

Switzerland on its way to the WHO target of 60% Access group antibiotics: a two decades analysis of outpatient antibiotic consumption

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Background

- The WHO Access, Watch, Reserve (AWaRe) classification serves as framework for supporting national health authorities and policymakers to develop national antimicrobial stewardship programs (1, 2).
- Switzerland has one of the lowest levels of outpatient antibiotic consumption compared to EU/EAA countries (3).

Study aim: to determine the consumption per AWaRe category in Switzerland and in linguistic regions over a 20-year period.

Method

We analyzed sales data (ATC code J01, A07A, J04A, P01A) obtained from IQVIATM spanning the years 2002 to 2022 for the three Swiss linguistic regions. The data, expressed in defined daily doses per 1000 inhabitants per day (DID) were subjected to a trend analysis using non-parametric Mann-Kendall tests for each AWaRe category. Additionally, the Sen's slope was calculated to quantify the slope of the observed trends.

Results

- Over 20 years, the percent of the **Access group** antibiotics increased steadily and since 2019, the three linguistic regions have represented over 60%, aligning with the country-level WHO target (Figure 1).
- Over a 20-year period, the consumption of the antibiotics in the **Watch group** decreased in all Swiss linguistic regions, led by the French-speaking region ($p < 0.001$, Sen's Slope - 0.151), the German-speaking ($p < 0.001$, Sen's Slope - 0.098) and the Italian-speaking region ($p < 0.05$, Sen's Slope - 0.045) (Figure 2).
- In the **Watch group**, fluoroquinolones emerged as the predominant family in all three linguistic regions in 2002. However, two decades later, while this antibiotic family continued to dominate in the Italian-speaking region, macrolides and lincosamides had taken over in the French- and German-speaking regions.
- Conversely, the use of antibiotics in the **Reserve group** increased across all linguistic regions, with the most significant rise observed in the Italian-speaking region.
- In 2022, the **Reserve group** was predominantly composed of colistin, daptomycin, aztreonam and linezolid, accounting for over 95% of the antibiotics within this category in all linguistic regions.

Conclusion

Since 2019, Switzerland has achieved the WHO's national target of 60% of antibiotics used coming from the Access group.

Even if consumption of antibiotics in the Reserve group remains low, their increase in use necessitates a careful evaluation, considering both their potential contribution to resistance and the associated economic implications.

Understanding the consumption patterns of antibiotics in each category helps identify areas for improvement and reduce unnecessary use of certain classes of antibiotics.

