2019 Antibiogram (Data from 2018) for the University of Washington and Harborview Medical Centers

Organism (% susceptible)	Maximum # of isolates tested		Cefazolin [e]		Ceftriaxone		Clindamycin		Erythromycin		Levofloxacin [d]		Moxifloxacin		Nitrofurantoin [b]		Oxacillin [c,e]		Penicillin		Tetracycline		Trimeth/sulfa		Vancomycin	
	H	U	H	U	H	U	H	U	H	U	H	U	H	U	H	U	H	U	H	U	H	U	H	U	H	U
MSSA [e]	980	918	100	100			83	69	65	57	90	89	90	90	100	100	100	100			94	95	97	97	100	100
MRSA (HMC 50%, UWMC 33%)	982	442	0	0			60	44	9	12	12	14	12	14	100	100	0	0			85	85	78	88	100	100
Coagulase-negative *Staphylococcus*	283	251					58	57	3	0	69	40	68	39			45	29			83	85	59	55	100	100
Staphylococcus lugdunensis	32						91		0		97		97				97				94		94		100	
Streptococcus pneumoniae [a]	100	35					90	85	74	65	100	100	100	100											100	100
***without* meningitis**					98	97													96	100						
***with* meningitis**					90	91													62	63						
***Streptococcus pyogenes* (Beta-hemolytic Strep Group A)**	206				100		64[f]		64				100[g]						100						100	

Blank cells = insufficient data or drug is not tested. H = HMC; U = UWMC; MSSA, methicillin-susceptible *S. aureus;* MRSA, methicillin-resistant *S. aureus.*

[a] Penicillin or ceftriaxone may still be effective in patients with pneumonia (without meningitis) caused by *S. pneumoniae* with intermediate susceptiblity.

[b] Indicated for urinary tract infections only.

[c] Molecular testing for *mecA* is required for coagulase-negative *Staphylococcus* isolates to be reported as methicillin-susceptible.

[d] Current susceptibility methods may fail to detect single-step mutations conferring low-level levofloxacin resistance.

[e] Cefazolin and Oxacillin (or nafcillin) possess superior potency *in vitro* compared to other beta-lactams and have been associated with better outcomes in patients with MSSA bacteremia.

[f] At HMC 32% of *Streptococcus pyogenes* (Group A) exhibited inducible clindamycin resistance.

[g] No CLSI breakpoints are available for moxifloxacin, therefore 2019 EUCAST breakpoints for Streptococcus Group A (≤0.50 µg/mL susceptible and >0.50 µg/mL resistant) were used to determine % susceptible.

Organism (% susceptible)	Maximum # of isolates tested		Ampicillin		Daptomycin [b]		Levofloxacin [a]		Linezolid [b]		Nitrofurantoin [a]		Penicillin		Tetracycline		Vancomycin	
	H	U	H	U	H	U	H	U	H	U	H	U	H	U	H	U	H	U
Enterococcus faecalis	548	473	99	100			90	82			99	99	98	99	23	24	99	100
Enterococcus faecium	70	133	34	14	91	94	14	11	94	87	52	51	29	12		22	51	46

Blank cells = insufficient data or drug was not tested. H = HMC; U = UWMC.

[a] Indicated for urinary tract infections only.

[b] Daptomycin and linezolid are tested against VRE only.

Organism (% susceptible)	Maximum # of isolates tested		Amikacin		Ampicillin		Amp/sulbactam		Aztreonam		Cefazolin		Cefepime [a]		Ceftazidime		Ceftriaxone		Ciprofloxacin [a]		Doxycycline [i]		Ertapenem		Gentamicin		Imipenem		Levofloxacin [a]		Meropenem		Minocycline		Moxifloxacin [g]		Nitrofurantoin [c]		Pip/tazo [a]		Tobramycin [j]		Trimeth/sulfa	
	H	U	H	U	H	U	H	U	H	U	H	U	H	U	H	U	H	U	H	U	H	U	H	U	H	U	H	U	H	U	H	U	H	U	H	U	H	U	H	U	H	U
Acinetobacter baumannii/calcoaceticus complex [h]	68	48	96	83			91						96	79	87	81			88	74			0	0	90	77	94	81	90	77	93	79	94	90					76	64	99	83		
Citrobacter freundii complex [b]	54	84			0	0	63	57	80	79	0	0	98	100	78	76	78	73	96	92		63	100	99	94	96			96	96	100	100			84	77		93	94	89			81	67
Enterobacter cloacae complex [b]	215	205			0	0			83	75	0	0	99	99	82	75	82	74	94	97	79	79	96	91	100	99			97	97	100	100			78	92	82	62	87	82			86	86
Escherichia coli	1575	1792	98	98	47	48	58	58	89	88	67	64	96	95	92	90	86	83	71	65	73	71	100	99	91	88			71	65	100	99			70	67	98	97	97	97	31	26	68	66
Haemophilus influenzae [f]		62				62												98												100						100								63
Klebsiella aerogenes [b]	66	83			0	0			55	70	0	0	97	100	65	69	64	66	95	98		95	98	98	100	98			95	100	100	100				100		85	74	72			94	100
Klebsiella oxytoca (or *Raoultella* sp)[k]	90	164			0	0	43	56	92	88	21	29	100	99	100	96	92	88	91	95	88	95	100	100	99	95			94	98	100	100			85	87	94	100	89	89			92	84
Klebsiella pneumoniae	350	429		82	0	0	78	71	86	87	78	75	95	96	87	88	85	87	87	85	81	69	99	98	94	92			92	90	99	98			86	82	89	88	96	94		9	85	74
Morganella morganii [b]	54	47			0	0	31	40	93	98	0	0	100	100	80	85	81	89	74	94			100	100	80	96			76	100	100	100			56	76			94	98			76	89
Proteus mirabilis	268	145			76	86	91	97	100	100	10	8	100	100	99	100	94	99	72	80	0	0	100	100	92	93			80	89	100	100			67	69	0	0	100	100			72	72
Pseudomonas aeruginosa (non-CF)	363	532	99	98									89	89	89	89			81	76					98	95	75	69	81	79	88	86							85	85	98	96		
Pseudomonas aeruginosa (CF) [d]		1014		53						60				56		64				47		12		45		45		40		40		64		21						65		71		64
Serratia marcescens [b]	90	96			0	0	1	0	99	96	0	0	100	97	99	97	97	91	97	100	35		100	98	99	97			97	96	100	99			74		0		100	99			99	97
Stenotrophomonas maltophilia (non-CF)	38	90													18	53											0	0		65			100	99	78	71							95	91
Stenotrophomonas maltophilia (CF) [e]		134		10						2						21						69		4		25		0		31		4		88						0		20		53

