Table 2. Patient Outcomes

	No ID Consult (N=32)	ID Consult (N=195)	Overall (N=227)	p-value
Clearance blood cultures				< 0.001
Unknown	1	2	3	
No	5 (16.1%)	2 (1%)	7 (3.1%)	
Yes	26 (83.9%)	191 (99%)	217 (96.9%)	
Transthoracic echocardiogram				0.014
Unknown	0	1	1	
No	14 (43.8%)	45 (23.20%)	59 (26.11%)	
Yes	18 (56.2%)	149 (76.80%)	167 (73.89%)	
Transesophageal echocardiogram				0.005
Unknown	0	2	2	
No	32 (100%)	154 (79.8%)	186 (82.7%)	
Yes	0	39 (20.2%)	39 (17.3%)	
Antibiotic-related adverse event				0.550
Unknown	0	8	8	
No	31 (96.9%)	183 (97.9%)	214 (97.7%)	
Yes	1 (3.12%)	4 (2.1%)	5 (2.3%)	
In-hospital death				0.651
No	27 (84.4%)	158 (81%)	185 (81.5%)	
Yes	5 (15.6%)	37 (19%)	42 (18.5%)	
30-day mortality				0.643
Unknown	5	38	43	
No	25 (92.6%)	149 (94.9%)	174 (94.6%)	
Yes	2 (7.4%)	8 (5.1%)	10 (5.4%)	
30-day readmission				0.402
Unknown	6	47	53	
No	21 (80.8%)	108 (73%)	129 (74.1%)	
Yes	5 (19.2%)	40 (27%)	45 (25.9%)	
Median duration of therapy – endocarditis (range)	N/A	42 (3-59)	42 (3-59)	N/A
Median duration of therapy – no endocarditis (range)	14 (5-24)	14 (0-55)	14 (0-55)	0.444

N/A, not applicable

(Table 2). There were no significant differences in in-hospital mortality, 30-day mortality, 30-day re-admission rate, or duration of anti-Enterococcal antibiotics. **Conclusions:** These results support the conclusion that patients with Enterococcal bacteremia who received IDC were more likely to be managed according to currently recommended standards of care. In this cohort, IDC did not have a statistically significant association with differences in mortality, re-admission rate, or antibiotic duration. Patients with Enterococcal bacteremia are likely to benefit from IDC, especially as they frequently have significant life-limiting co-morbidities complicating their care. **References:** Vogel M, Schmitz RP, Hagel S, Pletz MW, Gagelmann N, Scherag A, Schlattmann P, Brunkhorst FM. Infectious disease consultation for Staphylococcus aureus bacteremia - A systematic review and meta-analysis. J Infect. 2016 Jan;72(1):19-28. doi: 10.1016/j.jinf.2015.09.037. Epub 2015 Oct 9. PMID: 26453841.

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Presentation Type:
Poster Presentation
Subject Category: Antibiotic Stewardship
Parental Perceptions of Penicillin Allergy Labels: Findings from a Multisite Survey at Two Pediatric Primary Locations
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Background: In children, penicillin allergy labels (PALs) are pervasive and persistent, despite linkage to suboptimal antibiotic selection with higher risk of side effects, increased length of hospitalization, and increased risk of harm throughout life. Up to 10% of children are labeled with PALs, yet over 95% tolerate the medication when tested. Parents might not always know that PALs are over-reported or incorrectly diagnosed. We aimed to examine parent and guardian perceptions of PALs and their attitudes towards delabeling. **Method:** We invited all English and Spanish-speaking parents of children presenting to two pediatric primary care locations in the northeast U.S to participate in an online, investigator-developed survey. Survey recruitment was passive, with parents discovering the survey through English and Spanish posters in the waiting and examination rooms. The survey included an initial screening question to identify whether a penicillin allergy was present. If the parent answered "yes," they were instructed to proceed with survey completion. The survey consisted of 32 questions (7 reaction history, 9 perceptions, 5 provider interaction, 4 general knowledge, 6 demographics and one open-ended). We used descriptive statistics to analyze the data. **Result:** After screening, we received 54 completed responses. Most respondents had a college degree or higher (75%). When asked about the reaction, the majority occurred in those ≤ 2 years of life (55%); the predominant symptom reported was rash (92%). Twenty-nine percent of patients were evaluated in an urgent care or emergency room. Parents reported being very concerned by the reaction to penicillin (79%). When asked if their child would have a reaction if re-prescribed penicillin, none disagreed. Only 38% did not think allergies were permanent. Most families had not been offered penicillin testing (82%), although 67% expressed interest in the testing process, and 64% planned to inquire about testing following our survey. The majority (89%) would not agree to removing PALs without testing, citing fear that the child would have an allergic reaction if given penicillin (60%) and needing more information (25%) as the reasons for lack of agreement with PAL removal without testing. **Conclusion:** Among this highly educated population, parents expressed concerns at the initial reaction, perceived the reaction would reoccur with future penicillin use, and stated interest in testing, but were reluctant to delabel from history alone. Parents are untapped partners in delabeling; interventions are necessary to enhance parental understanding of the impact of PALs and the potential for delabeling with low-risk allergies.

