

PERCENTAGE OF SUSCEPTIBLE OF MOST COMMON ORGANISMS, ISOLATED FROM ALL SPECIMENS, KHON KAEN HOSPITAL (JANUARY-DECEMBER 2018)

PERCENTAGE OF SUSCEPTIBLE (JANUARY-DECEMBER 2018)		TOTAL OF ISOLATES	AMINOGLYCOSIDE		BETA - LACTAM						CARBAPENEM			POLY MYXINS		QUINOLONE			GLYCO PEPTIDES	MISCELLANEOUS								
			Gentamicin	Aminikacin	Penicillin	Ampicillin	Amoxicillin/Cla	Cefazolin	Cefotaxime	Cefazidime	Cefoperazone/Su	Piperacil/Tazob	Oxacillin	Merpopenem	Doripenem	Ertapenem	Imipenem	Colistin ^b	Ciprofloxacin	Norfloxacin	Levofloxacin	Sofloxacin	Vancamycin ^b	Trimetho/Sulf.	Chloramphenico	Tetracycline	Tigecycline	Erythromycin
<i>Escherichia coli</i> (all isolates); MDR 30.7 % , CRE 5.5%	1984	58 (1981)	98 (1968)	-	14 (161)	67 (1977)	38 (1880)	44 (1977)	56 (1937)	88 (1949)	90	-	95 (1970)	95 (1965)	94 (1939)	95 (1970)	96 (157)	43 (1976)	28 (573)	48 (157)	89 (1881)	-	38 (1977)	-	-	99 (156)	-	-
ICU (MDR 29.6 % , CRE 8.0 %)	312	59 (312)	96 (309)	-	-	60 (312)	31 (300)	37 (312)	49 (307)	82 (307)	85	-	91 (310)	91 (309)	90 (305)	91 (310)	-	36 (311)	24 (88)	-	84 (301)	-	37 (311)	-	-	-	-	-
Non-ICU (MDR 30.9 % , CRE 4.9 %)	1751	59 (1709)	99 (1698)	-	16 (140)	68 (1704)	39 (1616)	45 (1704)	57 (1669)	89 (1680)	91	-	95 (1698)	95 (1695)	95 (1672)	95 (1699)	96 (136)	45 (1704)	29 (494)	50 (136)	90 (1615)	-	37 (1705)	-	-	99 (135)	-	-
Out-patient (MDR 17.9 % , CRE 1.2 %)	84	63 (60)	97 (59)	-	-	73 (60)	60 (60)	62 (60)	72 (59)	93 (59)	95	-	98 (59)	98 (59)	98 (59)	98 (59)	-	42 (60)	-	-	90 (60)	-	38 (60)	-	-	-	-	
<i>Acinetobacter baumannii</i> (all isolates); MDR 78.1% , CoRo 1.3%	1527	31 (1520)	44 (1497)	-	R	R	R	10 (1523)	19 (1523)	40 (1470)	24	-	25 (1518)	16 (1518)	R	18 (219)	91 (219)	23 (226)	24 (1522)	94 (1406)	-	31 (1519)	R	-	-	-	-	-
ICU (MDR 84.1% , CoRo 0.3%)	524	26 (521)	34 (515)	-	R	R	R	6 (523)	13 (523)	31 (503)	16	-	17 (524)	17 (76)	R	18 (76)	90 (79)	16 (523)	93 (483)	-	26 (521)	R	-	-	-	-	-	
Non-ICU (MDR 75.4 % , CoRo 1.3 %)	1091	33 (1086)	47 (1070)	-	R	R	R	11 (1088)	20 (1088)	42 (1053)	26	-	26 (1082)	15 (157)	R	17 (157)	93 (161)	25 (1087)	94 (1005)	-	32 (1086)	R	-	-	-	-	-	
Out-patient (MDR 60 %) ^E	17	40 (10)	50 (10)	-	R	R	R	30 (10)	40 (10)	50 (10)	40	-	40 (10)	-	R	-	-	40 (10)	33 (9)	100 (9)	40 (10)	R	-	-	-	-	-	
<i>Klebsiella pneumoniae</i> (all isolates); MDR 39.8 % , CRE 23.0%	1392	80 (1390)	92 (1368)	-	R	56 (1349)	45 (1302)	49 (1387)	52 (1357)	66 (1376)	69	-	78 (1383)	78 (1372)	76 (1367)	78 (1378)	90 (106)	56 (1376)	32 (147)	62 (110)	82 (1329)	-	50 (1386)	-	-	97 (105)	-	-
ICU (MDR 53.4% , CRE 33.8%)	338	73 (338)	89 (328)	-	R	45 (328)	35 (327)	37 (336)	39 (330)	53 (335)	59	-	71 (335)	71 (332)	68 (332)	70 (332)	70 (337)	46	-	78 (327)	-	42 (335)	-	-	-	-	-	
Non-ICU (MDR 34.3% , CRE 19.2%)	1087	82 (1059)	92 (1046)	-	R	58 (1026)	48 (1018)	52 (1058)	55 (1038)	69 (1048)	71	-	80 (1055)	80 (1047)	80 (1041)	80 (1053)	89 (56)	59 (1058)	32 (118)	63 (57)	82 (1013)	-	52 (1058)	-	-	98 (56)	-	-
Out-patient (MDR 10.5 % , CRE 5.2 %)	45	95 (19)	95 (19)	-	R	84 (19)	67 (18)	74 (19)	84 (19)	90 (19)	90	-	95 (19)	100 (18)	100 (18)	100 (18)	-	79 (19)	-	-	84 (19)	-	58 (19)	-	-	-	-	
<i>Pseudomonas aeruginosa</i> (all isolates); MDR 15.0%	910	85 (907)	90 (896)	-	R	R	R	78 (907)	78 (890)	82 (897)	-	80 (897)	48 (33)	R	30 (33)	100 (36)	83 (907)	-	42 (33)	88 (867)	-	R	R	R	-	-	-	
