



**Volume 3; Issue 1**  
**31/3/2025**

# MAMC-Microbes

Official Newsletter of Department of Microbiology,  
Maulana Azad Medical College, New Delhi

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*Dr. Poornima Sen*  
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*Dr. Ashish William*  
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*Dr. Madhumita Debbarma*

**Senior Residents**

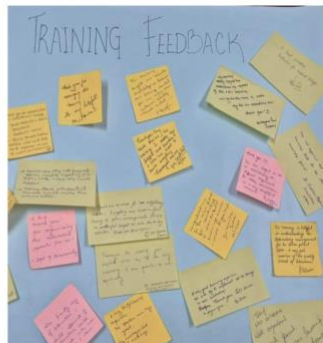
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*Dr. Devyani Puri*  
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*Dr. Pratima*  
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*Dr. Anmol Guleria*  
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*Dr. Sneha Dey*  
*Dr. Naila Begum*

The Department of Microbiology brings to you the 3<sup>rd</sup> edition of its newsletter, presenting data from 1st January to 31<sup>st</sup> December 2024. We are grateful for all the inputs provided by other departments. This has helped us in adding new tests, services, and assays. The department has participated in multiple External Quality Assurance Programs giving exemplary performance and aims to provide quality assured services to the patients. The Department scored an average of 99% in IAMM-EQAS conducted by Sir Ganga Ram Hospital, and 94% in Tier-II- Antimicrobial Resistance (AMR)-EQAS conducted by CMC, Vellore.

The Department proudly hosted the 2<sup>nd</sup> Chapter Meet of IAMM Delhi Chapter on 10<sup>th</sup> August 2024, focusing on 'Quality Assurance in Clinical Microbiology'. The event brought together esteemed experts from the National Accreditation Board for Testing and Calibration Laboratories (NABL) and distinguished doctors to discuss best practices, challenges and advancements in ensuring accuracy and reliability in laboratory quality systems. A key highlight was the interactive session on establishment of quality systems and laboratory accreditation, emphasizing its role in Microbiology. This reinforced the commitment to maintaining high standards in diagnostic laboratories.

Dr. Sonal Saxena, IAMM secretary and Head, Department of Microbiology, MAMC, along with a distinguished team of clinicians, microbiologists and epidemiologists from across India, conducted a **Certificate course in Infection Prevention & Control** under the aegis of IAMM. This specialized training equipped clinicians, nurses, residents and microbiologists with essential skills to tackle the global challenge of healthcare-associated infections. The course emphasized the latest infection prevention strategies, enhancing patient safety and empowering professionals to lead effective infection control initiatives in healthcare settings.

- ❖ An **onsite training on Medical Laboratory System and Internal Audit** from 17th to 19th September 2024 in collaboration with Quality Council of India was organized in the Department with smooth coordination by Dr. Sonal Saxena and Dr. Poornima Sen, from the Department of Microbiology. The three-day continuous training focused on standards for medical laboratories and requirements for quality and competence as per **ISO 15189: 2022** while highlighting the practical implementation of these standards in respective laboratory and had interactive discussions on overcoming the various challenges of accreditation. It was attended by esteemed faculty and senior residents from the departments of Microbiology, Pathology and Biochemistry. Several valuable lectures were taken by dignitaries from the Quality Council of India.
- ❖ A role play activity was performed by **B.Sc. Nursing students of 3<sup>rd</sup> semester (Batch 2024)** on 4<sup>th</sup> October 2024 in view of **World Patient Safety Day**. The entire batch of nursing students actively participated in this activity, which commenced with an introductory talk on patient safety by Director Professor and HOD Microbiology Dr. Sonal Saxena. Several important topics focused on patient safety were discussed such as types of vacutainers for different diagnostic tests, transportation of specimens, read back policy during sharing of critical information and means to overcome miscommunication errors in clinical settings. It was attended by faculties from the departments of Microbiology, Medicine and Community Medicine along with students of MBBS Second Professional Batch 2022 who benefitted from the activity. Some glimpses from this activity are shared here...



## AWARDS AND HONOURS IN 2024

1. **Dr. Sonal Saxena** was selected for 1st Grand Challenges of India (GCI) program of “Women Leadership in STEM” cohort by Biotechnology Industry Research Assistance Council (BIRAC) under Dept of Science of Technology, GOI.
2. The Integrated Counselling & Testing Centre and the State Reference Laboratory for HIV were conferred with “**The Best Performing ICTC award**” and “**The Best Performing SRL award**” by the Delhi State AIDS Control Society (Govt. of NCT of Delhi) on the occasion of the World AIDS Day.
3. **Dr. Rohit Chawla**, Professor & Incharge HIV Laboratory was conferred with an award in recognition for a steadfast commitment to delivering exceptional services as part of Community Led Monitoring Project under the aegis of Delhi State AIDS Control Society and National AIDS Control Organization.
4. **1<sup>st</sup> Prize in IAMM Silver Jubilee for Best Paper in Parasitology** for paper entitled “Ensuring Accuracy: Lessons in Inter laboratory quality assurance for peripheral blood smears from the state malaria reference laboratory” in 47<sup>th</sup> Annual Conference of Indian Association of Medical Microbiologists on 21-24<sup>th</sup> November at Pune, India. **Authors: Meera, Pallavi, Siddiqui O, Saxena S.**
5. **1<sup>st</sup> Prize in Dr. Shrinivas Award for outstanding work on Antibiotic sensitivity testing** for paper entitled “The challenge of overcoming resistance: Assessing newer  $\beta$ -lactam/ $\beta$ -lactamase inhibitor combinations for treating Carbapenem-resistant organisms” in 2<sup>nd</sup> Academic Meet of Indian Association of Medical Microbiologists – Delhi Chapter on 10<sup>th</sup> August at Delhi, India. **Authors: Mitra S, Saxena S, Aggarwal P, Singh S, Kaim M, Sharma A.**
6. **Ashok Kumar Chakravarti Memorial award for best Poster for paper entitled** “Infectious profile of liver dysfunction and the clinical outcomes in children” in Indian Association of Medical Microbiologists – MICRO-D-CON on 17<sup>th</sup>-19<sup>th</sup> October 2024 at Delhi. **Authors: Swaraj A, Manchanda V, Saxena S.**
7. **1<sup>st</sup> Prize in Free MD poster category** for poster entitled ‘Utility of MALDI-TOF MS for the identification of anaerobic bacteria in deep seated infections’ in IAMM Delhi Chapter, 4th May 2024 at Delhi, India. **Authors: Shalini, Williams A, Siddiqui O, Mitra S, Aggarwal P, Saxena S.**
8. **3<sup>rd</sup> prize for poster titled** "Relationship between pre-operative surgical prophylaxis and surgical site infections in abdominal surgeries" at HISICON Delhi-NCR Chapter Meet held on 14th December 2024 at AIIMS, New Delhi. **Authors: Abhijit R, Mehra B, Kaur S, Manchanda V, Saxena S.**
9. **1<sup>st</sup> prize in Quiz**
  - **Dr. Anwesh Pattanaik** in 16<sup>th</sup> Annual Conference of Indian Association of Medical Microbiologists- Delhi Chapter ‘MICRO-D-CON’ on 19<sup>th</sup> October 2024 at New Delhi
  - **Dr. Masoom Nathani** in 2<sup>nd</sup> Academic meet of Indian Association of Medical Microbiologists- Delhi Chapter on 10<sup>th</sup> August 2024 at New Delhi.
  - **Dr. Nikita Yadav** in 1<sup>st</sup> Chapter meet of Indian Association of Medical Microbiologists Delhi-Chapter on 4<sup>th</sup> May 2024 at New Delhi



