PulseNet/OutbreakNet Regional Meeting
High-Burden State Perspective

Hope Dishman, MPH and Stacy Reeves, PhD
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About Us

Laboratory
- 5 Laboratorians and 1 part time WGS
  - 1.5 dedicated to WGS
- PFGE, WGS, MALDI-TOF, Conventional microbiology testing
- WGS Instrumentation – 3 MiSeqs, and 1 QIAcube

Epidemiology
- 6 epis on various aspects of enteric diseases/outbreaks
- 3 part-time students on enteric disease interviews
- District epis conduct ~50% interviews
- CDC programs: FoodNet, OBNE
Prior to 2019

Laboratory
• Isolates/Specimens requested
• Conventional serotyping
• PFGE
• WGS (for select isolates)

Epidemiology
• Cases reported within 7 days
• Random selection (60%) of cases interviewed (Salmonella specific)
• Interviews attempted within 7 days of selection

Collaboration
• Quarterly spreadsheets of interviewed cases from epi to lab
• Quarterly spreadsheets of outbreak cases from epi to lab
• Monthly spreadsheets of NARMS selected isolates from lab to epi
• Quarterly meetings
# Salmonella Submissions (2018)

<table>
<thead>
<tr>
<th>Months</th>
<th># of Isolates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan</td>
<td>79</td>
</tr>
<tr>
<td>Feb</td>
<td>87</td>
</tr>
<tr>
<td>Mar</td>
<td>93</td>
</tr>
<tr>
<td>Apr</td>
<td>106</td>
</tr>
<tr>
<td>May</td>
<td>156</td>
</tr>
<tr>
<td>June</td>
<td>249</td>
</tr>
<tr>
<td>July</td>
<td>359</td>
</tr>
<tr>
<td>Aug</td>
<td>429</td>
</tr>
<tr>
<td>Sept</td>
<td>302</td>
</tr>
<tr>
<td>Oct</td>
<td>367</td>
</tr>
<tr>
<td>Nov</td>
<td>204</td>
</tr>
<tr>
<td>Dec</td>
<td>123</td>
</tr>
</tbody>
</table>

**Georgians**

The number of Salmonella submissions in 2018 varied significantly throughout the year, with the highest number of isolates occurring in August and the lowest in January. The data suggests a trend with peaks in the summer months and troughs in the winter months.
<table>
<thead>
<tr>
<th>Bacterial Pathogen</th>
<th>Case Count</th>
<th>Specimens Received</th>
<th>Cases with Specimens/Isolates Sent to State Lab</th>
<th>Interviewed</th>
<th>Sent to State Lab and Interviewed</th>
<th>Percent Funded for WGS</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Salmonella</em></td>
<td>2907</td>
<td>2554</td>
<td>1880</td>
<td>1537</td>
<td>1064</td>
<td>50%</td>
</tr>
<tr>
<td><em>Campylobacter</em></td>
<td>1397</td>
<td>635</td>
<td>540</td>
<td>523</td>
<td>239</td>
<td>100%</td>
</tr>
<tr>
<td><em>Shigella</em></td>
<td>547</td>
<td>520</td>
<td>375</td>
<td>241</td>
<td>168</td>
<td>100%</td>
</tr>
<tr>
<td><em>STEC</em></td>
<td>480</td>
<td>372</td>
<td>297</td>
<td>328</td>
<td>231</td>
<td>100%</td>
</tr>
<tr>
<td><em>Listeria</em></td>
<td>31</td>
<td>24</td>
<td>24</td>
<td>19</td>
<td>16</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Preliminary Data*
Challenges

- Staffing
- WGS vs *Salmonella* Funding
  - 50% budget
2019 Plan of Action

Laboratory
• Specimens or isolates required
• WGS for all isolates associated with cases selected for interview (approx 40%)
• Conventional serotyping for all others
• WGS for any requested isolates

Epidemiology
• Cases reported within 7 days
• Interview selections every Monday and Thursday
• Cases attempted for interview within 7 days of selection

Collaborations
Electronic module in SendSS:
• Notifiable disease cases
• ELR data from GPHL
• Variables in notifiable disease cases (selected for interview, interviewed, outbreak)
• Sent to NARMS variable from ELR
• WGS ID for completed isolates
Questions?

REGARDLESS OF YOUR QUESTION,

THE ANSWER IS ALIENS.