



CHACHA NEHRU BAL CHIKITSALAYA

(Affiliated to Maulana Azad Medical College)

Clinical Microbiology Newsletter

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From Editor's Desk

It gives me immense pleasure to release the 2nd edition of clinical microbiology newsletter. I hope this will guide our clinicians to use appropriate antibiotics. Uniqueness of this newsletter is an exclusive pediatric data which is not available in most of the newsletters released from Delhi state and India.

We have tried to overcome some gaps that were left in the previous edition. Susceptibility data, in contrast to resistant profile has been presented in the current edition. The change has been adopted in keeping with the CLSI guidelines for presentation of antibiograms. In addition, this time susceptibility data has been analysed in atleast two different formats. First, the susceptibility profiles of different bacterial species with their sample distribution and site of isolation from various patient care areas. Secondly, presentation of cumulative susceptibility data for important bacterial species.

The methodology of data compiling antibiotic susceptibility data included data entry into WHONET software followed by software analysis for non-repeat isolates.

CLSI recommendations of not presenting data for isolates less than 10 in number, however, has not been followed for few critical isolates. (e.g. *Neisseria meningitidis* and *Streptococcus pneumoniae*). Therefore, susceptibility data for these isolates must be interpreted with utmost care as this data may not be representative data for such isolates but is epidemiologically important.

In this newsletter, data from serology laboratory has also been included. Data from our ICTC and DOTS centers apprise us about the HIV and tuberculosis situation in patients visiting our hospital. Your critical comments and suggestions will help us to improve upon the data are and can be kindly sent to microcnbc@gmail.com

Dr. Vikas Manchanda
Head of Department

Clinical Microbiology & Infectious Diseases Division

INSIDE THIS ISSUE:

Contents	Page
Activities in the Department	2
Cumulative Antibiograms	3
Blood Antibiograms	8
Urine Antibiograms	10
Respiratory Isolates Antibiograms	12
Pus and Other Body Sites Antibiograms	14
ICTC & DOTS	16
Serological Data	17
Monthly Census and Panic Reporting	19
Hospital Infection Control Programme	20

Activities and achievements of Microbiology & Infectious Diseases Division, CNBC in last one year

Joining of two senior residents Dr. Rajan Chopra and Dr. Swastika Agarwal to the department.

Completion of summer training project by 3rd MSc student

Starting of research projects on "Neonatal Sepsis" and "Pediatric pneumonias in ICUs"

Holding CME program on "Laboratory safety and quality control in microbiology" during 3rd meeting of IAMM Delhi Chapter (Accredited to Delhi Medical Council)

Successful completion of EQAS cycle for 3rd consecutive year

Starting of linked ART center

Installation of new machines including:

COBAS Amplicore

Real Time PCR (Light cycler 480)

Magna Pure compact automated nucleic extraction system

Freeze dryer System

Salient Features of the antibiograms

Occurrence of MRSA is 30% among all isolates of S. aureus. Less than 50% of both gram negative bacteria as well as gram positive cocci are susceptible to fluoroquinolones like ciprofloxacin and ofloxacin.

Susceptibility to penem group (Imipenem and Meropenem) has alarmingly decreased from >95% last year to ~75% this year.

We also confirm presence of MBL and KPC among the clinical isolates in children.

Susceptibility to Colistin in Acinetobacter spp. was 100%, although in Pseudomonas spp. it has decreased to 90%.

S. Typhi

High prevalence of nalidixic acid resistant S. Typhi (NARST) indicates high chances of ciprofloxacin therapy failure if used despite its high in vitro susceptibility.

All isolates were found susceptible to cefotaxime and ceftriaxone.

Chloramphenicol still may hold good for therapy for enteric fever in atleast 74% of cases.

Azithromycin may have limited role in the therapy of enteric fever in our setup.

N. meningitidis isolates at CNBC showed decreased susceptibility to ciprofloxacin (33%). It is matter of great concern as the drug is used in chemoprophylaxis of contacts.

Contact: microcnbc@gmail.com

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Battery of tests available in our laboratory

Bacterial Tests

Gram's Stain, Albert Stain
Direct Microscopy
Culture & Antimicrobial Susceptibility Testing
Rapid Blood Culture (Bactec 9050)
Rapid Latex Agglutination Tests for meningitis by 5 different bacterial agents
Routine screening for MRSA, HLAR, ESBLs, MBLs
Streptococcal grouping by Latex agglutination

Fungal Tests

KOH
Gram's Stain
Fungal Cultures
Identification of Filamentous Fungi
Identification of yeast by Card tests and slide culture
Susceptibility testing for yeast (Under standardization)

Parasitic Tests

Stool Microscopy
Cryptosporidium Ag detection in stool
Direct Microscopy
Rapid malaria Ag detection
Antigen detection for Leishmania donovani (Kala azar)
Serological tests for diagnosis of:
1. Anti E. histolytica Antibodies ELISA
2. Anti Echinococcus granulosus Antibodies ELISA
3. Toxoplasma IgM
4. Toxoplasma IgG Avidity Test
5. Toxoplasma IgG

Viral Diseases

HIV antibodies
HBsAg
HCV antibodies
AntiHBe antibodies
CMV IgG Avidity, IgM
Measles IgG
HSV 1 & 2 IgM
Rubella IgG Avidity
Dengue IgM

Mycobacteria

TB Ag detection
Has DOTS center - AFB stain
Mycobacterial culture in sterile body fluids

Immunology

ASO, CRP, RA
Procalcitonin test
ANA
dsDNA
VDRL
TTG IgA
Serological Tests:
1. Mycoplasma IgG
2. Widal Test
3. Chlamydia IgM and IgA

Hospital Infection Control

Environmental samples from O.T. and critical care areas
Water sampling for potable water, dialysis water.

Activities at Clinical Microbiology and Infectious Diseases Division

Integrated Counselling and Treatment Centre
DOTS Centre
Linked Anti-Retroviral Therapy Centre
Dengue Surveillance Programme
NABH Accreditation
Hospital Infection Control Programme
Bacteriology Laboratory
Mycology Laboratory
Serology Laboratory
Elisa Laboratory
Molecular Laboratory

New Test Introduced

Procalcitonin test quantitative
Yeast susceptibility testing (for azoles only)

Starting Shortly Molecular Laboratory

Viral Diseases

HIV RNA Viral Load Quantification
HIV DNA Detection
HBV DNA Qualitative
HBV DNA Quantitative
HCV RNA Qualitative
HCV RNA Quantitative
HCV RNA Genotyping
CMV DNA Detection
Enterovirus RNA Detection
Influenza Virus Type A & B RNA Detection
Para influenza Virus Type A & B RNA Detection
RSV RNA Detection
Dengue RNA Detection

Mycobacterial Diseases

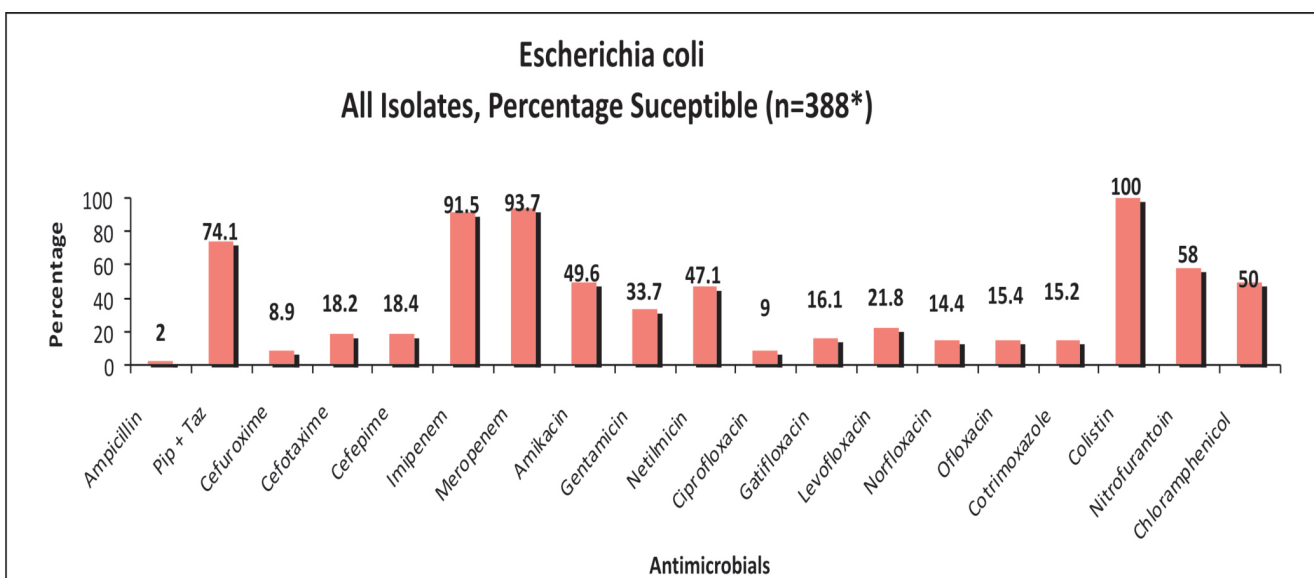
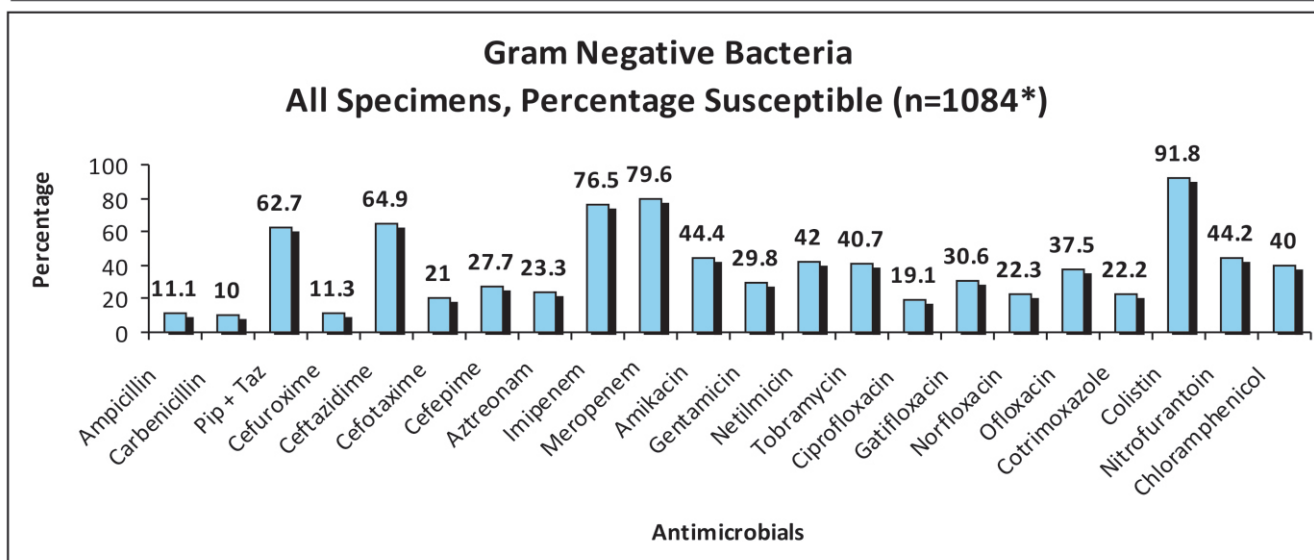
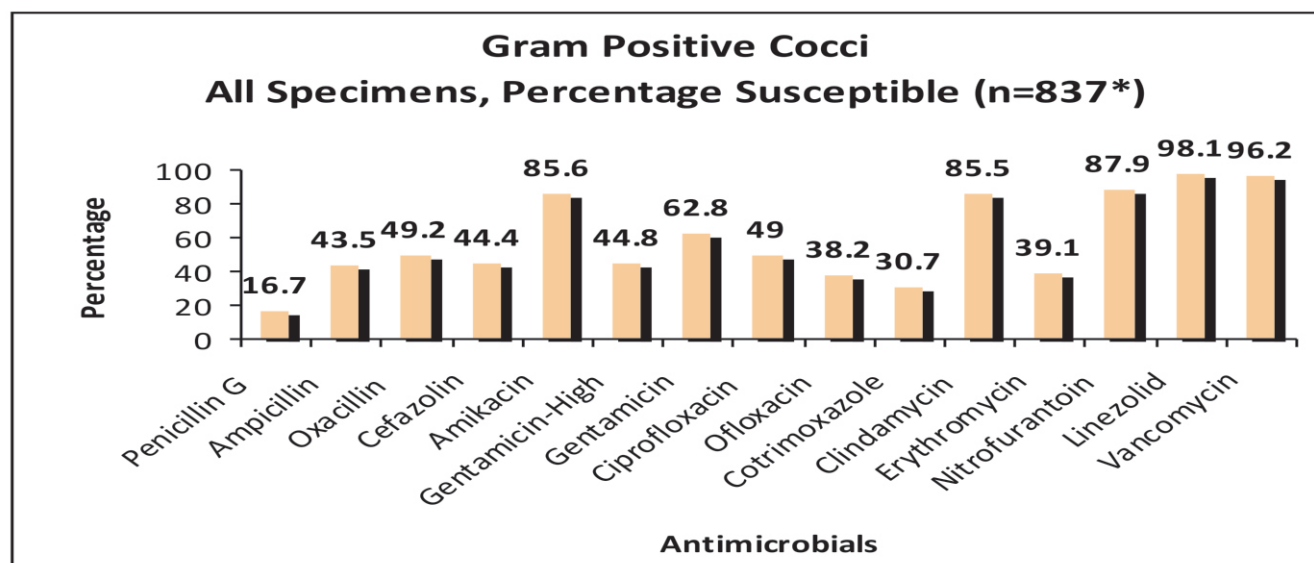
Mycobacterium tuberculosis complex -DNA/RNA Detection
MOTT differentiation

