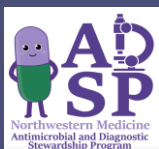


## Northwestern Memorial Hospital (NMH) 2021 Antibigrams

- I. Facility-Wide Antibigram
- II. Blood Antibigram
- III. Urinary Antibigram
- IV. Emergency Department (ED) Antibigram
- V. Respiratory Antibigram
- VI. Medical Intensive Care Unit (MICU) Antibigram
- VII. Intensive Care Unit (ICU) Non-MICU Antibigram

# NMH 2021 Facility-Wide Antibiogram



## GRAM POSITIVES

Isolates	Amikacin	Ampicillin	Ampicillin/Sulbactam	Aztreonam	Cefazolin	Cefepime	Ceftiderocol <sup>e</sup>	Ceftazidime	Ceftazidime/Avibactam <sup>e</sup>	Ceftiozane/Tazobactam <sup>e</sup>	Ceftriaxone	Ciprofloxacin	Clindamycin	Daptomycin	Doxycycline	Fluconazole	Gentamicin	Levofloxacin	Linezolid	Meropenem <sup>h</sup>	Micafungin	Minocycline	Oxacillin	Penicillin G	Piperacillin/Tazobactam	Rifampin	Sulfamethoxazole/Trimethoprim	Tetracycline	Tobramycin	Vancomycin	Voriconazole
Enterococcus faecalis	1103	100 <sup>a</sup>											68 <sup>f</sup>					100													98
Enterococcus faecium	359	15 <sup>a</sup>											99 <sup>g</sup>					99												36	
Vancomycin-Resistant Enterococci	260	10 <sup>a</sup>											99 <sup>g</sup>					99										10			
Staphylococcus coagulase negative	447												53	100				100					30 <sup>f</sup>			97	65	85 <sup>f</sup>		100	
Staphylococcus aureus	1026												67	100				100					69 <sup>f</sup>			100	93	90 <sup>f</sup>		100	
Methicillin-resistant Staphylococcus aureus	315												52	100				100								99	86	78 <sup>f</sup>		100	
Streptococcus pneumoniae (non-meningitis)	31										100							96		80				100						100	
Streptococcus pneumoniae (meningitis)	31										81							96		80				32						100	
Viridans streptococci	259										98		76					91						92						100	

## GRAM NEGATIVES

Acinetobacter species	77	63	69				39					46			66		67	49	48		71			36	64	47	67			
Citrobacter species	299	100		86		99	88				85	93					96	90	100					90	91	90	97			
Enterobacter species	196	100		77		93	73				73	93					97	88	97					72	92	93	96			
Escherichia coli	3228	100	49 <sup>b</sup>	58	91	78	90	92			87	69					89	65	100					95	72	82	89			
Klebsiella species	1398	99	71 <sup>c</sup>	88	77 <sup>c</sup>	90	90				87	83					94	80	97					91	82	78	91			
Morganella morganii	98	100		93			76					68					87	67	99					100	67	93				
Proteus species	648	100	78 <sup>d</sup>	88	99	70	98	96			95	84					93	84	100					99	87	93				
Pseudomonas aeruginosa	923	98		74		94	87	99	98		84						92	77	87					88			96			
Serratia species	160	99		96		98	98				93	95					98	84	99						99	51	90			
Stenotrophomonas maltophilia	134																87	94			100				97					

## MULTI-DRUG RESISTANT GRAM NEGATIVES

Carbapenem Resistant Acinetobacter baumannii (CRAB)	41		32				79 <sup>a</sup>								44								56								
Carbapenem Resistant Enterobacterales (CRE)	42	76						97			7						67	7								19	33				
Extended-Spectrum β-Lactamase Enterobacterales (ESBL-E)	665	97						99	83	16							63	21	95					70	34	53					

## Candida species

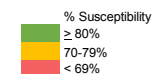
Candida albicans	77															96						92									96
Candida glabrata	47															76						90									77

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

[See asp.nm.org for organ specific empiric prescribing guidance](#)

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

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<sup>a</sup> 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.

