Reportable Diseases, MN Rule 4605.7040

Report Immediately by Telephone

Anthrax (*Bacillus anthracis*) a
Botulism (*Clostridium botulinum*)
Brucellosis (*Brucella* spp.) a
Cholera (*Vibrio cholerae*) a
Diphtheria (*Corynebacterium diphtheriae*) a
Hemolytic uremic syndrome a
Measles (rubeola) a
Meningococcal disease (*Neisseria meningitidis*)
(all invasive disease) a, b
Orthopox virus a
Plague (*Yersinia pestis*) a
Poliomyelitis a
Q fever (*Coxiella burnetii*) a
Rabies (animal and human cases and suspected cases)
Rubella and congenital rubella syndrome a
Severe Acute Respiratory Syndrome (SARS)
(1. Suspect and probable cases of SARS. 2. Cases of health care workers hospitalized for pneumonia or acute respiratory distress syndrome.) a
Smallpox (variola) a
Tularemia (*Francisella tularensis*) a
Unusual or increased case incidence of any suspect infectious illness a

Report Within One Working Day

Amebiasis (*Entamoeba histolytica/dispar*)
Anaplasmosis (*Anaplasma phagocytophilum*)
Arboviral disease (including, but not limited to, LaCrosse encephalitis, eastern equine encephalitis, western equine encephalitis, St. Louis encephalitis, and West Nile virus)
Babesiosis (*Babesia* spp.)
Blastomycosis (*Blastomyces dermatitidis*)
Campylobacteriosis (*Campylobacter* spp.) a
Cat scratch disease (infection caused by *Bartonella* spp.)
Chancroid (*Haemophilus ducreyi*) c
Chlamydia trachomatis infection c
Coccidioidomycosis
Cronobacter (Enterobacter) sakazakii (infants under 1 year of age) a
Cryptosporidiosis (*Cryptosporidium* spp.) a
Cyclosporiasis (*Cyclospora* spp.) a
Dengue virus infection
Diphyllobothrium latum infection
Ehrlichiosis (*Ehrlichia* spp.)
Encephalitis (caused by viral agents)
Enteric *E. coli* infection
(*E. coli* O157:H7, other enterohemorrhagic [Shiga toxin-producing] *E. coli*, enteropathogenic *E. coli*, enteroinvasive *E. coli*, enterotoxigenic *E. coli*) a
Giardiasis (*Giardia lamblia*)
Gonorrhea (*Neisseria gonorrhoeae*) c
Haemophilus influenzae disease
(all invasive disease) a
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) a, d
Influenza
(unusual case incidence, critical illness, or laboratory confirmed cases) a, e
Kawasaki disease
Kingella spp. (invasive only) a, b
Legionellosis (*Legionella* spp.) a
Leprosy (Hansen's disease) (*Mycobacterium leprae*)
Leptospirosis (*Leptospira interrogans*)
Listeriosis (*Listeria monocytogenes*) a
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*) a, b
Pertussis (*Bordetella pertussis*) a
Psittacosis (*Chlamydophila psittaci*)
Retrovirus infection
Reye syndrome
Rheumatic fever (cases meeting the Jones Criteria only)
Rocky Mountain spotted fever (*Rickettsia rickettsii, R. canada*)
Salmonellosis, including typhoid (*Salmonella* spp.) a
Shigellosis (*Shigella* spp.) a
Staphylococcus aureus (vancomycin-intermediate *S. aureus* [VISA], vancomycin-resistant *S. aureus* [VRSA], and death or critical illness due to community-associated *S. aureus* in a previously healthy individual) a
Streptococcal disease (all invasive disease caused by Groups A and B streptococci and *S. pneumoniae*) a, b
Syphilis (*Treponema pallidum*) c
Tetanus (*Clostridium tetani*)
Toxic shock syndrome a
Toxoplasmosis (*Toxoplasma gondii*)
Transmissible spongiform encephalopathy
Trichinosis (*Trichinella spiralis*)
Tuberculosis (*Mycobacterium tuberculosis* complex) (Pulmonary or extrapulmonary sites of disease, including laboratory confirmed or clinically diagnosed disease, are reportable. Latent tuberculosis infection is not reportable.) a
Typhus (*Rickettsia* spp.)
Unexplained deaths and unexplained critical illness (possibly due to infectious cause) a
Varicella-zoster disease (1. Primary [chickenpox]: unusual case incidence, critical illness, or laboratory-confirmed cases. 2. Recurrent [shingles]: unusual case incidence or critical illness.) a
Vibrio spp. a
Yellow fever
Yersiniosis, enteric (*Yersinia* spp.) a

