SCION/MAVEN and ELRs

Claire Youngblood, Division of Acute Disease Epidemiology
System Summary

- SCION = MAVEN
- Meets the standard for CDC National Electronic Disease Surveillance System (NEDSS)
- Disease surveillance and outbreak management
- Currently used for all reportable disease EXCEPT STD/HIV, Tuberculosis, Lead
- Event based
- Web Interface/SQL Server
<table>
<thead>
<tr>
<th>Years</th>
<th>System</th>
<th>Specifics</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003-2016</td>
<td>Carolina’s Health Electronic Surveillance System (CHESS)</td>
<td>CDC funded system, NEDSS compatible, limited customization, no outbreak management.</td>
</tr>
<tr>
<td>2016-?</td>
<td>South Carolina Infectious Disease and Outbreak Network (SCION)</td>
<td>Consilience product, NEDSS compatible, extensive customization, outbreak management.</td>
</tr>
</tbody>
</table>
Diseases Collected

- Anthrax
- Campylobacteriosis
- Chikungunya
- Ebola
- Hepatitis (A, B, C, D, E)
- Influenza
- Meningococcal disease
- Mumps
- Pertussis
- Rocky Mt. Spotted Fever
- Salmonella
- Zika
- And many more…
Data Collected For Cases

- Disease
- Patient demographics
- Lab reports
- Contact tracing
- Disease specific questions
  - Risk
  - Symptoms
  - Vaccination
  - Treatment
Data Collected For Outbreaks

- Disease
- Venue details
- Line lists/case counts
- Summary of actions
Disease Specific Questions

- Divided into Question Packages.
- Questions can be turned on or off by disease.
- Skip questions, child questions.
- Answers can trigger other events, such as warnings or deadlines for action.
Example: Lab Report

- Ordering Facility and Provider
- Reporting Facility
- Specimen Collection Date
- Result Date
- Test Results
Example: Salmonella - Risk

• Did you handle baby chicks?
• Did you eat ground chicken?
• Did you travel outside of South Carolina?
• What is the source of your drinking water?
• Do you work on a farm?
Example: Pertussis - Clinical

• Symptoms?
  • Cough
  • Whoop
  • Fever

• Chest X-Ray?

• Was the patient hospitalized for this illness?
Data Sources

• Disease Reports
  • Phone calls to regional epi staff.
  • DHEC 1129 forms/paper labs submitted by mail.
  • Provider portal as part of SCIAPPS.
  • Electronic Lab Reporting (ELRs).

• Case/Outbreak investigations by DHEC staff.
Electronic Lab Reporting (ELRs)

- HL7 Message standard
- Rerouted to other systems as needed
- 12 live
- 42 in testing
- Bureau of Labs


<table>
<thead>
<tr>
<th>Source</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>1129 Card</td>
<td>144</td>
</tr>
<tr>
<td>Paper lab report</td>
<td>1,924</td>
</tr>
<tr>
<td>Provider web entry</td>
<td>5,999</td>
</tr>
<tr>
<td>ELR</td>
<td>24,639</td>
</tr>
</tbody>
</table>
Data Limitations

- Data compiled from three platforms.
- Data prior to 2003 has no disease-specific variables or lab reports.
- Case definition changes/strictness of application.
- Data completeness varies by disease and time period.
Data Access

Fill out DHEC form D-1622 and return to:

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