ICU (MDR 20.0 %)	220	81 (219)	88 (216)	-	R	R	R	75 (218)	70 (216)	76 (216)	-	71 (216)	-	-	-	-	-	79 (219)	-	-	85 (209)	-	R	-	-	-	-	
Non-ICU (MDR 13.9%)	726	86 (724)	91 (716)	-	R	R	R	78 (725)	79 (710)	83 (717)	-	81 (715)	-	-	-	-	-	84 (724)	-	-	89 (692)	-	R	-	-	-	-	
Enterobacter cloacae (all isolates); MDR 9.0 % , CRE 10.1%	385	76 (384)	92 (377)	-	R	R	R	59 (385)	65 (385)	82 (373)	83	-	91 (380)	90 (379)	89 (375)	89 (378)	-	78 (384)	-	-	92 (366)	-	78 (383)	-	-	-	-	
ICU (MDR 13.6% , CRE 26.1%)	88	51 (87)	76 (84)	-	R	R	R	38 (88)	42 (88)	63 (82)	63	-	74 (85)	73 (83)	71 (85)	74 (84)	-	57 (87)	-	-	77 (78)	-	67 (87)	-	-	-	-	
Non-ICU (MDR 7.9 % , CRE 5.6 %)	302	82 (302)	96 (298)	-	R	R	R	65 (302)	71 (302)	87 (296)	88	-	95 (300)	94 (300)	94 (295)	94 (299)	-	83 (302)	-	-	96 (292)	-	81 (301)	-	-	-	-	
<i>Proteus mirabilis</i> (all isolates); MDR 1.4 % , CRE 1.4 %	313	85 (313)	100 (309)	-	-	82 (304)	43 (310)	79 (312)	91 (308)	97 (308)	99	-	98 (308)	98 (301)	99 (306)	93 (302)	R	84 (313)	74 (42)	-	98 (305)	-	62 (312)	-	R	R	-	
<i>Stenotrophomonas maltophilia</i>	211	R	R	-	R	R	-	R	-	R	-	R	R	R	R	R	-	-	97 (207)	-	-	93 (211)	-	-	-	-	-	
<i>Burkholderia pseudomallei</i>	174	-	-	-	-	99 (173)	-	-	100 (172)	-	-	-	-	-	-	-	-	-	-	-	-	99 (171)	-	99 (170)	-	-	-	-
<i>Haemophilus influenzae</i>	108	-	-	-	-	94 (108)	-	94 (104)	-	-	-	-	-	-	-	-	100 (108)	-	-	-	-	50 (108)	93 (107)	63 (108)	-	-	-	-
<i>Salmonella species</i>	99	-	-	-	-	90 (42)	-	98 (45)	100 (45)	95 (43)	98	-	100 (45)	100 (44)	100 (44)	100 (44)	-	68 (38)	-	-	100 (43)	-	98 (48)	-	-	-	-	
<i>Morganella morganii</i>	79	85 (79)	94 (78)	-	R	R	R	76 (79)	84 (79)	87 (78)	95	-	96 (78)	95 (77)	96 (77)	94 (77)	R	78 (79)	-	-	94 (77)	-	67 (79)	-	R	R	-	
<i>Citrobacter freundii</i>	78	90 (78)	92 (77)	-	R	R	R	79 (78)	81 (78)	91 (77)	91	-	92 (78)	92 (77)	92 (78)	91 (78)	R	82 (78)	-	-	90 (77)	-	74 (78)	-	-	-	-	
<i>Acinetobacter lwoffii</i>	75	72 (75)	90 (72)	-	-	79 (62)	-	59 (74)	69 (74)	86 (72)	79	-	77 (73)	78 (73)	78 (73)	78 (73)	R	80 (75)	-	-	97 (71)	-	51 (74)	-	-	-	-	
<i>Aeromonas hydrophila/caviae</i>	64	100 (34)	100 (34)	-	-	24 (34)	-	79 (34)	85 (34)	97 (34)	97	-	76 (33)	-	-	-	-	94 (34)	-	-	100 (33)	-	88 (34)	-	-	-	-	
<i>Pseudomonas species</i>	62	55 (62)	60 (62)	-	-	53 (45)	-	32 (53)	53 (62)	61 (62)	63	-	63 (62)	-	-	-	-	56 (62)	-	-	71 (62)	-	53 (53)	-	-	-	-	
<i>Enterobacter aerogenes</i>	59	90 (59)	100 (59)	-	R	R	R	73 (59)	76 (59)	89 (59)	90	-	95 (58)	95 (57)	95 (57)	89 (56)	R	95 (59)	-	-	100 (56)	-	88 (59)	-	-	-	-	
<i>Proteus vulgaris</i>	47	91 (47)	98 (47)	-	R	79 (47)	R	85 (47)	94 (47)	100 (46)	100	-	100 (47)	100 (46)	100 (46)	94 (47)	R	91 (47)	-	-	100 (45)	-	68 (47)	-	R	R	-	
<i>Serratia marcescens</i>	46	98 (46)	100 (45)	-	R	R	R	98 (46)	100 (46)	100 (45)	100	-	100 (46)	100 (44)	100 (44)	100 (46)	R	100 (46)	-	-	100 (45)	-	96 (46)	-	-	-	-	
<i>Staphylococcus aureus</i> (all isolates); MRSA 12.0 %	1700	94 (1647)	12 (139)	100 (56)	-	-	-	-	-	-	-	88 ^{a,b} (1640)	-	-	-	-	95 (139)	-	96 (139)	-	100 (1500)	94 (1648)	96 (139)	56 (139)	100 (1623)	85 (1496)	-	
ICU (MRSA 19.6 %)	149	95 (139)	-	-	-	-	-	-	-	-	-	92 ^{a,b} (139)	-	-	-	-	-	-	-	-	100 (99)	95 (139)	-	-	90 (131)	98 (111)	-	
Non-ICU (MRSA 11.2 %)	1416	95 (1384)	-	9 (116																								

