



مستشفى الملك فهد للطب والجراحة ومركز الأبحاث  
King Faisal Specialist Hospital & Research Centre

KING FAISAL SPECIALIST HOSPITAL & RESEARCH CENTRE  
Department of Pathology & Laboratory Medicine - Jeddah  
MICROBIOLOGY SECTION

2019

Cumulative Antimicrobial Susceptibility Report  
Hospital Wide Gram Negative Rods

Organism	# shown indicate the Percent susceptible														NT = Not tested	U=intrinsic Resistance								
	Count	Ampicillin	Amox/Clav	Pip/ Tazo	Amikacin	Gentamicin	Cefazolin-Oral	Cefazolin-Parenteral-Non	Cefotaxime-Parenteral*	Cefotetan	Cefuroxime-Oral	Cefuroxime-Parenteral	Ceftazidime	Cefepime	Ciprofloxacin	Imipenem	Meropenem	Nitrofurantoin*	Aztreonam **	SXT	Tigecycline	ESBL	CRE	
<i>Citrobacter freundii</i>	27	0	0	74	100	93	0	0	0	0	0	64	67	74	89	94	97	93	NT	78	100			
<i>Citrobacter koseri</i>	35	0	87	97	100	94	79	44	80	86	38	71	80	80	83	97	100	100	71	NT	97	100		
<i>E.coli</i>	2037	23	65	91	92	81	52	14	52	78	44	49	54	54	55	48	97	97	89	5	47	100	47	1
<i>Enterobacter aerogenes</i>	58	0	0	73	100	98	0	0	0	0	0	68	72	90	97	85	99	10	NT	83	100			
<i>Enterobacter cloacae complex</i>	159	0	0	69	95	94	0	0	0	0	0	64	64	76	91	85	93	42	NT	80	100			
<i>Klebsiella oxytoca</i>	46	0	85	94	94	94	88	0	89	94	67	85	91	94	94	98	94	94	91	NT	91	96	6	
<i>Klebsiella pneumoniae</i>	1411	0	71	81	93	86	49	32	49	84	42	49	54	53	55	73	83	84	16	NT	50	88	42	6
<i>Morganella morganii</i>	77	0	0	88	97	70	0	0	0	36	0	0	82	82	82	69	37	100	0	NT	52	0		
<i>Proteus mirabilis</i>	179	58	81	99	96	62	87	46	87	97	90	93	93	93	93	74	18	100	0	NT	45	0	7	
<i>Serratia marcescens</i>	112	0	0	90	97	95	0	0	0	0	92	91	92	96	93	99	0	NT	93	96				
<b>Haemophilus influenzae</b>																								
Organism	Count	Ampicillin	Ceftriaxone	Ciprofloxacin	SXT	Meropenem	Imipenem																	
<i>Haemophilus influenzae</i>	17	59	100	87	56	100	100																	

ESBL Extended -spectrum Beta-lactamase  
CRE Carbapenem Resistant Enterobacteriaceae



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**MICROBIOLOGY SECTION**

**Cumulative Antimicrobial Susceptibility Report**

Hospital Wide Gram Negative Rods

**2019**

**Pseudomonas & Acinetobacter**

Organism	Count	Amikacin	Ampicillin/Sulbactam	Cefepime	Cefazidime	Ciprofloxacin	Gentamicin	Imipenem	Meropenem	Levofloxacin	Pip/Taz	SXT	Minocycline	Tigecycline	Tobramycin
<i>Acinetobacter baumannii</i> Complex	117	74	68	66	53	61	75	70	70	61	53	80	81	85	77
<i>Pseudomonas aeruginosa</i>	1214	94	0	77	77	75	91	69	70	74	72	0	NT	0	94

**Stenotrophomonas maltophilia**

Organism	Count	Cefazidime	Levofloxacin	SXT
<i>Stenotrophomonas maltophilia</i>	100	76	70	96

**Salmonella species**

Organism	Count	Ampicillin	Centrifalone	Ciprofloxacin	SXT
<i>Salmonella Group B</i>	22	46	100	62	73
<i>Salmonella Group D</i>	16	50	100	75	100
<i>Salmonella Group C1</i>	10	80	90	80	90
<i>Salmonella Group C2</i>	12	67	100	65	75

Amox/Clav= Amoxicillin/clavulanic acid

Pip/Taz = Piperacillin/tazobactam

SXT = Trimethoprim/Sulfamethoxazole

**General Notes:**

Statistical validity of estimates of percent susceptibility for organisms for which there are fewer than 30 isolates reported is limited. Please take this into consideration when interpreting the reported results.  
Some organisms for which there were only very small numbers have been excluded from this report.