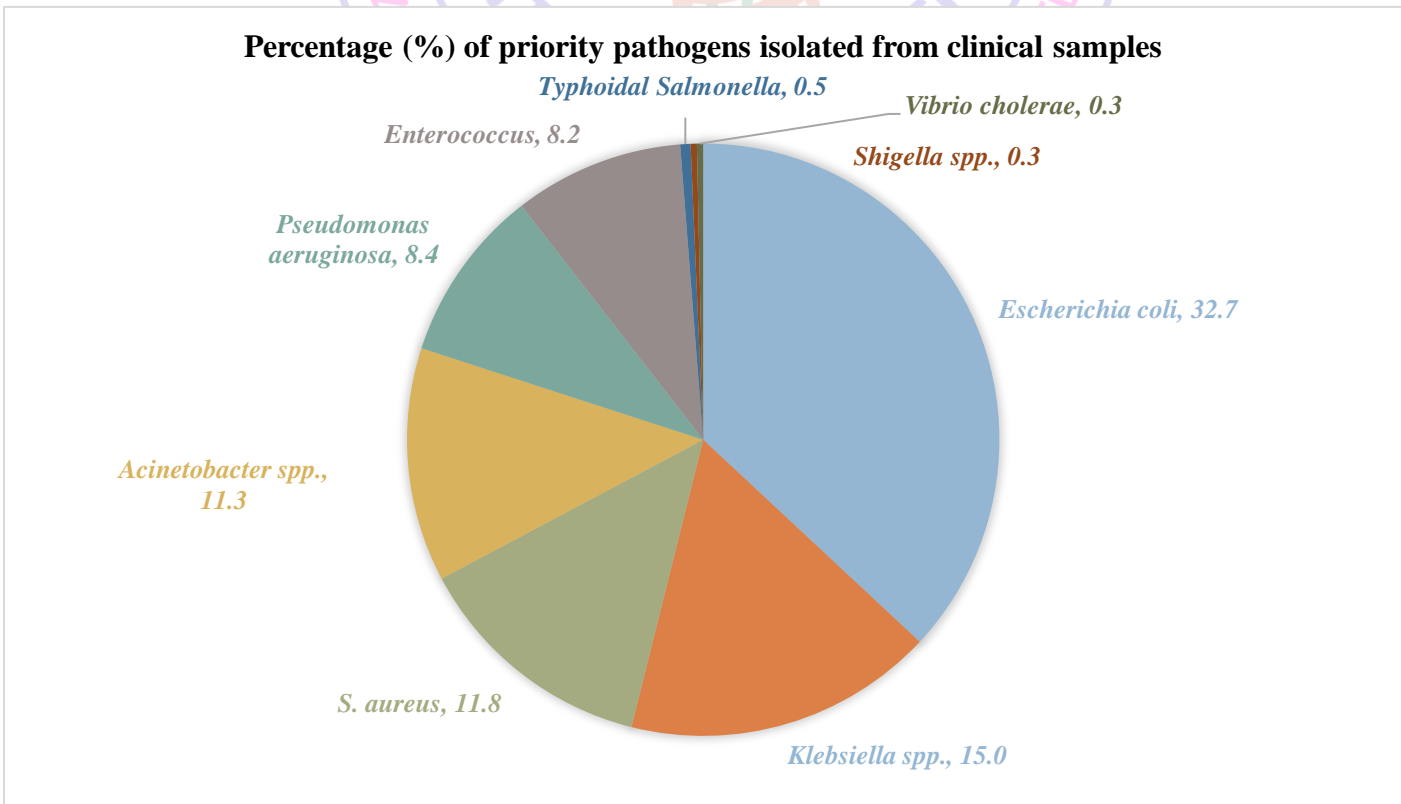
## PUBLICATIONS OF 2024

- **Sharma A, Manchanda V, Agarwal A, Kapoor A, Kumar S, Saxena S.** Blood borne infections and Hepatitis B virus immunization levels among medical students in India. *Indian J Med Microbiol.* 2024;47:100525.
- **Manchanda V,** Muralidharan J, Nischal N, Aggarwal K, Gupta S, Gupta N, Velayudhan A, Kaur H, Brijwal M, Chhabra M, Vishwanathan R, Dhodapkar R, Mahajan SK, Deol S, Sekhar JC, **Mitra S, Saxena S,** Kumar J, Garg A, Lodha R, Ravi V, Soneja M, Verghese VP, Rodrigues C. Approach towards surveillance-based diagnosis of acute respiratory illness in India: Expert recommendations. *Indian J Med Microbiol.* 2024;48:100548.
- **Saxena S, Aggarwal P, Mitra S, Singh S, Kaim M, Sharma A.** In vitro assessment of newer colistin-sparing antimicrobial agents for clinical isolates of carbapenem-resistant organisms. *J Infect Chemother.* 2024;30(12):1252-1258.
- **Aggarwal P, Saxena S, Nagi N.** Possible impact of revisions in disc diffusion breakpoints for aminoglycosides and piperacillin/tazobactam in the 33rd edition of CLSI M100 document on clinical reporting and use in Indian settings with low susceptibility. *Indian J Med Microbiol.* 2024;49:100602.
- **Gupta N, Manchanda V, Sinha R, Saxena S.** Aquatic whispers: Decoding skin manifestation of *Aeromonas hydrophila*. *Indian J Med Microbiol.* 2024;50:100658.
- **Manchanda V, Siddiqui O, Meena K, Sharma A, Saxena S.** Quality assurance of SARS-CoV-2 testing laboratories during the pandemic period in India - An experience from a designated provider laboratory. *Indian J Med Microbiol.* 2024;49:100577.
- **Mitra S, Bhagwan J, William A, Siddiqui O, Saxena S.** *Paeniclostridium sordellii* causing liver abscess: A rare case report in India. *Indian J Med Microbiol.* 2024;49:100595.
- **Nathani M, Manchanda V, Jorwal A, Saxena S, Kumar S.** Pulmonary cryptococcosis in chronic kidney disease. *Indian J Med Microbiol.* 2024;51:100688.
- **William A, Mitra S, Siddiqui O, Aggarwal P, Saxena S.** Utilization of MALDI-TOF MS in the etiological diagnosis of deep-seated anaerobic bacterial infections. *Indian J Med Microbiol.* 2024;52:100739.
- **Suman U, Sheoran L, Manchanda V, Saxena S.** Digital gangrene without sclerodactyly in the presence of anticentromere antibodies: A unique presentation of scleroderma. *Indian J Med Microbiol.* 2024;53:100769.
- Dibyashree D, Goyal N, Yadav R, Singh NP, Swain K, **Manchanda V,** Singh P. A rare case of pneumococcal keratitis in a patient with Herpes Zoster Ophthalmicus and compromised immune status. *Microbiologia Medica.* 2024;39(1).
- Jain A, Jain K, Jhurani D, Mishra A, Mohapatra S, **Sharma A, Manchanda V,** Sankar MJ, Agarwal R. Umbilical cord blood IgA levels and bacterial profile in preterm neonates born with maternal risk factors for early-onset neonatal sepsis. *Indian journal of pediatrics.* 2024;91(6):541-7.
- Meyyan A, Tyagi V, Dabas A, Mantan M, **Manchanda V.** Serosurvey For Measles, Mumps and Rubella in Children and Adolescents with Chronic Kidney Disease. *Indian Pediatr.* 2025;62(1):49-52.
- Goel V, Narula MK, Bano S, Anand R, Chaudhary V, Singh V, **Saxena S.** Lung infections in HIV-infected children: imaging pattern recognition and its correlation with CD4 counts. *Egypt J Radiol Nucl Med.* 2024;55:72

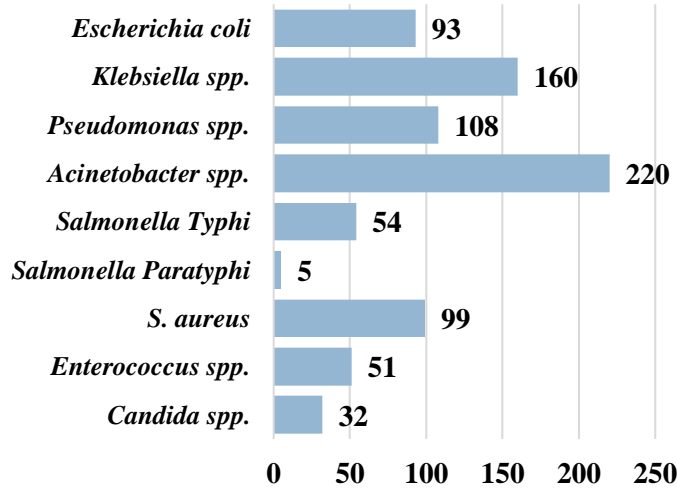
## BACTERIAL CULTURE & SENSITIVITY SPECIMEN LOAD AND POSITIVITY RATE

Specimen Type	IPD	OPD	ICU	Total specimens	Total positive specimens (% of total specimen)
Urine	24026	26928	2086	53040 (52.9%)	5581 (10.5%)
Blood & CSF	15045	136	2701	17882 (17.8%)	1534 (8.5%)
Stool	1306	1379	28	2713 (2.7%)	115 (4.2%)
Pus aspirate	10481	562	1491	12534 (17.4%)	4195 (33.5%)
Sterile body fluids except CSF	6394	519	593	7506 (2.6%)	1591 (21.2%)
Other Miscellaneous samples	4237	1678	579	6494 (6.5%)	1819 (28.0%)
<b>Total</b>	<b>56586 (56.5%)</b>	<b>31202 (31.1%)</b>	<b>12381 (12.4%)</b>	<b>100169 (100%)</b>	<b>14835 (14.8%)</b>

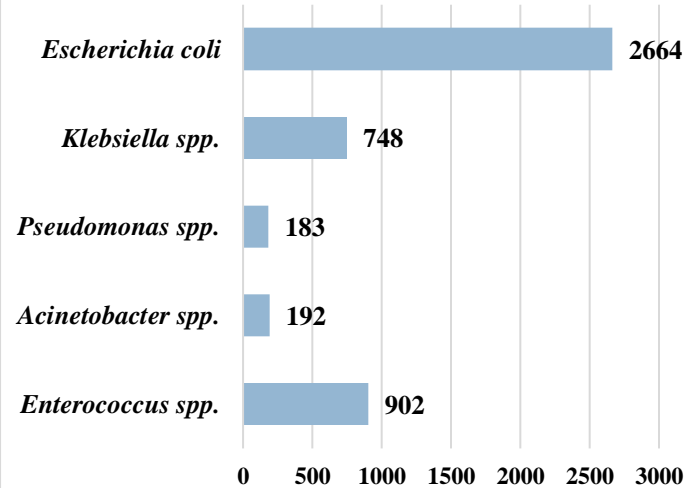
## BACTERIAL PRIORITY PATHOGENS



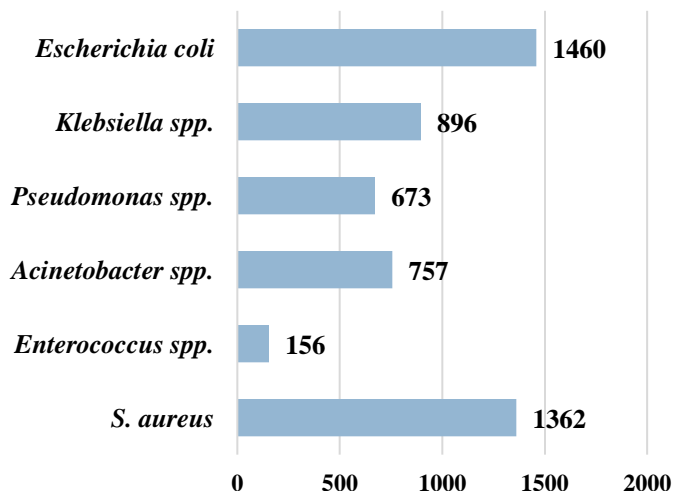
### Priority pathogens in blood (n=822)



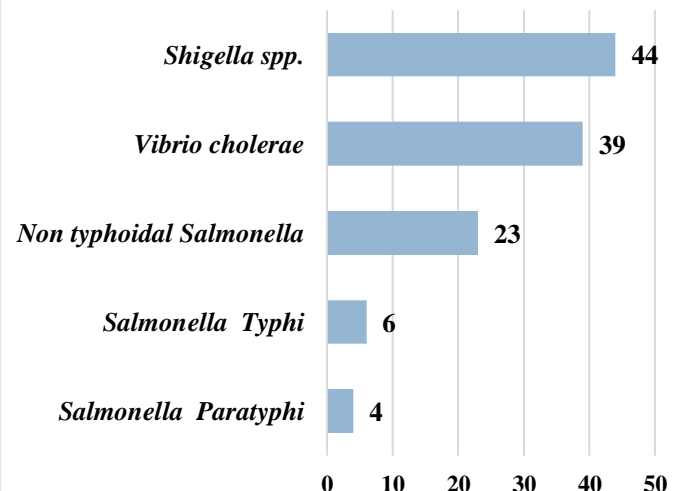
### Priority pathogens in urine (n=4689)



### Priority pathogens in pus and sterile body fluids (n=5304)



### Priority pathogens in stool (n=116)

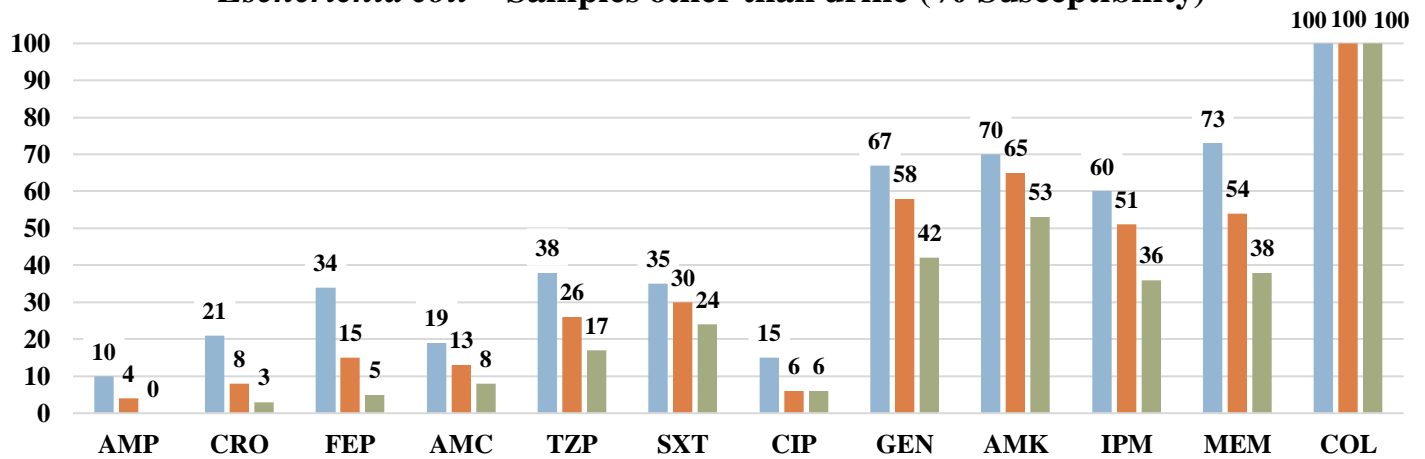


\*Priority Pathogens are as per NARS-Net SoP, National Programme on Antimicrobial Containment, NCDC