<sup>b</sup> Results of ampicillin can predict results for amoxicillin.

<sup>c</sup> 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.

<sup>d</sup> %S out of 24 isolates

<sup>e</sup> Recommend infectious diseases consultation for ongoing use

<sup>f</sup> %S based on dosage regimen of 6 mg/kg every 24 hours.

<sup>g</sup> %SDD based on a dosage regimen of 8-12 mg/kg every 24 hours. Intended for serious infections due to E. faecium. Consultation with an infectious diseases specialist recommended.

<sup>h</sup> Should be reserved for patients who are intolerant to penicillins and cephalosporins or in patients who are suspected of having a drug-resistant bacteria.

<sup>i</sup> 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-clavulante, ampicillin-sulbactam, piperacillin-tazobactam);

2) oral cephalosporins (cefactor, cefdinir, cephalexin, cefpodoxime, cefprozil, cefuroxime); 3) IV cephalosporins (cefazolin, cefepime, ceftriaxone); and 4) carbapenems (ertapenem, imipenem, meropenem).

<sup>j</sup> 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, or both.

Abbreviations: %S, percent susceptible; SDD, susceptible-dose-dependent

30 isolate threshold unless indicated otherwise.

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), agents with %S of 80-85% may be appropriate.

Antibiogram Guidance (CLSI M100-Ed32)

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# NMH 2021 Blood Antibiogram



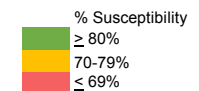
Isolates	Amikacin	Ampicillin	Ampicillin/Sulbactam	Aztreonam	Cefazolin	Cefepime	Ceftazidime	Ceftazidime/Avibactam <sup>d</sup>	Ceftolozane/Tazobactam <sup>d</sup>	Ceftriaxone	Ciprofloxacin	Clindamycin	Daptomycin	Fluconazole	Gentamicin	Levofloxacin	Linezolid	Meropenem <sup>g</sup>	Micafungin	Oxacillin	Penicillin G	Piperacillin/Tazobactam	Rifampin	Sulfamethoxazole/Trimethoprim	Tetracycline	Tobramycin	Vancomycin	
<b>GRAM POSITIVES</b>																												
Enterococcus faecalis	56	100 <sup>a</sup>											60 <sup>e</sup>				98											98
Enterococcus faecium	43	12 <sup>a</sup>											90 <sup>f</sup>				98											37
Staphylococcus coagulase negative	107											43	100				99			23 <sup>b</sup>					47	92 <sup>i</sup>	100	
Staphylococcus aureus	121											65	100				99			73 <sup>b</sup>			98	93	93 <sup>i</sup>	100		
Methicillin-resistant Staphylococcus aureus	31											61	100				100						100	84	81 <sup>i</sup>	100		
Viridans streptococci	42									97		86				64					80						100	
<b>GRAM NEGATIVES</b>																												
Escherichia coli	184	98	36 <sup>b</sup>	44	87	63	83	90		80	60				81	56	100					92		61			78	
Klebsiella species	86	98		73 <sup>c</sup>	92	86 <sup>c</sup>	92	92		92	82				93	75	98					92		80			85	
Pseudomonas aeruginosa	44	100			75		93	81	100	96		77			95	74	86					81					96	
<b>MULTI-DRUG RESISTANT GRAM NEGATIVES</b>																												
Extended-Spectrum β-Lactamase Enterobacterales (ESBL-E)	45	91							95	84		5			44	5	95					77		25			35	

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

[See asp.nm.org](http://See.asp.nm.org) for organ specific empiric prescribing guidance

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

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<sup>a</sup> 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.

<sup>b</sup> Results of ampicillin can predict results for amoxicillin.

<sup>c</sup> Klebsiella (formerly Enterobacter) aerogenes is intrinsically resistant to ampicillin/subactam and cefazolin.

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

<sup>d</sup> Recommend infectious diseases consultation for ongoing use

<sup>e</sup> %S based on dosage regimen of 6 mg/kg every 24 hours.

