



**Aga Khan University Hospital Clinical Laboratory
Microbiology**

**ANTIBIOTIC SUSCEPTIBILITY REPORT
Jan-Dec 2020**

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AKUH INPATIENTS. PRECENT SENSITIVE (number of isolates tested) Jan-Dec 2020															
Organism	AMK	AMP	AMC	ATM	CFM	CIP	CRO	CT*	CXM	GEN	IPM	MEM	SXT	TZP	NIT↑
<i>E.coli</i>	96 (2021)	6 (2017)	36 (2050)	29 (1157)	16(1963)	25(2024)	20 (2021)	0 (310)	11(1145)	73 (2028)	81 (1269)	82 (1301)	32 (2031)	64(2037)	76 (1339)
<i>Enterobacter</i> spp	88 (154)	-	-	49 (114)	33 (142)	55 (154)	47 (153)	0 (31)	12 (109)	75 (154)	79(121)	78(125)	63 (153)	73 (152)	36 (39)
<i>Klebsiella</i> spp	80 (937)	-	42 (948)	39 (656)	30 (868)	42 (952)	35 (941)	0 (272)	21 (659)	69 (940)	69 (720)	70 (773)	45 (944)	66 (937)	40 (329)
<i>Serratia</i> spp	61 (87)	-	-	55 (74)	39 (80)	49 (84)	46 (83)	-	-	52 (86)	60 (73)	58 (79)	56 (85)	52 (75)	-
<i>Proteus mirabilis</i>	71 (144)	26 (76)	65 (113)	78 (68)	47 (104)	53 (112)	59 (113)	-	34 (76)	62 (113)	-	99 (77)	22 (112)	96 (113)	-
	AMK	ATM	CAZ	CIP	CT*	GEN	LEV	IMP	MEM	SXT	TET	MINO	TIG	TZP	TOB
<i>Acinetobacter</i> spp	28 (489)	-	13 (434)	15 (467)	0 (405)	30 (503)	-	14 (455)	14 (461)	26 (488)	18 (276)	85 (118)	14 (395)	15 (464)	57 (262)
<i>P. aeruginosa</i>	90 (850)	65 (865)	84(864)	81 (865)	0 (120)	86 (861)	-	78 (871)	79 (875)	-	-	-	-	82 (871)	90 (407)
<i>S.maltophilia</i>	-	-	50 (60)	-	-	-	91(224)	-	-	98 (221)	-	98 (216)	-	-	-
<i>B. cepacia</i>	-	-	70 (76)	-	-	-	40 (65)	-	54 (74)	91 (74)	-	-	-	-	-
	AMP	CLR	CLI	ERY	FD	CIP/LEV	LNZ	TET	SXT	PEN	OX	VAN			
<i>Enterococcus</i> spp	48 (754)	87 (327)	-	-	-	15 (433)	99 (358)	26 (667)	-	-	-	78 (751)			
<i>S. aureus</i>	-	97 (433)	78 (805)	46 (805)	74 (807)	37 (827)	100 (368)	64 (799)	75 (845)	0 (1219)	37 (846)	100 (610)			
