

AdventHealth CFD-South
2023 Cumulative Antimicrobial Susceptibility Report
Children Hospital Inpatient Antibigram 2023

Enterobacterales

	# Isolates	Amoxicillin/ Clavulanic Acid	Piperacillin/ tazobactam	Cefazolin (Urine only)	Ceftriaxone	Cefepime	Meropenem	Ciprofloxacin	Gentamicin	Tobramycin	Trimethoprim/ sulfamethoxazole	Nitrofurantoin (Urine only)	Fosfomycin (ESBL urine only)	Carbapenemase Product. (n=isolates)
MIC Breakpoints (CLSI 2019)		≤ 8	≤ 16	≤ 16	≤ 1	≤ 2	≤ 1	≤ 0.25	≤ 4	≤ 4	≤ 2/38	≤ 32		
<i>Escherichia coli</i> * (ESBL 6%)	201	86	91	90	94	94	100	85	92	86	74	96	87	
<i>Klebsiella pneumoniae</i> * (ESBL 8%)	59	88	88	85	90	90	98	100	100	100	85	19	50	
<i>Enterobacter cloacae</i> complex	24	R	83	R	83	100	100	95	91	86	83	R		
<i>Serratia marcescens</i>	40	R	100	R	80	100	100	82	90	66	100	R		

RED MIC: indicates %S isolates in presence of inducible resistance mechanisms.

* These isolates include ESBL strains

Non-fermenters

	# Isolates	Ampicillin/ sulbactam	Piperacillin/ tazobactam	Ceftazidime	Cefepime	Aztreonam	Meropenem	Ciprofloxacin	Levofloxacin	Gentamicin	Tobramycin	Amikacin	Trimethoprim/ sulfamethoxazole	Minocycline	Ceftolozane/ Tazobactam ¹	Carbapenemase Product. (n=isolates) ²
MIC Breakpoints (CLSI 2019)		≤ 8	≤ 16	≤ 8	≤ 8	≤ 8	≤ 2	≤ 0.5	≤ 2	≤ 4	≤ 4	≤ 16	≤ 2/38	≤ 4	≤ 4	
<i>Pseudomonas aeruginosa</i> * (MDR 3%)	93	R	90	95	89	88	91	89	89	85	89	98	R	R	100	
<i>Stenotrophomonas maltophilia</i> * (MDRO 19%)	48	R	R	R			R		96	R	R		81	100	R	

* These organisms include MDRO strains

- Data gathered from January 1, 2022 to December 31 2022 and presented as percent of susceptible isolates (%S)
- A minimum of 30 organisms are required to be included in this report based on the CLSI guidelines M39 Ed5th. Some organisms were included despite less than 30 organisms were isolated based on its clinical significance.

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Gram-Positive Organisms

	# Isolates	Penicillin	Ampicillin	Oxacillin	Cefazolin	Ceftriaxone	Clindamycin	Tetracycline	Doxycycline	Trimethoprim/ sulfamethoxazole	Nitrofurantoin (Urine only)	Gentamicin (synergy)	Vancomycin	Linezolid	Daptomycin
MIC Breakpoints (CLSI 2019)															
<i>Staphylococcus aureus</i> (MSSA)	96	R	R	S	S	S	81	93	100	92	100		100	100	100
<i>Staphylococcus aureus</i> (MRSA 35%)	51	R	R	R	R	R	74	88	94	88	100		100	100	100
<i>Enterococcus faecalis</i> (VRE 0%)	63	100		R	R	R	R	31	39	R	97	79	100	100	100
<i>Streptococcus pneumoniae</i> * (non-meningitis)	20	70				90		75		40			100	100	
<i>Streptococcus pneumoniae</i> ** (meningitis)	20	50				70									

* Penicillin MIC: <2 & ceftriaxone MIC: <1 **Penicillin MIC: <0.06 & ceftriaxone MIC: <0.5

Antimicrobial Resistance Definitions:

- **MRSA:** *S. aureus* positive to cefoxitin screen OR resistant to oxacillin OR positive for *mecA* or *mecC* gene
- **VRE:** *E. faecium* & *E. faecalis* resistant to vancomycin OR positive for *vanA* or *vanB* gene
- **ESBL:** *E. coli*, *K. pneumoniae*, *K. oxytoca* & *P. mirabilis* intermediate or resistant to ceftriaxone OR ceftazidime OR cefepime
- **CRE:** *Enterobacterales* intermediate or resistant to meropenem
- **CP-CRE:** CRE + a carbapenemase gene detected (i.e., *KPC*, *NDM*, *OXA48*, *VIM*, etc.)
- **MDRO:**
 - *P. aeruginosa*, *A. baumannii* & *A. xylosoxidans*: intermediate or resistant to 1 antimicrobial in at least 3 active tested classes
 - *S. maltophilia*: intermediate or resistant to trimethoprim/sulfamethoxazole
- **DTR:**
 - *P. aeruginosa*: intermediate or resistant to all tested antimicrobials, except aminoglycosides
 - *A. baumannii*: intermediate or resistant to ampicillin/sulbactam + meropenem + 1 more active antimicrobial

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