

Table S1. The prevalence of pathogens in all hospital.

Organism	Total from 5591	Blood	Urine	Respiratory	Pus and wound	CSF	pleural
<i>Klebsiella</i>	1535 (100%)	226/1535 (14.7%)	614/1535 (40%)	299/1535 (19.4%)	276/1535 (17.9%)	110/1535 (7.1%)	10/1535 (0.65%)
<i>Ecoli</i>	1110 (100%)	53/1110 (4.77%)	871/1110 (78.46 %)	41/1110 (3.69%)	133/1110 (11.98%)	10/1110 (0.9%)	2/1110 (0.18%)
<i>Enterobacter</i>	99 (100%)	11/99 (11.11%)	32/99 (32.32%)	21/99 (21.21%)	25/ 99 (25.25%)	10/99 (10.1%)	0/ 99 (0%)
<i>Pseudomonas</i>	780 (100%)	91/780 (11.66%)	332/780 (42.56%)	124/780 (15.89%)	194/780 (24.87%)	35/780 (4.48%)	4/780 (0.51%)
<i>Acinetobacter</i>	406 (100%)	100/406 (24.63%)	72/406 (17.73%)	136/406 (33.49%)	68/406 (16.74%)	28/406 (6.89%)	2/406 (0.49%)
<i>Proteus</i>	107 (100%)	8/107 (7.47%)	36/107 (33.64%)	4/107 (3.73%)	58/107 (54.2%)	1/107 (0.93%)	0/107 (0%)
All <i>Staph aureus</i> including MRSA	535 (100%)	198/535 (37%)	52/535 (9.71%)	45/535 (8.41%)	202/535 (37.75%)	26/535 (4.85%)	12/535 (2.24%)
<i>Enterococci</i>	456 (100%)	62/456 (13.59%)	320/456 (70.17%)	0/456 (0%)	61/456 (13.37%)	12/456 (2.63%)	1/456 (0.21%)
<i>CoNS</i>	563 (100%)	445/563 (79.04%)	16/563 (2.84%)	0/563 (0%)	47/563 (8.34%)	50/563 (8.88%)	5/563 (0.88%)
Total	5591 (100%)	1194/5591 (21.35%)	2345/5591 (41.94%)	670/5591 (11.98%)	1064/5591 (19.03%)	282/5591 (5.04%)	36/5591 (0.64%)

Table S2. Antimicetriaaxonebial resistance profile in various Gram positive organisms

Antibiotic	All <i>Staph aureus</i> including <i>MRSA</i>	<i>Enterococci</i>	<i>CoNS</i>	Total Gentamycin positive	P Value for each antibiotic between the 3 organisms
Amikacin	88/278 (31.65 %)	NA*	75/279 (26.88%)	163/557 (29.26%)	0.216
Gentamycin Low	254/415 (61.2%)	NA*	165/365 (45.2%)	419/780 (53.71%)	< 0.0001
Gentamycin High	NA*	31/157 (19.74%)	NA*	31/157 (19.74%)	-
Trimethoprim/Sulfamethoxazole	118/365 (32.32%)	NA*	206/375 (54.93%)	324/740 (43.78%)	< 0.0001
Erythromycin	236/457 (51.64%)	137/168 (81.54 %)	207/290 (71.37%)	580/915 (63.38%)	< 0.0001
Clindamycin	203/471 (43%)	NA*	218/414 (52.65%)	421/885 (47.57%)	< 0.0001
Doxycycline	182/441 (41.26%)	110/164 (67.07%)	163/428 (38.08%)	455/1033 (44.04%)	< 0.0001
Vancomycin	0 /535 (0%)	*33/456 (7.23%)	0/563 (0%)	33/1554 (2.12%)	-
Teicoplanin	19/391 (4.85%)	22/300 (7.33%)	22/380 (5.78%)	63/1071 (5.88%)	0.389
Linezolid	22/459 (4.79%)	16/368 (4.34%)	27/423 (6.38%)	65/1250 (5.2%)	0.387
Cefoxitin	**466/535 (87.1%)	NA*	493/563 (87.57%)	***959/1098 (87.34%)	0.817
Ampicillin	NA*	158/366 (43.16%)	NA*	158/366 (43.16%)	-
Ciprofloxacin	168/365 (46.02%)	180/251 (71.71%)	178/319 (55.79%)	526/935 (56.25%)	< 0.0001
Levofloxacin	137/384 (35.67%)	144/258 (55.81%)	166/337 (49.25%)	447/979 (45.65%)	< 0.0001
Ofloxacin	145/354 (40.96%)	167/261 (63.98%)	190/350 (54.28%)	502/965 (52.02%)	< 0.0001

