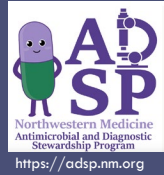




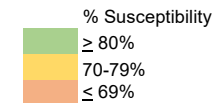
Northwest Region 2022 Antibigrams

- I. [Facility Wide Antibigram](#)
- II. [Blood Antibigram](#)
- III. [Emergency Department \(ED\) Antibigram](#)
- IV. [Urinary Antibigram](#)

NM Northwest Region (Huntley/McHenry) 2022 Facility-Wide Antibiogram



Isolates	Ampicillin ^a	Ampicillin/Sulbactam	Cefazolin	Cefepime	Ceftazidime	Ceftazidime/Avibactam ^c	Ceftriaxone	Ciprofloxacin	Clindamycin	Daptomycin ^c	Levofloxacin	Linezolid ^c	Meropenem ^c	Penicillin G	Piperacillin/Tazobactam	Sulfamethoxazole/Trimethoprim	Tetracycline	Vancomycin
GRAM POSITIVES																		
Enterococcus species	384	94								100		96		93				97
Staphylococcus coagulase negative	38		31					70	100		100					63	71 ^d	100
Staphylococcus aureus	512		60					65	100		100					96	82 ^d	100
Methicillin-resistant Staphylococcus aureus	206							41	100		100					91	63 ^d	100
GRAM NEGATIVES																		
Citrobacter freundii complex	53		50	2	100	73		71	89		89		100		88	83		
Citrobacter koseri	32		100	97	100	100		100	100		100		100		100	100		
Enterobacter cloacae complex	120		28	1	96	74		63	95		95		100		77	90		
Escherichia coli	1580	55	63	70	88	86		86	72		76		100		98	77		
Klebsiella aerogenes	38	15	73 ^b	8 ^b	100	81		78	100		100		100		92	97		
Klebsiella oxytoca	104	1	67	11	96	96		92	95		98		100		94	91		
Klebsiella pneumoniae	332	0	79	84	91	91		91	88		93		100		97	86		
Proteus mirabilis	203	66	80	60	92	92		90	60		61		100		99	69		
Pseudomonas aeruginosa	263				92	93	98		86		81		95		97			
Serratia species	41	9	17	0	97	80		70	80		88		97		87			
Extended-Spectrum β-Lactamase Enterobacterales (ESBL-E)	241					99		15			23		100			43		



Antibiogram data helps guide clinicians to choose appropriate empiric antibiotics for many infectious syndromes.

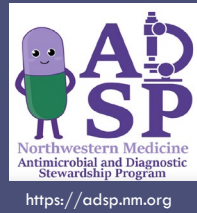
[See protocol for multi-drug resistant gram-negative agents for additional guidance](#)

- ^a Results of ampicillin susceptibility tests should be used to predict the activity of amoxicillin. Ampicillin may be used to predict susceptibility to amoxicillin-clavulanate, ampicillin-sulbactam, and piperacillin-tazobactam among non-β-lactamase-producing enterococci in clinically stable/non-immunocompromised patients.
- ^b Klebsiella (formerly Enterobacter) aerogenes is intrinsically resistant to ampicillin/sulbactam and cefazolin. If final culture results in Klebsiella aerogenes, empiric therapy with ampicillin/sulbactam or cefazolin should be changed to a susceptible definitive agent.
- ^c Requires infectious diseases consultation for ongoing use
- ^d Organisms that are susceptible to tetracycline are also considered susceptible to doxycycline and minocycline. However, some organisms that are intermediate or resistant to tetracycline may be susceptible to doxycycline, minocycline, or both.

30 isolate threshold

Blank boxes indicate organism has intrinsic resistance to corresponding antimicrobial or resistance testing is not applicable
 When risk for mortality or significant morbidity is high (eg. meningitis, sepsis, ICU patients) agents with %S at least 90-95% should be selected.
 Less significant concerns for mortality within the next 24 to 48 hours (eg. uncomplicated UTIs or community-acquired infections), %S of 80-85% may be appropriate.
 Antibiogram Guidance (CLSI M100-Ed33)

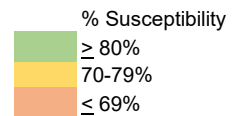
NM Northwest Region 2022 Blood Antibiogram



Isolates	Ampicillin ^a	Ampicillin/Sulbactam	Cefazolin	Cefepime	Ceftazidime	Ceftriaxone	Ciprofloxacin	Cilindamycin	Daptomycin ^c	Levofloxacin	Linezolid ^c	Meropenem ^c	Oxacillin	Penicillin G	Piperacillin/Tazobactam	Sulfamethoxazole/Trimethoprim	Tetracycline	Vancomycin
GRAM POSITIVES																		
Enterococcus species	36	100							100		100							97
Staphylococcus aureus	128			63				63	100		100		63 ^b			96	83 ^d	100
Methicillin-resistant Staphylococcus aureus	47							42	100		100					89	63 ^d	100
GRAM NEGATIVES																		
Escherichia coli	196	54	64	69	81	79	79	71			74		100		97	70		
Klebsiella pneumoniae	50		86 ^b	90 ^b	96	96	96	88			92		100		100	92		
Extended-Spectrum β-Lactamase Enterobacterales (ESBL-E)	41							12			17		100			34		

Antibiogram data helps guide clinicians to choose appropriate empiric antibiotics for many infectious syndromes.

