Ministry of Health & Family Welfare
Government of India

Annual Report

Telangana State Antimicrobial Resistance Surveillance Network (TARS-Net)

Reporting period

January 01st-December 31st 2025

Nodal Center- Osmania Medical College, Microbiology Department, Hyderabad Supported by

National Programme on AMR Containment, National Centre for Disease Control (NCDC)
Directorate General of Health Services

Ministry of Health & Family Welfare Government

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Acknowledgement

Osmania Medical College, Osmania General Hospital Hyderabad, Microbiology Department, nodal center for Telangana State Antimicrobial Resistance Surveillance Network, is very glad to publish its Second annual report, 1 January -31 December 2025.

We express our deepest of the gratitude to National AMR Programme Unit at NCDC, New Delhi, for their guidance and support to conceptualize and formulate Telangana State Antimicrobial Resistance Surveillance-TARS network as a part of National programme on Antimicrobial Resistance Containment.

We are highly indebted and express our gratitude to Dr. A Narendra Kumar (Director of Medical Education), for all administrative support in successful rolling out of the TARS-Net network.

We also want to thank, all Allied Hospitals and the network sites, who had submitted their data in the timely manner and participated actively in training sessions and online meetings for improving the TARS-Net data management.

The annual TARS-Net report generated provides critical insights into state's antimicrobial resistance pattern. It will leverage evidence-based interventions, policies, and programs that will mitigate the threat of AMR and preserve the effectiveness of antibiotics for the treatment of infectious diseases in our state and country.

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Acronyms

AMR	Antimicrobial Resistance
Amox-clav	Amoxicillin/ Clavulanic acid
AST	Antimicrobial Susceptibility Testing
BMD	Broth Micro dilution
CBDDR	Centre for bacterial Diseases and Drug Resistance
CLSI	Clinical & Laboratory Standards Institute
CSV	Comma Separated Value
EQAS	External Quality Assessment Scheme
GLASS	Global Antimicrobial Resistance and Use Surveillance System
IPD	Inpatient Department
ICU	Intensive Care Unit
ID	Identification
IQC	Internal Quality Control
LIMS	Laboratory Information Management System
MRSA	Methicillin-Resistant *Staphylococcus aureus*
NARS-Net	National Antimicrobial Resistance Surveillance Network
NFGNB	Non-fermenting Gram-negative bacilli
NCDC	National Centre for Disease Control
NRL	National Reference Laboratory
OPD	Outpatient Department
OSBF	Other Sterile Body Fluids
PA	Pus Aspirate
R I S	Resistant Intermediate Sensitive
TMP-SMX	Trimethoprim- Sulfamethoxazole
SOP	Standard Operating Procedure
TARSNET	Telangana state Antimicrobial Resistance Surveillance Network
VBA	Visual Basic Application
VRE	Vancomycin-Resistant *Enterococcus species*
WHO	World Health Organization

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1. Executive Summary

The Telangana State AMR surveillance network (TARS-Net) under the National Programme on AMR Containment, coordinated by the National Centre for Disease Control (NCDC), has been established in December 2023 and includes 13 laboratories in 10 Districts. For the surveillance of TARSNET sites, Osmania Medical College, Hyderabad has been selected as the state nodal centre for AMR surveillance.

NCDC has been designated by the Ministry of Health and Family Welfare (MoHFW), Government of India as the National Coordinating Centre (NCC) for AMR surveillance in the country.

WHONET work shop in Telangana state was conducted in December 2023. Hands on training was provided to the bacteriologists and HODs of microbiology of all 13 sites regarding WHONET configuration, data entry, analysis of antibiotic sensitivity report and preparation of antibiograms using local data. In 2026 January , OMC conducted annual review meeting with 13 sites to review the 2025 data. The current report covers the data submitted by TARS-Net sites during the reporting period from 1st January 2025 to 31st December 2025 and includes surveillance data from 13 sentinel sites in 10 districts of Telangana.

The comparison of antimicrobial resistance surveillance data between 2024 and 2025 from Telangana State laboratories shows similar overall pathogen distribution with minor variations in isolate numbers and resistance patterns.

The total number of isolates in the data was slightly less in 2025 compared to 2024 after deduplication. In both years, Gram-negative organisms predominated, with *Escherichia coli* and *Klebsiella* spp. remaining the most frequently isolated pathogens. However, a slight reduction in their total numbers was observed in 2025, while *Pseudomonas* spp. and *Acinetobacter* spp. showed a modest increase. The proportion of isolates from blood and ICU settings increased in 2025, suggesting improved reporting from critical care units or a higher burden of severe infections.

In terms of antimicrobial resistance, MRSA rates among *Staphylococcus aureus* increased in 2025 compared to 2024, whereas vancomycin resistance among *Enterococcus* spp. remained very low in both years. Resistance to third-generation cephalosporins and fluoroquinolones among Gram-negative bacteria continued to be high, with a notable increase in carbapenem resistance in some organisms. Overall, the findings indicate persistent high antimicrobial resistance among key pathogens, highlighting the need for strengthened antimicrobial stewardship and infection control practices across healthcare facilities.

2. Telangana State AMR Surveillance Network (TARS-Net) Report

2.1 Introduction

Antimicrobial resistance (AMR) is recognized as one of the top ten public health threats by the World Health Organization (WHO).

OMC Hyderabad became the part of National AMR Surveillance Network (NARS-Net) in 2018 .Since then OMC has been submitting their surveillance data to NCDC. State AMR Surveillance was initiated in 2023 which currently includes 13 medical Colleges/ laboratories in 10 districts of the state (as of March 2026) to ensure geographic representation. The surveillance data submitted by the TARS-Net sentinel sites is analyzed after validation at OMC Hyderabad, which is designated as nodal centre for State AMR Surveillance in the state of Telangana.

