



**HEALTH
STORY**

PROJECT 

Interoperability for Everyone

Liora Alschuler, CEO

Lantana Consulting Group

Health Story Volunteer

About me

- Background in electronic text, how to make large amounts of information usable on a computer
- I volunteer a lot
- Current day job as Lantana CEO
- Participate in the CDA Academy (www.cdaacademy.com)

Interoperability for Everyone

1. Health Story Project
2. Health Story at HIMSS Showcase 2014
3. ***An announcement***

Interoperability for Everyone

“It was so much easier when I could just say what I wanted.”

John Spinoso, MD, quoting a colleague

The Challenge of Electronic Records

- “It was so much easier when I could just say what I meant.”
- Unstructured narrative is not considered “meaningful use” of an electronic record.



Challenge

VIEWPOINT

Robert S. Foote, MD
Department of Nuclear
Cardiology, Dartmouth
Hitchcock Medical
Center, Lebanon, New
Hampshire., and
Department of
Medicine and
Radiology, Geisel
School of Medicine at
Dartmouth, Hanover,
New Hampshire.

The Challenge to the Medical Record

Observe, record, tabulate, communicate.

Sir William Osler

Thirty years ago, not long after I began teaching first- and second-year medical students how to take patient

JAMA, Internal Medicine, published online, May 27, 2013

uted have become more and more inscrutable, it has spawned a small army of people who “need” to know what happened in the examination room or at the bedside. They need to know because their livelihoods and the functioning of the system as a whole depend on it

“I have never seen...a checkbox for apprehension...”

“The medical record is not data. It contains data... but it is not data, nor is it simply a repository into which data are poured.

“... [it is] information that has been transformed by the knowledge, skill, and experience of the physician...into an understanding of human experience...”

Challenge

Perspective

Data from clinical notes: a perspective on the tension between structure and flexible documentation

S Trent Rosenbloom, Joshua C Denny, Hua Xu, Nancy Lorenzi, William W Stead, Kevin B Johnson

JAMIA, published online, January 12, 2011

Department of Biomedical Informatics, Vanderbilt University Medical Center, Nashville, Tennessee, USA

Correspondence to

Dr S Trent Rosenbloom, Eskind Biomedical Library, Room 440, 2209 Garland Avenue, Nashville, TN 37232-8340, USA; trent.rosenbloom@vanderbilt.edu

ABSTRACT

Clinical documentation is central to patient care. The success of electronic health record system adoption may depend on how well such systems support clinical documentation. A major challenge is to convert clinical documentation into electronic formats that can be used to generate reusable data. This paper discusses the need for an emphasis on deploying clinical documentation systems that support flexible documentation. Research

documentation (CBD) systems that promote real-time structured clinical documentation.

The myriad requirements imposed on clinical documentation compel healthcare providers to

Structured data capture can be at odds with the expressivity, workflow, and usability factors preferred by clinicians.

Authors recommend **choice** in data capture and text processing modalities.

Challenge

Lawrence B. Marks, MD

- **Misperceptions on electronic health records**
- &Newsobserver.com, October 4, 2013
 - “During any evaluation, I like to scan the prior notes to remind myself of how the patient has been doing over the last few weeks. ...with a paper chart, ...it was almost like reading a short story.
 - “Imagine reading a short story and being allowed to view only one paragraph at a time. Imagine needing to open or close multiple windows to move in between paragraphs or needing to search to determine whether there is a prior paragraph to read.”

Response

- We can create an electronic record that ensures value for
 - Care delivery
 - Evidence-based medicine
 - And which endures over time, as technology evolves
- Vision
 - Comprehensive electronic records that
 - Tell a patient's complete health story.

How?

