

# MercyOne Des Moines Medical Center

Microbiology Department  
Antibiotic Susceptibility  
January – December 2024

**Mi**ERCYONE<sup>SM</sup>

Des Moines - Laboratory  
1111 6th Avenue  
Des Moines, IA 50314

**Antimicrobial Stewardship Contact Information:**

**Antimicrobial Stewardship:**

**Infectious Disease Pharmacy Specialist: Office: 643-8697**

**Penicillin Allergy Skin Testing:** Pharmacy provides allergy testing for hospitalized patients with a reported history of penicillin allergy. Consult pharmacy to evaluate if your patient is a candidate. Order in CPOE- "Pharmacy Consult" with order comments "penicillin skin testing". Call the infectious diseases pharmacy specialist with questions about this service.

**Pharmacy & Therapeutics Approved Protocols:**

**Pharmacy has been approved to perform the following**

Renal dosing of antimicrobials

IV to oral Conversion (azithromycin, clindamycin, doxycycline, fluconazole, levofloxacin, linezolid, metronidazole)

Vancomycin pharmacokinetic monitoring and dosing

**This data reflects isolates of cultures from patients of  
MercyOne Des Moines Medical Center and  
MercyOne West Des Moines Medical Center.**

Mercy Medical Center Antibigram Data - January through December 2024

Antibiotic Susceptibility	# Isolates tested	Penicillin	Ampicillin	Amp/Sul	Cefazolin	Ceftriaxone (meningitis)	Ceftriaxone (non-meningitis)	Linezolid	Oxacillin	Vancomycin	Clindamycin	Erythromycin	Tetracycline	Levofloxacin	Trimeth/Sulfa	<sup>(1)</sup> Nitrofurantoin
<b>Gram Positive Cocci</b>		<b>Percentage of Isolates that are Susceptible</b>														
Enterococcus spp. (all) <sup>(2)</sup>	649	76	86					99		88				74		96 (338)
Enterococcus faecalis	106	85	100					100		93				93		100 (19)
Enterococcus faecium	79	11	11					97		19				10		83 (35)
Staphylococcus aureus <sup>(3)</sup> (MRSA)	575			0	0			100	0	100	83	14	88	23	98	100 (34)
Staphylococcus aureus (MSSA)	687			100	100			100	100	100	76	67	91	89	99	100 (59)
Staphylococcus coagulase neg.	145			46	46			99	48	100		38	88	66	63	100 (66)
Streptococcus pneumoniae <sup>(4)</sup>	103	97 <sup>(6)</sup>														
Streptococcus pneumoniae <sup>(5)</sup>	58					78	98			100		45	71	100	69	
Streptococcus agalactiae (GBS) <sup>(7)</sup>	38										40	29				

<sup>(1)</sup>Nitrofurantoin results are only reported on urinary isolates. The number of isolates tested are in parenthesis.

<sup>(2)</sup>Enterococcus (all) reflects data from speciated and unspeciated Enterococci. Enterococci are speciated when isolated from a sterile site, and/or when resistant to Vancomycin.

<sup>(3)</sup>Of the 1262 Staphylococcus aureus isolates tested: 575 were Oxacillin Resistant (46%), and 687 were Oxacillin Sensitive (54%).

<sup>(4)</sup>Of the 103 Strep. pneumoniae isolates reported: 100 were Penicillin Sensitive (97%).

<sup>(5)</sup>Strep. pneumoniae susceptibility testing is performed when a screening test suggests possible Penicillin resistance or if isolated from blood or CSF. Data charted is representative of only 58 of the 103 Strep. pneumo isolates. Results should be used accordingly.

<sup>(6)</sup>Strep. pneumoniae Penicillin susceptibility results are based on parenteral (nonmeningitis) breakpoints.

<sup>(7)</sup>GBS statistics are based on Kirby Bauer results, and include isolates from both inpatient and outreach specimens. Kirby Bauers are performed only on request or on prenatal patients with Penicillin allergies.

