The CDA Approach to Claims (and other) Attachments

12 December 2003
NCVHS

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Goals for NCVHS Presentation Today

- Inform the subcommittee on the revised approach to Attachments approved by HL7 ballot at our September 2003 meeting
  - similarities and differences vs. prior approach
  - related policy issues
- Solicit the support of the NCVHS with the Secretary DHHS in order to gain experience and maintain momentum on Attachments
- Ask the subcommittee to consider the "dual-level" approach (to be described) in the more general context of the NHII

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Topics

- **Introduction**
- HL7 Clinical Document Architecture
- Using CDA for Attachments
- Timeline

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Issues Surrounding Claims Attachments

- "Big" issues
  - payers who want no controls on what can be asked
  - providers who want no requirement for attachments
- Manageable issues
  - predictable content
  - providers sending "the entire chart" (some help)
  - structured vs. unstructured vs. document image
  - coding system for attachment questions
    - versus nothing (i.e., unstructured)
    - versus X12-enumerated codes (i.e., limited and simple)
  - syntax
  - eHealth Communications Models

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"Attachment" vs "Claim Attachment"

- HIPAA Law mandates a claims attachment transaction
- Other administrative transactions need supporting clinical information (e.g., referral)
- There is currently consideration within X12N to use the same basic approach to support the 278 transaction
- To assist this HL7 changed the name of its Attachments standard to be more general
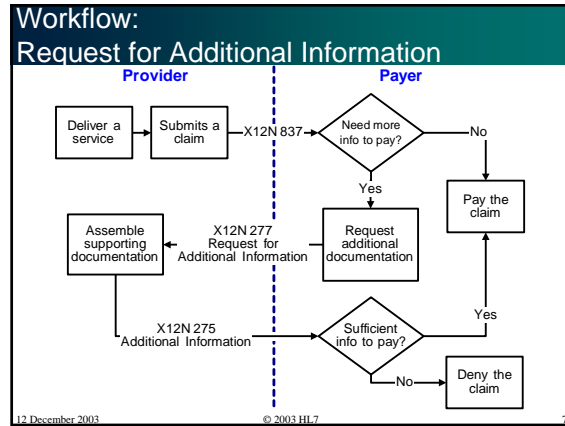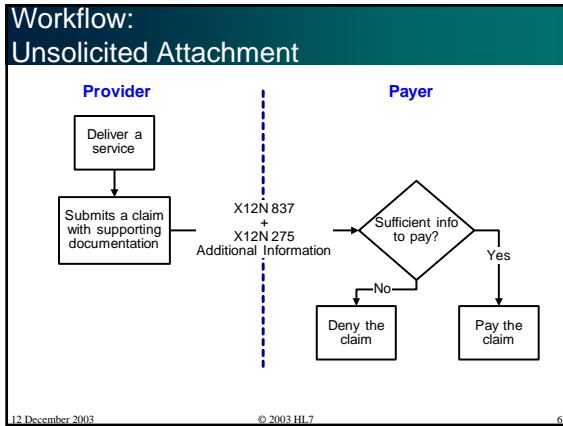
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Attachments – Past

Recommendations from industry outreach

- ✓ Determine most frequently used Attachments
- ✓ Consider Attachments where HL7 messages already exist / in development
- ✓ Need to "Standardize" the questions payers ask - industry consensus required
- ✓ Form "Attachment workgroups" by soliciting help from all sectors of industry (e.g. payers, providers, National Associations)
- ✓ Use LOINC codes

(See reference material at the end of this presentation for more history.)

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Workflow: Unsolicited Attachment

Provider

Payer

Deliver a service

Submits a claim with supporting documentation

X12N 837 + X12N 275 Additional Information

Sufficient info to pay?

Yes

No

Deny the claim

Pay the claim

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Workflow: Request for Additional Information

Provider

Payer

Deliver a service

Submits a claim

X12N 837

Need more info to pay?

No

Yes

Pay the claim

Assemble supporting documentation

X12N 277 Request for Additional Information

Request additional documentation

X12N 275 Additional Information

Sufficient info to pay?

