Stanford MEDICINE Children's Health

Lucile Packard Children's Hospital Stanford

Antibiogram Data from 2023 Isolates

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

Gram Negative Rods	No. of Isolates (a)	Penicillins		Cephalosporins and Lactams					Carbapenems		Aminoglyc's			Others		Urines Only	
		Ampicillin ($)	Pipe/Tazobactam ($$)	Cefuroxime (IV) ($)	Ceftriaxone ($)	Ceftazidime ($)	Cefepime (b) ($)	Aztreonam ($$$)	Ertapenem ($$$)	Meropenem ($$)	Amikacin ($$$)	Gentamicin ($$$)	Tobramycin ($$$)	Ciprofloxacin ($)	Trimethoprim-sulfa ($)	Cefazolin (f) ($) Predicts 1st gen cephem	Nitrofurantoin (f) ($$$)
Achromobacter xylosoxidans	21(c,d)	R	86	R	R	62	0	0	R	95	14	5	10	14	95	R	-
Acinetobacter baumannii complex	16(c,d)	R	-	R	R	94	88	R	R	94	94	88	88	88	94	R	-
Citrobacter freundii complex	21(c,d)	R	75	R	67	67	-	-	100	95	100	100	95	95	86	R	94
Enterobacter cloacae complex	61	R	59	R	49	54	71 / 21	68	74	98	100	96	96	93	91	R	48
Escherichia coli	293	43	94	82	82	90	82 / 0	82	99	99	99	88	88	76	70	75	97
Klebsiella aerogenes (Enterobacter aerogenes)	20(c)	R	87	R	87	87	86 / 0	100	100	100	100	100	100	95	100	R	14
Klebsiella oxytoca	36	R	77	57	78	100	86 / 10	71	100	100	100	100	97	94	92	29	92
Klebsiella pneumoniae	80	R	90	79	94	95	90 / 0	90	98	98	100	95	94	90	79	84	22
Morganella morganii	9(c,d)	R	-	R	89	78	100 / 0	-	100	100	100	78	100	56	100	R	R
Proteus mirabilis	33(c)	81	100	-	94	100	-	-	100	100	100	88	91	81	88	94	R
Pseudomonas aeruginosa	124	R	94	C/T 99		95	94	85	R	93	100(f)	-	100	85	R	R	R
Pseudomonas aeruginosa (CF-mucoid) (e)	13(c)	R	92	C/T 92		92	85	69	Imp 77	85	-	-	100	62	R	R	R
Pseudomonas aeruginosa (CF-non-mucoid) (e)	31	R	94	C/T 97		94	97	84	Imp 97	97	-	-	100	84	R	R	R
Salmonella spp.	22(c,d)	86	-	R	91	-	-	-	-	-	R	R	R	68	86	R	-
Serratia marcescens	30	R	100	R	97	97	100 / 0	100	100	100	100	100	100	93	97	R	R
Stenotrophomonas maltophilia	40	R	R	R	R	-	-	R	R	R	R	R	Levo 93		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 2022.
(e) Cystic fibrosis patient isolates tested by disk diffusion.
(f) Urine only.

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

Gram Positive Cocci

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

	Number of Isolates (a)	Beta-Lactams								Others								
		Oxacillin/Nafcillin ($$)	Penicillin or Ampicillin ($)			1st Generation cephem ($)	Cefuroxime ($)	Ceftriaxone ($)	Meropenem ($$$)	Levofloxacin ($$)	Ciprofloxacin (h) ($)	Clindamycin (b) ($)	Erythromycin ($$$)	Nitrofurantoin (h) ($$$)	Trimethoprim-sulfa ($)	Vancomycin ($$$)	Tetracycline ($$)	Linezolid ($$$$)
			%S	%I	%R													
Staphylococcus aureus	435	89	(c)	-	-	89	-	-	-	-	-	82	70	-	100	100	-	-
MRSA only	49	0	0	-	-	0	-	-	-	-	-	69	35	-	100	100	94	100
Staphylococcus lugdunensis	6(d,e)	100	(c)	-	-	100	-	-	-	-	-	67	67	-	100	100	-	-
Staphylococcus spp., Coagulase-negative	54	33	(c)	-	-	33	-	-	-	-	-	61	37	-	67	100	-	-
Enterococcus faecium	14(d)	-	43	-	57	R	R	R	-	-	71	R	-	43	R	93	-	93
Enterococcus faecalis	24(d)	-	100	-	0	R	R	R	-	-	-	R	-	-	R	100	-	-
Streptococcus group B	30	-	100	0	0	-	-	-	-	-	-	43	-	-	-	-	-	-
Viridans group Streptococci	30	-	63	30	7	-	-	93	-	97	-	89	43	-	-	100	-	-
Streptococcus pneumoniae	23(d)	-	74(f)	-	26	-	81	96(g)	83	-	-	93	65	-	83	100	Doxycycline 67	

(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) Penicillin sensitivity confirmed by request. (d) Data from isolate totals <30 may be statistically unreliable. (e) Includes isolates from 2022. (f) Based on meningitis interpretive criteria (more conservative). Nonmeningitis interpretation is 100%. (g) Ceftriaxone uses the meningitis interpretive criteria (more conservative). (h) Urine only.

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

Candida

Percent Susceptible By Broth Microdilution (YeastOne, Trek Diagnostics)	No. Tested	Amphotericin B (a) ($$$$)	Fluconazole (b) ($)	Voriconazole ($$$$)	Caspofungin (c) ($$$)
Candida albicans	16(d,e)	100	100/0	100	94
Candida glabrata	7(d,e)	100	0/86	-	100
Candida parapsilosis	13(d,e)	100	100/0	100	100
Other Candida species	6(d,e)	100	(f)	67	100

(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 2022. (f) Species other than C. krusei are 100% susceptible; C. krusei is intrinsically resistant to fluconazole.

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, 65% (n=52) of H. influenzae are ampicillin susceptible.