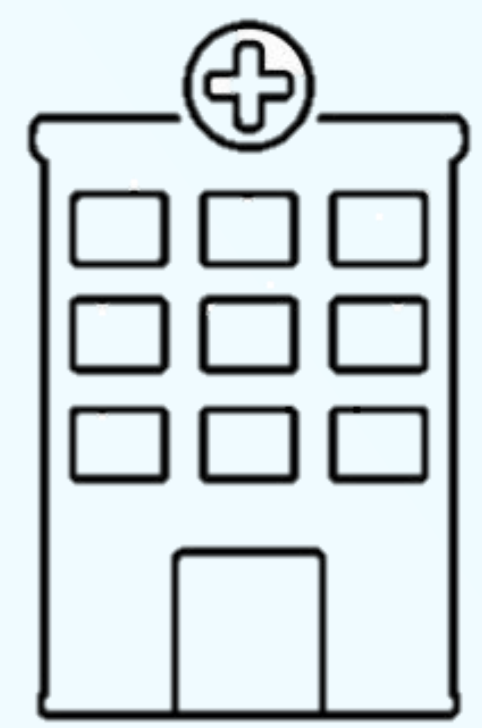




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NAVIGATING DIGITAL HEALTH



EVALUATION OF ANTIBIOTICS CONSUMPTION IN THE INTENSIVE CARE UNIT OF A SECOND LEVEL HOSPITAL



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BACKGROUND AND IMPORTANCE

Intensive care units (ICU) are favourable setting for the development of intra-hospital infections due to antibiotic-resistant bacteria. Therefore, it is necessary to ensure adequate antibiotic treatment by knowing the resistance profile of the microorganisms.

AIM AND OBJECTIVES

The aim of this study was to analyse the evolution of antibiotic consumption (AC) and microorganisms isolated (MI) in the ICU over the last four years.

MATERIAL AND METHODS



Four years (2020-2023) observational and prospective study carried out in the ICU of a second level hospital.



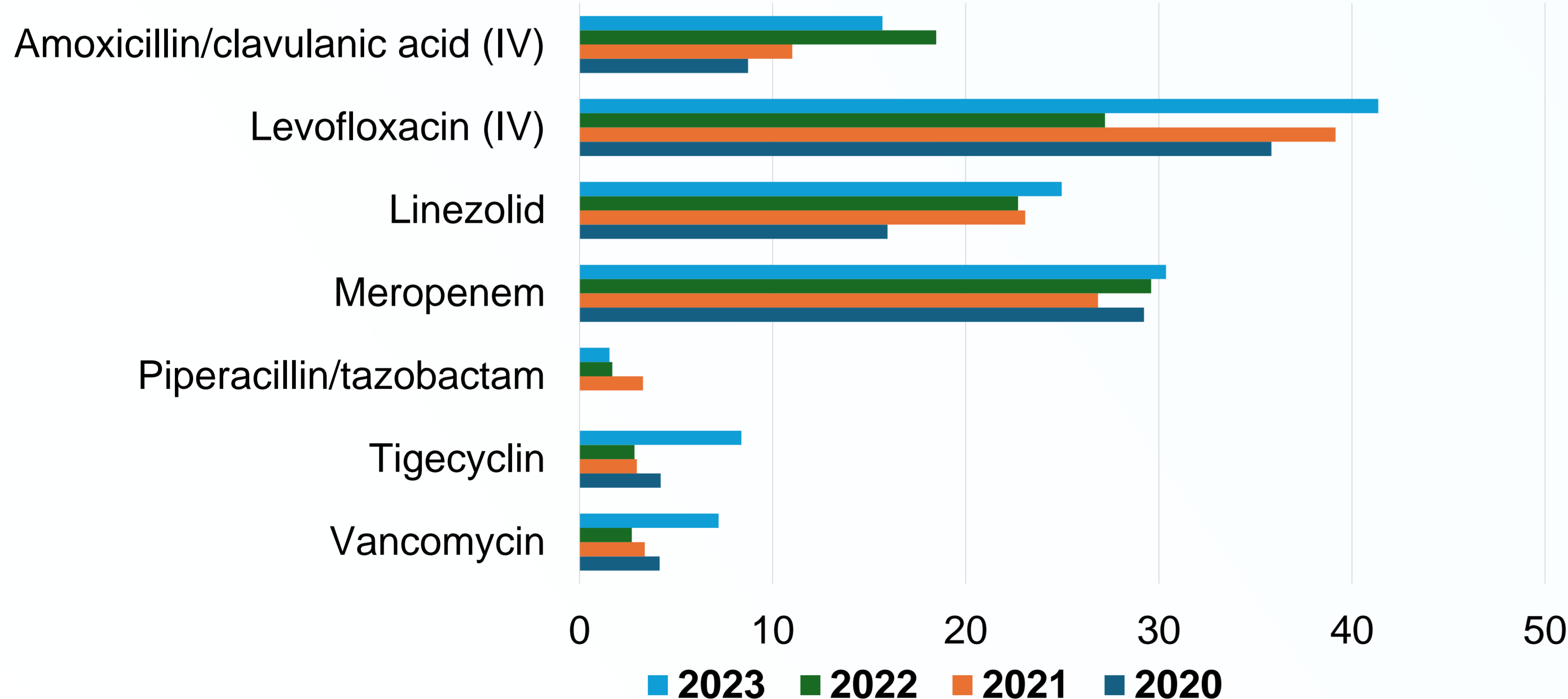
To express the AC was used the defined daily dose per 100 stays and day (DDD/100 e-d).