*NA = not applicable

** The resistance for Ampicillin was deduced from Cefoxitin; **P value** < 0.05 is considered significant

Table S3. Antimicetrixonebial resistance profile in various Gram-negative organisms

Antibiotic	<i>Klebsiella</i>	<i>Ecoli</i>	<i>Enterobacter</i>	<i>Pseudomonas</i>	<i>Acinetobacter</i>	<i>Proteus</i>	Total Gentamycin negative	P Value for each antibiotic between the 6 organisms
Cefoxitin	1014/1366 (74.23%)	318/971 (32.74%)	77/99 (77.78%)	NA*	NA*	49/105 (46.66%)	1458/2541 (57.38%)	< 0.0001
Amoxicillin +clavulanate	1226/1363 (89.94%)	711/952 (74.68%)	86/93 (92.47%)	NA*	NA*	79/104 (75.96%)	2102/ 2512 (83.67%)	< 0.0001
Piperacillin +tazobactam	821/1081 (75.94%)	262/751 (34.88%)	67/81 (82.71%)	336/492 (68.29%)	356/380 (93.68%)	26/80 (32.5%)	1868/2865 (65.2%)	< 0.0001
Ceftazidime	1238/1356 (91.29%)	772/958 (80.58%)	91/99 (91.91%)	603/722 (83.51%)	330/338 (97.63%)	75/105 (71.42%)	3109/3578 (86.89%)	< 0.0001
Cefotaxime	1272/1409 (90.27%)	791/986 (80.22%)	91/99 (91.91%)	NA*	346/355 (97.46%)	78/107 (72.9%)	2578/2956 (87.21%)	< 0.0001
Ceftriaxone	1355/1474 (91.92%)	762/969 (78.63%)	91/98 (92.85%)	NA*	346/352 (98.29%)	78/107 (72.9%)	2632/3000 (87.73%)	< 0.0001
Cefepime	1075/1209 (88.91%)	636/861 (73.86%)	67/89 (75.28%)	460/611 (75.28%)	283/296 (95.6%)	57/92 (61.95%)	2578/3158 (81.63%)	< 0.0001
Imipenem	791/1312 (60.28%)	143/930 (15.37%)	39/88 (44.31%)	417/638 (65.36%)	268/330 (81.21%)	22/100 (22%)	1680/3398 (49.44%)	< 0.0001
Meropenem	726/1189 (61.05%)	110/832 (13.22%)	38/81 (46.91%)	369/626 (59.1%)	249/298 (83.55%)	16/107 (14.95%)	1508/3133 (48.13%)	< 0.0001
Ciprofloxacin	730/949 (76.92%)	420/667 (62.96%)	42/70 (60%)	273/390 (70%)	220/240 (91.66%)	48/82 (58.53%)	1733/2398 (72.26%)	< 0.0001
Ofloxacin	704/956 (73.64%)	419/718 (58.35%)	38/73 (52.05%)	365/513 (71.15%)	217/242 (89.66%)	47/76 (61.84%)	1790/2578 (69.43%)	< 0.0001
Levofloxacin	756/1054 (71.72%)	389/729 (53.36%)	39/77 (50.64%)	301/456 (65.57%)	226/262 (86.25%)	50/96 (52.08%)	1761/2674 (65.85%)	< 0.0001
Amikacin	632/1016 (62.2%)	163/718 (22.7%)	47/83 (56.62%)	307/560 (54.82%)	209/259 (80.69%)	19/82 (23.17%)	1377/2718 (50.66%)	< 0.0001
Gentamycin	670/1131 (59.23%)	211/898 (23.49%)	44/86 (51.16%)	371/547 (67.82%)	204/260 (78.46%)	43/78 (55.12%)	1543/3000 (51.43%)	< 0.0001
Trimethoprim/Sulfamethoxazole	788/964 (81.74%)	430/719 (59.8%)	40/64 (62.5%)	NA*	205/244 (84.01%)	64/77 (83.11%)	1527/2068 (73.83%)	< 0.0001
Tigecycline	76/486 (15.63%)	12/101 (11.88%)	5/32 (15.62%)	NA*	61/185 (32.97%)	NA*	154/804 (19.15%)	< 0.0001