Yes

No

Deny the claim

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277 Questions & 275 Answers

- A 277 asks for
  - Attachments
  - *or*
  - Components

Electronic Attachment

Component	Component
Component	Component
Component	

  - By sending LOINC

- A 275 sends
  - Components
  - *consisting of*
  - Answer parts

| Component | Answer Part |

| Component | Answer Part |
| | Answer Part |

  - Identified by LOINC

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Original and New Proposal

- 1997-1999, joint committee: Attachments SIG
  - 275 contains HL7 embedded ORU message
  - similar syntax to X12N -- but different
  - limited support for free text and images
  - initially six attachments
  - no NPRM forthcoming
- 2003, same joint committee
  - 275 contains HL7 Clinical Document Architecture XML document
  - same six attachments, same content
  - better support for images and free text

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Structured Data: Must We Sell the Future to Gain the Present?

- Present
  - Limited ability of providers to provide structured data
  - Limited ability of payers to use structured data
  - ROI available by saving People, Paper, and Postage

- Future
  - increasing levels of autoadjudication
  - better medical management
  - more extensive collection of quality data
  - requires structured data

  - Web-based communication models

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Syntax

"Legacy" Syntaxes
  - HL7 v2 and X12
  - Only dealt with through mappers
  - Awkward for dealing with text
  - Will be used for many years
  - Not the best choice for new endeavors

XML
  - Was "the future" in 1998
  - Ubiquitous low-cost tooling plus part of most mapping products
  - XSL = auto-rendering
  - equally at home with structured data and text
  - Currently the syntax of choice for new endeavors, especially Web-based endeavors

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XML Stylesheets

```
<section>
 <caption>History of Present Illness</caption>
 <paragraph>
  <content>
Henry Levin, the 7th is a 67 year old male referred for further
asthma management. Onset of asthma in his teens. He was h
twice last year, and already twice this year. He has not been
be weaned off steroids for the past several months.
  </content>
 </paragraph>
</section>
<section>
 <caption>Past Medical History</caption>
```

XSL Style Sheet:
Mapping rules in a standard
language

Style Sheet Processor

Birthdate: September 24, 1932

History of Present Illness

Henry Levin, the 7th is a 67 year old male referred for further asth
his teens. He was hospitalized twice last year, and already twice th
weaned off steroids for the past several months.

Past Medical History

HTML. PDF, Word-Processing, XML, Data File ...

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- Introduction
- HL7 Clinical Document Architecture
- Using CDA for Attachments
- Timeline

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HL7 Clinical Document Architecture (CDA)

- CDA is an XML document specification set
- Objective: standardization of clinical documents for exchange using XML
- XML markup is application independent
- Markup is metadata added to data (discrete elements, narrative text, images)
- Markup provides information persistence and processability across applications

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The CDA Standard Level One

- ANS HL7 CDA R1.0-2000
  - ANSI Certified Standard
  - Published October 2000
- Description of the CDA framework
  - CDA Header: structured info on patient, encounter, document author, revision status, etc.
  - CDA Body
    - clinical content variable structure

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Almost "Free-Form" Data

- XML or non-XML
- Non-XML: Free text or an image
- if XML, consists of structures & entries
  - CDA body structures
    - section, paragraph, list, table, caption
    - structures, including <body>, can have own confidentiality, originator, xml:lang
  - CDA body entries
    - text, link, codes, content, images (multi-media)

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Can Include Images

```
<section>
 <caption>
  <caption_cd V="8709-8"/>Skin</caption>
 <paragraph>
  <content>Erythematous rash, palmar surface, left index finger.
  <observation_media><observation_media.value MT="image/jpeg">
   <REF V="rash.jpeg"/>
  </observation_media.value></observation_media>
  </content>
 </paragraph>
</section>
```

XSL Rendering to HTML

Physical Examination
- **Vital Signs ::** BP 118/78; Resp 16 and unlabored; T 98.6F; HR 86 and regular
- **Skin ::** Erythematous rash, palmar surface, left index finger.

