

4.2 Cumulative Antibiograms (2023)

4.2.1 United Arab Emirates (National Cumulative Antibiogram)

Table 4.2.1.1 National Cumulative Antibiogram (2023): Percent susceptible isolates (%S^a) – Gram-neg. bacteria (isolates from all sources, N=113,400)

Gram-negative Bacteria	Isolates N	β-Lactams											Aminoglycosides			FQ	Other		
		Penicillins			Cephalosporins				Carbapenems				AMK	GEN	TOB	CIP	ATM	SXT	NIT ^b
		AMP	AMC	TZP	CZO	CXM	CTX	CAZ	FEP	IPM	MEM	ETP	AMK	GEN	TOB	CIP	ATM	SXT	NIT ^b
Gram-negative bacteria (all)	113,400	-	69	87	-	-	69	-	81	91	96	95	82	88	84	59	57	70	66 ^b
<i>Haemophilus influenzae</i> ^c	3,413	48	85	-	-	79	-	-	-	-	-	-	-	-	-	91	-	46	-
<i>Moraxella (Branh.) catarrhalis</i> ^d	343	-	91	-	-	76	-	-	-	-	-	-	-	-	-	88	-	52	-
Enterobacterales	87,946	28	72	88	57	-	70	-	80	92	98	96	80	88	82	54	71	70	-
<i>Citrobacter koseri (diversus)</i>	2,237	R	94	93	93	55/79 ⁱ	93	-	97	98	99	98	84	98	92	88	94	97	76 ^b
<i>Enterobacter cloacae</i>	2,388	R	R	87	R	36/51 ⁱ	81	-	91	92	97	93	76	95	91	71	76	87	41 ^b
<i>Enterobacter aerogenes (K. aer.)</i>	2,263	R	R	81	R	R	75	-	94	77	97	96	81	96	89	82	47	94	20 ^b
<i>Escherichia coli</i> ^e	51,511	36	77	92	56	58/60 ⁱ	64	-	78	98	99	98	81	89	84	45	74	61	96 ^b
<i>Klebsiella pneumoniae</i>	19,869	R	80	84	23	67/69 ⁱ	73	-	83	94	95	94	82	91	83	64	69	79	28 ^b
<i>Klebsiella oxytoca</i>	1,019	R	82	92	21	81/83 ⁱ	88	-	93	94	97	95	78	95	90	75	-	88	75 ^b
<i>Morganella morganii</i>	953	R	R	97	R	R	66	-	95	15	96	97	84	84	76	44	92	64	R
<i>Proteus mirabilis</i>	2,484	61	76	97	22	82/84 ⁱ	82	-	87	23	93	96	76	71	73	55	73	60	R
<i>Proteus vulgaris</i>	69	R	75 ^f	100	R	R	83 ^f	-	97	6	86	92 ^f	74	94	-	65	-	86	R
<i>Providencia</i> spp.	298	R	R	93	R	-	92	-	95	44	91	88	89	74	78	66	-	88	R
<i>Salmonella</i> spp. (non-typhoid)	1,616	81	99	99	-	-	97	-	99	-	-	-	-	-	-	46 ^g	-	96	-
<i>Salmonella</i> Typhi/Paratyphi	162	53	85	85	-	25/40 ^h	56	-	93	-	-	-	-	-	-	9	-	66	-
<i>Serratia marcescens</i>	2,081	R	R	85	R	R	90	-	97	76	97	96	87	96	74	80	77	98	R
<i>Shigella</i> spp.	108	19	90	90	-	-	53	-	95	-	-	-	-	-	-	34	-	40	-
Non-fermenting Gram-neg. rods	14,655	R	R	84	-	-	-	87	90	83	85	R	97	91	91	84	61	70	-
<i>Acinetobacter baumannii</i>	2,270	R	R	78	-	-	-	84	85	90	89	R	92	89	86	84	R	90	-
<i>Pseudomonas aeruginosa</i>	11,981	R	R	84	-	R	R	87	91	83	85	R	97	92	92	85	63	R	R
<i>Stenotrophomonas maltophilia</i> ^h	1,240	R	R	R	-	-	R	33	-	R	R	R	R	R	R	-	R	79	-

