Limitations & Misinterpretations

Workshop on Evaluation of Risk Factors for Foodborne Listeriosis

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Limitations

• Generalized groupings of foods and individuals
• Lack of data
• RA is tail driven
  – Many exposures, few illnesses
# Acquired Contamination Data at Retail

<table>
<thead>
<tr>
<th>Category</th>
<th>Total</th>
<th>&lt; 0.04</th>
<th>0.1</th>
<th>1</th>
<th>10</th>
<th>100</th>
<th>$10^3$</th>
<th>$10^4$</th>
<th>$10^5$</th>
<th>$10^6$</th>
</tr>
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<tbody>
<tr>
<td>All Deli Salads</td>
<td>11,236</td>
<td>10,793</td>
<td>244</td>
<td>47</td>
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<tr>
<td>Smoked Seafood</td>
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<td>2573</td>
<td>67</td>
<td>11</td>
<td>19</td>
<td>8</td>
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<td>Deli Meats</td>
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<td>9117</td>
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<tr>
<td>Soft Ripened Cheeses</td>
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<td>1333</td>
<td>12</td>
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<tr>
<td>Bagged Precut Leafy Salad</td>
<td>2963</td>
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</tbody>
</table>

Gombas et al., 2003
IDFA, 2000
Growth Issues

• Generalized growth rate within a group
• Interaction of Lm with spoilage flora
• Maximum Lm growth
• Deli meats—industry beginning to use lactate-diacetate to inhibit growth—data obsolete
Time-temperature storage in the home

Data from RTI, 2007
Dose-response relationship

• FSIS/FDA 2003 RA
  – Shape based on mouse data
  – >60 years old is elderly

• Limited knowledge of different subpopulation susceptibility
• Limited knowledge of strain variability for virulence
• Limited knowledge on virulence and adverse effect
Misinterpretations

• Risk Communication
  – Understanding large uncertainty ranges (log scale)
  – Grouping of food categories

• Additional limitations and misinterpretations?