CONS	-	88(1271)	57 (1371)	14 (1371)	-	42 (1399)	-	63(1300)	40 (1422)	0 (574)	21 (946)	100 (742)			
AKUH OUTPATIENTS. PRECENT SENSITIVE (number of isolates tested) Jan-Dec 2020															
Organism	AMK	AMP	AMC	ATM	CFM	CIP	CRO	CT*	CXM	GEN	IPM	MEM	SXT	TZP	NIT↑
<i>E.coli</i>	97 (16180)	7 (5939)	48 (16188)	35 (5810)	26(16027)	32(16166)	30(16185)	0 (1137)	18(5786)	73(16188)	85 (6527)	86 (6611)	35(16168)	78(16142)	80 (14677)
<i>Enterobacter</i> spp	86 (818)	-	-	41 (447)	33 (787)	57 (803)	50 (818)	0 (196)	7 (436)	68 (818)	66 (475)	66 (503)	59 (805)	62 (458)	37 (403)
<i>Klebsiella</i> spp	80 (4413)	-	53(4391)	42(1956)	43 (4252)	55 (4387)	47 (4408)	0 (974)	28 (1930)	72 (4414)	63 (2308)	63 (2409)	59 (4391)	63 (2080)	40 (3124)
<i>Serratia</i> spp	42 (616)	-	-	24 (499)	23 (585)	29 (605)	28 (607)	-	-	30 (615)	32 (507)	34 (534)	48 (610)	30 (517)	-
<i>Proteus mirabilis</i>	86 (852)	22 (467)	68 (850)	72 (423)	47 (803)	43 (844)	51 (850)	-	36 (418)	62 (853)	-	99 (486)	56 (848)	95 (846)	-
	AMK	ATM	CAZ	CIP	CT*	GEN	LEV	IMP	MEM	SXT	TET	MINO	TIG	TZP	TOB
<i>Acinetobacter</i> spp	52 (1546)	-	34(1287)	37(1499)	0 (865)	52 (1550)	-	41 (1363)	41 (1421)	43(1547)	32(701)	71 (34)	22 (551)	41 (1453)	70 (388)
<i>P. aeruginosa</i>	83 (4439)	64(4286)	81(4435)	67 (4438)	0 (691)	77 (4452)	-	82(4434)	81(4442)	-	-	-	-	82 (4439)	81(2064)
<i>S.maltophilia</i>	-	-	42(55)	-	-	-	88 (294)	-	-	94 (297)	-	96 (285)	-	-	-
<i>B. cepacia</i>	-	-	83 (797)	-	-	-	33 (672)	-	57 (798)	88 (800)	-	59 (147)	-	-	-
	AMP	CLR	CLI	ERY	FD	CIP/LEV	LNZ	TET	SXT	PEN	OX	VAN			
<i>Enterococcus</i> spp	75 (3499)	80 (828)	-	-	-	16 (2673)	99 (736)	28	-	-	-	94 (3497)			
<i>S. aureus</i>	-	96 (1092)	79 (4454)	40 (4459)	79 (4451)	31 (4693)	100 (1984)	65(4633)	79 (4745)	0 (4843)	36 (4981)	100(3423)			
CONS	-	91 (4928)	62 (5462)	15 (5466)	-	42 (5734)	-	54(5342)	36 (5806)	0 (2515)	22 (3902)	100(2836)			

