Templated CDA

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President and CMO,
What is templated CDA?
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**History**
- Frequency of wheezing:
  - Missed days and not continual.
  - Daily but not continual.
- Episodes per week: ________________

**Labs**
- Peak Flow: __________ mL

**Assessment**
- Asthma, Intermittent.
- Asthma, Mild Persistent.
- Asthma, Moderate Persistent.
- Asthma, Severe Persistent.

**Plan**
- Pneumococcal Vaccine
- Complete PFTs with lung volumes.
- Provide education on peak flow self-monitoring.
- Environmental and Occupational screening questionnaire.
- Teach Inhaler/spacer/holding chamber technique.
- Discuss environmental control measures to avoid exposure to known allergens and irritants.
- Teach self-monitoring.

CDA Template Library
What is templated CDA?

```xml
<section>
  <templateId root="2.16.840.1.113883.3.27.354"/>
  <title>Plan</title>
  <text>Complete PFTs with lung volumes; Provide education on peak flow self-monitoring; ...</text>
  <entry>
    <observation classCode="OBS" moodCode="INT">
      <code code="23426006" codeSystem="&SNOMEDCT;" display="Pulmonary function test"/>
    </observation>
  </entry>
  <entry>
    <act classCode="ACT" moodCode="INT">
      <code code="22468009" codeSystem="&SNOMEDCT;" display="Teaching of skills">
        <qualifier>
          <name code="363702006" display="has focus"/>
        </qualifier>
        <value code="29893006" display="Peak flow rate measurement"/>
      </code>
    </act>
  </entry>
</section>
```
Templated CDA business case

- **Streamlined standards development**
  - Reusable building blocks.

- **Streamlined standards implementation**
  - Implement once, deploy often.

- **Modular and reusable**
  - Templates (e.g., blood pressure, discharge diagnosis) can be repackaged with other templates in any number of CDA implementation guides.

- **Core component of CDA’s “incremental interoperability” strategy**
  - Begin with simple CDA, and add templates as they are prioritized.
Templates are computable artifacts

```
Template

+is contained in 1..1
+contains 1..*
+is constrained by 1..*
+constrains 1..1

ValueSet
+may have associated 0..1
+is bound to 1..*

Constraint

Template-template relationship
```

CDA Base Model
Templates are computable artifacts

- **CDA Template Library**
- **greenCDA XML**
- **Data Entry Form**
- **CDA Instance Validation**
- **Runtime API**

Support for standards development

Support for standards implementation
Standards Development

~ 42 templates per guide: 24 new, 18 reused.
Standards Harmonization

Thousand flowers bloom  Active harmonization  Gradual increase in templates, per new use cases

today
Standard EHR Interface

Quality Measure

Decision Support

CDA Template Library

Standard EHR Interface
Templated CDA Interoperability Roadmap

EHR Repository

Clinical Applications

HL7 CDA + Meaningful Use CDA templates

SNOMED CT

Disease, DF-00000
Metabolic Disease, D6-00000
Disorder of carbohydrate metabolism, D6-50000
Disorder of glucose metabolism, D6-50100
Diabetes Mellitus, DB-61000
Neonatal, DB-75110
Type 1, DB-61010
Carpenter Syndrome, DB-02324
Insulin dependent type 1A, DB-61020

Narrative Text

Disorders of glucose metabolism, D6-50100

Diabetes Mellitus, DB-61000

Type 1, DB-61010

Carpenter Syndrome, DB-02324

Insulin dependent type 1A, DB-61020
Templated CDA Interoperability Roadmap: 2011

- Template tooling
- CDA implementation “simplification”
  - greenCDA technology
- Template harmonization
  - ONC-sponsored HL7/IHE/Health Story CDA Implementation Guide Consolidation Project
- Template exchange formalism
Templated CDA Interoperability Roadmap: 2012

- Template tooling
- Template harmonization
- Template prioritization
  - ONC-sponsored HL7/IHE/Health Story CDA Implementation Guide Consolidation Project templates
- CDA Release 3
- Templates vs. Archetypes vs. Detailed Clinical Models vs. Domain Analysis Models vs. …
Thank you!