Lantana
CONSULTING GROUP

CM/DM CARE PLAN REQUIREMENTS

Review and Recommendations for Using the C-CDA R2.0 Care Plan Document

June 17th, 2015

Lisa R. Nelson, Lantana Consulting Group
Lenel James, Blue Cross and Blue Shield Association

Commissioned by

BlueCross BlueShield Association

Agenda

Project Briefing for Patient Care WG (30 mins)

- Introduction
  - Historical perspective, goals and approach (5 mins)
    - C-CDA Care Plan Document
    - Identified missing requirements
    - Approach & collaboration
- Results
  - Review of Deliverables (3 mins)
    - Document Design Details
    - Style-sheet transformation – leveraging the design
  - Summary of Key "Gap" Findings (3 mins)
  - Summary of Recommendations (4 mins)
- Next Steps
  - Summary of Next Steps (5 mins)
  - Q/A (10 mins)

SEPTEMBER 2013 HL7 BALLOT COMMENT

CDAR2_IG_CCDA_CLINNOTES_R1_D1_2013SEP Ballot Comment
Supplemental Information

HL7 Implementation Guides for CDA Release 2: Consolidated CDA Templates for Clinical Notes, DSTU Release 2 - US Realm

Submitted by:
R. Lenel James
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312-404-5852

Contributors:

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Pat Van Dyke, RN, Delta Dental
George Cole, Allscripts

The issue

How to document and track patient enrollment in specific Care Management or Disease Management programs.

Background:

As part of providers and payers being in ACOs and the growth of Patient Centered Medical Home, there is a need to know and track which patients are in Care Management programs – to know what treatment protocol is expected, track any special patient/member co-pays or unique benefits, and to help insure it can be document and reported that the patient is in the program.

Historical Perspective

Standards development activities:

- **Consolidated CDA Release 2 (C-CDA R2.0)**
  - New Care Plan Document Template
  - Identified Missing Requirements
- **Pilot Lessons Learned**
  - S&I Framework Longitudinal Coordination of Care (LCC)
- **HL7 Patient Care**
  - Care Plan Domain Analysis Model
  - Added Story Board 8

ABOUT THE PROJECT

Goals and Objectives

Goal:

- Address 19 Requirements (Table 2)
- Demonstrate possible solutions
- Identify gaps

Objectives:

- Develop a generalized approach which could fit many different views of what a Care Plan is
- Educate about C-CDA R2 Care Plan templates
- Elevate CDA usage to a higher level
- Minimize differences between CDA and FHIR

Stakeholder Collaboration

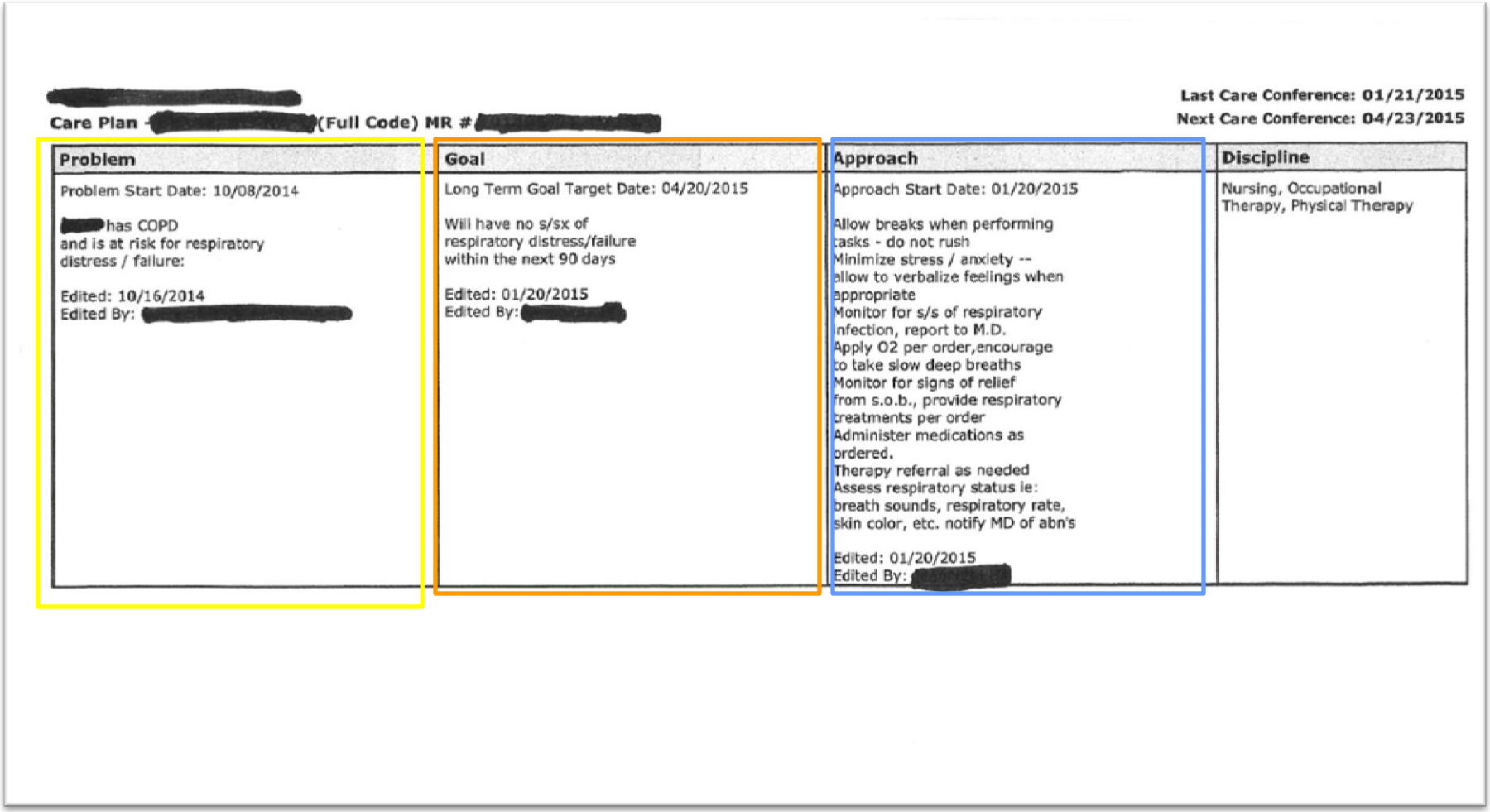
Requirements identification, project input:

