GUILTY-ISH
Jury convicts Blagojevich on 1 count but deadlocks on 23, setting stage for retrial 6-7
What is the Illinois Public Health Node?

- A set of services that permits providers to submit data in a reliable way to public health
  - ELR, IMM, Syndromic Surveillance, NHSN, popHealth
- Framework for interaction with data aggregators (health information exchanges) and hospitals/providers (EHRs)
- Setting for implementation of surveillance definitions created by public health agencies
- Certified solution to meet Meaningful Use requirements for public health menu items
Database Standardization Layer: How databases are structured
Semantic Harmonization Layer: How concepts are represented in the database (what are the names of tests and results)
Knowledge Base Layer: How rules, case definitions, and surveillance requirements are defined and used to find conditions
Outbound Messaging Layer: How data in the database are shared from one system to another
Clinical Care Transactions/Data Set Creation

Mapping of Local Codes to Standard Vocabularies

Creation of Standardized Data Structures

Standardized Data Set

Business Rules/Knowledge Bases

Surveillance Data Sets

Content Validation

Hospital and Provider EHR Capability

Health Information Exchange Capability

Public Health Node Capability

Data Flow and The Public Health Node
Services Provided by the Public Health Node

• Nomenclature mapping
  – SNOMED, LOINC, RxNORM, CVX Codes

• Knowledge base application/surveillance definitions

• New content and rules implementation

• Interface engines for public health needs
  – CDA, HL7 v3, HL7 2.5.1, HL7 2.3.1, CSV, excel, ...

• Data transformation
  – Receive structured data; parse and store; output relevant messages
## Data requirements for Public Health Meaningful Use Menu Items

<table>
<thead>
<tr>
<th>Data Element</th>
<th>Electronic Laboratory Reporting</th>
<th>Syndromic Surveillance</th>
<th>Immunization Messaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ordering Facility and Name</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Patient Demographics</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Visit/Encounter Information</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Microbiology Order and Result Information</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laboratory Order and Result Information</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Immunization Prescribing Information</td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Chief Complaint</td>
<td>x</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Data Requirements Detail (ELR)

- Microbiology Data
- Placer & Filler Order Number
- Ordered Test Name
- Specimen Source Name
- Organism Name
- Antibiotic Name
- Antibiotic MIC value, Susceptibility Interpretation, and Units
- Order, Collect, Receive, Plate/Process, Result, and Final date
- Result Status
- Ordering Provider Name, ID#, and Phone Number
- Abnormal Flag

- Laboratory Data
- Placer & Filler Order Number
- Ordered Test Name
- Specimen Source Name
- Result, Units, and Ref Range
- Order, Collect, Receive, Process, Result, and Final date
- Result Status
- Ordering Provider Name, ID#, and Phone Number
- Abnormal Flag

Public Health Reporting through the ILHIE
Data Requirements Detail (Immunizations)

- Immunization Data
  - Sending Facility
  - Patient Identifier list
  - Patient name
  - Date/time of birth
  - Administrative Sex
  - Patient address
  - Date/time of administration
  - Administered code/Vaccine Name
  - Race
  - Mother's Maiden Name (may be missing)
  - Protection indicator & Immunization registry status (may be missing)
  - Lot Number
  - Manufacturer Name
  - Administering Provider
Data Requirements Detail
(Surveillance)

- Facility Identifier
- Facility visit type
- Report date/time
- Unique patient id
- Age
- Gender
- Zip
- Race
- Ethnicity

- Visit id
- Visit date/time
- Chief complaint
- Diagnosis/injury code
- Discharge disposition
## Data Requirements Detail

<table>
<thead>
<tr>
<th>Hospital specific information</th>
<th>Electronic Laboratory Reporting</th>
<th>Syndromic Surveillance</th>
<th>Immunization Messaging</th>
<th>HL7 2.3.1. Message Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital Name</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>OBR 44 for ELR or mapped value</td>
</tr>
<tr>
<td>Hospital ID # (i.e., CLIA number)</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>Mapped from Lookup table</td>
</tr>
<tr>
<td>Hospital ID # system (i.e., “CLIA”)</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>Mapped from Lookup table</td>
</tr>
<tr>
<td>Ordering Facility Name</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>MSH 4.1</td>
</tr>
<tr>
<td>Ordering Facility Address</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>OBR 45, 47, or mapped value</td>
</tr>
<tr>
<td>Ordering Facility Phone Number</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>ORC 14, OBR 46 or mapped value</td>
</tr>
</tbody>
</table>
Public Health Node Activities
Syndromic Surveillance

• Identification/integration of feeds/data sets with relevant data
• Deidentification—application of linker id
• Creation of outbound message
• Transmission to Biosense 2.0
Onboarding Process to Join the Public Health Node

- Define which Use Cases to be used by each provider/center that will utilize the public health node
- Establish necessary agreements to permit data sharing
- Share sample data file
- Test data submission to public health agency
- Implement ongoing data feed
• Certified solution created by Public Health Node to meet public health meaningful use menu items: Altivance Public Health Data Data reporter, 1.0.1
Putting it all together

• Illinois Public Health Node
  – Use a common data set: Demographics/Admission Discharge Transfer (ADT), Laboratory, and Immunization data
  – Acts as single point of contact for electronic surveillance rules
  – One stop shopping: submission to I-CARE, I-NEDSS, Biosense, NHSN, popHealth...
  – Leverage Meaningful Use to develop public health informatics infrastructure
Acknowledgements

CDC Prevention Epicenter
Bala Hota
Dejan Jovanov
Bill Trick
Bob Weinstein

IDPH
Robin Holding
Judy Kauerauf
Mike Jadala
Todd Davis