Under the TARS-Net, for the year 2025 ,11 government medical colleges and 2 private medical colleges have performed data entry in WHONET software and submitted their data on priority pathogens and their antibiotic sensitivity testing results to the nodal center at OMC

The TARS-Net sentinel sites conduct laboratory-based AMR surveillance of nine priority bacterial pathogens namely

1. *Staphylococcus aureus*
2. *Enterococcus* species
3. *Escherichia coli*
4. *Klebsiella* species
5. *Pseudomonas* species
6. *Acinetobacter* species
7. *Salmonella enteric serotype Typhi and Paratyphi*
8. *Shigella* species
9. *Vibrio cholera*

Table1: Priority Pathogens and specimens included under AMR Surveillance

Clinical Specimen	Laboratory case-definition	Priority pathogens under AMR Surveillance
Blood		*Enterococcus* species *Staphylococcus aureus* *Escherichia coli* *Klebsiella* species *Acinetobacter* species *Pseudomonas* species *Salmonella enterica* serovar Typhi *Salmonella enterica* serovar Paratyphi
Urine	Clinically significant bacteria	*Enterococcus* species *Escherichia coli* *Klebsiella* species *Acinetobacter* species *Pseudomonas* species
Pus Aspirate	Growth of pathogenic bacteria from aspirated purulent material from a closed infected site	*Enterococcus* species *Staphylococcus aureus* *Escherichia coli* *Klebsiella* species *Acinetobacter* species *Pseudomonas* species
Other sterile body fluids*	Growth of pathogenic bacteria from a sterile body fluid specimen	*Enterococcus* species *Staphylococcus aureus* *Escherichia coli* *Klebsiella* species *Acinetobacter* species *Pseudomonas* species
Stool	Isolation of pathogen from stool	*Salmonella enterica* serovar Typhi *Salmonella enterica* serovar Paratyphi *Shigella* species *Vibrio cholera*

NCDC provides support for conducting state level trainings of TARS-Net sites. It also provide technical support through online zoom calls with all the sentinel sites on proper sample collection, culture methodology, Identification and Antibiotics sensitivity testing and Data management. Osmania medical college as a state nodal centre performs and confirms alerts by doing AST using Broth micro dilution as per the AMR Program SOP.

TELANGANA STATE TARS –Net SITES MAP

Figure1- National AMR Surveillance Network laboratories under NARS-Net as of March 2026

WHONET 2024 is open source offline system for entries and analysis of antibiotic sensitivity test performed by manually and on automated systems. As per the SoP of the National programme, the CLSI guidelines are followed to interpret the zone sizes as Intermediate, Resistance and Sensitive to all antibiotics tested except for colistin interpretations, for which EUCAST guidelines is followed to interpret the MIC value as sensitive or resistant.

The completeness and alignment of data as per programme guidelines is reviewed through monthly zoom meetings for the sentinel sites conducted by NCDC officer.

Sentinel sites perform internal quality control using ATCC strains as per SOP and also participate in EQAS for Bacteriology with CMC Vellore.

The Annual report of AMR Data from January 2025 to December 2025 was compiled as a single file including data of all the sentinel sites. Deduplication of data was done before compiling and developing the final report.

2.2. Findings

This TARS-Net report includes data of 15,752 priority pathogen isolates reported by 13 sites in 2025 (List at Annexure-1). The data reported was cleaned at OMC Hyderabad and validated at NCDC before analysis and preparation of the annual report.

2.2.1 Data Deduplication

Deduplication of reported data of 15,752 isolates using WHONET revealed 14,616 isolates data from unique patients, which has been further taken for AST analysis. Figure2 depicts the distribution of AMR surveillance priority pathogen isolates before and after de duplication.

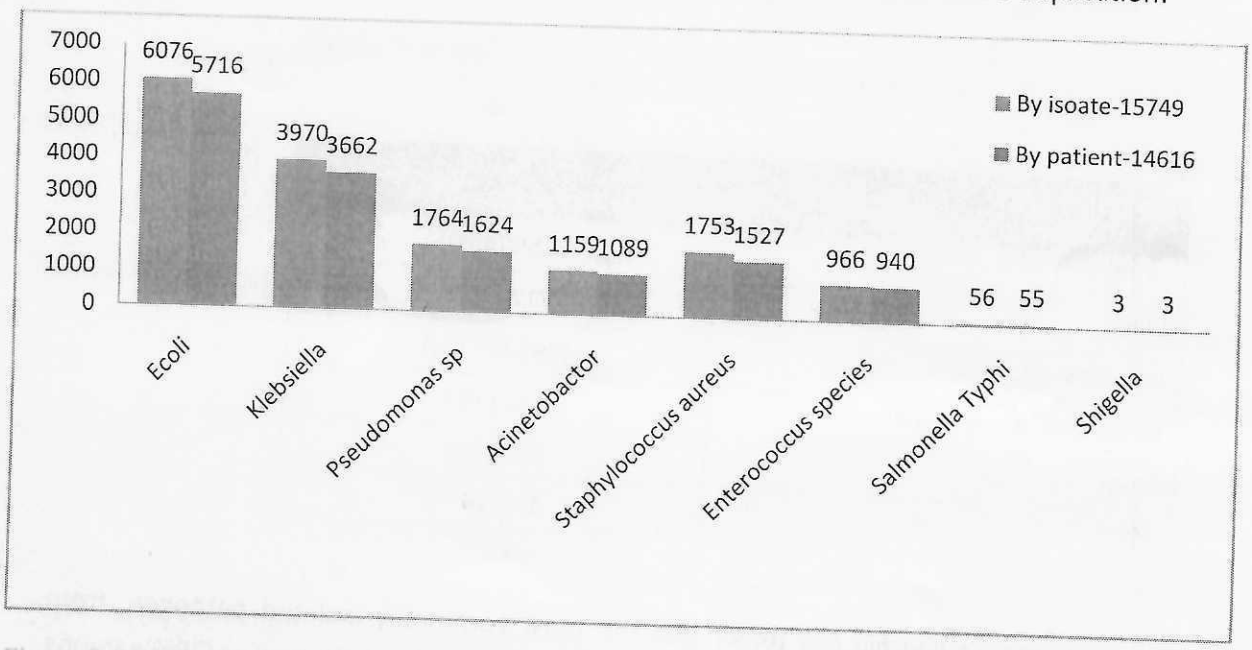
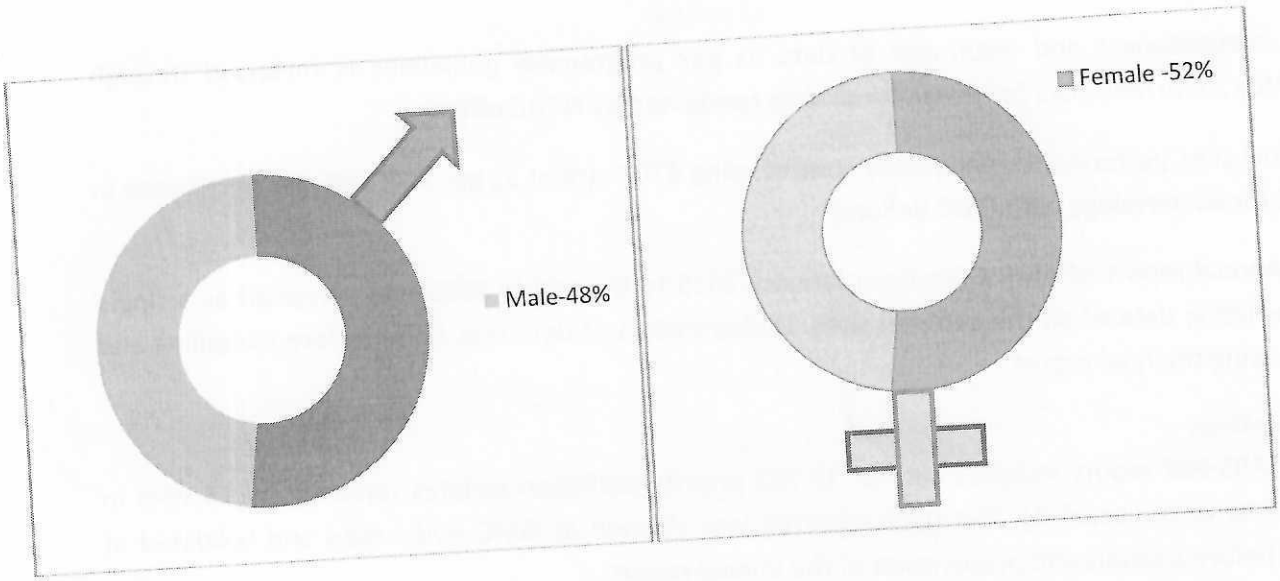


