

Antimicrobial Susceptibilities of Selected Pathogens, 1998



Sampling Methodology

† all isolates tested
 * ~ 20% sample of statewide isolates received at MDH
 ** all isolates tested from 7-county metropolitan area isolates from a normally sterile site

	<i>Campylobacter</i> spp. ^{1*}	<i>Salmonella typhimurium</i> ^{2*}	Other <i>Salmonella</i> spp. (non-typhoidal) ^{2*}	<i>Shigella</i> spp. [*]	<i>Neisseria gonorrhoeae</i> ³	<i>Neisseria meningitidis</i> ^{4†}	Group A streptococci [†]	Group B streptococci ^{5*}	<i>Streptococcus pneumoniae</i> ^{6**}	<i>Mycobacterium tuberculosis</i> ^{7†}
No. of Isolates Tested	237	41	86	34	252	36	145	100	469	131

% Susceptible

	<i>Campylobacter</i> spp. ^{1*}	<i>Salmonella typhimurium</i> ^{2*}	Other <i>Salmonella</i> spp. (non-typhoidal) ^{2*}	<i>Shigella</i> spp. [*]	<i>Neisseria gonorrhoeae</i> ³	<i>Neisseria meningitidis</i> ^{4†}	Group A streptococci [†]	Group B streptococci ^{5*}	<i>Streptococcus pneumoniae</i> ^{6**}	<i>Mycobacterium tuberculosis</i> ^{7†}
β-lactam antibiotics	amoxicillin/ampicillin	/	66	93	21	/	100	100	86	/
	penicillin	/	/	/	/	100	100	100	80	/
	cefuroxime	/	/	/	/	100	/	/	84	/
	cefotaxime	/	/	/	/	100	100	100	87	/
	ceftriaxone	/	/	/	/	100	100	/	/	/
	meropenem	/	/	/	/	/	100	/	86	/
Other antibiotics	ciprofloxacin	91	100	100	100	100	/	/	/	/
	trovafloxacin	/	/	/	/	100	/	/	99	/
	chloramphenicol	/	83	98	65	100	/	/	96	/
	clindamycin	/	/	/	/	/	99	92	97	/
	erythromycin	100	/	/	/	/	94	80	84	/
	gentamicin	97	/	/	/	/	/	/	/	/
	tetracycline	54	/	/	/	/	/	/	91	/
	trimethoprim/sulfamethoxazole	/	88	94	18	/	67	/	72	/
	vancomycin	/	/	/	/	/	100	100	100	/
TB antibiotics	ethambutol	/	/	/	/	/	/	/	/	99
	isoniazid	/	/	/	/	/	/	/	/	87
	pyrazinamide	/	/	/	/	/	/	/	/	96
	rifampin	/	/	/	/	100	/	/	/	100
	streptomycin	/	/	/	/	/	/	/	/	92

Trends, Comments and Other Pathogens

1 <i>Campylobacter</i> spp.	> 60% of isolates from patients returning from foreign travel were resistant to quinolones. Susceptibilities were determined using 1999 NCCLS breakpoints for <i>Enterobacteriaceae</i> . Susceptibility to erythromycin was based on a MIC ≤ 8 µg/ml.
2 <i>Salmonella</i> spp.	Antibiotic treatment for enteric salmonellosis is generally not recommended.
3 <i>Neisseria gonorrhoeae</i>	252 isolates comprise 10% of total (2,636) cases reported. Also, all isolates tested were susceptible to cefpodoxime, cefixime and spectinomycin.
4 <i>Neisseria meningitidis</i>	Provisional breakpoints from CDC.
5 Group B streptococci (GBS)	All early-onset and late-onset infant cases, invasive maternal cases, and 28% of other invasive GBS cases tested. 96% (49/51) of infant and maternal isolates were susceptible to clindamycin and 84% (43/51) were susceptible to erythromycin.
6 <i>Streptococcus pneumoniae</i>	7% had intermediate-level and 13% had high-level resistance to penicillin; 9% had intermediate-level and 4% had high-level resistance to cefotaxime.
7 <i>Mycobacterium tuberculosis</i> (TB)	National guidelines recommend initial 4-drug therapy where prevalence of isoniazid resistance is >4% (such as in MN). No cases of multi-drug resistant TB (i.e., resistant to at least isoniazid and rifampin) were identified.
<i>Bordetella pertussis</i>	All isolates susceptible to erythromycin by provisional CDC breakpoints.
<i>Escherichia coli</i> O157:H7	Antibiotic treatment for <i>E. coli</i> O157:H7 infection is not recommended.
Methicillin Resistant <i>Staphylococcus aureus</i> (MRSA)	MRSA isolates were submitted in 1998 from selected hospitals throughout state. No MRSA isolates with increased resistance to vancomycin have been reported to or seen by MDH. Community-acquired MRSA infections have been observed in children and young adults; these isolates were generally susceptible to many antibiotic classes except beta-lactams/cephalosporins, and many were non-susceptible to erythromycin.
Vancomycin Resistant Enterococcus (VRE)	117 isolates of vancomycin-resistant <i>E. faecium</i> from wounds and normally sterile sites were submitted. 111 (95%) of these isolates were susceptible to quinupristin/dalfopristin with an MIC ≤ 1.0 as defined by 1999 NCCLS investigational breakpoints.

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.)
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)
Enteric *E. coli* infection (*E. coli* O157:H7 and other pathogenic *E. coli* from gastrointestinal infections) **b**
Giardiasis (*Giardia lamblia*)
Hantavirus infection
Hemolytic uremic syndrome
Leptospirosis (*Leptospira interrogans*)
Listeriosis (*Listeria monocytogenes*) **b**
Lyme disease (*Borrelia burgdorferi*)
Malaria (*Plasmodium* spp.)
Plague (*Yersinia pestis*)
Psittacosis (*Chlamydia psittaci*)
Q fever (*Coxiella burnetii*)
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*)
Typhus (*Rickettsia* spp.)
Yellow fever
Yersiniosis (*Yersinia* spp.) **b**

a Report immediately by telephone 612-676-5414

b Submit isolates to the Minnesota Department of Health

c Isolates are considered to be from invasive disease if they are isolated from normally sterile sites, i.e. blood, CSF, joint fluid,...etc.

Invasive Bacterial Diseases

Haemophilus influenzae disease (all invasive disease) **b,c**
Meningitis (caused by *Haemophilus influenzae* **b**, *Neisseria meningitidis* **b**, *Streptococcus pneumoniae* **b**, or viral or other bacterial agents)

Meningococemia (*Neisseria meningitidis*) **b**
~~Streptococcal disease (all invasive)~~
S. pneumoniae) **b,c**

Toxic shock syndrome **b**

Vaccine Preventable Disease and Tuberculosis

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*)
Tuberculosis (*Mycobacterium tuberculosis* and *M. bovis*) **b**

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

Other Conditions

Blastomycosis (*Blastomyces dermatitidis*)
Histoplasmosis (*Histoplasma capsulatum*)
Increased incidence of any illness beyond expectations
Kawasaki disease
Legionellosis (*Legionella* spp.)
Leprosy (*Mycobacterium leprae*)
Reye syndrome
Rheumatic fever (cases meeting the Jones Criteria only)
Infectious cause(s) **b** and serious illness **d** (possibly due to
Vancomycin Intermediate/Resistant *Staphylococcus aureus* **d**

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

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Minnesota Department of Health
P.O. Box 9441
Minneapolis, MN 55440-9441

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 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.