- Use simple, stable, established formats for information exchange.
- Mix data and narrative.
- Go Big
- This will be:
 - Less disruptive
 - More useful

Background

- “CDA for Common Document Types” (aka CDA4CDT) in 2006
 - M*Modal
 - Association for Healthcare Document Integrity (AHDI)
 - American Health Information Management Association (AHIMA)
 - Alschuler Associates (aka Lantana)
- Members provide direction, elect Executive Committee
- Supported eight (8!) implementation guides in three years

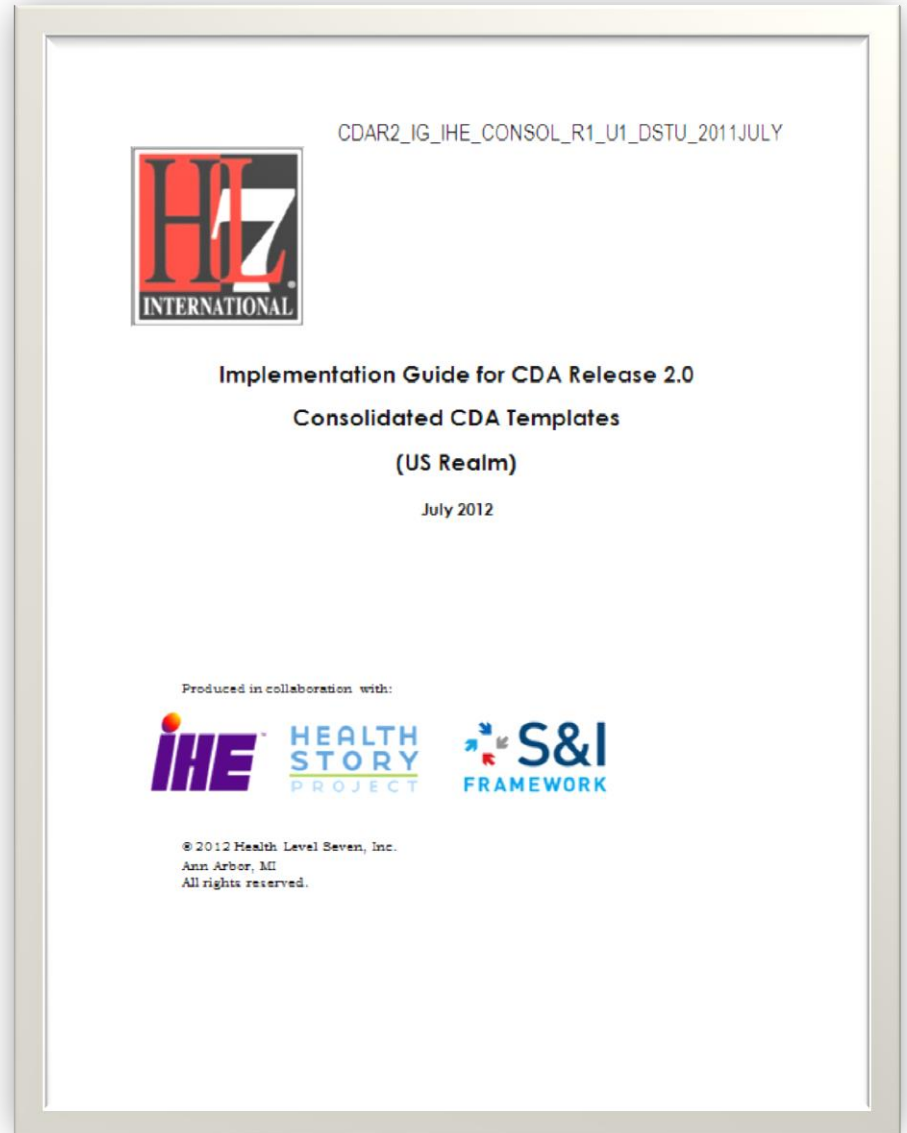
Background

- Associate Charter Agreement with HL7
- Initiated project to **consolidate** 8 guides into single guide and also
 - Update Continuity of Care Document (CCD)
 - Harmonize with IHE
 - Integrate HITSP C32
- Initiated Consolidated CDA (C-CDA) cited in MU2