- Pilot experimentation and feedback

- **Input from various groups and individuals**
  - Vocabulary and structural design work
  - Collaboration with HL7 Patient Care
  - Report, sketch review and feedback
  - Experimentation with sample plan

- **Sample care plans provided as informative examples**
  - Shelly Spiro – Pharmacy HealthIT Collaborative

Sample Care Plan – 20 pages



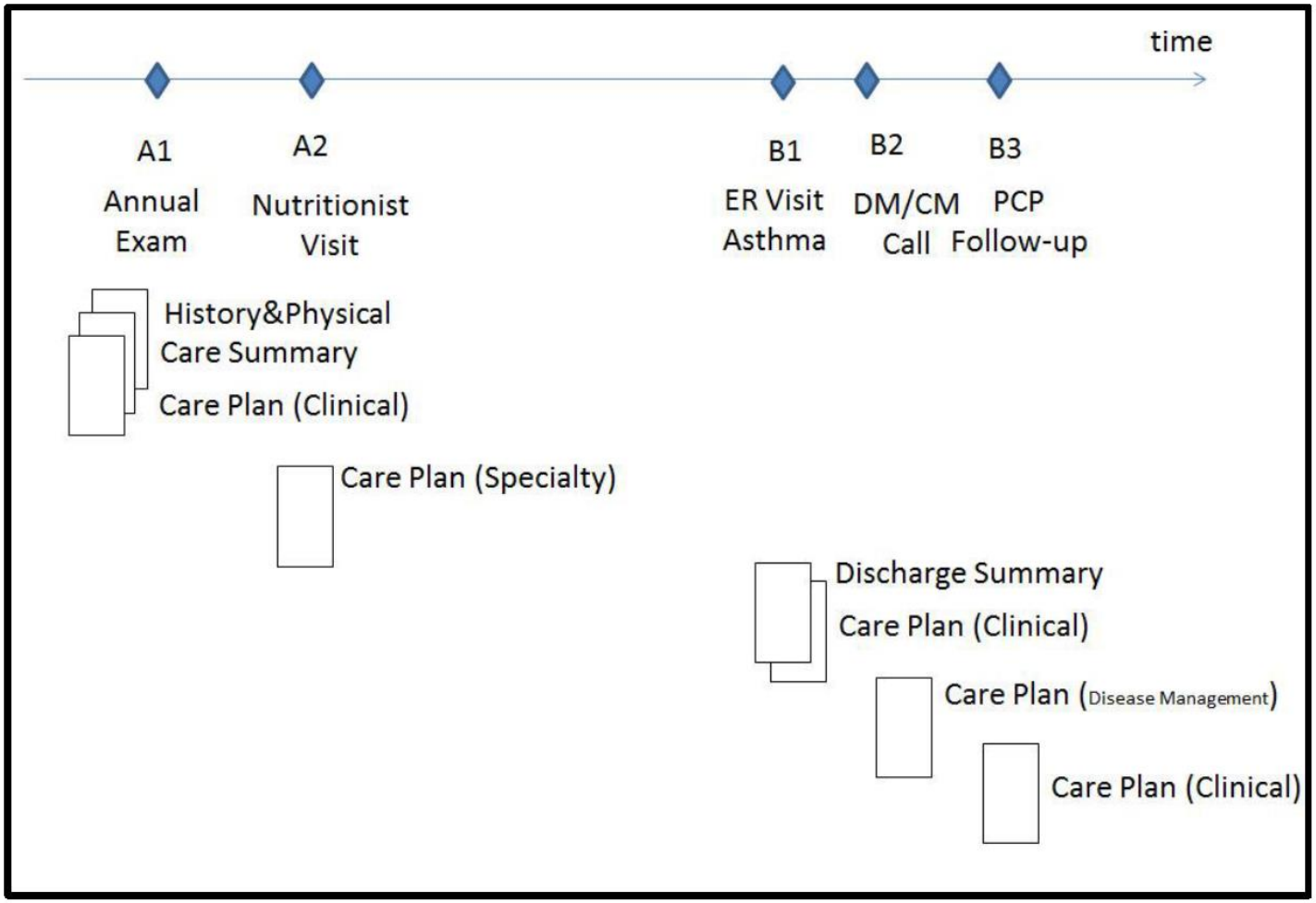
[redacted]