Cumulative Antimicrobial Susceptibility Report

Hospital Wide Gram Positive Cocci

**Streptococcus pneumoniae**

# shown indicate the Percent susceptible

0=Intrinsic resistance

\* For urines only

NT = Not Tested

Organism	COUNT												
		Ceftriaxone-Mening	Ceftriaxone-NonMening	Cefuroxime-Oral	Cefuroxime-Parent	Erythromycin	Meropenem	Penicillin-Mening	Penicillin-NonMening	Penicillin-V	SXT	Vancomycin	
<b>Streptococcus pneumoniae**</b>	<b>23</b>	91	100	NT	NT	57	100	70	100	74	50	100	

**Enterococcus spp**

Organism	COUNT												
		Ampicillin	Ciprofloxacin	Gentamicin HL	Levofloxacin	Linezolid	Nitrofurantoin	penicillin	Streptomycin HL	Synergid	Tetracycline	Vancomycin	VRE
<b>Enterococcus faecalis</b>	<b>334</b>	100	NT	71	71	95	99	98	73	0	19	100	0
<b>Enterococcus faecium</b>	<b>71</b>	14	NT	54	26	94	33	14	49	90	47	52	49

**Staphylococcus species**

Organism	COUNT															
		Levofloxacin	Clindamycin	Erythromycin	Gentamicin	Linezolid	Nitrofurantoin*	Oxacillin	Penicillin	SXT	Moxifloxacin	Tetracycline	Rifampin	Vancomycin	MSSA	MRSA
<b>Staphylococcus aureus(MRSA &amp; MSSA)</b>	<b>595</b>	76	84	72	89	100	100	52	8	92	76	83	99	100	52	48
<b>MRSA</b>	<b>283</b>	62	81	73	78	100	100	0	0	87	62	82	98	100		
<b>Staphylococcus hominis(CoNS)</b>	<b>74</b>	55	50	12	77	100	99	19	1	80	53	55	97	100		
<b>Staphylococcus haemolyticus(CoNS)</b>	<b>29</b>	59	72	21	62	100	100	10	0	79	59	52	100	100		
<b>Staphylococcus epidermidis(CoNS)</b>	<b>266</b>	40	52	23	53	100	100	13	2	68	41	41	93	100		

**Streptococcus viridans group**

Organism	Count	Penicillin	Ceftriaxone	Vancomycin
<b>Streptococcus viridans group</b>	<b>76</b>	57	88	100

\*\* Ceftri-Menin - Ceftriaxone meningitis (susceptible MIC  $\leq$  0.5  $\mu$ g/mL)

\*\* Ceftri-NonMenin - Ceftriaxone non-meningitis (susceptible MIC  $\leq$  1.0  $\mu$ g/mL)

\*\* Pen-Menin - Penicillin-Meningitis and Penicillin-V (susceptible MIC  $\leq$  0.06  $\mu$ g/mL)

\*\* Pen-NonMenin - Penicillin-NonMeningitis (susceptible MIC  $\leq$  2  $\mu$ g/mL)

CoNS= Coagulase negative Staphylococcus MRSA=Methicillin Resistant Staphylococcus aureus

**General Notes:**

Statistical validity of estimates of percent susceptibility for organisms for which there are fewer than 30 isolates reported is limited. Please take this into consideration when interpreting the reported results.

Some organisms for which there were only very small numbers OR less than 20 isolates have been excluded from this report

Beta-hemolytic streptococci: Susceptibility testing to penicillin is not routinely performed since resistant strains have not been recognized. All isolates are considered susceptible to penicillin.



