all data of the selected type that represents observations made three months or fewer before the starting date of service.</td>
<td></td>
</tr>
<tr>
<td>18805-2</td>
<td>Include all data of the selected type that represents observations made six months or fewer before the starting date of service.</td>
<td></td>
</tr>
<tr>
<td>18806-0</td>
<td>Include all data of the selected type that represents observations made nine months or fewer before the starting date of service.</td>
<td></td>
</tr>
<tr>
<td>18807-8</td>
<td>Include all data of the selected type that represents observations made one year or less before the starting date of service.</td>
<td></td>
</tr>
<tr>
<td>LOINC code</td>
<td>Long Description</td>
<td>Example (if appropriate)</td>
</tr>
<tr>
<td>------------</td>
<td>----------------------------------------------------------------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>53033-7</td>
<td>Include all data of the selected type that represents observations made two years or less before the starting date of service</td>
<td></td>
</tr>
<tr>
<td>18793-0</td>
<td>Use no fixed time limit on data—any of the selected type are relevant no matter when obtained</td>
<td></td>
</tr>
</tbody>
</table>

**Table 7: Item Selection Modifier LOINC Codes**

<table>
<thead>
<tr>
<th>LOINC code</th>
<th>Meaning</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>18794-8</td>
<td>Send <em>all</em> items of the specified type within the time window</td>
<td>If the request is for serology results, send all serology results for test made during the time window, including repeats</td>
</tr>
<tr>
<td></td>
<td><strong>NOTE:</strong> This is the default value; it will be assumed if no time window modifier code is included</td>
<td></td>
</tr>
<tr>
<td>18795-5</td>
<td>Send all items of the specified type within the time window <em>relevant to the service</em></td>
<td>If the request is for CT scans, send only the ones that verify the diagnosis on the claim and do not send repeats within the time window</td>
</tr>
<tr>
<td>18796-3</td>
<td>Send <em>all abnormals</em> within the time window</td>
<td>If the request is for hematology results, send only the ones that were abnormal, including repeated administration of the same test in the time window</td>
</tr>
<tr>
<td>18797-1</td>
<td>Send the <em>first abnormals</em> within the time window</td>
<td>If the request is for hematology results, send the first of each kind of observation that is abnormal, but do not send repeated results of the same test in the time window</td>
</tr>
<tr>
<td>18798-9</td>
<td>Send the <em>last abnormals</em> within the time window</td>
<td>If the request is for hematology results, send only the most recent of each kind of observation within the time window that is abnormal</td>
</tr>
<tr>
<td>LOINC code</td>
<td>Meaning</td>
<td>Example</td>
</tr>
<tr>
<td>-----------</td>
<td>---------</td>
<td>---------</td>
</tr>
<tr>
<td>18800-3</td>
<td>Send the <em>worst</em> abnormal result for each kind of observation in the time window</td>
<td>If the request is for serology results, send the first of each kind of serology result within the time window, but do not send the results of subsequent repetitions of the same tests</td>
</tr>
<tr>
<td>18799-7</td>
<td>Send the <em>first</em> (i.e., oldest) result for each kind of observation in the time window</td>
<td>If the request is for serology results, send the first of each kind of serology result within the time window, but do not send the results of subsequent repetitions of the same tests</td>
</tr>
<tr>
<td>18802-9</td>
<td>Send the <em>last</em> (most recent) within the time window</td>
<td>If radiology reports are requested, with no further specificity, send the only the report that includes the last radiology exam done during the time period</td>
</tr>
</tbody>
</table>
5.5 Using the LOINC Database to Identify Valid Attachment Types

The AWG has reached out to the industry stakeholders to identify attachment information types that are known to be currently needed. However, we expect that as the attachment information exchange matures, the need for new attachment types will grow. Rather than including attachment types in this supplement as a “static” value set and requiring publication of a new version of this supplement before new types can be used, the attachment types will be implemented as a “dynamic” value set, external to this supplement.

The LOINC database, maintained and managed by the Regenstrief Institute, will maintain the content of the external value set of LOINC codes available for usage in the exchange of attachment information, and is further described below.

Regenstrief provides specialized attachment features in LOINC, RELMA, and the online LOINC Search application.