^a The %S for each organism/antimicrobial combination was generated by including the first isolate only of that organism encountered on a given patient during the reporting period (de-duplicated data). ^b NIT: Nitrofurantoin data from urine isolates only. ^c *H. influenzae*: disc diffusion data (KB): LVX 95 %S, CRO 81 %S, AZM: 88 %S, CLR 96 %S. ^d *M. catarrhalis*: CLR: no data, ERY 83 %S, AZM: 87 %S, LVX 89 %S, TCY 56 %S. ^e *E. coli* (urinary tract isolates): FOS 99 %S. ^f A small number of isolates were tested (N<30), and the percentage susceptible should be interpreted with caution. ^g Ciprofloxacin results for *Salmonella* spp. (non-typhoid) refer to extra-intestinal (non-stool) isolates only. ^h *S. maltophilia*: MNO 54 %S, TCC 67 %S. ⁱ Cefuroxime: oral/parenteral breakpoints.

AMC=Amoxicillin/Clavulanic acid, **AMK**=Amikacin, **AMP**=Ampicillin, **ATM**=Aztreonam, **AZM**=Azithromycin, **CAZ**=Ceftazidime, **CIP**=Ciprofloxacin, **CLR**=Clarithromycin, **CRO**=Ceftriaxone, **CTX**=Cefotaxime, **CXM**=Cefuroxime, **CZO**=Cefazolin, **ETP**=Ertapenem, **ERY**=Erythromycin, **FEP**=Cefepime, **FOS**=Fosfomicin, **GEN**=Gentamicin, **IPM**=Imipenem, **LVX**=Levofloxacin, **MEM**=Meropenem, **MNO**=Minocycline, **NIT**=Nitrofurantoin, **SXT**=Trimethoprim/Sulfamethoxazole, **TCC**=Ticarcillin/Clavulanic acid, **TCY**=Tetracycline, **TOB**=Tobramycin, **TZP**=Piperacillin/Tazobactam.

%S=Percent of isolates susceptible, FQ=Fluoroquinolones, MIC=Minimal inhibitory concentration data only, unless mentioned otherwise (usually derived by antibiotic susceptibility testing platforms), except for *H. influenzae* and *M. catarrhalis* (disc diffusion data), N=Number, spp.=species, R=intrinsically resistant, (-) =No data available, small number of isolates tested (N<30), antimicrobial agent is not indicated, or not effective clinically. Interpretation standard: CLSI M100 ED34:2024. Presentation standard: CLSI M39-A5:2024. Data analysis: WHONET 2024.

Data source: United Arab Emirates Antimicrobial Resistance Surveillance System. Data shown is from 273 surveillance sites from public and private sector (United Arab Emirates), including 84 hospitals and 189 ambulatory healthcare facilities. Version 1.0 (November 2023)

Table 4.2.1.2 National Cumulative Antibigram (2023): Percent susceptible isolates (%S^a) – Gram-pos. bacteria (isolates from all sources, N=77,924)