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Presentation Type:
Poster Presentation
Subject Category: Antibiotic Stewardship
Implementing a Comprehensive Antimicrobial Stewardship Program in a Global Healthcare Organization: A Phased Approach to Sustainable QI
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Background: Antimicrobial resistance (AMR) is a pressing global public health issue, and the limited development of new antibiotics necessitates robust Antimicrobial Stewardship Programs (ASP). As a global healthcare leader, IHH Healthcare successfully implemented ASP across 80 hospitals in seven countries (Singapore, Malaysia, India, Brunei, Hong Kong, China, and Turkey), aligned with the Centre for Disease Control and Prevention (CDC) Hospital ASP Core Elements, World Health Organization, and national guidelines. **Method:** A three-phase ASP strategy was developed following a crosswalk analysis of ASP practices across the seven countries (See Table 1): Phase 1 (2023): ASP committee establishment, terms of reference, and adoption of evidence-based guidelines. Phase 2 (2024): Guideline compliance audits, antibiogram development, resistance pattern monitoring, post-prescription audits, therapy optimization, and education. Phase 3 (2025): Antimicrobial preauthorization, infection-based interventions, and antimicrobial timeouts within 48–72 hours of initiation. Quarterly ASP meetings facilitated progress tracking and shared learning. Key metrics included guideline adherence, resistance trends, and antimicrobial utilization. **Results:** By 2023, all countries have established ASP committees and adopted guidelines for infections and surgical prophylaxis (see Table 2). In 2024, Phase 2 implementation (see Table 3) showed that: Guideline compliance: Regular audits monitored antimicrobial use for

Crosswalk Analysis of ASP practices across 7 countries in IHH Healthcare

	Hong Kong GHK	Brunei GJPMC	Singapore IHH SG	Malaysia IHH MY	China GCOD	India IN (Gleneagles)	Turkey (Acibadem)
Hospital Leadership Commitment	Y	N	Y	Y	Y	Y	Y
Accountability	Y	N	Y	Y	Y	Y	Y
Tracking	Y	Y	Y	Y	Y	Y	Y
Reporting	Y	N	Y	Y	Y	Y	Y
Prospective audit and feedback	Y	N	Y	Y	N	Y	Y
Preauthorization	N	N	N	N	Y	Y	Y
Treatment Guidelines	Y	N	Y	Y	Y	Y	Y

Crosswalk Analysis of ASP practices across 7 countries in IHH Healthcare

	Hong Kong GHK	Brunei GJPMC	Singapore IHH SG	Malaysia IHH MY	China GCOD	India IN (Gleneagles)	Turkey (Acibadem)
Interventions for CAP, UTI, skin infections	Y	N	Y	N	Y	Y	Y
Interventions for Sepsis	Y	N	N	N	Y	Y	Y
Interventions for S. aureus infection	Y	N	N	N	Y	Y	Y
Stopping unnecessary antimicrobial in new CDI	Y	N	N	N	Y	Y	Y
Culture-proven invasive infections	Y	N	N	N	Y	Y	Y
Review of OPAT	Y	N	N	N	N	Y	N
Policy for antimicrobial prescribing documentation	Y	N	Y	Y	Y	Y	Y

