



## **Collaborative for Performance Measure Integration with EHR Systems**

**Tuesday, October 16, 2007**

**Presentation to the Full Collaborative**

### **Co-sponsored by:**

American Medical Association

National Committee for Quality Assurance

In consultation with the EHRVA



## The Question

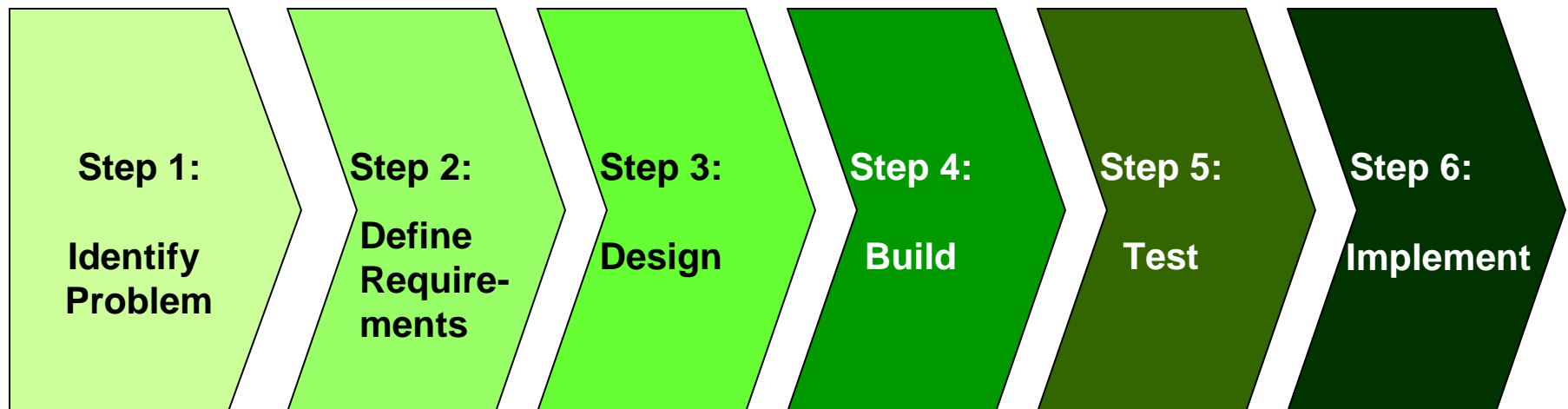
*As performance measure developers, AMA and NCQA, brought two questions to the table - are current performance measure specifications sufficient for EHR vendors? And how should performance measures be reported?*

- **Specifications available for all performance measures developed by PCPI and NCQA**
- **Algorithms with codes and measure calculation formula**
- **Very little direction about how to best report performance measure data**