NA = not applicable; **P value** < 0.05 is considered significant

Table S4. Distribution of different types of cultures

Test	Inpatient Count	Inpatient %	Outpatient Count	Outpatient %	All Hospital (Inpatient & Outpatient) Count & %
Blood Culture Tests	3168	93.56	218	6.43	3386 (100%)
Urine Culture Tests	3822	49.22	3943	50.78	7765 (100%)
Respiratory Culture Tests	1119	87.22	164	12.78	1283 (100%)
Pus & Wound Culture Tests	721	59.93	482	40.07	1203 (100%)
CSF Culture Tests	74	6.05	1150	93.95	1224 (100%)
Pleural Culture Tests	128	51.82	119	48.18	247 (100%)

Table S5. Gram-positive (resistance number and %)

Antibiotic	Bacteria Gram-positive	Inpatient resistance n	Inpatient resistance %	Outpatient resistance number	Outpatient resistance %	P value for each
Amikacin	<i>Staph aureus</i>	63/150	42	52/128	40.62	0.817
	<i>Enterococci</i>	NA*	NA*	NA*	NA*	NA*
	<i>CoNS</i>	57/204	27.94	18/75	24	0.510
Total Amikacin		120/354	33.89	70/203	34.48	0.888
Ampicilin	<i>Staph aureus</i>	NA*	NA*	NA*	NA*	NA*
	<i>Enterococcus</i>	94/178	52.81	64/188	34.04	< 0.0001
	<i>CoNS</i>	NA*	NA*	NA*	NA*	NA*
Total Ampicilin		94/178	52.81	64/188	34.04	< 0.0001
Ciprofloxacin	<i>Staph aureus</i>	112/200	56	56/165	33.93	< 0.0001
	<i>Enterococcus</i>	99/130	76.15	81/121	66.94	0.105
	<i>CoNS</i>	141/233	60.51	37/86	43.02	0.005
Total Ciprofloxacin		352/563	62.52	174/372	46.77	< 0.0001
Clindamycin	<i>Staph aureus</i>	127/257	49.42	76/214	35.51	0.002
	<i>Enterococcus</i>	NA*	NA*	NA*	NA*	NA*
	<i>CoNS</i>	169/296	57.09	49/118	41.52	0.0004
Total Clindamycin		296/553	53.52	125/332	37.65	< 0.0001
Doxycycline	<i>Staph aureus</i>	117/251	46.61	65/190	34.21	0.008
	<i>Enterococcus</i>	59/84	70.24	51/80	63.75	0.376
	<i>CoNS</i>	123/310	39.68	40/118	33.89	0.271
Total Doxycycline		299/645	46.35	156/388	40.2	0.0538
Erythromycin	<i>Staph aureus</i>	152/253	60.08	84/204	41.17	0.00005
	<i>Enterococcus</i>	73/87	83.91	64/81	79.01	0.413
	<i>CoNS</i>	133/182	73.08	74/108	68.51	0.406
Total Erythromycin		358/522	68.58	222/393	56.48	0.0002
Cefoxitin	<i>Staph aureus</i>	254/290	87.59	212/245	86.53	0.716
	<i>Enterococcus</i>	NA*	NA*	NA*	NA*	NA*
	<i>CoNS</i>	333/372	89.52	160/191	83.77	0.050
Total Cefoxitin		587/662	88.67	372/436	85.32	0.102
Gentamycin High	<i>Staph aureus</i>	NA*	NA*	NA*	NA*	NA*
	<i>Enterococcus</i>	17/82	20.73	14/75	18.66	0.745
	<i>CoNS</i>	NA*	NA*	NA*	NA*	NA*
Total Gentamycin High		17/82	20.73	14/75	18.66	0.745
Gentamycin Low	<i>Staph aureus</i>	143/227	63	111/188	59.04	0.411
	<i>Enterococcus</i>	NA*	NA*	NA*	NA*	NA*
	<i>CoNS</i>	117/259	45.17	48/106	45.28	0.984
Total Gentamycin Low		260/486	53.49	159/294	54.08	0.874
Levofloxacin	<i>Staph aureus</i>	92/208	44.23	45/176	25.56	0.0001
	<i>Enterococcus</i>	88/137	64.23	56/121	46.28	0.003
	<i>CoNS</i>	134/251	53.39	32/86	37.2	.010
Total Levofloxacin		314/596	52.68	133/383	34.72	< 0.0001