Crosswalk Analysis of ASP practices across 7 countries in IHH Healthcare

	Hong Kong GHK	Brunei GJPMC	Singapore IHH SG	Malaysia IHH MY	China GCOD	India IN (Gleneagles)	Turkey (Acibadem)
Antimicrobial timeout	Y	N	Y	N	N	Y	N
Proper assessment of penicillin allergies	Y	N	N	N	N	Y	N
Pharmacy-based de-escalation strategies	Y	N	N	N	N	Y	N
Documentation of indications for antimicrobials	N	N	Y	N	Y	Y	N
Automatic changes from IV to oral antimicrobial	N	N	N	N	N	N	N
Dose adjustments	Y	N	Y	Y	Y	Y	Y
Dose optimization	Y	N	Y	Y	Y	Y	Y

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Crosswalk Analysis of ASP practices across 7 countries in IHH Healthcare

	Hong Kong GHK	Brunei GJPMC	Singapore IHH SG	Malaysia IHH MY	China GCOD	India IN (Gleneagles)	Turkey (Acibadem)
Duplicative therapy alert	Hong Kong GHK	Brunei GJPMC	Singapore IHH SG	Malaysia IHH MY	China GCOD	India IN (Gleneagles)	Turkey (Acibadem)
Time-sensitive automatic stop orders	Y	N	N	N	N	N	Y
Detection/prevention of antimicrobial-related drug-drug interactions	Y	N	Y	Y	Y	Y	Y
Microbiology-led interventions e.g. susceptibility testing	Y	N	Y	N	Y	Y	Y
Education to prescribers and relevant staff	Y	N	Y	Y	Y	Y	Y
Education as part of prospective audit	Y	N	N	N	Y	Y	N
Education to e.g. patients	Y	N	Y	Y	Y	Y	Y
Overall	90%	3%	63%	47%	73%	93%	73%

2023 Targets (Phase 1 implementation)

2023 Targets (Phase 1 implementation)		2024 Target	Hong Kong GHK	Brunei GJPMC	Singapore IHH SG	Malaysia IHH MY	China GCOD	India IN (Gleneagles)	Turkey (Acibadem)	Hong Kong GHK
Phase 1A: Country ASP Committee Set Up	1. Each country shall set up an Antimicrobial Stewardship (AMS) committee in accordance with the terms of reference, with an appropriate healthcare professional as the leader to coordinate the AMS programme	100%	100%	100%	100%	100%	100%	100%	100%	100%
Phase 1B: Guideline Adoption	1. Each facility shall have up-to-date guidelines for common infections and common procedures, based on international/national evidence-based guidelines and local/national susceptibility patterns, and reviewed regularly. 2. Guidelines should target common infections (Top 3 – Treatment), and target common procedures (Top 3 – Surgical Antimicrobial Prophylaxis) specific to the country.	100%	100%	100%	100%	100%	100%	100%	100%	100%

