

13TH ANNUAL CONFERENCE

Infection Prevention Network – Kenya

Advancing Safe Care Through Infection Prevention & Control

CONFERENCE THEME

***“Advancing IPC, AMR, and One Health:
Science, Policy, and Practice”***

13TH IPNET KENYA CONFERENCE • 19–21 AUGUST 2026 • PRIDE INN PLAZA, NAIROBI

Abstract Details

TITLE OF ABSTRACT: High Prevalence of Multidrug Resistance and Distinct Antibiotic Susceptibility Patterns in Bacterial Isolates from Urine, Pus, and Body Fluids at a Kenyan Referral Hospital

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COUNTRY: Kenya

Background / Introduction

- Antimicrobial resistance (AMR) is the loss of effectiveness of antimicrobials to microorganisms against which they used to be susceptible
- AMR is one of the most critical public health crises in the contemporary world and has rapidly become a global concern that calls for a collective approach across all sectors
- Although it is a natural evolutionary phenomenon, faulty human behavior is its biggest promulgator. Poor infection control practices and misuse of antimicrobials accelerate this risky phenomenon
- Data shows that there has been no significant invention of new antibiotics since 1987

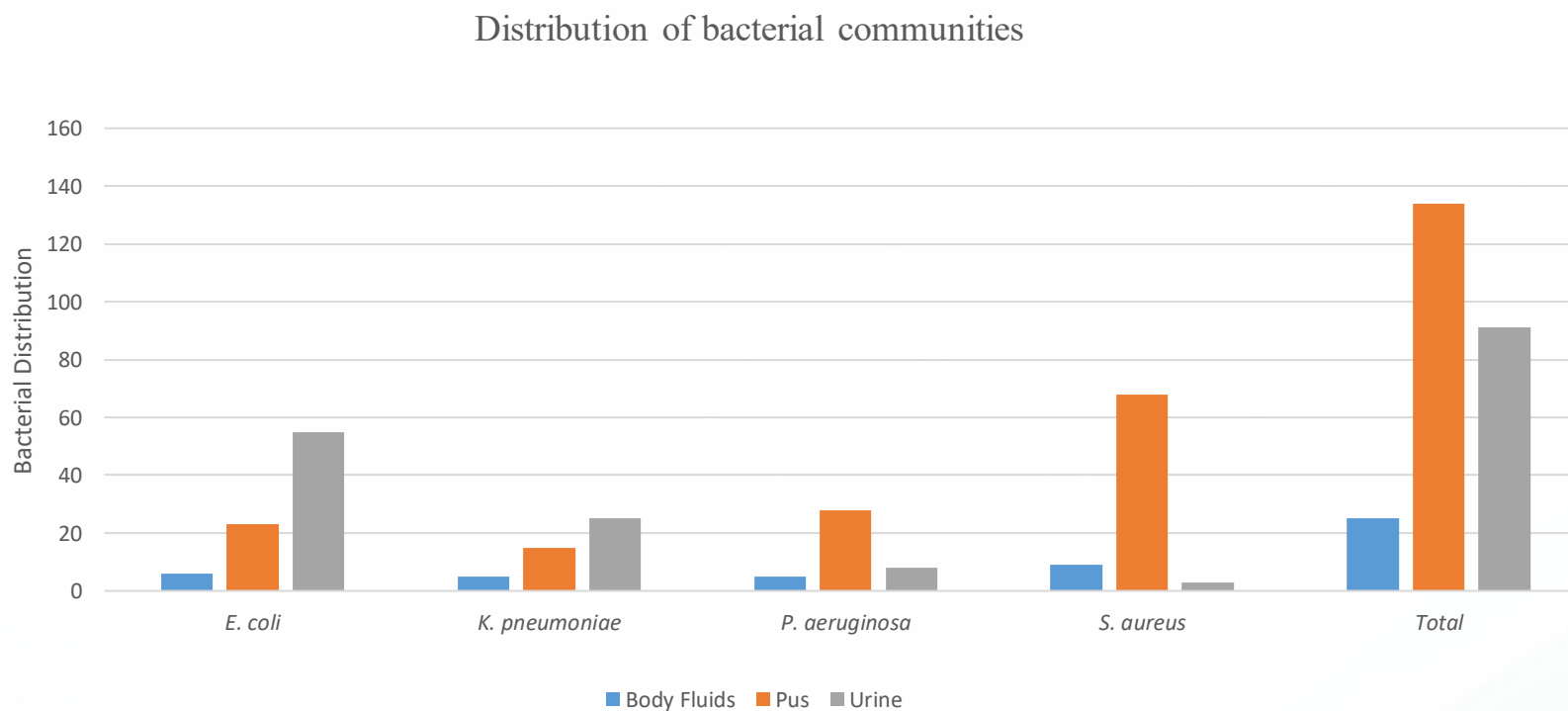
Objective

To determine antibiotic susceptibility patterns and the proportion of multidrug-resistant (MDR) bacterial isolates from urine, pus, and body fluid specimens at Thika Level 5 Hospital (TL5H).

Methodology

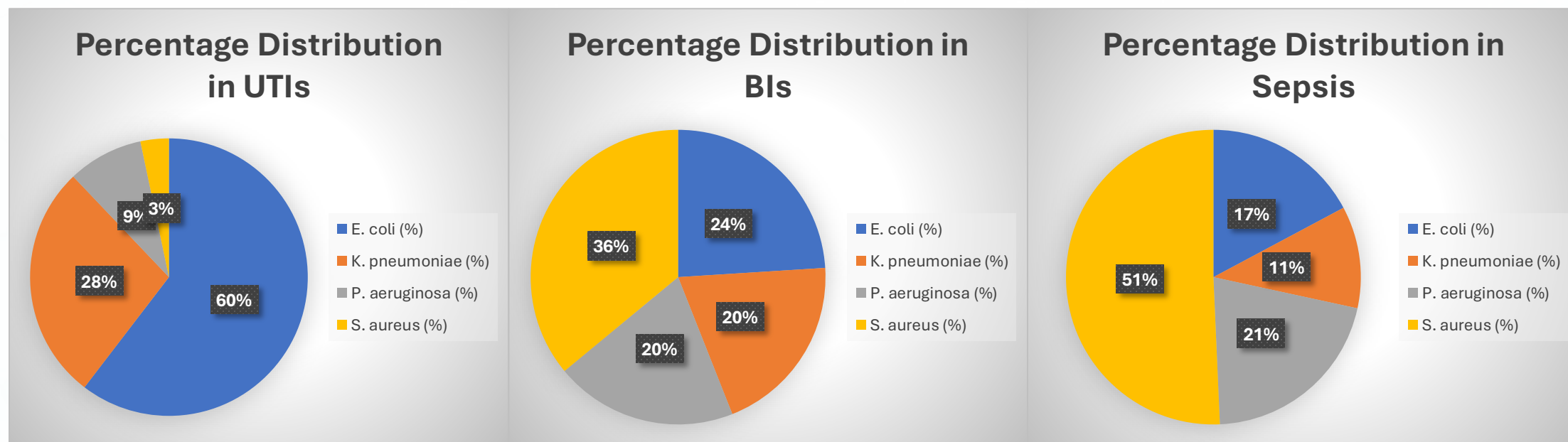
- By employing Cochran's formula, a retrospective cross-sectional study was conducted to analyze 250 archived bacterial isolates.
- The isolates included *Escherichia coli*, *Klebsiella pneumoniae*, *Pseudomonas aeruginosa*, and *Staphylococcus aureus* from urine (n=91), pus (n=134), and body fluids (n=25) from January 2021 to December 2024.
- Isolates were rejuvenated and tested per CLSI M100 guidelines.
- Data from 250 susceptibility tests were analyzed using WHONET and SPSS.
- Descriptive statistics and chi-square tests were employed.

