

2015 Antibiogram for the University of Washington and Harborview Medical Centers

Organism (% susceptible)	Maximum # of isolates tested		Cefazolin <sup>e</sup>		Ceftriaxone		Clindamycin		Erythromycin		Levofloxacin <sup>f</sup>		Moxifloxacin		Nitrofurantoin <sup>d</sup>		Oxacillin <sup>e</sup>		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 <sup>h</sup>	1078	1036	100	100			83	71	67	61	91	87	91	88	100	97	100	100			94	94	97	97	100 <sup>g</sup>	100 <sup>g</sup>
MRSA (HMC 44%, UWMC 31%)	845	472	0	0			58	43	11	12	15	14	15	14	95	100	0	0			92	92	83	89	100 <sup>g</sup>	99 <sup>g</sup>
Coagulase-negative <i>Staphylococcus</i>	255	174					59	62	33	42	58	43	59	42			35	36			81	88	51	47	100	100
<i>Streptococcus pneumoniae</i> <sup>a, i</sup>	115	33			b	b	95	79	76	76	100	94	100	97					c	c					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*.

<sup>a</sup> Penicillin or ceftriaxone may still be effective in patients with pneumonia (without meningitis) caused by *S. pneumoniae* with intermediate susceptibility.

<sup>b</sup> *S. pneumoniae* vs ceftriaxone (w/out meningitis) : 100% susceptible at HMC; 100% susceptible at UWMC.

*S. pneumoniae* vs ceftriaxone (w/ meningitis) : 90% susceptible and 10% intermediate at HMC ; 94% susceptible and 6% intermediate at UWMC.

<sup>c</sup> *S. pneumoniae* vs penicillin (w/out meningitis) : 100% susceptible at HMC; 94% susceptible, 3% intermediate, and 3% resistant at UWMC.

*S. pneumoniae* vs penicillin (w/ meningitis) : 62% susceptible and 38% resistant at HMC ; 65% susceptible and 35% resistant at UWMC.

<sup>d</sup> Indicated in urinary tract infections only.

<sup>e</sup> Molecular testing for *mecA* is required for coagulase-negative *Staphylococcus* isolates to be reported as methicillin-susceptible.

<sup>f</sup> Current susceptibility methods may fail to detect single-step mutations conferring low-level levofloxacin resistance.

<sup>g</sup> Less than 1% of *S. aureus* isolates were intermediate to vancomycin (VISA). At UWMC n=3; at HMC n=0.

<sup>h</sup> Oxacillin, nafcillin, and cefazolin possess superior potency *in vitro* compared to other beta-lactams and have been associated with better outcomes in patients with MSSA bacteremia.

<sup>i</sup> An insufficient number of isolates were speciated at the UWMC in 2015 to be statistically significant. Additional 2014 data were included in this analysis.

Organism (% susceptible)	Maximum # of isolates tested		Ampicillin		Daptomycin <sup>b</sup>		Doxycycline <sup>b</sup>		Erythromycin		High-level gentamicin		High-level streptomycin		Levofloxacin <sup>a</sup>		Linezolid <sup>b</sup>		Nitrofurantoin <sup>a</sup>		Synercid <sup>b</sup>		Penicillin		Tetracycline		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	H	U
<i>Enterococcus faecalis</i>	534	452	99	100					17	15	78	74	81	77	81	82			100	99			100	100	20	22	98	99
<i>Enterococcus faecium</i>	86	141	19	21	98	85	39	51	8	8	92	92	82	83	11	7	96	90	27	49	100	99	20	19	26	10	31	43

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

<sup>a</sup> Indicated in urinary tract infections only.

<sup>b</sup> Daptomycin, doxycycline, linezolid, and synercid are tested against VRE only.