Consolidated CDA

- CCD
- Consultation Note
- Diagnostic Imaging Report
- Discharge Summary
- H&P
- Operative Note
- Procedure Note
- Progress Note
- Unstructured Document

- Cited in Meaningful Use Stage 2
 - With exceptions



Investing in Information

- CDA can be simple
- CDA can be complex
- Simple encoding relatively inexpensive, complex encoding costs more
- **Gall's Law** is a rule of thumb from John Gall's *Systemantics: How Systems Really Work and How They Fail*:
 - A complex system that works is invariably found to have evolved from a simple system that worked.
 - The inverse proposition also appears to be true: A complex system designed from scratch never works and cannot be made to work. You have to start over, beginning with a working simple system.

We are looking for a shift in policy

- Lower the threshold for information exchange so that
 - all may participate
 - approach 100% of the records for 100% of patients
- Incentivize participation at all levels of interoperability
- Recognize diversity of applications
- Respect the clinical voice
- Provide value back to those who incur the costs

CDA Basics

- A Header + Body
- CDA Header: metadata
- CDA Body
 - narrative (free-text) form ***required*** and
 - coded (computable) form ***optional***

Incremental Approach

1. Get the data flowing, get the data flowing, get the data flowing.
2. Incrementally add structure, where cost effective to do so.

THE MEDQUEST HOSPITAL
DECHARGE SUMMARY

PATIENT: DOGOOD, LARRY ADMITTED: 11/15/07
MR#: A1234567 DISCHARGE: 11/26/07
ACCOUNT #: 1234567

DISCHARGE MEDICATIONS:
1. ECASA 325 mg po daily (new)
2. Zocor 40mg po daily. (new)
3. Atenolol 100mg po daily (increased)
4. Glucophage 850 mg tab, 1 tab po TID
5. Zyrtec 10mg po daily

DISCHARGE DIAGNOSES:
1. Acute Myocardial Infarction s/p CABG.
2. Cardiovascular collapse
3. Hypertension, NOS
4. Diabetes Mellitus, type II
5. Seasonal Allergies

PROCEDURE: CABG, LIMA->LAD, SVG->Circ, SVG->LAD
2/26/07.

HISTORY OF PRESENT ILLNESS: This is a 51 year old male with a history of Hypertension and diabetes admitted with chest pain, and hypotension. Please see the History of Present Illness for details of admission. He was noted to have non-ST segment elevation and positive cardiac enzymes on presentation and admission to the CCU.

Narrative Text

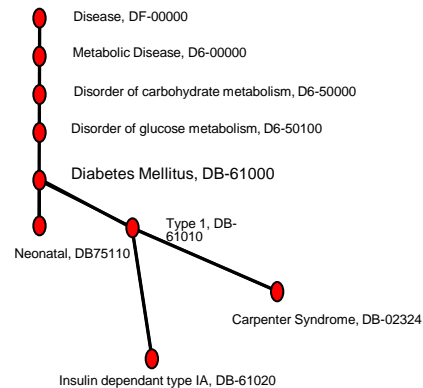
HL7 CDA Structured Documents

```

<<componentOf>
  <<composingExtenster classCode="ESCC" moodCode="EVN">
    <id root="1.3.6.4.1.4.1.2835.12" extension="99370129">
      <code code="99211" codeSystem="2.16.840.1.113883.6.12" codeSystemName="CPT-4"
        displayName="Evaluation and Management"/>
      <effectiveTime>
        <low value="20070220T">
          <low value="20070220T">
            <dischargeDispositionCode code="01" codeSystem="2.16.840.1.113883.6.2" codeSystemName="UB92"
              displayName="Routine Discharge"/>
          </dischargeDispositionCode>
        </low value>
      </effectiveTime>
    </composingExtenster>
  </componentOf>
  <<componentOf>
    <<structureBody>
      <templateId root="1.3.6.4.1.11950.10" extension="DMG1_CDAR2_LVL11_SREF_DS_ID_2005SEP">
        <component>
          <extension>
            <templateId root="1.3.6.4.1.19376.1.5.3.1.3.7" extension="HOSPITAL DISCHARGE DOC Template">
              <code code="15535-2" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
                displayName="HOSPITAL DISCHARGE DOC"/>
              <code code="DISCHARGE DIAGNOSES" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
                displayName="DISCHARGE DIAGNOSES"/>
            </extension>
            <text>
              <paragraph>1. Acute Myocardial Infarction s/p CABG </paragraph>
              <paragraph>2. Cardiovascular collapse </paragraph>
            </text>
          </extension>
        </component>
      </templateId>
    </structureBody>
  </componentOf>
  </composingExtenster>
</componentOf>
  