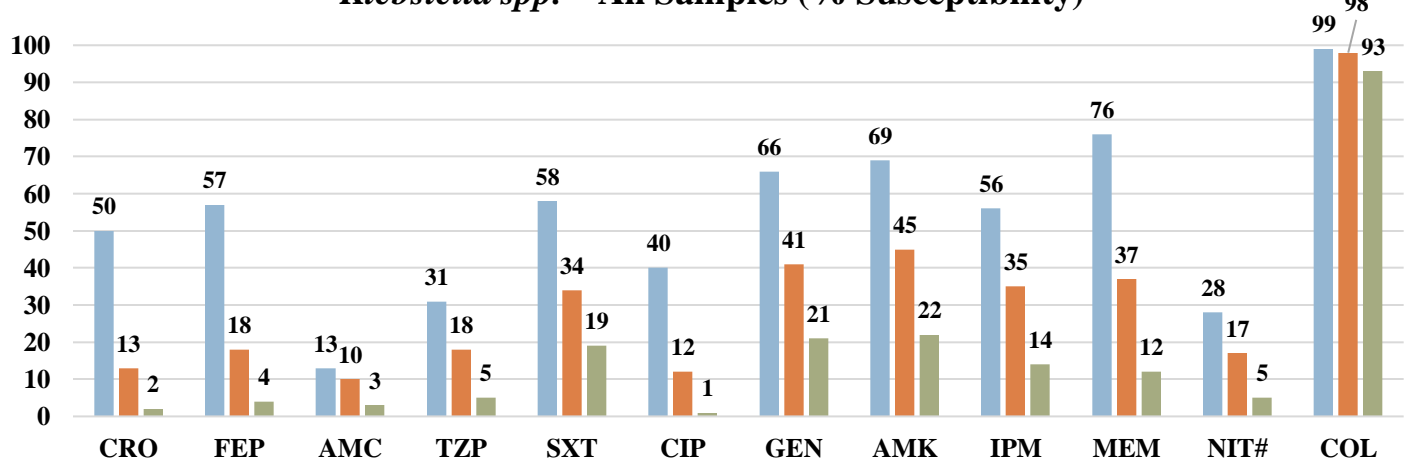
Number of tests put up using MALDI-TOF for rapid identification of bacterial and fungal pathogens: 11,640

## CUMULATIVE ANTIBIOGRAM

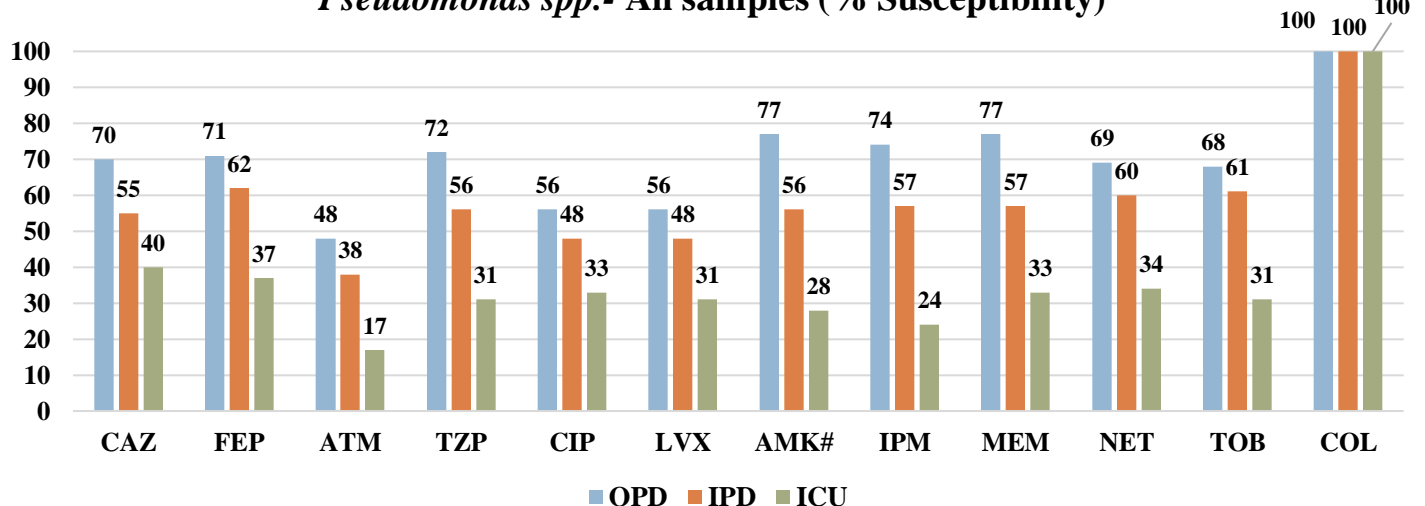
*Escherichia coli* – Samples other than urine (% Susceptibility)

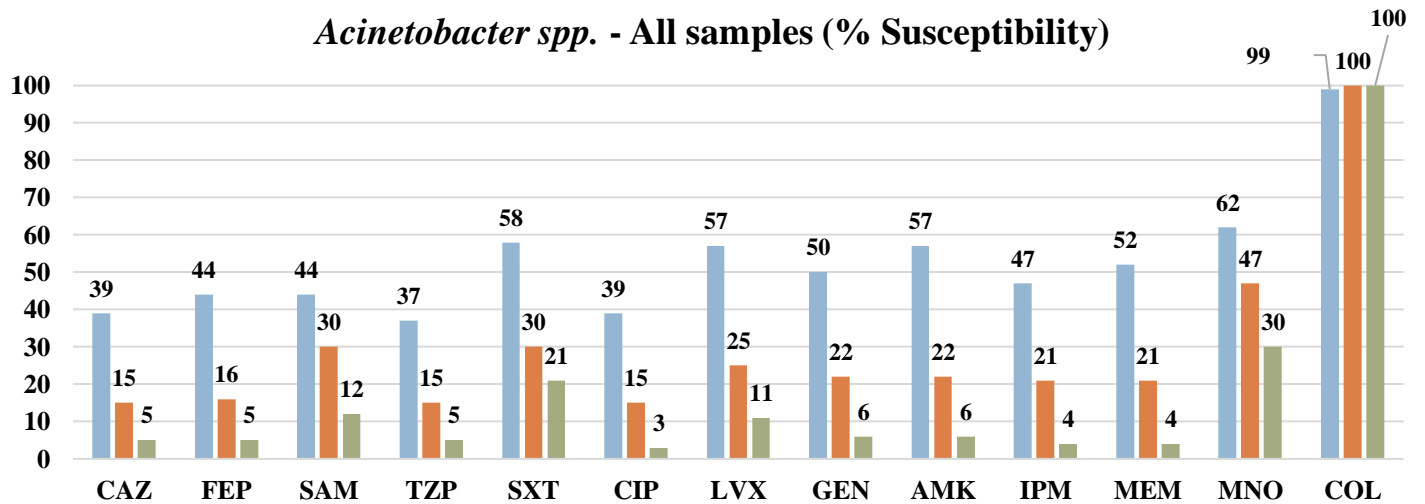
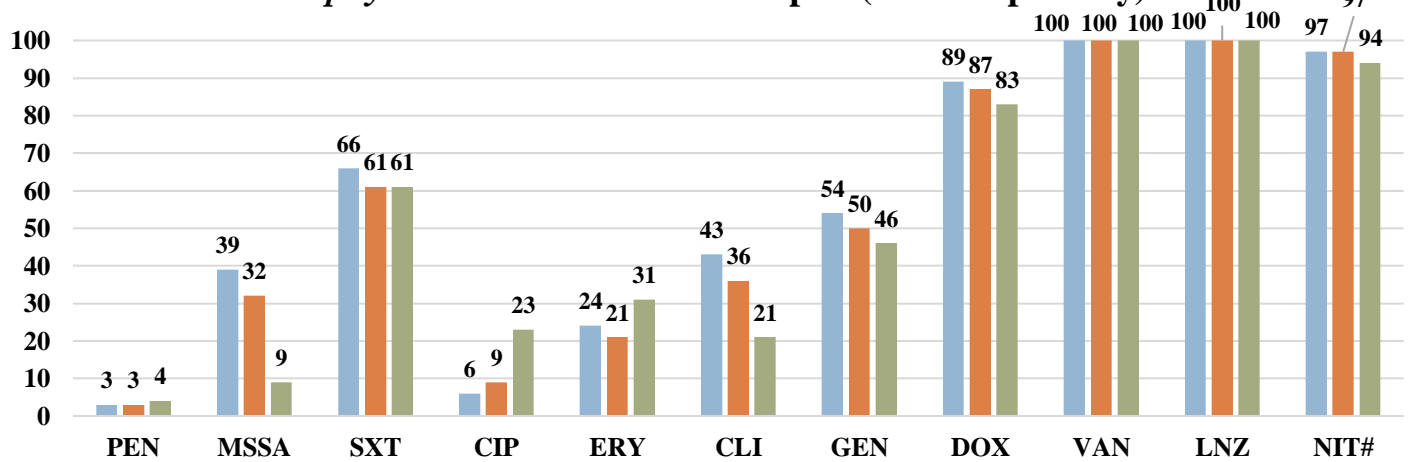
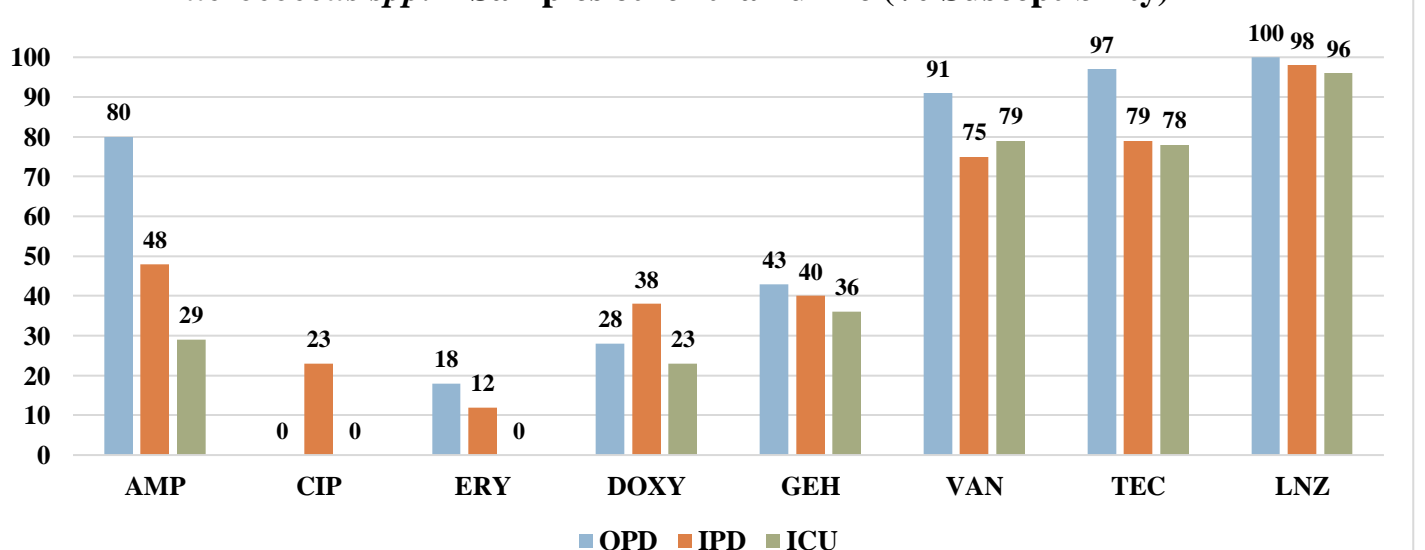


