### Sampling Methodology

- **120** isolates tested
- **30**% of isolates from a normally sterile site
- **70**% isolates from a clinically sterile site

### Number of Isolates Tested

<table>
<thead>
<tr>
<th>Disease</th>
<th>Isolates Tested</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neisseria meningitidis</td>
<td>37</td>
</tr>
<tr>
<td>Campylobacter spp.</td>
<td>84</td>
</tr>
<tr>
<td>Haemophilus influenzae</td>
<td>27</td>
</tr>
<tr>
<td>Neisseria gonorrhoeae</td>
<td>12</td>
</tr>
<tr>
<td>Streptococcus pneumoniae</td>
<td>24</td>
</tr>
<tr>
<td>Mycobacterium tuberculosis</td>
<td>9</td>
</tr>
<tr>
<td>Escherichia coli</td>
<td>10</td>
</tr>
</tbody>
</table>

### Antimicrobial Susceptibilities of Selected Pathogens, 2005

<table>
<thead>
<tr>
<th>Pathogen</th>
<th>Susceptibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>S. pneumoniae</strong></td>
<td>60% susceptible to clindamycin (MIC ≤ 1.0 μg/ml), 35% resistant (MIC &gt; 1.0 μg/ml). All isolates were susceptible to erythromycin (MIC ≤ 0.5 μg/ml). One isolate had intermediate susceptibility (MIC of 1.1 μg/ml) and one was resistant (MIC of 5.5 μg/ml).</td>
</tr>
<tr>
<td><strong>H. influenzae</strong></td>
<td>82% susceptible to erythromycin (MIC ≤ 0.5 μg/ml), 18% resistant (MIC &gt; 0.5 μg/ml).</td>
</tr>
<tr>
<td><strong>N. meningitidis</strong></td>
<td>One isolate had intermediate susceptibility (MIC of 1.0 μg/ml) and one was resistant (MIC of 8.0 μg/ml).</td>
</tr>
<tr>
<td><strong>M. tuberculosis</strong></td>
<td>76% susceptible to isoniazid (MIC ≤ 0.5 μg/ml), 24% resistant (MIC &gt; 0.5 μg/ml).</td>
</tr>
<tr>
<td><strong>S. aureus</strong></td>
<td>100% susceptible to clindamycin (MIC ≤ 2.0 μg/ml).</td>
</tr>
<tr>
<td><strong>E. coli</strong></td>
<td>79% susceptible to amoxicillin (MIC ≤ 4.0 μg/ml), 21% resistant (MIC &gt; 4.0 μg/ml).</td>
</tr>
<tr>
<td><strong>C. jejuni</strong></td>
<td>100% susceptible to amoxicillin (MIC ≤ 4.0 μg/ml).</td>
</tr>
<tr>
<td><strong>C. Paradise</strong></td>
<td>94% susceptible to amoxicillin (MIC ≤ 4.0 μg/ml).</td>
</tr>
<tr>
<td><strong>S. pyogenes</strong></td>
<td>100% susceptible to amoxicillin (MIC ≤ 4.0 μg/ml).</td>
</tr>
<tr>
<td><strong>S. aureus</strong></td>
<td>100% susceptible to amoxicillin (MIC ≤ 4.0 μg/ml).</td>
</tr>
<tr>
<td><strong>S. pneumoniae</strong></td>
<td>100% susceptible to amoxicillin (MIC ≤ 4.0 μg/ml).</td>
</tr>
</tbody>
</table>

### Trends, Comments and Other Pathogens

1. **Campylobacter spp.**
   - Ciprofloxacin susceptibility was determined for all isolates (n=1746). Only 34% of isolates from patients returning from foreign travel were susceptible to quinolones. Susceptibilities were determined using 2005 CLSI (formerly NCCLS) breakpoints for Enterobacteriaceae. Susceptibility for erythromycin was based on an MIC > 4.0 μg/ml.

2. **Salmonella enterica (non-typhoidal)**
   - Antimicrobial treatment for enteric salmonellosis generally is not recommended.

3. **Neisseria gonorrhoeae**
   - In 2005, we tested 392 Neisseria gonorrhoeae isolates for antibiotic resistance including 286 (73%) from a Minneapolis STD clinic and 106 (27%) from a St. Paul STD clinic. One isolate was resistant to erythromycin, and were D-test negative (where applicable).

4. **Neisseria meningitidis**
   - One isolate had intermediate susceptibility (MIC of 12.5 μg/ml) and one was resistant (MIC of 0.5 μg/ml) to penicillin. The newly established clone was susceptible to cefotaxime and ceftriaxone (intermediate = 1.0 μg/ml, resistant > 2.0 μg/ml). By nonmeningitis breakpoints (intermediate = 2.0 μg/ml, resistant > 4.0 μg/ml) the isolate was susceptible to cefotaxime and ceftriaxone. Isolates were screened for high-level resistance to rifampin at a single MIC, all were ≤ 2.0 μg/ml. 17% (9/53) of isolates were resistant to two or more antibiotic classes and 12% (6/53) were resistant to 3 or more antibiotic classes.

5. **Group A Streptococcus**
   - Of 9 isolates that were resistant to erythromycin, 1 was also resistant to clindamycin. The other 8 were susceptible but each had inducible clindamycin resistance by D-test.