Care Plan - [redacted] (Full Code) MR # [redacted]

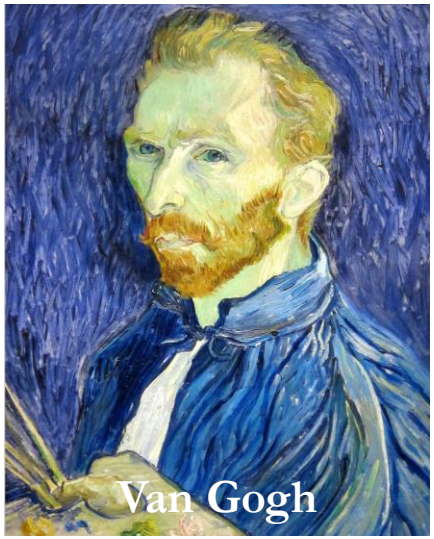
Last Care Conference: 01/21/2015
Next Care Conference: 04/23/2015

Problem	Goal	Approach	Discipline
Problem Start Date: 10/08/2014 [redacted] has COPD and is at risk for respiratory distress / failure: Edited: 10/16/2014 Edited By: [redacted]	Long Term Goal Target Date: 04/20/2015 Will have no s/sx of respiratory distress/failure within the next 90 days Edited: 01/20/2015 Edited By: [redacted]	Approach Start Date: 01/20/2015 Allow breaks when performing tasks - do not rush Minimize stress / anxiety -- allow to verbalize feelings when appropriate Monitor for s/s of respiratory infection, report to M.D. Apply O2 per order,encourage to take slow deep breaths Monitor for signs of relief from s.o.b., provide respiratory treatments per order Administer medications as ordered. Therapy referral as needed Assess respiratory status ie: breath sounds, respiratory rate, skin color, etc. notify MD of abn's Edited: 01/20/2015 Edited By: [redacted]	Nursing, Occupational Therapy, Physical Therapy

PC – Care Plan DAM: Story Board 8



RESULTS



Summary of Deliverables

Deliverables:

- **Report (50+ pages)**
  - 19 CM/DM care plan requirements addressed
- **Context for sketches (Chapter 3.1)**
  - Visualizations of the "longitudinal view"
- **Summarized C-CDA R2.0 care plan document sections and entries**
  - (Appendix A, Table 5)
- **Novel care plan document design (Chapter 3.2)**
  - Care plan "containers" organize human readable content
  - Care plan standard "core sections" organize machine readable entries
  - Multidimensional "linkages" to aid information processing
- **9 CDA Care Plan Documents**
  - (Table 1 (over time), Table 4 (requirements met)
  - Reinforce longitudinal context
  - Demonstrate a way to address CM/DM requirements
  - Identify potential new templates, and current gaps
- **Stylesheet to illustrate processing possibilities that leverage the proposed design (Chapter 3.3)**