- AC data was obtained through the electronic prescription program and the MI were provided by the Microbiology Department.
- For the statistical analysis, STATA-MP-16.0[®] was used: a correlation matrix was made by evaluating each pair of antibiotics and the Person correlation coefficient (CoefP) was calculated applying a multiple linear regression model.

RESULTS

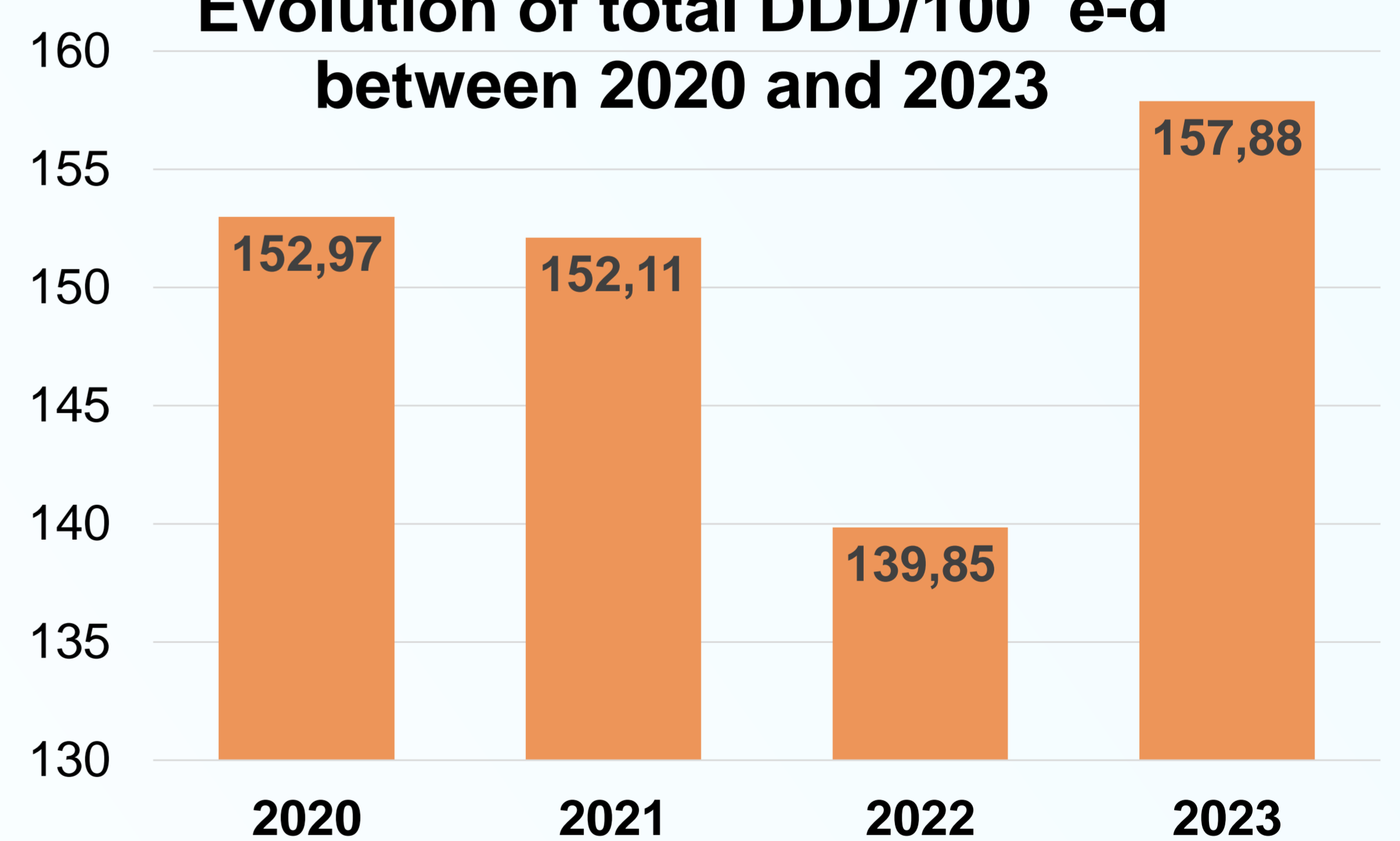
✓ Sixteen active substances (J01 group) were included.