Bacterial Diseases

Mycoplasma pneumoniae DNA PCR
Haemophilus influenzae DNA PCR
Streptococcus pneumoniae DNA PCR
Neisseria meningitidis DNA PCR

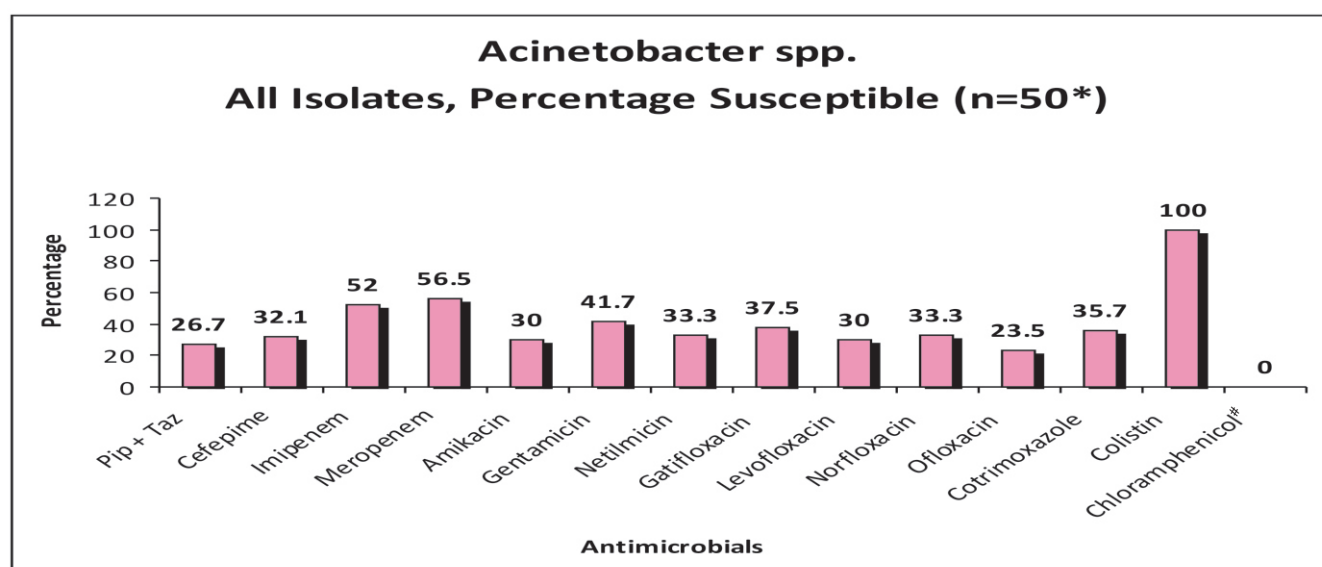
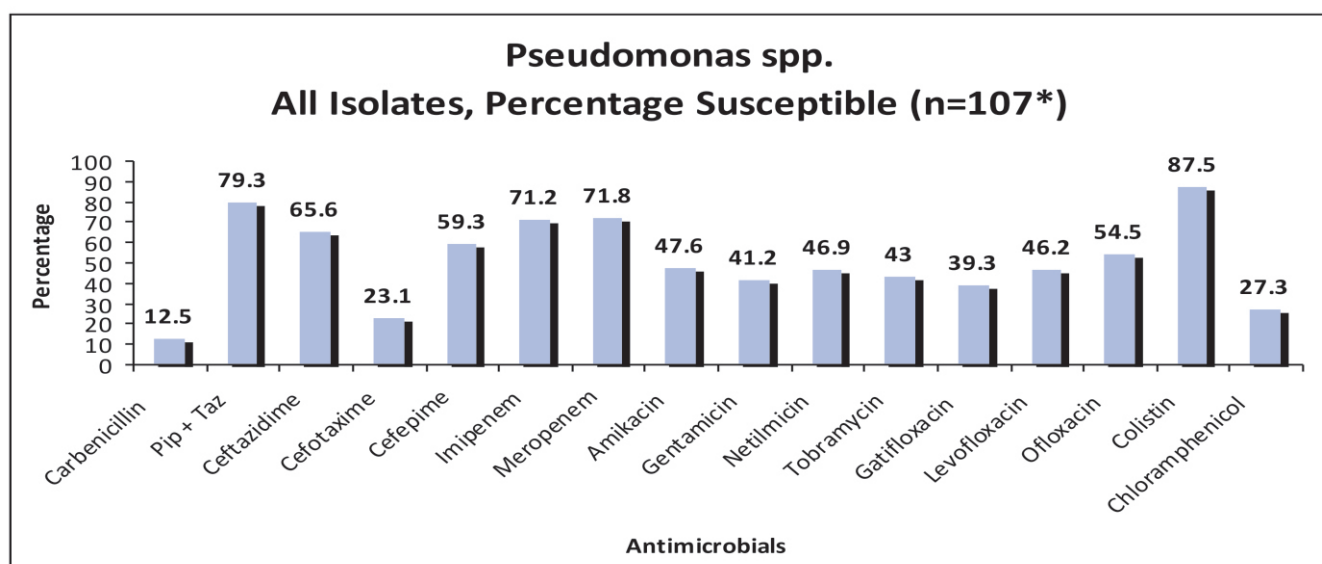
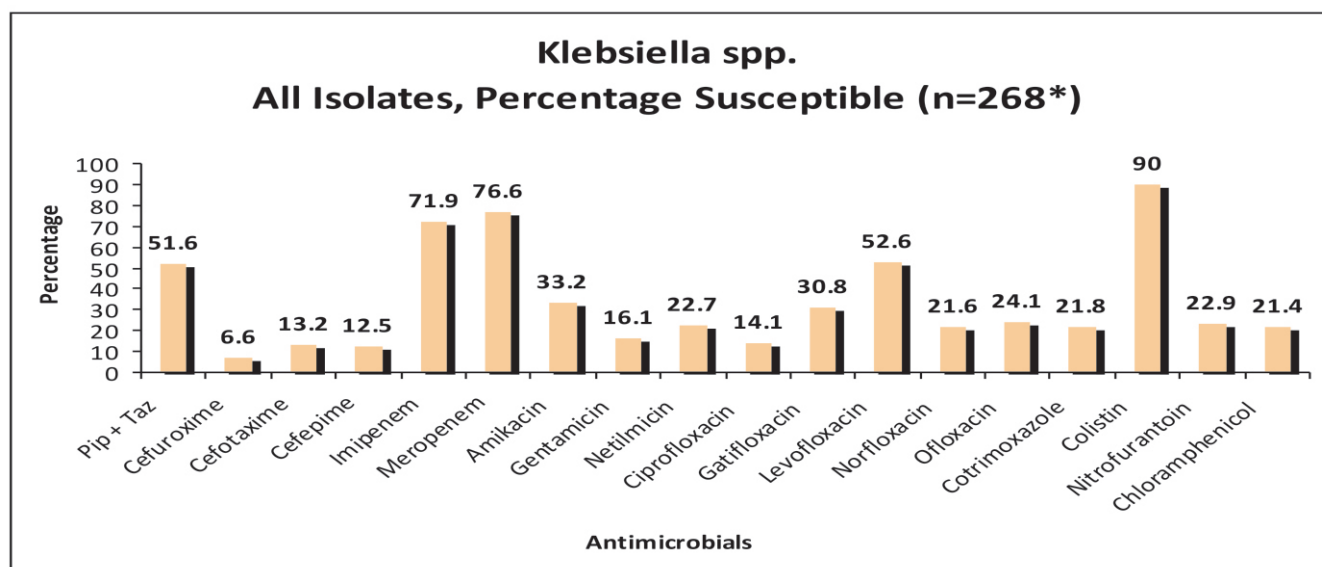
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Antibiograms



*The total number of isolates is variable as few antimicrobials are tested only as second line drugs or under special indications

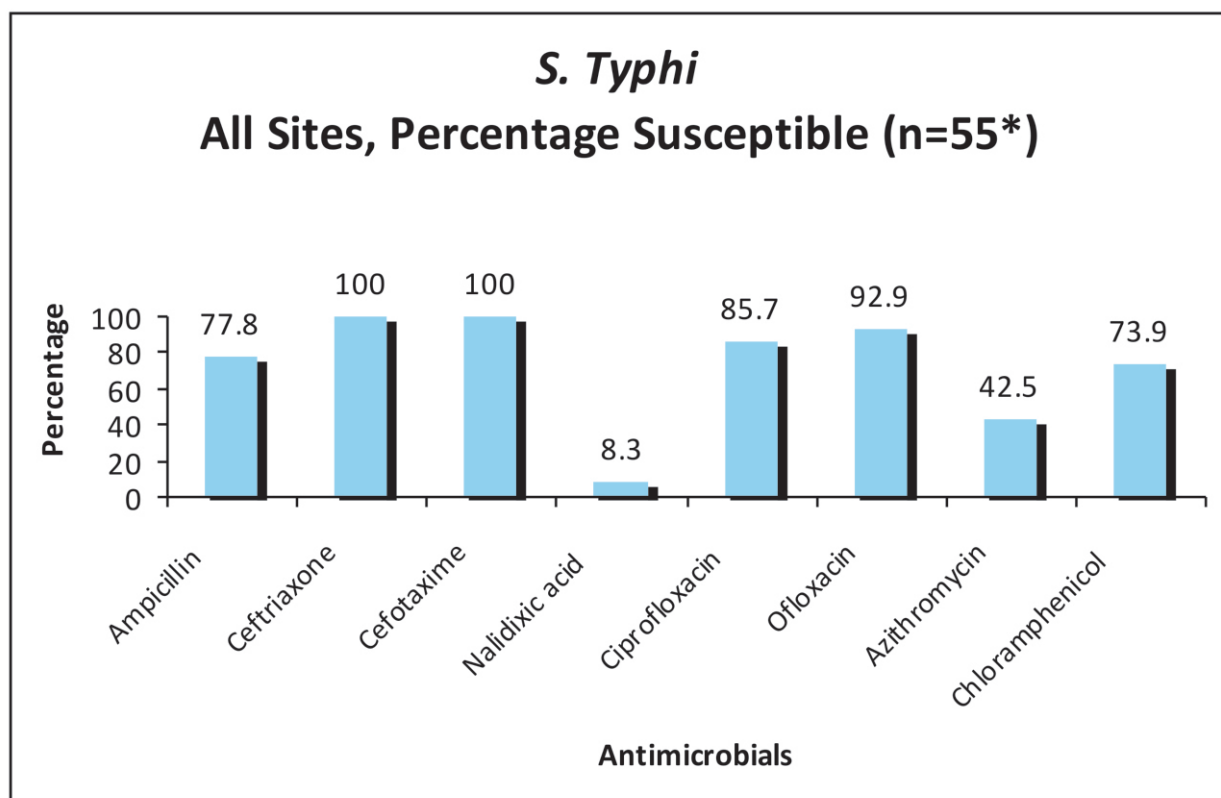
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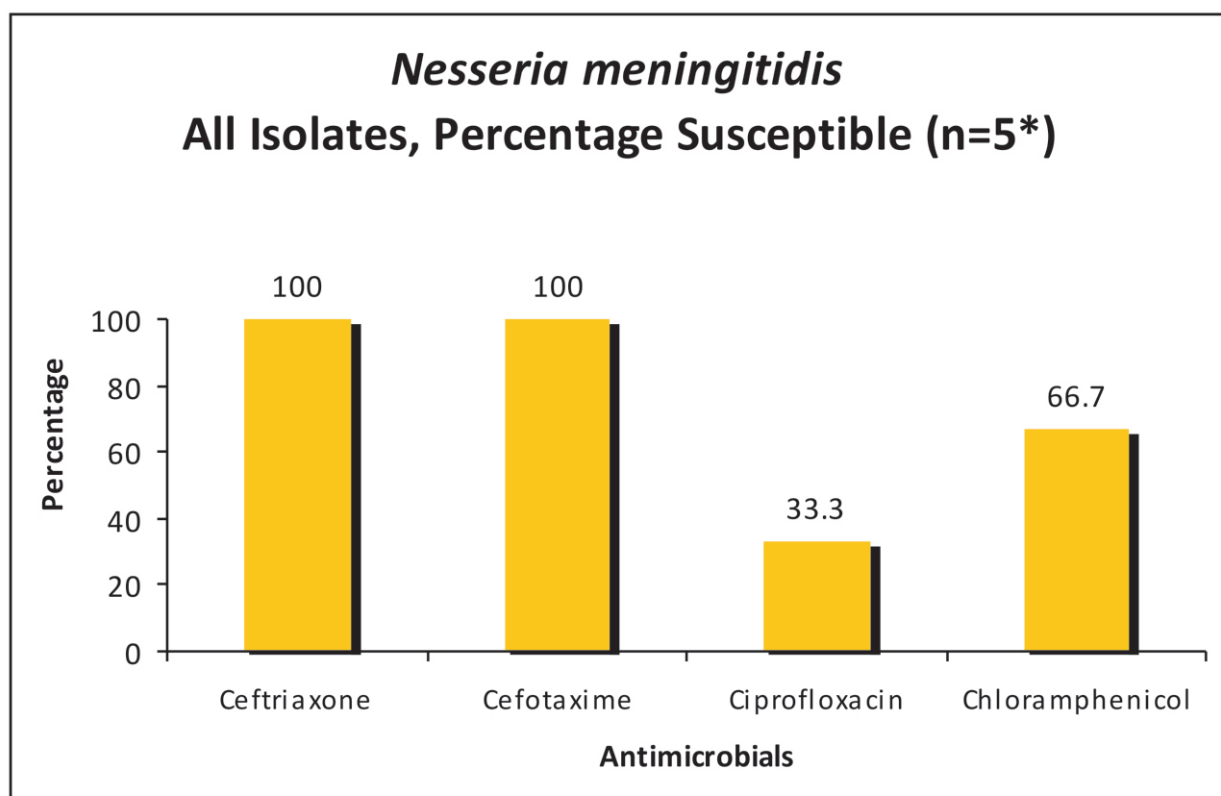
*Tested only for "Pan Resistant" Isolates.