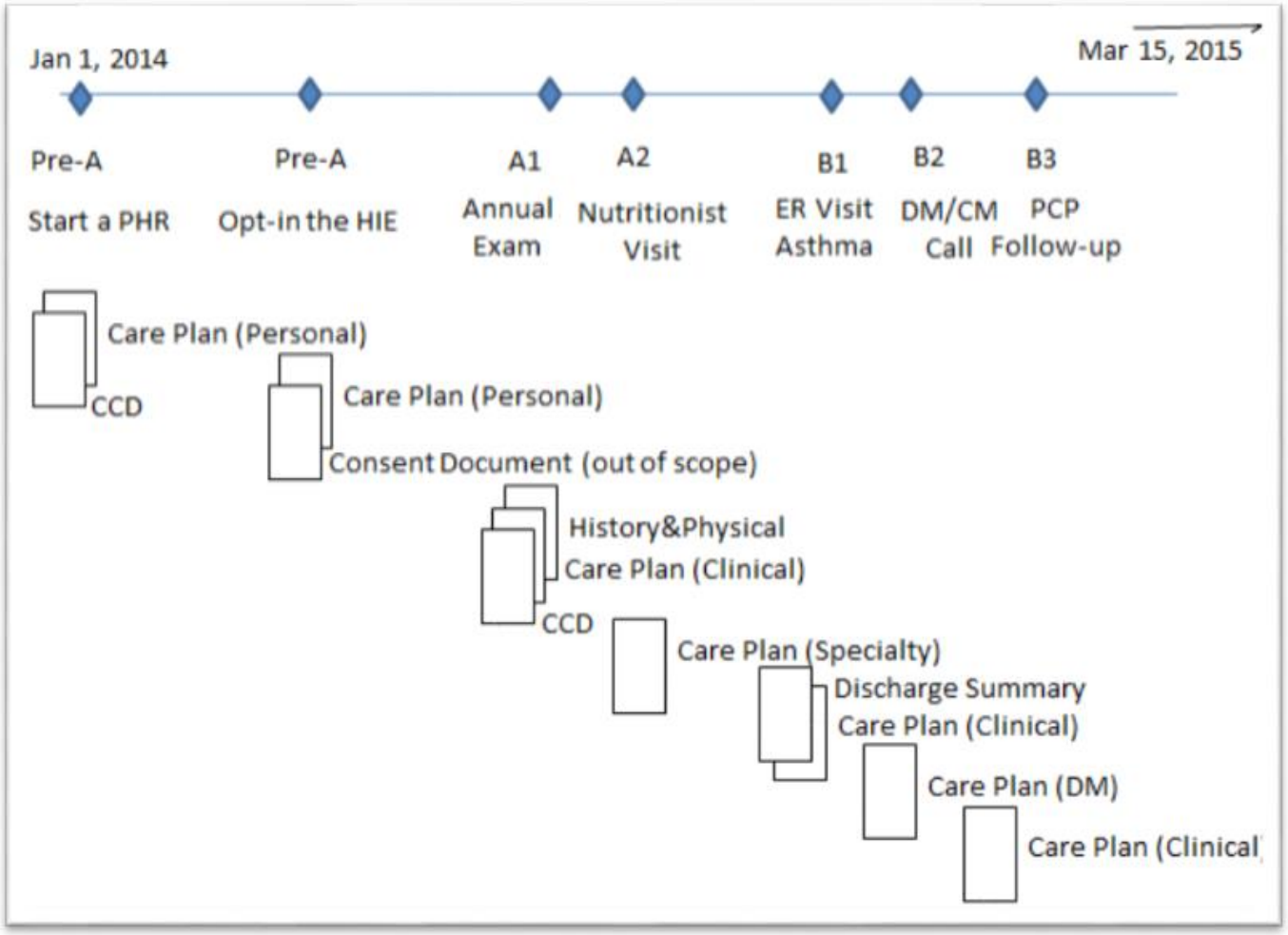
Summary of Requirements Addressed (Tables 2,4)

Priority: A B B/C C S=Sketched G=Guidance X=Gap

	Requirement Characterization	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Structure	Care Plan structure – Containers	S	S	S			S	S	S	S	S		S							
Acceptance	Metadata – Acceptance/status				S	S									S	S				
Linking	Linking – internal and external										S	S					S			
Linking	Linking of Outcome Observaction																		G	
Linking	Linking Supplied Edu materials																			G
Uncharted	Types of interventions, barriers, etc.													X						
Uncharted	Goal not met																	X		

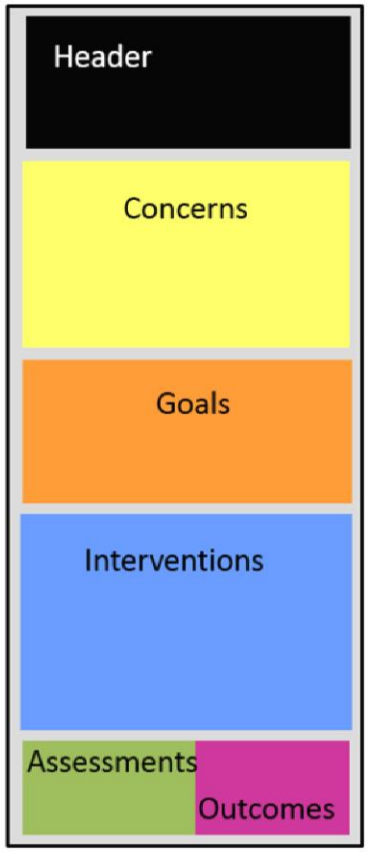
A Longitudinal Context for Care Plans

Figure 6: Storyboard Example—Context for CDA Sketches



Document Design Details

Care Plan Document



An illustration of the CDA document developed in C-CDA R2.0 for representing a care plan.

The design for a C-CDA R2.0 care plan document includes a header and in the body of the document it includes one section for each of the following types of information:

- the concerns
- the goals,
- the interventions, and
- the assessments and outcomes.

These set of "core sections" make up the structure of a care plan.