Additional information about the use of the RELMA program and the LOINC database for attachment purposes and can be found at:

http://loinc.org/attachments

5.5.1 Identifying Valid Attachment Types In The LOINC Table

The LOINC Table (available in several file formats) contains a field called [HL7_ATTACHMENT_STRUCTURE]. This field can be populated by one of these values UNSTRUCTURED or STRUCTURED.

5.5.1.1 UNSTRUCTURED LOINC Terms

LOINC terms with this value are approved by the HL7 AWG for use as an unstructured attachment ONLY.

When sent as an attachment, implementers SHALL use the Unstructured Document template of the C-CDA (see section 3.9 in C-CDA). Conformant Unstructured Documents must carry the document-level templateId asserting conformance with the C-CDA guide.

SHALL contain exactly one [1..1] templateId (CONF:7710) such that it

a. SHALL contain exactly one [1..1]
   @root="2.16.840.1.113883.10.20.22.1.10" (CONF:10054).

Implementers SHALL NOT use LOINC codes where the [HL7_ATTACHMENT_STRUCTURE] is Null or STRUCTURED as an Unstructured Document attachment (see section 3.9 in C-CDA).
Over time, HL7 may develop additional guides for communicating attachments in a structured way. As new implementation guides are developed by HL7 for these attachment types, Regenstrief will update the value of the [HL7_ATTACHMENT_STRUCTURE] field to reflect the presence of a guide for structured reporting.

5.5.1.2 STRUCTURED LOINC Terms

LOINC terms with this value are approved by the HL7 AWG for sending as structured content using the C-CDA. This does not mean that they must always be sent as fully structured content, but rather that such a structured specification exists and is approved for use. As indicated in the C-CDA, any particular attachment type can be sent in a manner that conforms to CDA Level 1 (nonXMLBody), CDA Level 2 (structuredBody with sections that contain a narrative block), or CDA Level 3 (structuredBody containing sections that contain a narrative block and coded entries).

If the attachment is sent as CDA Level 1 (nonXMLBody) or CDA Level 2 (structuredBody with sections that contain a narrative block), it must include the required content defined for the fully structured document (CDA Level 3). That is, the expected information content in the documents is the same in both cases.

5.5.2 Identifying Valid Attachment Types Using RELMA and The Online LOINC Search Application (http://search.loinc.org)

Both the RELMA desktop mapping program and the online LOINC search application http://search.loinc.org provide many functions for searching and browsing the LOINC database. Both applications are maintained and enhanced by the Regenstrief Institute on a regular basis, with new releases made available on the LOINC website. The following sub-sections provide a basic overview of how to use these tools to identify valid attachment types, but the most current information is available at:

http://loinc.org/attachments

5.5.2.1 Searching RELMA

From the Search tab or the Mapping tab, a query on the HL7_ATTACHMENT_STRUCTURE field will return all of the LOINC codes of that kind (i.e. UNSTRUCTURED or STRUCTURED). RELMA uses a Google-like search syntax, so a search for keywords can be combined with a search on a particular field in the LOINC database. For example, to search for all the LOINC terms with value in HL7_ATTACHMENT_STRUCTURE of “UNSTRUCTURED” containing the word “consent”, you could enter this query in the search box:

consent HL7_ATTACHMENT_STRUCTURE:unstructured

As with all search results in RELMA, the rows in the search results grid can be highlighted and then exported (to a CSV file, the clipboard, or other options).

5.5.2.2 Browsing RELMA
The RELMA program also provides a convenient viewer for browsing the LOINC terms used in attachments. The attachments viewer is available from the “HIPAA” menu.

From the main attachments viewer, three sub-sections are available: Structured, Unstructured, and Request Modifier Codes.

The Structured tab presents the high level attachment type classifications from the C-CDA and this supplement, the set of LOINC document codes in that classification, and a linkage to the set of allowed section and entry-level codes where appropriate.

The Unstructured tab lists all of the LOINC codes that are approved by the HL7 Attachments WG for use as an unstructured attachment ONLY (i.e. they have a value of UNSTRUCTURED in the HL7_ATTACHMENT_STRUCTURE field).

The Request Modifier Codes tab lists all the LOINC codes that can be used as request modifiers, as described in Section 4.4.3 of this supplement.

