

IMPACT OF ANTIMICROBIAL STEWARDSHIP INTERVENTIONS ON THERAPY OPTIMISATION AND ACCEPTANCE OF RECOMMENDATIONS IN PATIENTS WITH BLOODSTREAM INFECTIONS

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Background and importance: Bloodstream infections (BSI) are associated with high morbidity and mortality, requiring prompt and appropriate antimicrobial therapy. Antimicrobial Stewardship Programmes (ASPs) review positive blood cultures daily and provide recommendations to optimise treatment.

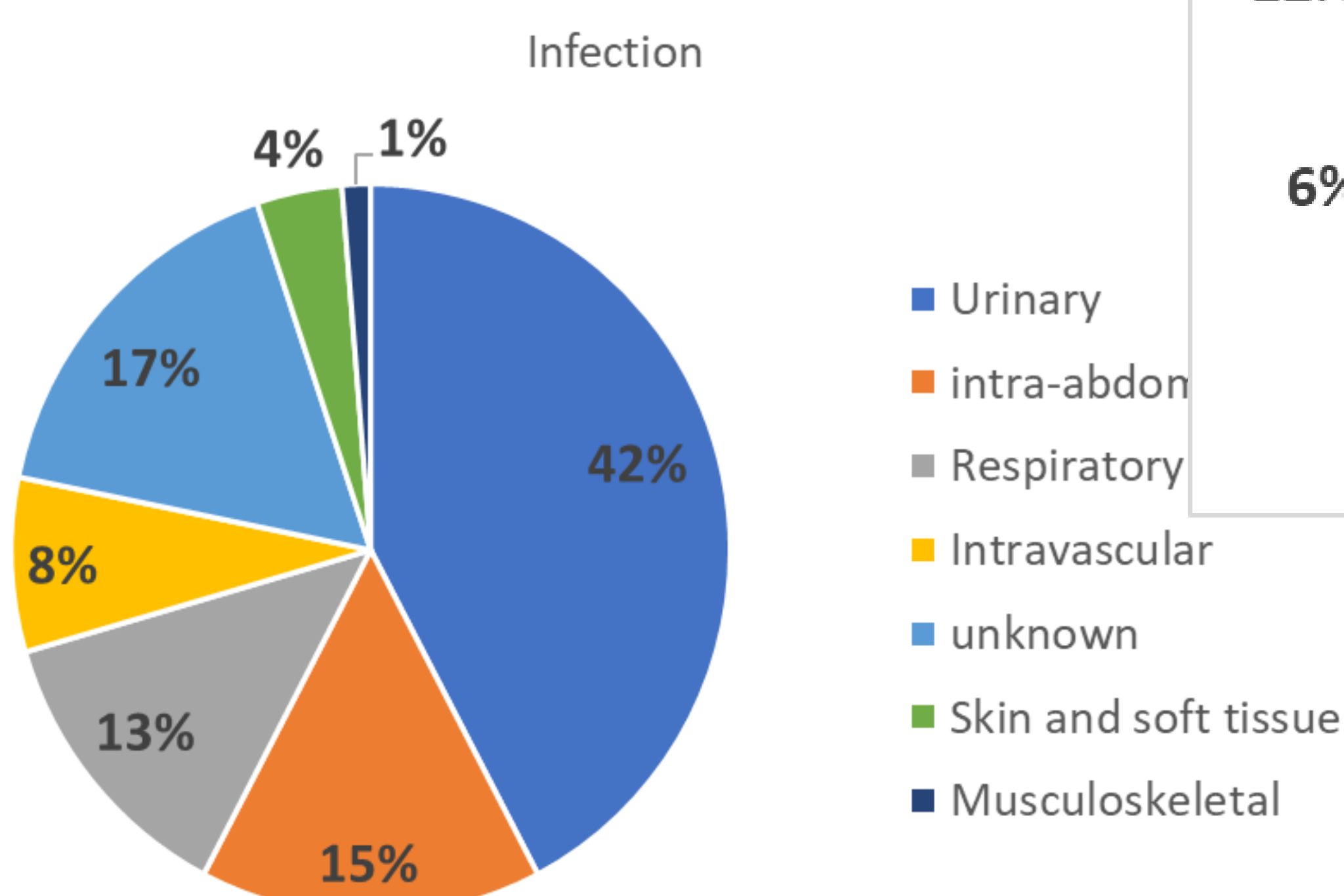
Aim and objectives: Evaluate the impact of ASP interventions on optimizing antimicrobial treatment in patients with BSI. To this end, we assessed the acceptance rate of ASP recommendations and analyzed the association between acceptance (yes/no) and clinical outcomes: 30-day mortality, ICU admission, and hospital readmission.

Materials and methods: We conducted a retrospective observational study over four months (April–July 2025) in a tertiary care hospital.

