

2018 GRAM-NEGATIVE ANTIBIOGRAM, NORTHERN LIGHT HEALTH*

Microbiology Department, Affiliated Laboratories Inc., 207-973-6980

Percent Susceptible

GRAM-NEGATIVE ORGANISMS 2018 DATA % SUSCEPTIBLE (ISOLATES)	Ampicillin	Ampicillin/Sulbactam	Cefazolin	Cefuroxime	Ceftriaxone	Cefepime	Meropenem	Pip / Tazobactam	Ciprofloxacin	Levofloxacin	Gentamicin	Tobramycin	Trimeth / Sulfa	Aztreonam	Nitrofurantoin
Antibiotic cost ^A	IV: \$\$	IV: \$\$	IV: \$	IV: \$ PO: \$	IV: \$	IV: \$\$	IV: \$\$	IV: \$\$	IV: \$ PO: \$	IV: \$ PO: \$	IV: \$ + MONITORING	IV: \$ + MONITORING	IV: \$\$\$\$ PO: \$	IV: \$\$\$\$\$	PO: \$
<i>Escherichia coli</i> (All) (7364)	67%	72%	93%	92%	94%	97%	100%	99%	86%	86%	95%	96%	85%	‡	
<i>E. coli</i> (Urine) (7141)	67%	72%	94%	92%	95%	97%	100%	99%	86%	86%	95%	96%	84%	‡	98%
<i>E. coli</i> (Non-urine) ^B (223)	62%	68%	69%	87%	88%	95%	100%	98%	82%	82%	92%	91%	81%	‡	
<i>Klebsiella pneumonia</i> (1020)	R ^C	80%	92%	90%	94%	94%	100%	97%	94%	97%	95%	95%	87%	‡	82%
<i>Enterobacter</i> spp. ^D (376)	R	R	R	R	83%	95%	100%	87%	97%	98%	98%	99%	94%	‡	76%
<i>Serratia marcescens</i> (114)	R	R	R	R	96%	96%	99% ^E	96%	96%	98%	99%	97%	99%	‡	R
<i>Proteus mirabilis</i> (518)	85%	94%	89%	98%	99%		99% ^F		73%	80%	97%	98%	85%	‡	R
<i>Citrobacter freundii</i> (213)	R	R	R	R	81%	96%	100%	87%	98%	98%	98%	98%	93%	‡	99%
<i>Acinetobacter</i> spp. ^G (69)	R	96%	R	R	R	100%	100%	87%	100%	100%	86%	91%	96%	‡	
<i>Pseudomonas aeruginosa</i> (non-CF) (473)	R	R	R	R	R	95%	92%	89%	84%	82%	98%	98%	R	84%	R
<i>P. aeruginosa</i> (CF) ^H (30)	R	R	R	R	R	77%	87%	87%	77%		70%	83%	R	73%	R
<i>Haemophilus influenzae</i> (133)	69% ^I														

A: Cost/day of typical IV/PO dose of drug at EMMC: \$ = <\$10; \$\$ = <\$30; \$\$\$ = <\$60; \$\$\$\$ = <\$100; \$\$\$\$\$ = >\$100
 B: Non-urine: blood, aerobic/anaerobic/orthopedic, and respiratory specimens
 C: R = Intrinsic resistance expected
 D: Combined data for *Enterobacter aerogenes* and *Enterobacter cloacae*
 E: 1 isolate resistant to meropenem (non-carbapenemase producer)
 F: 1 isolate tested intermediate to meropenem
 G: Combined data for all *Acinetobacter* species, including *A. baumannii* complex received in 2017 and 2018.
 H: CF = cystic fibrosis patients. Includes flat and mucoid phenotypes
 I: Cefinase disk testing; predicts ampicillin and amoxicillin sensitivity

*All inpatient and outpatient locations associated with EMMC and surrounding area hospitals. Does not include NL Mercy Hospital.
 Blank cell: Insufficient data or no isolates tested against agent