# The Process

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**Step 1:**

**Identify  
Problem**



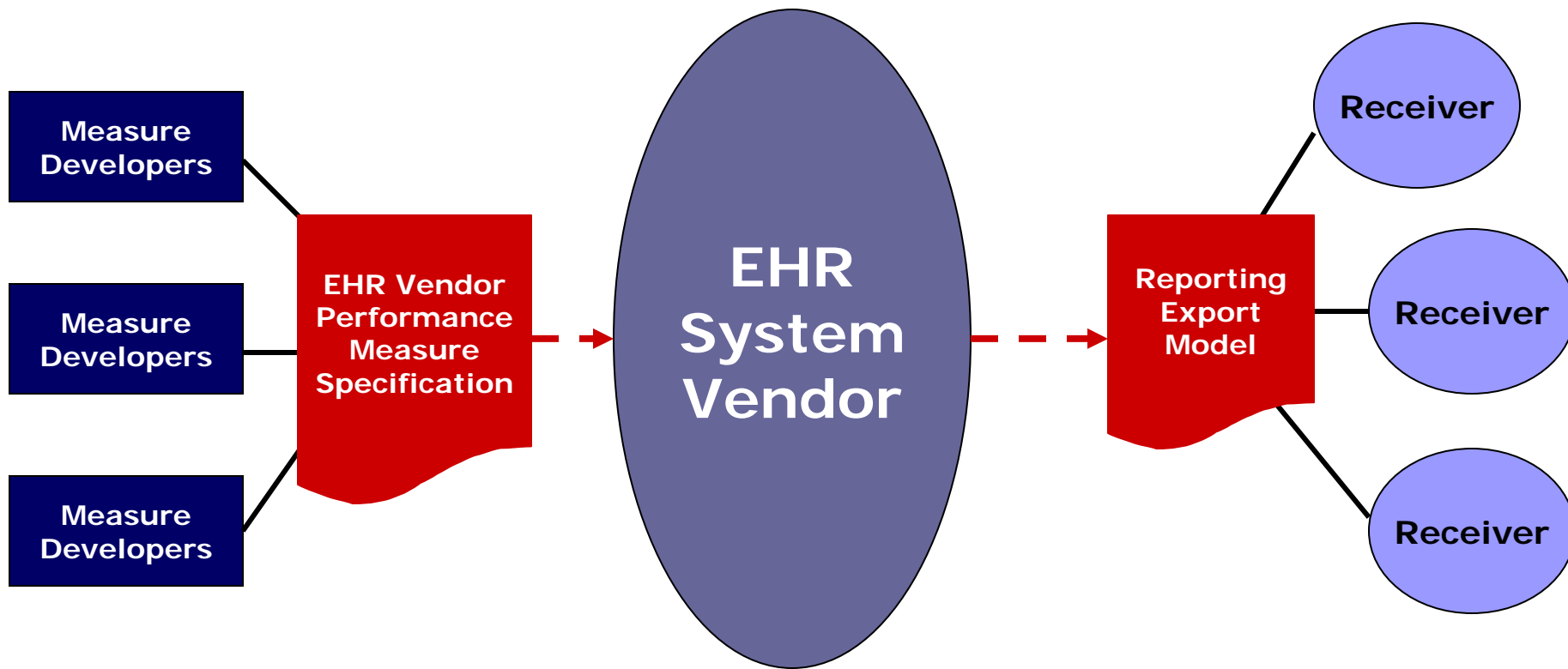
## Identifying the Problem

*Based on discussions that began in June of 2006, we started our work by defining the problems with current performance measure specifications.*

- **Inconsistency**
- **Lack of specificity**
- **Not machine readable**
- **Inefficient for development and maintenance**



# The Data Flow





## Workgroup B Objectives

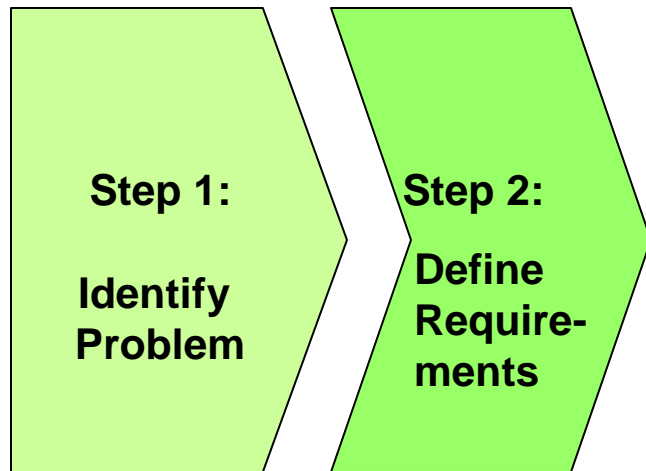
**We planned our scope of work by defining objectives. Once objectives were defined, we began work on the standard representation of performance measure specifications to EHR vendors.**

- *Providing developers' measure specifications to EHR vendors*
  - Define method, format, content and schedule for specification delivery
  - Plan for development of implementation guides for measure calculation
  - Test implementation guidelines
- *Exporting performance measure report*
  - Develop a standardized report
  - Plan for adoption of standard report
  - Establish a standardized report and test its feasibility