- All episodes of BSI confirmed by blood culture were included.
- ASP interventions were prospectively recorded in an Excel® database (type of recommendation, communication method, and acceptance).
- Demographic, clinical, microbiological, therapeutic, and outcome variables were retrospectively extracted from the electronic medical record.
- Statistical analysis was performed using Excel®. Descriptive statistics (means \pm SD or medians [IQR] for continuous variables, percentages for categorical variables) and comparisons between groups were performed.

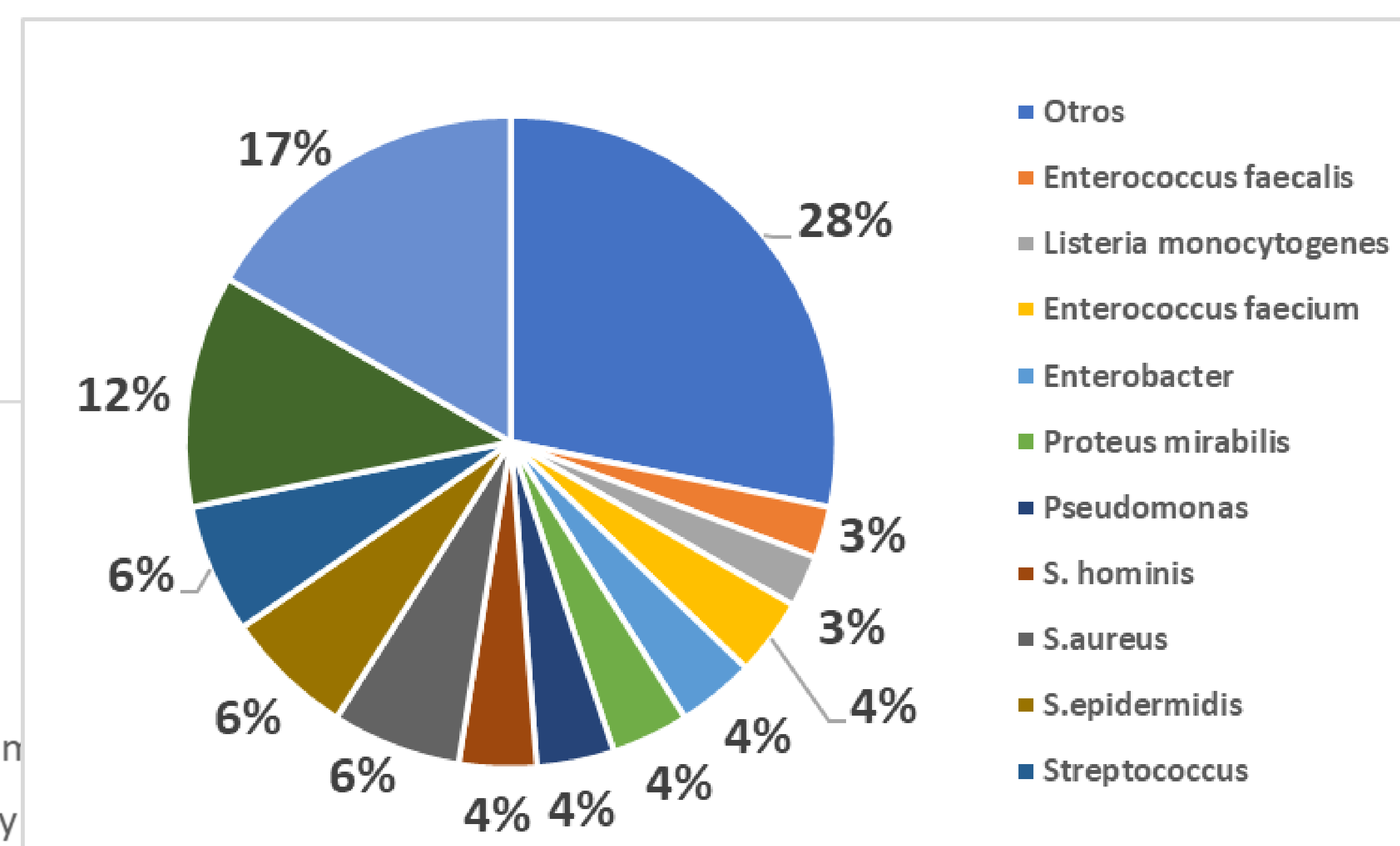
Results

- N = 78 interventions
- 62% Male
- Median Age: 76 years.
- Origin: 40% Community-acquired.