*The total number of isolates is variable as few antimicrobials are tested only as second line drugs or under special indications

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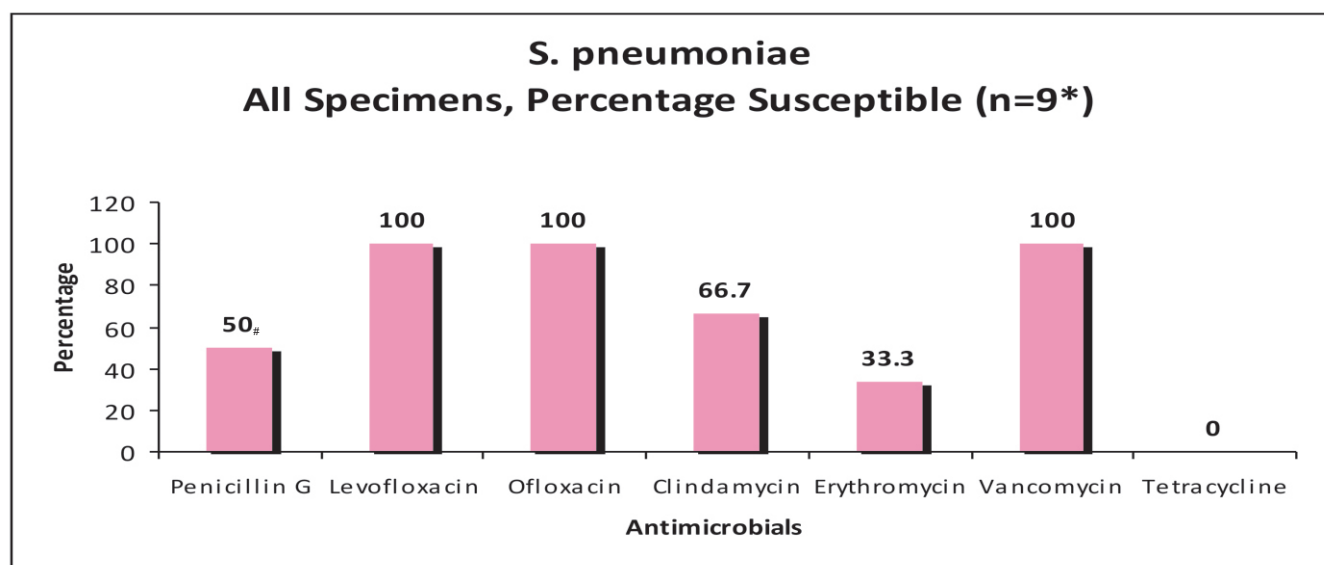
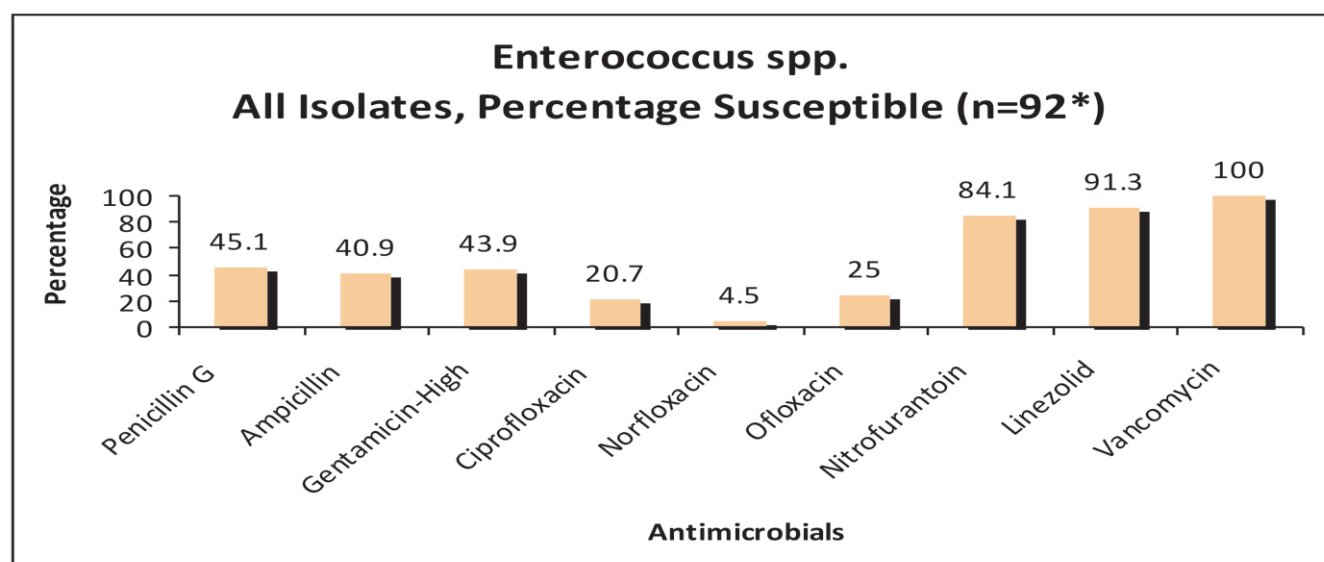
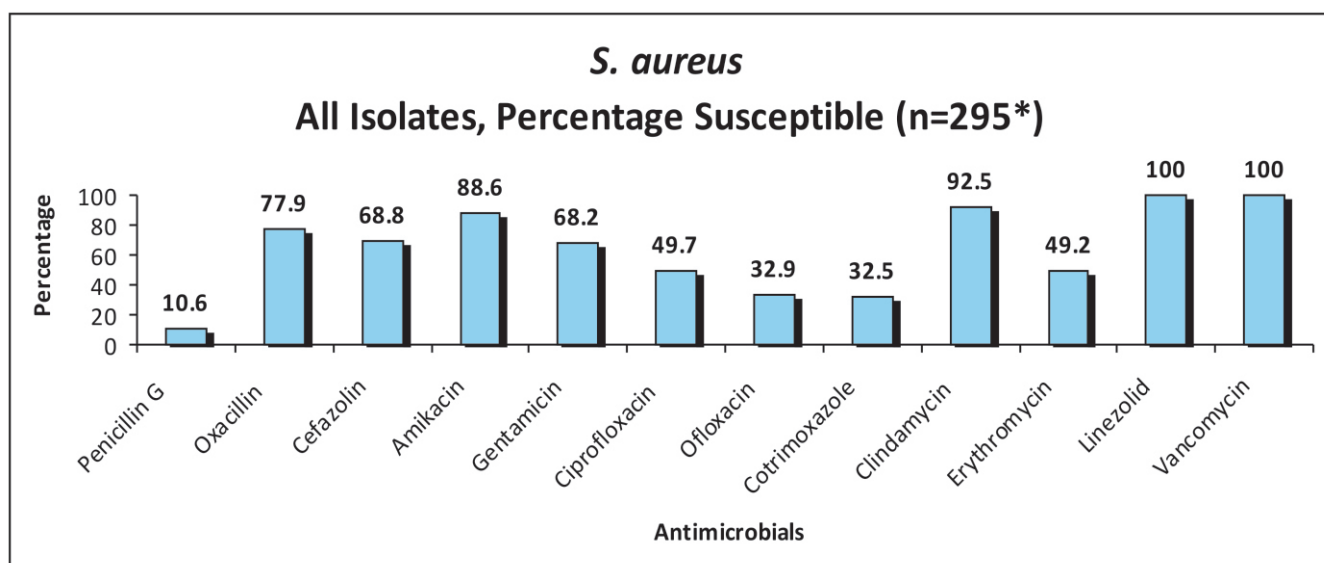
All susceptibility testing was done by E-test



All susceptibility testing was done by E-test

* The total number of isolates is variable as few antimicrobials are tested only as second line drugs or under special indications

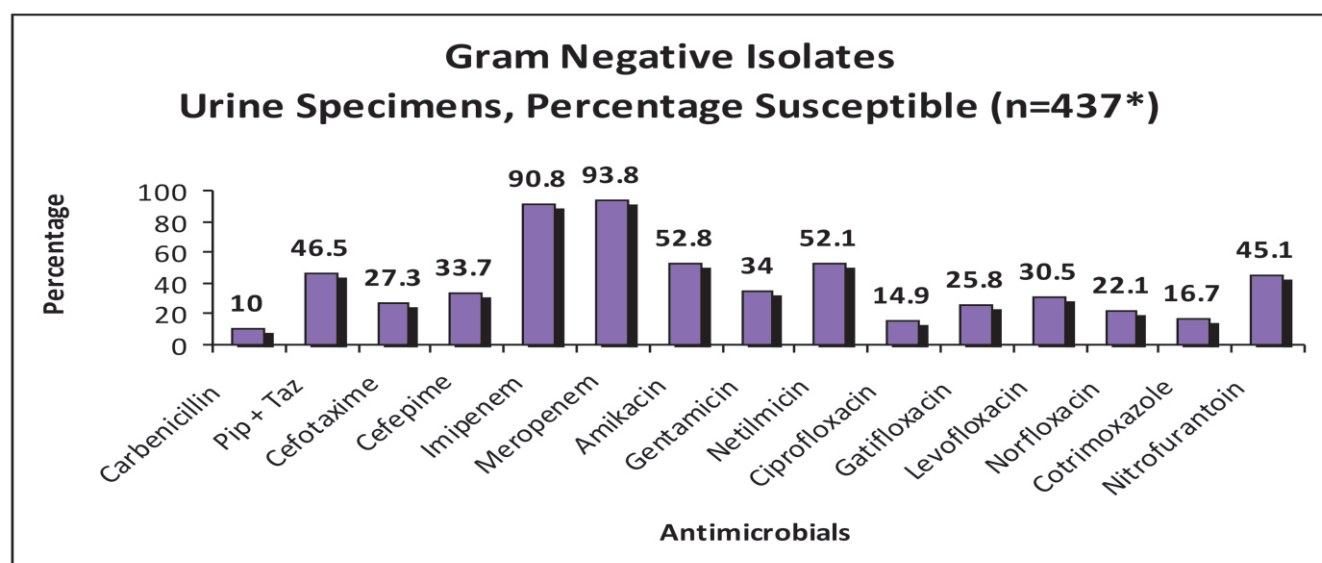
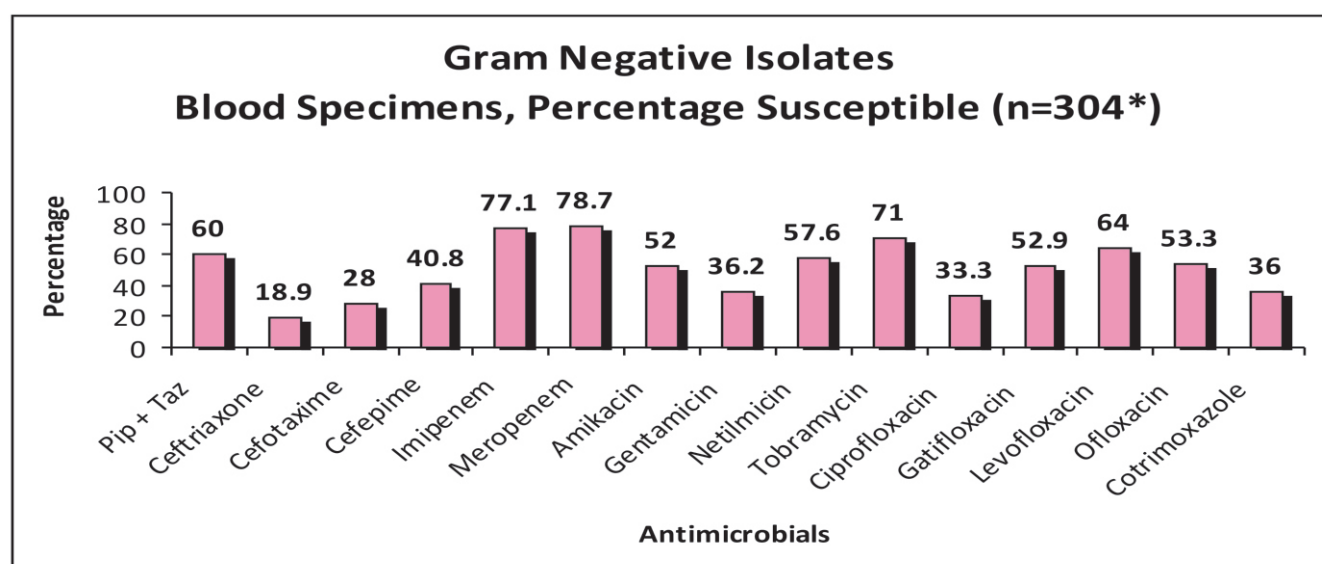
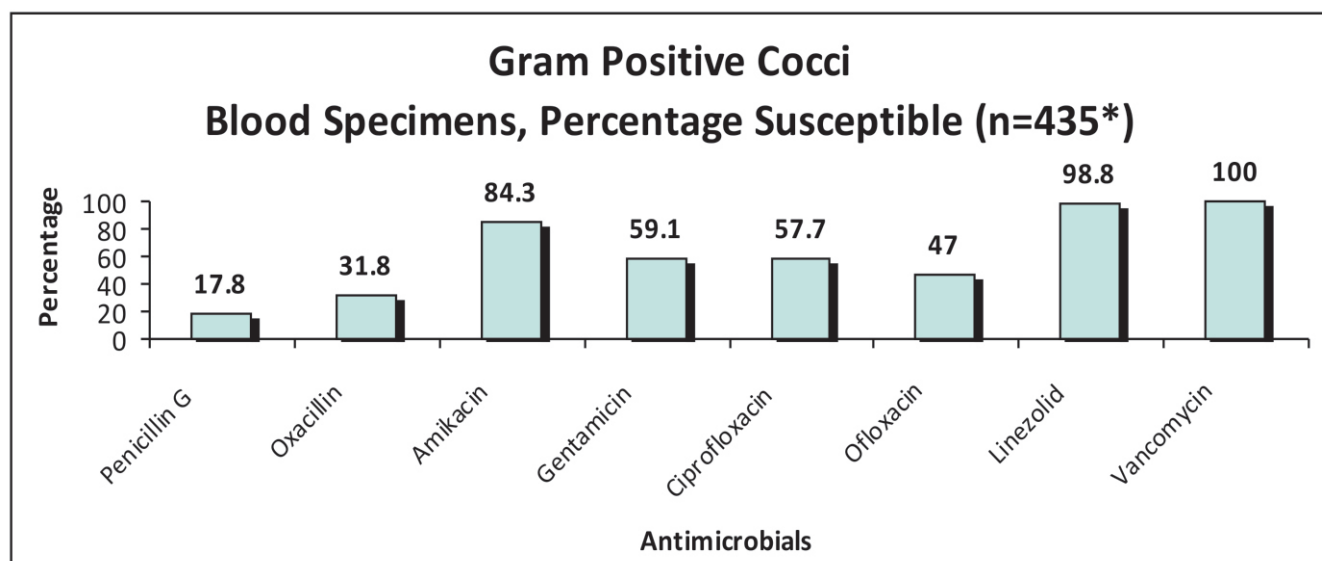
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[#] All Penicillin sensitivity data in *S. pneumoniae* is based on MIC test (E-test). None of the isolates were Penicillin resistant, however, 50% had increased MIC to penicillin (0.032-0.125 g/ml) which may be in susceptible range according to revised CLSI criteria (Dec. 2008)