*Klebsiella spp.* – All Samples (% Susceptibility)

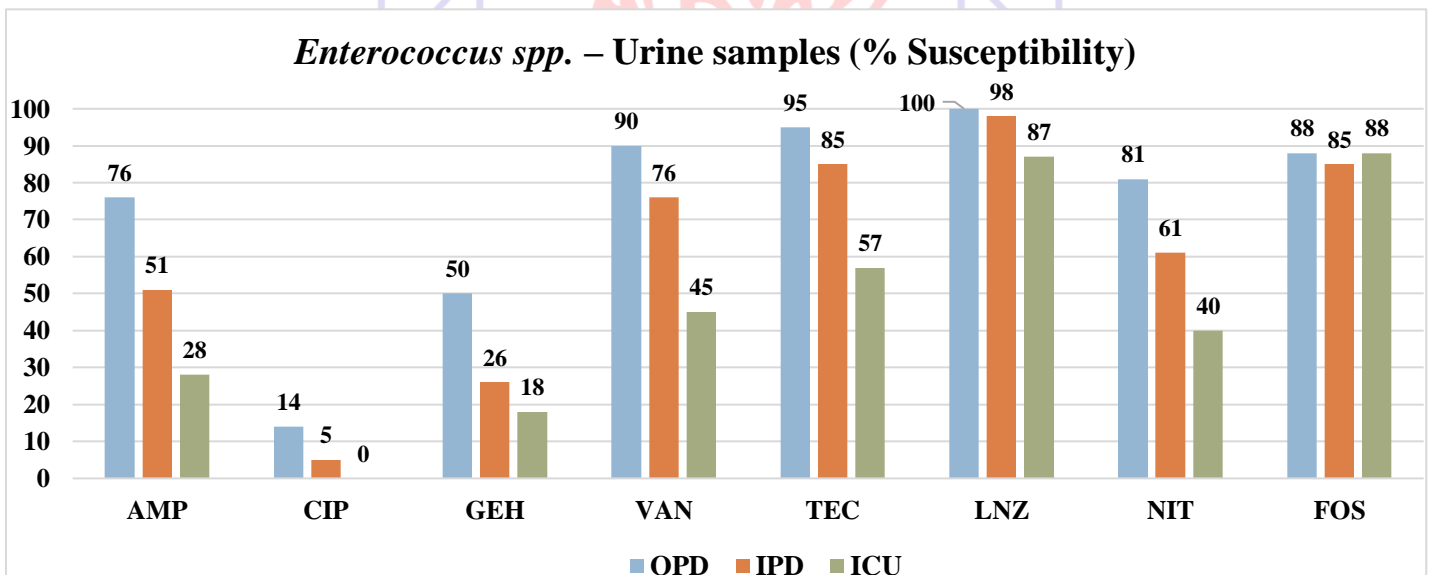
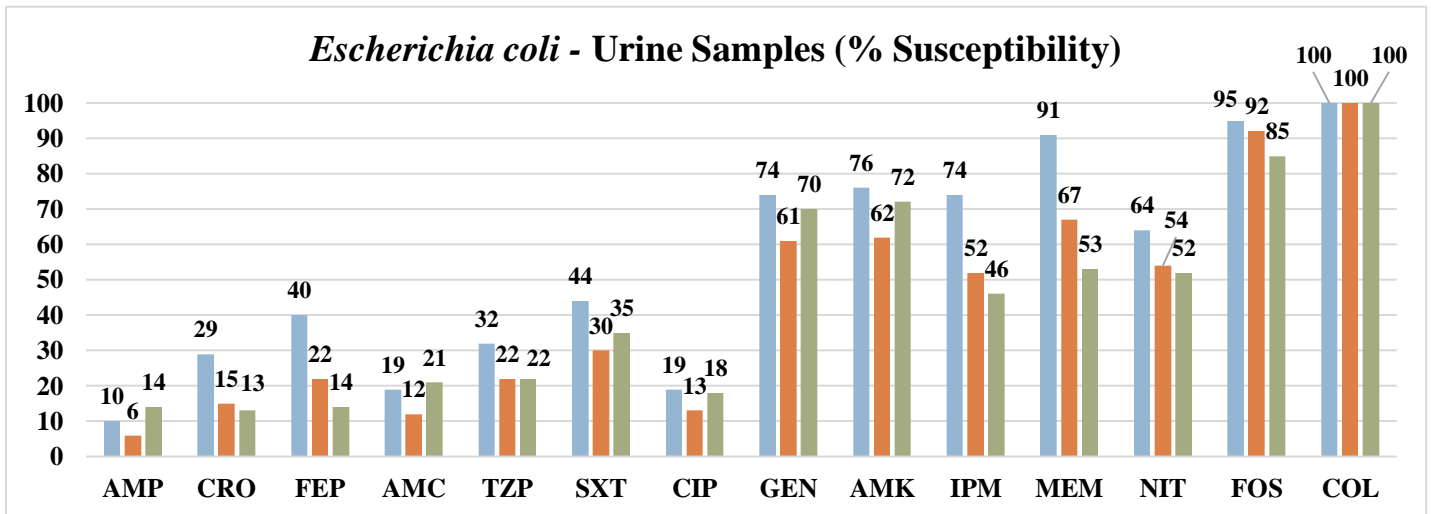


*Pseudomonas spp.* – All samples (% Susceptibility)



*Acinetobacter spp.* - All samples (% Susceptibility)*Staphylococcus aureus* – All samples (% Susceptibility)*Enterococcus spp.* – Samples other than urine (% Susceptibility)

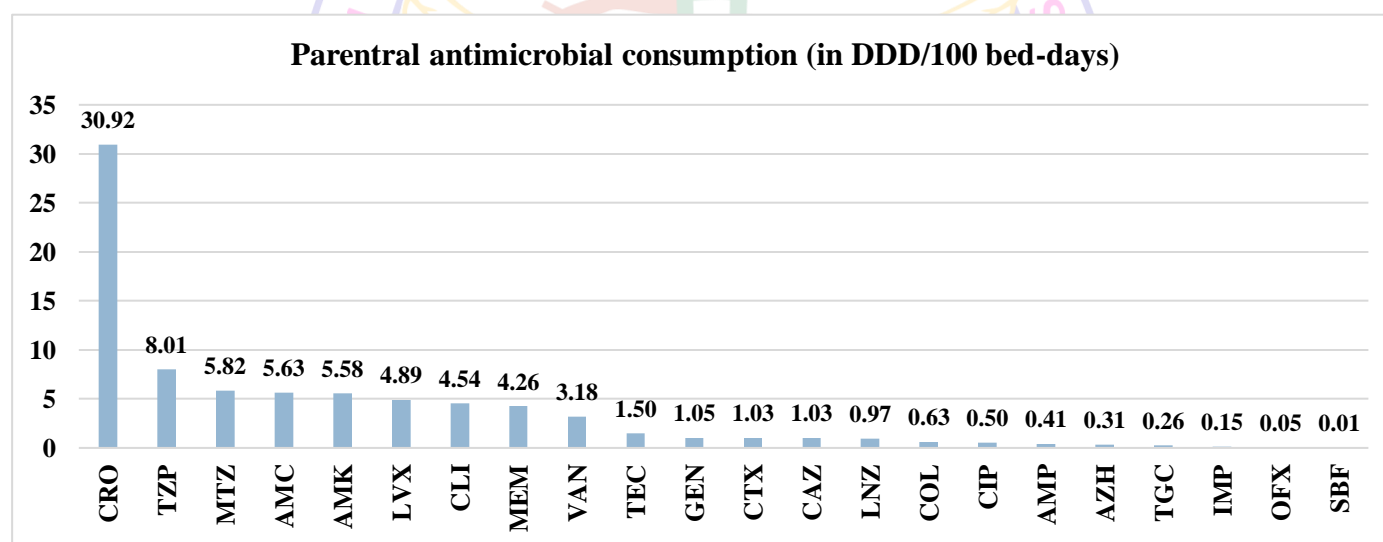
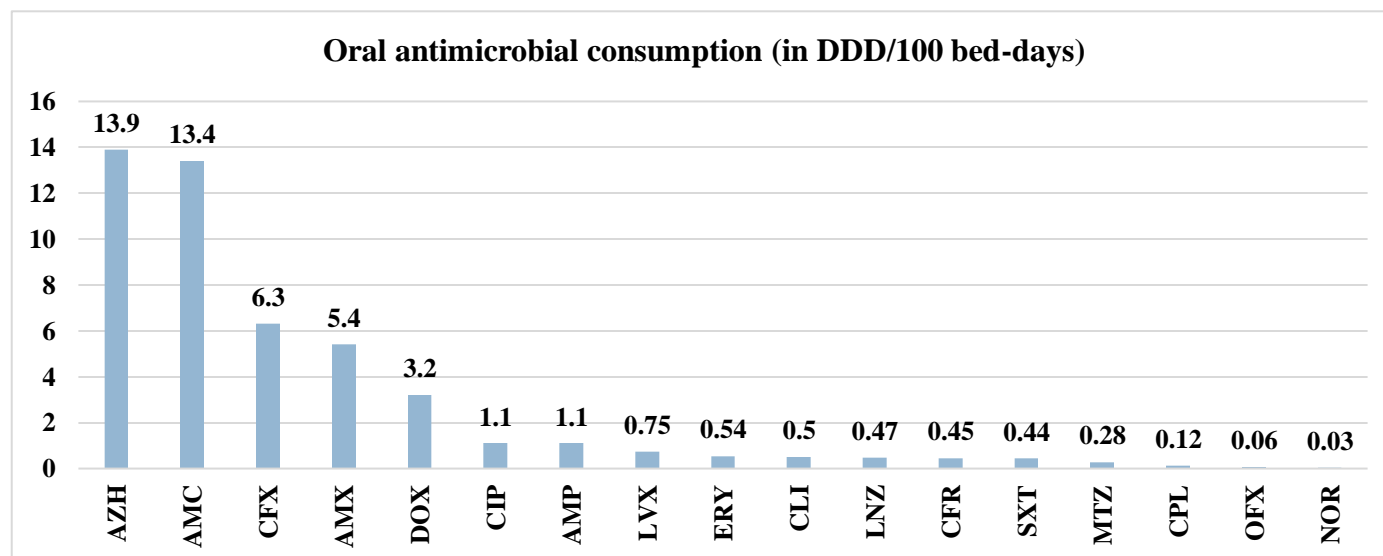




- **Cumulative hospital antibiogram** presented here represents a summary of antimicrobial susceptibilities of local bacterial isolates submitted to the hospital's clinical microbiology laboratory from January 2024 to December 2024. This antibiogram can aid in selecting empiric antibiotic therapy, to assess local susceptibility rates, and in monitoring resistance trends over time within institution.
- However, for efficient and personalised antimicrobial therapy, **it is essential to submit appropriately collected specimen for bacterial culture and susceptibility testing prior to initiation of empiric therapy.**
- The data suggests overall the Gram-negative bacteria outnumbered Gram-positive bacteria. Apart from priority organisms presented here, other organisms such as *Proteus spp.*, *Morganella spp.*, *Providencia spp.*, *Citrobacter spp.*, *Burkholderia spp.*, *Stenotrophomonas spp.*, etc. were also isolated although in lower numbers (detailed distribution is available with Department of Microbiology).
- In general, **lower susceptibility is seen for bacterial isolates from ICU and in-patients** as compared to out-patient departments. *Acinetobacter spp.* and *Klebsiella spp.* show poor susceptibility to several drugs including carbapenems. Colistin susceptibility has been done by determining minimum inhibitory concentration using dilution methods; CLSI has removed susceptible category for colistin (only Intermediate and resistant categories are being reported) indicating limited clinical efficacy.
- **More than two-third *Staphylococcus aureus* were Methicillin Resistant**, indicating resistance to all beta-lactam drugs and their combination with beta-lactamase inhibitors, except for newer 5th Generation cephalosporins. Linezolid and Vancomycin susceptibility remains good for now, **however rampant overuse is likely to push resistance against them.**