5.5.2.3 Identifying Valid Attachment Types Using The Online LOINC Search Application

The search syntax of the online LOINC search application is the same as that of RELMA. This powerful search syntax can search on keywords anywhere in the LOINC records or with a particular field. For example, to search for all the LOINC terms with value in HL7_ATTACHMENT_STRUCTURE of “UNSTRUCTURED” you could enter this query in the search box:

    HL7ATTACHMENTSTRUCTURE:unstructured

Similar to RELMA, the rows in the search results grid of the online search application can be highlighted and then exported to a CSV file.

5.6 ISO Object Identifiers (OID’s)

OID is an acronym, used throughout HL7 specifications to mean ISO object identifier. ISO is the International Organization for Standardization (http://www.iso.ch), and we will see below that the International Telecommunications Union (ITU, http://www.itu.int) is also relevant. The HL7 OID registry, mentioned below, can be used to find, or create, OIDs for use in attachment implementations; and the mention of ISO and ITU is for background information only.

The CDA uses OIDs to uniquely specify where to find more information regarding a coded data value or an identifier for a person, organization, or other entity.

An OID is a globally unique string consisting of numbers and dots (e.g., 2.16.840.1.113883.6.103). This string expresses a tree data structure, with the left-most number representing the root and the right-most number representing a leaf.

Each branch under the root corresponds to an assigning authority. Each of these assigning authorities may, in turn, designate its own set of assigning authorities that work under its auspices, and so on down the line. Eventually, one of these authorities assigns a unique (to it as an assigning authority) number that corresponds to a leaf node on the tree.
OID’s present a systematic way to identify the organization responsible for issuing a code or entity identifier. HL7 is an assigning authority, and has the OID prefix “2.16.840.1.113883.” broken down as follows:

(2) represents the OID was assigned by a joint ISO-ITU
(16) represents assigning authority which is specific to the country
(840) reflects the USA
(1) is specific to the organization
(113883) represents Health Level Seven (as the assigning authority).

Any OID that begins with this is further described by a registry maintained by the HL7 organization. For example, the OID 2.16.840.1.113883.6.103 (above) was established by HL7 as a globally unique identifier for the ICD-9-CM code set for diagnoses.

Beyond that, the HL7 organization assigns any numbers - and these are maintained in a registry available on the HL7.org website. HL7 uses its registry to assign OIDs within its branch for HL7 users and vendors upon their request. HL7 is also assigning OIDs to public identifier-assigning authorities both U.S. nationally (e.g., the U.S. State driver license bureaus, U.S. Social Security Administration, US National Provider Identifier (NPI) registry, etc.) and internationally (e.g., other countries’ social security administrations, citizen ID registries, etc.)

Additional reference information about OIDs, including the current directory of OIDs assigned by HL7, is available at http://www.hl7.org/oid/index.cfm. Organizations that wish to request an OID for their own use (e.g., to be able to create identifiers within a CDA document), may also obtain one from HL7 at this site.
The following sections indicate examples of attachment activities covered by this Supplement. These examples will provide typical business flows for each of these attachment activities. Where these examples depict information exchange consistent with an attachment activity (see Table 2: Attachment Activity Types), those specific activities will be identified and correlated back to an entry in that table using their “Attachment Activity ID #”. Some of the examples may include information exchanges that are considered out of scope for this supplement but necessary to reflect the complete business flow. Those considered out of scope will be clearly marked.

As previously noted, where attachment activities are indicated the corresponding ASC X12 standard will also be indicated for example purposes, but should not be construed to be limited ONLY to that ASC X12 standard. Is it assumed for these standard references, the attachment activity will be an electronic standard. However, it may be possible for the request activity to be non-electronic (i.e., manual, paper, phone call, etc), provided that the necessary metadata (see Appendix “A”) is communicated for inclusion in the electronic response.

In the sub-chapter sections below, you will find general examples for the solicited and unsolicited scenarios where additional information attachments are used in support of a healthcare claim or encounter, prior authorizations, referrals, notifications and post-adjudicated claims review/audits. These examples are intended for illustrative purposes only and should not be construed as exhaustive.
6.1 Example – Claim Attachment

When a provider submits a claim to a payer, the claim may meet a condition(s) which requires additional supporting information be provided to the payer to complete the adjudication of the claim. When the conditions are of a consistent and recurring nature, the payer may make these conditions known in advance to the provider so that the provider may submit the additional information with the claim (unsolicited). When the condition is of a more “ad hoc” basis, upon receipt/review of the claim the payer may request additional information from the provider directly related to that claim (solicited).