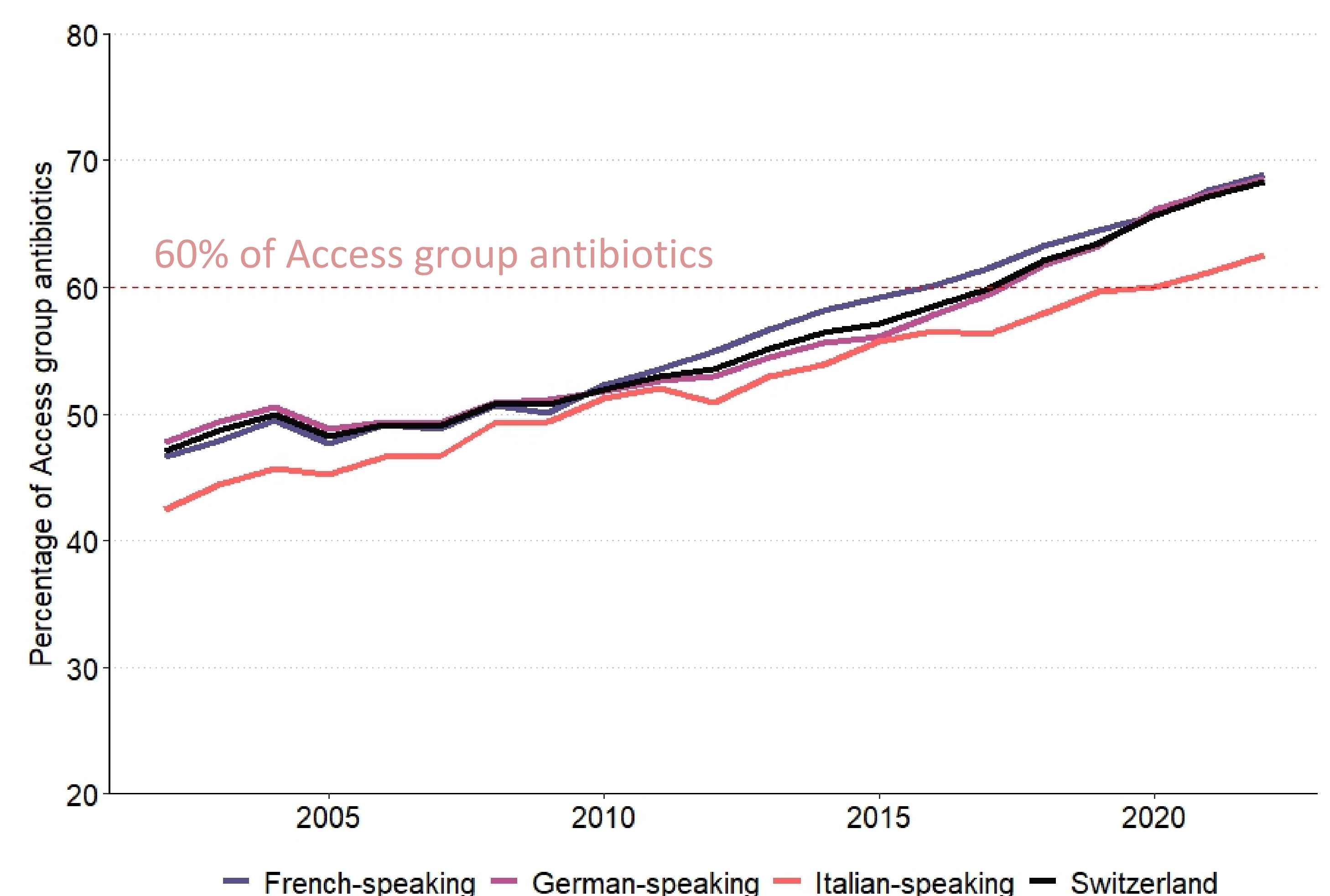


Figure 1: The plot shows the proportion of Access group in Switzerland and in the 3 linguistic regions (datasource: IQVIATM sales data (Sell-in) from pharmaceutical industries to public pharmacies and self-dispensing physicians)

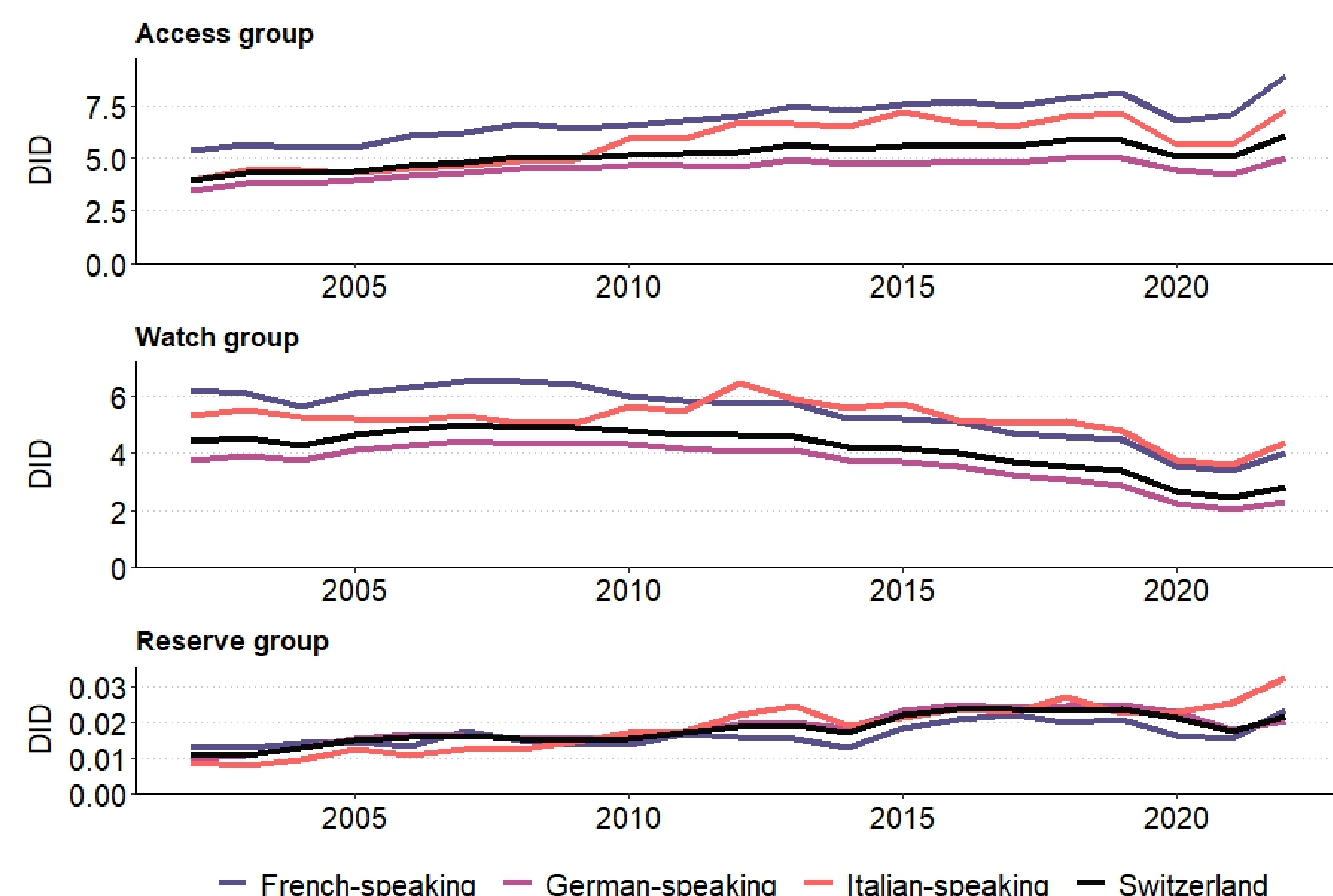


Figure 2: The plot shows the annual antibiotic consumption in DID per 1000 inhabitants per day (DID) in Switzerland and in the 3 linguistic regions (datasource: IQVIATM sales data (Sell-in))

References

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