1

2024 Targets (Phase 2 implementation)

2024 Targets (Phase 2 implementation)		2024 Target	Hong Kong GHK	Brunei GJPMC	Singapore IHH SG	Malaysia IHH MY	China GCOD	India IN (Gleneagles)	Turkey (Acibadem)	Hong Kong GHK
Phase 2A Guideline Monitoring: Compliance to guidelines shall be monitored through audits, and may include appropriateness of antimicrobial use, as well as quantity and types of antimicrobial use.	1. Evidence of compliance to guidelines (Phase 1B) is monitored through regular audits, and may include appropriateness of antimicrobial use, as well as quantity, shortest effective duration, types of antimicrobial use.	100%	100%	100%	100%	100%	100%	100%	100%	100%
Phase 2A Education: Education of patient and Healthcare Workers (HCWs) on antimicrobial resistance is in place.	1. Patient education materials: E.g. Given to patients/caregivers on antimicrobials; Information provided to patients/caregivers on discharge when discharged to complete an antibiotic regimen. 2. Staff/HCP: Regular continuing education	100%	100%	100%	100%	100%	100%	100%	100%	100%
Phase 2B Post prescription audits & feedback: There is regular evaluation and sharing on antimicrobial use in place.	1. Hospital/Country-level policy/protocol for post-Rx audits and feedback with the following: - Established audit criteria - Auditors - Process/ system of data collection and feedback 2. Regular reporting of Post-prescription audits & feedback and interventions to targeted stakeholders	100%	100%	100%	100%	100%	100%	100%	100%	100%
Phase 2B Antibiogram: Aggregate antibiogram is developed and updated regularly	1. Hospital/Country policy/protocol for developing, updating and using antibiogram 2. Evidence of monitoring resistance patterns	100%	100%	100%	100%	100%	100%	100%	100%	100%
Phase 2B Monitoring of key resistance organisms; Hospital acquired infections: Monitoring of key resistance organisms and hospital acquired infections, relevant to the country/healthcare facility.	1. Hospital/Country policy/protocol for monitoring key resistance organisms/Hospital-acquired infections with the following: - List of/definition of KRO and HAI - Process of monitoring of KRO and HAIs 2. Regular reporting of monitoring and interventions to targeted stakeholders	100%	100%	100%	100%	100%	100%	100%	100%	100%
Phase 2B Therapy optimization: Antimicrobial therapy shall be optimised with the following measures e.g. documentation of indications, automatic IV-to-Oral switch, dose adjustments, dose optimization, duplicative therapy alerts and automatic stop orders.	1. Hospital/Country-level policy/protocol that requires prescribers to document in the medical record or during order entry a dose and indication for all antibiotics orders 2. Protocol for IV to PO antibiotics to improve outcomes and/or reduce cost 3. Evidence that the impact of actions is being monitored through Days of Therapy (DOTs) or Defined Daily Dose (DDDs) 4. Dose optimization (pharmacokinetics/pharmacodynamics) to optimize the treatment of organisms with reduced susceptibility (e.g. for aminoglycoside) 5. Regular reporting of therapy optimization interventions to targeted stakeholders	100%	100%	100%	100%	100%	100%	100%	100%	100%

2025 Targets (Phase 3 implementation)

Initiative		Target
Preauthorization: Measures for the preauthorization of certain antimicrobials shall be in place.	✓ **Ensure that a system or process is in place for preauthorization of certain antimicrobials, with criteria clearly defined and documented.** 1. Implement a designated individual or team responsible for reviewing and approving preauthorization requests. 2. Establish clear guidelines or criteria for when preauthorization is required (e.g. specific antimicrobials, indications, duration). 3. Document the criteria for preauthorization in a written policy or guideline accessible to healthcare providers, updated regularly as needed.	100%
	✓ **Confirm that healthcare providers are aware of and adhere to the preauthorization process.** 1. Provide education and training sessions for healthcare providers on the preauthorization process, including how to submit requests and criteria for approval. 2. Implement reminders or prompts within electronic medical record systems to encourage compliance with preauthorization requirements.	
	✓ **Regularly monitor preauthorization requests and approvals to ensure compliance and effectiveness.** 1. Establish a system for tracking preauthorization requests, approvals, denials, and reasons for denial. 2. Conduct regular audits or reviews of preauthorization activities to assess compliance with established criteria and identify areas for improvement.	
Infection based intervention: Interventions tailor therapy to culture results for infections such as Community Acquired Pneumonia, Urinary Tract Infection, Skin and Soft Tissue Infection, Sepsis, C. difficile Infection, Staphylococcus Aureus Infection, should be put in place.	✓ **Establish protocols or guidelines for tailoring antimicrobial therapy based on culture results for specific infections (e.g., Community Acquired Pneumonia, Urinary Tract Infection, Skin and Soft Tissue Infection, Sepsis, C. difficile Infection, Staphylococcus Aureus Infection).** 1. Develop evidence-based treatment algorithms or protocols for common infections, considering local antimicrobial resistance patterns and guidelines (refer to Table 1 of CDC Core Elements - Key opportunities to improve antibiotic use). 2. Include recommendations for initial empiric therapy and subsequent modifications based on culture and susceptibility results.	100%
	✓ **Ensure that healthcare providers are educated on the protocols and guidelines for infection-based interventions.** 1. Provide training sessions or educational materials on the use of infection-based intervention protocols to relevant healthcare providers, including physicians, nurses, and pharmacists.	
	✓ **Monitor adherence to infection-based intervention protocols and assess their impact on patient outcomes.** 1. Track adherence to treatment protocols through chart reviews, electronic medical record audits, or quality improvement initiatives.	
Antimicrobial Timeouts: Review of antimicrobials should be prompted within 48-72 hours of therapy to review the appropriateness of antimicrobial selection.	✓ **Establish a protocol for conducting antimicrobial timeouts within 48-72 hours of therapy initiation.** 1. Develop a standardised process for reviewing antimicrobial therapy within the specified timeframe, including who conducts the review, what information is evaluated, and how decisions are documented. 2. Define criteria for determining whether antimicrobial therapy should be continued, modified, or discontinued based on clinical response and microbiological data.	100%
	✓ **Regularly review antimicrobial timeouts to evaluate the appropriateness of antimicrobial selection and optimize therapy as needed.** 1. Establish a schedule for periodic review and analysis of antimicrobial timeout data, such as quarterly meetings to targeted stakeholders	