*The total number of isolates is variable as few antimicrobials are tested only as second line drugs or under special indications

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*The total number of isolates is variable as few antimicrobials are tested only as second line drugs or under special indications

Out-Patient Units

TOTAL SAMPLES	783	%
POSITIVES	83	10.6%
MIXED GROWTHS	49	6.3%
NO GROWTHS	651	83.1%

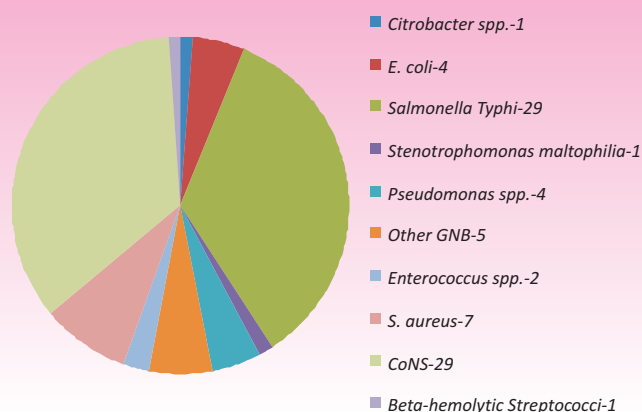
Non-ICU Inpatient Units

TOTAL SAMPLES	3371	%
POSITIVES	563	17%
MIXED GROWTHS	420	12%
NO GROWTHS	2388	71%

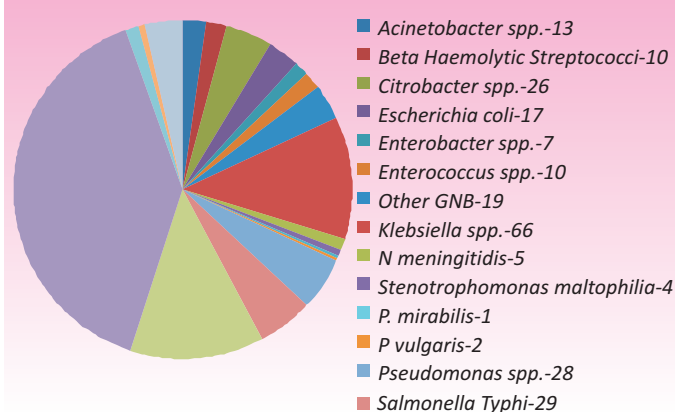
Intensive Care Units

TOTAL SAMPLES	584	%
POSITIVES	87	15%
MIXED GROWTHS	12	2%
NO GROWTHS	485	83%

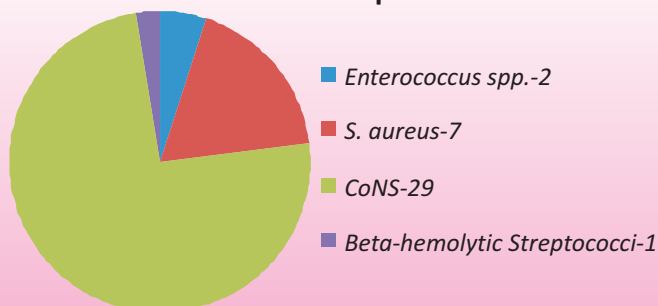
All Blood Isolates - Outpatients



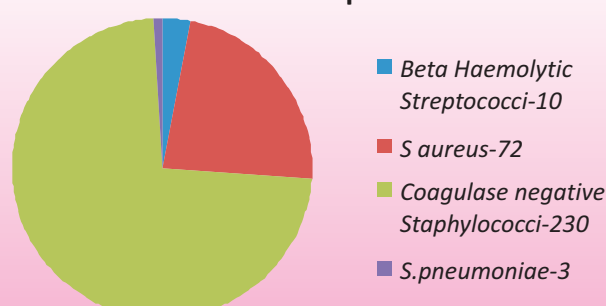
All Blood Isolates - Inpatients



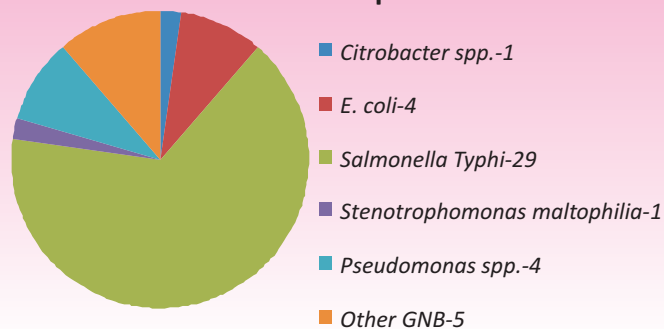
Gram Positive Bacteria Isolated in Blood - Outpatients



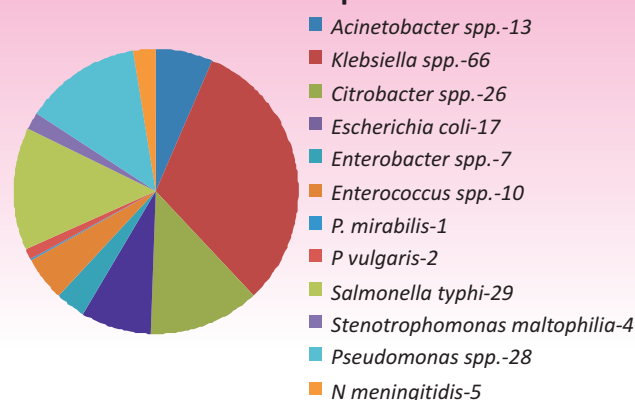
Gram Positive Bacteria Isolated in Blood - Inpatients



Gram Negative Bacteria Isolated in Blood - Outpatients



Gram Negative Bacteria Isolated in Blood - Inpatients



PERCENTAGE SENSITIVITY

GPC	Total Isolates (n)	Antimicrobials											
		Penicillin	Ampicillin	Oxacillin	Gentamicin	Genta High	Amikacin	Chloramphenicol	Cotrimoxazole	Ciprofloxacin	Ofloxacin	Vancomycin	Linezolid
S. aureus	7	25	-	60	100	-	100	-	25	50	-	100	100
	72	13	-	58	33	-	82	-	34	62	45	100	100
	9	20	-	33	100	-	0	-	14	50	0	100	100
	4	0	-	0	100	-	-	-	0	-	0	100	100
	5	33	-	60	100	-	0	-	25	50	0	-	100
Enterococcus spp.	2	100	-	-	-	100	100	-	-	-	50	-	50
	10	0	66	-	-	66	100	-	-	50	0	100	100
	3	-	0	-	-	0	0	-	-	-	-	100	100
	3	-	0	-	-	0	0	-	-	-	-	100	100
	0	-	-	-	-	-	-	-	-	-	-	-	-
Coagulase Negative Staphylococci	29	29	-	53	100	-	100	-	50	73	100	89	100
	230	22	-	42	50	-	87	100	26	58	49	95	99
	28	5	-	15	-	-	80	-	25	36	33	100	100
	18	0	-	8	-	-	66	-	29	37	0	100	100
	10	17	-	29	-	-	100	-	0	33	100	100	100

OPD
IPD
ICU
NICU
PICU

ICU = NICU + PICU

PERCENTAGE SENSITIVITY

GNB	Total Isolates (n)	Antimicrobials																			
		Ampicillin	Cefotaxime	Ceftazidime	Ceftriaxone	Cefepime	Gentamicin	Amikacin	Netilmicin	Azithromycin	Ciprofloxacin	Ofloxacin	Tobramycin	Nalidixic Acid	Chloramphenicol	Cotrimoxazole	Aztreonam	Pip + Taz	Imepenem	Meropenem	Colistin
S. Typhi	29	100	100	-	100	100	-	100	-	41	92	87	-	22	92	100	-	100	-	-	-
	29	33	100	-	100	-	-	100	100	53	84	100	-	12	40	100	-	100	100	100	-
	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Klebsiella spp.	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	66	-	14	-	-	6	24	32	0	-	13	10	-	-	0	19	-	43	74	74	50
	29	-	0	-	-	0	0	33	50	-	0	0	-	-	0	0	0	0	40	37	0
	13	-	-	-	-	0	0	15	20	-	-	0	-	-	0	0	0	0	17	20	-
	16	-	0	-	-	0	-	50	71	-	0	-	-	-	0	-	0	0	75	66	0
E. coli	4	-	-	-	-	0	0	75	67	-	-	0	-	-	-	50	-	-	-	-	-
	17	-	27	-	-	27	33	56	0	-	33	40	-	-	50	15	-	80	100	100	-
	6	-	0	-	-	0	50	83	100	-	0	0	-	-	60	-	50	100	100	-	-
	3	-	0	-	-	0	-	100	100	-	-	0	-	-	-	33	-	100	100	100	-
	3	-	-	-	-	-	50	66	100	-	0	-	-	-	-	100	-	0	100	100	-
Citrobacter spp.	1	-	100	-	-	100	100	100	0	-	100	100	-	-	100	100	-	100	100	100	100
	26	-	20	0	-	6	0	19	0	-	0	75	0	-	100	19	-	20	87	90	100
	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pseudomonas spp.	4	-	-	100	-	75	0	75	100	-	100	100	75	-	100	-	-	66	100	50	-
	28	-	40	85	-	76	71	81	75	-	100	80	78	-	66	-	-	90	100	92	100
	2	-	-	0	-	0	-	0	0	-	-	0	0	-	-	-	-	0	50	100	-
	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2	-	-	0	-	0	-	0	0	-	-	0	0	-	-	-	-	0	50	100	-
Acinetobacter spp.	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	13	-	0	-	-	66	60	58	66	-	-	50	-	-	-	-	0	75	71	71	-
	3	-	-	-	-	-	50	100	50	-	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	50	100	50	-	-	-	-	-	-	-	-	-	-	-	-

