

Antimicrobial Susceptibilities of Selected Pathogens, 2000 MINNESOTA MDH DEPARTMENT OF HEALTH		<i>Campylobacter</i> spp. ^{1*}	<i>Salmonella typhimurium</i> ^{2†}	Other <i>Salmonella</i> serotypes (non-typhoidal) ²	<i>Shigella</i> spp.	<i>Neisseria gonorrhoeae</i> ³	<i>Neisseria meningitidis</i> ^{4†✓}	Group A <i>Streptococcus</i> ^{1✓}	Group B <i>Streptococcus</i> ^{5✓}	<i>Streptococcus pneumoniae</i> ^{6**✓}	<i>Mycobacterium tuberculosis</i> ^{7†}
Sampling Methodology † all isolates tested * 1 isolate tested per week at MDH ~10% sample of statewide isolates received at MDH ** all isolates tested from 7-county metropolitan area ✓ isolates from a normally sterile site											
No. of Isolates Tested		51	160	75	80	255	22	124	226	411	141
% Susceptible											
β-lactam antibiotics	amoxicillin									89	
	ampicillin		61	89	6			100	100		
	penicillin						95	100	100	73	
	cefuroxime sodium					100				77	
	cefotaxime						100	100	100	83	
	ceftriaxone		98	92	100	100	100				
	meropenem						100			80	
Other antibiotics	levofloxacin									99	
	ciprofloxacin	89 ¹	100	100	100	99	100				
	chloramphenicol		72	89	92		100			98	
	clindamycin							100	88	97	
	erythromycin	98						96	77	74	
	gentamicin	92									
	tetracycline	43								91	
	trimethoprim/sulfamethoxazole		93	100	90		64			66	
	vancomycin							100	100	100	
TB antibiotics	ethambutol										99
	isoniazid										84
	pyrazinamide										97
	rifampin						100				99
	streptomycin										83

Trends, Comments, and Other Pathogens	
1 <i>Campylobacter</i> spp.	Note that ciprofloxacin susceptibility was determined for all isolates received (n=1,028) rather than 1 isolate per week. Less than 40% of isolates from patients returning from foreign travel were susceptible to quinolones. Susceptibilities were determined using 2000 NCCLS breakpoints for <i>Enterobacteriaceae</i> . Susceptibility for erythromycin was based on an MIC ≤4 µg/ml.
2 <i>Salmonella</i> spp.	Antibiotic treatment for enteric salmonellosis generally is not recommended.
3 <i>Neisseria gonorrhoeae</i>	255 isolates comprise 8% of total (3,163) cases reported. Also, all isolates tested were susceptible to cefpodoxime, cefixime, and spectinomycin. Two isolates were found to have intermediate susceptibility to ciprofloxacin. No decreased susceptibility to azithromycin was detected in 247 MN isolates tested through another surveillance system (GISP) using a CDC provisional breakpoint of 1.0 µg/ml.
4 <i>Neisseria meningitidis</i>	Provisional breakpoints from CDC. MIC ≤0.06 µg/ml to penicillin was considered susceptible. In 2000, one isolate had intermediate susceptibility to penicillin (MIC of 0.25 µg/ml).
5 Group B <i>Streptococcus</i> (GBS)	76% (25/33) of early-onset infant, 74% (17/23) of late-onset infant, 60% (9/15) of maternal, and 78% (175/223) of other invasive GBS cases were tested. 86% (44/51) of infant and maternal case isolates were susceptible to clindamycin, and 80% (41/51) were susceptible to erythromycin.
6 <i>Streptococcus pneumoniae</i>	10% (41/411) had intermediate susceptibility, and 17% (68/411) were resistant to penicillin; 10% (41/411) had intermediate susceptibility, and 7% (28/411) were resistant to cefotaxime. Breakpoints for amoxicillin (susceptible ≤2 µg/ml; intermediate = 4 µg/ml; resistant ≥8 µg/ml), were provisional in 2000 and officially adopted by NCCLS in 2001. Using these criteria, 3% (12/411) had intermediate susceptibility, and 8% (31/411) were resistant to amoxicillin. Isolates were screened for resistance (high-level) to rifampin at a single MIC (4 µg/ml); all were ≤4 µg/ml.
7 <i>Mycobacterium tuberculosis</i> (TB)	National guidelines recommend initial 4-drug therapy where resistance to isoniazid (INH) exceeds 4%. In Minnesota, 16% of <i>M. tuberculosis</i> isolates were INH-resistant. One case of multi-drug resistant TB (i.e., resistant to INH and rifampin) was identified.
<i>Bordetella pertussis</i>	189 isolates were received and tested for erythromycin susceptibility using provisional CDC breakpoints; none were resistant.
<i>Escherichia coli</i> O157:H7	Antibiotic treatment for <i>E. coli</i> O157:H7 infection is not recommended.
<i>Staphylococcus aureus</i> (VISA/GISA)	In 2000, a Minnesota resident became the fifth person in the U.S. with a vancomycin- or glycopeptide-intermediate <i>S. aureus</i> (VISA or GISA) infection. Like other VISA patients, this patient was on dialysis and had received prolonged vancomycin therapy. VISA/GISA strains have a vancomycin MIC of 8-16 µg/ml by broth microdilution. However, all <i>S. aureus</i> isolates with vancomycin MICs ≥4 µg/ml should be referred to MDH for further testing, since commercial susceptibility panels may underestimate the true vancomycin MIC.