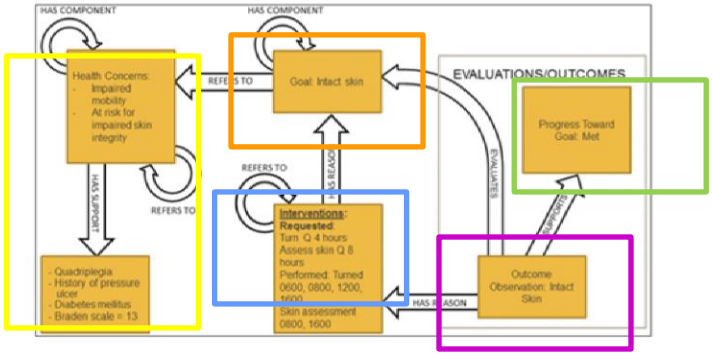
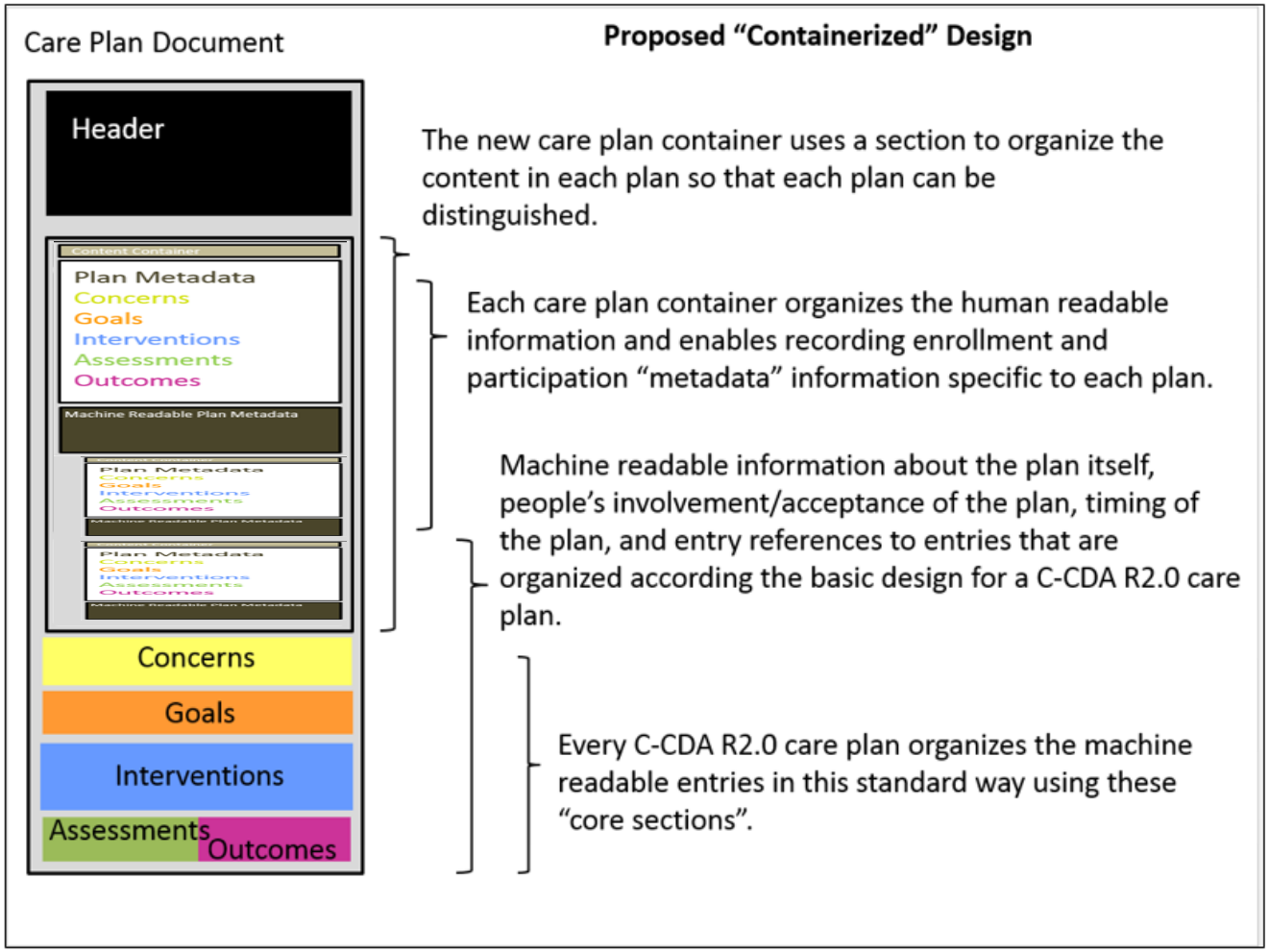