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2019

Cumulative Antimicrobial Susceptibility Report  
Emergency - Gram Negative Rods & Gram positive cocci

Organism	# shown indicate the Percent susceptible	Antimicrobials																		NT = Not Tested	O = Intrinsic Resistance		
	Count	Ampicillin	Amox/Clav	Pip/Tazo	Amitacin	Gentamicin	Cefazolin-Oral	Cefazolin-Parenteral/Non*	Cefotixin	Cefuroxime-Oral	Cefuroxime-Parenteral	Ceftriaxone	Ceftazidime	Cefepime	Ciprofloxacin	Imipenem	Meropenem	Nitrofurantoin*	Aztreonam**	SXT	Tigecycline	ESBL	
<i>E.coli</i>	776	21	64	92	93	82	50	17	51	80	43	48	54	54	55	48	97	97	90	NT	45	100	47
<i>Enterobacter cloacae complex</i>	42	0	0	76	95	100	0	0	0	0	0	74	74	74	86	91	100	43	NT	71	93		
<i>Klebsiella pneumoniae</i>	437	0	70	84	97	86	50	37	50	87	45	50	56	55	57	76	90	93	19	NT	48	90	44
<i>Morganella morganii</i>	28	0	0	86	93	50	0	0	0	29	0	0	82	82	82	54	23	100	0	NT	36	0	
<i>Proteus mirabilis</i>	78	61	84	99	96	62	85	37	85	96	91	92	92	92	92	76	16	100	0	NT	49	0	
<i>Serratia marcescens</i>	39	0	0	88	100	100	0	0	0	0	0	0	100	98	98	98	88	98	0	NT	100	98	

Organism	Count	Antimicrobials																		SXT	Tigecycline	Tobramycin
		Amitacin	Ampicillin Sulbactam	Cefepime	Ceftazidime	Ciprofloxacin	Gentamicin	Imipenem	Meropenem	Levofloxacin	Pip/Taz	SXT	Minoxycline									
<i>Acinetobacter baumannii Complex</i>	36	78	74	72	62	67	81	78	78	66	58	85	89	93	85							
<i>Pseudomonas aeruginosa</i>	321	97	0	88	89	79	93	80	81	79	82	0	NT	0	96							

Organism	COUNT	Antimicrobials																		VRE
		Ampicillin	Ciprofloxacin	Gentamicin HL	Levofloxacin	Linezolid	Nitrofurantoin*	penicillin	Streptomycin HC	Synercid	Tetracycline	Vancomycin	VRE							
<i>Enterococcus faecalis</i>	109	100	NT	78	71	97	100	97	78	0	17	100	0							

Organism	COUNT	Antimicrobials																		MRSA
		Levofloxacin	Clindamycin	Erythromycin	Gentamicin	Linezolid	Nitrofurantoin*	Oxacillin	Penicillin	SXT	Moxifloxacin	Tetracycline	Rifampin	Vancomycin	VRE					
<i>Staphylococcus aureus</i>	197	73	85	70	90	100	100	56	10	91	73	80	100	100	56	44				
<i>Staphylococcus hominis (CoNS)</i>	50	54	52	14	78	100	98	20	2	82	52	46	96	100						
<i>Staphylococcus epidermidis (CoNS)</i>	97	49	67	26	59	100	100	13	2	79	49	51	97	100						

General Notes:

Statistical validity of estimates of percent susceptibility for organisms for which there are fewer than 30 isolates reported is limited. Please take this into consideration when interpreting the reported results.  
Some organisms for which there were only very small numbers have been excluded from this report.

**2019**

Cumulative Antimicrobial Susceptibility Report

Adult ICUs(JICUs,JSICU)- Gram Negative Rods & Gram positive cocci

Enterobacteriaceae	# shown indicate the Percent susceptible	* For urines only																		*** For MDR only			NT = Not Tested	0 = Intrinsic Resistance	
		Count	Ampicillin	Amox/Clav	Pip/Tazo	Aminacacin	Gentamicin	Cefazolin-Oral	Cefazolin-Parenteral-Nor	Cefazolin-Parenteral*	Cefotaxime	Cefuroxime-Oral	Cefuroxime-Parenteral	Ceftriaxone	Cefazidime	Cefepime	Ciprofloxacin	Imipenem	Meropenem	Nitrofurantoin*	Aztreonam***	SXT	Tigecycline	ESBL	
<i>E.coli</i>	65	6	46	69	85	68	44	8	38	63	21	25	29	28	30	34	99	99	89	NT	26	100	72		
<i>Klebsiella pneumoniae</i>	71	0	61	65	85	82	24	27	20	75	25	37	41	40	42	68	63	63	13	NT	51	79	45		
<i>Pseudomonas</i>																									
<i>Pseudomonas aeruginosa</i>	159	83	0	56	55	60	79	32	35	60	48	0	NT	0	80										
<i>Stenotrophomonas maltophilia</i>																									
<i>Stenotrophomonas maltophilia</i>	43	74	65	98																					
<i>Staphylococcus species</i>																									
<i>Staphylococcus aureus</i>	46	61	91	78	96	100	98	41	4	87	61	91	100	100	41	41	93	100	41	59					
<i>Staphylococcus epidermidis(CoNS)</i>	27	42	59	15	56	100	100	11	0	63	41	44	93	100											