<sup>f</sup> %SDD based on a dosage regimen of 8-12 mg/kg every 24 hours. Intended for serious infections due to E. faecium. Consultation with an infectious diseases specialist recommended.

<sup>g</sup> Should be reserved for patients who are intolerant to penicillins and cephalosporins or in patients who are suspected of having a drug-resistant bacteria.

<sup>h</sup> 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, cefepodoxime, cefprozil, cefuroxime);

3) IV cephalosporins (cefazolin, cefepime, ceftriaxone); and 4) carbapenems (ertapenem, imipenem, meropenem).

<sup>i</sup> 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.

Abbreviations: %S, percent susceptible; SDD, susceptible-dose-dependent

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), agents with %S of 80-85% may be appropriate.

Antibiogram Guidance (CLSI M100-Ed32)

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# NMH 2021 Urinary Antibiogram



Isolates	Amikacin	Ampicillin	Ampicillin/Subbactam	Aztreonam	Cefazolin	Cefepime	Ceftazidime	Ceftazidime/Avibactam <sup>d</sup>	Ceftolozane/Tazobactam <sup>d</sup>	Ceftriaxone	Ciprofloxacin	Clindamycin	Fosfomycin	Gentamicin	Levofloxacin	Linezolid	Meropenem <sup>e</sup>	Nitrofurantoin	Oxacillin	Piperacillin/Tazobactam	Sulfamethoxazole/Trimethoprim	Tetracycline	Tobramycin	Vancomycin
<b>GRAM POSITIVES</b>																								
Enterococcus faecalis	623	100 <sup>a</sup>														100		100						97
Enterococcus faecium	152	7 <sup>a</sup>														99		23						28
Vancomycin-Resistant Enterococci	123	12 <sup>a</sup>														98		30				9		
Staphylococcus aureus	103										68					100			61 <sup>f</sup>		85	85 <sup>g</sup>		100
<b>GRAM NEGATIVES</b>																								
Citrobacter species	176	99		91		99	92			89	93			95	89		100	90		92	91			98
Enterobacter species	48	100		75		93	70			70	94			96	88		96	14		97	94			97
Escherichia coli	2579	100	51 <sup>b</sup>	60	92	86	91	94		88	70		93	90	66		99	96		95	73			91
Klebsiella species	924	99		73 <sup>c</sup>	89	85 <sup>c</sup>	91	91		88	83			94	80		98	36		89	82			92
Proteus species	407	99	79 <sup>b</sup>	88	99	91	98	97		96	84			93	84		100			99	88			94
Pseudomonas aeruginosa	352	98		73		95	88	99	98		79			92	73		86			91				96
<b>MULTI-DRUG RESISTANT GRAM NEGATIVES</b>																								
Carbapenem Resistant Enterobacterales (CRE)	30	77						100		7				73	7			4			20			20
Extended-Spectrum β-Lactamase Enterobacterales (ESBL-E)	434	97						99	85		15		24	59	11		96	62		71	38			54

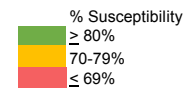
Several agents have the potential to concentrate in the urine with an intermediate MIC. Contact ADSP for appropriate indication and recommended dosing.

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

[See asp.nm.org for organ specific empiric prescribing guidance](https://www.asp.nm.org/organ-specific-empiric-prescribing-guidance)

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

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<sup>a</sup> 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.

<sup>b</sup> Results of ampicillin can predict results for amoxicillin.

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

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

<sup>d</sup> Recommend infectious diseases consultation for ongoing use

<sup>e</sup> Should be reserved for patients who are intolerant to penicillins and cephalosporins or in patients who are suspected of having a drug-resistant bacteria.

<sup>f</sup> 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 (cefactor, cefdinir, cephalexin, cefpodoxime, cefprozil, cefuroxime);

3) IV cephalosporins (cefazolin, cefepime, ceftriaxone); and 4) carbapenems (ertapenem, imipenem, meropenem).

<sup>g</sup> 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

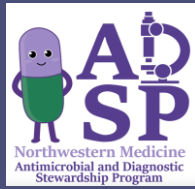
When risk for mortality or significant morbidity is high (eg. meningitis, sepsis, ICU patients), agents with %S at least 90-95% should be selected.