## ANTIMICROBIAL CONSUMPTION DATA FOR THE YEAR 2024

Antimicrobial Consumption Data includes data for common antimicrobial agents consumed in IPD between 1<sup>st</sup> January 2024 to 31<sup>st</sup> December 2024. (This excludes data from Emergency/ Casualty, Out-patient Department and Pediatrics)

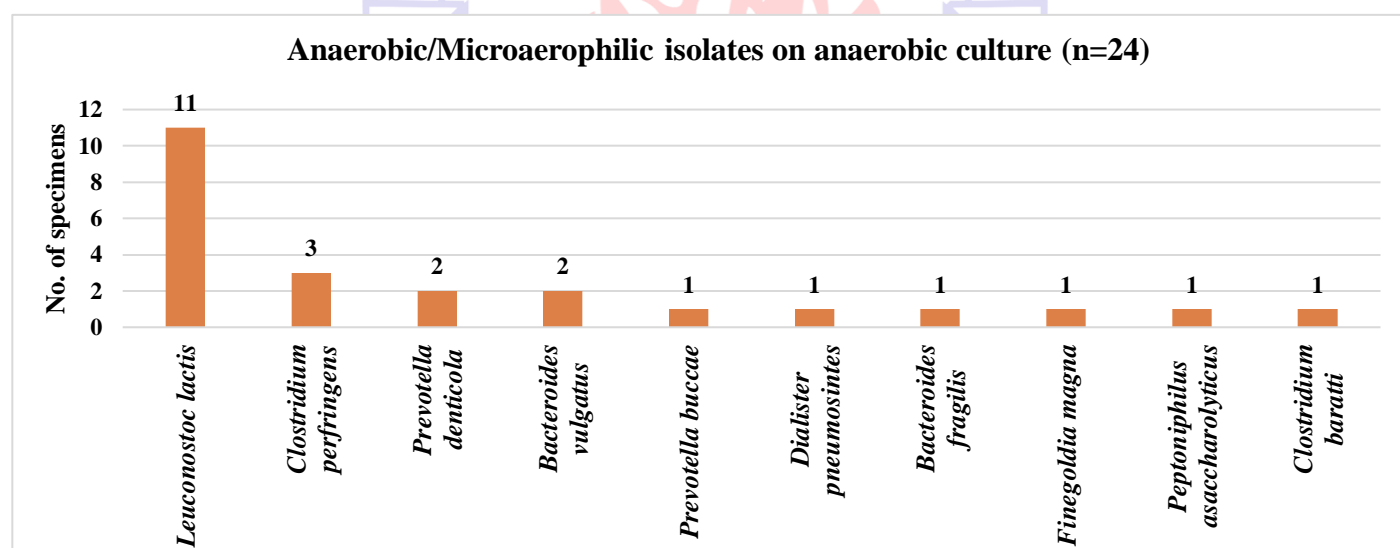


**Abbreviations:** AMP: Ampicillin; AMX: Amoxicillin; AMC: Amoxycillin/ Clavulanate; AMK: Amikacin; AZH: Azithromycin; ATM: Aztreonam; CFX: Cefixime; CTX: Cefotaxime; CRO: Ceftriaxone; CFR: Cefuroxime; CAZ: Ceftazidime; CPL: Cephalexin; CIP: Ciprofloxacin; COL: Colistin; CLI: Clindamycin; DOX: Doxycycline; ERY: Erythromycin; ETP: Ertapenem; FEP: Cefepime; FOX(MSSA): Cefoxitin (Methicillin Susceptible *Staphylococcus aureus*), FOS: Fosfomycin GEN: Gentamicin; GEH: High level Gentamicin; IMP: Imipenem; LNZ: Linezolid; LVX: Levofloxacin; MNO: Minocycline; MEM: Meropenem; MTZ: Metronidazole; NOR: Norfloxacin; NIT: Nitrofurantoin; NET: Netilmicin; OFX: Ofloxacin; SBF: Cefoperazone/ Sulbactam; SXT: Trimethoprim/Sulfamethoxazole; TEC: Teicoplanin; TGC: Tigecycline; TZP: Piperacillin/Tazobactam; VAN: Vancomycin

#: URINE ONLY

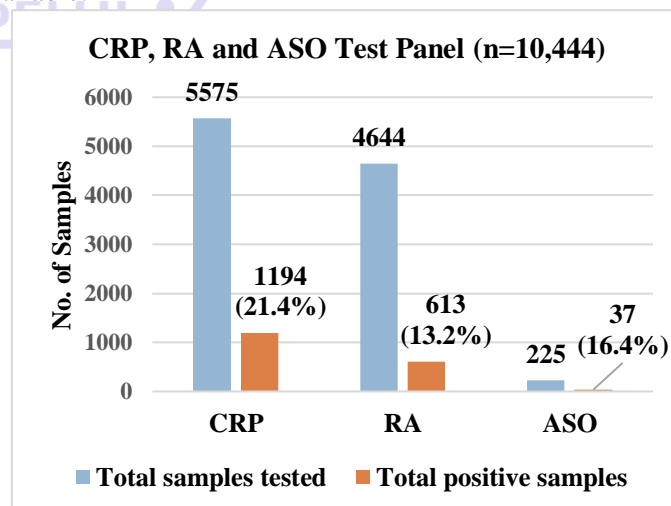
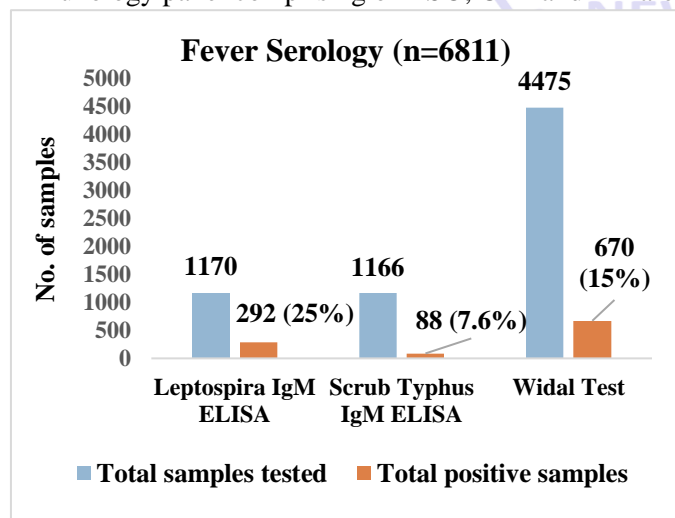
## OTHER BACTERIOLOGY TESTS

Test	Total samples received	Total samples positive (%)
Anaerobic culture	664	Total positive- 375 (56.47%) [Obligate & Microaerophilic anaerobe - 24 (6.4%), Facultative anaerobe- 345 (92%), Obligate aerobe-06 (1.6%)]
Mycobacterial culture by LJ media (Jan to Mar 2024)	168	1 (0.5%)
Mycobacterial culture using MGIT (Mar-Dec 2024)	674	17 (2.5%)
ZN Stain for Acid Fast Bacilli	1672	40 (3.2%)



## SEROLOGY LABORATORY

The laboratory has facilities for serological diagnosis for syphilis, enteric fever, leptospirosis & scrub typhus. An immunology panel comprising of ASO, CRP and RA are also available.



### Results of participation in EQAS

The laboratory participated in Syphilis Serology EQAS organized by Apex Regional STD Centre, Department of Dermatology & STD, VMMC & Safdarjung Hospital, New Delhi and attained satisfactory results.

The laboratory participated in External Quality Assessment Scheme for Scrub Typhus-IgM ELISA organized by Regional Virus Research and Diagnostic Laboratory (RVRDL), JIPMER, Puducherry under the aegis of Indian Council of Medical Research (ICMR).

**The laboratory attained 100% concordant results in the said EQAS.**

## REGIONAL STI RESEARCH, REFERRAL & TRAINING LABORATORY

The laboratory was established under the aegis of National AIDS & STD Control Program, MoHFW, GoI. The laboratory provides diagnostic services for various sexually transmitted/ reproductive tract infections, such as syphilis, gonorrhea, HSV, bacterial vaginosis, donovanosis, trichomoniasis, vaginal candidiasis etc.

Test performed	Total samples received	Total samples positive (%)
Gram Stain (Urethral, vaginal & cervical discharge)	84	9 (10.7%) [09 Gram negative diplococci]
Tzank Smear	02	0
Gonococcal culture	67	09 (13.4%)
<b>Syphilis serology</b>		
RPR	3883	93 (2.4%)
TPHA	158	44 (41.8%)

### Conduct of Syphilis Serology EQAS for linked STI Labs

The RSRRTL conducted one round of External Quality Assessment Scheme for Syphilis Serology for linked STI labs. The performance of the linked STI labs was found to be satisfactory.

### Enhanced Gonococcal Antimicrobial Susceptibility Program (E-GASP)

The RSRRTL has been identified as one of the laboratories in the country for Enhanced Gonococcal Antimicrobial Susceptibility (E-GASP) program of World Health Organization (WHO) under the aegis of National AIDS and STD Control Program, MoHFW, Government of India.

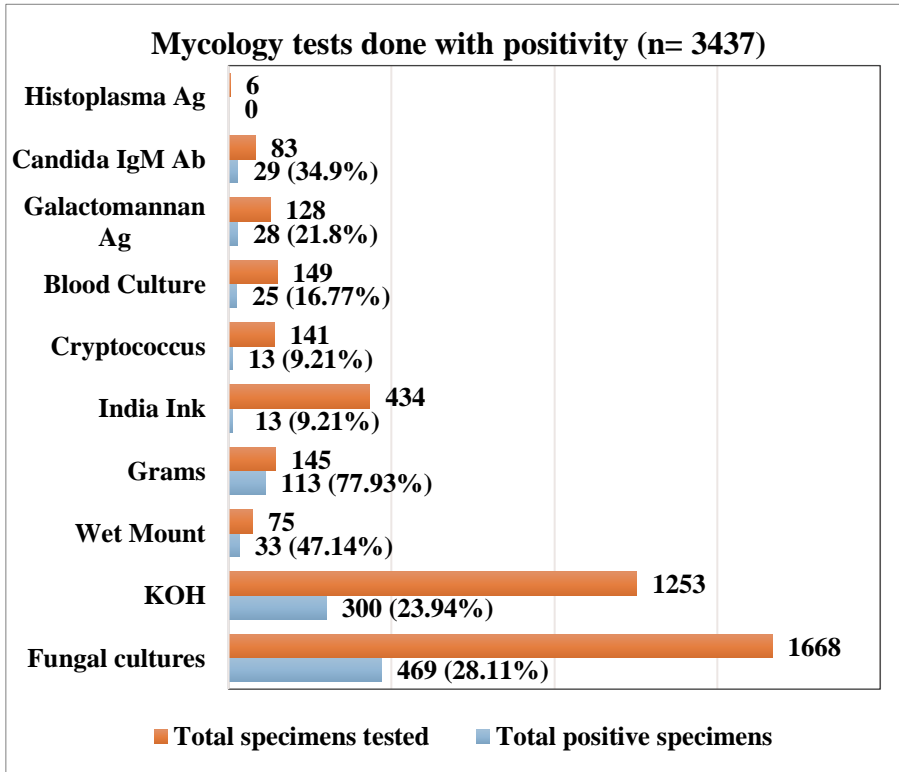
<b>Real-time PCR for simultaneous detection of <i>Chlamydia trachomatis</i>, <i>Neisseria gonorrhoeae</i>, <i>Mycoplasma genitalium</i>, <i>Mycoplasma hominis</i>, <i>Ureaplasma urealyticum</i>, <i>Ureaplasma parvum</i>, and <i>Trichomonas vaginalis</i> (n=84)</b>	
Specimen type	Positive (%)
Urine	64 (76.2%)
Urethral/ Cervical/Vaginal Swab	67 (79.8%)
Dried Urine Spot	52 (61.9%)

