Health Information Systems Interoperability

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Section A

Evolution of Public Health Systems
Public Health Systems

- Began as program-specific, stovepipe systems, often PC-or mainframe-based
- Evolved into more robust specialized systems
- In some cases became integrated systems, either patient-centric or case-centric
- Eventually some applications aimed outside of the agency
Sample CDC Applications

<table>
<thead>
<tr>
<th>CASA</th>
<th>Clinic Assessment Software Application (1992)</th>
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</thead>
<tbody>
<tr>
<td>LIMS</td>
<td>Laboratory Information Management System (1995)</td>
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<tr>
<td>VACMAN</td>
<td>Vaccine Management System (1994)</td>
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</tbody>
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Public Health Information Network

- National initiative to improve the capacity of public health to use and exchange information electronically by promoting the use of standards and defining functional and technical requirements

- Involves CDC and partner state/municipal/territorial agencies

- Covers a variety of areas, including:
  - Biosurveillance and syndromic surveillance
  - Alerting and directory services
  - Laboratory systems
  - Notifiable disease surveillance
  - Outbreak management

- Provides standards, architectures, strategies, education, applications

Source: http://www.cdc.gov/phin/about.html
National Electronic Disease Surveillance System

- NEDSS

“System of interoperable subsystems” including modules developed by CDC, by state/local public health agencies, commercial vendors

- Standards-based: coding, transmission, functionality

- Key functions:
  - Required reporting
  - Case investigation
  - Lab and morbidity
  - Immunizations
  - Treatment
  - Reports
  - Workflow
  - Notifications

Countermeasure and Response Administration System

- CRA

- Plan and execute interventions as countermeasures for large-scale events, including:
  - Vaccinations
  - Prophylaxes
  - Treatments
  - Quarantine
  - Adverse events