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

Antibiogram Guidance (CLSI M100-Ed32)

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# NMH 2021 ED Antibiogram

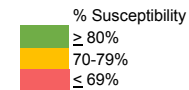


Isolates	Amikacin	Ampicillin	Ampicillin/Sulbactam	Aztreonam	Cefazolin	Cefepime	Ceftazidime	Ceftriaxone	Ciprofloxacin	Clindamycin	Daptomycin	Gentamicin	Levofloxacin	Linezolid	Meropenem <sup>9</sup>	Oxacillin	Piperacillin/Tazobactam	Sulfamethoxazole/Trimethoprim	Tetracycline	Tobramycin	Vancomycin
<b>GRAM POSITIVES</b>																					
Enterococcus faecalis	243	100 <sup>a</sup>									73 <sup>d</sup>		100								98
Enterococcus faecium	57	16 <sup>a</sup>									100 <sup>e</sup>		98								42
Vancomycin-Resistant Enterococci	38	16 <sup>a</sup>									100 <sup>e</sup>		97								
Staphylococcus coagulase negative	80									58			100		43 <sup>f</sup>		70	54 <sup>h</sup>			97
Staphylococcus aureus	251			-						72	100		99		68 <sup>f</sup>		92	91 <sup>h</sup>			100
Methicillin-resistant Staphylococcus aureus	77									64	100		100				83	83 <sup>h</sup>			100
Viridans streptococci	59							100		77			93								100
<b>GRAM NEGATIVES</b>																					
Citrobacter species	74	100		93		100	94	91	93			95	90		100		94	91			100
Enterobacter species	39	100		84		94	79	71	94			100	92		94		71	94			96
Escherichia coli	1325	99	51 <sup>b</sup>	60	92	80	91	94	88	72		90	67		100		96	75			91
Klebsiella species	461	99		69 <sup>c</sup>	88	79 <sup>c</sup>	87	90	87	83		92	79		97		93	80	78		90
Proteus species	212	99	76 <sup>b</sup>	88	97	69	97	95	94	80		93	80		100		100	84			94
Pseudomonas aeruginosa	165	98			73		93	86		77		93	71		84		92				96
Serratia species	31	91			97		100	97	88	100		94	88		100		100	100	72		81

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

See [asp.nm.org](http://asp.nm.org) for organ specific empiric prescribing guidance

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<sup>a</sup> 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.

<sup>b</sup> Results of ampicillin can predict results for amoxicillin.

<sup>c</sup> 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.

<sup>d</sup> %S based on dosage regimen of 6 mg/kg every 24 hours.

<sup>e</sup> %SDD based on a dosage regimen of 8-12 mg/kg every 24 hours. Intended for serious infections due to E. faecium. Consultation with an infectious diseases specialist recommended.

<sup>f</sup> 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, cephalixin, cefpodoxime, cefprozil, cefuroxime); 3) IV cephalosporins (cefazolin, cefepime, ceftriaxone); and 4) carbapenems (ertapenem, imipenem, meropenem).

<sup>g</sup> Should be reserved for patients who are intolerant to penicillins and cephalosporins or in patients who are suspected of having a drug-resistant bacteria.

<sup>h</sup> 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.

Abbreviations: %S, percent susceptible; SDD, susceptible-dose-dependent

30 isolate threshold

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

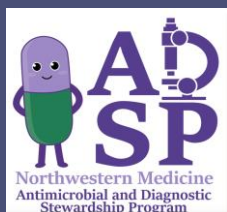
When risk for mortality or significant morbidity is high (eg. meningitis, sepsis, ICU patients), agents with %S at least 90-95% should be selected.

