OCHSNER LAFAYETTE GENERAL

SUSCEPTIBILITY OF COMMON ORGANISMS

Jan-Dec 2023

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The susceptibility information reported is based on the Food & Drug Administration (FDA) Minimum Inhibitory Concentration (MIC) susceptibility breakpoints which differ from the Clinical & Laboratory Standards Institute (CLSI) MIC susceptibility breakpoints. **While this information is consistent with previously published internal antibiogram data, these data may overestimate organism susceptibility particularly with regards to Pseudomonas aeruginosa susceptibilities to Piperacillin/Tazobactam and Meropenem when compared with CLSI MIC susceptibility breakpoints.**

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IMPORTANT NOTES:

Gram positive organism susceptibilities

1. **Staphylococci that are oxacillin-susceptible** (i.e. MSSA) are also considered susceptible to beta-lactam inhibitor combinations, cephalosporins, and carbapenems. **Oxacillin-resistant** isolates (i.e. MRSA) are also resistant to all currently available beta-lactams (e.g. penicillins, cephalosporins, and carbapenems) **EXCEPT for ceftaroline**.

2. **Beta-hemolytic streptococci (Group A, B, C, F and G)** are uniformly susceptible to beta lactams (e.g. penicillins, cephalosporins, carbapenems). Antibiotic susceptibility testing is not routinely performed on these isolates.

3. Isolates **resistant or intermediate to tetracycline** may be **susceptible to doxycycline, minocycline, or both**. If additional testing for these agents is warranted, please contact the microbiology laboratory.

Gram negative organism susceptibilities

1. When treating serious ***Enterobacter cloacae, Citrobacter freundii***, and ***Klebsiella aerogenes*** infections, avoid use of third generation cephalosporins or piperacillin/tazobactam (even if they initially test susceptible) due concerns of inducing resistance on therapy due to clinically significant beta-lactamase (ampC) hyperproduction. Cefepime is the antibiotic of choice for these pathogens, with carbapenems as an alternative if cefepime resistant or allergy constraints.

2. ***Haemophilus influenzae*** is predictably susceptible to beta-lactam inhibitor combinations. ***Moraxella catarrhalis*** predictably produces a beta lactamase that may not respond to beta lactam beta lactamase inhibitor combinations however may be reliably susceptible to second and third generation cephalosporins.

Candida species susceptibilities

Candida albicans is reliably susceptible to fluconazole and can be used empirically for this *Candida* species. For non - albicans candida, ID involvement for consideration of species-specific characteristics should be sought for ideal management secondary to dose dependent susceptibility.

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Gram Negative Isolates	Enterobacter cloacae Complex	Escherichia coli	Escherichia coli ESBL	Klebsiella pneumoniae (ssp pneumoniae)	Proteus mirabilis	Pseudomonas aeruginosa	Stenotrophomonas maltophilia	Serratia marcescens	Citrobacter koseri	Klebsiella oxytoca	Morganella morganii	Acinetobacter baumannii complex
	329	5177	855	1502	1085	940	93	166	178	166	173	121
AMOXICILLIN/CLAVULANATE	0	86	44	94	100	~	~	0	99	96	0	~
AMPICILLIN	~	53	0	0	76	~	~	~	~	0	0	~
AMPICILLIN/SULBACTAM	~	~	~	~	~	~	~	~	~	~	~	63
CEFEPIME	98	97	47	96	99	94	~	100	99	100	~	~
CEFTRIAXONE	~	96	17	95	99	~	~	96	97	99	~	~
CEFUROXIME	0	89	0	90	98	~	~	~	79	87	0	~
CIPROFLOXACIN	94	72	19	89	71	83	~	87	94	98	67	46
GENTAMICIN^^	98	92	74	96	94	91	~	99	98	99	88	96
LEVOFLOXACIN	93	70	15	86	71	69	83	85	94	96	66	68
MEROPENEM	99	100	100	99	99	92	~	99	100	100	100	68
MINOCYCLINE	~	~	~	~	~	~	100	~	~	~	~	~
NITROFURANTOIN++	42	96	84	32	0	~	~	0	89	92	0	~
PIPERACILLIN/TAZOBACTAM	93	98	87	96	99	88	~	~	100	98	99	51
TETRACYCLINE	95	77	38	80	0	~	~	30	98	95	52	62
TOBRAMYCIN^^	94	92	59	95	95	98	~	89	99	99	93	96
TRIMETH/SULFA	94	72	37	91	77	~	88	98	98	96	73	96

++Nitrofurantoin tested on urine isolates only.

^^Aminoglycosides, including amikacin, gentamicin, and tobramycin, should not generally be used as monotherapy unless treating a UTI.

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Gram Positive Isolates	Staphylococcus aureus (MSSA)	Staphylococcus aureus (MRSA)	Streptococcus pyogenes (Group A)	Streptococcus agalactiae (Group B)	Streptococcus pneumoniae	Enterococcus faecalis	Enterococcus faecium (VRE)
Total isolates+	763	860	128	322	74	1012	66
AMPICILLIN¥	~	~	100	100	~	100	3
CEFTRIAXONE (non-meningitis)	~	~	100	~	96	~	~
CIPROFLOXACIN	81	25	~	~	~	83	~
CLINDAMYCIN	78	70	88	27	76	~	~
GENTAMICIN	96	99	~	~	~	~	~
LEVOFLOXACIN	~	~	95	~	97	83	0
LINEZOLID	100	100	100	100	100	100	100
MEROPENEM	~	~	~	~	68	~	~
NITROFURANTOIN+	100	99	~	~	~	99	48
OXACILLIN	100	0	~	~	~	~	~
PENICILLIN (non-meningitis)	~	~	100	100	96	~	~
TETRACYCLINE	88	92	87	15	80	27	3
TRIMETH/SULFA	98	96	~	~	72	~	~
VANCOMYCIN	100	100	100	100	100	100	0

¥ Enterococci that are susceptible to ampicillin are also susceptible to amoxicillin and piperacillin. Isolates resistant to ampicillin are also resistant to above agents. Enterococci are intrinsically resistant to all cephalosporins and to trimethoprim/sulfamethoxazole.
++ Nitrofurantoin tested on urine isolates only.

1) Isolates resistant or intermediate to tetracycline may be susceptible to doxycycline, minocycline, or both. If additional testing for these agents is warranted, please contact the microbiology laboratory.

2) Staphylococci that are oxacillin-susceptible (i.e. MSSA) are also considered susceptible to beta-lactam inhibitor combinations, cephalosporins, and carbapenems. Oxacillin-resistant isolates (i.e. MRSA) are also resistant to all currently available beta-lactams (e.g. penicillins, cephalosporins, and carbapenems) **EXCEPT for ceftaroline.** Beta-hemolytic streptococci (Group A, B, C, F and G) are uniformly susceptible to beta lactams (e.g. penicillins, cephalosporins, carbapenems). Antibiotic susceptibility testing is not routinely performed on these isolates.

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