Linezolid	<i>Staph aureus</i>	16/257	6.23	6/202	2.97	0.105
	<i>Enterococcus</i>	6/178	3.37	10/190	5.26	0.373
	<i>CoNS</i>	24/314	7.64	3/109	2.75	0.071
Total Linezolid		46/749	6.14	19/501	3.79	0.066
Ofloxacin	<i>Staph aureus</i>	101/198	51.01	44/156	28.2	0.00001
	<i>Enterococcus</i>	100/139	71.94	67/122	54.91	0.0042
	<i>CoNS</i>	147/252	58.33	43/98	43.87	0.014
Total Ofloxacin		348/589	59.08	154/376	40.95	< 0.0001
Trimethoprim/S ulfamethoxazole	<i>staph aureus</i>	77/212	36.32	41/153	26.79	0.054
	<i>enterococcus</i>	NA*	NA*	NA*	NA*	NA*
	<i>CoNS</i>	159/280	56.79	47/95	49.47	0.215
Total Trimethoprim/S ulfamethoxazole		236/492	47.96	88/248	35.48	0.001
Vancomycin	<i>Staph aureus</i>	0/310	0	0/225	0	-
	<i>Enterococcus</i>	14/240	5.83	17/216	7.87	0.388
	<i>CoNS</i>	0/423	0	0/140	0	-
Total Vancomycin		14/973	1.44	17/581	2.99	0.042
Teicoplanin	<i>Staph aureus</i>	12/227	5.29	7/164	4.26	0.644
	<i>Enterococcus</i>	15/161	9.32	7/139	5.03	0.156
	<i>CoNS</i>	17/288	5.9	5/92	5.43	0.867
Total Teicoplanin		44/676	6.5	19/395	4.81	0.254

NA = *not applicable*; *P value* < 0.05 is considered significant

Table S6. Gram negative (resistance number and %)

Antibiotic	Bacteria Gram negative	Inpatient resistance n	Inpatient resistance %	Outpatient resistance number	Outpatient resistance %	P value each
Amikacin	<i>Klebsiella</i>	436/652	66.87	196/364	53.84	<0.0001
	<i>Ecoli</i>	89/330	26.97	74/388	19.07	0.011
	<i>Enterobacter</i>	23/36	63.89	24/47	51.06	0.243
	<i>Pseudomonas</i>	230/373	61.67	77/187	41.17	<0.0001
	<i>Acinetobacter</i>	170/198	85.86	39/61	63.93	0.001
	<i>Proteus</i>	10/52	19.23	9/30	30	0.266
Total Amikacin		958/1641	58.37	419/1077	38.9	<0.0001
Amoxicillin +Clavulanate	<i>Klebsiella</i>	773/844	91.59	453/519	87.28	0.010
	<i>Ecoli</i>	333/423	78.72	378/529	71.45	0.010
	<i>Enterobacter</i>	51/55	92.72	35/38	92.1	0.911
	<i>Pseudomonas</i>	NA*	NA*	NA*	NA*	NA*
	<i>Acinetobacter</i>	NA*	NA*	NA*	NA*	NA*
	<i>Proteus</i>	51/66	77.27	28/38	73.68	0.680
Total Amoxicillin +Clavulanate		1208/1388	87.03	894/1124	79.53	<0.0001
Ceftazidime	<i>Klebsiella</i>	791/847	93.39	447/509	87.81	0.0004
	<i>Ecoli</i>	367/427	85.95	405/531	76.27	0.0002
	<i>Enterobacter</i>	50/54	92.59	41/45	91.11	0.788
	<i>Pseudomonas</i>	424/481	88.15	179/241	74.27	<0.0001
	<i>Acinetobacter</i>	251/256	98.05	79/82	96.34	0.377
	<i>Proteus</i>	51/69	73.91	24/36	66.66	0.435
Total Ceftazidime		1934/2134	90.62	1175/1444	81.37	<0.0001
Ciprofloxacin	<i>Klebsiella</i>	487/594	81.99	243/355	68.45	<0.0001
	<i>Ecoli</i>	208/288	72.22	212/379	55.93	<0.0001
	<i>Enterobacter</i>	25/38	65.79	17/32	53.12	0.281
	<i>Pseudomonas</i>	192/252	76.19	81/138	58.69	0.0003
	<i>Acinetobacter</i>	177/184	96.2	43/56	76.78	<0.0001
	<i>Proteus</i>	37/57	64.91	11/25	44	0.077
Total Ciprofloxacin		1126/1413	79.68	607/985	61.62	<0.0001
Ceftriaxone	<i>Klebsiella</i>	898/955	94.03	457/519	88.05	<0.0001
	<i>Ecoli</i>	366/430	85.11	396/539	73.46	<0.0001
	<i>Enterobacter</i>	50/52	96.15	41/46	89.13	0.178
	<i>Pseudomonas</i>	NA*	NA*	NA*	NA*	NA*
	<i>Acinetobacter</i>	267/270	98.89	79/82	96.34	0.119
	<i>Proteus</i>	55/75	73.33	23/32	71.88	0.877
Total Ceftriaxone		1636/1782	91.8	996/1218	81.77	<0.0001
Cefotaxime	<i>Klebsiella</i>	808/883	91.51	464/526	88.21	0.0444
	<i>Ecoli</i>	378/438	86.3	413/548	75.36	<0.0001
	<i>Enterobacter</i>	50/52	96.15	41/47	87.23	0.104