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# Requirements

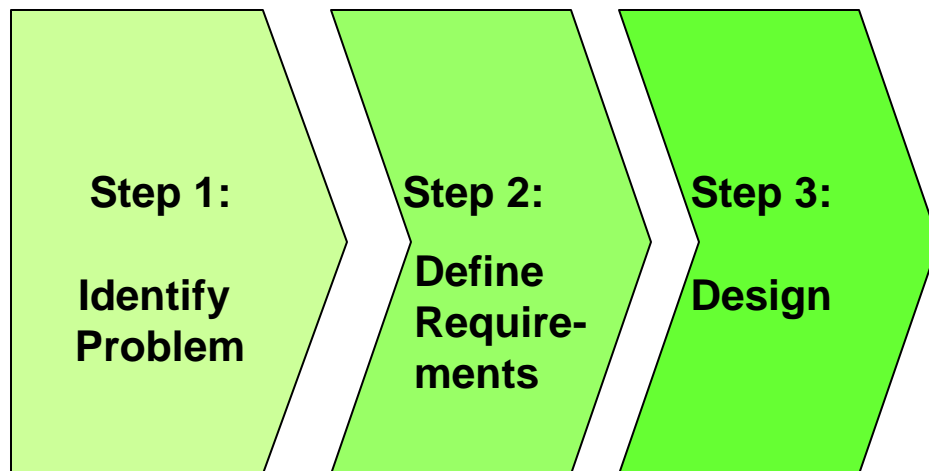
*The Work Group identified that performance measure specifications had to meet the following requirements in order to maximize the value to EHR vendors.*

- **Extendible**
- **Structured**
- **Encoded**
- **Preserve intent of measure**



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# Workgroup B Deliverables

*The deliverables include general supporting documents and technical files. The Reference Guide describes how those references should be used and provides samples of the performance measure specification.*

## ○ General Documents

- Performance Measure Template
- Data Dictionary

## ○ Technical Files

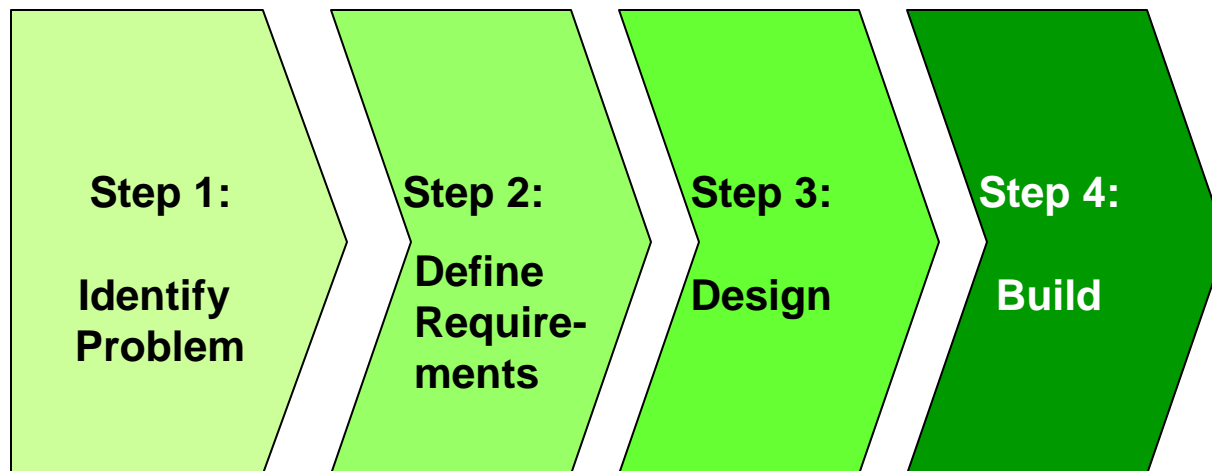
- Measure XML
- Code XML
- XSD

## ○ Reference Guide



# The Process

*As performance measure developers, AMA and NCQA, brought two questions to the table - are current performance measure specifications sufficient for EHR vendors? And how should performance measures be reported?*