Gram-positive Bacteria	Isolates	β-Lactams						Macrolides		Aminoglycosides			FQ		Glycopept.		Other					
	N	AMP	PEN	AMC	OXA	CRO	CTX	ERY	CLI	GEN	GEH	STH	LVX	MFX	VAN	TEC	SXT	NIT ^b	LNZ	TCY	RIF	QDA
Gram-positive organisms (all)	77,924	-	-	-	-	-	-	47	76	-	-	-	75	57	99	99	66	98	99	-	-	-
<i>Enterococcus</i> spp.	7,237	93	-	-	-	R	R	-	R	R	40	73	72	83	98	99	R	90	97	-	-	-
<i>Enterococcus faecalis</i>	6,063	100	-	-	-	R	R	-	R	R	46	78	75	82	99	99	R	99	97	-	-	R
<i>Enterococcus faecium</i>	610	32	-	-	-	R	R	-	R	R	61	68	32	75 ^j	88	91	R	22	94	-	-	85
<i>Staphylococcus aureus</i> ^k	24,251	-	-	62 ^c	62	-	-	64	87	89	-	-	66	68	100	100	80	100	100	87	100	87
MSSA ^k	11,123	-	-	100	100	-	-	68	90	96	-	-	75	76	100	100	83	100	100	91	100	89
MRSA ^k	6,097	-	-	-	-	-	-	56	81	76	-	-	50	52	99	99	74	99	100	79	99	80
<i>Staphylococcus</i> , coagulase-neg. (SCN)	9,526	-	-	34 ^c	34	-	-	32	64	78	-	-	67	63	99	95	82	98	99	81	93	92
<i>Staphylococcus epidermidis</i>	2,553	-	-	21 ^c	26	-	-	27	57	68	-	-	53	52	99	90	71	98	100	79	94	95
<i>Staphylococcus saprophyticus</i> ^g	1,496	-	-	44 ^c	38	-	-	35	78	99	-	-	98	95	100	100	94	99	99	93	99	94
<i>Staphylococcus lugdunensis</i>	341	-	-	70 ^c	70	-	-	77	83	92	-	-	95	92	100	100	100	100	100	94	100	94
<i>Streptococcus pneumoniae</i>	3,764	-	94 ^d	-	-	97 ^e	96 ^e	36	65	-	-	-	91	94	100	100	59	-	100	48	100	99
<i>Streptococcus pyogenes</i> ^h	13,717	95 ^f	95	-	-	97	97	50	84	-	-	-	90	-	100	100	-	-	100	79	-	-
<i>Streptococcus agalactiae</i> ⁱ	7,003	98	98	-	-	98	99	37	49	-	-	-	88	-	99	98	-	96	100	14	-	99
<i>Streptococcus</i> spp. (viridans group)	1,550	-	71	-	-	89	90	34	82	-	-	-	89	-	98	-	-	-	98	45	-	-

^a The %S for each organism/antimicrobial combination was generated by including the first isolate only of that organism encountered on a given patient during the reporting period (de-duplicated data). ^b NIT: Nitrofurantoin data from testing urine isolates only. ^c Extrapolated, based on Oxacillin. ^d Data shown is based on non-meningitis breakpoints for Pen G. Pen G (meningitis breakpoints/oral breakpoints): 62 %S. ^e CRO/CTX: Data shown is based on non-meningitis breakpoints. ^f Extrapolated, based on Penicillin G. ^g includes *ss bovis* and *ss saprophyticus*. ^h includes *Streptococcus*, beta-haemolytic group A (GAS). ⁱ includes *Streptococcus*, group B (GBS). Excludes GBS isolates from vagina. ^j A small number of isolates were tested (N<30), and the percentage susceptible should be interpreted with caution. ^k *S. aureus*: excludes isolates from axilla, nose, groin, perineum, and umbilicus.

AMP=Ampicillin, AMC=Amoxicillin/Clavulanic acid, CLI=Clindamycin, CRO=Ceftriaxone, CTX=Cefotaxime, ERY=Erythromycin, GEH=Gentamicin, high-level, GEN=Gentamicin, LNZ=Linezolid, LVX=Levofloxacin, MFX=Moxifloxacin, NIT=Nitrofurantoin, OXA=Oxacillin, PEN=Penicillin G, QDA=Quinupristin/Dalfopristin, RIF=Rifampin, STH=Streptomycin, high-level, SXT=Trimethoprim/Sulfamethoxazole, TEC=Teicoplanin, TCY=Tetracycline, VAN=Vancomycin.

%S=Percent of isolates susceptible, FQ=Fluoroquinolones, GAS=Group A streptococci, GBS=Group B streptococci, Glycopept.=Glycopeptides, MIC=Minimal inhibitory concentration data only, unless mentioned otherwise (usually derived by antibiotic susceptibility testing platforms), MRSA=Oxacillin-resistant *S. aureus*, MSSA=Oxacillin-susceptible *S. aureus*, N=Number, spp.=species, R=intrinsically resistant, (-) =No data available, or small number of isolates tested (N<30), or antimicrobial agent is not indicated or not effective clinically. Interpretation standard: CLSI M100 ED34:2024. Presentation standard: CLSI M39-A5:2024. Data analysis: WHONET 2024.

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