Sentinel Surveillance (at sites designated by the Commissioner)

Methicillin-resistant *Staphylococcus aureus* (invasive only) a, b
Clostridium difficile a
Carbapenem-resistant Enterobacteriaceae (CRE) and carbapenem-resistant *Acinetobacter* spp. a

a Submission of clinical materials required. If a rapid, non-culture assay is used for diagnosis, we request that positives be cultured, and isolates submitted. If this is not possible, send specimens, enrichment broth, or other appropriate material. Call the MDH Public Health Laboratory at 651-201-4953 for instructions.

b Isolates are considered to be from invasive disease if they are isolated from a normally sterile site, e.g., blood, CSF, joint fluid, etc.

c Report on separate Sexually Transmitted Disease Report Card.

d Report on separate HIV Report Card.

e For criteria for reporting laboratory confirmed cases of influenza, see www.health.state.mn.us/divs/idepc/dtopics/reportable/index.html.

Antimicrobial Susceptibilities of Selected Pathogens, 2014

MINNESOTA MDH DEPARTMENT OF HEALTH

Minnesota Department of Health
625 North Robert Street
PO Box 64975
St. Paul, MN 55164-0975
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 Investigation and Control Section at: 651-201-5414 or 1-877-676-5414 or fax form to 651-201-5743.

To Send an Isolate to MDH:
If you are using a courier, use transport packaging appropriate for the specific courier and send to: 601 North Robert Street, St. Paul, MN 55155. To request packaging, or for other assistance, call the Public Health Laboratory Specimen Handling Unit at: 651-201-4953.

The MDH Antibiogram is available on the MDH web site (http://www.health.state.mn.us). Laminated copies can be ordered from: Antibiogram, Minnesota Department of Health, Acute Disease Investigation and Control Section, 625 North Robert Street, PO Box 64975, St. Paul, MN 55164-0975.

Antimicrobial Susceptibilities of Selected Pathogens, 2014

MINNESOTA MDH DEPARTMENT OF HEALTH

Sampling Methodology
* all isolates tested
† ~20% sample of statewide isolates received at MDH
‖ isolates from a normally sterile site

		Campylobacter spp. [1†]	*Salmonella enterica* (non-typhoidal) [2†]	*Shigella* spp. [3*]	*Neisseria gonorrhoeae* [4]	*Neisseria meningitidis* [5‖]	Group A *Streptococcus* [6*‖]	Group B *Streptococcus* [7*‖]	*Streptococcus pneumoniae* [8*‖]	*Mycobacterium tuberculosis* complex [10*]
Number of Isolates Tested		142	71	78	102	6	239	506	453	105
		% Susceptible								
ß-lactam antibiotics	amoxicillin								93	
	ampicillin		89	51		84	100	100		
	penicillin				0	84	100	100	80#/96¶	
	cefixime				100					
	cefpodoxime									
	cefuroxime sodium								87	
	cefotaxime						100	100	91#/96¶	
	ceftriaxone		99	99	100	100			91#/96¶	
	meropenem					100			92	
Other antibiotics	ciprofloxacin	75[1]	99	90	76	100				
	levofloxacin					100	100	99	99	
	azithromycin	99		74[3]	77	100				
	erythromycin	99					84	46	65	
	clindamycin						95/84[6]	66/55[7]	89	
	chloramphenicol		97	78					99	
	gentamicin	100								
	spectinomycin				100					
	tetracycline	39			14		88		87	
	trimethoprim/sulfamethoxazole (TMP/SMX)		100	23					82	
	vancomycin						100	100	100	
TB antibiotics	ethambutol									99
	isoniazid									82
	pyrazinamide									92
	rifampin					100				99