# Performance Measure Template

*The performance measure template is designed to provide a standard, comparable way for measure development organizations to logically represent different performance measures.*

- Defines logic
- Describes attributes
- Defines relationship of logical elements

```
Statement=All patients with CAD >= 18 years of age {}  
Min Age=18 {}  
Age Unit=Years {}  
  {}  
  Number-Of-Logical-Expressions=1 {}  
    {}  
    <Logical Expression> {}  
      Number-Of-Logical-Elements=2 {}  
        {}  
        <Logical Element> {}  
          Logical-Element-Logical-Operator="OR" {}  
          Code-Group=CAD1.CG2 {}  
          Code-Type=ICD9 {}  
        <End/Logical Element> {}  
        {}  
        <Logical Element> {}  
          Code-Group=AD1.CG3 {}  
          Code-Type=CPT {}  
        <End/Logical Element> {}  
      {}  
    <End/Logical Expression> {}  
  {}  
  Information-Type="Numerator" {}  
  {}  
  Statement=Patients who were prescribed antiplatelet therapy (aspirin,  
  clopidogrel or combination of aspirin and dipyridamole) {}  
    {}  
    Number-Of-Logical-Expressions=1 {}  
      {}  
      <Logical Expression> {}  
        Number-Of-Logical-Elements=2 {}  
          {}  
          <Logical Element> {}  
            Logical-Element-Logical-Operator="OR" {}  
            Code-Group=CAD1.CG4 {}  
            Code-Type=NDC {}  
          <End/Logical Element> {}  
          {}  
          <Logical Element> {}  
            Code-Group=CAD1.CG5 {}  
            Code-Type=CPT {}
```



# Technical Files

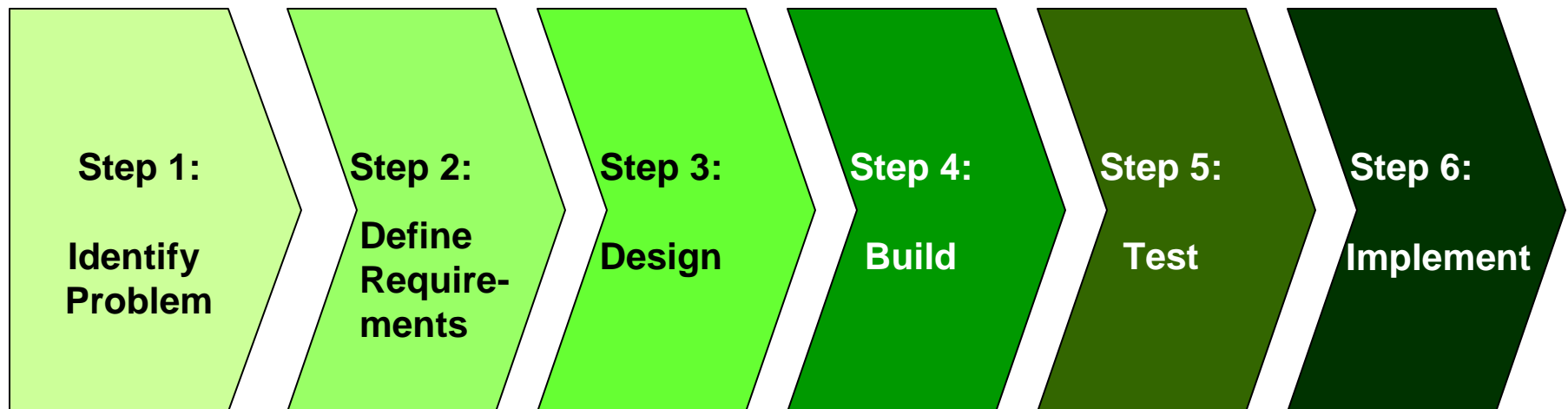
***The performance measure is then translated into technical files for purposes of programming. Codes are separated from the logic of the measure for more efficient import and maintenance.***

```
50     <Information Type="Denominator">
51         <Statement>All patients with CAD >= 18 years of age</Statement>
52         <MinAge>18</MinAge>
53         <AgeUnit>Years</AgeUnit>
54         <NumberOfLogicalExpressions>1</NumberOfLogicalExpressions>
55         <LogicalExpression>
56             <NumberOfLogicalElements>2</NumberOfLogicalElements>
57             <LogicalElement LogicalOperator="OR">
58                 <CodeGroup Description="DX CODE">CAD1.CG2</CodeGroup>
59                 <CodeType>ICD9</CodeType>
60             </LogicalElement>
61             <LogicalElement>
62                 <CodeGroup Description="PROC CODE">CAD1.CG3</CodeGroup>
63                 <CodeType>CPT</CodeType>
64             </LogicalElement>
65         </LogicalExpression>
66     </Information>
67     <Information Type="Numerator">
68         <Statement>Patients who were prescribed antiplatelet therapy (aspirin,
69         clopidogrel or combination of aspirin and dipyridamole)</Statement>
70         <NumberOfLogicalExpressions>1</NumberOfLogicalExpressions>
71         <LogicalExpression>
72             <NumberOfLogicalElements>2</NumberOfLogicalElements>
73             <LogicalElement LogicalOperator="OR">
74                 <CodeGroup Description="TOPIC_DRUG_CODES">CAD1.CG4</
75                 CodeGroup>
76                 <CodeType>NDC</CodeType>
77             </LogicalElement>
78             <CodeGroup Description="ANTIPLATELET THERAPY CODE">CAD1.CG5
79             </CodeGroup>
80             <CodeType>CPT</CodeType>
81         </LogicalElement>
82     </LogicalExpression>
83 </Information>
```