Mercy Medical Center Antibiogram Data - January through December 2024

Antibiotic Susceptibility	# Isolates tested	Ampicillin	Amp/Sul	Pip/Tazo	Cefazolin	Cefuroxime	Ceftazidime	Ceftriaxone	Cefepime	Ertapenem	Meropenem	Aztreonam	Gentamicin	Tobramycin	Ciprofloxacin	Levofloxacin	Trimeth/Sulfa	(1) Nitrofurantoin	(3) % ESBL	(4) % CRE	(5) % Total MDR
Gram Negative Rods		Percentage of Isolates that are Susceptible																	% MDR (2)		
Escherichia coli	1718	58	67	99	85	93	92	92	93	99	100	95	92	93	83	87	79	99 (1212)	8.0	0.1	9.4
Enterobacter cloacae	177	0	0	86	0		80	70	95	90	99		98	98	93	97	88	30 (57)		5.1	5.6
Klebsiella (Enterobacter) aerogenes	61	0	0	85	0		77	74	100	97	100		100	100	98	98	97	38 (34)		3.3	3.3
Klebsiella pneumoniae	586	0	82	98	86		89	89	90	99	99		98	97	88	95	89	60 (338)	7.0	0.2	7.3
Klebsiella oxytoca	144	0	77	90	28		91	88	91	100	100		97	98	96	97	94	96 (56)	7.6	0.0	7.6
Citrobacter spp.	116	0	41	98	32		85	77	99	100	100		100	98	95	98	92	87 (63)		0.0	0.0
Proteus mirabilis/penneri	346	72	84	100	76	91	95	94	96	100	100	94	88	90	68	69	71	0 (148)	3.2	0.3	10.7
Morganella morganii	66	0	9	98	0		77	80	100	100	100		89	92	82	80	85	0 (13)		0.0	7.6
Serratia marcescens	111	0	0	87	0		75	71	99	99	100		98	94	97	99	98	0 (21)		0.0	0.9
Pseudomonas aeruginosa	568			91			91		92		95	85		99	86	83					1.9
Stenotrophomonas maltophilia	40						43									93	98				2.5
(1) Nitrofurantoin results are only reported on urinary isolates. The number of isolates tested are in parenthesis.																					
(2) The last three columns reflect percentage of isolates showing a multiple drug resistant strain. (MDR)																					
(3) Reflects percentage of isolates showing Extended Spectrum Beta Lactamase production.																					
(4) Reflects percentage of isolates meeting definition of Carbapenemase Resistant Enterobacteriaceae: An Enterobacteriaceae isolate that is intermediate or resistant to at least one carbapenem, excluding Proteus, Morganella or Providencia resistant only to Imipenem. To determine if the CRE was a CP-CRE (Carbapenemase Producing CRE), mCIM phenotypic testing and PCR testing were performed on all CRE, and PCR tested for markers KPC, OXA, NDM, IMP, VIM. Of the 14 CRE in 2023, none tested positive for CP-CRE.																					
(5) MDR-GNR (Multiple Drug Resistant GNR) is defined as ESBL, CRE, or any other GNR with with resistant or intermediate susceptibility to all agents in 2/3 of the following antibiotic classes: a. Beta-lactams: Penicillins, cephalosporins, and carbapenems, b. Aminoglycosides: Gentamicin and Tobramycin but not Amikacin, c. Fluoroquinolones: Ciprofloxacin and Levofloxacin.																					
Haemophilus influenzae: Of the 90 isolates identified in 2024, 19 were found to be Beta Lactamase positive (21%), and 71 were found to be Beta Lactamase negative (79%).																					
Moraxella catarrhalis: Of the 24 isolates identified in 2024, 24 were found to be Beta Lactamase positive (100%), and none were found to be Beta Lactamase negative (0%).																					

<b>Candida albicans Antibiogram Data 2022-2024</b>		
Antibiotic Susceptibility	# Isolates tested	Fluconazole
Candida albicans	56	91
% susceptible includes both susceptible and susceptible dose dependent.		

