

### 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:**  
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 (22)                   | 6. <i>E. faecalis</i> (5)         |
| 2/3. <i>E. coli</i> (7)        | 7. MRSA (4)                       |
| <i>Klebsiella</i> spp. (7)     | 8/9. <i>Enterobacter</i> spp. (3) |
| 4/5. <i>S. epidermidis</i> (6) | <i>P. aeruginosa</i> (3)          |
| <i>S. pneumoniae</i> (6)       |                                   |

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uchealth



Southern Colorado Region

**PEDIATRIC** (Age <18)

**Antibiogram**

**February 2024 – December 2024**

**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  February 2024 – December 2024		Ampicillin	Amoxicillin/Clavulanic Acid (Augmentin)	Ampicillin/Sulbactam (Unasyn)	Cefazolin	Cefepime	Ceftriaxone	Ciprofloxacin	Clindamycin	Erythromycin (Use Azithromycin)	Gentamicin ‡	Levofloxacin	Meropenem	Nitrofurantoin	Oxacillin	Piperacillin/Tazobactam (Zosyn)	Tetracycline (Doxycycline shown for Gram Positives)	Tobramycin	Trimethoprim/ Sulfamethoxazole (Bactrim)	Vancomycin	NU = Non-Urine U = Urine All = All Sources	
NU	MSSA (91)				100				76	62	98				100		97		97	100	MSSA (165)	NU
	MRSA (32)		R	R	R	R	R		81	21	90		R		R	R	96		93	100	MRSA (44)	
	All Enterobacteriales (43)		62	37	65	97	95	95			90	84	100			96	74	72	85		All Enterobacteriales (72)	
U	<i>Enterococcus faecalis</i> (33)	100			R	R	R					100		100	R				R	100	<i>Enterococcus faecalis</i> (33)	U
	<i>Escherichia</i> spp. (340)	51	86	58	93	95	95	77			89	90	100	99		98		90	79		<i>Escherichia</i> spp. (340)	
	<i>Klebsiella</i> spp. (46)	R	100	69	100	100	100	91			97	97	100	67		100		97	97		<i>Klebsiella</i> spp. (46)	
	All Enterobacteriales (391)	45	84	57	95	96	95	79			90	91	100	92		98		91	81		All Enterobacteriales (391)	
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> (17; 14 NU, 3 U)				47				75	50	100			100	47		93			100	<i>Staph. epidermidis</i> (; 27 NU, 3 U)	All
	<i>P. aeruginosa</i> (27; 20 NU, 7 U)	R	R	R	R	93	R	77				77	89	R		96	R	92*	R		<i>P. aeruginosa</i> (; 26 NU, 7 U)	
NU	<i>Streptococcus pneumoniae</i> (12)						100		100	77		100					100		87	100	<i>Streptococcus pneumoniae</i> (16)	NU
	<i>S. pneumo.</i> Meningitis MIC						100														<i>S. pneumo.</i> Meningitis MIC	

Organism (# of isolates)      % susceptible      R = Intrinsically resistant.      spp = species

\* = Due to breakpoint limitation % susceptible & intermediate shown for *Pseudomonas aeruginosa* only

‡ = For synergy for gram-positive infections, not appropriate as monotherapy for gram-positives.

#### 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 = 0.48% (2)      MRSA = 25% (32)  
2/0 *Enterobacter* spp.      VRE = 0% (0)  
CRPA = 12% (3)  
CRAsp = 0% (0)