



# Lucile Packard Children's Hospital

Stanford Children's Health

## Antibiogram Data from 2022 Isolates

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Values expressed are % susceptible R = intrinsic resistance "-" = data not available

Gram Negative Bacilli		No. of Isolates (a)	Penicillins		Cephalosporins and Lactams					Carbapenems		Aminoglyc's			Others		Urines Only	
			Ampicillin (\$)	Piper/Tazobactam (\$\$)	Cefturoxime (IV) (\$)	Ceftriaxone (\$)	Ceftazidime (\$)	Cefepime (b) (\$)	Aztreonam (\$\$\$)	Ertapenem (\$\$\$)	Meropenem (\$\$)	Amikacin (\$\$\$)	Gentamicin (\$\$\$)	Tobramycin (\$\$\$)	Ciprofloxacin (\$)	Co-trimoxazole (\$\$)	Cefazolin (\$)	Predicts 1st gen cephem
Achromobacter xylosoxidans	15(c,d)	R	93	R	R	73	7	7	R	87	13	13	7	20	73	R	-	
Acinetobacter baumannii complex	23(c,d)	R	A/S 100	R	R	100	100	R	R	100	96	96	96	96	91	R	-	
Citrobacter freundii complex	19(c)	R	90	R	84	84	100 / 0	-	100	95	100	100	95	90	84	R	94	
Enterobacter cloacae complex	42	R	69	R	62	69	82 / 18	85	86	100	100	100	100	98	95	R	74	
Escherichia coli	517	47	97	84	87	93	90 / 3	92	100	100	100	89	87	79	68	83	97	
Klebsiella aerogenes (Enterobacter aerogenes)	31	R	68	R	55	58	88 / 12	62	87	94	100	97	97	97	97	R	33	
Klebsiella oxytoca	41	R	95	100	90	98	100 / 0	93	100	100	100	98	98	98	95	63	96	
Klebsiella pneumoniae	87	R	95	88	90	93	94 / 0	100	99	99	99	93	93	87	83	87	23	
Morganella morganii	14(c,d)	R	93	R	79	79	-	-	100	100	100	100	100	93	100	R	R	
Proteus mirabilis	53	89	100	83	100	100	100 / 0	-	100	100	100	100	100	98	87	96	R	
Pseudomonas aeruginosa	155	R	99	C/T	100	99	97	87	R	92	98	90	98	87	R	R	R	
Pseudomonas aeruginosa (CF-mucoid) (e)	18(c)	R	94	C/T	89	94	94	78	Imp 78	89	89	-	94	94	R	R	R	
Pseudomonas aeruginosa (CF-non-mucoid) (e)	43	R	98	C/T	100	95	98	86	Imp 86	86	95	-	95	81	R	R	R	
Salmonella spp.	17(c)	94	-	R	94	-	-	-	-	-	R	R	R	82	88	R	-	
Serratia marcescens	32	R	100	R	94	100	100 / 0	100	100	100	97	97	94	94	100	R	R	
Stenotrophomonas maltophilia	46	R	R	R	R	-	-	R	R	R	R	R	Levo 91	100		R	-	

- (a) First isolate from each patient was included.
- (b) Shows susceptible / susceptible dose dependent. Not routinely tested on urine and blood Enterobacterales isolates.
- (c) Data from isolate totals <30 may be statistically unreliable.
- (d) Includes isolates from 2021.
- (e) Cystic fibrosis patient isolates tested by disk diffusion.

A/S= Ampicillin/ Sulbactam; C/T= Ceftolozane/ Tazobactam;  
 Imp= Imipenem; Levo= Levofloxacin

Values expressed are % susceptible R = intrinsic resistance "-" = data not available"

### Gram Positive Cocci

	Number of Isolates (a)	Beta-Lactams							Others										
		Oxacillin/Nafcillin (\$\$)		Penicillin or Ampicillin (\$)		1st Generation cephem (\$)		Cefuroxime (\$)	Ceftriaxone (\$)	Meropenem (\$\$\$)	Levofloxacin (\$\$)	Ciprofloxacin - urine (\$)	Clindamycin (b) (\$)	Erythromycin (\$\$\$)	Nitrofurantoin - urine (\$\$\$)	Co-trimoxazole (\$)	Vancomycin (\$\$\$)	Tetracycline (\$\$)	Linezolid (\$\$\$)
		%S	%I	%R															
Staphylococcus aureus	490	84	(c)	-	-	84	-	-	-	-	-	77	65	-	100	100	-	-	
MRSA only	76	0	0	-	-	0	-	-	-	-	-	61	28	-	100	100	96	100	
Staphylococcus lugdunensis	6(d,e)	83	(c)	-	-	83	-	-	-	-	-	50	50	-	100	100	-	-	
Staphylococcus sp., Coagulase-negative	36	39	(c)	-	-	39	-	-	-	-	-	47	22	-	69	100	-	-	
Enterococcus faecium	22(d)	-	41	-	59	R	R	R	-	-	23	R	-	54	R	86	-	91	
Enterococcus faecalis	22(d)	-	96	-	4	R	R	R	-	-	-	R	-	-	R	100	-	-	
Streptococcus group B	65	-	100	0	0	-	-	-	-	-	-	50	-	-	-	-	-	-	
Viridans group Streptococci	37	-	73	16	11	-	-	92	-	87	-	92	64	-	-	100	-	-	
Streptococcus pneumoniae	24(d)	-	62(f)	-	38	-	77	92(g)	77	-	-	85	71	-	83	100	Doxycycline	80	

**Drug cost:** Please choose the appropriate antibiotic based on best spectrum of coverage and lowest cost. Costs are reflective of 1 day of therapy based on adult dosing and include drug levels and reformulations.

\$ = \$0-20  
 \$\$ = \$20-50  
 \$\$\$ = \$50-100  
 \$\$\$\$ = >\$100

(a) First isolate from each patient was included. (b) Testing for inducible clindamycin resistance performed on all Staphylococci, group B Strep, and S. pneumoniae. (c) Sensitivity confirmed by request. (d) Data from isolate totals <30 may be statistically unreliable. (e) Includes isolates from 2021. (f) Based on meningitis interpretive criteria (more conservative). Nonmeningitis interpretation is 100%. (g) Ceftriaxone uses the meningitis interpretive criteria (more conservative).

### Candida

Percent Susceptible By Broth Microdilution (YeastOne, Trek Diagnostics)	No. Tested	Amphotericin B (a) (\$\$\$)	Fluconazole (b) (\$)	Voriconazole (\$\$\$\$)	Caspofungin (c) (\$\$\$)
Candida albicans	18(d,e)	100	94 / 0	94	94
Candida glabrata	9(d,e)	100	0 / 89	-	89
Candida parapsilosis	8(d,e)	100	100 / 0	100	100
Other Candida species	5(d,e)	100	(f)	60	80

### Haemophilus influenzae

For infections with beta-lactamase producing H. influenzae: cefuroxime, ceftriaxone, trimethoprim/sulfamethoxazole, amoxicillin/clavulanate, or azithromycin is recommended. Ceftriaxone is drug of choice for CNS infections. At LPCH, 79% (23/29) of H. influenzae are ampicillin susceptible.

(a) Suggested Ampho Resistant breakpoint MIC > or = 2 mcg/ml. (b) Shows susceptible / susceptible dose dependent. (c) Consult Peds ID if Caspofungin being considered for treatment. (d) Data from isolate totals <30 may be statistically unreliable. (e) Includes isolates from 2021. (f) Species other than C. krusei are 100% susceptible; C. krusei is intrinsically resistant to fluconazole.