HEALTH STORY | PROJECT

Integrating Narrative Notes and the EHR

> **Vision: Comprehensive electronic records that tell a patient's complete *health story*.**
>
> Much of the information needed for patient care is locked in unstructured documents, such as transcribed notes. We unlock it with data standards that support information flow between narrative documents and EHR systems.

Integrating Narrative Notes and the EHR

Approximately 1.2 billion clinical documents are produced in the United States each year. These documents comprise around 60% of all clinical data. This tremendous source of clinical information is underutilized in today's computer-based record systems.

Health Story is an alliance of healthcare vendors, providers and associations that pooled resources over the previous four years in a rapid-development initiative to produce data standards for the flow of information between common types of healthcare documents and electronic medical record (EMR) systems.

Health Story has an Associate Charter Agreement with the HL7 data standards organization. Using HL7 Clinical Document Architecture (CDA®), the group developed the following technical guides, which are now available in a consolidated package along with the Continuity of Care Document (CCD) standard. The consolidation effort was supported within the ONC Standards & Interoperability Framework in partnership with IHE and HL7:

1. Consultation Note
2. Diagnostic Imaging Reports
3. Discharge Summary
4. History and Physical
5. Operative Note
6. Procedure Note
7. Progress Notes
8. Unstructured Documents

Adoption of these standards will unlock the valuable data from clinical notes and make possible an unrestricted flow of this narrative-source data into EMR systems and expedite the development of interoperable clinical document databases for use within healthcare enterprises and health information exchanges.

Health Story supports implementation of these standards and works to inform industry about the availability and benefits of the Health Story pathway.

Preserving the Patient Story Demo at HIMSS12

The Health Story approach is appealing to providers looking for a glide path to interoperability that allows clinicians to move toward EMR adoption and to meet early ARRA targets for meaningful use of EMRs while retaining their preferred methods of care. See Health Story in action at the HIMSS12 Interoperability Showcase, Feb. 21-23, in Las Vegas as eleven vendor volunteers demonstrate how to apply Health Story to a transition of care use case developed by the American College of Physicians.

Call to Action

We invite you to join the project, and support the Health Story approach.

Organization Affiliates

Promoter Members

HEALTH STORY PROJECT

HIMSS12 Interoperability Showcase
Hall G, Booth #11000, Use Case 13: Maintaining the Patient Story Across Transitions of Care

A significant percent—some estimates as high as 85%—of the information needed to care for a patient at some point crosses enterprise boundaries. For the first time, Health Story will demonstrate how to maximize the information available to the Electronic Health Record (EHR) while maintaining the patient story using all available channels, from unstructured, scanned documents to dictated notes enriched with abstractor, computer-assisted and Natural Language Processing (NLP) coding.

Demonstration Background

The American College of Physicians (ACP) recently developed a use case to address gaps in the referral process—a critical area of care transition and coordination. The intent was to define a "care coordination agreement," including the interactions and expectations for information exchange to improve the referral process. The ACP allowed Health Story to demonstrate its use case at the HIMSS12 Interoperability Showcase using the clinical document standards that Health Story helped create through the HL7 International data standards organization over the previous three years.

Recommended Demonstration Tour

Patient Visit to Primary Care Physician, Dr. Crow

A patient visits Dr. Crow due to fatigue, rapid weight loss and increased thirst. Dr. Crow conducts an exam, dictates and authenticates a progress note, pulls historical patient information for review, and consults an Endocrinologist who agrees to see the patient the next day. Dr. Crow creates and sends a lab order, and asks the patient to go for testing. He then dictates a referral request, which is sent to the Endocrinologist along with all related historical documents. *Dr. Crow uses an EHR system, dictation with NLP, and a Multifunction Peripheral (MFP) to scan documents.*

1. **M*Modal:** Dr. Crow conducts an exam and dictates a Progress Note. See M*Modal create a level-3 HL7 CDA Progress Note using real-time speech recognition and real-time natural language understanding technologies, which can also leverage prior documentation and automated summarizations from prior data.

2. **Verizon:** Verizon uses a secure transport layer throughout the demonstration to exchange all CDA documents. Visitors can review transport history using Medical Data Exchange with audit logs.

3. **Canon/Nuance:** Dr. Crow's office scans historical patient records (progress note and lab) using Canon imageRUNNER ADVANCE MFP embedded with Nuance eCopy ShareScan v5 to turn the documents into HL7 CDA Unstructured Documents.

4. **MIE:** MIE demonstrates the ability to collect and integrate HL7 CDA documents with its EHR system. Dr. Crow authenticates the Progress Note and sends the Referral Request to the Endocrinologist. (MIE received a level-2 CDA-based Referral Request from Lantana Consulting Group, which created it from dictation using its Trifolia Toolkit with HL7 greenCDA.

