

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**
- Polioyielitis **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). 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**

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/depd/topics/reportable/index.html.

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**
- 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*)

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**

Antimicrobial Susceptibilities
of Selected Pathogens,
2013



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.

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* Sampling Methodology
all isolates tested
+ ~10% sample of statewide isolates received at MDH
++ ~20% sample of statewide isolates received at MDH
+++ ~25% sample of statewide isolates received at MDH
|| isolates from a normally sterile site

		<i>Campylobacter</i> spp. ^{1*}	<i>Salmonella enterica</i> (non-typhoidal) ^{2†}	<i>Shigella</i> spp. ^{3§}	<i>Neisseria gonorrhoeae</i> ⁴	<i>Neisseria meningitidis</i> ^{5¶}	Group A <i>Streptococcus</i> ⁶	Group B <i>Streptococcus</i> ⁷	<i>Streptococcus pneumoniae</i> ⁸	<i>Mycobacterium tuberculosis</i> ⁹
Number of Isolates Tested		159	80	37	98	12	197	530	518	113
% Susceptible										
β-lactam antibiotics	amoxicillin								95	
	ampicillin		85	78		100	100	100		
	penicillin				0	92	100	100	83*/97 [¶]	
	cefixime				100					
	cefepodoxime									
	cefuroxime sodium								92	
	cefotaxime						100	100	93*/97 [¶]	
	ceftriaxone		95	100	100	100			93*/97 [¶]	
meropenem						100		93		
Other antibiotics	ciprofloxacin	74 [†]	100	97	82	100				
	levofloxacin					100	100	99	99	
	azithromycin	96			99	100				
	erythromycin	96					87	47	65	
	clindamycin						96/87 [§]	67/57 [§]	94	
	chloramphenicol		96	84					99	
	gentamicin	99								
	spectinomycin				100					
	tetracycline	30			26		89		91	
	trimethoprim/sulfamethoxazole (TMP/SMX)		99	30					82	
vancomycin						100	100	100		
TB antibiotics	ethambutol									96
	isoniazid									88
	pyrazinamide									87
	rifampin					100				100