Trends, Comments, and Other Pathogens

[1] *Campylobacter* spp.	Quinolone susceptibility was determined for all (799) isolates; isolates that were nalidixic acid-susceptible were assumed to be ciprofloxacin susceptible. Only 24% of isolates from patients returning from foreign travel (n=154) were susceptible to quinolones. *Campylobacter* susceptiblities were determined using CDC NARMS report standards (http://www.cdc.gov/narms).
[2] *Salmonella enterica* (non-typhoidal)	Antimicrobial treatment for uncomplicated gastroenteritis due to *Salmonella* is not generally recommended.
[3] *Shigella* spp.	For cases in which treatment is required and susceptibility is unknown or an ampicillin and TMP/SMX-resistant strain is isolated, azithromycin for 3 days, ceftriaxone for 2 to 5 days, or a fluoroquinolone (such as ciprofloxacin) for 3 days is recommended. For susceptible strains, ampicillin or TMP/SMX is effective; amoxicillin is less effective because of rapid absorption from the gastrointestinal tract (2015 *Red Book*). National susceptibility criteria for azithromycin are under development. In Minnesota, bacterial isolates with no zone of inhibition of bacterial growth using 15µg of azithromycin were considered "resistant" for this table. 18 (90%) of azithromycin-resistant infections were in adult males with no travel history. The other 2 were adult women who reported foreign travel.
[4] *Neisseria gonorrhoeae*	Routine resistance testing for *Neisseria gonorrhoeae* by the MDH PHL was discontinued in 2008. Susceptibility results were obtained from the CDC contracted laboratory at John's Hopkins, and are for isolates obtained through the Gonococcal Isolate Surveillance Program. Isolates (n=102) were received from the Red Door Clinic in Minneapolis. One isolate did not have results reported. Resistance criteria for the following antibiotics have not been established; therefore, the data reflect reduced susceptibility using provisional MIC breakpoints for cefixime ≥0.5 µg/ml, ceftriaxone ≥0.5 µg/ml, and azithromycin ≥2.0 µg/ml. Also, the number of isolates submitted for testing increased from 98 in 2013 to 102 in 2014. CDC issued new treatment guidelines in 2015.
[5] *Neisseria meningitidis*	In 2014, 1 case-isolate was intermediate to both penicillin and ampicillin. There were no case-isolates with ciprofloxacin resistance. In 2008, 2 isolates from cases occurring in northwestern MN had nalidixic acid MICs >8 µg/ml and ciprofloxacin MICs of 0.25 µg/ml indicative of resistance. The MIC interpretive criteria for azithromycin, ciprofloxacin, levofloxacin, and rifampin apply to prophylactic therapy and do not apply to therapy of patients with invasive meningococcal disease.
[6] Group A *Streptococcus*	The 239 isolates tested represent 92% of 259 total cases. Among 27 erythromycin resistant - clindamycin susceptible or intermediate isolates, 26 (92%) had inducible clindamyin resistance for a total of 84% that were susceptible to clindamycin and did not exhibit inducible clindamycin resistance.
[7] Group B *Streptococcus*	100% (16/16) of early-onset infant, 100% (17/17) late-onset infants, 87% (13/15) of maternal, and 92% (460/500) of other invasive GBS cases were tested. Among 107 erythromycin resistant-clindamycin susceptible or intermediate isolates, 58 (54%) had inducible resistance to clindamycin for a total of 55%(276/506) that were susceptible to clindamycin and did not exhibit inducible clindamycin resistance. 73% (35/48) of infant and maternal cases were susceptible to clindamycin and did not exhibit inducible clindamycin resistance.
[8] *Streptococcus pneumoniae*	The 453 isolates tested represent 95% of 476 total cases. #Case-isolates susceptible by meningitis breakpoints for cefotaxime and ceftriaxone (intermediate =1.0 µg/ml, resistant ≥2.0 µg/ml) and penicillin (resistant ≥0.12 µg/ml). ¶Case-isolates susceptible by nonmeningitis breakpoints for cefotaxime and ceftriaxone (intermediate =2.0 µg/ml, resistant ≥4.0 µg/ml), and penicillin (intermediate =4.0 µg/ml, resistant ≥8.0 µg/ml). Isolates were screened for high-level resistance to rifampin at a single MIC; >99% (452/453) were ≤2 µg/ml. Using meningitis breakpoints, 18% (80/453) of isolates were resistant to two or more antibiotic classes and 12% (54/453) were resistant to three or more antibiotic classes. (Please refer to CLSI oral penicillin V breakpoints, not shown above.)