### Results of participation in EQAS/ Retesting

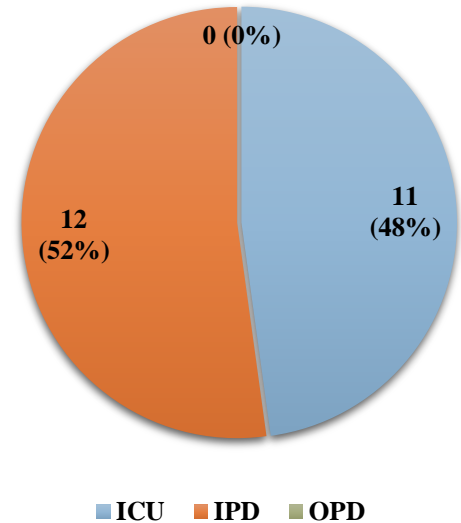
1. The laboratory participated in Gonococcal Antimicrobial Susceptibility Program (GASP) EQAS organized by Apex Regional STD Centre, Department of Dermatology & STD, VMMC & Safdarjung Hospital, New Delhi and attained satisfactory results.
2. The RSRRTL submitted samples for syphilis serology from routine workflow to Apex Regional STD Centre, Department of Dermatology & STD, VMMC & Safdarjung Hospital, New Delhi, for retesting and attained 100% concordant results.
3. The RSRRTL submitted nine clinical isolates of *Neisseria gonorrhoeae* to Apex Regional STD Centre, Department of Dermatology & STD, VMMC & Safdarjung Hospital, New Delhi, for retesting. The results of AST testing of the said isolates were found to be concordant with that of the Apex Laboratory.

## MYCOLOGY LABORATORY

The Mycology Laboratory proudly participated in an EQAS round for Mycology culture and susceptibility testing, organized by PGIMER, Chandigarh. In its first- attempt, the laboratory delivered an impressive performance.



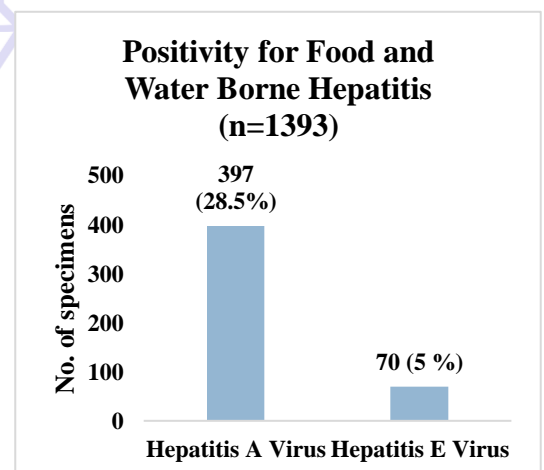
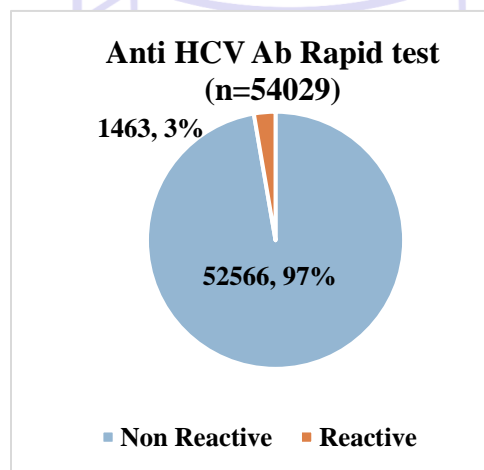
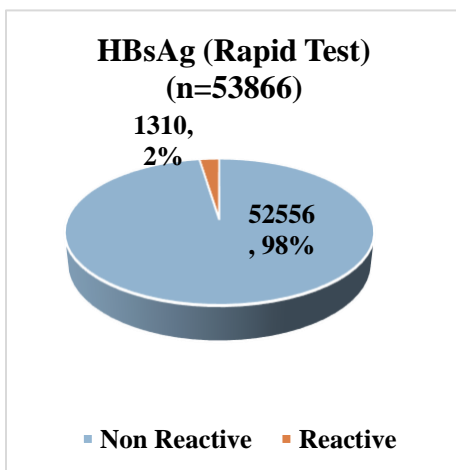
### Candida spp. isolated from Blood samples received in Mycology Lab (n=23)



Elective Program for “Molecular Methods in Clinical Microbiology” successfully completed in the year 2024, where students gained hands-on experience in molecular biology techniques. They learned nucleic acid extraction, PCR, gel electrophoresis, BLAST searches, sequence alignment, phylogenetic analysis, and basic Python for bioinformatics. With a small, focused batch of 10 students (5+5), the program provided an interactive and enriching learning experience.

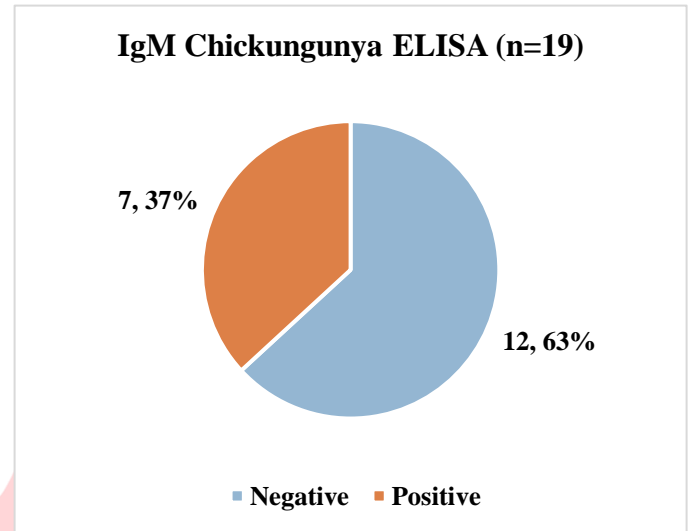
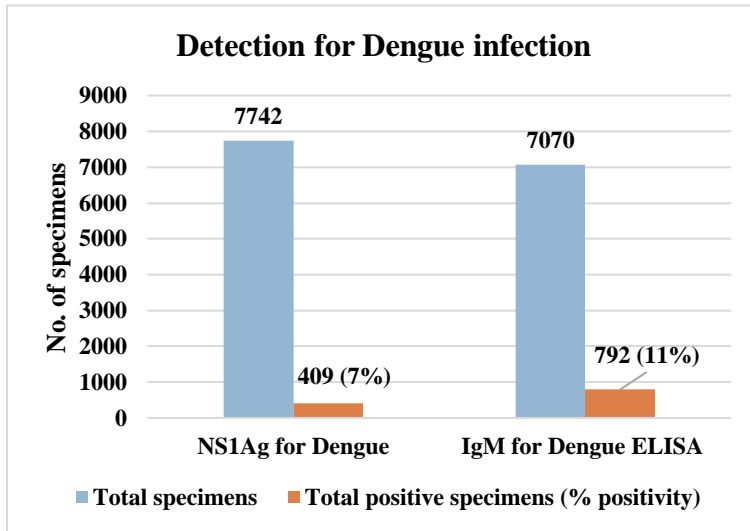
## VIROLOGY LABORATORY

### SEROLOGY FOR HEPATITIS VIRUSES



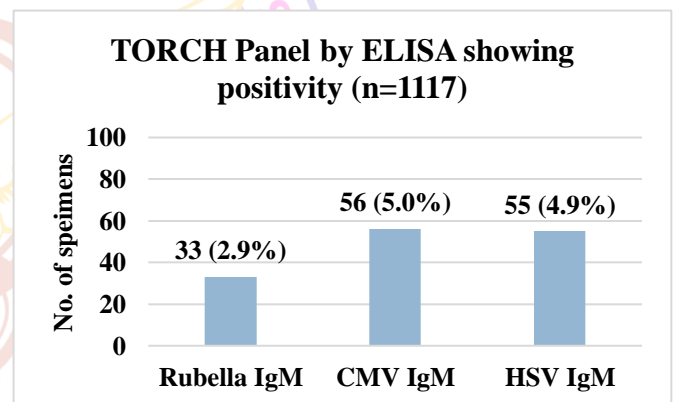


## SEROLOGY FOR VECTOR BORNE VIRUS

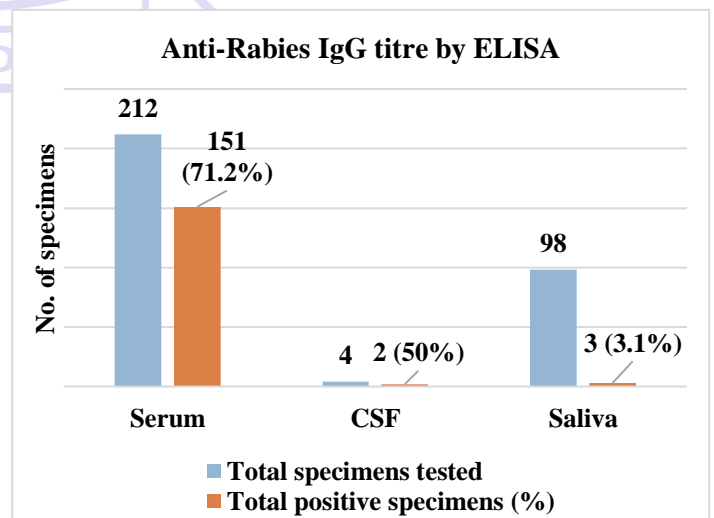
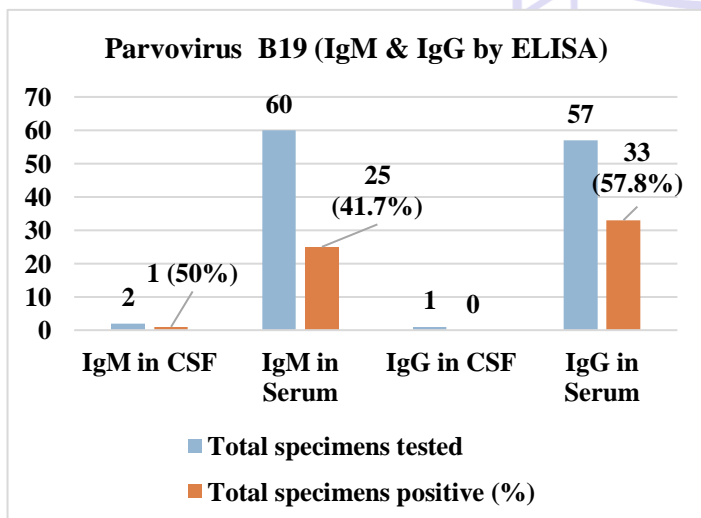