Reportable Diseases, MN Rule #4605.7040

Foodborne, Vectorborne and Zoonotic Diseases

Amebiasis (*Entamoeba histolytica*)
 Anthrax (*Bacillus anthracis*) **a**
 Babesiosis (*Babesia* spp.)
 Botulism (*Clostridium botulinum*) **a**
 Brucellosis (*Brucella* spp.) **g**
Campylobacteriosis (*Campylobacter* spp.) **b**
 Cat scratch disease (infection caused by *Bartonella* spp.)
Cholera (*Vibrio cholerae*) **a,b**
 Cryptosporidiosis (*Cryptosporidium parvum*)
 Dengue virus infection
Diphyllobothrium latum infection
 Ehrlichiosis (*Ehrlichia* spp.)
 Encephalitis (caused by viral agents) **g**
 Enteric *E. coli* infection (*E. coli* O157:H7 and other pathogenic *E. coli* from gastrointestinal infections) **b**
 Giardiasis (*Giardia lamblia*)
 Hantavirus infection **g**
 Hemolytic uremic syndrome
 Leptospirosis (*Leptospira interrogans*)
Listeriosis (*Listeria monocytogenes*) **b**
 Lyme disease (*Borrelia burgdorferi*)
 Malaria (*Plasmodium* spp.)
 Plague (*Yersinia pestis*) **g**
 Psittacosis (*Chlamydia psittaci*)
 Q fever (*Coxiella burnetii*) **g**
 Rabies (animal and human cases and suspects) **a**
 Rocky Mountain spotted fever (*Rickettsia* spp., *R. canada*)
Salmonellosis, including typhoid (*Salmonella* spp.) **b**
Shigellosis (*Shigella* spp.) **b**
 Toxoplasmosis
 Trichinosis (*Trichinella spiralis*)
 Tularemia (*Francisella tularensis*) **g**
 Typhus (*Rickettsia* spp.)
 Yellow fever
Yersiniosis (*Yersinia* spp.) **b**

Invasive Bacterial Diseases

Haemophilus influenzae disease (all invasive disease) **b,c**
 Meningitis (caused by *Haemophilus influenzae* **b**, *Neisseria* other bacterial agents) **b,g**
Streptococcal disease (all invasive disease) **b**, or viral or
S. pneumoniae **b**, or viral or
 Meningococemia (*Neisseria meningitidis*) **b,g**
Streptococcal disease (all invasive disease) **b**, or viral or
S. pneumoniae **b,c**
 Toxic shock syndrome **b**

Vaccine Preventable Diseases

Diphtheria (*Corynebacterium diphtheriae*) **b**
 Hepatitis (all primary viral types including A,B,C,D, and E)
 Influenza (unusual case incidence or lab confirmed cases) **d**
 Measles (Rubeola) **a**
 Mumps **a**
Pertussis (*Bordetella pertussis*) **a,b**
 Poliomyelitis **a,d**
 Rubella and congenital rubella syndrome
 Tetanus (*Clostridium tetani*)

Sexually Transmitted Diseases and Retroviral Infections

Chancroid (*Haemophilus ducreyi*) **a,e**
Chlamydia trachomatis infections **e**
 Gonorrhea (*Neisseria gonorrhoeae*) **e**
 Human Immunodeficiency Virus (HIV) Infection, including Acquired Immunodeficiency Syndrome (AIDS) **f**

Retrovirus infection (other than HIV)
 Syphilis (*Treponema pallidum*) **a,e**

Other Conditions

Agents of bioterrorism **g**
 Blastomycosis (*Blastomyces dermatitidis*)
 Histoplasmosis (*Histoplasma capsulatum*)
 Increased incidence of any illness beyond expectations
 Kawasaki disease
 Legionellosis (*Legionella* spp.) **d**
 Leprosy (*Mycobacterium leprae*)
 Reye syndrome
 Rheumatic fever (cases meeting the Jones Criteria only)
Staphylococcus aureus (only death or serious illness due to methicillin-resistant *S. aureus*) **b**
 Vancomycin Intermediate/Resistant *Staphylococcus aureus* **d**
Unexplained deaths **b** and serious illness **d** (possibly due to infectious cause)
Tuberculosis (*Mycobacterium tuberculosis* and *M. bovis*) **b**

- a** Report immediately by telephone 612-676-5414 or 877-676-5414
- b** Submit isolates to the MDH. If a rapid, non-culture assay is used for diagnosis, we request that positives be cultured, and isolates submitted. If not possible, please send specimens, enrichment broth, or other appropriate material. Please call the MDH Public Health Laboratory at 612-676-5938 for instructions.
- c** Isolates are considered to be from invasive disease if they are isolated from normally sterile sites, e.g. blood, CSF, joint fluid, etc.
- d** Submission of isolates to MDH is requested, but not required by rule
- e** Report on separate Sexually Transmitted Disease Report Card
- f** Report on separate HIV Report Card
- g** Requested to report immediately by telephone; reporting rule change expected in 2001

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Minnesota Department of Health
 717 Delaware Street SE
 Minneapolis, MN 55414
 www.health.state.mn.us

To Report a Case:

Fill out a Minnesota Department of Health case report form and mail to the above address. For diseases that require immediate reporting, or for questions about reporting, call the Acute Disease Epidemiology Section at: 612-676-5414 or 877-676-5414 or fax form to 612-676-5743.

To Send an Isolate to MDH:

Send isolates by U.S. mail using approved containers to the above address. If using a courier, isolates should be sent to 717 Delaware Street SE, Minneapolis, MN 55414. To order pre-paid etiologic agent mailers, or for other assistance, call the Public Health Laboratory Specimen Handling Unit at: 612-676-5396.

The MDH Antibiogram is available on the MDH Web site (<http://www.health.state.mn.us>). Laminated copies can be ordered from: Antibiogram, Minnesota Dept. of Health, Acute Disease Epidemiology Section, 717 Delaware St. SE, Minneapolis, MN 55414.