Figure 1

Document Design Details

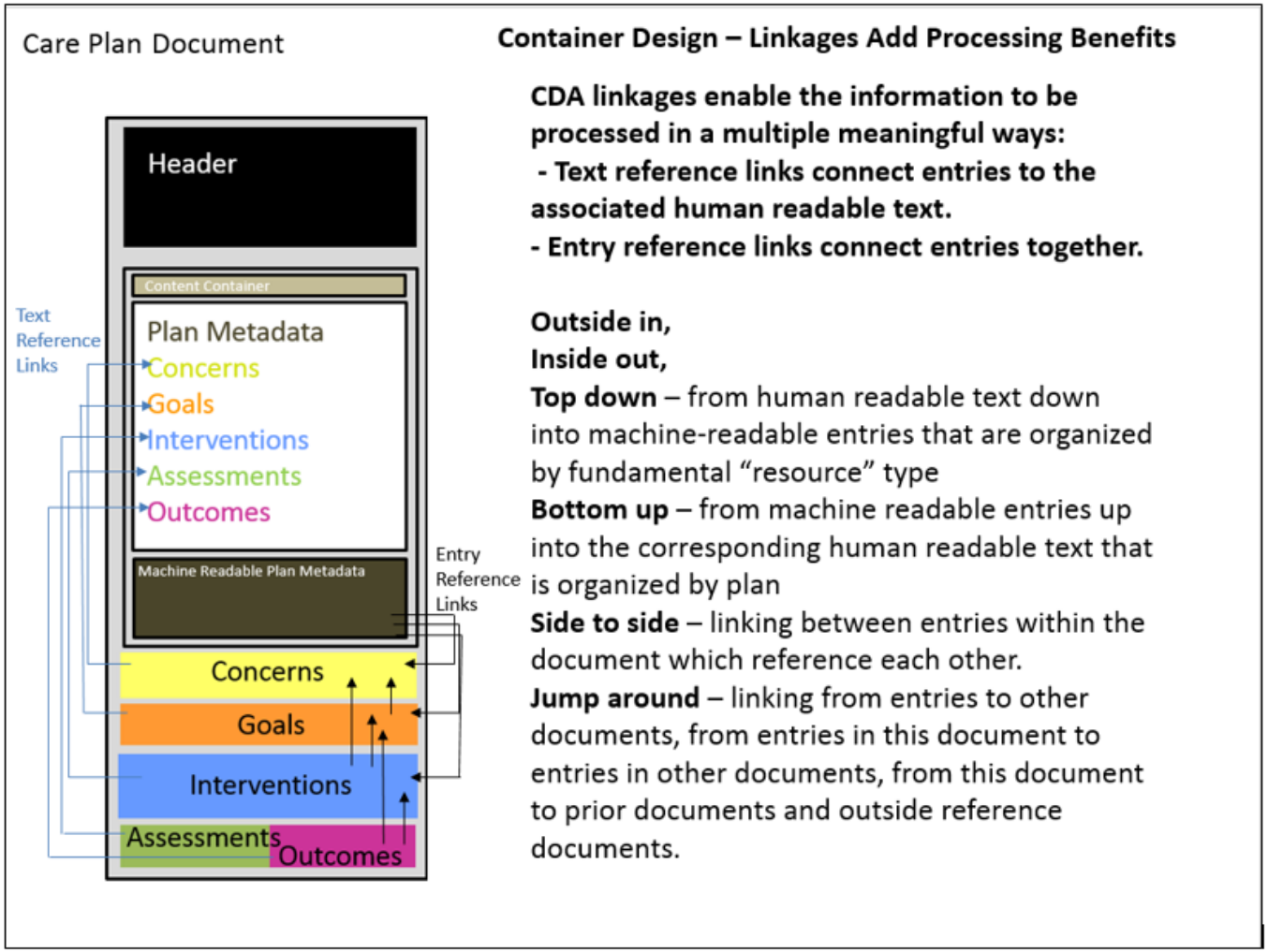
Figure 10: Proposed Care Plan Document Structure with "Container"



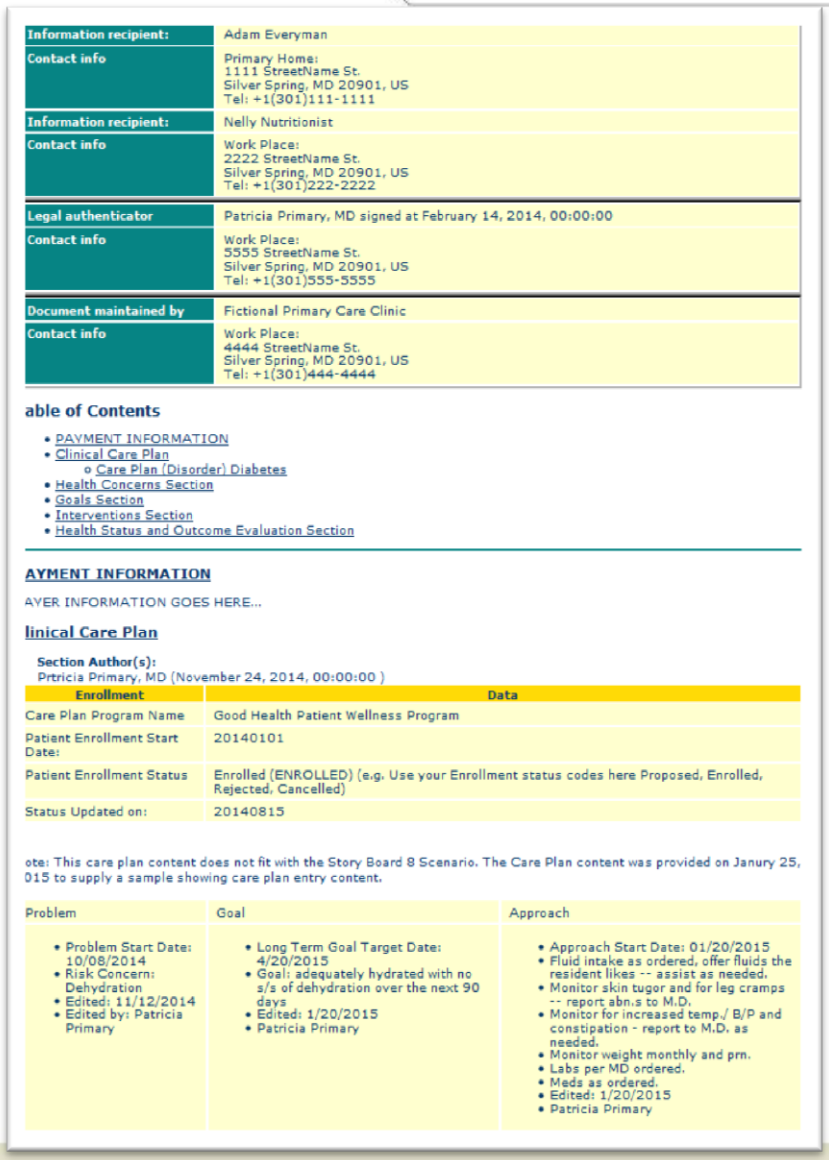
Care Plan Container Is a Recursive Design