appropriateness, quantity, duration, and type, achieving full compliance across facilities. Education: Comprehensive initiatives included patient education on completing antibiotic regimens and continuous education for healthcare professionals. Post-prescription audits: Standardized protocols ensured systematic audits, with findings and targeted interventions shared with stakeholders. Antibiogram and resistance monitoring: Standardized antibiogram protocols monitored resistance patterns, guiding treatment decisions and policy updates. A framework for tracking key resistance organisms and hospital-acquired infections was also established. Therapy optimization: Policies required prescribers to document antibiotic doses and indications, while IV-to-oral conversion protocols reduced costs and improved outcomes. Metrics like Days of Therapy and Defined Daily Doses measured impact, with dose optimization improving treatment for resistant organisms. **Conclusion:** IHH

Healthcare is the first large international group to adopt and implement the U.S. CDC ASP elements across its network of foreign hospitals. By utilizing a phased approach, we have ensured consistent and effective implementation across diverse healthcare settings. To date, all 80 hospitals have successfully completed Phase 2 of the program and are on track to achieve Phase 3 milestones by 2025 (see Table 4). Early outcomes from this initiative underscore the significant value of standardized ASPs in enhancing patient safety, reducing AMR and fostering sustainable quality improvement.

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Subject Category: Antibiotic Stewardship

Mapping Microbial Resistance: Unveiling Regional Patterns through Atlanta's Antibiogram Development

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Background: Multidrug resistance remains one of the top global health threats and has been rising over recent decades, jeopardizing patient outcomes and increasing healthcare costs. This underscores an urgent need to design tools to optimize antibiotic prescribing to target these pathogens. Antibiograms are an essential antimicrobial stewardship tool used to provide guidance for empiric antimicrobial selection and information on local resistance. However, facility-level antibiograms are limited to individual institutions and do not reflect regional variations in resistance. Previous studies have demonstrated the feasibility and importance of generating regional antibiograms to better inform regional infection prevention and spearhead antimicrobial stewardship initiatives. Regional antibiograms also offer a valuable resource for community hospitals and health centers with lower pathogen prevalence and limited access to infectious diseases-trained personnel. This study aims to curate a regional antibiogram to analyze and understand antimicrobial susceptibility and resistance patterns of targeted pathogens across Metro Atlanta. **Methods:** This descriptive study aimed to evaluate antibiograms from multiple hospitals across the Atlanta metropolitan area. In September 2019, flagship hospitals of five different health-systems within metro Atlanta were surveyed using a