Figure2-Distribution of priority pathogen isolates and unique patient isolates



2.2.2Gender distribution of reported AMR data

Table 2: Distribution of Number of isolates based on specimen type (N=14,616)

Specimen Type	Number of isolates (%)
Urine	7159 (49%)
Blood	2717 (19%)
Pus Aspirate	4293 (29.3%)
Other sterile body fluids	442 (3%)
Stool	5(0.03%)
Total	**14,616**

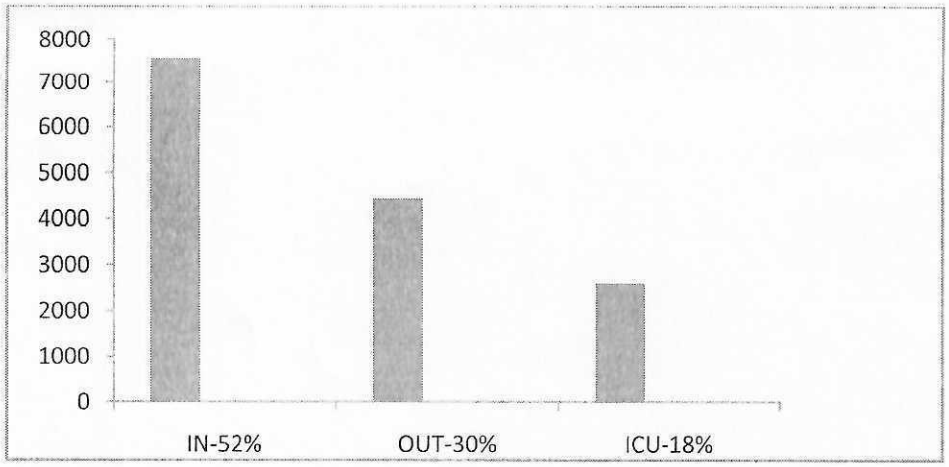
From urine specimens, *Escherichia Coli* (60%) was the most commonly isolated pathogen, from blood specimens the most common priority pathogen isolated was *Klebsiella* species (29%); among pus aspirates was *Staphylococcus aureus* (26%).*Klebsiella* species (24%) and *Escherichia coli* (22%) were the most commonly isolated pathogens from other sterile body fluids (Table 3).

Table 3-Distribution of isolates by specimen type (N= 14,616)

Priority pathogen	Blood		Pus aspirate		OSBF		Urine	
	N	(%)	N	(%)	N	(%)	N	(%)
Staphylococcus aureus	385	14%	1104	26%	39	9%	x	X
Enterococcus species	208	8%	89	2%	18	4%	625	9%
Escherichia Coli	357	13%	936	22%	128	29%	4295	60%
Klebsiella species	792	29%	1069	24%	103	23%	1698	24%
Salmonella Typhi and Paratyphi	55	2%	x	x	x	x	x	x
Pseudomonas species	293	11%	811	19%	96	22%	424	6%
Acinetobacter species	629	23%	284	7%	59	13%	117	2%
Total	2719	100%	4293	100%	443	100%	7159	100%

Table 4 -Specimen type wise distribution of isolates (N=14,616)

ioriy olates	Staphylococcus aureus		Enterococcus spp.		Escherichia Coli		Klebsiella spp.		Salmonella Typhi and Paratyphi		Pseudomonas spp.		Acinetobacter spp.		Shigella	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
ood	385	25%	208	22%	357	6%	792	22%	53	100 %	293	18%	629	58%	x	x
us spirate	1104	72%	89	9%	936	16%	1069	29%	x	x	811	49%	284	26%	x	x
SBF	38	2%	18	5%	128	2%	103	3%	x	x	96	6%	59	5%	x	x
rine	x	x	625	66%	4295	75%	1698	46%	x	x	424	26%	117	10%	x	x
ool	x	x	x	x	x	x	x	x	2		x	x	x		**3**	**100%**
otal	1527		940		5716		3662		55		1624		1089		**3**	



*IN–Inpatient also included emergency; OUT–Outpatient; ICU–Intensive care Units

Figure 3 -Distribution of isolates by location type (N=14,616)

In the 2025 AMR surveillance data, the majority of isolates were from patients admitted in hospital wards (IPD- 52%) whereas the least number of isolates belonged to patients from ICU(18%). Almost a third of the isolates (30%) were from patients visiting the outpatient clinics (Fig.3).