2018 GRAM-POSITIVE AND YEAST ANTIBIOGRAM, NORTHERN LIGHT HEALTH*

Microbiology Department, Affiliated Laboratories Inc., 207-973-6980

Percent Susceptible

GRAM-POSITIVE ORGANISMS 2018 Data % Susceptible (Isolates)	Penicillin	Ampicillin	Oxacillin	Ceftriaxone	Clindamycin	Tetracycline	Levofloxacin	Gentamicin	Vancomycin	Trimeth/ Sulfa	Linezolid	Daptomycin
Antibiotic cost ^A	IV: \$\$ PO: \$	IV: \$\$	IV: \$\$\$\$	IV: \$	IV: \$\$ PO: \$	IV: \$\$ ^B PO: \$	IV: \$ PO: \$	IV: \$ + MONITORING	IV: \$ + MONITORING	IV: \$\$\$\$ PO: \$	IV: \$\$\$\$ PO: \$\$	IV: \$\$\$\$
<i>Staphylococcus aureus</i> (all isolates) (2188)	R ^C	R	65% ^D		78%(1984)	95%	‡	‡	100%	98%	100%	100%
<i>Staphylococcus aureus</i> (MSSA) (1434)	R ^C	R	100%		81%(1294)	95%	‡	‡	100%	98%	100%	100%
<i>Staphylococcus aureus</i> (MRSA) (754)	R ^C	R	0%		74%(690)	96%	‡	‡	100%	97%	100%	100%
<i>Staphylococcus</i> sp.(coagulase neg.) (417) ^E	R	R	53%		56%(144)	87%	‡	‡	100%	64%	100%	100%
<i>Staphylococcus lugdunensis</i> (112)			99%		87% (77)	96%	‡	‡	100%	100%	100%	100%
<i>Enterococcus faecalis</i> (86)		100%	R	R	R		‡	83% ^F	99%	R	100%	100%
<i>Enterococcus faecium</i> (41) ^G		15%	R	R	R		R	100% ^F	22%	R	100%	98%
Viridans group streptococci (107) ^H	89%			99%	82%		96%		100%		100%	100%
<i>Streptococcus pneumoniae</i> (145)	----- ^I			----- ^I	91%	86%	100%	R	100%	82%	100%	
<i>S. pneumoniae</i> , Meningitis (145)	79%			93%								
<i>S. pneumoniae</i> , Non-meningitis (145)	100%			100%								

Yeast (<i>Candida</i> spp.) 2010-2018 Cumulative Data % Susceptible	Fluconazole	Voriconazole	Micafungin
Antibiotic cost:	PO: \$ IV: \$	PO: \$\$\$ IV: \$\$\$\$\$	IV: \$\$\$\$
<i>Candida albicans</i> (201)	95%	95%	99% *
<i>C. glabrata</i> (44)	86% ^J	K	99%
<i>C. parapsilosis</i> (63)	98%	100%	97%

*One isolate tested intermediate to micafungin; the percent susceptible was 99.5%

*All inpatient and outpatient locations associated with EMMC and surrounding area hospitals. Does not include NL Mercy.

Blank cell: Insufficient data or no isolates tested against agent

‡: Not recommended for empiric use; consult Infectious Disease pharmacist before use

A: Cost/day of typical IV/PO dose of drug at EMMC: \$ = <\$10; \$\$ = <\$30; \$\$\$ = <\$60; \$\$\$\$ = <\$100; \$\$\$\$\$ = >\$100

B: Cost data based on doxycycline cost

C: R = Intrinsic resistance expected

D: Methicillin-resistant *Staphylococcus aureus* (MRSA) prevalence at NLH = 35%

E: Includes all coagulase negative staphylococci except *Staphylococcus lugdunensis*

F: High-level gentamicin (synergy)

G: 2017, 2018 Cumulative data

H: Includes alpha streptococci: *S. mitis/oralis*, viridans group, *S. salivarius*, *S. mutans*, *S. anginosus* group, etc.

I: Breakpoints differ for penicillin and ceftriaxone based on diagnosis. Penicillin and ceftriaxone meningitis applies to susceptibility of *S. pneumoniae* for patients with meningitis; penicillin and ceftriaxone non-meningitis applies to susceptibility of *S. pneumoniae* for patients who do not have meningitis.

J: Susceptibility is dose dependent (SDD) for all non-resistant *C. glabrata* isolates tested with fluconazole; dependent on achieving maximal possible drug levels in the blood.

K: Current data are insufficient to demonstrate a correlation between susceptibility testing and clinical outcome for *C. glabrata* and voriconazole.