## OTHER SEROLOGY TESTS

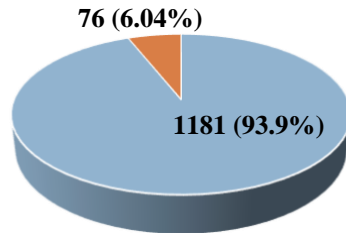
	Total	Positives	% Positivity
Rubella IgG	196	191	97.5
Anti - Hepatitis B antibody	102	63	61.7



## VIRAL RESEARCH AND DIAGNOSTIC LABORATORY/ ADVANCE VIROLOGY

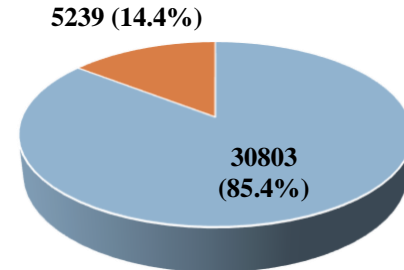


### Detection Of SARS-CoV-2 By RTPCR (n=1257)



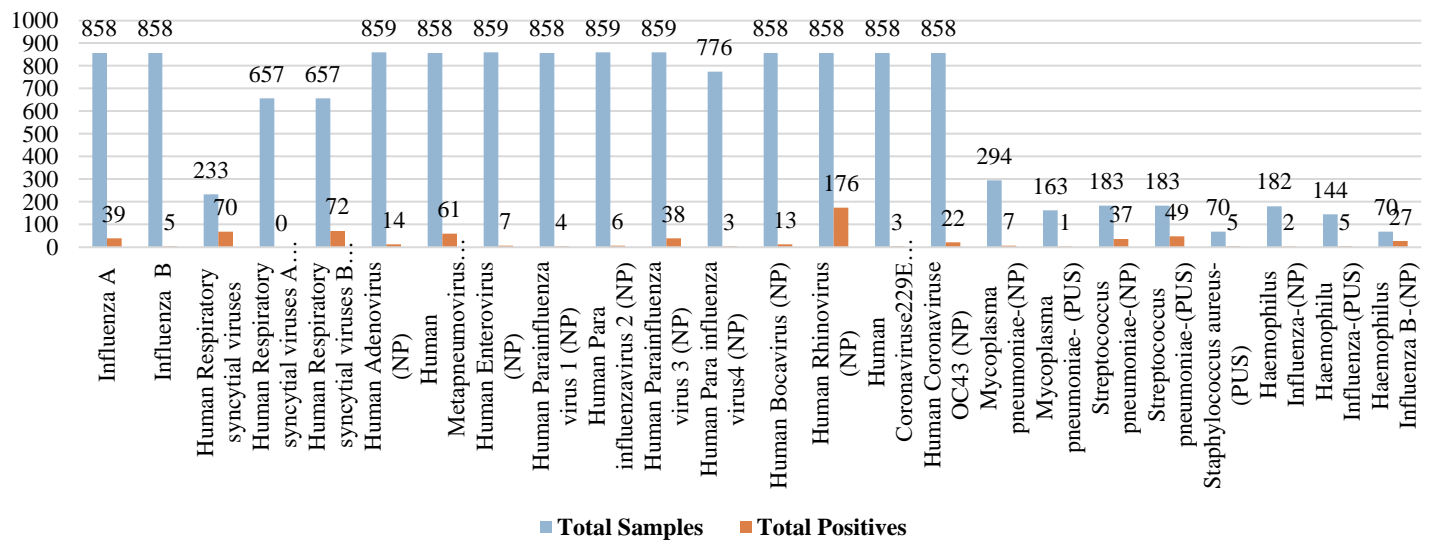
■ Negative For SARS-CoV-2  
■ Positive For SARS-CoV-2

### RTPCR for tests (excluding SARS-CoV-2) (n=36042)



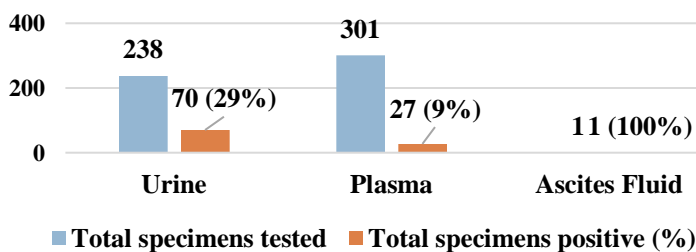
■ Negative ■ Positive

### Respiratory pathogens (n=13912)

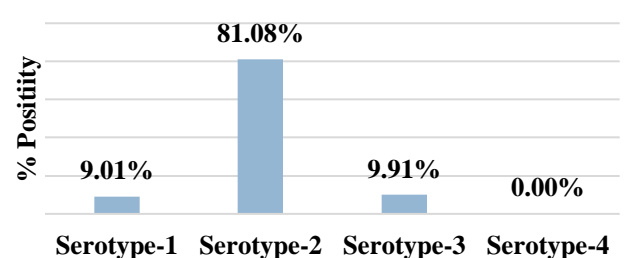


NEW DELHI

### Detection of Human Cytomegalovirus by PCR



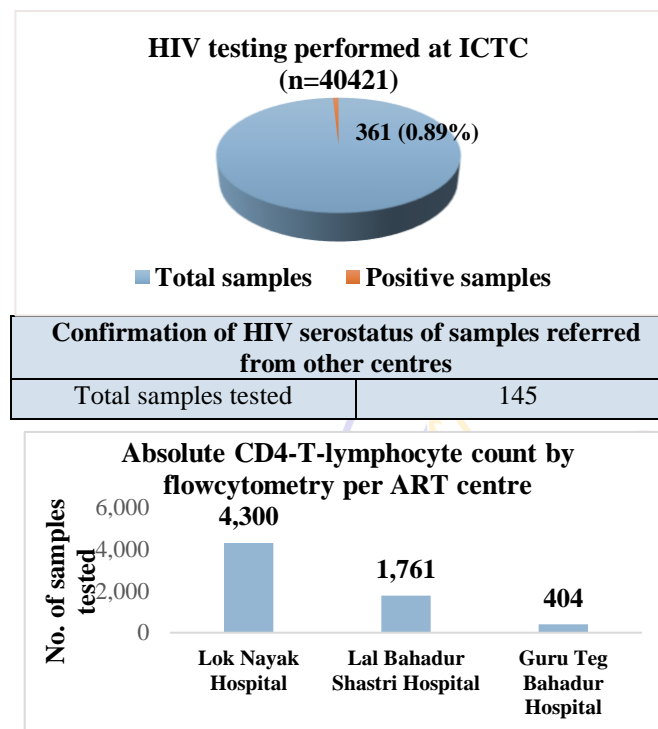
### Detection of dengue virus serotypes (n=111)



## HIV LABORATORY

The HIV Laboratory, Department of Microbiology, MAMC, comprises of the following laboratories under the aegis of National AIDS Control Organization (NACO), MoHFW, GoI:

1. State Reference Laboratory (SRL) for HIV
2. CD4 Testing Laboratory
3. Integrated Counselling & Testing Centre (ICTC) for HIV



The SRL for HIV monitors the quality of HIV testing of the 26 linked ICTCs and PPTCTs, through the conduct of EQAS and by organizing training programs. The CD4 testing lab performs absolute CD4-T-Lymphocyte count by flowcytometry for various ART Centers in Delhi. The ICTC provides HIV counseling and testing services to direct walk-in clients as well as the patients admitted at Lok Nayak Hospital.

The HIV laboratory has been designated by NACO, MoHFW as the Dried Blood Spot (DBS) testing site for HIV Sentinel Surveillance and tested 10,046 specimens. Recently, the laboratory has been designated by NACO, MoHFW as the Dried Blood Spot (DBS) testing site for HIV and Syphilis for Integrated Bio-behavioral Surveillance (IBBS), which would help in generating crucial data as part of Integrated & Enhanced Surveillance and Epidemiology (IESE) for HIV, STIs and related co-infections under National AIDS Control Program (NACP).

Testing performed as part of Integrated Bio-behavioral Surveillance (IBBS)	
Total samples tested for HIV	6,983
Total samples tested for Syphilis	6,983
<b>Total</b>	<b>13,966</b>

## National Accreditation Board for Testing & Calibration Laboratories (NABL) Accreditation:

The HIV Laboratory not only successfully transitioned to the new accreditation standard, i.e. ISO15189:2022, but also expanded the scope of accreditation to include all assays that are being performed by the laboratory.

Currently, the Rapid tests for HIV serology based on the principles of Immunochromatography, Immunofiltration, Immunodot, & ELISA; and Absolute CD4+ T-lymphocyte count by flow cytometry have been accredited as per ISO15189:2022 by National Accreditation Board for Testing & Calibration Laboratories (NABL), a constituent board of Quality Council of India, for the period from 07.03.2024 to 06.03.2026.

## Results of participation in EQAS

1. The SRL participated in EQAS round for HIV serology conducted by National Reference Laboratory for HIV, National Centre for Disease Control, Delhi and Microbiology External Quality Assurance Scheme conducted by IAMM EQAS and attained 100% concordant results.
2. The ICTC participated in one EQAS round for HIV serology conducted by the linked SRL and attained 100% concordant results.
3. The ICTC submitted 188 (179 HIV-negative and 09 HIV-positive) samples comprising of four quarters to the linked SRL for retesting and attained 100% concordant results during all the four quarters.
4. The CD4 testing laboratory participated in EQAS for CD4 absolute count & percentage conducted by National AIDS Research Institute (ICMR), Pune and attained satisfactory score.

**Conduct of HIV Serology EQAS for linked ICTCs**  
The SRL conducted one round of EQAS for HIV serology for the 26 linked ICTCs. The performance of the linked ICTCs was found to be satisfactory.

## Training programs organized

The laboratory organized a virtual workshop on External Quality Assessment Scheme (EQAS) for HIV serology for the laboratory technicians of the 26 linked ICTCs and PPTCTs on 20.02.2024.

## NABL Medical Entry Level Testing (MELT) Lab certification of linked ICTCs

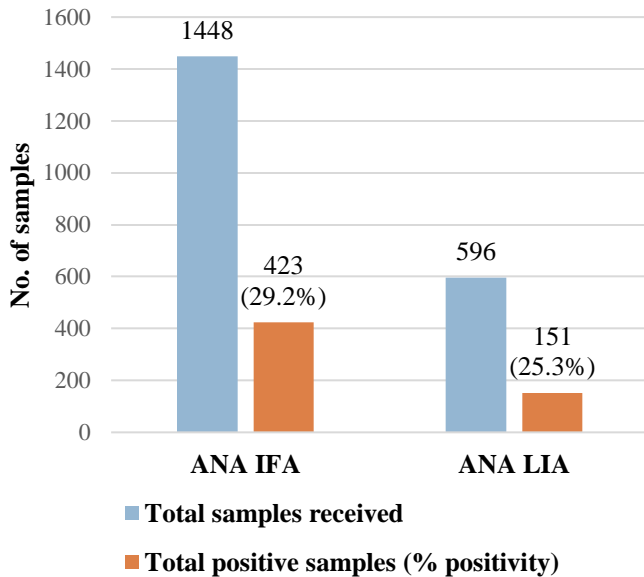
As part of continuous endeavour to improve the quality of HIV testing, guidance and technical support was provided to the linked ICTCs/ PPTCTs, which led to the NABL MELT certification of the following three ICTCs in addition five ICTCs earlier: ICTC, Indira Gandhi Polyclinic; ICTC, Maternity Home, Madipur; and ICTC, Dr. BSA Hospital.