[10] *Mycobacterium tuberculosis* (TB) complex	National guidelines recommend initial four-drug therapy for TB disease, at least until first-line drug susceptibility results are known. Of the 25 TB cases reported in 2014 resistant to at least one first-line drug, 19 (76%) were foreign-born. There was 1 case of multidrug-resistant TB (MDR-TB) (i.e., resistant to at least isoniazid and rifampin) but no cases of extensively drug-resistant TB (XDR-TB) (i.e., resistance to isoniazid and rifampin, plus one fluoroquinolone, and at least one injectable second-line drug).
Invasive methicillin-resistant *Staphylococcus aureus* (MRSA)	260 cases of invasive MRSA infection were reported in 2014 in Ramsey and Hennepin Counties, of which 190 (73%) were from blood. 86% (224/260) had an isolate submitted and antimicrobial susceptibility testing conducted. Of cases with an isolate, 76% (171/224) were epidemiologically classified as healthcare-associated (hospital and community onset) . Susceptibilities were as follows: 100% to daptomycin, linezolid, telavancin, and vancomycin, and 99% to gentamicin and TMP/SMX; 98% to rifampin; 96% to doxycycline and tetracycline; 22% to levofloxacin; and 11% to erythromycin. Isolates were screened for mupirocin resistance with 8% exhibiting high-level resistance (MIC >256 ug/ml). 42% (71/171) were susceptible or intermediate to clindamycin by broth microdilution; however among 52 erythromycin resistant-clindamycin susceptible or intermediate isolates, 20 had inducible clindamycin resistance for a total of 30% (51/171) that were susceptible to clindamycin and did not exhibit inducible clindamycin resistance. For community-associated (CA) cases (53/57 with isolates), susceptibilities were as follows: 100% to daptomycin, doxycycline, gentamicin, linezolid, rifampin, telavancin, tetracycline, TMP/ SMX, vancomycin; 60% to levofloxacin; 21% to erythromycin. No CA isolates screened for mupirocin resistance exhibited high-level resistance. 83% (44/53) were susceptible to clindamycin by broth microdilution; however among 33 erythromycin resistant-clindamycin susceptible or intermediate isolates 12% (4/33) had inducible clindamycin resistance for a total of 75% (40/53) that were susceptible to clindamycin and did not exhibit inducible clindamycin resistance. There were no isolates confirmed as vancomycin resistant or intermediate in 2014.
Bordetella pertussis	In 2014, no cases of pertussis were tested for susceptibility in Minnesota. Nationally, only 11 erythromycin-resistant *B. pertussis* cases have been identified to date.
Carbapenem-resistant Enterobacteriaceae (CRE)	Of 134 CRE isolates submitted from 133 patients, 21 (16%) isolates (representing 20 patients) were bla_{KPC} positive by PCR including 10 (48%) *Enterobacter cloacae*, 8 (38%) *Klebsiella pneumoniae*, 2 (9%) *K. oxytoca*, 1 (5%) *Citrobacter freundii*; none were bla_{NDM} positive. 70% (14/20) were residents of the 7-county metro area. Additionally, 1 isolate (*K. pneumoniae*) from a non-MN resident was positive for bla_{OXA-48}, and 5 isolates (2 *E. coli* and 2 *K. pneumoniae*) were positive for bla_{NDM} from non- MN residents. The CRE definition is based on current CLSI breakpoints and includes Enterobacteriaceae that are nonsusceptible to a carbapenem (excluding ertapenem) and resistant to all tested third generation cephalosporins, or are positive for carbapenemase production. Due to their intrinsic resistance to imipenem, additional criteria apply for all species of *Proteus, Providencia,* and *Morganella*.
Escherichia coli O157:H7	Antimicrobial treatment for *E. coli* O157:H7 infection is not recommended.