**General Notes:**

Statistical validity of estimates of percent susceptibility for organisms for which there are fewer than 30 isolates reported is limited. Please take this into consideration when interpreting the reported results.

Some organisms for which there were only very small numbers have been excluded from this report



**2019**

Cumulative Antimicrobial Susceptibility Report

Oncology (JES4,JEN4,JPONC3,JPBMT) Gram Negative Rods & Gram positive cocci

Enterobacteriaceae	# shown indicate the Percent susceptible	Antimicrobials																		NT = Not Tested	O = Intrinsic Resistance		
		Count	Ampicillin	Amox/Clav	Pip / Tazo	Amikacin	Gentamicin	Cefazolin-Oral	Cefazolin-Parenteral-Non	Cefazolin-Parenteral*	Cefotaxim	Cefuroxime-Oral	Cefuroxime-Parenteral	Ceftriaxone	Ceftazidime	Cefepime	Ciprofloxacin	Imipenem	Meropenem	Nitrofurantoin*	Attreonam**	SXT	Tigecycline
Organism																							
<i>E.coli</i>	46	16	44	73	80	80	40	0	46	79	30	39	51	52	53	41	92	92	86	NT	34	100	49
<i>Klebsiella pneumoniae</i>	80	0	70	75	86	85	32	27	35	79	30	46	58	56	59	76	76	74	7	NT	46	85	42
<i>Pseudomonas &amp; Acinetobacter</i>																							
Organism																							
<i>Pseudomonas aeruginosa</i>	79	94	0	66	66	72	86	72	72	72	60	0	NT	0	95								

**General Notes:**

Statistical validity of estimates of percent susceptibility for organisms for which there are fewer than 30 isolates reported is limited. Please take this into consideration when interpreting the reported results.  
Some organisms for which there were only very small numbers have been excluded from this report.

**2019**

Cumulative Antimicrobial Susceptibility Report

Pediatric units (PICU,NRS,NICU) Gram Negative Rods & Gram positive cocci

Organism	# shown	indicate the Percent susceptible												* For urines only	*** For MDR only	NT = Not Tested	0 =Intrinsic Resistance								
	Count	Ampicillin	Amox/Clav	Pig/Tazo	Amikacin	Gentamicin	Cefazolin-Oral	Cefazolin-Parenteral-Non	Cefazolin-Parenteral*	Cefotaxin	Cefuroxime-Oral	Cefuroxime-Parenteral	Ceftriaxone	Ceftazidime	Cefepime	Ciprofloxacin	Imipenem	Meropenem	Nitrofurantoin*	Aztreonam **	SXT	Tigecycline	ESBL		
<i>Klebsiella pneumoniae</i>	32	0	81	81	94	94	60	29	64	87	40	52	56	56	59	84	69	74	32	NT	61	79	38		
<i>Pseudomonas</i>																									
<i>Pseudomonas aeruginosa</i>	59	97	0	63	63	95	88	49	51	95	60	0	NT	0	100										
<i>Staphylococcus species</i>																									
<i>Staphylococcus aureus</i>	32	75	78	53	Erythromycin	Gentamicin	Linezolid	Nitrofurantoin*	Oxacillin	Penicillin	Moxifloxacin	Tetracycline	Rifampin	Vancomycin	MSSA	MRSA									

**General Notes:**

Statistical validity of estimates of percent susceptibility for organisms for which there are fewer than 30 isolates reported is limited. Please take this into consideration when interpreting the reported results.

Some organisms for which there were only very small numbers have been excluded from this report