6.1.1 Claim Attachment – Solicited Attachment Example

**Example Scenario:** A provider submits a healthcare claim/encounter to a payer who, upon review, determines that it needs additional information from the provider to complete the adjudication of the claim. The payer initiates a request for that additional information. The provider receives that request, and responds to the payer with the additional information needed.

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

- **Arrow #1** represents a claim which is submitted from a provider to a payer.
- **Arrow #2** (Attachment Activity #1) represents the request for additional information from the provider. (if electronic, ASC X12 2774)
- **Arrow #3** (Attachment Activity #2) represents the provider’s response with additional information (ASC X12 2755).

![Figure 1: Example - Claims Attachment (Solicited)](attachment.png)

**Figure 1: Example - Claims Attachment (Solicited)**

(OUT OF SCOPE: Information exchange depicted by Arrows#1 is considered out of scope for this supplement as it only acts as a triggering event for additional information needed.)

6.1.2 Claim Attachment – Unsolicited Attachment Example
**Example Scenario:** A payer has provided instructions to providers when specific additional information is needed for pre-defined conditions found on a claim. The provider submits a claim to the payer and the supplemental information in addition to the claim.

The diagram below depicts the business flow of the example above for an unsolicited claim attachment.

- **Arrow #1** represents a claim which is submitted from a provider to a payer.
- **Arrow #2** *(Attachment Activity #3)* represents the provider’s submittal of additional information previously agreed to between payer and provider (ASC X12 2753).

![Figure 2: Example – Claims Attachment (Unsolicited)](image)

**6.2 Example – Prior Authorization Attachment**

Often healthcare services require specific authorization of coverage in order to secure reimbursement. Depending on the service to be provided and the specifics of patient’s condition/diagnosis, additional patient-specific criteria (age, sex, etc.) and plan coverage, clinical or other information might be needed to support approval of the service.

The need for authorization may be known to the healthcare provider based on:

- contracts with the payer,
- eligibility, formulary or benefit inquiries,
- prior experience with providing the service for patients covered by the plan.

Alternatively the provider may learn of the need for authorization by virtue of a service denial or communication from the payer.

**6.2.1 Prior Authorization Attachment – Solicited Attachment Example**

**Example Scenario:** When the provider is not aware that additional information is needed, only the request for authorization will be sent. The payer/utilization management organization (UMO) receives the request for authorization and upon review, determines that it needs additional information from the provider. The payer/UMO initiates a request for the required documentation. The provider responds to the payer with the additional information needed.
The diagram below depicts the business flow of the example above for an solicited prior authorization attachment.

- **Arrow #1** represents a Service Authorization Request which is submitted from a provider to a payer (ASC X12 278®).
- **Arrow #2** (*Attachment Activity #4*) represents a request for additional information in support of a service authorization request from the payer to the provider (ASC X12 278®).
- **Arrow #3** (*Attachment Activity #5*) represents the provider’s response with additional information (ASC X12 275®).

**Figure 3: Example – Prior Authorization (Solicited)**

(OUT OF SCOPE: Information exchange depicted by Arrow #1 is considered out of scope for this supplement as it only acts as a triggering event for additional information needed.)

6.2.2 Prior Authorization Attachment – Unsolicited Attachment Example

**Example Scenario:** When the requirement is known, the provider may submit the request at the time the service is planned. This request for prior authorization would be accompanied by the required additional information attachment in support of the request.

The diagram below depicts the business flow of the example above for an unsolicited Prior Authorization Attachment.

- **Arrow #1** represents a Service Authorization Request which is submitted from a provider to a payer (ASC X12 278®).
- **Arrow #2** (*Attachment Activity #6*) represents the provider’s response with additional information (ASC X12 275®).
6.3 Example - Referral Attachment

Patients may be referred to other providers for consultations, services, evaluations, etc. The referral is usually initiated from a care provider, but may be initiated by a payer or other entity. The initiator of the referral may provide clinical information for use by the “referred to” provider (unsolicited). When information is not sent and additional information is needed, the “referred to” provider may request that pertinent information be sent (solicited).

The following diagrams depict the referral processes.

6.3.1 Referral Attachment – Solicited Attachment Example

Example Scenario: Provider “A” is caring for a patient and refers that patient to a specialist (Provider “B”) for further assessment. Provider “A” sends a referral to Provider “B”. Provider “B” receives the request and, upon review, determines they need additional information from Provider “A” and sends them a request. Provider “A” responds with the additional information attachment.