[See protocol for multi-drug resistant gram-negative agents for guidance](#)



^a Results of ampicillin susceptibility tests should be used to predict the activity of amoxicillin.

Ampicillin may be used to predict susceptibility to amoxicillin-clavulanate, ampicillin-sulbactam, and piperacillin-tazobactam among non-β-lactamase-producing enterococci in clinically stable/non-immunocompromised patients.

^b For agents with established clinical efficacy and considering site of infection and appropriate dosing, oxacillin-susceptible staphylococci can be considered susceptible to:

- 1) β-lactam combination agents (amoxicillin-clavulanate, ampicillin-sulbactam, piperacillin-tazobactam);
- 2) oral cephalosporins (cefazolin, cefdinir, cephalexin, cefpodoxime, cefprozil, cefuroxime);
- 3) IV cephalosporins (cefazolin, cefepime, ceftriaxone); and
- 4) carbapenems (ertapenem, imipenem, meropenem)

^c Requires infectious diseases consultation for ongoing use

^d Organisms that are susceptible to tetracycline are also considered susceptible to doxycycline and minocycline. However, some organisms that are intermediate or resistant to tetracycline may be susceptible to doxycycline, minocycline, or both.

30 isolate threshold

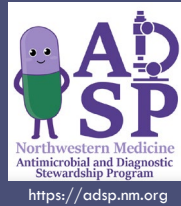
Blank boxes indicate organism has intrinsic resistance to corresponding antimicrobial or resistance testing is not applicable

When risk for mortality or significant morbidity is high (eg. meningitis, sepsis, ICU patients) agents with %S at least 90-95% should be selected.

Less significant concerns for mortality within the next 24 to 48 hours (eg. uncomplicated UTIs or community-acquired infections), %S of 80-85% may be appropriate.

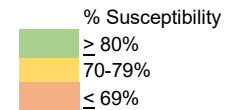
Antibiogram Guidance (CLSI M100-Ed32)

NM Northwest Region 2022 ED Antibiogram



Isolates	Ampicillin ^a	Ampicillin/Sulbactam	Cefazolin	Cefepime	Ceftazidime	Ceftriaxone	Ciprofloxacin	Clindamycin	Daptomycin ^c	Levofloxacin	Linezolid ^c	Meropenem ^c	Oxacillin	Piperacillin/Tazobactam	Sulfamethoxazole/Trimethoprim	Tetracycline	Vancomycin
GRAM POSITIVES																	
Enterococcus species	271	94							100		96						98
Staphylococcus aureus	262		56					70	100		100		57 ^b		96	82 ^d	100
Methicillin-resistant Staphylococcus aureus	112							48	100		100				92	66 ^d	100
GRAM NEGATIVES																	
Citrobacter species	69		68	32	98	82	79	93			93		100		92	92	
Citrobacter freundii complex	40		50	3	100	70	70	88			88		100		87	87	
Enterobacter cloacae complex	73		32	0	98	76	65	95			95		100		81	89	
Escherichia coli	1301	55	63	70	88	87	86	72			75		100		98	77	
Klebsiella oxytoca	72		70	10	94	94	91	96			99		100		94	93	
Klebsiella pneumoniae	260		80	84	93	93	92	87			93		100		98	86	
Proteus mirabilis	164	68	81	60	92	92	90	60			61		100		100	70	
Pseudomonas aeruginosa	130				94	95		86			83		96		99		
Extended-Spectrum β -Lactamase Enterobacterales (ESBL-E)	191							13			22		100			41	

Antibiogram data helps guide clinicians to choose appropriate empiric antibiotics for many infectious syndromes.



^a Results of ampicillin susceptibility tests should be used to predict the activity of amoxicillin.

Ampicillin may be used to predict susceptibility to amoxicillin-clavulanate, ampicillin-sulbactam, and piperacillin-tazobactam among non- β -lactamase-producing enterococci in clinically stable/non-immunocompromised patients.

^d For agents with established clinical efficacy and considering site of infection and appropriate dosing, oxacillin-susceptible staphylococci can be considered susceptible to:

- 1) β -lactam combination agents (amoxicillin-clavulanate, ampicillin-sulbactam, piperacillin-tazobactam);
- 2) oral cephalosporins (cefazolin, cefdinir, cephalexin, cefpodoxime, cefprozil, cefuroxime);
- 3) IV cephalosporins (cefazolin, cefepime, ceftriaxone); and
- 4) carbapenems (ertapenem, imipenem, meropenem)

^c Requires infectious diseases consultation for ongoing use

^d Organisms that are susceptible to tetracycline are also considered susceptible to doxycycline and minocycline.