## Formulary For Intravenous Anti-Infectives

ANTI-INFECTIVE	Usual Adult Dose(a)
Amikacin	7.5 - 15 mg/kg q12-24h
Amphotericin B	0.5-1 mg/kg
Ampicillin	1-2 Gm q6h
Ampicillin/Sulbactam	1.5-3 Gm q6h
Azithromycin	500 mg daily
Aztreonam	1-2 Gm q8h
Cefazolin	1-2 Gm q8h
Cefepime	1-2 Gm q12h
*Cefiderocol	2 Gm q8h
Cefoxitin	2 Gm q6h
*Ceftaroline	600 mg q12h
Ceftazidime	1-2 Gm q8h
*Ceftazidime/avibactam	2.5 g q8h
*Ceftolozane/Tazobactam	1.5 - 3 g q8h
Ceftriaxone	1-2 Gm daily
Cefuroxime	1.5 Gm q8h
Ciprofloxacin	200 - 400 mg q12h
Clindamycin	600-900 mg q8h
Colistimethate	2.5 mg/kg q12h
*Daptomycin	4-6 mg/kg/day
Doxycycline	100 mg q12h
*Eravacycline	1 mg/kg q12h
*Ertapenem	1 Gm daily
Erythromycin	0.5-1 Gm q6h
Fluconazole	200-400 mg daily
Gentamicin	1 mg/kg q8hrs, or 5-7mg/kg q24
*Imipenem-cilastatin-relabactam	1.25 Gm q6h
*Isavuconazonium sulfate	372 mg q8h x 6 doses, then daily
Levofloxacin	250-750 mg
*Linezolid	600 mg q12h
*Meropenem	1 gm q8hrs
*Meropenem/vaborbactam	4 g q8h
Metronidazole	500 mg q8h
*Micafungin	100-150 mg daily
*Minocycline	100-200mg q12h
Nafcillin	2 g q4h or 12 g continuous infusion
Penicillin G	18-24 MU/day
Piperacillin/Tazobactam	3.375-4.5 Gm q6h
*Tigecycline	100 mg x 1, then 50 mg q12h
Tobramycin	1 mg/kg q8hrs, or 5-7mg/kg q24
Trimethoprim/Sulfamethoxazole	15-20 mg/kg/day
Vancomycin	15 mg/kg/dose
*Voriconazole	6 mg/kg q12h x 2 doses, then 4 mg/kg q12h

(a) may require adjustment in patients with renal or hepatic dysfunction

\*USE RESTRICTED TO ID PHYSICIANS

### Formulary For Oral Anti-Infectives

ANTI-INFECTIVE	Usual Adult Dose
Amoxicillin	250-500 mg q8h
Amoxicillin/Clavulanate	500 - 875 mg q8-12h
Ampicillin	200-500 mg q6h
Azithromycin	250-500 mg daily
Cefdinir	300 mg q12h
Cefuroxime	500 mg q12h
Cephalexin	250-500 mg q6h
Ciprofloxacin	250-750 mg q12h
Clarithromycin	250-500 mg q12h
Clindamycin	150-300 mg q6-8h
Dicloxacillin	250-500 mg q6h
Doxycycline	100 mg daily - q12h
Erythromycin	250-500 mg q6-8h
*Fidaxomicin	200 mg daily
Fluconazole	100-200 mg daily
Fosfomycin	3 g x 1 dose
*Isavuconazonium sulfate	372 mg q8h x 6 doses, then daily
Itraconazole	200 mg daily
Levofloxacin	250-750 mg daily
*Linezolid	600 mg q 12h
Metronidazole	250-500 mg q6-8h
Minocycline	100 mg q12h
Penicillin VK	250-500 mg q6h
**Posaconazole	300mg - 400 mg q12-24h
Tetracycline	250-500 mg q6h
Trimethoprim/Sulfamethoxazole	800-160 mg q12h
Vancomycin	125 mg q 6h
*Voriconazole	200 - 300 mg q12h

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\*\* USE RESTRICTED TO ID AND ONCOLOGY PHYSICIANS