The diagram below depicts the business flow of the example above for a Solicited Referral Attachment.

- **Arrow #1** represents a Referral Request which is submitted from provider “A” (referring) to a provider “B” (referred to) (ASC X12 2786).

- **Arrow #2 (Attachment Activity #7)** represents a request for additional information in support of a referral request from the provider “B” to provider “A” (ASC X12 2786).

- **Arrow #3 (Attachment Activity #8)** represents provider “A” response with additional information to provider “B” (ASC X12 2757).
Figure 5: Example – Referral Attachment (Solicited)

(OUT OF SCOPE: Information exchange depicted by Arrows #1 is considered out of scope for this supplement as it only acts as a triggering event for additional information needed.)

6.3.2 Referral Attachment – Unsolicited Attachment Example

Example Scenario: Provider “A” is caring for a patient and needs to refer that patient to a specialist (Provider “B”) for further assessment. Provider “A” forwards a referral along with any necessary medical records as an additional information attachment to provider “B”.

The diagram below depicts the business flow of the example above for an unsolicited Prior Authorization Attachment.

- Arrow #1 represents a Referral which is submitted from a provider “A” to provider “B” (ASC X12 2786).
- Arrow #2 (Attachment Activity #9) represents the submittal of medical records from provider “A” to provider “B” as an additional information attachment (ASC X12 2757).

Figure 6: Example – Referral Attachment (Unsolicited)
6.4 **Example - Notification Attachment**

Notification can be used to send unsolicited information among providers, payers, delegated UMO entities and/or other providers. This information can take the form of copies of health service reviews or notification of scheduled treatment, or the beginning and end of treatment. A participant who is the recipient of the information may acknowledge they received the data, or reject the data due to specific application layer processing, but may not respond with any review decision outcome. Notification falls into four categories:

- **Advance Notification** used to communicate scheduled admissions or services.
- **Completion Notification** used to communicate patient facility admission or discharge and services completion for any specific episode of care.
- **Information Copy** used for any Health Services Review information sent to primary care provider(s), service provider(s), or other healthcare entities requiring the information for specific purposes.
- **Change Notification** used to report changes to the detail of a previously sent notification or information copy.

The information source is the entity that knows the outcome of the service review request, and can be either a UMO or a provider. For example, in a situation where the primary care provider can authorize specialty referrals that do not require review for medical necessity, appropriateness, or level of care, the primary care provider is the information source and may have responsibility for notifying both the UMO and the service provider of the specialty referral. In cases where the UMO is the decision maker, the UMO would send a notice of certification to the requesting provider and the service provider.

6.4.1 **Notification Attachment – Unsolicited Notice of Facility Discharge with Discharge Summary Example**

**Example Scenario** – A facility provider discharges a patient of a primary care provider, and forwards a notification to that effect.

The diagram below depicts the business flow of the example above for a notification attachment.

- **Arrow #1 (Attachment Activity #10)** represents the request for additional information from the provider. (if electronic, ASC X12 2757)
6.5 Example - Post Adjudicated Claim Attachment

After the adjudication of a claim or encounter, a payer may elect or be requested to review that claim or encounter to be sure the adjudication was consistent with applicable medical policy. This may include a scenario where additional information from the provider of service may be needed.

6.5.1 Post Adjudicated Claim Attachment – Solicited Attachment Example

Example Scenario: A payer, after adjudicating a claim/encounter, reviews that claim and decides to perform some type of post-adjudication re-consideration of the original disposition. The payer initiates a request for that additional information. The provider receives that request, and responds to the payer with the additional information needed.

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

- Arrow #1 represents a claim which is submitted from a provider to a payer.
- Arrow #2 represents a payer’s remittance advice to the provider.
- Arrow #3 [Attachment Activity #11] represents the request for additional information from the provider. (if electronic, ASC X12 2774)
- Arrow #4 [Attachment Activity #12] represents the provider’s response with additional information (ASC X12 2755).