Document Design Details

Figure 13: CDA Linkages Add Processing Benefits



CDA XML Walk Through



Information recipient:	Adam Everyman
Contact info	Primary Home: 1111 StreetName St. Silver Spring, MD 20901, US Tel: +1(301)111-1111
Information recipient:	Nelly Nutritionist
Contact info	Work Place: 2222 StreetName St. Silver Spring, MD 20901, US Tel: +1(301)222-2222
Legal authenticator	Patricia Primary, MD signed at February 14, 2014, 00:00:00
Contact info	Work Place: 5555 StreetName St. Silver Spring, MD 20901, US Tel: +1(301)555-5555
Document maintained by	Fictional Primary Care Clinic
Contact info	Work Place: 4444 StreetName St. Silver Spring, MD 20901, US Tel: +1(301)444-4444

able of Contents

- PAYMENT INFORMATION
- Clinical Care Plan
  - Care Plan (Disorder) Diabetes
- Health Concerns Section
- Goals Section
- Interventions Section
- Health Status and Outcome Evaluation Section

AYMENT INFORMATION

AYER INFORMATION GOES HERE...

linical Care Plan

Section Author(s):
Prtricia Primary, MD (November 24, 2014, 00:00:00)

Enrollment	Data
Care Plan Program Name	Good Health Patient Wellness Program
Patient Enrollment Start Date:	20140101
Patient Enrollment Status	Enrolled (ENROLLED) (e.g. Use your Enrollment status codes here Proposed, Enrolled, Rejected, Cancelled)
Status Updated on:	20140815

ote: This care plan content does not fit with the Story Board 8 Scenario. The Care Plan content was provided on Janury 25, 015 to supply a sample showing care plan entry content.

Problem	Goal	Approach
• Problem Start Date: 10/08/2014 • Risk Concern: Dehydration • Edited: 11/12/2014 • Edited by: Patricia Primary	• Long Term Goal Target Date: 4/20/2015 • Goal: adequately hydrated with no s/s of dehydration over the next 90 days • Edited: 1/20/2015 • Patricia Primary	• Approach Start Date: 01/20/2015 • Fluid intake as ordered, offer fluids the resident likes -- assist as needed. • Monitor skin tugor and for leg cramps -- report abn.s to M.D. • Monitor for increased temp./ B/P and constipation - report to M.D. as needed. • Monitor weight monthly and prn. • Labs per MD ordered. • Meds as ordered. • Edited: 1/20/2015 • Patricia Primary

```
<code code="EX-PersonalCarePlan" displayName="Personal Care Plan" codeSyst
    sdtc:valueSet="1.2.826.0.1.3680043.8.2160.1.1.1.1.5.1"/>
<title>Clinical Care Plan</title>
<text>

    <!-- Header Info for the Care Plan -->
    <table styleCode="EnrollmentInfo">
        <thead>
            <tr>
                <th>Enrollment</th>
                <th>Data</th>
            </tr>
        </thead>
        <tbody ID="CP1_Enrollment">
            <tr ID="CP1_Enrollment_Name">
                <td>Care Plan Program Name</td>
                <td ID="CP1_Enrollment_CPType_Value">Good Health Patient W
            </tr>
            <tr ID="CP1_Enrollment_StartDate">
                <td>Patient Enrollment Start Date:</td>
                <td>20140101</td>
            </tr>
            <tr ID="CP1_Enrollment_Status">
                <td>Patient Enrollment Status</td>
                <td ID="CP1_Enrollment_Status_Value">Enrolled (ENROLLED) (
            </tr>
            <tr ID="CP1_Enrollment_StatusEffectiveDate">
                <td>Status Updated on:</td>
                <td>20140815</td>
            </tr>
        </tbody>
    </table>
    <br/>
```

"Uncharted Areas"

Req #	Short Description
13	Value Set Options for Types of Interventions, Concerns, Activities, and Barriers
17	Care Step (Goal or Intervention) Is Not Met

Priority: A B B/C C

Leveraging the Design

Care Plan

Table of Contents

Care Plan Containers

- Clinical Care Plan
  - Care Plan (Disorder) Diabetes

Standard Aggregate Care Plans Sections

- Aggregation of Health Concerns
- Aggregation of Goals
- Aggregation of Interventions
- Aggregation of Health Status Assessments and Outcome Evaluations

Clinical Care Plan

Author: Primary, Patricia MD
November 24, 2014

Enrollment	Data
Care Plan Program Name	Good Health Patient Wellness Program
Patient Enrollment Start Date:	20140101
Patient Enrollment Status	Enrolled (ENROLLED) (e.g. Use your Enrollment status codes here Proposed, Enrolled, Rejected, Cancelled)
Status Updated on:	20140815