However, some organisms that are intermediate or resistant to tetracycline may be susceptible to doxycycline, minocycline, or both.

30 isolate threshold

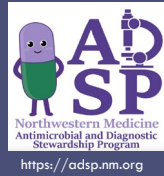
Blank boxes indicate organism has intrinsic resistance to corresponding antimicrobial or resistance testing is not applicable

When risk for mortality or significant morbidity is high (eg. meningitis, sepsis, ICU patients) agents with %S at least 90-95% should be selected.

Less significant concerns for mortality within the next 24 to 48 hours (eg. uncomplicated UTIs or community-acquired infections), %S of 80-85% may be appropriate.

Antibiogram Guidance (CLSI M100-Ed33)

NM Northwest Region 2022 Urine Antibiogram

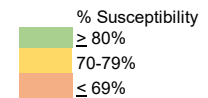


Isolates	Ampicillin ^b	Ampicillin/Sulbactam	Cefazolin	Cefepime	Ceftazidime	Ceftriaxone	Ciprofloxacin	Clindamycin	Daptomycin	Fosfomycin	Gentamicin ^g	Levofloxacin	Linezolid	Meropenem ^d	Nitrofurantoin	Oxacillin	Piperacillin/Tazobactam	Sulfamethoxazole/Trimethoprim	Tetracycline	Tobramycin ^g	Vancomycin
GRAM POSITIVES																					
Enterococcus species	296	92							100			96		91					24		97
Staphylococcus aureus	70		37					63	100			100		100	37		92	72			100
Methicillin-resistant Staphylococcus aureus	44							50	100			100		100			88	61 ^f			100
GRAM NEGATIVES																					
Citrobacter species	83		67	33	96	81	78	92			92	92		100	79		92	90			93
Citrobacter freundii complex	48		47	2	100	70	69	88			87	88		100	87		87	83			89
Enterobacter cloacae complex	63				96	66	52	94			98	94		100	20		73	85			96
Escherichia coli	1407	53	63	84 ^a	88	86	87	72		94	89	75		100	97		98	77			90
Klebsiella oxytoca	74		74 ^c	12	94	94	92	96			97	98		100	89		94	94			95
Klebsiella pneumoniae	276		79	89 ^a	90	90	91	78			96	93		100	48		97	85			94
Proteus mirabilis	158	66	79	86 ^a	93	93	94	59			81	60		100	0		100	69			81
Pseudomonas aeruginosa	125				94	95		86				85		95			99				98
Extended-Spectrum β-Lactamase Enterobacterales (ESBL-E)	209							14		93	61	22		100	82		94	43			55

Several agents have the potential to concentrate in the urine with an intermediate MIC. Contact ADSP for appropriate indication and recommended dosing.

Antibiogram data helps guide clinicians to choose appropriate empiric antibiotics for many infectious syndromes.

[See protocol for multi-drug resistant gram-negative agents for guidance](#)



^a %S using MIC breakpoint for urine sources (≤ 16 mcg/ml).

^b Results of ampicillin susceptibility tests should be used to predict the activity of amoxicillin.

Ampicillin may be used to predict susceptibility to amoxicillin-clavulanate, ampicillin-sulbactam, and piperacillin-tazobactam among non-β-lactamase-producing enterococci in clinically stable/non-immunocompromised patients.

^c Klebsiella (formerly Enterobacter) aerogenes is intrinsically resistant to ampicillin/sulbactam and cefazolin.

If final culture results in Klebsiella aerogenes, empiric therapy with ampicillin/subactam or cefazolin should be changed to a susceptible definitive agent.

^d Requires infectious diseases consultation for ongoing use.

^e For agents with established clinical efficacy and considering site of infection and appropriate dosing, oxacillin-susceptible staphylococci can be considered susceptible to:

1) β-lactam combination agents (amoxicillin-clavulanate, ampicillin-sulbactam, piperacillin-tazobactam); 2) oral cephalosporins (cefaclor, cefdinir, cephalexin, cefpodoxime, cefprozil, cefuroxime); 3) IV cephalosporins (cefazolin, cefepime, ceftriaxone); and 4) carbapenems (ertapenem, imipenem, meropenem)

^f Organisms that are susceptible to tetracycline are also considered susceptible to doxycycline and minocycline.

However, some organisms that are intermediate or resistant to tetracycline may be susceptible to doxycycline, minocycline, or both.

^g Susceptibility based on lab breakpoint of 4 mcg/mL.

30 isolate threshold

Blank boxes indicate organism has intrinsic resistance to corresponding antimicrobial or resistance testing is not applicable

When risk for mortality or significant morbidity is high (eg. meningitis, sepsis, ICU patients) agents with %S at least 90-95% should be selected.

Less significant concerns for mortality within the next 24 to 48 hours (eg. uncomplicated UTIs or community-acquired infections), %S of 80-85% may be appropriate.

Antibiogram Guidance (CLSI M100-Ed33)