2015 Antibiogram for the University of Washington and Harborview Medical Centers

Organism (% susceptible)	Maximum # of isolates tested		Amikacin		Ampicillin		Amp/sulbactam		Aztreonam		Cefazolin		Cefepime <sup>a</sup>		Cefotetan		Ceftazidime		Ceftriaxone		Ciprofloxacin <sup>a</sup>		Doxycycline		Ertapenem		Gentamicin		Imipenem		Levofloxacin <sup>a</sup>		Meropenem		Minocycline		Moxifloxacin <sup>g</sup>		Nitrofurantoin <sup>c</sup>		Pip/tazo <sup>a</sup>		Tobramycin		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	H	U				
<i>Acinetobacter baumannii/calcoaceticus</i> complex <sup>h</sup>	104	38	82	95		59					73	81			67	95			69	91			0	0	75	82	79	95	70	91	76	92	76	94			52	82	81	87								
<i>Citrobacter freundii</i> complex <sup>b</sup>	63	71			0	0	71	71	83	81	0	0	100	97			79	80	79	79	97	89	83	76	100	100	95	93			97	96	100	100			87	81	93	96	89	97			89	74		
<i>Enterobacter aerogenes</i> <sup>b</sup>	56	48			0	0	30	48	88	88	0	0	100	100	84	79	86	85	84	83	95	100		97	98	100	96	100			95	100	98	100			100		77	88	88			96	94			
<i>Enterobacter cloacae</i> complex <sup>b</sup>	211	144			0	0	36	31	84	65	0	0	99	98	74	60	83	65	83	62	96	96	94	88	98	85	98	94			97	98	99	100			90	95	90	65	87	80			91	87		
<i>Escherichia coli</i>	1376	1466			49	46	61	57	92	85	70	63	98	94	99	98	93	87	88	81	69	65	69	66	100	99	90	84			69	65	100	100			69	67	98	97	98	97			68	62		
<i>Haemophilus influenzae</i> <sup>f</sup>		68				66														100										93														54				
<i>Klebsiella oxytoca</i>	136	113			0	0	59	64	96	96	27	26	100	100	100	100	99	98	96	96	93	96	80	95	100	100	99	96			94	98	100	100			85	93	90	97	93	94			97	88		
<i>Klebsiella pneumoniae</i>	348	422			0	0	84	80	93	89	86	80	99	94	100	98	93	88	92	87	93	83	78	77	100	97	95	89			94	88	100	98			87	81	92	85	98	95			85	76		
<i>Morganella morganii</i> <sup>b</sup>	58	38			0	0	29	29	93	87	0	0	100	100	98	87	84	68	86	87	78	71	0	0	100	100	79	95			79	74	100	100			53		0	0	90	89			55	74		
<i>Proteus mirabilis</i>	237	154			72	73	90	92	100	100	13	8	100	100	100	100	100	100	97	99	63	77	0	0	100	100	85	86			72	79	100	100			57	62	0	0	100	100			60	69		
<i>Pseudomonas aeruginosa</i> (non-CF)	349	502	99	99									93	85			92	87			81	74					97	92	83	77	80	72	84	82					88	78	98	95						
<i>Pseudomonas aeruginosa</i> (CF) <sup>e</sup>		922		63					64				51				68				41					49	46			37		64		17						64		77						
<i>Serratia marcescens</i> <sup>b</sup>	87	73			0	0	10	14	99	97	0	0	100	100	99	99	100	100	94	97	91	97					98	99	100	100			94	99	99	100			75		0		100	100			97	100
<i>Stenotrophomonas maltophilia</i> (non-CF)	57	102															30	10										0	0		67			100	99	73	73							100	95			
<i>Stenotrophomonas maltophilia</i> (CF) <sup>d</sup>		120															16												0		31				89										72			

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

<sup>a</sup> 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.

<sup>b</sup> *Citrobacter freundii*, *Enterobacter* spp., *Hafnia alvei*, *Morganella* spp., *Providencia* spp., and *Serratia* spp. have an inducible beta-lactamase. Resistance to penicillins and 3rd generation cephalosporins may arise on therapy.

<sup>c</sup> Indicated in urinary tract infections only.

<sup>d</sup> Chloramphenicol was tested at UWMC with 27% of CF *S. maltophilia* isolates susceptible.

<sup>e</sup> Colistin was tested at UWMC with 91% of CF *P. aeruginosa* isolates susceptible.

<sup>f</sup> At HMC 24% (n=151) of *H. influenzae* were beta-lactamase positive; at UWMC 32% (n=66) were beta-lactamase positive. At UWMC 100% of isolates were susceptible to amoxicillin-clavulanate, 97% susceptible to cefuroxime, 98% susceptible to azithromycin, and 99% susceptible to chloramphenicol.

<sup>g</sup> No CLSI breakpoints are available for moxifloxacin, therefore EUCAST breakpoints for Enterobacteriaceae (≤0.50 µg/mL susceptible and ≥2.0 µg/mL resistant) were used to determine % susceptible.

<sup>h</sup> Tigecycline was tested against *Acinetobacter baumannii/calcoaceticus* complex with 77% of HMC isolates and 91% of UWMC isolates exhibiting an MIC of ≤0.25mg/ml.