## Next Steps

***The Reference Guide with complete samples of two Performance Measure Specifications is now available for review and testing. A small number of EHR vendors have reviewed the work to date, but more robust testing is needed.***





## Recommendations

*The recommendations identified by the work group came as a by product of our work. In creating the deliverables, the work group highlighted two requirements needed to ensure usability of performance measure specifications – consistency and specificity.*

- **All relevant fields specified**
- **Calculation specified (e.g., age vs. DOB)**
- **Eliminate ranges of codes**
- **Consistency of language across measures**

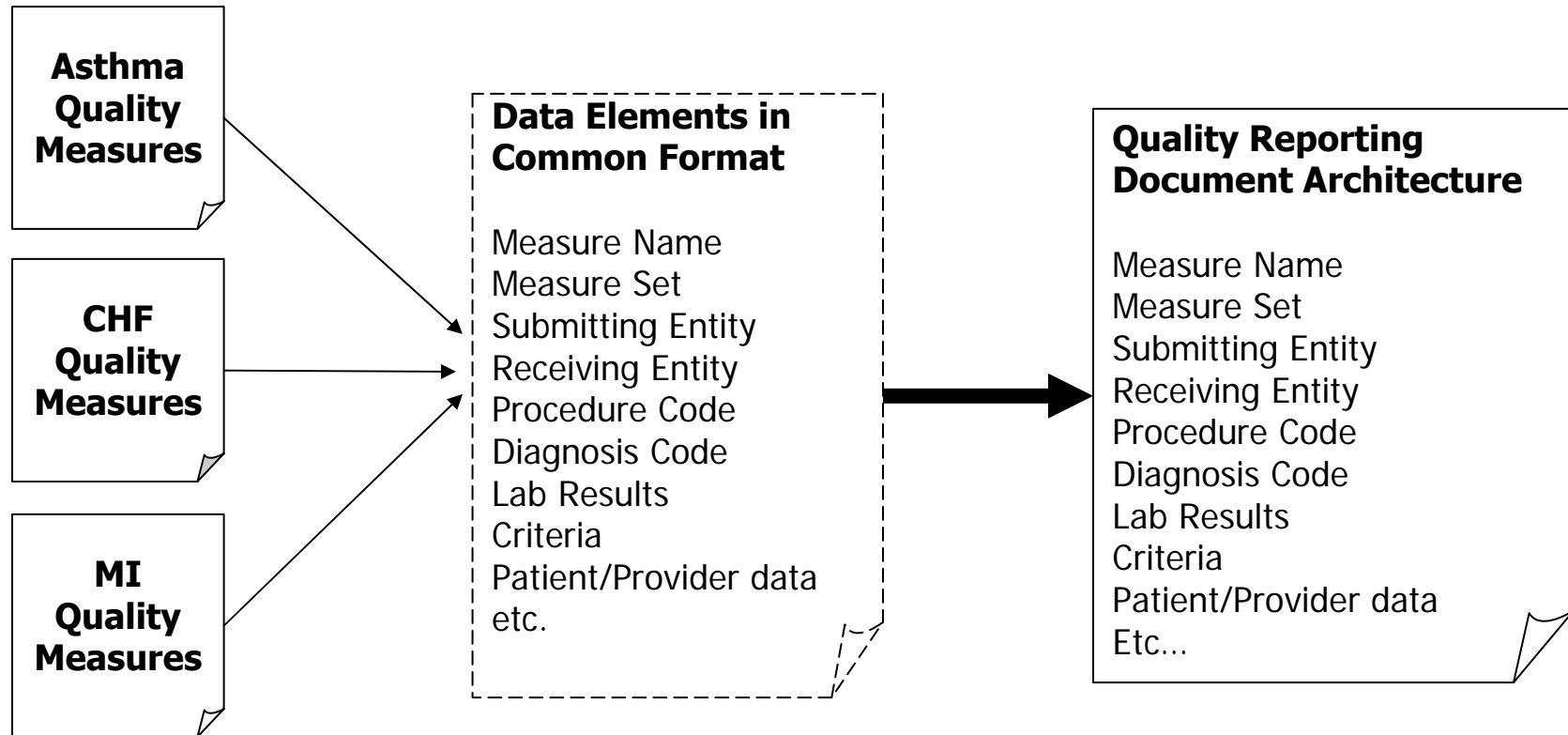


# Performance Measure Reporting

A Summary of related work by HL7  
and the Alliance for Pediatric Quality

# Prototype to Standards:

## HL7 – The Alliance for Pediatric Quality



**Quality Measures contain common elements that can be formatted and communicated in a standard manner**

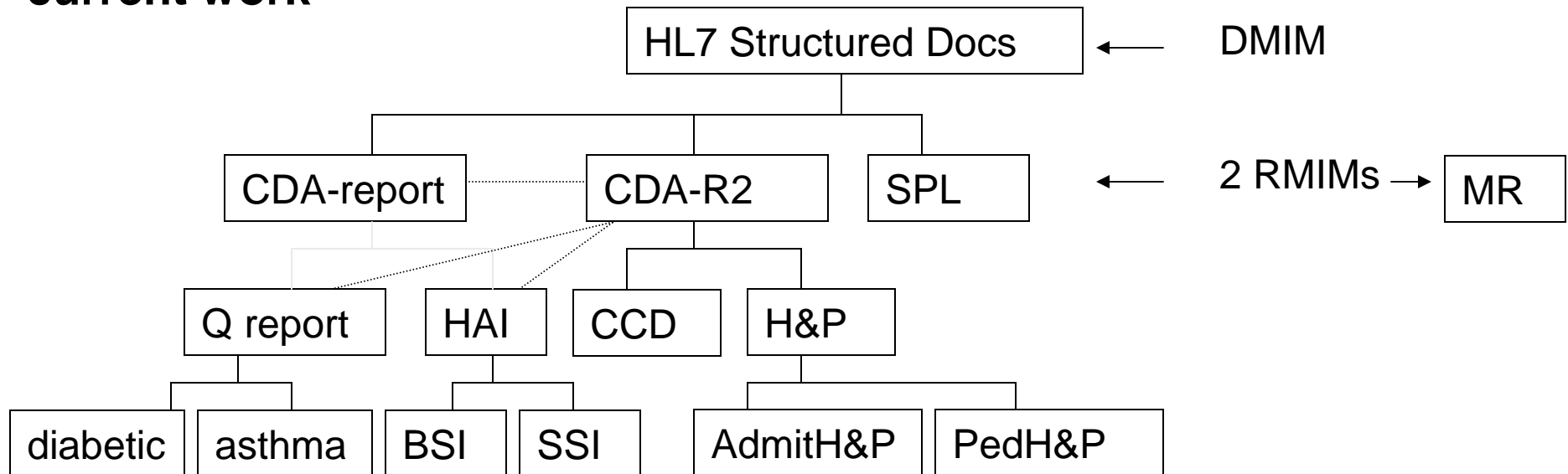
With Permission: Alliance for Pediatric Quality ([www.kidsquality.org](http://www.kidsquality.org))