-Elective Program for "HIV: Care continuum" was successfully conducted in the year 2024 for batch of 10 (5+5) MBBS students.

## IMMUNOLOGY LABORATORY

The Immunology Laboratory upheld its commitment to accurate diagnostics in 2024, conducting a plethora of tests on **7,104** samples, with **1,037** testing positive, resulting in a **14.6% positivity**.

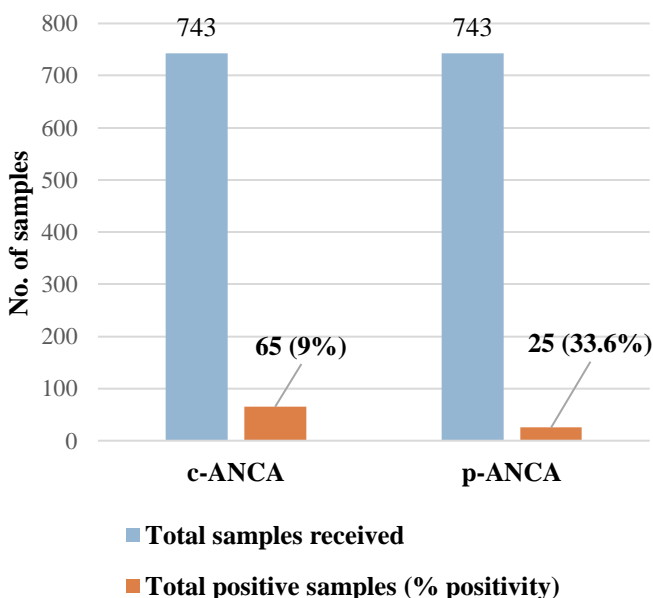
**ANA (Immunofluorescence assay (IFA) and Line Immuneassay (LIA)) [n=2044]**



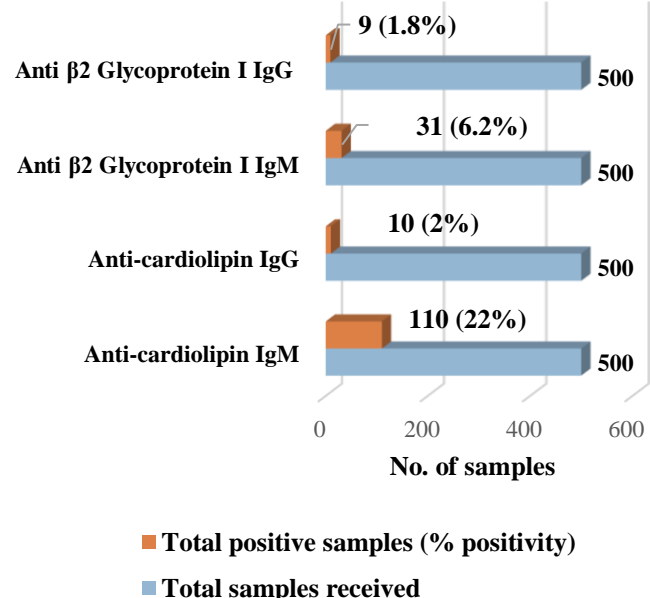
**Other tests done**

Test performed	Total samples received	Total positive (%)
<b>Quantitative ELISA</b>		
Anti-CCP	542	99 (18.3%)
Anti-dsDNA	634	57 (8.9%)
<b>Line Immunoblot assay (LIA)</b>		
Auto-immune Hepatitis	154	9 (5.8%)
Auto-immune myositis	128	40 (31.2%)
Auto-immune encephalitis	118	8 (6.7%)

**ANCA (Quantitative ELISA) [n=743]**



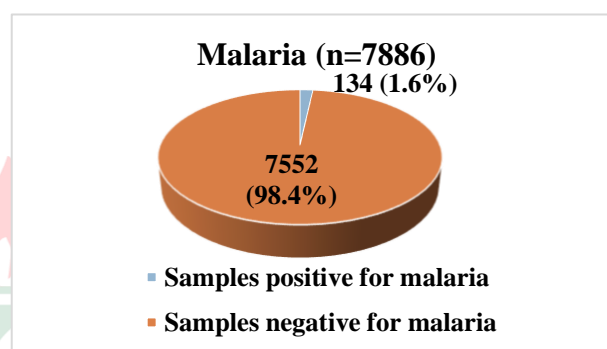
**APLA (Quantitative ELISA) [n=500]**



## PARASITOLOGY LABORATORY

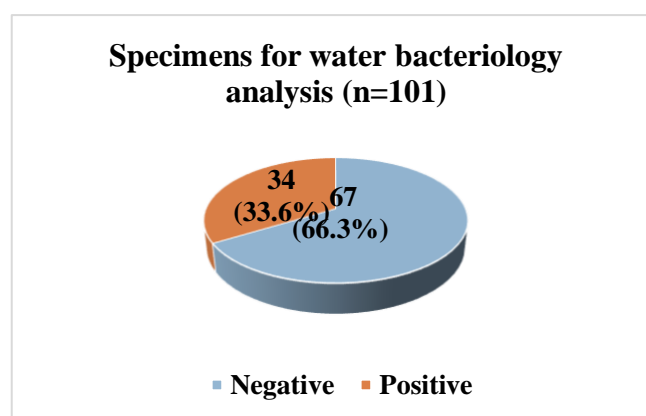
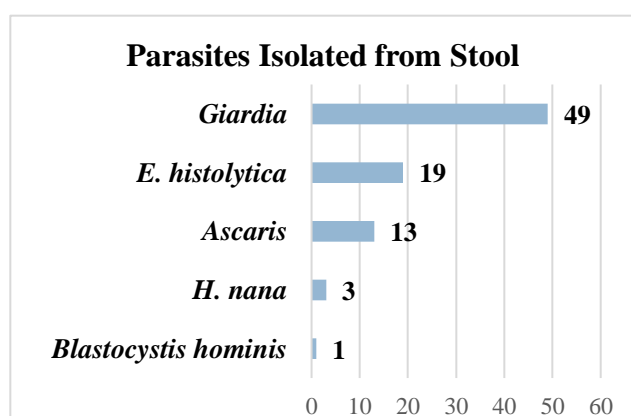
As part of quality control measures, the **State Malaria Reference Laboratory is designated at MAMC**. It receives samples from various health centers in Delhi NCR. For State Malaria Reference laboratory. In 2024, 2924 slides of peripheral smear for Malarial parasite were received for Quality control testing in which positives slides were 689 (24%). Of these, 167 slides had unsatisfactory staining, while 17 slides were rejected due to improper mounting. The laboratory participated in **EQAS** conducted by Indian Academy of Tropical Parasitology (IATP) and was awarded the highest Grade “A”.

Tests performed	Total samples received	Total positive (%)
Toxoplasma IgM	1225	5 (0.4%)
Toxoplasma IgG	1380	337 (24.4%)
Entamoeba histolytica IgG	693	235 (33.9%)
Hydatid serology IgG	56	18 (32.1%)
RK 39 for Leishmania	101	0
Microfilaria antigen	14	0



## ENTEROBACTERIACEAE LABORATORY

Tests performed	Total samples	Total positive (%)
Helicobacter pylori antigen in stool (Rapid immunoassay/ ELISA)	106	9 (8.5%)
Rotavirus in stool (Rapid immunoassay/ ELISA)	101	7 (6.9%)
Adenovirus in stool (Rapid immunoassay)	101	6 (5.9%)
Occult Blood in stool (Standard Guaiac Method)	376	22 (5.8%)
Multiplex RT-PCR test for Enteric pathogens (Virus, Bacterial, Parasites)- (VRDL)	120	Rotavirus (6.6%), Adenovirus (19.1%), Norovirus G (14.1%), Norovirus G2 (18.3%), Sapovirus (4.1%), Astrovirus (6.6%), Vibrio cholerae (8.3%), Shigella/ EIEC (7.5%), EPEC (1.6%), Salmonella (1.6%), Campylobacter (15.8%), C. difficile (0%), Giardia Lamblia (3.3%), Cryptosporidium species (1.6%), E. histolytica (0.8%)

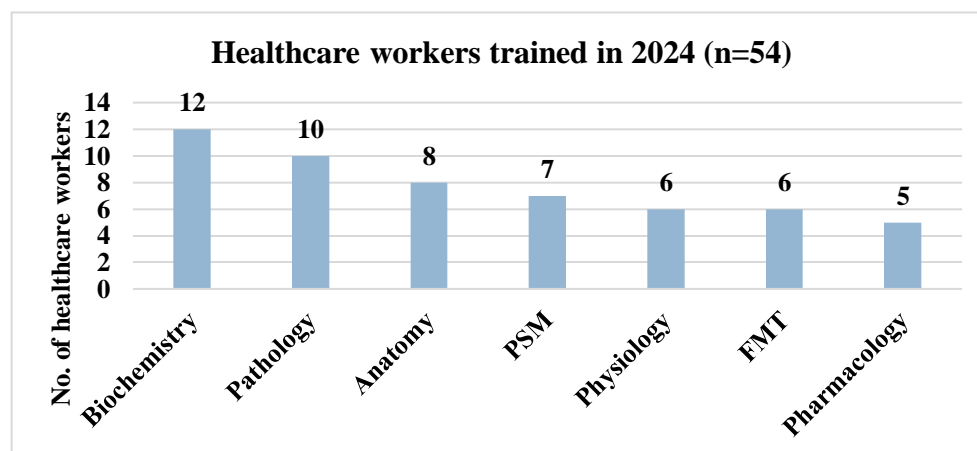




## TRAINING OF BIOMEDICAL WASTE MANAGEMENT FOR HEALTHCARE WORKERS

The knowledge of the Biomedical waste management rules among the hospital staff is very crucial. Training of the healthcare providers plays an important role in effective management of the Biomedical waste.

The Department of Microbiology at Maulana Azad Medical College conducts Biomedical Waste Management training classes twice a month for its health-care providers. In the year 2024, total 24 training classes were conducted. A total of 54 healthcare workers were trained. Of these, 51 were Resident Doctors and 3 were Paramedical staff members.



## NEW TESTS ADDED IN 2024

1.	<b>Tuberculosis Laboratory</b>	Automated liquid culture for <i>M. tuberculosis</i> using MGIT
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### **Junior Residents**

PG 3<sup>rd</sup> Year: Dr. Shailey, Dr. Rajat, Dr. Prarthana, Dr. Hemant, Dr. Priyanka K, Dr. Amrisha, Dr. Kevin

PG 2<sup>nd</sup> Year: Dr. Aditya, Dr. Jai, Dr. Meera, Dr. Nakilabet, Dr. Nikita, Dr. Priyanka, Dr. Rohit, Dr. Rumi, Dr. Swati, Dr. Vamika

PG 1<sup>st</sup> Year: Dr. Abhijit, Dr. Anwesh, Dr. Anita, Dr. Ashwin, Dr. Jagriti, Dr. Narasimha, Dr. Munya, Dr. Padmasna, Dr. Shalini

PG 1<sup>st</sup> Year (2024 Batch): Dr. Noor, Dr. Anoushka, Dr. Vishakha, Dr. Rewa, Dr. Anandita, Dr. Sujata, Dr. Biplav, Dr. Tejaswini, Dr. Rashmi, Dr. Prakriti

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**Newsletter compiled and prepared by:** Dr. Prabhav Aggarwal (Professor) and Dr. Srestha Mitra (Assistant Professor)

**Approved by:** Dr. Sonal Saxena (Director Professor and Head)