Section E

Public Health Imperatives
Three Imperatives for Public Health

1. Embrace national standards for system interoperability and participate in their development

2. Enable “special functions” of public health systems to be accessed directly by user systems

3. Organize an informatics focus in the agency to engage in and support local, regional and national initiatives
#1: Standards Initiatives

- **Health Information Exchange**
  - HHS HIT Policy Committee and HIT Standards Committee
  - Nationwide Health Information Network Cooperative

- **Federal/state/local systems**
  - Consolidated Health Initiative (CHI)
  - Federal Health Architecture (FHA)
  - Medicaid Information Technology Architecture (MITA)
  - Public Health Information Network (PHIN)

- **Eclipsed activities**
  - Health Information Technology Standards Panel (HITSP)
  - Health Information Security and Privacy Collaboration (HISPC)
  - American Health Information Community (AHIC)
More Initiatives

- EHR System Certification Bodies
  - Certification Commission for Health Information Technology (CCHIT)
  - Drummond Group, Inc.
  - ICSA Labs
  - InfoGard Laboratories, Inc.
  - SLI Global Solutions
More Initiatives

- Industry interoperability
  - Health Level 7 (HL7)
  - Integrating the Healthcare Enterprise (IHE)

- Agency/jurisdiction standards and policies

- Public health organizations
  - Public Health Data Standards Consortium (PHDSC)
Case Study: HIT Standards Development in Minnesota

National Standards Activities
- HIT Policy Committee
- HIT Standards Committee
- Certification Criteria from Office of National Coordinator (ONC)
- ONC Programs
- National Health Information Network (NHIN) Projects
- National Institute of Standards and Technology (NIST)
- Centers for Medicare and Medicaid Services (CMS)
- Centers for Disease Control and Prevention (CDC)
- Standards Implementation resources

Standard Development Organizations
- Health Level Seven International (HL7)
- National Council for Prescription Drug Programs (NCPDP)
- Systematized Nomenclature of Medicine Clinical Terms (SNOMED CT)
- Logical Observation Identifiers Names and Codes (LOINC)
- Accredited Standards Committee (ASC) X12

Monitor standards recommended earlier for revisions and industry readiness

Minnesota e-Health Advisory Committee
 Priorities And Standards Workgroup Charge

Identification and Analysis
- Analysis of existing standards in context of particular topic areas
- Focus on consensus standards recommended at the national level for MN e-Health priority transactions and various stages of Meaningful Use
- Identify standards in EHR product certification process by ONC
- Identify tools and resources to support standards implementation

Evaluation and Classification
- Evaluate applicability to Minnesota in terms of industry readiness and current adoption status
- Classify into standards that are tested, in varying stages of adoption and ready for state-wide use
- Classify into standards that are in testing, with limited adoption and to be monitored further
- Align recommended standards with related Meaningful Use objectives

Validation
- Validation of Proposed Recommendations on Standards with Subject Matter Experts

Recommendations to Advisory Committee
- Propose recommendations for adoption of specific standards
- Propose recommendations on standards to monitor

Feedback to National Organizations
- Review relevant national standards and certification related documents and provide a state-level collaborative response

Continuous Review, Monitoring and Feedback

Identify and Publish Tools & Resources for supporting Implementation

Public Domain.
Immunization Information Systems (IIS) serves a jurisdiction by providing a common repository for immunization information.

IIS provides specialized features not typically found in an EHR-S, such as:
- Recommendations of next immunizations due
- Reminder and recall to ensure that patients return
- Vaccine ordering and order processing
- Practice-level assessment of up-to-date status
IIS-EHR-S Tension

Feature Set

EHR-S

IIS

Majority of Clinical Functionality

Record vaccination; view history

Algorithm, Reminder/Recall
- **Service-oriented architecture (SOA):** a building block approach to systems design that allows discreet functions to be accessed by any authorized system.
SOA Benefits

- Increased scalability through increased modularity
- Lower cost through software component reuse
- Applicable either to entire systems or just to parts of systems, making it a flexible approach with no single “right answer” in the context of a particular application
- Components tend to be more platform independent than other strategies
- Offers increased flexibility as services can be rewritten and/or replaced as needs change with less impact on the overall system than other methods
- Offers the potential for more agile and speedy system modification and improvement through its modular design
SOA Limitations

- Implementations may run slower or require more processing power as data flows between loosely coupled components that may not be optimized for these data flows.

- There is a lot of hype in the marketplace over SOA, and it may be difficult to discern when components that are acquired are well tested and operating properly.

- Just because a system is developed using SOA, it does not mean it will be developed using good practices or appropriate methods.
Enabling Special Features: A Case Study

- KIDSNET, the integrated child health system in RI, did not have a robust immunization predictor algorithm.

- Decided to use a version of the algorithm developed in another state (with permission).

- Deployed algorithm as a web service rather than absorbed into KIDSNET.

- Other applications could now easily make use of the service.
Web service is called in real time from KIDSNET application when needed

Core KIDSNET system (Linux/Oracle) interoperates with Microsoft-based Web Immunization Service Evaluation and Recommendation (WISER) without issue
This future vision can co-exist with the previous model: Web service can interact with IIS and provider EHR systems
#3: Informatics Focus

- Not only tactical but *strategic*
- Reporting to a senior agency official
- Links to academic informatics programs
- Links to appropriate associations (e.g., AMIA, HL7, HIMSS)
- Example: CDC National Center for Public Health Informatics (NCPHI), MN Center for Health Informatics