	<i>Pseudomonas</i>	NA*	NA*	NA*	NA*	NA*
	<i>Acinetobacter</i>	266/271	98.15	80/84	95.23	0.137
	<i>Proteus</i>	59/80	73.75	19/27	70.37	0.733
Total Cefotaxime		1561/1724	90.54	1017/1232	82.55	<0.0001
Cefepime	<i>Klebsiella</i>	716/781	91.68	359/428	83.87	<0.0001
	<i>Ecoli</i>	311/390	79.74	325/471	69	0.0004
	<i>Enterobacter</i>	40/49	81.63	27/40	67.5	0.124
	<i>Pseudomonas</i>	333/416	80.05	127/195	65.12	<0.0001
	<i>Acinetobacter</i>	231/238	97.06	52/58	89.65	0.014
	<i>Proteus</i>	39/62	62.9	18/30	60	0.788
Total Cefepime		1670/1936	86.26	908/1222	74.3	<0.0001
Cefoxitin	<i>Klebsiella</i>	662/859	77.07	352/507	69.42	0.002
	<i>Ecoli</i>	173/432	40.05	145/539	26.9	<0.0001
	<i>Enterobacter</i>	47/55	85.45	30/44	68.18	0.040
	<i>Pseudomonas</i>	NA*	NA*	NA*	NA*	NA*
	<i>Acinetobacter</i>	NA*	NA*	NA*	NA*	NA*
	<i>Proteus</i>	32/65	49.23	17/40	42.5	0.502
Total Cefoxitin		914/1411	64.77	544/1130	48.14	<0.0001
Gentamycin	<i>Klebsiella</i>	430/691	62.23	240/440	54.54	0.010
	<i>Ecoli</i>	115/326	35.28	96/572	16.78	<0.0001
	<i>Enterobacter</i>	26/41	63.41	18/45	40	0.030
	<i>Pseudomonas</i>	270/377	71.62	101/170	59.41	0.005
	<i>Acinetobacter</i>	166/197	84.26	38/63	60.31	<0.0001
	<i>Proteus</i>	31/50	62	12/28	42.85	0.103
Total Gentamycin		1038/1682	61.71	505/1318	38.31	<0.0001
Imipenem	<i>Klebsiella</i>	547/842	64.96	244/470	51.91	<0.0001
	<i>Ecoli</i>	83/421	19.71	60/509	11.78	<0.0001
	<i>Enterobacter</i>	29/48	60.42	10/40	25	0.0008
	<i>Pseudomonas</i>	315/396	79.55	102/242	42.14	<0.0001
	<i>Acinetobacter</i>	223/253	88.14	45/77	58.44	<0.0001
	<i>Proteus</i>	17/70	24.29	5/30	16.66	0.399
Total Imipenem		1214/2030	59.8	466/1368	34.06	<0.0001
Levofloxacin	<i>Klebsiella</i>	505/649	77.81	251/405	61.97	<0.0001
	<i>Ecoli</i>	200/308	64.94	189/421	44.89	<0.0001
	<i>Enterobacter</i>	23/41	56.1	16/36	44.44	0.307
	<i>Pseudomonas</i>	210/299	70.23	91/160	56.87	0.004
	<i>Acinetobacter</i>	185/204	90.69	41/58	70.68	<0.0001
	<i>Proteus</i>	33/63	52.38	17/33	51.51	0.936
Total Levofloxacin		1156/1564	73.91	605/1113	54.35	<0.0001
Meropenem	<i>Klebsiella</i>	492/742	66.3	234/447	52.34	<0.0001
	<i>Ecoli</i>	66/360	18.33	44/472	9.322	0.0001
	<i>Enterobacter</i>	25/44	56.82	13/37	35.13	0.051
	<i>Pseudomonas</i>	274/412	66.5	95/214	44.39	<0.0001