6. **Group B Streptococcus**
   - 100% (15/15) of early-onset infant, 94% (16/17) of late-onset infant, 58% (7/12) of maternal, and 90% (257/287) of other invasive GBS cases were tested. Among 48 erythromycin-resistant, clindamycin-susceptible strains, 26 (54%) had inducible resistance to clindamycin by D-test. Overall, 74% (217/293) were susceptible to clindamycin and were D-test negative (where applicable). 56% (223/397) of infant and maternal isolates were susceptible to clindamycin and were D-test negative (where applicable).

7. **Streptococcus pneumoniae**
   - The 532 isolates tested represented 89% of 596 total cases. Of these, 14% (75/532) had intermediate susceptibility and 9% (46/532) were resistant to penicillin. Reported above are the proportions of case-isolates susceptible by meningitis breakpoints for cefotaxime and ceftriaxone (intermediate = 1.0 μg/ml, resistant > 2.0 μg/ml). By nonmeningitis breakpoints (intermediate = 2.0 μg/ml, resistant > 4.0 μg/ml) 32% (33/100) of isolates were susceptible to cefotaxime and ceftriaxone, respectively. Isolates were screened for high-level resistance to rifampin at a single MIC, all were ≤ 2.0 μg/ml. Ninety-five percent (151/157) of isolates were resistant to two or more antibiotic classes and 12% (18/157) were resistant to 3 or more antibiotic classes.

8. **Haemophilus influenzae**
   - All amoxicillin-resistant isolates produced β-lactamase and were susceptible to amoxicillin-clavulanate, which contains a β-lactamase inhibitor. Four percent of the isolates were ampicillin-intermediate and L-alaninease negative. Only one isolate was resistant to 2 or more antibiotics.

9. **Mycobacterium tuberculosis (TB)**
   - National guidelines recommend initial four-drug therapy for TB disease, at least until first-line drug susceptibility results are known. In 2005, both resistance to isoniazid and multidrug-resistant TB (MDR-TB) were more common among U.S.-born TB cases than among foreign-born cases (10% versus 8%, and 9% versus 2%, respectively). One of the four MDR-TB cases was resistant to all four first-line TB drugs.

Community-associated Methicillin Resistant Staphylococcus aureus (CA-MRSA)

- 99% of CA-MRSA cases were reported in 2005. 93% (925/998) of CA-MRSA cases returned from foreign travel were susceptible to quinolones. Susceptibilities were determined using 2005 CLSI (formerly NCCLS) breakpoints for Enterobacteriaceae. Susceptibility for erythromycin was based on an MIC > 4.0 μg/ml.

### Antimicrobial Treatment for Enteric Salmonellae

- Ciprofloxacin susceptibility was determined for all isolates (n=746). Only 34% of isolates from patients returning from foreign travel were susceptible to quinolones. Susceptibilities were determined using 2005 CLSI (formerly NCCLS) breakpoints for Enterobacteriaceae. Susceptibility for erythromycin was based on an MIC > 4.0 μg/ml.

### Frequency of Isolates Tested

<table>
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</table>
Amebiasis (Entamoeba histolytica/dispar)

Babesiosis (Babesia)

Blastomycosis (Blastomyces dermatitidis)

Campylobacteriosis (Campylobacter jejuni)

Cat scratch disease (infection caused by Bartonella spp.)

Chancroid (Haemophilus ducreyi)

Chlamydia trachomatis infection

Coccidioidomycosis (Coccidioides immitis)

Cryptosporidiosis (Cryptosporidium spp.)

Dengue virus infection

Diphtheria (Corynebacterium diphtheriae)

Diphtheria (Corynebacterium diphtheriae)

Ehrlichia infection

Enterobacter sakazakii disease

Encephalitis (caused by viral agents)

E. coli O157:H7, other enterohemorrhagic [Shiga toxin-] E. coli infection

E. coli O157:H7, other enterohemorrhagic [Shiga toxin-] E. coli infection

Gonorrhea (Neisseria gonorrhoeae)

Giardiasis (Giardia lamblia)

Giardia lamblia disease

Hantavirus infection

Hepatitis (all primary viral types including A, B, C, D, and E)

Histoplasmosis (Histoplasma capsulatum)

Human immunodeficiency virus (HIV) infection, including Acquired Immunodeficiency Syndrome (AIDS), and its complications

Hemolytic uremic syndrome, critical illness, or laboratory-confirmed cases of HUS

Kawasaki disease

Legionellosis (Legionella spp.)

Leptospirosis (Leptospira interrogans)

Listeriosis (Listeria monocytogenes)

Lyme disease (Borrelia burgdorferi)

Malaria (Plasmodium spp.)

Meningitis (caused by viral agents)

Mumps

Neonatal sepsis, less than 7 days after birth (bacteria isolated from a sterile site, excluding coagulase-negative Staphylococcus spp.)

Peritonitis (Bacteroides fragilis)

Psittacosis (Chlamydia psittaci)

Polio
tons (Chlamydia psittaci)

Psittacosis (Chlamydia psittaci)

Pertussis (Bordetella pertussis)

Plague (Yersinia pestis)

Psittacosis (Chlamydia psittaci)

Quarantine (Yersinia pestis)

Rocky Mountain spotted fever (Rickettsia rickettsii, R. conorii, R. slovaca, R. montana)

Rickettsiosis (Rickettsia spp.)

Rheumatic fever (cases meeting the Jones Criteria only)

Rocky Mountain spotted fever (Rickettsia rickettsii, R. conorii, R. slovaca, R. montana)

Rhoicidiosis (Rickettsia sp.)

Rheumatic fever (cases meeting the Jones Criteria only)

Rickettsia rickettsii, R. conorii, R. slovaca, R. montana

Shiga toxin (Staphylococcus aureus)