

OCHSNER UNIVERSITY HOSPITAL AND CLINICS

SUSCEPTIBILITY OF COMMON ORGANISMS Jan-Dec 2023

Zoltan Gombos, MD, PhD
Clinical Laboratory Director
Ochsner Lafayette General
Lafayette, LA

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.**

Important Contacts

Clinical Microbiology Senior Technologist

Joyce Burt, MLS(ASCP)^{CM}SM^{CM}
337-289-7670

joyce.burt@ochsner.org

Clinical Microbiology Supervisor

Enna K. Castaneda MLS(ASCP)^{CM}
337-289-8905

enna.castaneda@ochsner.org

Antimicrobial Stewardship Service

Stephanie Barras, RPh, PhAST
337-289-8213

System ASP Pharmacist

Yewande Dayo, PharmD, BCIDP
Yewande.dayo@ochsner.org

System ASP Physician

Sandra Kemmerly, MD,
MACP, FIDSA
skemmerly@ochsner.org

(EPIC: Weblink Resources > Physicians)

[Ochsner Antimicrobial Stewardship Program - ASP
Home \(sharepoint.com\)](#)

[Antimicrobial Stewardship Program | Ochsner Health](#)

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.

OCHSNER UNIVERSITY HOSPITAL AND CLINICS
SUSCEPTIBILITY OF COMMON ORGANISMS
Jan-Dec 2023

<u>Gram Negative Isolates</u>	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 (ssp morganii)	Acinetobacter baumannii complex
Total isolates⁺	55	1181	118	276	159	108	16+	19+	49	30	29+	15+
AMOXICILLIN/CLAVULANATE	0	86	23	98	100	~	~	0	100	100	0	~
AMPICILLIN	~	52	0	0	85	~	~	~	~	0	0	~
CEFEPIME	98	99	50	98	100	95	~	100	100	100	~	~
CEFTRIAXONE	~	98	25	97	100	~	~	94	100	100	~	~
CEFUROXIME	0	93	0	95	98	~	~	~	91	93	0	~
CIPROFLOXACIN	82	75	33	89	88	81	~	94	100	96	79	77
GENTAMICIN^^	96	91	69	96	96	95	~	100	100	100	84	89
LEVOFLOXACIN	79	72	29	90	89	70	87	94	100	96	79	77
MEROPENEM	99	100	100	100	100	89	~	100	100	100	100	77
MINOCYCLINE	~	~	~	~	~	~	100	~	~	~	~	~
NITROFURANTOIN^^	40	96	89	34	0	~	~	0	97	93	0	~
PIPERACILLIN/AZOBACTAM	94	97	87	98	100	90	~	~	100	100	100	77
TETRACYCLINE	91	78	40	88	0	~	~	31	100	96	51	72
TOBRAMYCIN^^	94	92	51	97	96	99	~	89	100	100	93	89
TRIMETH/SULFA	90	71	46	95	91	~	93	100	97	100	84	94

⁺ Susceptibility rates for organisms with less than 30 isolates is of unclear significance and should be interpreted cautiously.

^{^^} Nitrofurantoin tested on urine isolates only.

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

OCHSNER UNIVERSITY HOSPITAL AND CLINICS
SUSCEPTIBILITY OF COMMON ORGANISMS
Jan-Dec 2023

<u>Gram Positive Isolates</u>	Staphylococcus aureus (MSSA)	Staphylococcus aureus (MRSA)	Streptococcus pyogenes (Group A)	Streptococcus agalactiae (Group B)	Streptococcus pneumoniae	Enterococcus faecalis	Enterococcus faecium (VRE)
Total isolates+	134	121	24+	87	17+	117	5+
AMPICILLIN[‡]	~	~	100	98	~	100	0
CEFTRIAZONE (non-meningitis)	~	~	100	~	100	~	~
CIPROFLOXACIN	85	27	~	~	~	95	~
CLINDAMYCIN	86	62	75	24	~	~	~
GENTAMICIN	100	100	~	~	~	~	~
LEVOFLOXACIN	~	~	95	~	100	95	0
LINEZOLID	100	100	100	100	~	100	100
MEROPENEM	~	~	~	~	100	~	~
NITROFURANTOIN+	100	100	~	~	~	100	~
OXACILLIN	100	0	~	~	~	~	~
PENICILLIN (non-meningitis)	~	~	100	100	100	~	~
TETRACYCLINE	91	86	58	9	87	26	0
TRIMETH/SULFA	97	97	~	~	70	~	~
VANCOMYCIN	100	100	100	100	100	100	0

+ Susceptibility rates for organisms with less than 30 isolates is of unclear significance and should be interpreted cautiously.

‡ **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**.

3) 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 in Respiratory isolates.