ASSESSMENT OF IN-HOSPITAL ANTIBIOTICS CONSUMPTION PATTERN ACCORDING TO THE WHO AWARE CLASSIFICATION IN A LOCAL HEALTH AUTHORITY

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BACKGROUND AND IMPORTANCE

Antimicrobial resistance (AMR) is a recognized global health concern. For this reason, in 2017, the World Health Organization (WHO) developed the **AWaRe** classification of antibiotics, which grouped them into three main groups: **Access**, **Watch** and **Reserve**.

WHO **AWaRe** classification is a helpful tool to promote the appropriate and responsible use of antibacterials, reduce AMR, monitor antibiotics consumption and assess the effectiveness of stewardship programs.
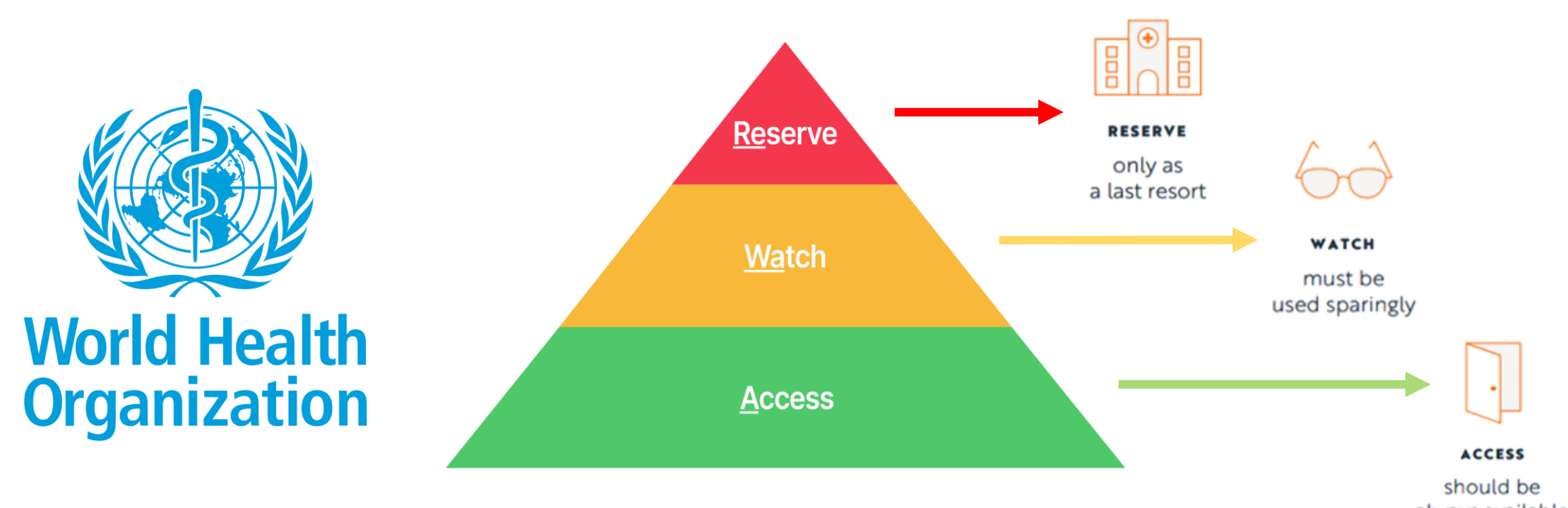
AIM AND OBJECTIVES

We aimed to evaluate the antibiotic consumption pattern of the seven suburban hospitals of our Local Health Authority, comparing a 6-month period in 2023 to a 6-month period in 2022.

The main goal of the analysis was to assess the performance of stewardship initiatives.

MATERIAL AND METHODS

First, antibiotic consumption data regarding in-hospital settings from January 1, 2022, to June 30, 2023, were extracted from the National Health System (NHS) dispensing database. The total Defined Daily Dose (DDD) as a percentage and the DDD per 100 bed days were used as measures of antibiotic consumption.

Second, the Anatomical Therapeutic Chemical (ATC) 4th level code was used to categorize antimicrobials within the different AWaRe groups.