Key Findings: Pathogenic Bacterial Communities' Distribution

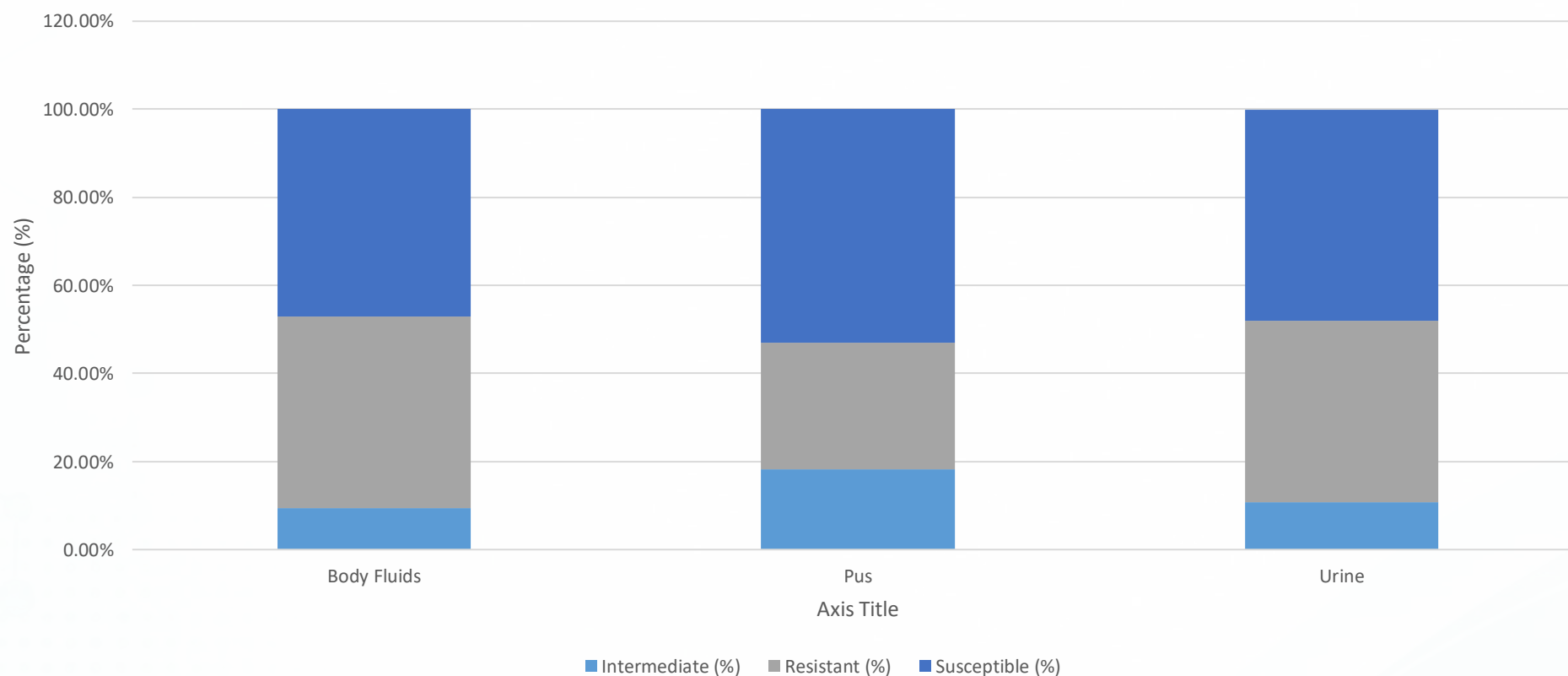


Clinical Significance of Pathogenic Bacterial Distribution Patterns Characterized from Body Fluids, UTI and Sepsis Infections