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

Antibiogram Guidance (CLSI M100-Ed32)

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# NMH 2021 Respiratory Antibiogram

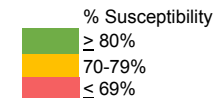


	Isolates	Amikacin	Ampicillin	Ampicillin/Sulbactam	Aztreonam	Cefazolin	Cefepime	Ceftazidime	Ceftriaxone	Ciprofloxacin	Clindamycin	Gentamicin	Levofloxacin	Linezolid	Meropenem <sup>d</sup>	Minocycline	Oxacillin	Piperacillin/Tazobactam	Sulfamethoxazole/Trimethoprim	Tetracycline	Tobramycin	Vancomycin
<b>GRAM POSITIVES</b>																						
Staphylococcus aureus	268										64			100			73 <sup>c</sup>		98	93 <sup>e</sup>		100
Methicillin-resistant Staphylococcus aureus	74										50			100					93	84 <sup>e</sup>		100
<b>GRAM NEGATIVES</b>																						
Acinetobacter species	33	53		70				33		45		63	48		45	66		28	60	48	56	
Enterobacter species	57	98			70		93	68	71	92		98	88		95			68	92		100	
Escherichia coli	101	95	27 <sup>a</sup>	30	72	42	67	76	66	55		81	51		99			78	57		83	
Klebsiella species	156	99		58 <sup>b</sup>	82	68 <sup>b</sup>	86	85	80	80		93	75		94			80	77		85	
Pseudomonas aeruginosa	249	97			67		92	83		81		88	70		80			82			92	
Serratia species	58	100			95		98	97	95	97		100	97		98			100	100		89	
Stenotrophomonas maltophilia	82												87			100			96			

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

[See asp.nm.org](http://See.asp.nm.org) for organ specific empiric prescribing guidance

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<sup>a</sup> Results of ampicillin can predict results for amoxicillin.

<sup>b</sup> 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.

<sup>c</sup> 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-clavulante, ampicillin-sulbactam, piperacillin-tazobactam); 2) oral cephalosporins (cefaclor, cefdinir, cephalixin, cefpodoxime, cefprozil, cefuroxime); 3) IV cephalosporins (cefazolin, cefepime, ceftriaxone); and 4) carbapenems (ertapenem, imipenem, meropenem).

<sup>d</sup> Should be reserved for patients who are intolerant to penicilins and cephalosporins or in patients who are suspected of having a drug-resistant bacteria.

<sup>e</sup> 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), agents with %S of 80-85% may be appropriate.

Antibiogram Guidance (CLSI M100-Ed32)

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# NMH 2021 MICU Antibiogram



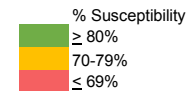
Isolates	Amikacin	Ampicillin	Ampicillin/Sulbactam	Aztreonam	Cefazolin	Cefepime	Ceftazidime/Avibactam <sup>d</sup>	Ceftolozane/Tazobactam <sup>d</sup>	Ceftazidime	Ceftriaxone	Ciprofloxacin	Clindamycin	Daptomycin	Gentamicin	Levofloxacin	Linezolid	Meropenem <sup>i</sup>	Oxacillin	Piperacillin/Tazobactam	Sulfamethoxazole/Trimethoprim	Tetracycline	Tobramycin	Vancomycin
<b>GRAM POSITIVES</b>																							
Enterococcus faecalis	62	100 <sup>a</sup>										64 <sup>h</sup>			100								96
Enterococcus faecium	47	6 <sup>a</sup>													97								34
Vancomycin-Resistant Enterococci (VRE)	33	6 <sup>a</sup>													96								
Staphylococcus aureus	72											59	100			100	69 <sup>i</sup>		100	97 <sup>k</sup>			100
Methicillin-resistant Staphylococcus aureus (MRSA)	21											57			100								100
<b>GRAM NEGATIVES</b>																							
Escherichia coli	51	94	16 <sup>b</sup>	20	69	40	63	98	96 <sup>e</sup>	73	61	51			79	49		97		75	53		80
Klebsiella species	57	98		53 <sup>c</sup>	70	59 <sup>c</sup>	72	98	82 <sup>f</sup>	75	70	66			85	61		90		74	66		73
Pseudomonas aeruginosa	70	97			67		94	95	97	81		70			81	68		69		80			91
<b>MULTI-DRUG RESISTENT GRAM NEGATIVES</b>																							
Extended-Spectrum β-Lactamase Enterobacterales (ESBL-E)	42	89						97	65 <sup>g</sup>			12			58	10		86		53	23		46 <sup>j</sup>

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

[See asp.nm.org for organ specific empiric prescribing guidance](#)

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

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<sup>a</sup> 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.