RESULTS

- The comparative analysis of the time period considered showed a similar overall DDD consumption of antibiotics (*Figure 1*).
- Noteworthy, among the different **AWaRe** groups, an increase in consumption in the **Watch** group antibiotics equal to plus 10.5% (2023 75% vs. 2022 64.5%) and a reduction in the **Access** group equal to minus 10% (2023 23% vs. 2022 33%) were observed (*Figure 2*). The DDD consumption of **Reserve** group antibacterials was quite similar among the two periods (2023 2% vs. 2022 2.3%).
- Within the **Watch** group, the most consumed antimicrobials according to ATC 4th level were J01DD with 29.6 DDD/100 bed-days, J01MA 22.5, J01FA 11.7, J01CR 10.3, J01DH 9 and J01XA 5.3 respectively (*Figure 3*).

CONCLUSION AND RELEVANCE

In contrast with WHO indications (at least 60% of total antibiotics in the **Access** group), our findings show that in our Local Health Authority the majority of antimicrobials consumed belong to the **Watch** group.

The results of our investigation highlight the need for further efforts by the Antimicrobial Stewardship Team in order to improve the appropriate use of antibiotics in the hospital setting and fight AMR.
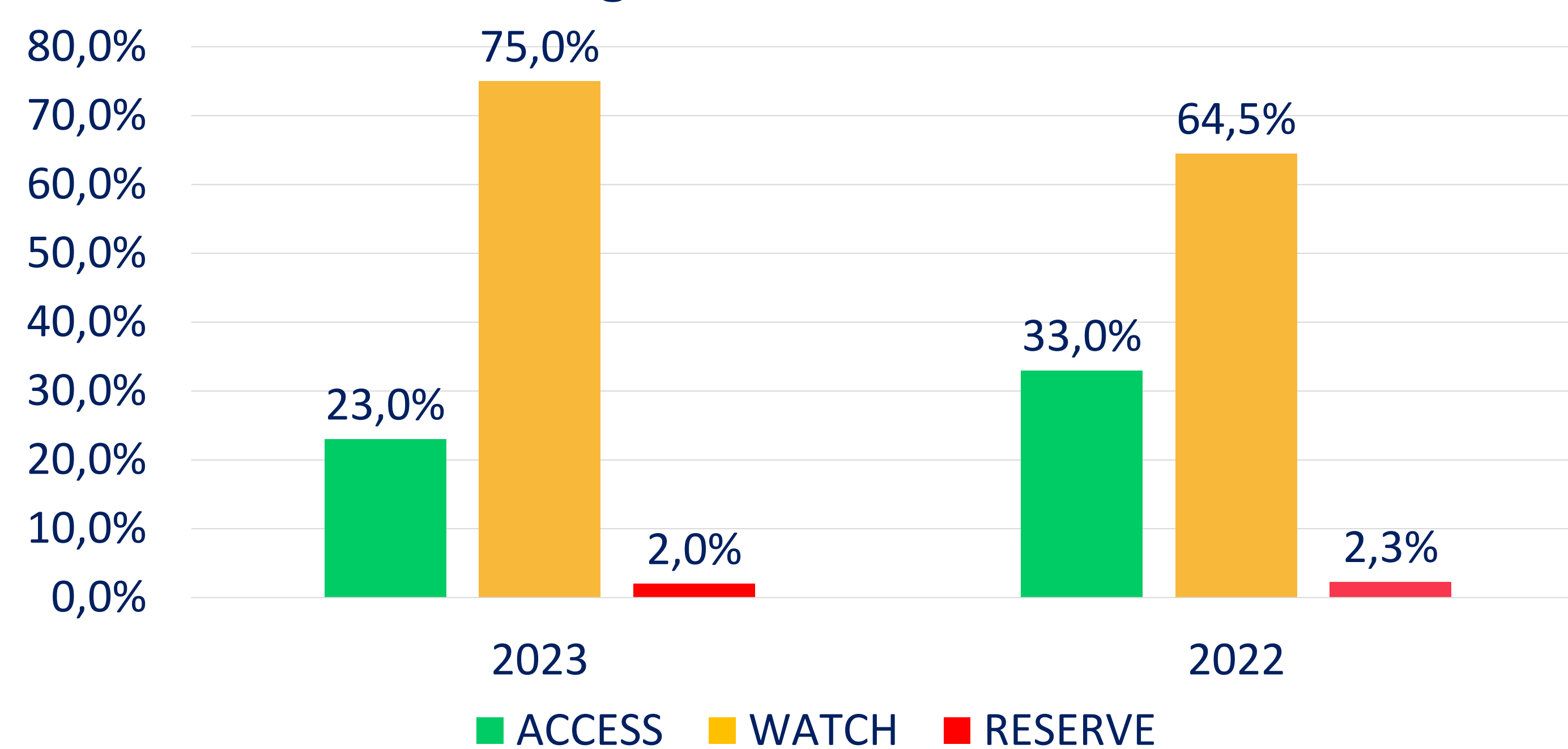
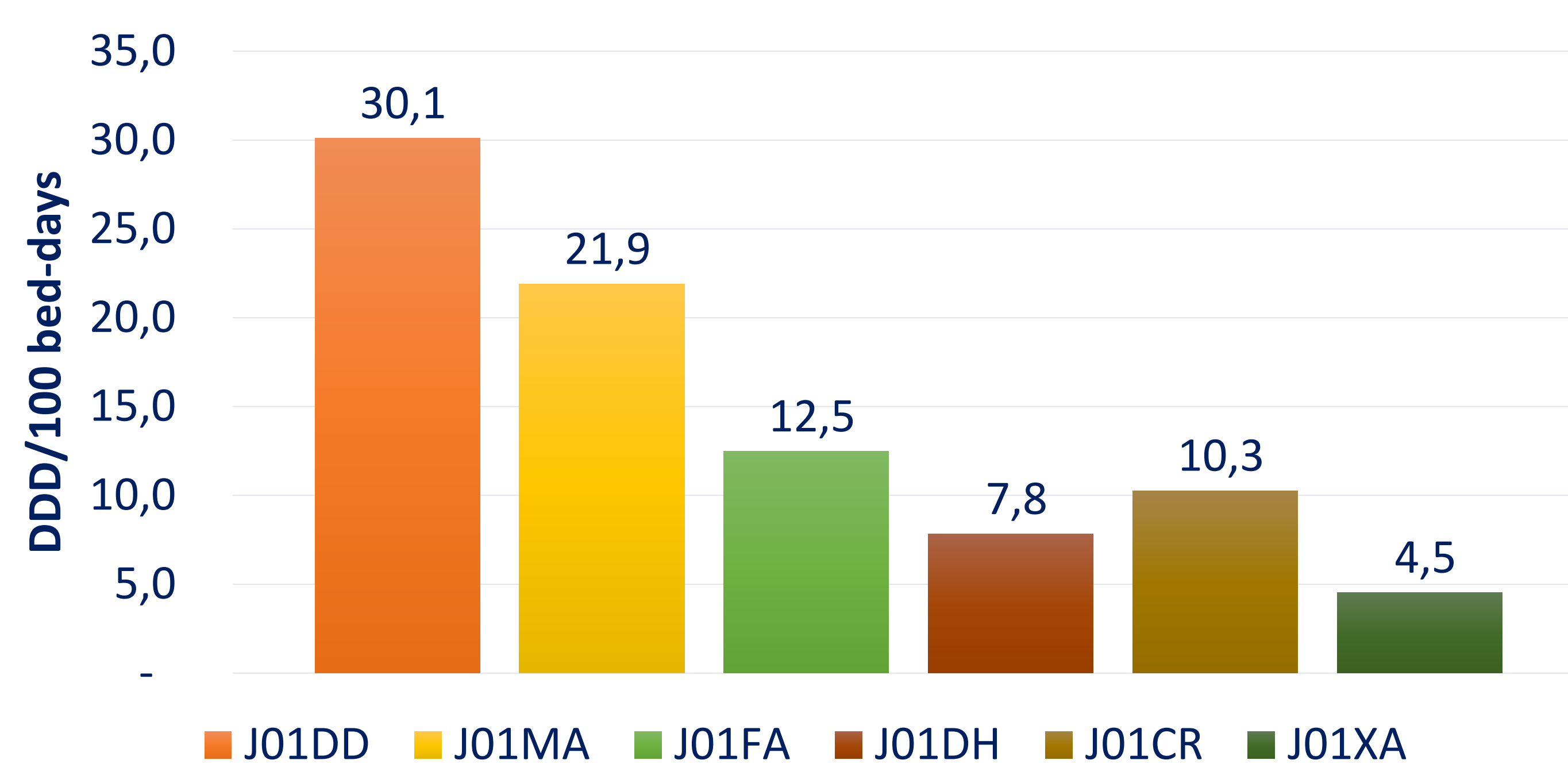### Overall DDD antibiotic consumption (%) according to AWaRe Classification