URINE

JANUARY-DECEMBER 2008

Out-Patient Units

TOTAL SAMPLES	1799	%
POSITIVES	350	19.5%
MIXED GROWTHS	470	26.1%
NO GROWTHS	979	54.4%

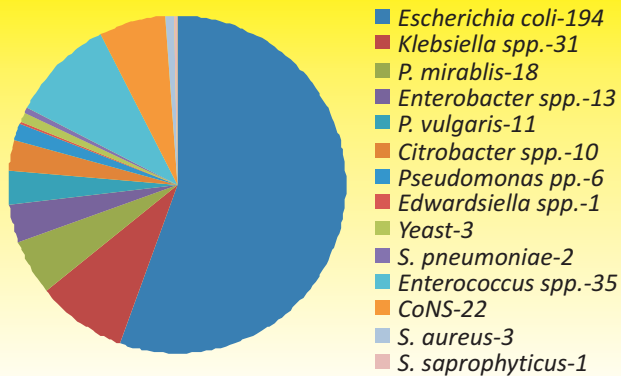
Non-ICU Inpatient Units

TOTAL SAMPLES	906	%
POSITIVES	204	22.5%
MIXED GROWTHS	163	18%
NO GROWTHS	539	59.5%

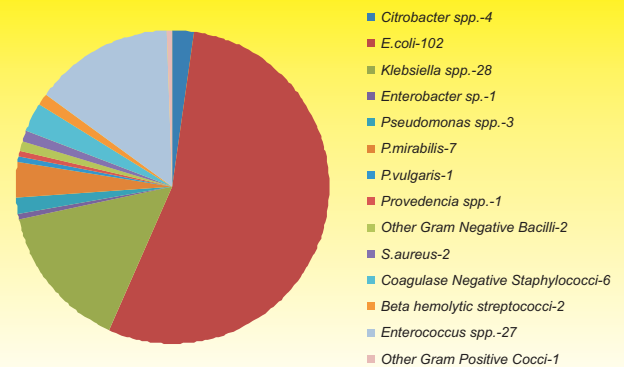
Intensive Care Units

TOTAL SAMPLES	84	%
POSITIVES	15	17.7%
MIXED GROWTHS	8	9.6%
NO GROWTHS	61	72.7%

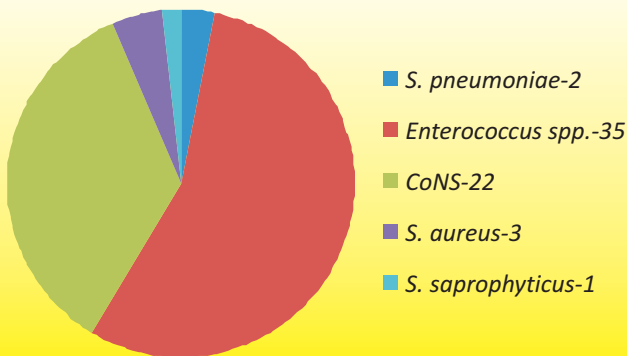
All Urine Isolates - Outpatients



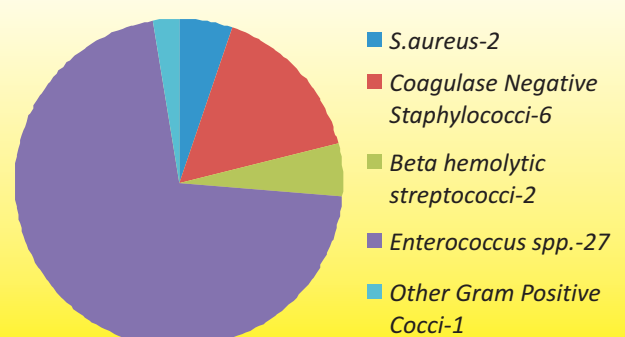
All Urine Isolates - Inpatients



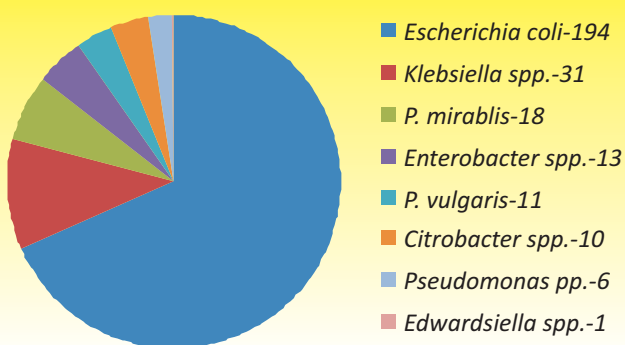
Gram Positive Bacteria Isolated in Urine - Outpatients



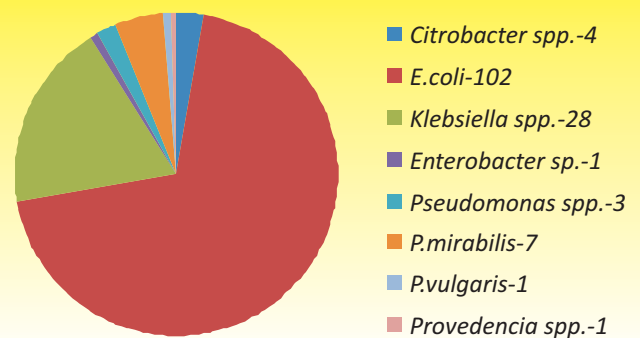
Gram Positive Bacteria Isolated in Urine - Inpatients



Gram Negative Bacteria Isolated in Urine - Outpatients



Gram Negative Bacteria Isolated in Urine - Inpatients



URINE

JANUARY-DECEMBER 2008

PERCENTAGE SENSITIVITY															
GPC	Total Isolates (n)	Antimicrobials													
		Penicillin	Ampicillin	Oxacillin	Cotrimoxazole	Gentamicin	Gentamicin High	Amikacin	Netilmicin	Ciprofloxacin	Ofloxacin	Norfloxacin	Vancomycin	Linezolid	Nitrofurantoin
<i>S. aureus</i>	3	0	-	33	33	-	-	100	100	0	0	0	100	100	-
	2	0	-	50	0	-	-	-	-	100	-	-	100	100	100
	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Enterococcus spp.</i>	35	8	16	-	-	50	56	100	100	17	0	7	100	100	88
	27	0	0	-	-	-	36	0	-	17	0	0	100	100	81
	3	0	0	-	-	-	0	-	-	-	-	-	100	100	-
	2	0	0	-	-	-	0	-	-	-	-	-	100	100	-
	1	0	-	-	-	-	-	-	-	-	-	-	100	100	-
<i>Coagulase Negative Staphylococci</i>	22	0	-	47	14	0	-	87	100	42	-	0	100	100	100
	5	0	-	33	0	100	-	50	-	0	-	-	100	100	-
	2	-	-	0	0	0	-	-	-	0	-	-	50	100	-
	1	-	-	0	0	0	-	-	-	-	-	-	0	-	-
	1	-	-	0	-	-	-	-	-	0	-	-	100	100	-
PERCENTAGE SENSITIVITY															
GNB	Total Isolates (n)	Antimicrobials													
		Ampicillin	Cefotaxime	Cefepime	Gentamicin	Amikacin	Ciprofloxacin	Norfloxacin	Cotrimoxazole	Netilmicin	Pip + Taz	Imepinem	Meropenem	Nitrofurantoin	Carbenicillin
<i>Klebsiella spp.</i>	31	0	40	40	75	69	30	38	-	100	33	100	100	25	-
	26	0	10	18	18	39	17	28	24	100	35	100	100	29	-
	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>E. coli</i>	194	3	22	43	34	51	9	12	14	45	55	96	95	61	-
	101	0	17	17	27	43	9	13	13	39	50	91	97	52	-
	2	-	0	-	-	50	-	0	0	100	0	0	0	0	-
	1	-	0	-	-	0	-	0	0	-	0	0	0	0	-
	1	-	-	-	-	100	-	-	0	100	-	-	-	-	-
<i>Citrobacter spp.</i>	10	100	60	100	100	70	75	80	40	50	50	66	50	37	-
	4	-	0	0	-	25	50	0	0	100	33	33	50	0	-
	2	-	-	0	-	0	0	0	50	0	0	100	-	100	-
	1	-	-	-	-	0	-	0	0	0	-	-	-	100	-
	1	-	-	0	-	0	0	-	100	-	0	100	-	-	-
<i>Proteus spp.</i>	18 (<i>P. mirabilis</i>)	12	66	100	100	87	33	40	0	100	66	100	100	88	-
	10 (<i>P. vulgaris</i>)	-	75	66	50	66	20	0	0	75	75	100	100	0	-
	7 (<i>P. mirabilis</i>)	0	50	-	-	71	-	33	0	100	0	100	0	100	0
	1 (<i>P. vulgaris</i>)	-	0	0	0	0	0	-	0	-	-	100	100	0	-
	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Enterobacter spp.</i>	13	0	55	80	100	69	25	44	-	100	40	100	100	31	-
	1	-	-	-	0	0	-	-	0	0	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Pseudomonas spp.</i>	6	-	0	100	100	66	-	66	-	100	-	-	-	0	25
	3	-	-	-	0	66	-	0	-	-	100	50	100	0	0
	1	-	-	-	-	0	-	0	-	-	0	100	100	0	0
	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1	-	-	-	-	0	-	0	-	-	0	100	100	0	0

OPD
IPD
ICU
NICU
PICU

ICU = NICU + PICU

RESPIRATORY

JANUARY-DECEMBER 2008

Out-Patient Units

TOTAL SAMPLES	36	%
POSITIVES	14	38.9%
MIXED GROWTHS	4	11.1%
NORMAL GROWTHS	6	16.7%
NO GROWTHS	12	33.3%

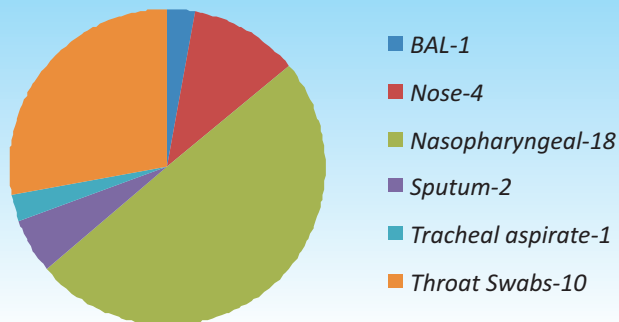
Non-ICU Inpatient Units

TOTAL SAMPLES	508	%
POSITIVES	185	36.4%
MIXED GROWTHS	48	9.5%
NORMAL GROWTHS	31	6.1%
NO GROWTHS	244	48%

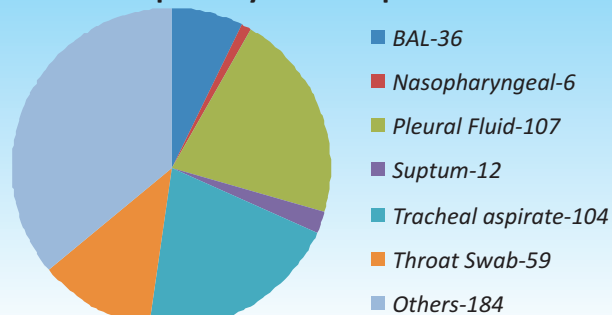
Intensive Care Units

TOTAL SAMPLES	252	%
POSITIVES	112	44.4%
MIXED GROWTHS	27	10.8%
NO GROWTHS	113	44.4%

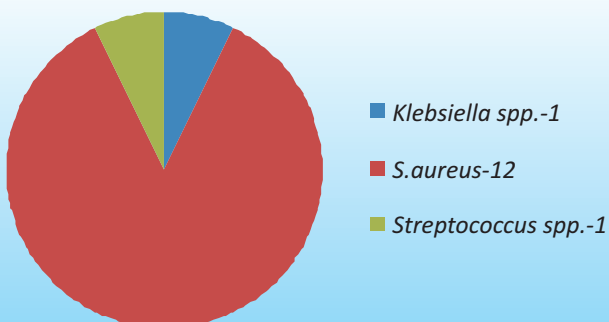
Respiratory Sites - Outpatients



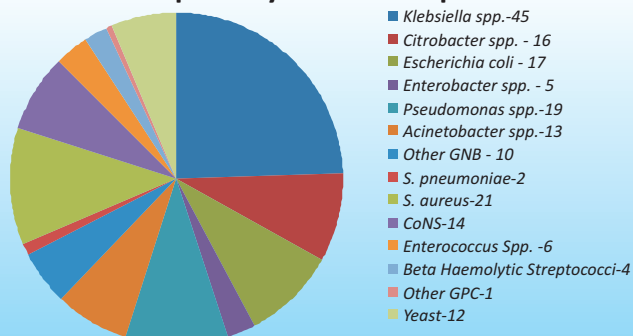
Respiratory Sites - Inpatients



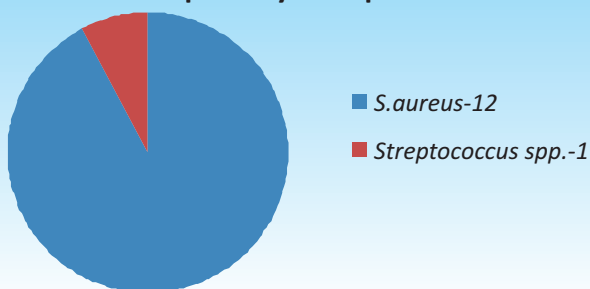
All Respiratory Isolates - Outpatients



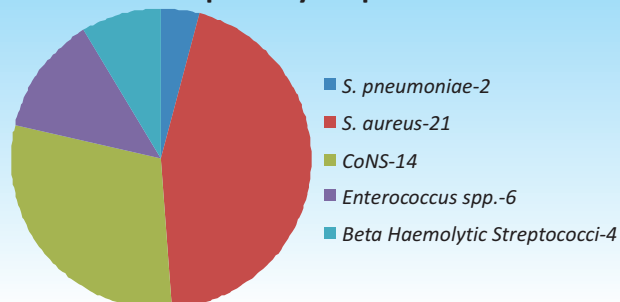
All Respiratory Isolates - Inpatients



Gram Positive Bacteria Isolated in Respiratory - Outpatients



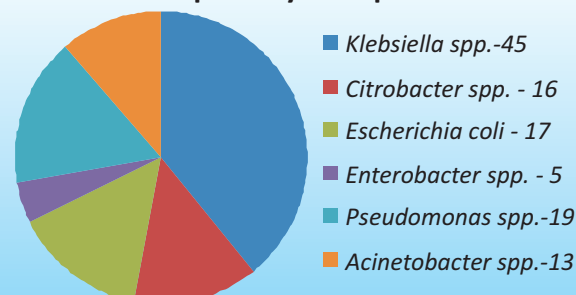
Gram Positive Bacteria Isolated in Respiratory - Inpatients