Cumulative Antimicrobial Susceptibility Reports :- Should be used as a guideline for empirical antimicrobial therapy.

- Data are from routine susceptibility result of Microbiology Laboratory of Khon Kaen Hospital.
 - Include only diagnostic (not surveillance) isolates.
 - Include only the first isolate of a species/patient/analysis period.
 - Report the % S and do not include % I.

^A: Interpret according to cefoxitin susceptibility test, ^B: MIC Interpretive Criteria, ^C: High-Level Aminoglycoside, ^D: Interpret according to oxacillin susceptibility test, ^E: The standard requires > 30 isolates.

Definition of MDROs.

MDR: Multidrug Resistance (1. Resistant : Amikacin, Cefazidime and another 3rd Cephalosporin, or 2. Resistant : Amikacin and 3 of 3rd Cephalosporin), CRE : Carbapenem resistant Enterobacteriaceae.

CoRO : Colistin resistant Organism., MSSA: Methicillin susceptible *Staphylococcus aureus*, MRSA: Methicillin resistant *Staphylococcus aureus*, MRCoNS : Methicillin resistant Coag. Neg. *Staphylococci*.

References

1. Clinical and Laboratory Standards Institute. 2014. Analysis and Presentation of Cumulative Antimicrobial Susceptibility Test Data; Approved Guideline-Fourth Edition. CLSI document M39-A4. Clinical and Laboratory Standards Institute, Wayne, PA.
 2. Clinical and Laboratory Standards Institute. 2017. Performance Standards for Antimicrobial Susceptibility Testing. CLSI document M100 27th edition. Clinical and Laboratory Standards Institute, Wayne, PA.

ສອນຄາມໜ້ອນລົມເພີ່ມເຄີມທີ່ຫອງນັບກຳນົດກາງຈະລູ້ວິທາຍາ ກລັນມານທານທົນຄົກພາພຫຍາ ໂຮງພາຍງານລາຂອນນະກຳນີ້ ດ.ສ.ວິຫຼວທ່າ ດ. ໃນເມືອງ ອ. ເນື້ອງ ລ.ຂອນນະກຳນີ້ 40000 ໂທ. 043-232555 ຕະໂລ 3814



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