Table 1: Characteristics of Contributing Flagship Hospital of each Healthcare System (Hospital A, Health system E, Health system F)

Characteristics (n=3)	n (%)
Hospital bed size	
> 500	3 (100.0)
Patient population	
Adults	3 (100.0)
Pediatrics	0
Obstetrics	2 (66.7)
Special patient populations	
Bone marrow transplant	1 (33.3)
Burn	1 (33.3)
Cystic fibrosis	2 (66.7)
Neonatal ICU	2 (66.7)
Oncology/hematology	3 (100.0)
Solid organ transplant	2 (66.7)
Trauma	1 (33.3)
Specialized ID services available	3 (100.0)
Primary professional(s) responsible for generating antibiograms	
Microbiologist	3 (100.0)
Epidemiologist	1 (33.3)
ID physiciann	1 (33.3)
Non-ID physician	1 (33.3)
ID pharmacist	1 (33.3)
Frequency of generating new antibiograms	
Every year	3 (100.0)
Months of culture data used to generate antibiograms	
12 months*	3 (100.0)
Specimen sources used to compile data for antibiogram	
Blood	3 (100.0)
Cerebrospinal fluid	3 (100.0)
Pleural fluid/bronchoalveolar lavage	3 (100.0)
Sputum	3 (100.0)
Urine	3 (100.0)
Wound	2 (66.7)
Stratify antibiograms by sample site (i.e., separate urine antibiogram)	1 (33.3)
Stratify antibiograms by hospital location (ICU, general wards, ED, etc.)	2 (66.7)
Inclusion of ED isolates	1 (33.3)
Inclusion of first only isolates	3 (100.0)
Susceptibility platform used	
MicroScan	1 (33.3)
Vitek	2 (66.7)
Fungal antibiogram available	1 (33.3)
Using breakpoints established by Clinical and Laboratory Standards Institute	3 (100.0)
Which edition of the CLSI M100 are you using for breakpoints?	30th Edition 2020 (66.7) 25th Edition 2015 (33.3)
Do you routinely adopt new/revised CLSI breakpoints?	Yes, on a case-by-case basis (33.3) Yes, update once per year (33.3) Yes, update with every revision (33.3)

*1 hospital pools 24 months of data to obtain > 30 isolates

Table 2: Non-Susceptible Rates for Targeted Resistant Pathogens

Pathogen Combination	Antibiotic	Susceptibility Rate	Non-Susceptibility Rates
Staphylococcus aureus	Oxacillin	54.9%	**MRSA: 45.1%**
Enterococcus faecalis	Vancomycin	95.8%	**VRE: 15.8%** (557/3525)
Enterococcus faecium		31.0%	
Acinetobacter baumannii/complex	Ceftriaxone	53.3%	**Ceftriaxone-Resistant: 11.3%** (2957/26163)
Citrobacter freundii		71.7%	
Citrobacter koseri		99.6%	
Enterobacter cloacae		74.8%	
Escherichia coli		90.0%	
Klebsiella aerogenes		78.0%	
Klebsiella oxytoca		88.8%	
Klebsiella pneumoniae		89.1%	
Morganella morganii		84.0%	
Proteus mirabilis		97.3%	
Proteus vulgaris		50.0%	
Providencia group		90.8%	
Serratia marcescens		85.8%	
Acinetobacter baumannii/complex	Meropenem	86.8%	**CR-AB: 13.2%** (52/395)
Citrobacter freundii	Meropenem	94.5%	**CR-E: 1.1%** (275/26004)
Citrobacter koseri		100.0%	
Enterobacter cloacae		97.3%	
Escherichia coli		99.5%	
Klebsiella aerogenes		92.7%	
Klebsiella oxytoca		99.8%	
Klebsiella pneumoniae		98.9%	
Morganella morganii		96.7%	
Proteus mirabilis		100.0%	
Proteus vulgaris		50.0%	
Providencia group		97.1%	
Serratia marcescens		97.2%	
Pseudomonas aeruginosa	Meropenem	86.7%	**CR-PA: 13.3%**