Gram Negative Bacteria Isolated in Respiratory - Outpatients



Gram Negative Bacteria Isolated in Respiratory - Outpatients



PERCENTAGE SENSITIVITY

GPC	Total Isolates (n)	Antimicrobials													
		Penicilin	Ampicillin	Oxacillin	Cefazolin	Gentamicin	Gentamicin High	Amikacin	Erythromycin	Clindamycin	Cotrimoxazole	Ciprofloxacin	Chloramphenicol	Vancomycin	Linezolid
S. aureus	12	33	-	91	-	-	-	100	58	100	83	55	100	100	100
	21	17	-	75	83	100	-	77	28	92	21	36	-	100	100
	2	-	-	0	-	-	-	-	-	-	0	-	-	100	100
	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2	-	-	0	-	-	-	-	-	-	0	-	-	100	100
Enterococcus spp.	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	6	0	0	-	-	-	33	0	0	0	-	-	-	100	100
	2	0	100	-	-	-	0	-	-	-	-	-	-	100	100
	2	0	100	-	-	-	0	-	-	-	-	-	-	100	100
	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coagulase Negative Staphylococci	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14	12	-	30	-	100	-	100	20	70	43	40	-	100	100
	8	0	-	12	-	-	-	-	33	100	66	0	-	100	100
	7	0	-	14	-	-	-	-	33	100	60	0	-	100	100
	1	-	-	0	-	-	-	-	-	-	100	-	-	100	100

OPD
IPD
ICU
NICU
PICU

ICU = NICU + PICU

PERCENTAGE SENSITIVITY

GNB	Total Isolates (n)	Antimicrobials															
		Cefotaxime	Ceftazidime	Cefepime	Gentamicin	Amikacin	Tobramycin	Chloramphenicol	Ciprofloxacin	Gatifloxacin	Ofloxacin	Cotrimoxazole	Netilmicin	Pip + Taz	Imepenem	Meropenem	Colistin
<i>Klebsiella spp.</i>	1	-	-	-	-	100	-	-	-	-	-	0	-	-	-	-	-
	45	0	-	5	0	26	-	0	0	33	20	11	25	30	71	79	100
	33	0	-	0	7	19	-	-	0	17	-	15	0	0	56	100	-
	15	-	-	0	-	20	-	-	-	0	-	14	0	0	0	-	-
	18	0	-	0	7	19	-	-	0	22	-	17	0	0	62	100	-
<i>E. coli</i>	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	17	0	-	0	50	25	-	0	-	0	0	9	-	66	87	91	-
	8	0	-	0	0	0	-	-	0	0	0	25	0	66	66	60	100
	2	0	-	0	0	0	-	-	0	-	-	50	-	100	100	100	-
	6	0	-	0	0	0	-	-	-	0	0	17	0	60	60	50	100
<i>Citrobacter spp.</i>	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16	0	0	6	0	19	-	0	0	0	17	19	0	29	62	63	100
	7	0	-	0	33	50	-	-	50	-	-	60	0	50	33	33	-
	2	-	-	-	-	-	-	-	-	-	-	50	0	-	-	-	-
	5	0	-	0	33	50	-	-	50	-	-	33	-	50	33	33	-
<i>Enterobacter spp.</i>	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5	0	-	25	0	0	-	0	66	0	0	50	0	20	20	40	100
	3	0	-	0	-	66	-	-	-	-	-	0	0	0	100	50	-
	1	-	-	-	-	0	-	-	-	-	-	0	0	-	-	-	-
	2	0	-	0	-	100	-	-	-	-	-	0	-	0	100	50	-
<i>Acinetobacter spp.</i>	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	13	0	0	0	0	0	-	0	0	0	0	-	0	14	36	36	100
	13	0	-	33	0	14	-	0	0	0	0	-	0	50	33	50	100
	8	0	-	0	0	0	-	-	-	0	-	-	0	0	0	-	-
	5	0	-	50	-	33	-	0	0	0	-	-	0	50	50	50	100
<i>Pseudomonas spp.</i>	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	18	0	50	50	57	44	33	0	100	66	62	-	33	57	37	62	100
	21	-	75	50	-	9	12	0	-	7	50	-	29	50	67	67	100
	13	-	50	0	-	0	0	0	-	0	0	-	0	0	0	0	100
	8	-	100	100	-	25	33	0	-	20	100	-	50	50	100	7	100

PUS/OTHER SITES

JANUARY-DECEMBER 2008

Out-Patient Units

TOTAL SAMPLES	323	%
POSITIVES	196	60.7%
MIXED GROWTHS	12	3.7%
NO GROWTHS	115	35.6%

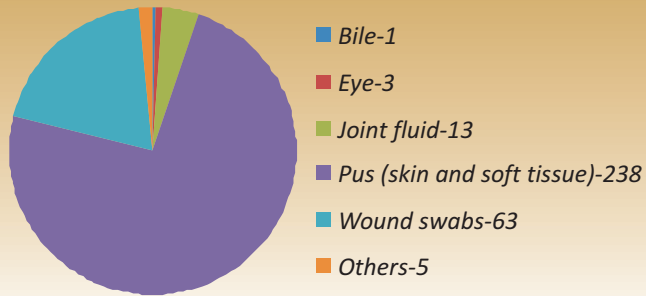
Non-ICU Inpatient Units

TOTAL SAMPLES	642	%
POSITIVES	273	42.5%
MIXED GROWTHS	35	5.5%
NO GROWTHS	334	52%

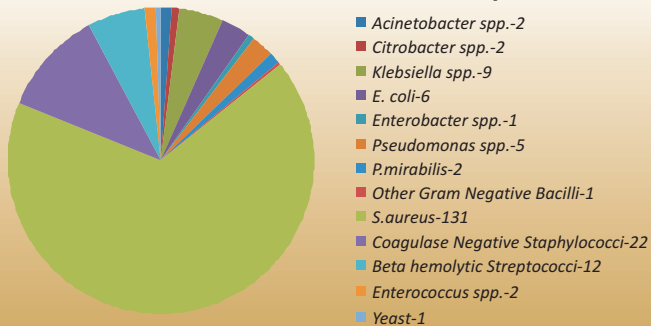
Intensive Care Units

TOTAL SAMPLES	48	%
POSITIVES	13	27.2%
MIXED GROWTHS	4	8.3%
NO GROWTHS	31	64.5%

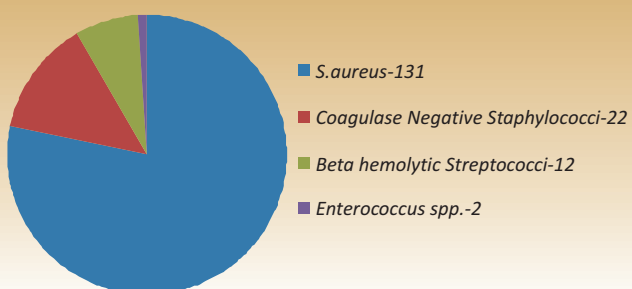
Pus/Other Sites - Outpatients



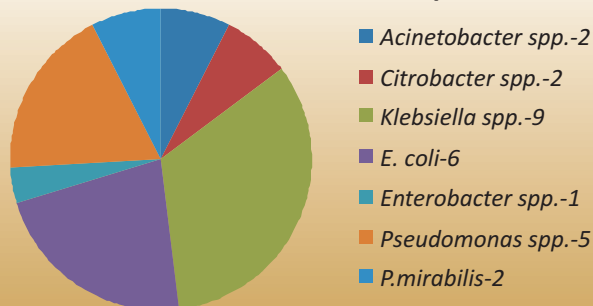
All Pus/Other Sites Isolates - Outpatients



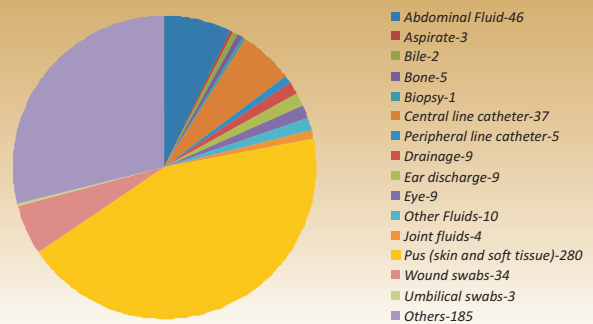
Gram Positive Bacteria Isolated in Pus/Other Sites - Outpatients



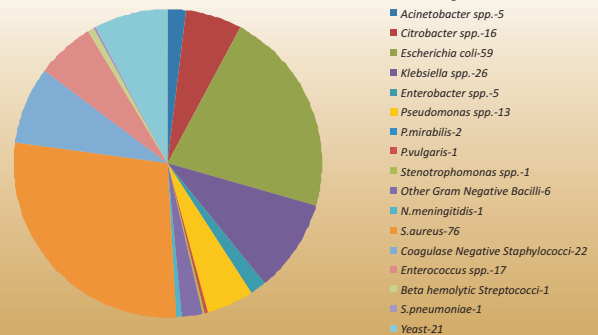
Gram Negative Bacteria Isolated in Pus/Other Sites - Outpatients



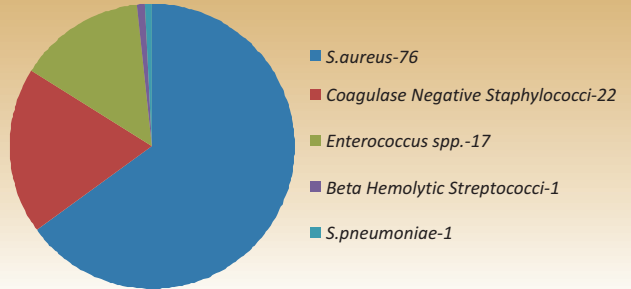
Pus/Other Sites - Inpatients



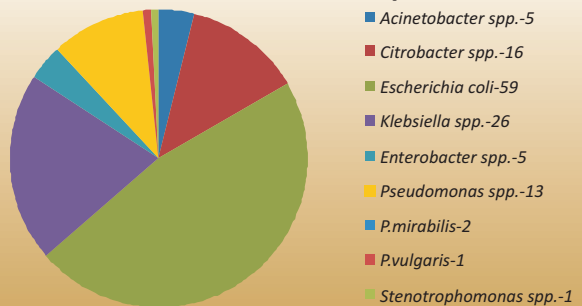
All Pus/Other Sites Isolates - Inpatients



Gram Positive Bacteria Isolated in Pus/Other Sites - Inpatients



Gram Negative Bacteria Isolated in Pus/Other Sites - Inpatients



PERCENTAGE SENSITIVITY

GPC	Total Isolates (n)	Antimicrobials													
		Penicilin	Ampicillin	Oxacillin	Gentamicin	Gentamicin High	Amikacin	Erythromycin	Clindamycin	Cotrimoxazole	Ciprofloxacin	Ofloxacin	Chloramphenicol	Vancomycin	Linezolid
S. aureus	131	1	-	94	64	-	95	50	95	34	58	45	-	100	100
	76	8	-	82	66	-	79	53	93	28	35	36	100	97	100
	3	0	-	100	-	-	-	0	100	0	-	0	-	100	100
	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3	0	-	100	-	-	-	0	100	0	-	0	-	100	100
Enterococcus spp.	2	0	-	-	-	0	0	-	-	-	-	-	-	100	100
	17	0	14	-	-	25	-	0	0	-	0	0	-	100	100
	5	0	0	-	-	0	-	-	-	-	-	100	-	50	100
	4	0	0	-	-	0	-	-	-	-	-	-	-	50	100
	1	0	-	-	-	-	-	-	-	-	-	100	-	-	100
Coagulase Negative Staphylococci	22	8	-	67	-	-	88	50	82	10	63	0	-	100	100
	22	10	-	37	0	-	100	7	66	25	8	60	-	92	100
	4	0	-	33	0	-	-	0	100	50	-	-	-	100	100
	3	0	-	50	-	-	-	0	100	100	-	-	-	100	100
	1	-	-	0	0	-	-	-	-	0	-	-	-	100	100