```

Coded Discrete Data Elements

SNOMED CT



Quality Reporting

Decision Support

Clinical Applications

Meaningful Use!

Value Statement

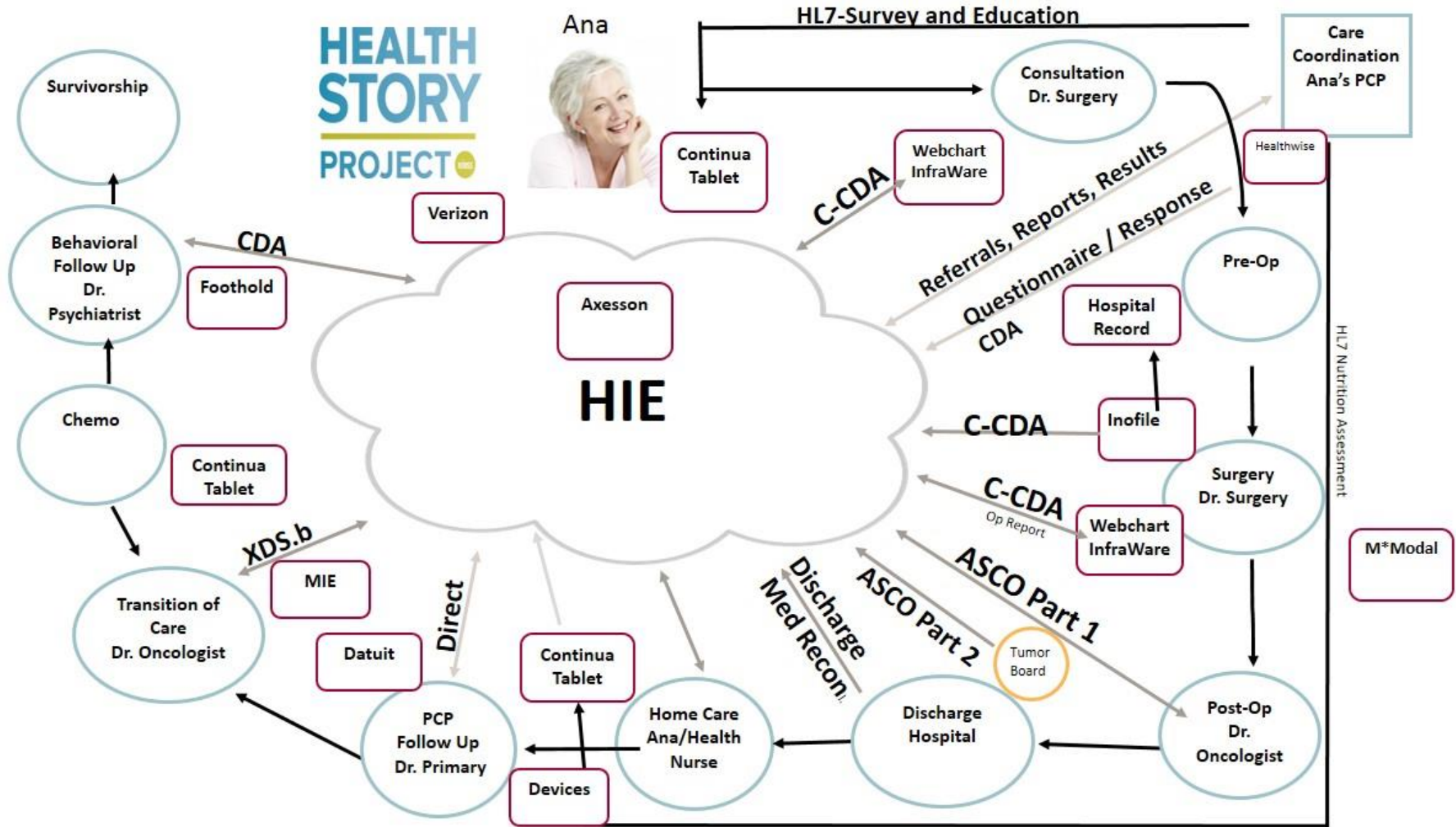
- A health record is the patient’s “health story”
- The primary purpose of the record is to support care delivery
- Electronic records must produce a longitudinal record of lasting value: expressive, data conversion-proof
- Clinical records must be complete, well organized, easy to navigate, concise, logical, adaptable to the needs of the user, sharable, and secure.
- Electronic records and new technologies
 - support shared decision-making,
 - document use of practice guidelines, and
 - support evidence-based practice.