Figure 8: Example – Post Adjudicated Claim Attachment (Solicited)
**OUT OF SCOPE:** Information exchange depicted by Arrows #1 and #2 are considered out of scope for this supplement as they only act as a triggering event for additional information needed.
7 IMPORTANT INFORMATION NOT PREVIOUSLY ADDRESSED IN THIS SUPPLEMENT

In Chapter 5, use cases are presented describing anticipated scenarios depicting attachment activities. While business rules are not included in those scenarios, the authors of this supplement believe there are some industry “best practices” that enhance the attachment activity, and may be addressed in mutual trading partner agreements, companion guides, operating rules or regulations.

Examples of these business rules include, but are not limited to the following:

1. The C-CDA offers specific document types in structured format along with an unstructured format suitable for other document types not defined in the structured formats. The unstructured format should never be construed to include the patient’s entire medical record, unless specifically asked for in the request.

2. Timeliness considerations for responses to requests for attachment information may be unique to the stakeholders needs, scenario’s, etc. Establishing standard timeliness guidance should be avoided. However, establishing reasonable expectations of minimum and maximum time between request and response may be appropriate.
   a. For solicited requests, consideration should be given to the request envelope including a “respond-by” date for the response to be completed on or before that date to successfully complete the attachment activity.
   b. For unsolicited responses, policy should be developed to guide payers in claims and prior authorization attachment activities and providers in referral attachment activities what to do if the attachment is received but the claim, prior authorization or referral never arrives and/or cannot be re-associated with the claim, prior authorization or referral itself.
   c. Guidance should be developed to communicate the ‘in advance’ payer rules for unsolicited attachment activity. This may include payers publishing on their provider web-sites information or other routine provider communications defining the requirements for unsolicited attachment submission(s).
   d. Proactively defined criteria and situations should be identified where non-conformance with ‘in advance’ rules for unsolicited attachment activity could result in a HIPAA disclosure violation. Examples could include a response attachment activity that exceeded the request (patient complete medical record) or response attachment activity not consistent with ‘in advance’ rules.

3. Attachment information, by default, is considered to be at the clinical document level. In some cases, the requestor of attachment information may need information at the sub-document level (section or entry). In this case, development of guidance based on scenarios may be helpful to identify the most appropriate document type to request the needed information. Absent that guidance, it would
be up to the requestor of attachment information to determine the most appropriate
document type to use for the request.

4. Use of the unstructured document is intended to accommodate attachment types
for which a structured format hasn’t been developed. Structured document types
MAY also be sent in an unstructured format (e.g., H&P Scanned Image, discharge
summary PDF, etc). It should be thought of as attachment types that would exist
at the document level, and where appropriate, capable of being developed into a
structured template.
8 OBTAINING NEW ATTACHMENT TYPES

Since its inception, Regenstrief has developed LOINC as an open standard. Regenstrief welcomes requests for new LOINC terms. It is because of submissions from the LOINC community that the vocabulary has been able to grow and adapt so quickly. Regenstrief is also always happy to receive specific suggestions about revisions or enhancements to existing content like synonyms and term descriptions as well. The general process for how to request these enhancements to LOINC are described on the LOINC website:

http://loinc.org/submissions/

8.1 Process for Requesting New Attachment Types

To request a new attachment type, initial contact should be made to the HL7 Attachments WG via any of the work group Co-Chairs found at the following link:
(http://www.hl7.org/special/Committees/claims/leadership.cfm)

Regenstrief Institute assigns LOINC codes upon request from various agencies. In the context of attachments, the LOINC codes for new attachment types (initially Unstructured) are received by the AWG which forwards appropriate requests to the Regenstrief for consideration. Requests go through a review process to ensure the concept has not been previously added and the meaning is clear. Some complex requests are discussed and decided by the LOINC Committee before they are completed by Regenstrief. In addition, the AWG will include OESS or any other regulatory entity which has incorporated the use of this external value set (LOINC codes for attachments) in the approval process.

The AWG, having initially received a request considered as unstructured, would coordinate with the submitter of the new attachment type request to assist in the development of content (Sections/Entries) necessary to advance the attachment information from Unstructured to Structured formatting.

8.2 Updates to the LOINC database

With each release (semi-annually), the LOINC database contains additional new terms and some edits to existing terms. LOINC development follows best practices for terminology system development by never reusing or deleting codes. If a LOINC term is identified as erroneous or a duplicate of a previous term it is flagged as “deprecated” in the database, but the record is not removed. Changes in concept status are made very judiciously.