   Visit the Lab (hand carry your lab (printed at the Canon station) to the next stop.

Patient Visit to Endocrinologist, Dr. Nest

The patient visits Dr. Nest and shares a hard copy of his lab results. Dr. Nest's office staff scans the lab results, and she performs a full physical examination of the patient. Dr. Nest produces a History & Physical and Referral Response letter, which is made available to Dr. Crow and a Clinical Knowledge Exchange. *Dr. Nest uses an MFP to scan documents, a documentation creation system, NLP coding system, and a Clinical Knowledge Exchange.*

5. **Inofile with Fujitsu and Ricoh:** Dr. Nest's office scans the hand-carried lab report, and locates the patient in the system. A Fujitsu scanner or Ricoh MFP running Inofile software is used to combine live patient data from a Virtual Health Record and turn the lab report into an HL7 CDA Unstructured Document, which is sent to Apixio via XDR.

6. **ChartLogic:** ChartLogic Stella automatically registers the patient in Dr. Crow's workflow using the incoming CDA documents. Dr. Nest reviews the new lab and the notes provided by Dr. Crow. She examines the patient and uses Stella to build both a level-2 CDA-based History & Physical and a CDA-based Referral Response.

7. **OptumInsight:** Optum demonstrates how it extracts codes from the History & Physical using NLP.

8. **Lantana Consulting Group:** Lantana shows how it takes the level-2 CDA-based History & Physical from ChartLogic and merges it with NLP coded data from Optum to create a level-3 CDA using the Lantana Trifolia Toolkit.

9. **Apixio:** Dr. Nest uses Apixio to review the complete patient story of all CDA documents and information sent in both directions throughout the demonstration and to make recommendations. Information is completely searchable. All documents within the demonstration can also be displayed within the MIE EHR system, allowing Dr. Crow to review the full patient story as well in preparation for patient follow up.

IHE Profiles & Domains Featured

Domain	Profile	Actor
IT Infrastructure (ITI)	XDR	Source, Recipient
	XDS-SD	Consumer, Creator
Patient Care Coordination (PCC)	XDS-MS	Consumer, Creator

HL7 Standards and Tools Featured

- HL7 Clinical Document Architecture (CDA) R2 Normative Edition 2005
- HL7 Implementation Guide for CDA Release 2: IHE Health Story Consolidation
- HL7 Implementation Guide for CDA Release 2: History & Physical
- HL7 Implementation Guide for CDA Release 2: Progress Note
- HL7 Implementation Guide for CDA Release 2: Unstructured Documents
- HL7 Patient Demographics Query (PDQ)
- HL7 **greenCDA** Implementation Guide
- Trifolia Workbench: Consolidation Project Edition 1.0

Health Story Vendors Featured

Vendor	Product	Contact	HIMSS12
Apixio	Apixio Clinical Knowledge Exchange	Anthony LaRocca alarocca@apixio.com	Showcase #13 & Booth #3073
Canon U.S.A	imageRUNNER ADVANCE MFP	Jeff Tepper jtepper@cusa.canon.com	Showcase #13 & Booth #12406
ChartLogic	ChartLogic Stella	Sam Winebaum samwinebaum@chartlogic.com	Showcase #13 & Booth #14024
Inofile with Fujitsu	Inofile ChartMD on Fujitsu 1800N and Ricoh Aficio MFP	Therasa Bell tbell@inofile.com	Showcase #13 Booth #4834
Lantana Consulting Group	Trifolia Toolkit	info@lantanagroup.com	Showcase #13
M*Modal		Juggy Jagannathan juggy@medquist.com	Showcase #13 Booth #5725
Nuance	eCopy ShareScan v5	David McKanna david.mckanna@nuance.com	Showcase #13 Booth #14542, 3523, 6527
OptumInsight	Actus™/CodeDirect™	Blair Jennings bjennings@alifemedical.com	Showcase #13 Booth #4245
Verizon	Medical Data Exchange	Ardi Kazarian ardi.kazarian@verizon.com	Showcase #13 Booth #2463

Health Story Presentation, Hall G, Interoperability Showcase Theater

Thursday, Feb. 23, 3:15 PM
Bill Beighe, CIO, Physicians Medical Group of Santa Cruz County
Health Story Member

Health Story, Hall G, Booth #10

Stop by the Health Story booth to learn more.
Or contact:

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"There are Health Story members who can produce electronic documents today based on HL7 CDA," said Bob Dolin, MD, Vice Chair of HL7 International. "We need to raise awareness of this option," he continued. "Many EMR system vendors do not know that companies in the clinical documentation industry can produce and offer structured, electronic documents in the HL7 CDA format. And, providers are not aware that they can ask for this approach to discrete data capture, which is minimally disruptive to clinician workflow."