Health Story Showcase 2014

- Standards:
 - **NEW:** Care Plan
 - **NEW:** Patient Questionnaire/
response
 - Consolidated CDA
 - Home Health Monitoring
 - ASCO Cancer Treatment Plan &
Summary
- Highlights:
 - Patient engagement
 - Flexible information capture
 - Care coordination
 - **Full record**



The Health Story Vignette

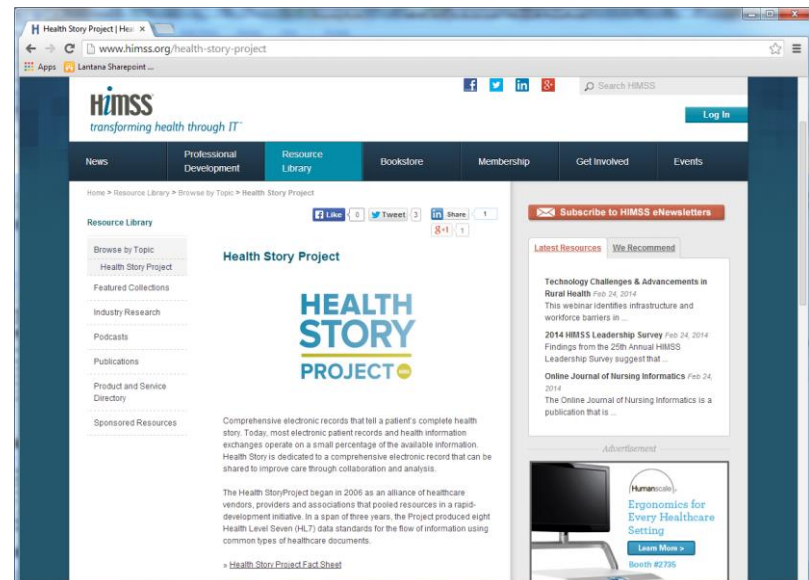




SPECIAL TEAMS
ASCO, AN&D, ACP
AHIMA and ONC

Announcing

- Health Story affiliated with HIMSS in 2013
- First meeting of the Round Table:
 - April 7, 2014 at 3-4pm CT
 - Election of Leadership Council
- First meeting of the Leadership Council
 - May 12, 2014 at 3-4pm CT
 - Meets 2nd, 4th Monday
- To sign up:



Contact!

- [At HIMSS: Interoperability Showcase Hall F](#)
- <http://www.himss.org/health-story-project>
- HIMSS Staff Support
 - Celina Roth
 - Manager, Staff Liaison to the Health Story Project
 - Phone: +1-312-915-9213
 - CRoth@himss.org
- Liora.Alschuler@lantanagroup.com

Questions?