Table5 - Distribution of priority pathogen isolates by location type (N=14,616)

Priority Pathogen	Inpatient		Outpatient		I.C.U.	
	Number	(%)	Number	(%)	Number	(%)
Escherichia coli	2685	36%	2288	52%	743	29%
Klebsiella species	1999	26%	957	21%	707	27%
Salmonella Typhi and Paratyphi	38	0.40%	12	0.20%	5	0.19%
Pseudomonas species	895	12%	386	9%	342	13%
Acinetobacter species	613	8%	105	2%	372	14%
Staphylococcus aureus	822	10%	487	11%	218	8%
Enterococcus species	521	7%	204	5%	215	8%
Shigella species	1	0.01%	0	0	1	0.03%
Total	**7574**		**4439**		**2603**	

Among the inpatients, the most commonly isolated priority pathogen was *Escherichia coli* (36%) followed by *Klebsiella* spp.(26%),however a reverse scenario was seen in Intensive care units where in *Klebsiella* spp. (27%) was the most commonly isolated pathogen followed by *Escherichia coli*(29%)and *Pseudomonas* spp.(13%), *Enterococcus* spp. (8%)(Table5). *Escherichia coli* was also the most commonly isolated pathogen in samples from Outpatient clinics (52%) In contrast, the least commonly isolated pathogen amongst all of the location types was *Salmonella Typhi and Paratyphi* 0.4% and *Shigella species* 0.03 %(Table 5).

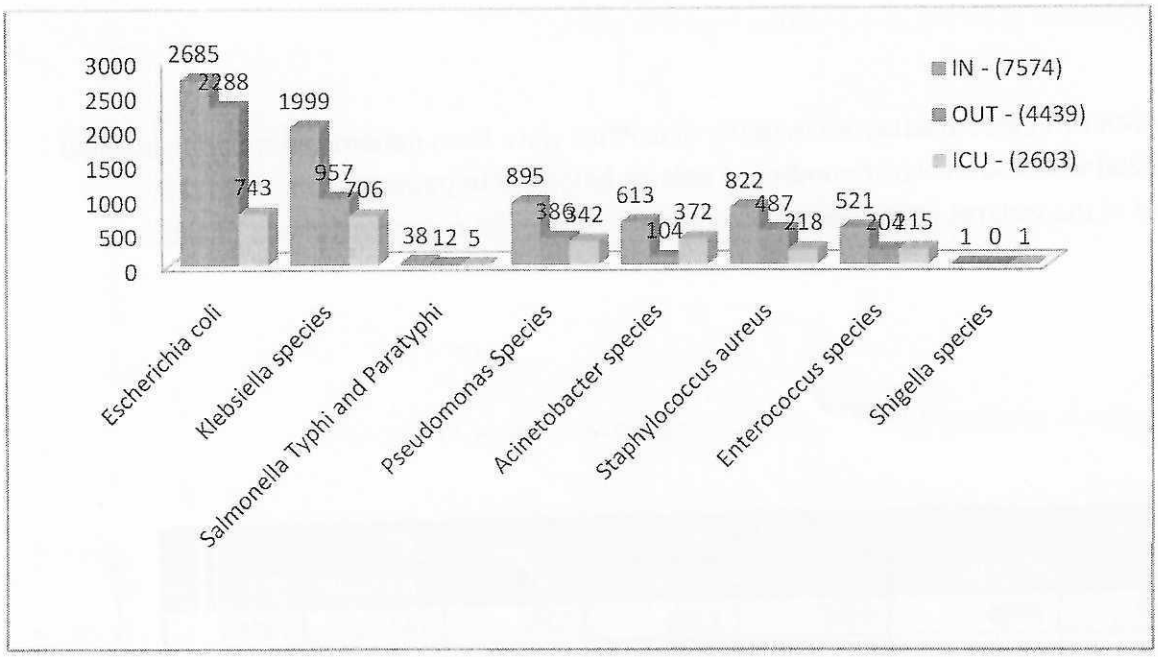


Figure 4-Distribution of priority pathogens isolates by location-type

2.2.3AMR profile of priority pathogens

2.2.3.1 Gram-Positive Cocci

The AMR surveillance under TARS-Net covers the two most prevalent Gram-positive bacteria human pathogens i.e., *Staphylococcus aureus* and *Enterococcus* species.

Staphylococcus aureus

Total numbers of Isolates 1527, isolated from specimen blood (25%), pus aspirates (72%) and other sterile body fluids 2% respectively (Table 4).

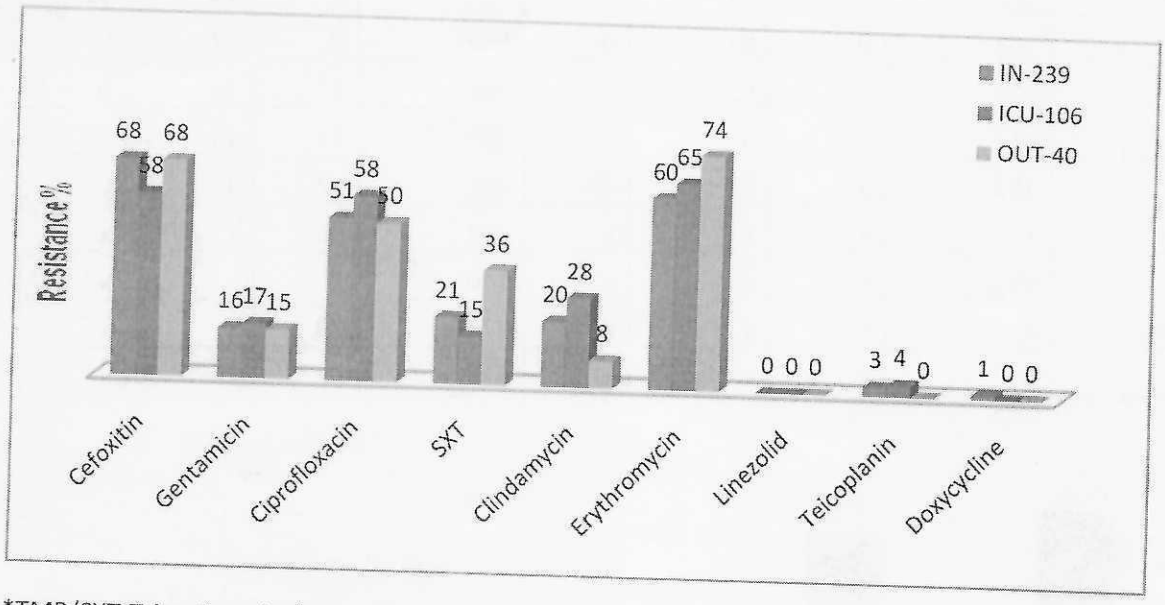
Among *staphylococcus aureus* isolated from blood, MRSA were reported to be 65%which was followed by resistance to erythromycin(63%) and ciprofloxacin (53%) . A similar resistance pattern was also seen in other specimen types like pus aspirate and sterile body fluids (Table -6).