<sup>b</sup> Results of ampicillin can predict results for amoxicillin.

<sup>c</sup> 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.

<sup>d</sup> Recommend infectious diseases consultation for ongoing use.

<sup>e</sup> %S out of 25 isolates

<sup>f</sup> %S out of 29 isolates

<sup>g</sup> %S out of 20 isolates

<sup>h</sup> %S based on dosage regimen of 6 mg/kg every 24 hours.

<sup>i</sup> Should be reserved for patients who are intolerant to penicillins and cephalosporins or in patients who are suspected of having a drug-resistant bacteria.

<sup>j</sup> 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, cephalixin, cefpodoxime, cefprozil, cefuroxime); 3) IV cephalosporins (cefazolin, cefepime, ceftriaxone); and 4) carbapenems (ertapenem, imipenem, meropenem).

<sup>k</sup> 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.

<sup>l</sup> %S out of 26 isolates

Abbreviations: %S, percent susceptible

30 isolate threshold unless indicated otherwise.

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

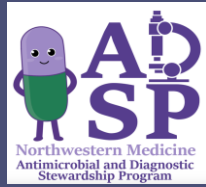
When risk for mortality or significant morbidity is high (eg. meningitis, sepsis, ICU patients), agents with %S at least 90-95% should be selected.

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

Antibiogram Guidance (CLSI M100-Ed32)

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# NMH 2021 ICUs (Non-MICU) Antibiogram



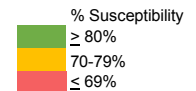
Isolates	Amikacin	Ampicillin	Ampicillin/Sulbactam	Aztreonam	Cefazolin	Cefepime	Ceftazidime	Ceftazidime/Avibactam <sup>d</sup>	Ceftolozane/Tazobactam <sup>d</sup>	Ceftriaxone	Ciprofloxacin	Clindamycin	Daptomycin	Gentamicin	Levofloxacin	Linezolid	Meropenem <sup>g</sup>	Minocycline	Oxacillin	Piperacillin/Tazobactam	Sulfamethoxazole/Trimethoprim	Tetracycline	Tobramycin	Vancomycin
<b>GRAM POSITIVES</b>																								
Enterococcus faecalis	78	100 <sup>a</sup>											66 <sup>f</sup>		100									98
Enterococcus faecium	48	6 <sup>a</sup>													100									18
Vancomycin-Resistant Enterococci (VRE)	43	2 <sup>a</sup>													100							6		
Staphylococcus aureus	118										72	100			100				68 <sup>h</sup>		98	94 <sup>i</sup>		100
Methicillin-resistant Staphylococcus aureus (MRSA)	37										56	100			100						94	86 <sup>i</sup>		100
<b>GRAM NEGATIVES</b>																								
Enterobacter species	37	100		67		94	62				94			100	92		100			62	97			100
Escherichia coli	83	100	35 <sup>b</sup>	44	85	58	83	86		78	65			90	61		100			81	65			92
Klebsiella species	97	98		60 <sup>c</sup>	82	68 <sup>c</sup>	88	87		78	83			95	77		100			81	80			87
Pseudomonas aeruginosa	95	95		65		92	77	97	98		83			89	72		75			81				91
Stenotrophomonas maltophilia	38														94			100			100			
<b>MULTI-DRUG RESISTENT GRAM NEGATIVES</b>																								
Extended-Spectrum $\beta$ -Lactamase Enterobacterales (ESBL-E)	44	97						97	64 <sup>e</sup>	16				75	11		81			53	25			56 <sup>f</sup>

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[See asp.nm.org for organ specific empiric prescribing guidance](https://www.asp.nm.org/for-organ-specific-empiric-prescribing-guidance)

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