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Organizations and Documents

ASC X12 & Subcommittee X12N	X12 Trans. Sets 277, 275	X12N Impl. Guides 277, 275
Health Level Seven	HL7 CDA	HL7 Additional Information Message Impl. Guide
LOINC Consortium	LOINC Codes	HL7 Attachments Impl. Spec

X12 277 Transaction
12748-1
9832-1

X12 275 Transaction
HL7 CDA Doct
12748-1   15748-3*   20118-5*
9832-1   7832-8*   4332-7*

*LOINC codes may be omitted in some attachments.

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Attachment Implementation Specs Give Predictable Content

Initial NPRM
- ambulance
- ED
- rehabilitation plans
- medications
- lab results
- clinical reports (verbal)

Others
- DMERC
- home health
- formal process for requesting additional attachments

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"Human-Decision" vs. "Computer-Decision" Variants

Human-Decision Variant
- Matches the most prevalent workflow: a person reviewing the information to make a decision
- "Low-impact" on health plans (easy to display using common tools)
- "Low-impact" on providers (supports low-cost document preparation and "fax-like" use of existing paper or document images)

Computer-Decision Variant
- Permits computer-assisted adjudication or autoadjudication
- Includes specifications for breaking data down into computer-accessible elements
- Includes LOINC codes to identify the questions
- Includes answer codes suitable to the question
- Processable in "Human-Decision" mode by health plans that have not adopted a computer-decision approach.
- Can be applied selectively, one attachment at a time.

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CDA: Semi- or fully-structured HIPAA Claims Attachments

Provider | Payer

Scanned Paper or Document Imaging — Image + XML
Transcription — Semistructured
Specific XML forms
Level 3 CPR — Structured and coded
Autoadjudicate

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Alternate Workflow (One of Many Possibilities)

Provider | Payer

Deliver a service → Submits a claim → X12N 837 or DDE equivalent → Need more info to pay? → No → Pay the claim

Yes → Request additional documentation ← Generic Email with URL → Log into payer site to get specific request (DDE) → Type replies or upload scanned images (DDE) — (HIPAA-specified information content) → Sufficient info to pay? → Yes → Pay the claim; No → Deny the claim

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What Happens to Computer-Decision Structure?

- Providers "may" code the details with LOINC codes if they "can", but initially have no incentive to do so

- Payers "can" ignore the LOINC detailed codes -- indeed they will do so automatically if they use the viewing stylesheet

- Payers that choose to auto-adjudicate claims in a process that includes attachments will announce to providers that those that choose to add use structure and detailed LOINC codes will have their claims adjudicated faster

  - no need for a new standard at that time
  - the move to the higher level is incentive-based

  Note: this is a policy issue, and somewhat divergent from "classical HIPAA"

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Gain Immediate Benefits...

- Providers
  - Predictable content
  - Maximum opportunity for immediate participation
  - ROI available by saving People, Paper, and Postage

- Payers
  - limit early implementation costs to basic Qs and As
  - less early use of LOINC codes (could limit it to attachment IDs if they preferred)
  - initial investment more justified by higher provider participation

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...But Don't Sell Out the Future

- Providers
  - Health plan incentives for structured data provides financial benefit for acquiring a computer-based patient record
  - Timing for conversion is a business decision rather than an enforced decision

- Health Plans
  - After the basic ROI is obtained, advance to the use of structured data without another regulatory cycle
  - Selectively approach the use of structured data as business opportunities arise, rather than being forced to by a regulation

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Timeline

Fall 2006(?)	Mandatory Compliance
May 2004(?)	Claims Attachments NPRM
September 2003	Finalize Ballot
Summer 2003	Finalize Documents and Ballot
May 2003	ASIG Decision to Go Ahead
January 2003	Proposed New Approach
December 2001	Amended HL7 Specification
January 2000	Initial HL7 Attachments Specification
August 1996	HIPAA Enacted

Pilots and Voluntary Adoption?