Table 6-Resistance profile of Staphylococcus aureus (N=1527)

	blood -385		Pus-1104		OSBF-18	
Antibiotic name	Number	R%	Number	R%	Number	R%
Cefoxitin	252	65	837	47	29	48
Gentamicin	169	16	485	19	17	18
Ciprofloxacin	146	53	498	58	20	60
Trimethoprim/Sulfamethoxazole	156	21	671	18	17	24
Clindamycin	316	21	995	20	30	30

Erythromycin	332	63	886	62	33	67
Linezolid	268	0	908	0	28	0
Teicoplanin	66	3	315	1	13	0
Doxycycline	123	1	604	2	16	0

*TMP/SMX-Trimethoprim/sulfamethoxazole.



*TMP/SXT-Trimethoprim/sulfamethoxazole.

Figure 5- Resistance profile of Staphylococcus aureus in blood (N=385)

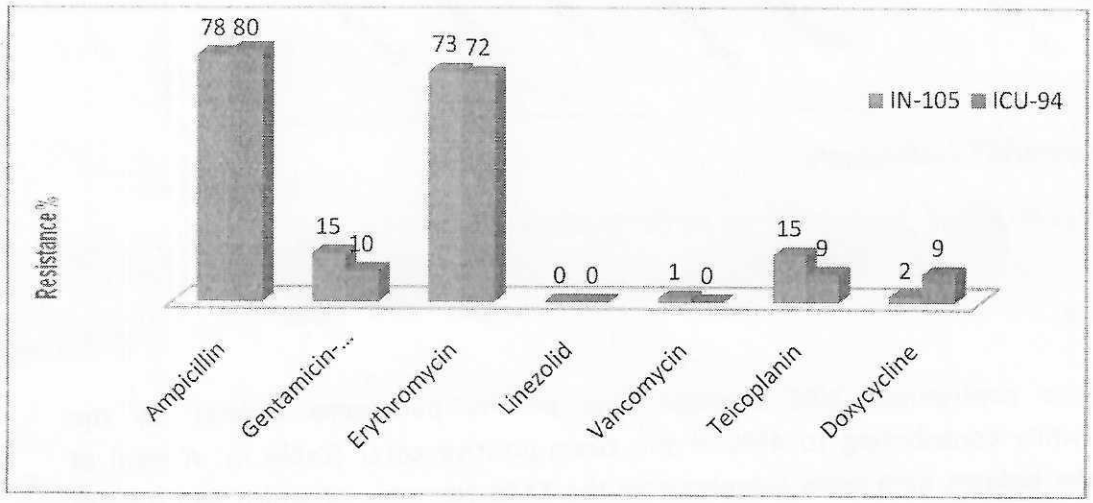
Enterococcus species

Enterococcus species contributed 10% amongst nine priority pathogens isolated by the surveillance sites while contributing to 46% of the Gram-positive cocci (Table 4). A total of *Enterococcus species* isolates data were submitted by the TARS Net sites of which 940 isolates were from unique patients (Fig. 2). Upon analysis of 940 unique patient isolates, isolation from specimen types were urine-(66%), blood-(22%), pus aspirates -(9%)and other sterile body fluids-5% respectively (Table 4).

Among *Enterococcus species* isolated from blood, erythromycin resistance was noted to be 70% followed by Ampicillin 79%). A similar resistance pattern was also seen in other specimen types like pus aspirate and sterile body fluids (Table -7).

Table 7-Resistance profile of Enterococcus species (N=960)

Antibiotic name	BLOOD -208		PUS-89		URINE-625		OSBF-38	
	Number	R%	Number	R%	Number	R%	Number	R%
Ampicillin	128	79	43	51	424	75	5	40
Gentamicin-High	109	12	33	9	386	35	6	0
Erythromycin	162	70	71	51	x	x	14	71
Linezolid	183	0	81	0	536	0	17	0
Vancomycin	165	1	61	5	488	2	16	6
Teicoplanin	117	11	46	9	339	27	13	31
Doxycycline	102	5	39	10	281	22	4	0
Ciprofloxacin	x	x	x	x	253	68	x	x
Fosfomycin	x	x	x	x	140	2	x	x
Nitrofurantoin	x	x	x	x	477	29	x	x
Tetracycline	x	x	x	x	93	82	x	x



*(Total blood samples are 217, in that outpatient samples 9 are not shown in graph)

Figure 6-Resistance profile of Enterococcus species in blood (N=208)

2.2.3.2 Gram-Negative Bacilli

Under TARS Net in alignment with NARS-Net, seven Gram-negative bacilli of public health importance are included for AMR surveillance. These are *Escherichia coli, Klebsiella* species, *Pseudomonas* species, *Acinetobacter* species, *Salmonella enterica serovar Typhi and Paratyphi, Shigella species*.

2.2.3.2.1 Enterobacteriaceae

Data of 10,105 isolates of *E. coli, Klebsiella* species, *Salmonella enterica serovar Typhi* and *Paratyphi* and *Shigella* species was submitted by network sites from 9,436 unique patients.