Table 3: Carbapenem-Resistance Rates in Hospitals with Restrictive vs Non-Restrictive Antimicrobial Restrictions

Carbapenem-Resistant Species	Restrictive Hospitals (n=8)	Non-Restrictive Hospitals (n=2)	p-value
CR-AB	13.3% 52/391	0% 0/4	-
CR-E	1.1% 246/22912	1.0% 30/3092	0.602
CR-PA	11.6% 259/2242	19.6% 118/602	**<0.001**

Gram Positive Organism	Antimicrobial						
	Ampicillin	Oxacillin	Vancomycin	Linezolid	Daptomycin	Clindamycin	SMZ-TMP
Staphylococcus aureus	-	**54.9%** 3638/6625	**99.9%** 6620/6625	**99.9%** 6094/6098	**99.6%** 6072/6098	**70.6%** 4305/6098	**94.2%** 6242/6625
Enterococcus faecalis	**99.2%** 2872/2896	-	**95.8%** 2773/2896	**98.5%** 2852/2896	**99.6%** 2883/2896	-	-
Enterococcus faecium	**14.6%** 92/629	-	**31.0%** 195/629	**97.3%** 612/629	**96.7%** 466/482	-	-

Figure 1: Gram-Positive Isolate Analysis

Gram Negative Organism	Antimicrobial															
	Ampicillin	Amp/Sulb	Pip/tazo	Cefazolin	Ceftriaxone	Ceftazidime	Cefepime	Ertapenem	Meropenem	Gentamicin	Tobramycin	Amikacin	Ciprofloxacin	Levofloxacin	SMZ/TMP	Tetracycline
Acinetobacter baumannii/complex	-	**81.8%** 191/234	**71.3%** 181/254	-	**53.3%** 90/169	**71.0%** 137/193	**74.6%** 129/173	-	**86.8%** 343/395	**81.3%** 247/304	**87.1%** 344/395	**100.0%** 50/50	**75.8%** 257/339	**74.6%** 144/193	**75.2%** 297/395	**82.2%** 139/169
Citrobacter freundii	-	-	**82.7%** 330/399	**0%** 0/76	**71.7%** 286/399	**72.4%** 288/399	**94.5%** 377/399	**95.5%** 230/240	**94.5%** 377/399	**90.2%** 360/399	**93.0%** 371/399	**100.0%** 399/399	**90.0%** 216/240	**91.3%** 295/323	**82.7%** 330/399	**97.6%** 156/164
Citrobacter koseri	-	-	**99.6%** 243/244	**95.0%** 123/130	**99.6%** 243/244	**100.0%** 244/244	**100.0%** 244/244	**100.0%** 244/244	**100.0%** 244/244	**100.0%** 243/243	**99.5%** 243/244	**100.0%** 244/244	**100.0%** 244/244	**100.0%** 114/114	**99.6%** 243/244	**98.2%** 112/114
Enterobacter cloacae/complex	-	-	**78.1%** 825/1056	**0%** 0/328	**74.8%** 790/1056	**75.4%** 796/1056	**92.0%** 971/1056	**96.0%** 726/756	**97.3%** 1027/1056	**95.5%** 1009/1056	**94.7%** 1000/1056	**100.0%** 1056/1056	**92.1%** 631/685	**91.8%** 715/779	**99.3%** 954/1056	**85.8%** 411/479
Escherichia coli	**47.9%** 5749/12000	**55.3%** 7844/14191	**97.1%** 14646/15078	**82.7%** 12470/15078	**90.0%** 13564/15078	**91.0%** 13720/15078	**92.2%** 13898/15078	**99.4%** 12843/12920	**93.5%** 14099/15078	**90.6%** 13662/15078	**91.0%** 13720/15078	**99.4%** 14996/15083	**77.4%** 9283/12000	**74.5%** 7993/10725	**72.5%** 10927/15078	**73.8%** 6320/8567