There are various mechanisms for staying abreast of LOINC updates that are available from the LOINC website. You can join the LOINC announcement email list (http://loinc.org/mailing-lists), subscribe to the LOINC news RSS feed (http://feeds.feedburner.com/LOINCNews), follow on Twitter (@LOINC), or check the website for other new features.
APPENDIX A — BUSINESS REQUIREMENTS FOR REQUESTING AND SUBMITTING ATTACHMENT (METADATA).

When an EHR or other patient record system creates any clinical document (attachment information) consistent with the C-CDA Standard, it does so without regard to the recipient or that recipient’s purpose for obtaining that attachment information. Because of this, the recipient may need additional information (metadata) to better understand which healthcare attachment activity the attachment information being provided is intended to provide additional information for.

The following metadata SHALL accompany the attachment information being exchanged:

- Requestor (Payer/UMO) Name and Identifier (plan ID, HPID, etc)
- Request receiver Name and ID (ETIN, etc)
- Provider of Service Name and ID (NPI)
- Attachment Control ID (payer or provider assigned, depending on solicited/unsolicited)
- Attachment Information ID needed (LOINC Code), both in request and response
- Date Requested and Response Due Date
- Payer Contact Information
- Date of Service/Encounter

In addition to the metadata above, the following MAY be included if the situation indicates:

- Patient Control Number (assigned by provider on claim)
- Patient Medical Record Number (assigned by provider on claim)
- Property and Casualty Claim Number
- Case Reference ID
- Attachment Request Tracking ID
APPENDIX B — ASC X12 STANDARDS THAT SATISFY THE BUSINESS REQUIREMENTS LISTED IN APPENDIX A.

ASC X12 has created several standards for enveloping the attachment content and have been mentioned earlier in this guide. However, we are repeating them in this appendix to provide a more user friendly list. Each of these standards may also mention acknowledgement standards when using each.

ASC X12 277 – Health Care Claim Request for Additional Information
ASC X12 275 – Additional Information to Support a Health Care Claim or Encounter
ASC X12 278 – Health Care Services Request for Review and Response
ASC X12 275 – Additional Information to Support a Health Care Service Review
**APPENDIX C — USE OF STYLESHEETS AS A PART OF THE C-CDA PACKAGE CONTENT**

HL7 has provided one or more stylesheets as part of this implementation package for the C-CDA; however, these are neither balloted standards, nor are they required for use. Use of HL7 provided stylesheets is entirely up to the implementer.

The following files comprise the package:

**Table 8: Content of the C-CDA Package**

<table>
<thead>
<tr>
<th>Filename</th>
<th>Description</th>
<th>Ballot Applicability</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDAR2_IG_IHE_CONSOL_R1_U1_2012MAY</td>
<td>Implementation Guide</td>
<td>Normative</td>
</tr>
<tr>
<td>Consults.sample.xml</td>
<td>Consultation Note</td>
<td>Informative</td>
</tr>
<tr>
<td>DIR.sample.xml</td>
<td>Diagnostic Imaging Report</td>
<td>Informative</td>
</tr>
<tr>
<td>Future_MU_CCD.sample.xml</td>
<td>Continuity of Care Document/C32</td>
<td>Informative</td>
</tr>
<tr>
<td>DS.sample.xml</td>
<td>Discharge Summary Report</td>
<td>Informative</td>
</tr>
<tr>
<td>HandP.sample.xml</td>
<td>History and Physical Report</td>
<td>Informative</td>
</tr>
<tr>
<td>OpNote.sample.xml</td>
<td>Operative Note</td>
<td>Informative</td>
</tr>
<tr>
<td>Procedure_Note.sample.xml</td>
<td>Procedure Note</td>
<td>Informative</td>
</tr>
<tr>
<td>Progress_Note.sample.xml</td>
<td>Progress Note</td>
<td>Informative</td>
</tr>
<tr>
<td>UD.sample.xml</td>
<td>Unstructured Document</td>
<td>Informative</td>
</tr>
<tr>
<td>cda.xsl</td>
<td>CDA stylesheet</td>
<td>Informative</td>
</tr>
<tr>
<td>Discharge_Summary_cda.xsl</td>
<td>Adds discharge disposition to cda.xsl header</td>
<td>Informative</td>
</tr>
<tr>
<td>Consolidated CCD template hierarchy</td>
<td>Hierarchy of CCD sections and entries</td>
<td>Informative</td>
</tr>
</tbody>
</table>