Escherichia coli

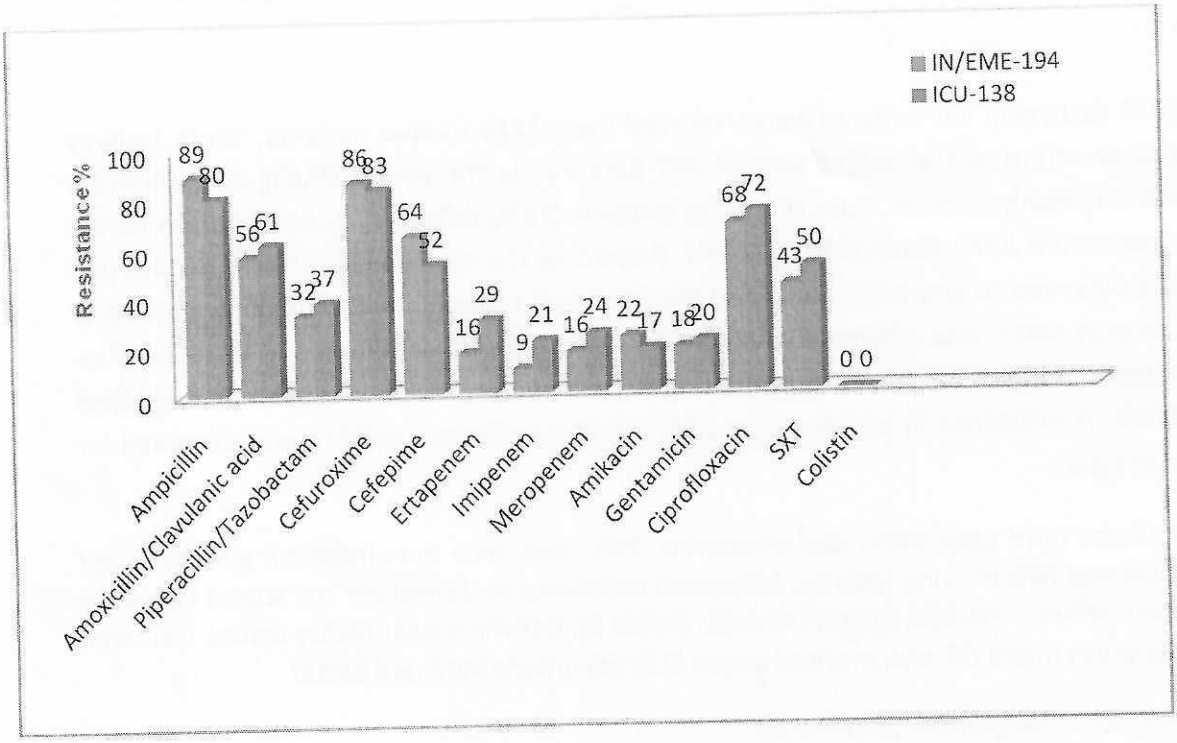
A total of 6076 *Eschericia coli* isolates were reported from 5716 unique patients. These isolates contributed to one-third of the unique patient AST data during the year 2025(Fig.2). *Escherichia coli* was most commonly isolated from the urine samples (75%) followed by pus aspirate (16%), blood (6%) and sterile body fluids (2%) (Table4). Regarding the resistance pattern, the highest resistance was observed to ampicillin among all the specimen types (Table8).A high proportion of resistance to ciprofloxacin was observed with 69% resistance in each of blood and OSBF isolates. Forty nine percent (49%) of resistance to trimethoprim- sulfamethoxazole was seen among blood isolates and 56% of resistance in isolates from OSBF, similar resistance pattern was observed for other specimen types.

With respect to the third generation cephalosporins, 78% resistance to ceftriaxone was observed in blood isolates and 74% in urine isolates. Imipenem resistance in *Eschericia coli* was observed to be 14% in blood Isolates and 10% in urine isolates (Table 8). Colistin susceptibility testing has been done using the broth micro dilution method as per CLSI document M02 and M100

Table 8 -Resistance profile of Escherichia coli

Antibiotic names	BLOOD -357		PUS-936		URINE-4295		OSBF-128	
	Number	R%	Number	R%	Number	R%	Number	R%
Ampicillin	x	x	538	89	1902	88	83	88
Amoxicillin/Clavulanic acid	215	56	607	67	3179	55	79	71
Piperacillin/Tazobactam	284	33	683	36	3174	26	94	36
Cefuroxime	151	83	275	80	2028	81	28	89
Ceftriaxone	191	78	487	72	2922	74	50	84
Cefotaxime	93	67	415	75	1307	72	72	76
Cefepime	278	57	631	50	2541	51	91	53
Ertapenem	74	22	154	21	1259	12	17	12
Imipenem	258	14	428	14	2110	10	58	12
Meropenem	256	19	584	12	2589	9	80	13
Amikacin	320	20	774	24	3721	20	105	25
Gentamicin	242	19	412	27	2439	20	56	21
Ciprofloxacin	234	69	442	61	2488	60	54	69

Trimethoprim/Sulfamethoxazole	285	45	626	51	2901	44	81	56
Colistin	232	0	520	0	2269	0	79	0
Doxycycline	x	x	26	19	x	x	1	0
Nitrofurantoin	x	x	x	x	2959	14	x	x



*(Total blood samples are 357, in that outpatient isolates 25 are not shown in graph)

Figure 7-Resistance profile of Escherichia coli in blood (N=278)

Klebsiella species

In the current data reporting period, 3,970 *Klebsiella* species isolates were reported of which 3,662 were from unique patients. The isolates of *Klebsiella* spp. in data reported by the sentinel sites was highest from urine (46%) followed by pus aspirate (29%), blood (22%) and OSBF (3%) (Table 4).

Among the urine isolates, more than one-third of the isolates tested against amino glycosides namely amikacin (44 %) were found to be resistant; eight of every 10 isolates of *Klebsiella* spp. from urine were found to be resistant to third generation cephalosporins. With respect to carbapenem resistance in urine isolates, resistance to ertapenem was observed to be (30%).

Like urine isolates, *Klebsiella* species from blood showed high level of resistance to the third generation cephalosporins .Imipenem resistance in *Klebsiella* species isolated from blood was

observed to be 20% whereas 19% resistance was observed in urine isolates. Compare to urine isolates carbapenem resistance in blood isolates (Table9).

Klebsiella species' location type wise AST data revealed similar resistance pattern like other priority pathogens wherein higher resistance was seen in isolates from inpatient compared to intensive care units and outpatient departments (Fig. 8).

Table 9 -Resistance profile of Klebsiella species (N= 3662)

Antibiotic name	BLOOD -792		PUS-1069		URINE-1698		OSBF-103	
	Number	R%	Number	R%	Number	R%	Number	R%
Amoxicillin/Clavulanic acid	477	73	723	67	1233	57	61	66
Piperacillin/Tazobactam	517	44	799	38	1262	31	70	43
Cefuroxime	296	89	289	70	702	65	20	75
Ceftriaxone	434	79	478	63	1029	60	33	55
Cefotaxime	293	77	571	73	610	60	55	71
Cefepime	498	54	767	49	973	43	59	54
Imipenem	397	20	515	19	750	19	48	21
Meropenem	435	31	736	16	1003	19	62	31
Amikacin	695	44	874	38	1439	29	79	37
Gentamicin	307	27	422	34	930	24	45	22
Ciprofloxacin	331	38	478	48	918	38	48	38
Trimethoprim/Sulfamethoxazole	557	36	741	48	1031	39	55	31
Colistin	341	0	610	0	873	0	41	0
Doxycycline	7	0	34	0	x	x	2	0
Nitrofurantoin	x	x	x	x	1243	40	x	x