Evolution of consumption of the main antibiotics in DDD/100 e-d

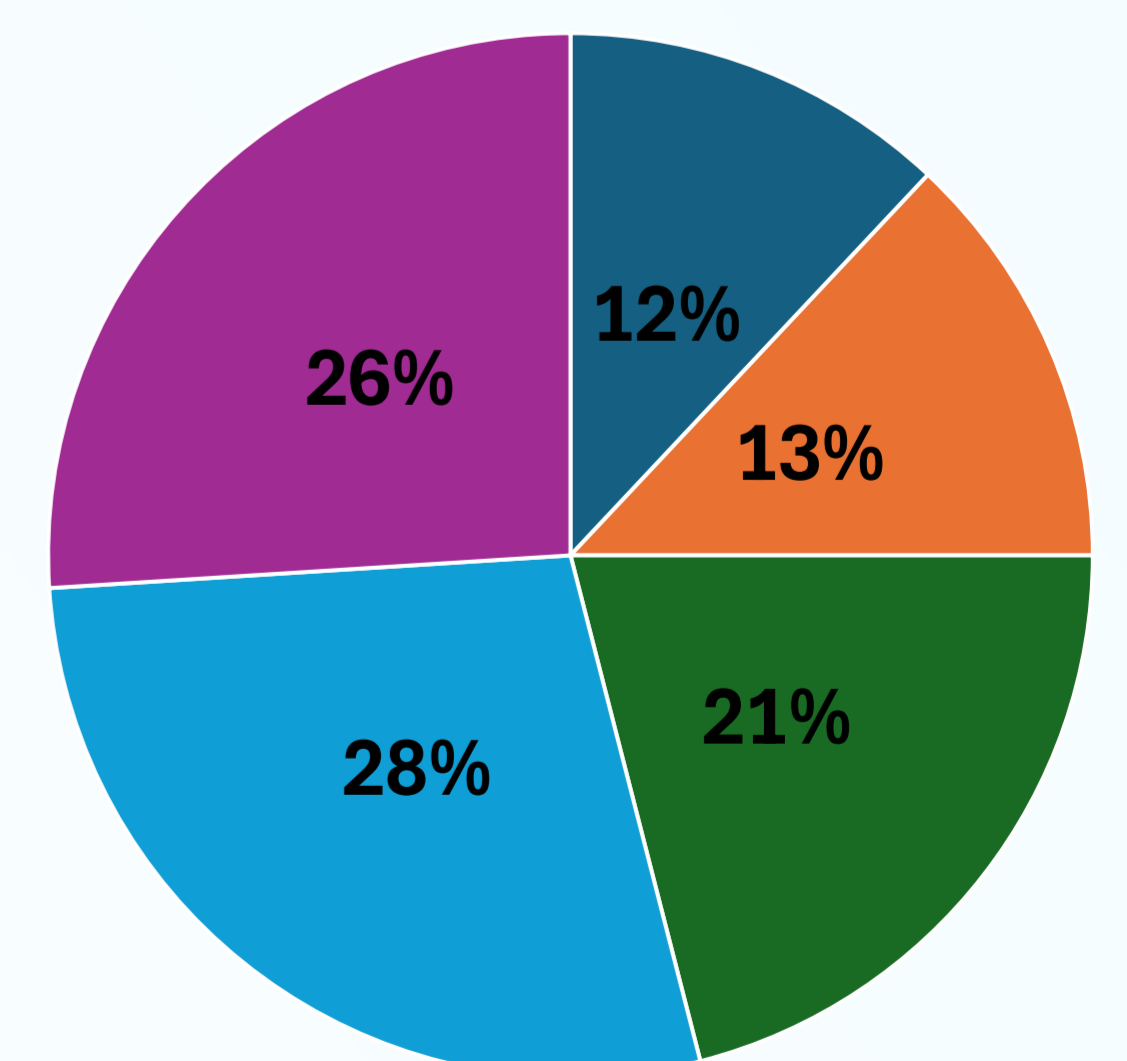


Study showed a positive correlation between the increased consumption of intravenous amoxicillin/clavulanic acid, tigecycline and linezolid (CoefP: 0.948, p_value: 0.0126). When linear regression was applied, the relationship between three drugs was statistically significant (R²=98.76, p_value: 0.0434).

Evolution of total DDD/100 e-d between 2020 and 2023



Microorganisms isolated



■ P. aeruginosa ■ K. pneumoniae ■ Other
■ E.coli BLEE+ ■ MRSA

CONCLUSION AND RELEVANCE

- ✓ Analysis using DDD/100 e-d allows comparisons between the years of the study.
- ✓ These results of AC are matched with the MI.
- ✓ Knowing these consumption trends, measures can be taken in the following years to promote rational and safe use of antibiotics.