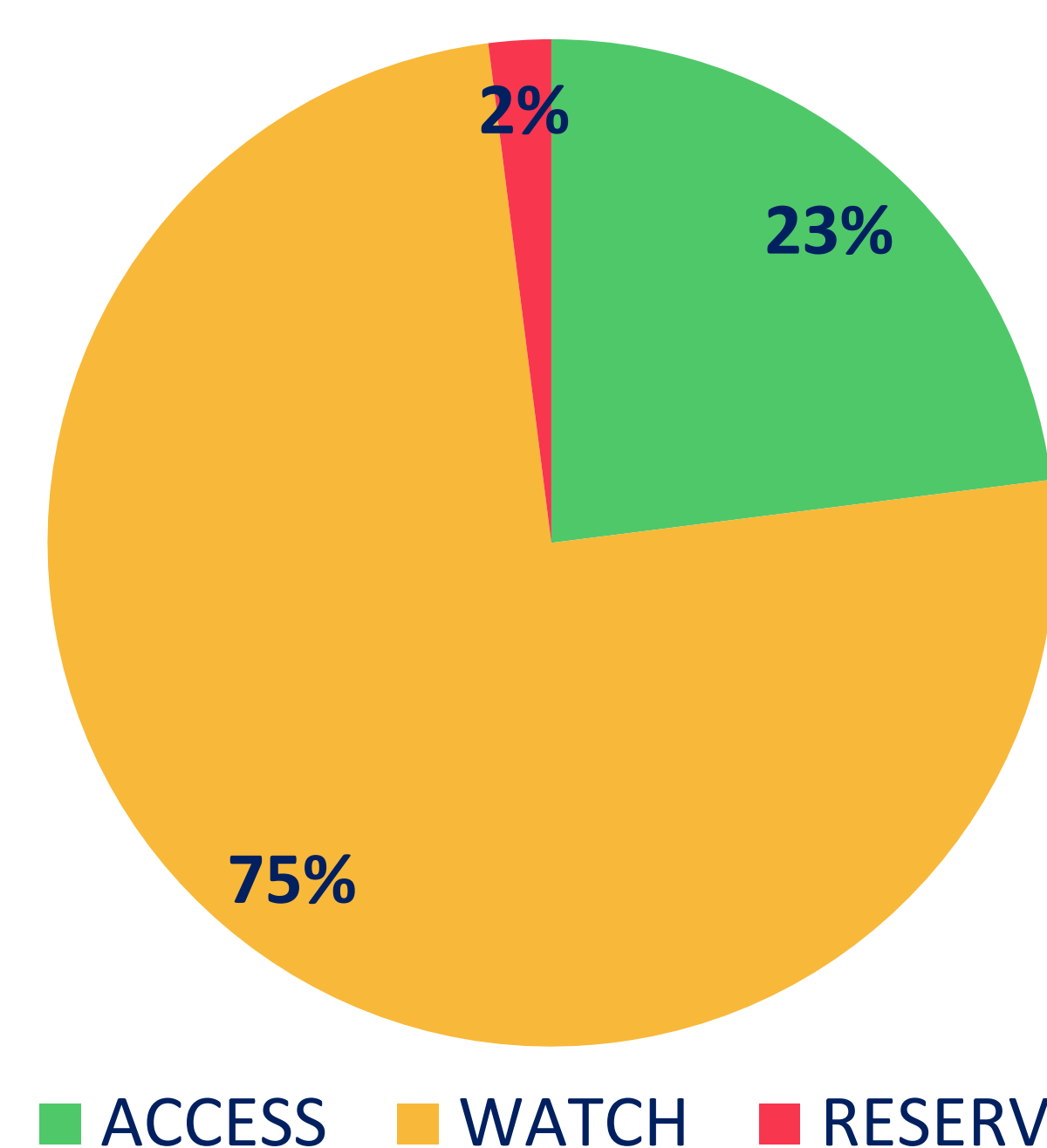
Figure 1

2023 Vs 2022 antibiotic consumption (%) according to AWaRe Classification

Figure 2

Watch group antibiotic consumption by ATC 4th level

Figure 3

REFERENCES AND/OR ACKNOWLEDGEMENTS

AWaRe classification of antibiotics for evaluation and monitoring of use, 2023 - https://www.who.int/publications/i/item/WHO-MHP-HPS-EML-2023.04

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- **Abstract number: 4CPS-015**
- **ATC: J01- ANTIBACTERIALS FOR SYSTEMIC USE**

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20-21-22 MARCH 2024
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