Problem	Goal	Approach	Assessment/Evaluation
• Problem Start Date: 10/08/2014 • Risk Concern: Dehydration • Edited: 11/12/2014 • Edited by: Patricia Primary	• Long Term Goal Target Date: 4/20/2015 • Goal: adequately hydrated with no s/s of dehydration over the next 90 days • Edited: 1/20/2015 • Patricia Primary	• Approach Start Date: 01/20/2015 • Fluid intake as ordered, offer fluids the resident likes -- assist as needed. • Monitor skin tugor and for leg cramps -- report abn.s to M.D. • Monitor for increased temp./ B/P and	

```
    ================================================================================
    Purpose:    Render Care Plan

                This is a minimally viable stylesheet and should not be utilized
                in a production environment.

    Revisions:  022715 BWS Creation

                Copyright 2015 Healthwise, Incorporated
    ================================================================================
    -->
    <xsl:stylesheet version="1.0"
                    xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
                    xmlns:cda="urn:hl7-org:v3"
                    xmlns:sdtc="urn:hl7-org:sdtc"
                    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
                    exclude-result-prefixes="cda sdtc xsi">


        <!--
    ================================================================================
     Section 1: Stylesheet Configuration
    ================================================================================
    -->
            text-align:center;
        }
        </xsl:comment>
        </style>
    </head>
    <body>
        <h1 id="Top" name="Top">Care Plan</h1>
        <xsl:call-template name="BuildTOC"/>
        <!-- Care Plan Container -->
        <xsl:apply-templates select="cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component
                                     /cda:section[cda:code[(@code != '75310-3' and @code != '61146-7' and @

        <!-- Health Concerns -->
        <xsl:apply-templates select="cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component
                                     /cda:section[cda:code[@code = '75310-3']]"/>
        <!-- Goals Section -->
        <xsl:apply-templates select="cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component
                                     /cda:section[cda:code[@code = '61146-7']]"/>
        <!-- Intervention Section -->
        <xsl:apply-templates select="cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component
                                     /cda:section[cda:code[@code = '62387-6']]"/>
        <!-- Health Status Assessments and Outcome Evaluation Section -->
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    </body>
</html>
</xsl:template>
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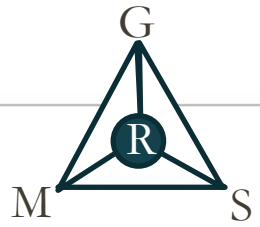

Sumary of Key "Gap" Findings (Chapter 4)

→ R=Requirements → M=Modeling → S=Semantics (value set) → G=Guidance →

#	Gap type	Brief Description
1	Semantics	Status-related concepts need value sets
2	Modeling	"Content Status", "Care Team Acceptance" needs to be clarified.
3	Semantics	Types of barriers and types of interventions, need value sets
4	Modeling	Care Plan "Containers" and the metadata for each care plan
5	Modeling	Documentation of a care step or goal "not met"
6	Modeling	Information for the payer section needs to be clarified
7	Requirements	Informational content in a care plan needs to be clarified
8	Requirements	The function of Care team members needs to be clarified
9	Requirements	ServiceEvent coding to help search for care plans, track activites
10	Guidance	Internal and external "linking" within and across documents

Recommendations (Chapter 5)

1. **Form a technical implementation team to address usage issues for C-CDA R2 Templates**
   - Payor/Provider pilots
   - PCWG IG issues
2. **Establish coded concepts and value sets to clarify expected care plan content and support machine readable entries**
   - Key CM/DM & pilot value sets
   - PCWG for other value sets
   - Use care plan examples to establish needed value sets
3. **Record progress as it happens by developing a detailed implementation guide for creating and processing care plan documents**
   - 2014 pilots as input
   - Submission of pilot and PCWG DSTU comments
   - IG work by PCWG, StrucDocsWG & Attachments WG
   - Include more implementer guidance (volume 1 content)
4. **Explore and develop content representation that makes sense in clinical use**
   - 2014 pilots as input
   - PCWG & StrucDocs WG domain
   - Focus on content that makes sense in clinical use before addressing machine readable entries
   - Address how the content will be presented in meaningful, useful ways

Conclusions (Chapter 6)

Three key take away points:

1. **This is much more complex than anticipated. Some fundamental concepts are not yet agreed, like goals and targets. A shared vision has not yet emerged making implementation difficult.**
2. **More examples, prototyping, and piloting are needed to understand the requirements of field implementations.**
3. **A significant effort will be needed to examine implementation details and develop consensus at a finer level of detail. Changes will be needed, and additional template refinement or development will be needed to mature this work.**

Thom Kuhn: Yes! This is true. There is a real danger of getting ahead of ourselves.

Lenel James: I agree that we need to find what provider and payer care Plan software can do, from those willing to work on a pilot process.

Next Steps

1. Schedule Q&A with interested stakeholders
2. Meet with key project participants to assess available resources
3. Determine Plan, Provider, and Vendor candidates for one or more pilot projects
4. Review options and timetable for pilot(s)
5. Kick-off pilots
6. Assess pilot progress and lessons learned
7. Determine impact on proposed Care Plan template changes
8. Prepare and submit formal C-CDA R2.X DSTU comments

QUESTIONS