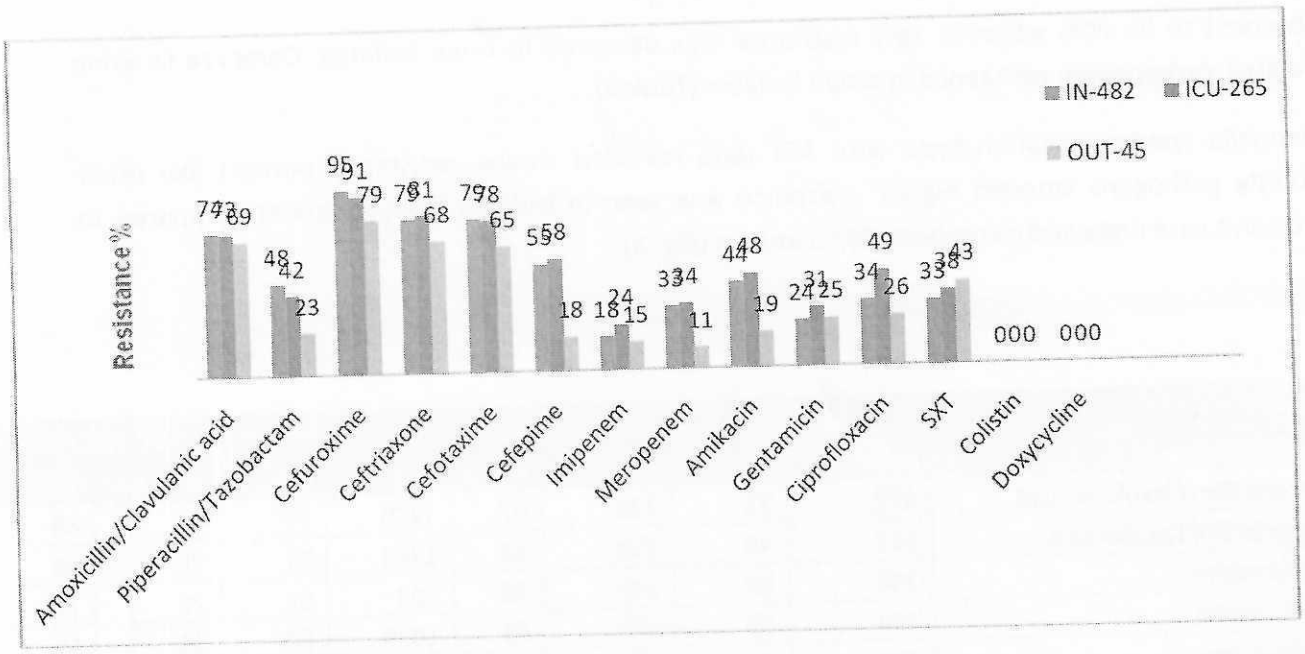


Figure 8-Resistance profile of Klebsiella species isolated from blood (N=792)

2.2.3.2.2 Non-Fermenting Gram-Negative Bacilli

Among the non-fermenting Gram-negative bacilli (NF GNB) included in the data submitted during Jan-Dec 2025 from the TARS-Net sentinel sites, *Pseudomonas* species was the most frequently isolated pathogen from 1624 unique patients followed by *Acinetobacter* species 1159 (Fig2).Among the NFGNB, *Pseudomonas species* was the predominant isolate among inpatients, while *Acinetobacter* species was the predominant isolate among the patients in ICU (Table 5).

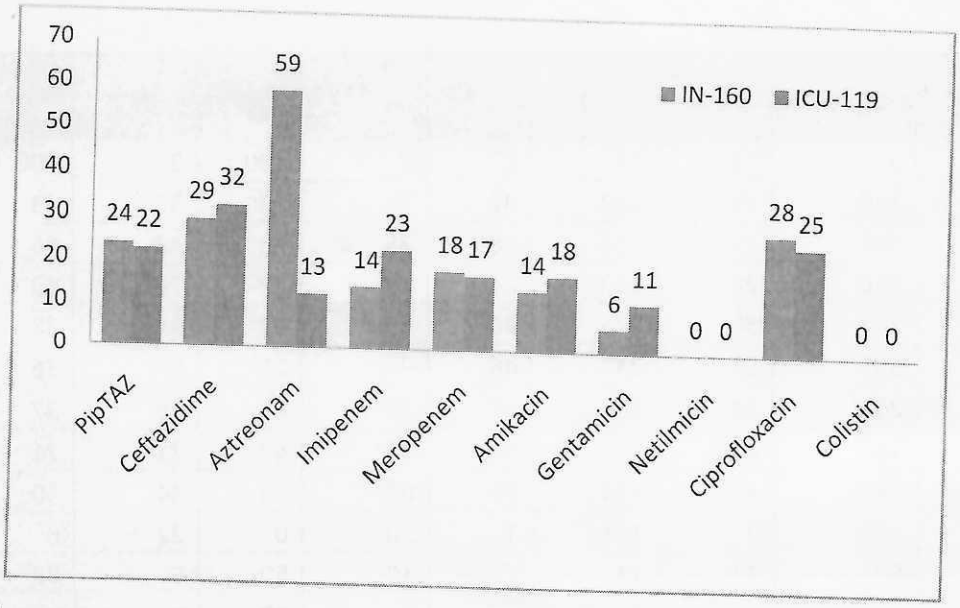
Pseudomonas species

Surveillance sites in 2025 submitted data of 1764 isolates of *Pseudomonas* spp. from 1624 unique patients (Fig2).*Pseudomonas* spp. Isolates included in the data during current reporting period were most commonly isolated from pus aspirate (49%), urine (26%), blood (18%), and other sterile body fluids (6%) (Table 4).

Isolates of *Pseudomonas spp.* from blood cultures of patients in Intensive care units showed highest resistance to Aztreonam, ciprofloxacin, Piperacillin/ tazobactam among the tested antibiotics (Fig.9).

Table 10 -Resistance profile of Pseudomonas species (N=1554)

Antibiotic name	BLOOD -293		PUS-811		URINE-424		OSBF-96	
	Number	R%	Number	R%	Number	R%	Number	R%
Piperacillin/Tazobactam	201	22	526	2	284	31	43	14
Ceftazidime	230	30	608	20	350	36	55	36
Aztreonam	39	46	80	20	38	63	7	43
Imipenem	159	18	376	7	216	38	30	3
Meropenem	182	17	474	5	248	32	45	4
Amikacin	183	15	605	12	361	23	59	8
Gentamicin	94	9	249	2	120	19	25	0
Netilmicin	1	0	6	0	3	33	x	x
Ciprofloxacin	134	26	391	23	237	42	35	23
Colistin	139	0	333	0	200	0	31	0



Pip/Taz: Piperacillin/ tazobactam,in total blood specimens from out patients are 14 only not shown in graph

Figure 9 -Resistance profile of Pseudomonas species in blood (N=293)

Acinetobacter spp.