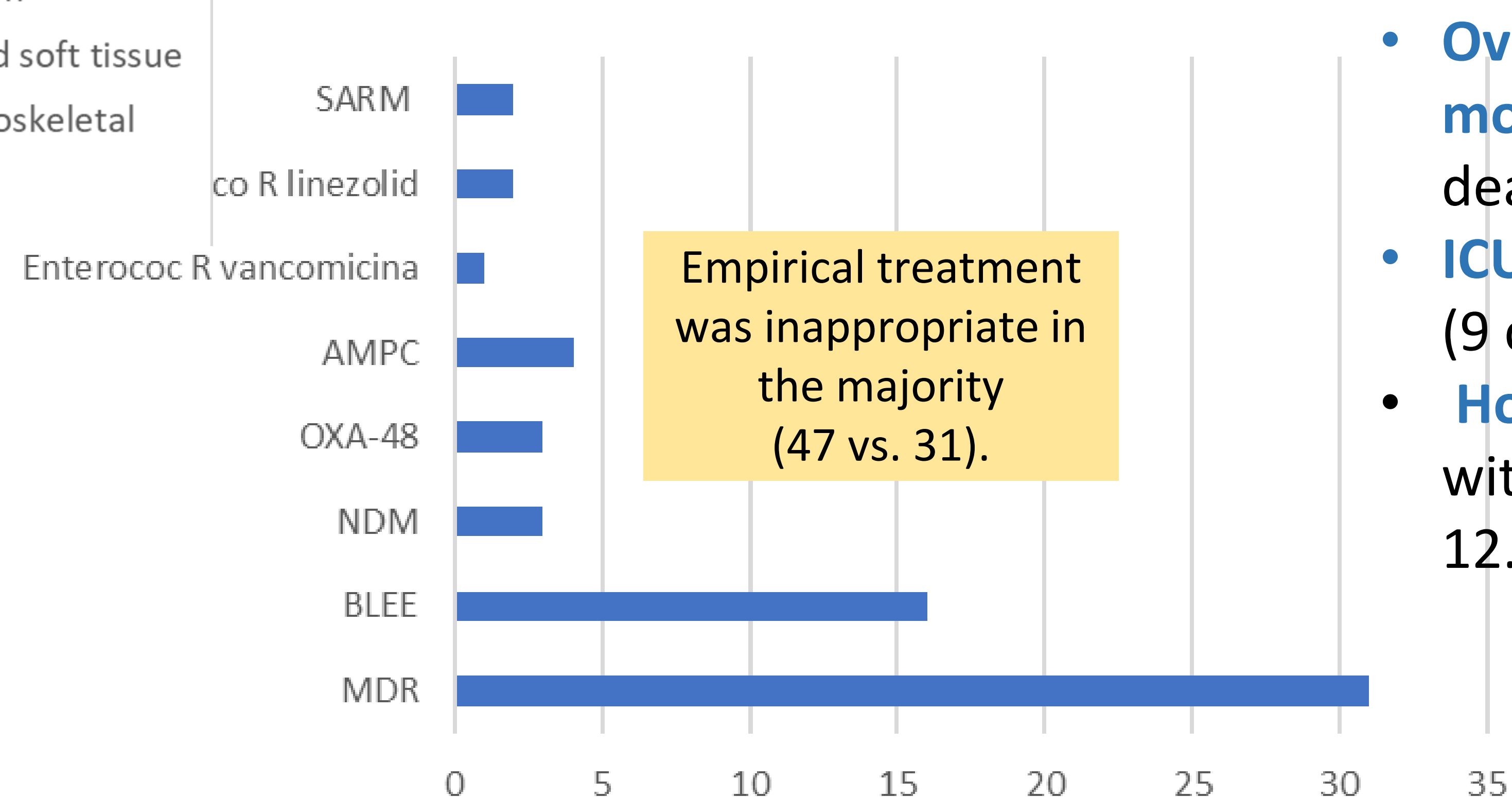


Category	Cases	Percentage
Complicated focus	16	20,50%
Sepsis	23	29,59%
Septic shock	9	11,50%
Non severe	30	38,5%

The most isolated pathogens were *E. coli* (13) and *K. pneumoniae* (9).



Antimicrobial Resistance



ASP interventions

88% acceptance rate 

Recommendation

- Escalation: (49 cases, 63%)
- De-escalation (25 cases, 32%)
- Treatment discontinuation (3 cases, 4%)
- Dosage adjustment (1 case, 1%).

Clinical Outcomes

- **Overall 30-day mortality:** 16.7% (13 deaths)
- **ICU admission:** 11,5% (9 cases)
- **Hospital readmission** within 30 days affected 12.8% (10 patients)

Conclusions: ASP interventions are highly accepted and important for optimizing antimicrobial therapy in patients with BSI, especially given the high rate of initial inappropriate treatment and MDR pathogens. Thirty-day mortality (16.7%) was similar to García-Rodríguez et al. (17.4%), while 30-day readmission (12.8%) was lower than Gradel et al. (31.3%).

References: García-Rodríguez & Mariño-Callejo, 2023BMC Infect Dis, 23:69.
<https://doi.org/10.1186/s12879-023-08018-02>. Gradel et al., 2025Eur J Clin Microbiol Infect Dis.
<https://doi.org/10.1007/s10096-025-05347-7>

