

**Urine Culture Reflex Guidance (Pediatric):**

- A urine sample will be cultured when the patient is <13 years old OR when reflex criteria are met:
  - Positive leukocyte esterase AND/OR
  - Positive nitrite and leukocytes > 10/hpf
  - No reflex culture will be done when epithelial cells > 10/hpf (indicative of contaminated specimen, unsatisfactory for culture)
- **Asymptomatic bacteriuria does not require therapy.** If the patient does not have UTI symptoms, urine culture is not indicated unless the patient is pregnant, pediatric, undergoing invasive urinary tract procedures, or immunocompromised.
- If culture is indicated; re-submit a clean catch or catheterized urine if it has been >24 hours from initial collection of UA, otherwise add-on from UA.
- The negative chemical and/or microscopic urinalysis has a very high specificity and a very high negative predictive value for absence of a UTI.

**Gram-Positive Inducible Resistance: All ages/sources/locations:**

2022 Grp B Strep Clinda = 47% sensitive, 28% of the total resistance was inducible from 39 isolates tested

2023 Grp B Strep Clinda = 48% sensitive, 14% of the total resistance was inducible from 64 isolates tested

While susceptibility testing may indicate that bacteria are susceptible to an antibiotic, some bacteria may have enzymes that can be “turned on” or induced (thus inducible resistance) in vitro resulting in antibiotic resistance.

**Common Blood Culture Isolations** (Frequency of Pathogen):

- |                                 |                               |
|---------------------------------|-------------------------------|
| 1. MSSA (27)                    | 5. <i>E. faecalis</i> (8)     |
| 2. <i>E. coli</i> (19)          | 6. <i>Salmonella sp.</i> (5)  |
| 3/4. <i>S. epidermidis</i> (10) | 7. <i>S. pneumoniae</i> (4)   |
| <i>S. pyogenes</i> (10)         | 8/9. <i>S. agalactiae</i> (3) |
|                                 | <i>K. pneumoniae</i> (3)      |

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**Southern Colorado Region**

**PEDIATRIC (Age <18)**

**Antibiogram**

**January 2023 – December 2023**

**UCHEALTH MICROBIOLOGY**

**719-365-5686**

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United States Anaerobic Susceptibility Data 2013-2016 % Susceptible						
	Amp/Sulb	Pip/Tazo	Cefoxitin	Meropenem	Clindamycin	Metronidazole
Anaerobic GPC*	-	99	-	100	97	100
<i>Bacteroides fragilis</i>	84	96	100	93	26	100
<i>B. fragilis</i> group	74	94	70	95	33	100
<i>Clostridium perfringens</i>	100	100	-	100	83	100
<i>Fusobacterium</i> spp	100	96	-	100	77	95

\*Anaerobic gram-positive cocci = *Peptococcus*, *Peptostreptococcus*, *Fingoldia*, *Peptoniphilus*, and *Anaerococcus* species

- = no data available      GPC = Gram Positive Cocci

Southern Colorado Region <b>PEDIATRIC</b> (Age <18) Antibiogram  January 2023 – December 2023		Amoxicillin/Clavulanic Acid (Augmentin)	Ampicillin +/- Sulbactam (Unasyn) ◊	Cefazolin*	Cefepime	Ceftriaxone	Ciprofloxacin*	Clindamycin	Erythromycin (Use Azithromycin)	Gentamicin †	Levofloxacin	Meropenem	Nitrofurantoin	Oxacillin	Penicillin	Piperacillin/Tazobactam (Zosyn)	Tetracycline (Use Doxycycline)	Tobramycin	Trimethoprim/ Sulfamethoxazole (Bactrim)	Vancomycin	NU = Non-Urine U = Urine All = All Sources	
NU	MSSA (165)			100				80	72	100				100	R		93		96	100	MSSA (165)	NU
	MRSA (44)	R	R	R	R	R		79	22	100		R		R	R	R	93		90	100	MRSA (44)	
	All Enterobacteriales (72)	62	37	65	97	95	95			90	84	100				96	81	90	86		All Enterobacteriales (72)	
U	<i>Enterococcus faecalis</i> (106)		100	R	R	R	99				100		100	R					R	100	<i>Enterococcus faecalis</i> (106)	U
	<i>Escherichia</i> spp. (654)	87	56	93	98	96	92		91	83	99	98				98		91	79		<i>Escherichia</i> spp. (654)	
	<i>Klebsiella pneumoniae</i> (54)	96	R	94	98	96	96		100	92	100	57				98		98	90		<i>Klebsiella pneumoniae</i> (54)	
	All Enterobacteriales (761)	85	51	94	98	96	93		92	85	99	91				97		92	81		All Enterobacteriales (761)	
Results Below This Line Must Be Interpreted With Caution Due To Low Isolate Numbers – Significant Outlier Effects Possible – May Not Be Representative of Wild Type Bacteria																						
All	<i>Staph. epidermidis</i> (71; 27 NU, 44 U)			49				59	30	97			100	54	R		70		76	100	<i>Staph. epidermidis</i> (71; 27 NU, 44 U)	All
	<i>P. aeruginosa</i> (40; 26 NU, 14 U)	R	R	R	95	R	90				90	98	R			95	R	93	R		<i>P. aeruginosa</i> (40; 26 NU, 14 U)	
NU	<i>Streptococcus pneumoniae</i> (16)					100		83	66		100				100		100		87	100	<i>Streptococcus pneumoniae</i> (16)	NU
	<i>S. pneumo.</i> Meningitis MIC					93									80						<i>S. pneumo.</i> Meningitis MIC	

Organism (# of isolates) % susceptible R = Intrinsically resistant. spp = species  
 \* = Due to breakpoint limitation % susceptible & intermediate shown; for ciprofloxacin only applies to Enterobacteriales group  
 † = For synergy for gram-positive infections, not appropriate as monotherapy for gram-positives.  
 ◊ = Ampicillin/sulbactam susceptibility is approximately the same or only a few percentage points better than ampicillin by itself except for *K. pneumo* which it should still maintain decent activity against

**Notes:**

- Clindamycin, Erythromycin, and Tetracycline are only for non-urine isolates.
- Nitrofurantoin is only for urine isolates.
- Routine testing of urine isolate of *Staph saprophyticus* is not advised because infections respond to concentrations achieved in urine of antimicrobial agents commonly used to treat acute, uncomplicated UTIs (e.g. cephalexin, nitrofurantoin, trimethoprim/sulfamethoxazole, or fluoroquinolones). It is intrinsically resistant to fosfomycin.
- Includes inpatient and outpatient data for MHN, MHC, Grandview, PPRH, CHCO in Colorado Springs, as well as any outpatient clinic, urgent care, or freestanding emergency department who sent specimens to Memorial microbiology lab.
- For *S. pneumo* and penicillin for oral administration use the meningitis MIC susceptibility data

Non-Susceptible Isolate Frequencies % (N)	
Pediatric Data (Age <18), All Sources, All regional locations (not just CHCO but Southern Colorado Region)	
N/N → Erta/Mero [often mero same isolate as erta]	
CRE = 0.7% (4)	MRSA = 20.5% (45)
3/0 <i>E. cloacae</i>	VRE = 0% (0)
1/1 <i>E. coli</i>	
CRPA = 2.6% (1)	
CRAsp = 0% (0)	