Combined VTHH and VBCH Antimicrobial Susceptibility Summary: 2025

Clinical Microbiology
Department of Pathology, Microbiology and Immunology

Preface

This booklet contains up-to-date information to assist in decisions concerning antimicrobial therapy.

Tables summarize susceptibility data obtained for organisms isolated in the VUMC Clinical Microbiology Laboratory between January 1, 2025 – December 31, 2025.

Guidelines for Interpretation of Minimum Inhibitory Concentrations (MICs)

MICs are interpreted as susceptible, intermediate, resistant, non-susceptible or susceptible dose dependent according to Clinical and Laboratory Standards Institute (CLSI) guidelines. When deciding whether the interpretation is meaningful, one should consider the antimicrobial pharmacokinetics, taking into account dosage and route of administration, the infecting organism and site of infection, and previous clinical experience.

For additional information, please call the microbiology laboratory, or the Antimicrobial Stewardship team.

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VASP Website:
https://medsites.vumc.org/antimicrobial-stewardship-program

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Table 1. Most Common Gram-negative Bacteria, Urine Isolates, % Susceptible

Data represent first isolate per patient.

Organism	N	Ampicillin	Ampicillin/Sulbactam	Cefazolin*	Cefepime	Ceftazidime	Ceftriaxone	Cefuroxime axetil	Ciprofloxacin	Ertapenem	Gentamicin	Levofloxacin	Meropenem	Nitrofurantoin	Piperacillin/Tazobactam	Trimethoprim/Sulfamethoxazole
Klebsiella aerogenes	33	36	79	6	94	85	82	79	97	97	100	94	100	12	76	100
Enterobacter cloacae	57	14	52	7	82	63	57	20	80	89	88	80	98	39	63	82
Escherichia coli	1499	53	80	85	90	88	88	82	72	100	93	74	100	97	94	75
Klebsiella oxytoca	35	6	83	37	97	94	83	83	91	100	97	97	100	83	89	94
Klebsiella pneumoniae	402	3	86	86	89	87	87	82	78	100	94	79	100	16	87	82
Proteus mirabilis	163	71	0	77	88	85	77	100	65	100	100		65	0	100	90
Pseudomonas aeruginosa	99				94	94			81		94	76	90		89	

*Oral cephalosporins include: cefaclor, cefdinir, cefpodoxime, cefprozil, cefuroxime, cephalexin, and loracarbef for treatment of uncomplicated urinary tract infections.

ⓘ Empiric guidance for the treatment of urinary tract infections, including pyelonephritis, can be found on the VASP website at https://www.vumc.org/vasp/52609. Antibiotics should be narrowed once susceptibilities are known.

Table 2. Most Common Gram-negative Bacteria, Non-Urine Isolates, % Susceptible

Data represent first isolate per patient.

Organism	N	Ampicillin	Ampicillin/Sulbactam*	Cefazolin	Cefepime	Ceftazidime	Ceftriaxone	Cefuroxime axetil	Ciprofloxacin	Ertapenem	Gentamicin	Levofloxacin	Meropenem	Piperacillin/Tazobactam	Trimethoprim/Sulfamethoxazole
Enterobacter cloacae	39	R	R	R	95	85	85	33	90	100	92	90	100	85	90
Escherichia coli	167	52	79	59	89	88	86	78	72	99	90	76	100	88	78
Klebsiella pneumoniae	72	R	86	81	92	88	88	86	75	100	92	75	100	88	79
Proteus mirabilis	61	67	89	5	87	90	77	79	66	100	90	64	98	100	64
Pseudomonas aeruginosa	98	R	R	R	93	96	R	R	91	R	99	91	95	90	R

R, intrinsic resistance

Table 3. Adults – *Staphylococcus aureus*, % Susceptible

Data represent first isolate per patient.

Organism	N	Clindamycin	Daptomycin	Doxycycline	Linezolid	Levofloxacin	Nitrofurantoin	Oxacillin	Trimethoprim/sulfamethoxazole*	Vancomycin
Staphylococcus aureus	404	83	100	90	100	60	100	51	84	100
MSSA	211	94	100	97	100	89	100	100	95	100
MRSA	202	69	100	81	100	29	100	0	73	100

ⓘ Isolation of *S. aureus* in the urine should be followed by a blood culture to confirm the patient is not bacteremic
S. aureus bacteremia or suspected invasive infection should be treated with IV antibiotics in conjunction with ID consultation

Table 4. Adults – *Enterococcus* spp., % Susceptible

Data represent first isolate per patient.

	N	Ampicillin	Daptomycin	Doxycycline	Linezolid	Levofloxacin	Nitrofurantoin	Vancomycin
Enterococcus faecalis	424	100	72	24	99	80	100	98
Enterococcus faecium	55	24	ND	26	96	15	49	52

ND, not tested

ⓘ Drugs of choice for *E. faecalis* include ampicillin in the absence of severe penicillin allergy.