Blank cells = insufficient data or drug was not tested; H = HMC; U = UWMC; CF = isolates from patients with cystic fibrosis.

[a] NOTE: Some organism/antibiotic combinations may exhibit dose-dependent susceptibility (e.g. cefepime, piperacillin-tazobactam, and fluoroquinolones). Current CLSI interpretive breakpoints are not reflective of full susceptibility at all antibiotic dosages and therefore may not predict clinical efficacy. In these cases, the MIC should be used to guide appropriate therapy. See http://web.labmed.washington.edu/tests/micro/antibiotics for more information.

[b] *Citrobacter freundii*, *Enterobacter* spp., *Hafnia alvei*, *Klebsiella aerogenes*, *Morganella* spp., *Providencia* spp., and *Serratia* spp. have an inducible beta-lactamase. Resistance to penicillins and 3rd generation cephalosporins may arise on therapy.

[c] Indicated for urinary tract infections only.

[d] At UWMC 97% of CF *Pseudomonas aeruginosa* isolates were susceptible to colistin, 96% susceptible to polymyxin B.

[e] At UWMC 60% of CF *Stenotrophomonas maltophilia* isolates were susceptible to colistin, 66% susceptible to polymyxin B, 94% susceptible to tigecycline.

[f] At HMC 23% (n=126) of *H. influenzae* were beta-lactamase positive; at UWMC 28% (n=134) were beta-lactamase positive. At UWMC 95% of isolates were susceptible to amoxicillin-clavulanate, 92% susceptible to cefuroxime, 94% susceptible to azithromycin, and 97% susceptible to chloramphenicol.

[g] No CLSI breakpoints are available for moxifloxacin, therefore 2019 EUCAST breakpoints for Enterobacteriaceae (≤0.50 µg/mL susceptible and >0.5 µg/mL resistant) were used to determine % susceptible.

[h] Tigecycline was tested against *Acinetobacter baumannii/calcoaceticus* complex with 82% of HMC isolates and 21% of UWMC isolates exhibiting an MIC of ≤0.25mg/ml.

[i] Doxycycline is tested for urinary isolates only.

[j] Tobramycin is reported when Enterobacteriaceae are resistant to gentamicin.

[k] *Klebsiella oxytoca* and *Raoultella* sp are not differentiated at the UWMC.

2019 Antibiogram (Data from 2018) for the University of Washington and Harborview Medical Centers

Organism (% susceptible)	Maximum # of isolates tested		Amoxicillin/ clavulanate		Ceftriaxone		Clindamycin		Erythromycin		Metronidazole		Levofloxacin [c]		Meropenem		Moxifloxacin		Penicillin		Vancomycin	
	H	U	H	U	H	U	H	U	H	U	H	U	H	U	H	U	H	U	H	U	H	U
Streptococcus agalactiae (Group B)	67	32			100	100	56[d]		43					94			97[a]		100	100	100	100
Streptococcus milleri group	122	83			99	100	68[d]	82	66	78				100			100[b]	100[b]	100	95	100	100
Cutiebacterium acnes (previous Propionibacterium acnes) [e]	31	61	100	100	100	100	100	88			0	0			100	100	100	98	100	100		

Blank cells = insufficient data or drug is not tested. H = HMC; U = UWMC.

[a] No CLSI breakpoints are available for moxifloxacin, therefore EUCAST breakpoints for Streptococcus Groups A, B, C, and G (≤0.50 µg/mL susceptible and ≥1.0 µg/mL resistant) were used to determine % susceptible.

[b] Currently there are no existing breakpoints for moxifloxacin. However, a provisional susceptible breakpoint of ≤1.0 µg/mL has been suggested for S. pneumoniae and could be considered applicable to viridans group streptococci (Andrews, et al. 1999, PMID 10590284).

[c] Current susceptibility methods may fail to detect single-step mutations conferring low-level levofloxacin resistance.

[d] At HMC 5% of *Streptococcus agalactiae* (Group B) exhibited inducible clindamycin resistance, and 0% of *Streptococcus milleri group* exhibited inducible clindamycin resistance.

[e] An insufficient number of isolates were tested at the HMC and UWMC in 2018 to be statistically significant. Additional 2017 data were included in this analysis.

Organism (% susceptible)	Maximum # of isolates tested		Amphotericin B		Fluconazole		Micafungin		Voriconazole	
	H	U	H	U	H	U	H	U	H	U
Candida albicans	64	72	100	100	91	94	100	100	90	97
Candida glabrata [a]	34	40	90	93			100	100		

Blank cells = insufficient data or drug was not tested. H = HMC; U = UWMC.

[a] An insufficient number of isolates were tested at the HMC in 2018 to be statistically significant. Additional 2017 data were included in this analysis.