OPD
IPD
ICU
NICU
PICU

ICU = NICU + PICU

PERCENTAGE SENSITIVITY

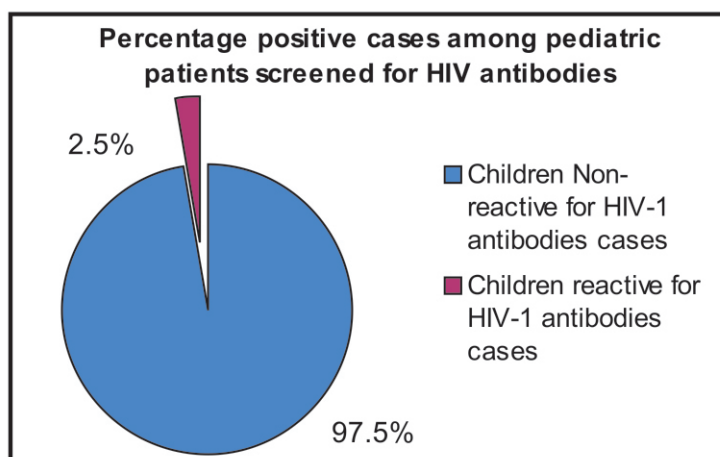
GNB	Total Isolates (n)	Antimicrobials																
		Cefotaxime	Ceftazidime	Cefuroxime	Cefepime	Gentamicin	Amikacin	Tobramycin	Chloramphenicol	Ciprofloxacin	Gatifloxacin	Ofloxacin	Cotrimoxazole	Netilmicin	Pip + Taz	Imepinem	Meropenem	Colistin
<i>Klebsiella spp.</i>	9	25	-	50	66	0	55	-	100	-	-	75	37	-	71	10	100	-
	26	9	-	0	13	10	16	-	0	14	0	28	19	-	22	91	94	100
	9	0	-	0	0	0	17	-	-	100	0	-	55	0	0	17	100	100
	6	-	-	0	0	0	0	-	-	100	0	-	83	-	0	0	-	100
	3	0	-	-	0	0	33	-	-	-	0	-	0	0	0	100	100	-
<i>E. coli</i>	6	33	-	33	20	33	66	-	100	0	0	-	17	-	66	100	100	-
	59	8	-	8	13	33	51	-	66	0	0	10	8	50	44	94	96	100
	2	-	-	-	-	0	0	-	-	-	0	-	0	-	-	-	-	-
	2	-	-	-	-	0	0	-	-	-	0	-	0	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Citrobacter spp.</i>	2	-	-	50	100	-	100	-	-	-	-	-	50	-	100	100	-	-
	16	0	-	0	0	0	27	-	0	0	50	0	9	0	10	100	100	-
	3	0	-	-	100	-	33	-	-	-	-	100	66	0	-	-	-	-
	1	-	-	-	-	-	0	-	-	-	-	-	100	0	-	-	-	-
	2	0	-	0	100	-	50	-	-	-	-	100	50	0	-	-	-	-
<i>Enterobacter spp.</i>	1	0	-	-	0	0	0	-	-	-	-	-	-	-	100	100	100	-
	5	20	-	0	40	0	25	-	0	33	0	50	50	100	25	100	100	-
	1	100	-	-	100	100	100	-	-	-	-	-	100	-	100	100	100	-
	1	100	-	-	100	100	100	-	-	-	-	-	100	-	100	100	100	-
	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Acinetobacter spp.</i>	2	-	-	-	0	0	0	-	-	-	0	-	0	0	0	0	-	-
	5	0	-	-	25	0	25	-	-	-	100	0	0	100	66	66	100	-
	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Pseudomonas spp.</i>	5	100	100	-	100	-	80	33	-	-	-	50	-	25	80	100	100	100
	13	-	55	-	71	50	40	42	0	-	50	25	-	11	100	50	50	86
	2	100	100	-	100	-	0	50	-	-	0	-	-	100	100	100	-	100
	1	-	-	-	-	-	0	0	-	-	0	-	-	-	-	-	-	100
	1	100	100	-	100	-	-	100	-	-	-	-	-	100	100	100	-	-

CHACHA NEHRU BAL CHIKITSALAYA

ICTC Center at CNBC

Data generated by ICTC center at CNBC is being presented here. The data is from January – December 2007. For confirmed HIV status for children less than 18 months is not detailed here as data of confirmation of results by other techniques or follow up visits was not available.

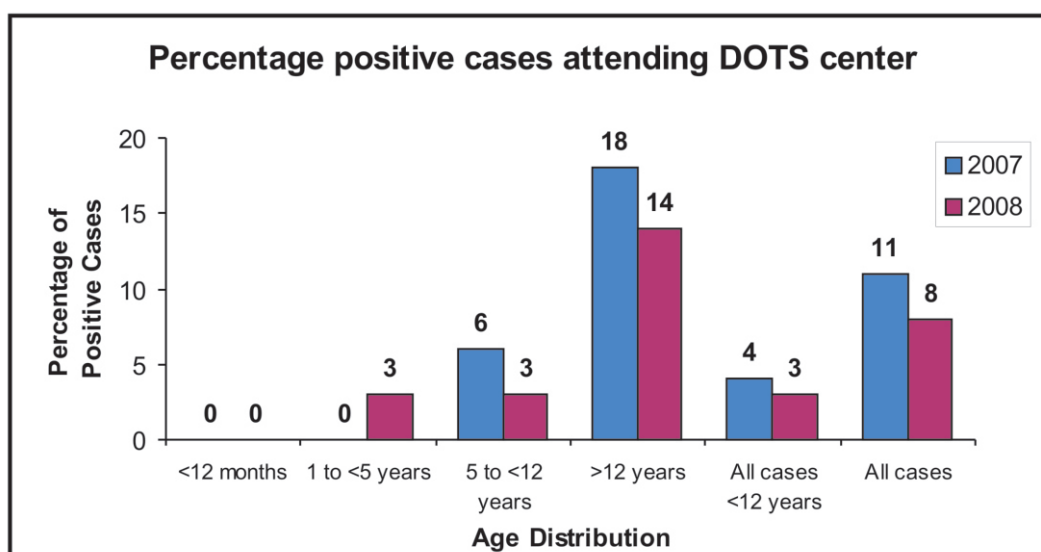
Among the 236 children screened for HIV infection in ICTC six (2.5%) children above the age of 18 months were found reactive for anti-HIV-1 antibodies. Among these HIV positive cases mother to child transmission (MTCT) was documented in four children. In other two cases one child was an adopted child (parent status unknown) and other's parents were not screened. Although this data is very small data to conclude significantly however, transmission of HIV infection of mother to child transmission is major cause of HIV in our setup. Program for prevention of MTCT needs urgent attention.



DOTS Center at CNBC

There has been no case of positive smear for Acid fast bacilli from gastric aspirates among children below one year of age. The data reflects limited role of gastric aspirate microscopy for this age group children in the diagnosis of tuberculosis. The data shows other diagnostic methodologies should be probed for diagnosis of children in children below one year of age.

Decline in the percentage positivity of acid fast smears in the year 2008 in children above five years of age. This change is attributed to better utilisation of DOTS services by the hospital (more than 100% increase in sample load).

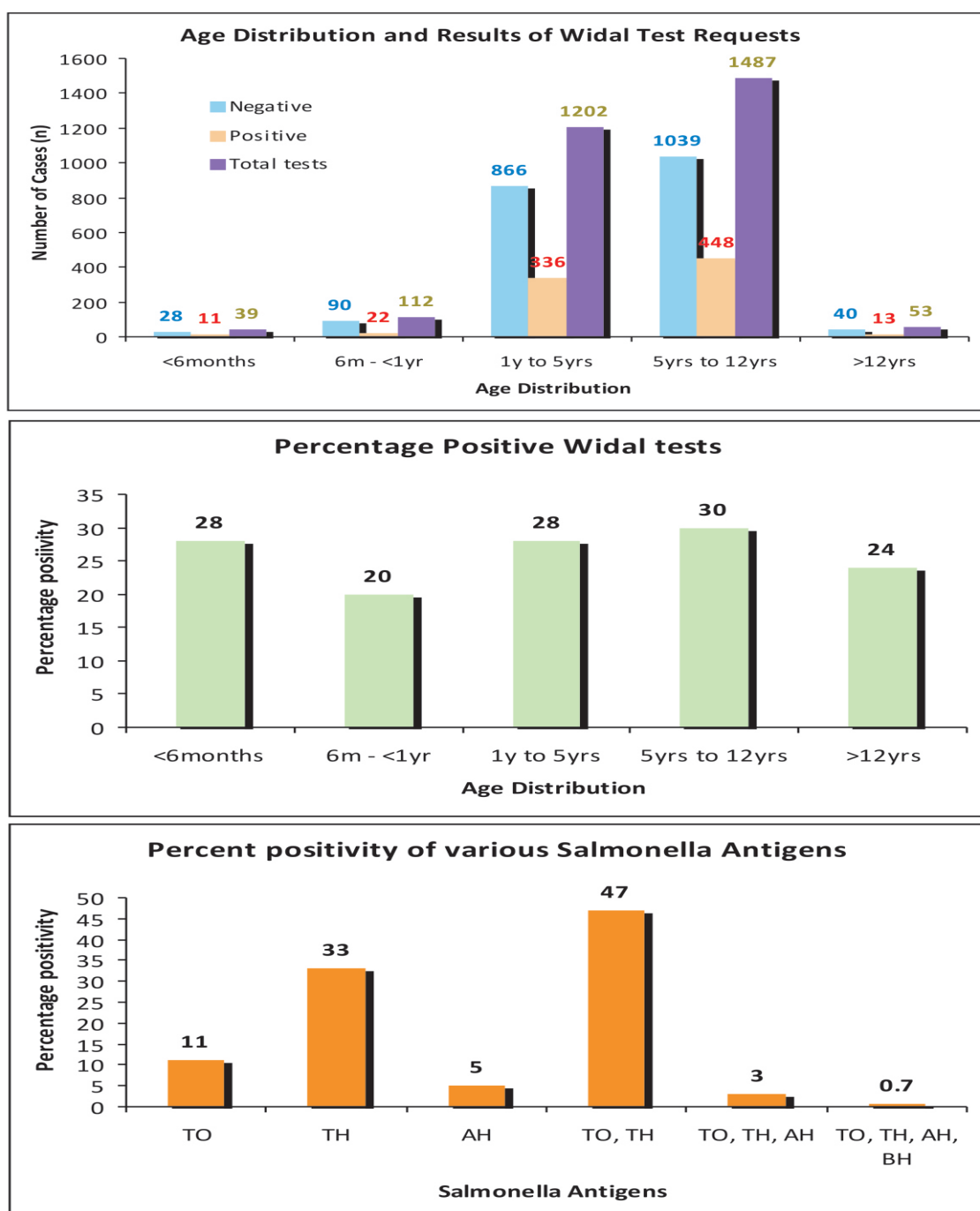


CHACHA NEHRU BAL CHIKITSALAYA

Widal Test

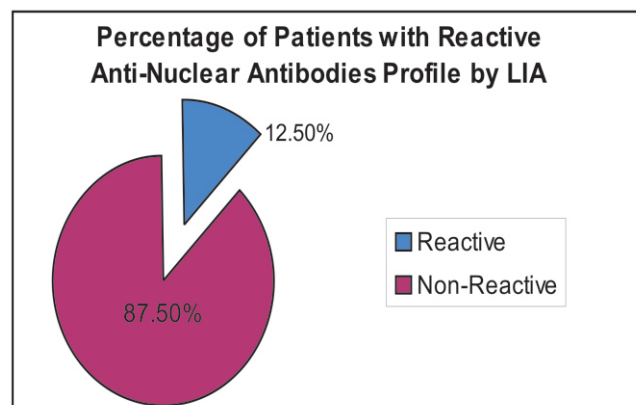
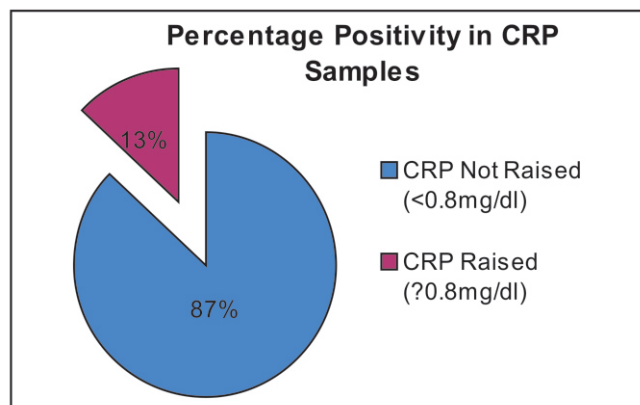
Results from our laboratory shows that in Widal test the antibodies titers were raised (28%) in children between 1-5 yr age group (raised levels means $\geq 1/160$). Among these patients with raised titers ~ 86% of patients had raised titers for Salmonella Typhi H and O/H alone or TO antigen alone. About 5% patients had antibodies raised against Salmonella Paratyphi AH antigen

Interesting finding was raised antibody titers against Salmonella antigens in children below 6months of age Almost 25% of total tested samples in this age group showed raised titer (raised levels means $\geq 1/160$). These findings suggest that Salmonella infections are endemic in this part of Delhi. Occurrence of percentage of samples with increased titres was more or less similar in different age groups of children.