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Summary

- Inform the subcommittee on the revised approach to Attachments approved by HL7 ballot at our September 2003 meeting
  - similarities and differences to prior approach
  - related policy issues
- Solicit the support of the NCVHS with the Secretary DHHS
  - letter to Secretary
    - support demo projects through Federal and commercial health plans
    - don't backslide on May 2004 NPRM date
- Ask the subcommittee to consider the "dual-level" approach in the context of the NHII

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Supporting Information

The following slides contain background information for this presentation.
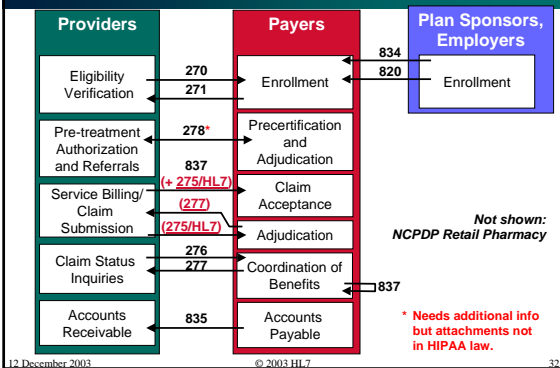
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For More Information

- www.hl7.org
  - click on "special interest groups" then "attachments"
- from home page
  - click on "list servers"
  - click on "asig@lists.hl7.org" to join
  - consider joining other list servers for specialized topics
- www.wpc-edi.com/hipaa
  - download old 277, 275 and HL7 v2.4 proposal

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History of HL7

- Founded 1987
- Membership: near 2000
- Goal: Exchange of clinical and clinical-administrative information
- US ANSI Accreditation 1995
- 18 Affiliate chapters in 30 + Countries
- US Market penetration:
  - Hospitals > 90%
  - Other care delivery organizations: no competing standard

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HIPAA EDI Transactions

Providers		Payers		Plan Sponsors, Employers
Eligibility Verification	270 / 271	Enrollment	834 / 820	Enrollment
Pre-treatment Authorization and Referrals	278* / 837	Precertification and Adjudication		
Service Billing/ Claim Submission	(+ 275/HL7) (277) (275/HL7)	Claim Acceptance / Adjudication		
Claim Status Inquiries	276 / 277	Coordination of Benefits	837	
Accounts Receivable	835	Accounts Payable		

Not shown: NCPDP Retail Pharmacy

* Needs additional info but attachments not in HIPAA law.

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Attachments – Past

- WEDI Attachment Workgroup Report, 1994
- Recommendations:
  - ✓Standardize attachment data elements
  - ✓Coordinate affected entities to develop guidelines
  - ✓Work with Medicaid to standardize/eliminate attachments
  - ✓Develop 274/275 as primary vehicle
  - ✓Create standard way to link data across transaction sets

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Attachments – Past

NUCC: National Uniform Claim Committee (NUCC) Survey, 1996

  - ✓Survey to Blues & Medicare contractors asking what attachments are utilized?
  - ✓COB, SNF, Therapies, DME, Surgery
  - ✓54 responses - no follow-up conducted as NUCC need to focus on 1500 dataset

HCFA Surveys to Medicare Carriers and Intermediaries, 1996 / 1997
  - ✓Results led to funding 275 POC

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Attachments – Past

- Proof of Concept (POC) Team
  - ✓5 Medicare contractors funded by HCFA to develop Electronic Request for Information
  - ✓1997 began considering options for Claims Attachments as response to request - April 1997 approached HL7
  - ✓August 1997 POC Team joined HL7 and helped to form ASIG
  - ✓ASIG solicited industry input before moving forward

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LOINC and RELMA

- Universal Identifiers for Lab and other Clinical Observations
- Maintained by Regenstrief Institute & LOINC Committee
- For FREE Code Set and User Guide go to: www.regenstrief.org/loinc
- Relma Utility Program helps to navigate LOINC database FREE at www.loinc.org/relma
- Used to Identify Question in the 277 and the Answer in the 275

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