*Current susceptibility testing guidelines suggest no 'sensitive' category for colistin. Isolates are either intermediate or resistant. Percent resistance rates for colistin are: *Acinetobacter* INP 8.6, OUT 2; *E.coli* INP 1 OUT 2; *Klebsiella* spp INP 18, OUT 10; *Enterobacter* spp INP 19 OUT15; and 0 for *P.aeruginosa* in 2020. ↑Reported for urinary isolates only

AKUH ALL PATIENTS. PRECENT SENSITIVE (number of isolates tested) Jan-Dec 2020

Organism	AMP	ATM	AZM	CAZ	CFM	CIP	CLR	CRO	CXM	ERY	MEM/IPM	SXT	TET
<i>Campylobacter jejuni/ coli</i>	-	-	-	-	-	6 (285)	-	-	-	95 (285)	-	-	69 (285)
<i>Salmonella Paratyphi A</i>	98 (497)	-	-	-	100 (497)	<1 (497)	99 (493)	100 (497)	-	-	-	100 (497)	-
<i>Salmonella Typhi</i>	15 (3348)	-	100 (3314)	-	24 (3348)	0 (3348)	18 (3340)	24 (3348)	-	-	100 (3330)	18 (3348)	-
<i>Shigella spp</i>	23 (107)	-	-	-	52 (107)	49 (108)	88 (107)	54 (107)	-	-	100 (49)	18 (107)	-
<i>Vibrio cholerae</i>	Insufficient isolate number for cumulative susceptibility analysis												
	AMP	AMC	CIP	CFM	CLR	CRO	CXM	ERY	SXT	TET	PEN	AZM	
<i>Haemophilus influenzae</i>	87 (307)	93 (307)	63 (306)	-	92 (306)	99 (307)	93 (306)	-	26 (306)	84 (303)	-	-	
<i>Moraxella catarrhalis</i>	-	96 (105)	54 (106)	-	92 (106)	98 (106)	0 (105)	71 (105)	51 (106)	85 (105)	-	-	
<i>Neisseria gonorrhoeae</i>	-	-	0 (37)	100 (40)	-	100 (40)	-	-	-	30 (40)	9 (39)	100 (37)	
	CLI	CLR	ERY	CXM	LEV/OFX	CRO	PEN	SXT	TET	VAN			
<i>Streptococcus pyogenes (GAS)</i>	56 (396)	83 (396)	58 (395)	-	90 (397)	100 (396)	100 (395)	-	-	100 (396)			
<i>Streptococcus agalactiae (GBS)</i>	59 (738)	89 (753)	57 (738)	-	64 (1433)	100 (1429)	100 (1429)	-	-	100 (1430)			
<i>Streptococcus pneumoniae</i>	76 (175)	93 (183)	50 (175)	87 (147)	95 (162)	100 (185)	46 (179)	18 (167)	34 (171)	100 (185)			
	MTZ	AMC											
<i>Bacteroides spp</i>	56 (158)	87 (154)											
<i>Clostridium spp</i>	76 (36)	100 (37)											
	INH	RIF	PZA	ETHM	LEV	MOX	BDQ	CFZ	LNZ				
<i>Mycobacterium tuberculosis</i>	86 (822)	92 (822)	92 (822)	91 (822)	82 (822)	82 (50)	96 (50)	96 (50)	96 (50)				
	AMC	AMK	CLA	IPM	CIP	SXT	MOX						
<i>Nocardia spp</i>	18 (67)	100 (66)	14 (66)	18 (66)	12 (66)	91 (67)	34 (69)						
	FLU	VOR	CAS										
<i>Candida albicans</i>	100 (287)	100 (287)	100 (275)										
	FLU	VOR	CAS										
<i>Non-albicans Candida spp</i>	90 (480)	91 (456)	99 (528)										

☒ = Susceptibility data includes meningitic and non- meningitic isolates. Penicillin susceptibility suggests susceptibility to amoxicillin and ampicillin for treatment of pneumonia cases, as well as to Penicillin G f or treatment of meningitis.

Note: Susceptibility profiles are derived from all specimens received by the Clinical Microbiology Laboratory. Antibiotic susceptibilities of bacteria recovered from specific wards or populations may differ.

Abbreviations: AMK – Amikacin; AMP – Ampicillin; ATM – Aztreonam; AMC – Amoxicillin/ Clavulanate; AZM – Azithromycin; BDQ – Bedaquiline; CAS – Caspofungin; CAZ – Ceftazidime; CFM – Cefixime; CFZ – Clofazimine; CIP – Ciprofloxacin; CLI – Clindamycin; CLA – Clarithromycin; CLR – Chloramphenicol; CONS – Coagulase negative staphylococci; CRO – Ceftriaxone; CXM – Cefuroxime; CT – Colistin; ERY – Erythromycin; ETHM – Ethambutol; FLUC – Fluconazole; INH – Isoniazid; FD – Fusidic acid; GEN – Gentamicin; IPM – Imipenem; LEV – Levofloxacin; LNZ – Linezolid; MOX – Moxifloxacin; MTZ – Metronidazole; MEM – Meropenem; MINO – Minocycline; NIT – Nitrofurantoin; OX – Oxacillin; OFX – Ofloxacin; PEN – Penicillin; PZA – Pyrazinamide; RIF – Rifampicin; SXT – Co-trimoxazole; TET – Tetracycline; TIG – Tigecycline; TZP – Piperacillin/Tazobactam; TOB – Tobramycin; VAN – Vancomycin; VOR – Voriconazole