	<i>Acinetobacter</i>	201/224	89.73	48/74	64.86	<0.0001
	<i>Proteus</i>	11/71	15.49	5/36	13.89	0.826
Total Meropenem		1069/1483	72.08	439/1280	34.3	<0.0001
Ofloxacin	<i>Klebsiella</i>	490/624	78.53	214/332	64.45	<0.0001
	<i>Ecoli</i>	212/315	67.3	207/403	51.36	<0.0001
	<i>Enterobacter</i>	25/40	62.5	13/33	39.39	0.049
	<i>Pseudomonas</i>	273/358	76.26	92/155	59.35	<0.0001
	<i>Acinetobacter</i>	175/186	94.09	42/56	75	<0.0001
	<i>Proteus</i>	33/51	64.71	14/25	56	0.463
Total Ofloxacin		1208/1574	76.74	609/1004	60.65	<0.0001
Trimethoprim/Sulfamethoxazole	<i>Klebsiella</i>	523/606	86.3	265/358	74.02	<0.0001
	<i>Ecoli</i>	209/312	66.99	221/407	54.29	0.0005
	<i>Enterobacter</i>	29/38	76.32	11/26	42.3	0.006
	<i>Pseudomonas</i>	NA*	NA*	NA*	NA*	NA*
	<i>Acinetobacter</i>	169/197	85.79	36/47	76.59	0.122
	<i>Proteus</i>	45/53	84.91	19/24	79.16	0.533
Total Trimethoprim/Sulfamethoxazole		975/1206	80.84	552/862	64.03	<0.0001
Tigecycline	<i>Klebsiella</i>	55/355	15.49	21/131	16.03	0.885
	<i>Ecoli</i>	6/73	8.22	6/28	21.42	0.066
	<i>Enterobacter</i>	4/25	16	1/7	14.28	0.912
	<i>Pseudomonas</i>	NA*	NA*	NA*	NA*	NA*
	<i>Acinetobacter</i>	55/158	34.81	6/27	22.22	0.199
	<i>Proteus</i>	NA*	NA*	NA*	NA*	NA*
Total Tigecycline		120/611	19.63	34/193	17.61	0.533
Piperacillin +Tazobactam	<i>Klebsiella</i>	562/709	79.27	259/372	69.62	0.0004
	<i>Ecoli</i>	141/335	42.09	121/416	29.08	<0.0001
	<i>Enterobacter</i>	38/43	88.37	29/38	76.31	0.152
	<i>Pseudomonas</i>	247/335	73.73	89/157	56.68	0.0001
	<i>Acinetobacter</i>	303/317	95.58	53/63	84.12	0.0006
	<i>Proteus</i>	16/52	30.77	10/28	35.71	0.652
Total Piperacillin +Tazobactam		1307/1791	72.97	561/1074	52.23	<0.0001

NA = *not applicable*; *P value* < 0.05 is considered significant