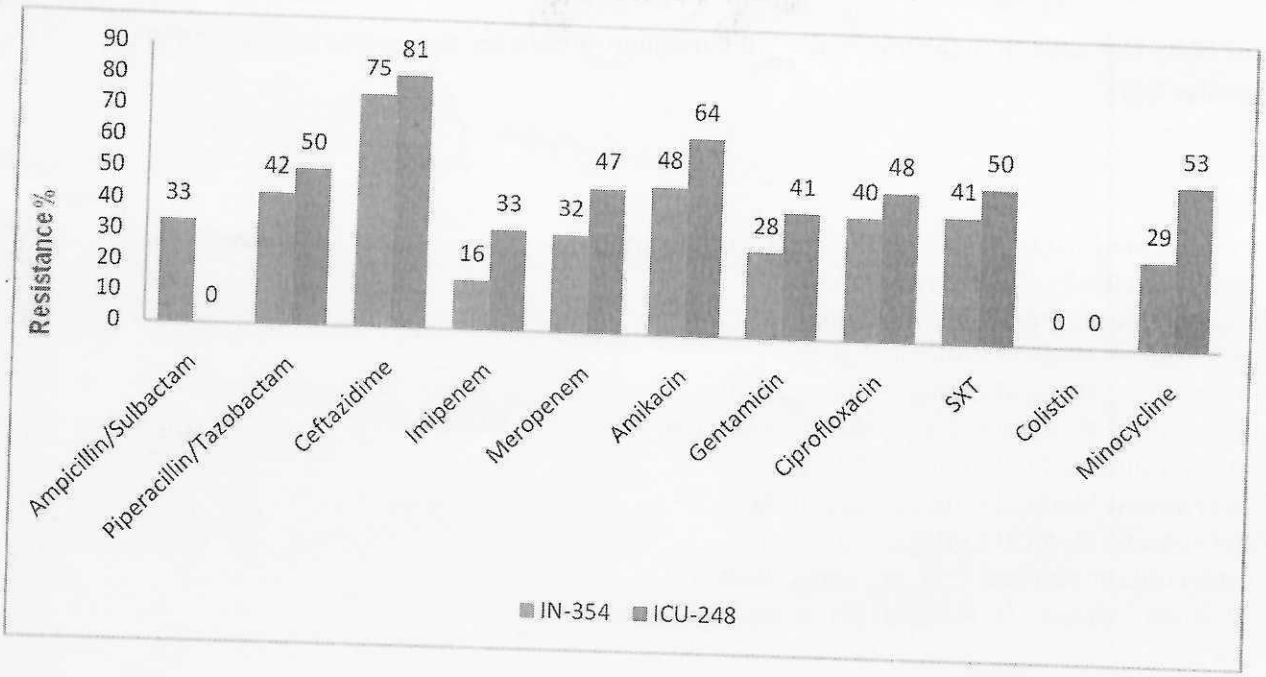
Data of a total of *Acinetobacter* species isolates was submitted by network sites during this reporting period Jan 2025–Dec2025,of which 1089 were from unique patients. Among all specimen types under the program, *Acinetobacter* species was most commonly isolated from blood (58%) followed by pus aspirates (26%), urine (10%) and other sterile body fluids (5%) (Table 4)

Blood isolates of *Acinetobacter* species showed high resistance to ceftazidime (77%).Forty four percent of blood isolates were resistant to Piperacillin/Tazobactam and minocycline (Table 11).

Pseudomonas isolates from blood cultures of patients in Intensive care units showed highest resistance Ceftazidime and Amikacin among the tested antibiotics (Fig.10).

Table11- Resistance profile of Acinetobacter species (N = 1089)

Antibiotic name	BLOOD -629		PUS-284		URINE-117		OSBF-96	
	Number	R%	Number	R%	Number	R%	Number	R%
Ampicillin/Sulbactam	3	33	14	86	2	100	3	100
Piperacillin/Tazobactam	346	44	243	42	74	32	35	43
Ceftazidime	491	77	224	68	85	69	44	66
Imipenem	246	24	133	24	49	27	24	63
Meropenem	282	38	225	24	65	18	34	38
Amikacin	559	53	247	46	94	28	50	36
Gentamicin	204	34	139	55	47	40	19	37
Ciprofloxacin	166	44	129	57	45	47	21	71
Trimethoprim/Sulfamethoxazole	480	44	213	66	66	45	34	50
Colistin	230	0	191	1	50	0	22	0
Minocycline	50	44	13	77	10	50	6	83
Tetracycline	x	x	x	x	6	50	x	x



*(Total isolates from blood samples are 629. Of that, those from outpatient samples are only 27, hence are not shown in graph.)

Figure 10 - Resistance profile of Acinetobacter species in blood (N=629)

2.3 Discussion

The 2025 TARS-Net analyzed 14,616 unique isolates after deduplication. Most isolates were from urine, with *Escherichia coli* being the predominant pathogen, while *Klebsiella* species was common from blood and *Staphylococcus aureus* from pus samples.

High MRSA prevalence was observed among Gram-positive bacteria, while Gram-negative organisms such as *Escherichia coli* and *Klebsiella* spp. showed significant resistance to third-generation cephalosporins and fluoroquinolones, with emerging carbapenem resistance. Non-fermenters like *Pseudomonas* spp. and *Acinetobacter* spp. also demonstrated multidrug resistance. These findings highlight the need for continuous AMR surveillance, antibiotic stewardship, and effective infection control measures.

2.4 Annexure I

List of TARS-Net sites that contributed AMR surveillance data for the period January 2025 to December 2025

Government Colleges

1. Osmania Medical College and Hospitals, Hyderabad
2 Gandhi Medical College, Hyderabad
3. Kakatiya Medical College, Warangal
4. Government Medical College, Adilabad
5. Government Medical College, Nizamabad
6. Government Medical College, Mahaboobnagar
7. Government Medical College, Siddipet
8. Government Medical College, Nalgonda
9. Government Medical College, Suryapet
10. Government Medical College, Sanga Reddy
11. All India Institute Of Medical Sciences, Bibinagar

Private Institutions

12. Kamineni Academy of Medical Sciences & Research Institute (KAMSRC), Hyderabad
13. Apollo Institute of Medical Sciences & Research, Hyderabad