Trends, Comments, and Other Pathogens

¹ <i>Campylobacter</i> spp.	Quinolone susceptibility was determined for all isolates (n=909); isolates that were nalidixic acid-susceptible were assumed to be ciprofloxacin susceptible. Only 19% of isolates from patients returning from foreign travel (n=125) were susceptible to quinolones. <i>Campylobacter</i> susceptibilities were determined using new CDC NARMS 2012 interpretive criteria (http://www.cdc.gov/narml/pdf/2012-annual-report-narml-508c.pdf).
² <i>Salmonella enterica</i> (non-typhoidal)	Antimicrobial treatment for uncomplicated gastroenteritis due to <i>Salmonella</i> is not generally recommended.
³ <i>Shigella</i> 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 5 days, or a fluoroquinolone (such as ciprofloxacin) for 3 days should be administered. For susceptible strains, ampicillin or TMP/SMX is effective; amoxicillin is less effective because of rapid absorption from the gastrointestinal tract. (2012 <i>Red Book</i>)
⁴ <i>Neisseria gonorrhoeae</i>	Routine resistance testing for <i>Neisseria gonorrhoeae</i> by the MDH PHL was discontinued in 2008. Susceptibility results were obtained from the CDC Regional Laboratory in Cleveland, Ohio, and are for isolates obtained through the Gonococcal Isolate Surveillance Program. Isolates (n = 98) 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 gonorrhea isolates submitted for testing increased from 79 in 2012 to 98 in 2013.
⁵ <i>Neisseria meningitidis</i>	In 2013, 1 case-isolate was intermediate to penicillin. 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 <i>Streptococcus</i>	The 197 isolates tested represent 94% of 209 total cases. Among 19 erythromycin resistant-clindamycin susceptible or intermediate isolates 19 (100%) had inducible clindamycin resistance for a total of 87% that were susceptible to clindamycin and did not exhibit inducible clindamycin resistance.
⁷ Group B <i>Streptococcus</i>	100% (17/17) of early-onset infant, 100% (12/12) of late-onset infant, 92% (11/12) of maternal, and 88% (490/556) of other invasive GBS cases were tested. Among 106 erythromycin-resistant, clindamycin susceptible or intermediate isolates, 54 (51%) had inducible resistance to clindamycin for a total of 57% (301/530) that were susceptible to clindamycin and did not exhibit inducible clindamycin resistance. 63% (26/41) of infant and maternal cases were susceptible to clindamycin and did not exhibit inducible clindamycin resistance.
⁸ <i>Streptococcus pneumoniae</i>	The 518 isolates tested represent 96% of 542 total cases. ^a Case-isolates susceptible by meningitis breakpoints for cefotaxime, ceftriaxone (intermediate = 1.0 µg/ml, resistant > 2.0 µg/ml) and penicillin (resistant > 0.12 µg/ml). ^b Case isolates susceptible by nonmeningitis breakpoints for cefotaxime, 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% (517/518) were ≤2 µg/ml. Using meningitis breakpoints, 14% (75/518) of isolates were resistant to two or more antibiotic classes and 8% (41/518) were resistant to three or more antibiotic classes. (CLSI also has breakpoints for oral penicillin V; refer to the most recent CLSI recommendations for information).
¹⁰ <i>Mycobacterium tuberculosis</i> (TB)	National guidelines recommend initial four-drug therapy for TB disease, at least until first-line drug susceptibility results are known. Of the 24 TB cases reported in 2013 resistant to at least one first-line drug, 21 (88%) were foreign-born. There were no cases of multidrug-resistant TB (MDR-TB) (i.e., resistant to at least isoniazid and rifampin) or 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 <i>Staphylococcus aureus</i> (MRSA)	213 cases of invasive MRSA infection were reported in 2013 in Ramsey and Hennepin Counties, of which 144 (68%) were from blood. 87% (185/213) had an isolate submitted and antimicrobial susceptibility testing conducted. Of cases with an isolate, 84% (153/185) were epidemiologically classified as healthcare-associated. Susceptibilities were as follows: 100% to linezolid; 99% to daptomycin, doxycycline, telavancin, and vancomycin; 98% to gentamicin, tetracycline, and TMP/SMX; 95% to rifampin; 20% to levofloxacin; 12% to erythromycin. Isolates were screened for mupirocin resistance with 6% exhibiting high-level resistance (MIC >256 µg/ml). 49% (75/153) were susceptible or intermediate to clindamycin by broth microdilution; however, 26/56 isolates that were clindamycin susceptible or intermediate and erythromycin resistant were found to have inducible resistance to clindamycin (32% susceptible and negative for inducible clindamycin resistance). For community-associated (CA) cases (32/33 with isolates), susceptibilities were as follows: 100% to daptomycin, doxycycline, gentamicin, linezolid, rifampin, telavancin, tetracycline, TMP/SMX, vancomycin; 56% to levofloxacin; 16% to erythromycin. No CA isolates screened for mupirocin resistance exhibited high-level resistance. 84% (27/32) were susceptible to clindamycin by broth microdilution; however, 4/22 isolates that were clindamycin susceptible or intermediate and erythromycin resistant were found to have inducible clindamycin resistance (72% susceptible and negative for inducible clindamycin resistance). In addition to invasive MRSA surveillance, MDH confirmed 3 isolates (2 MRSA; 1 MSSA) with intermediate resistance to vancomycin (MIC 4-8 µg/ml).
<i>Bordetella pertussis</i>	In 2013, no cases of pertussis were tested for susceptibility in Minnesota. Nationally, only 11 erythromycin-resistant <i>B. pertussis</i> cases have been identified to date.
Carbapenem-resistant Enterobacteriaceae (CRE)	Of 92 CRE isolates submitted from 90 patients, 26 (28%) were <i>bla</i> _{KPC} positive by PCR including 11 (42%) <i>Klebsiella pneumoniae</i> , 11 (42%) <i>Enterobacter cloacae</i> , 2 (8%) <i>K. oxytoca</i> , 1 (4%) <i>Citrobacter freundii</i> , and 1 (4%) <i>C. koseri</i> ; none were <i>bla</i> _{NDM} positive. 69% (18/26) were residents of the 7-county metro area. Additionally, one isolate (<i>K. pneumoniae</i>) from a non-MN resident was positive for <i>bla</i> _{OXA-48} by PCR. The CRE definition is based on 2013 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 <i>Proteus</i> , <i>Providencia</i> , and <i>Morganella</i> .
<i>Escherichia coli</i> O157:H7	Antimicrobial treatment for <i>E. coli</i> O157:H7 infection is not recommended.