Klebsiella aerogenes	-	-	**80.2%** 594/703	-	**78.0%** 548/703	**78.9%** 555/703	**94.2%** 662/703	**91.5%** 270/295	**95.4%** 671/703	**94.4%** 627/664	**93.7%** 659/703	**98.3%** 690/703	**93.3%** 443/475	**97.8%** 441/451	**95.0%** 668/703	**92.5%** 246/266
Klebsiella oxytoca	-	**56.7%** 361/531	**89.8%** 513/571	**38.8%** 198/510	**88.8%** 501/571	**92.1%** 525/570	**96.1%** 549/571	**100.0%** 344/344	**99.8%** 570/571	**92.6%** 529/571	**91.2%** 521/571	**100.0%** 571/571	**93.0%** 281/302	**95.7%** 464/485	**90.4%** 516/571	**91.1%** 235/258
Klebsiella pneumoniae	-	**77.1%** 3460/4488	**92.9%** 4483/4825	**84.6%** 4083/4825	**89.1%** 4300/4825	**90.0%** 4322/4825	**91.7%** 4423/4825	**99.1%** 3789/3815	**98.9%** 4774/4825	**93.0%** 4489/4825	**93.0%** 4485/4825	**99.5%** 4801/4825	**92.0%** 3217/3498	**92.2%** 3305/3582	**85.2%** 4113/4825	**80.1%** 2061/2572
Morganella morganii	-	-	**93.1%** 256/275	-	**84.0%** 231/275	**80.0%** 220/275	**92.7%** 255/275	**96.4%** 240/249	**96.7%** 266/275	**82.5%** 227/275	**90.5%** 249/275	**98.9%** 272/275	**74.3%** 185/249	**80.7%** 121/150	**66.9%** 184/275	-
Proteus mirabilis	**83.9%** 1309/1561	**92.6%** 1689/1823	**98.7%** 1929/1955	**91.2%** 1785/1958	**97.3%** 1892/1945	**97.2%** 1901/1955	**97.9%** 1913/1955	**100.0%** 1584/1584	**100.0%** 1952/1955	**95.0%** 1857/1955	**95.3%** 1863/1955	**99.6%** 1947/1955	**80.5%** 1150/1429	**81.4%** 1004/1234	**82.0%** 1579/1925	-
Proteus vulgaris	-	**78.0%** 39/50	**100.0%** 50/50	-	**50.0%** 25/50	**50.0%** 25/50	**100.0%** 50/50	**50.0%** 25/50	**50.0%** 25/50	**50.0%** 25/50	**50.0%** 25/50	**50.0%** 25/50	**50.0%** 49/50	**50.0%** 25/50	**98.0%** 49/50	-
Providencia group	-	**33.3%** 23/69	**93.1%** 162/174	-	**90.8%** 158/174	**81.0%** 141/174	**96.6%** 168/174	**97.1%** 169/174	**97.1%** 169/174	**53.4%** 93/174	**52.9%** 92/174	**100.0%** 174/174	**62.1%** 108/174	**78.3%** 54/69	**74.7%** 130/174	-
Pseudomonas aeruginosa	-	-	**81.4%** 2316/2844	-	-	**81.7%** 2323/2844	**80.4%** 2279/2834	-	**86.7%** 2467/2844	**67.7%** 2486/2834	**90.7%** 2712/2834	**95.3%** 2701/2834	**80.4%** 1386/1726	**74.5%** 1050/2087	-	-
Serratia marcescens	-	-	**91.3%** 146/238	**0%** 0/211	**85.8%** 578/674	**86.6%** 584/674	**96.7%** 652/674	**96.3%** 445/462	**97.2%** 655/674	**97.2%** 655/674	**86.9%** 580/674	**99.6%** 673/674	**92.3%** 385/417	**95.9%** 444/463	**98.1%** 661/674	**22.2%** 10/45
Stenotrophomonas maltophilia	-	-	-	-	-	**58.5%** 152/260	-	-	-	-	-	-	-	**86.9%** 225/260	**92.8%** 282/304	-

Figure 2: Gram-Negative Isolate Analysis