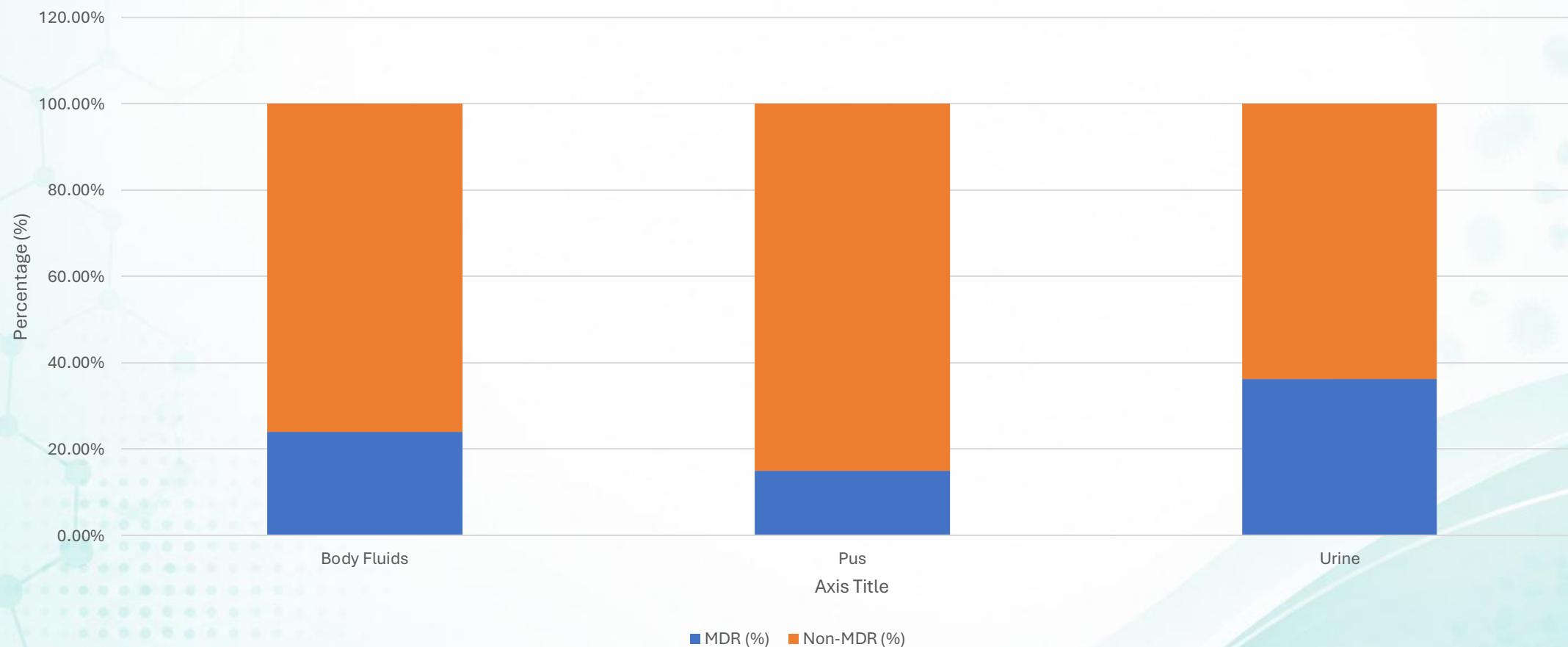
Pie Charts: Percentage of each bacterial species within urinary, septic, and sterile body fluid infections.



Antimicrobial Susceptibility Patterns of Pathogenic Bacterial Communities in Body Fluids, Septic & Urine Infections