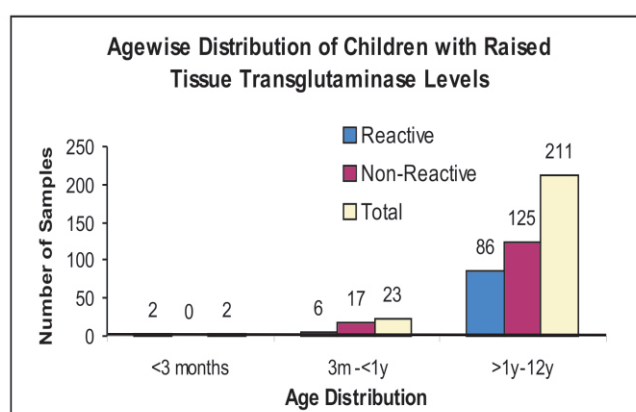
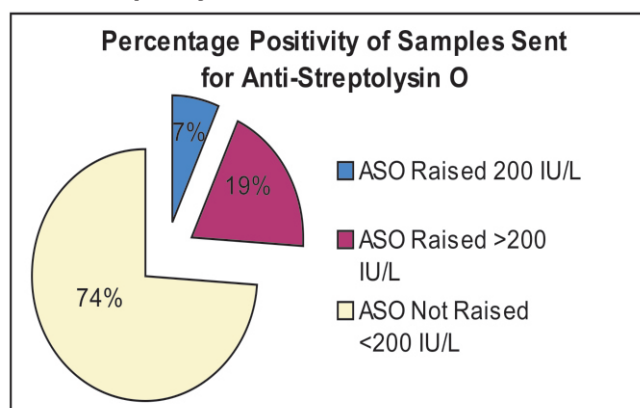


CHACHA NEHRU BAL CHIKITSALAYA

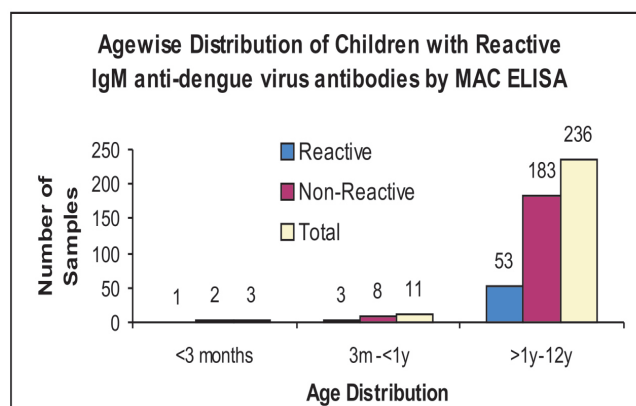
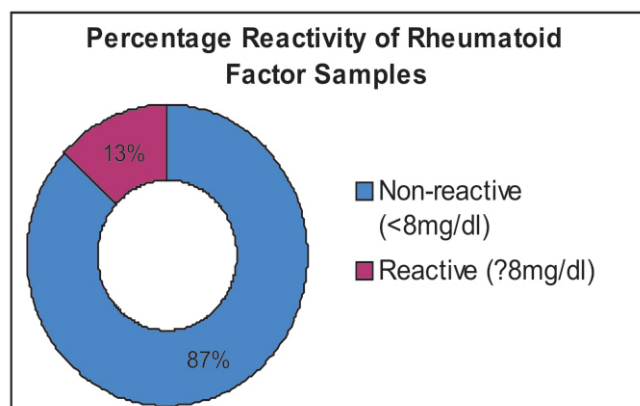
C- Reactive Protein



Anti-Streptolysin O Levels

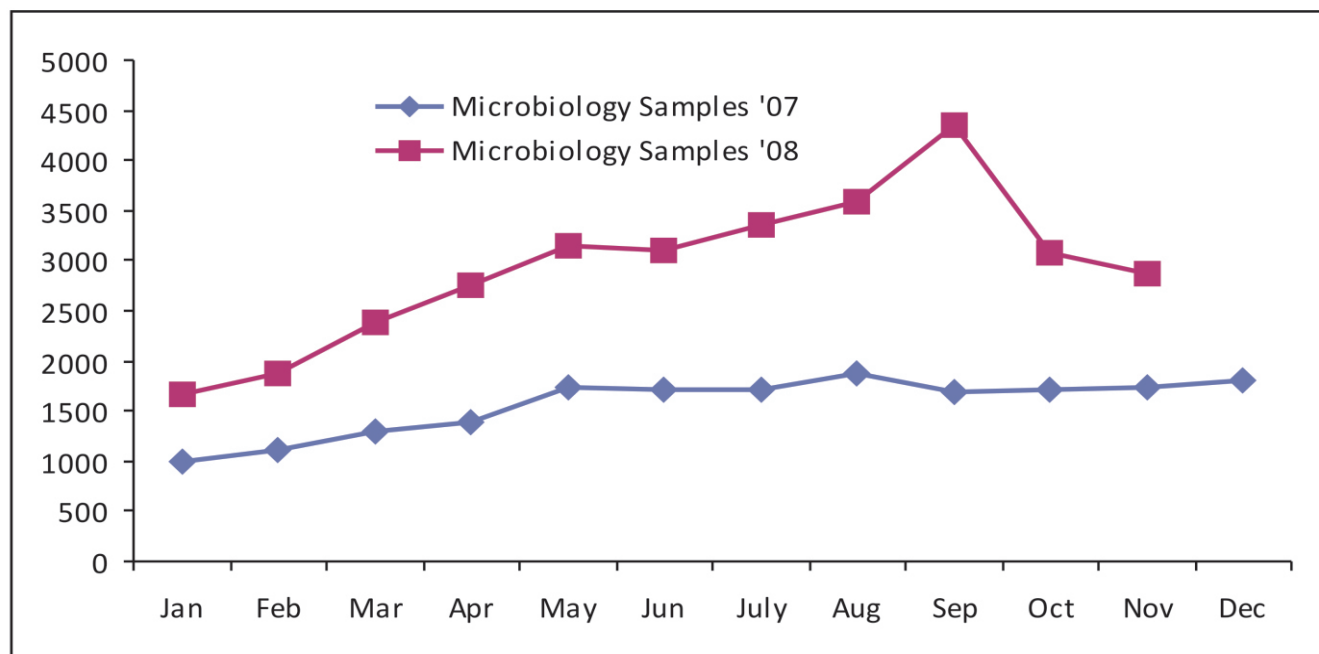


Samples Reactive for Rheumatoid factor

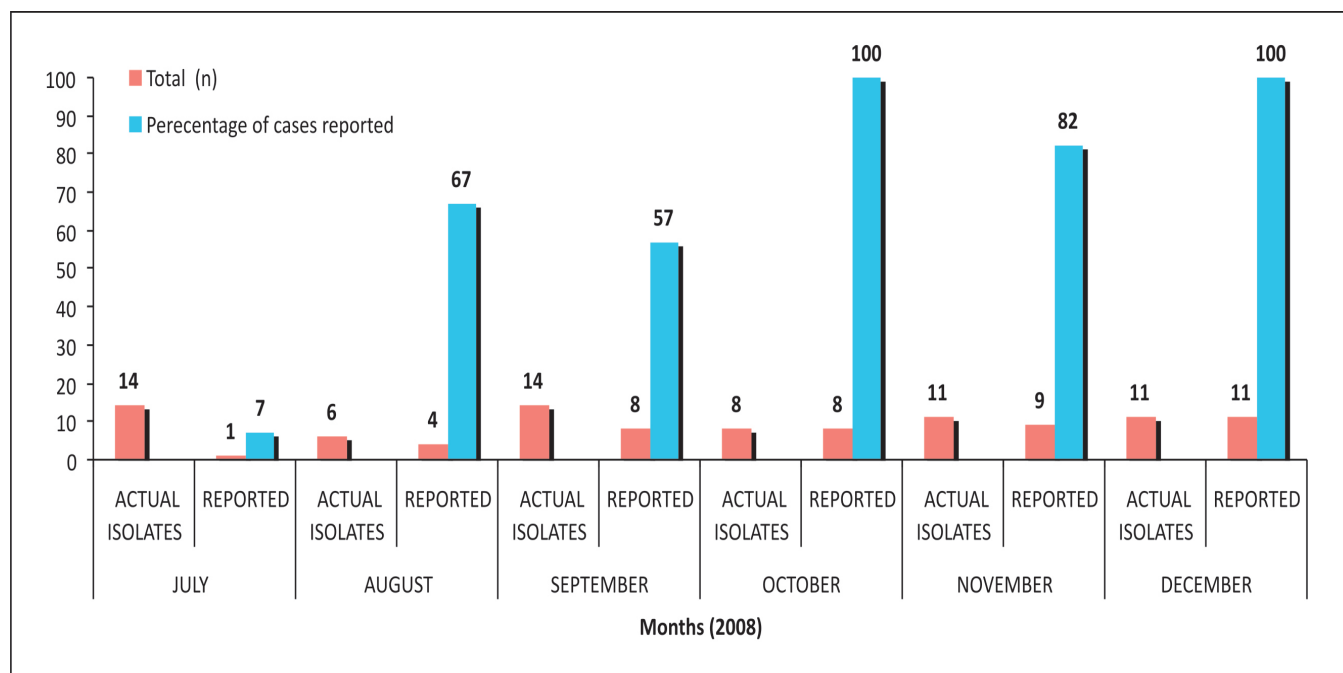


CHACHA NEHRU BAL CHIKITSALAYA

MONTHLY CENSUS



PANIC REPORTING



CHACHA NEHRU BAL CHIKITSALAYA

HOSPITAL INFECTION CONTROL PROGRAMME AT CNBC

Introduction: Hospital infection control committee was constituted under surveillance and infection control division (SICD) in September 2007 by the Medical Superintendent, C.N.B.C. Dr.K.K.Kalra. The idea was mooted to have HICC as per international standards for effective hospital infection control at C.N.B.C.

Purpose:

- ❖ To maintain standards in infection control measure and minimize hospital acquired infections inpatients and staff.
- ❖ To identify the role and responsibilities of key personnel involved in the prevention control of infection.
- ❖ To frame antibiotic policy and monitor its adherence by the prescribing authorities.

C.N.B.C. has a multi disciplinary infection control committee that has 11 members including chairperson Dr. K. K. Kalra whose keen interest in enforcement of hospital infection control practices and awareness among hospital staff and visitors has made the programme successful.

The infection control team meets at least once in a month or more frequently as necessary. The infection control team monitors hospital infection control practices, analysing the comparative data of HIC indicators and outcomes of hospital infection control records to provide better health care.

Benefits:

- ❖ An appropriate antibiotic policy has been established and implemented, which helps in rational use of antibiotics. (usage of some antibiotics has reduced considerably and for few others it has practically stopped)
- ❖ Surveillance activities are specially directed towards the defined high risk areas which provides cumulative data helps in preventing hospital acquired infection and providing the quality of work
- ❖ Induction training to the new staff helps healthcare workers to understand the importance of infection control programme and provide better health care to patient and a safe environment to all.
- ❖ Bio waste management programme has been implemented, that has helped the health care workers for proper segregation of bio medical waste which as a result has decreased the load of biomedical waste considerably. Further, it has reduced the exposure risks associated with improper biomedical waste management.
- ❖ Active surveillance programme for operation theatres is well placed.
- ❖ CSSD sterilization process has been monitored by chemical and biological indicators. Various other indicators are being used as per international standards and requirements. Active surveillance programme for CSSD is also in place that helps in maintaining the quality of sterilization processes along with storage and transport of sterile supplies.
- ❖ Laboratory based surveillance methods are being used for monitoring hospital acquired infections.

- ❖ Monitoring of all culture positive cases on time helps to identify hospital acquired infection and upgradation/de-escalation of antibiotics.
- ❖ Ward based surveillance is also in place (e.g.VAP scoring sheet).
- ❖ Health assessments of all health care workers are being done periodically and immunisation programme is in place to immunise healthcare workers (including class IV employees and other outsourced staff).
- ❖ Other activities of hospital infection control programme include screening of kitchen workers, monitoring of potable water supplies and medical gas air.

Goals:

- ❖ To reduce the rate of hospital acquired infection at a minimum as per international standards.
- ❖ To provide a safe environment to healthcare workers, patients and visitors.
- ❖ To be up to date with newer techniques to improve the quality of work and regular teaching of the hospital staff, patients and their relatives.
- ❖ To evolve newer cost effective techniques of hospital infection control.

Bornali Saikia

Chief Infection Control Nurse