# Prototype to Standards:

## HL7 – The Alliance for Pediatric Quality

### current work



### Rules:

1. Relationship between DMIM/RMIMs:
  1. blown out
  2. constrained
2. where can XML change?
3. what can extend/constrain a model?

1. R2-body based CDA-reporting
2. DMIM for SD/R2
3. CDA-R3

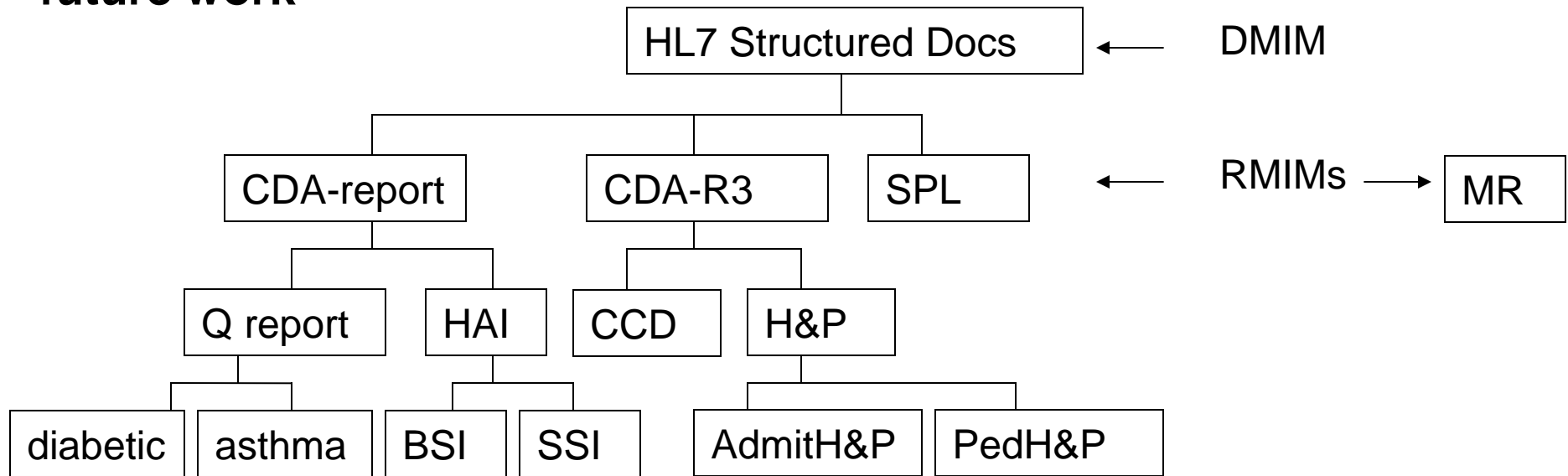
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# Prototype to Standards:

## HL7 – The Alliance for Pediatric Quality

### future work



#### Rules:

1. Relationship between DMIM/RMIMs
2. where can XML change?
3. what can extend/constrain a model?

1. R2-body based CDA-reporting
  2. DMIM for SD/R2
  3. CDA-R3
- or
1. DMIM
  2. CDA-R3
  3. CDA-report

With Permission : Alliance for Pediatric Quality ([www.kidsquality.org](http://www.kidsquality.org))