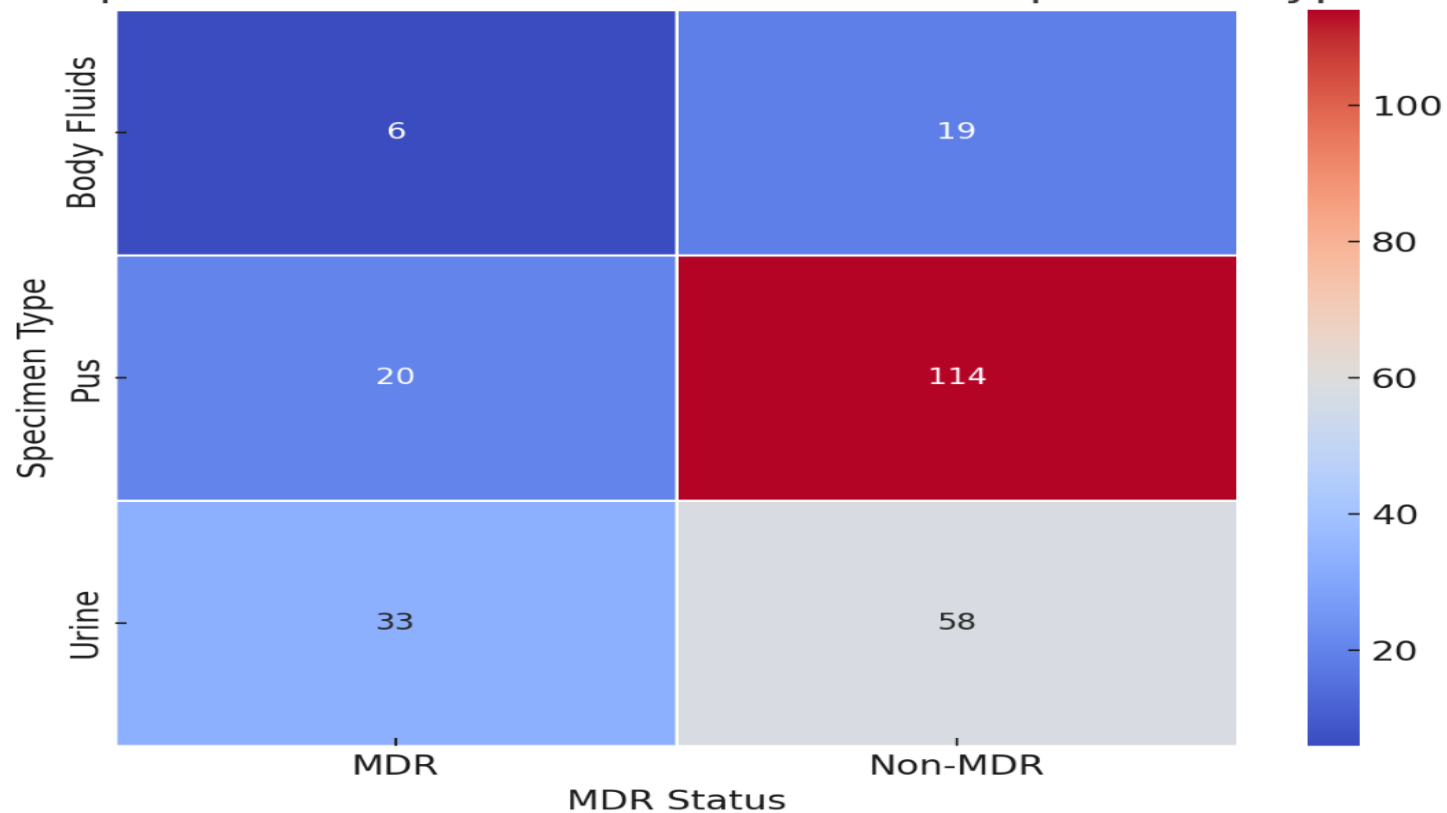


Proportion of Pathogenic Bacterial Communities with Antimicrobial Resistance (AMR)



Association Between the Occurrence of Infection and the Extent of Antibiotic Resistance by Pathogenic Bacterial Communities at TL5H; Pattern Analysis and Clinical Significance

Chi-Square Test: MDR Distribution Across Specimen Types



Conclusion & Recommendations

- Alarming **high** MDR rates, particularly in urinary isolates, reveal a severe AMR burden.
- Empirical therapy for UTIs may be compromised.
- The findings mandate urgent implementation of antimicrobial stewardship, enhanced diagnostics, and specimen-specific treatment guidelines.



REPUBLIC OF KENYA



MINISTRY OF HEALTH

THANK YOU

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