



The Global Point Prevalence Survey of Antimicrobial Consumption and Resistance (Global-PPS)

Results of Antimicrobial Prescribing in Montenegro in 2021



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BACKGROUND & OBJECTIVES

For years, Montenegro was among the European countries with the highest rate of antibiotic consumption, and it is threatened by antimicrobial resistance, which is the public health threat worldwide.

Aim: To assess the variation in antimicrobial prescribing in Montenegro by use of a uniform and standardized method for surveillance of antimicrobial use in hospitals.

METHODS

- PPS was conducted in June 2021, in 10 Montenegrin hospitals (1 tertiary, 2 specialized and 7 secondary hospitals).
- The survey included all inpatients receiving an antimicrobial on the day of PPS.
- Data collected included details on the antimicrobial agents, reasons and indications for treatment as well as a set of quality indicators.
- A web-based application is used for data-entry, validation and reporting as designed by the University of Antwerp, Belgium (www.global-pps.com).

RESULTS

- Among total of 976 patients admitted to hospitals across Montenegro (799 adults and 177 newborns and children), 50.6% of adult patients and 31.6% of paediatric patients were treated with at least one antimicrobial on the day of PPS.
- Multiple antibiotics were prescribed in 32.8% of adults and children receiving antimicrobials.
- Highest antimicrobial prevalence was in adult ICU's (95.0%).
- The commonest indications for antimicrobial use were pneumonia, COVID19 and gastrointestinal infections (Fig 1).
- Microbiology based targeted treatment was only recorded for 1.7% out of all participants receiving antimicrobials.
- Top 3 antibiotics used for pneumonia in adults and children were ceftriaxone, ciprofloxacin and metronidazole, and for surgical prophylaxis cefazolin, ceftriaxone and metronidazole.
- Guidelines compliance in antimicrobial prescription was 52.7% among adult patients and 82.1% among paediatric patients.

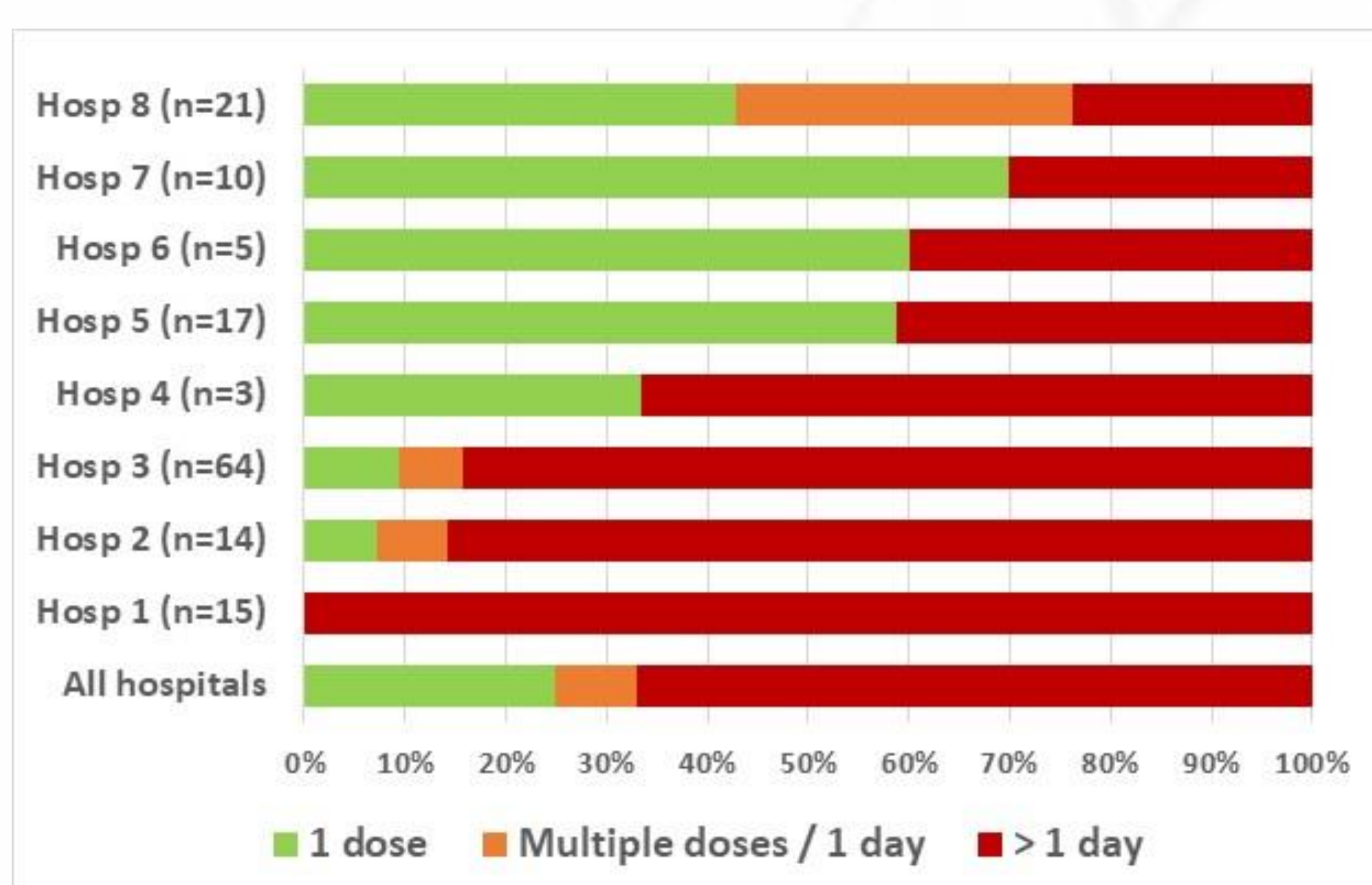
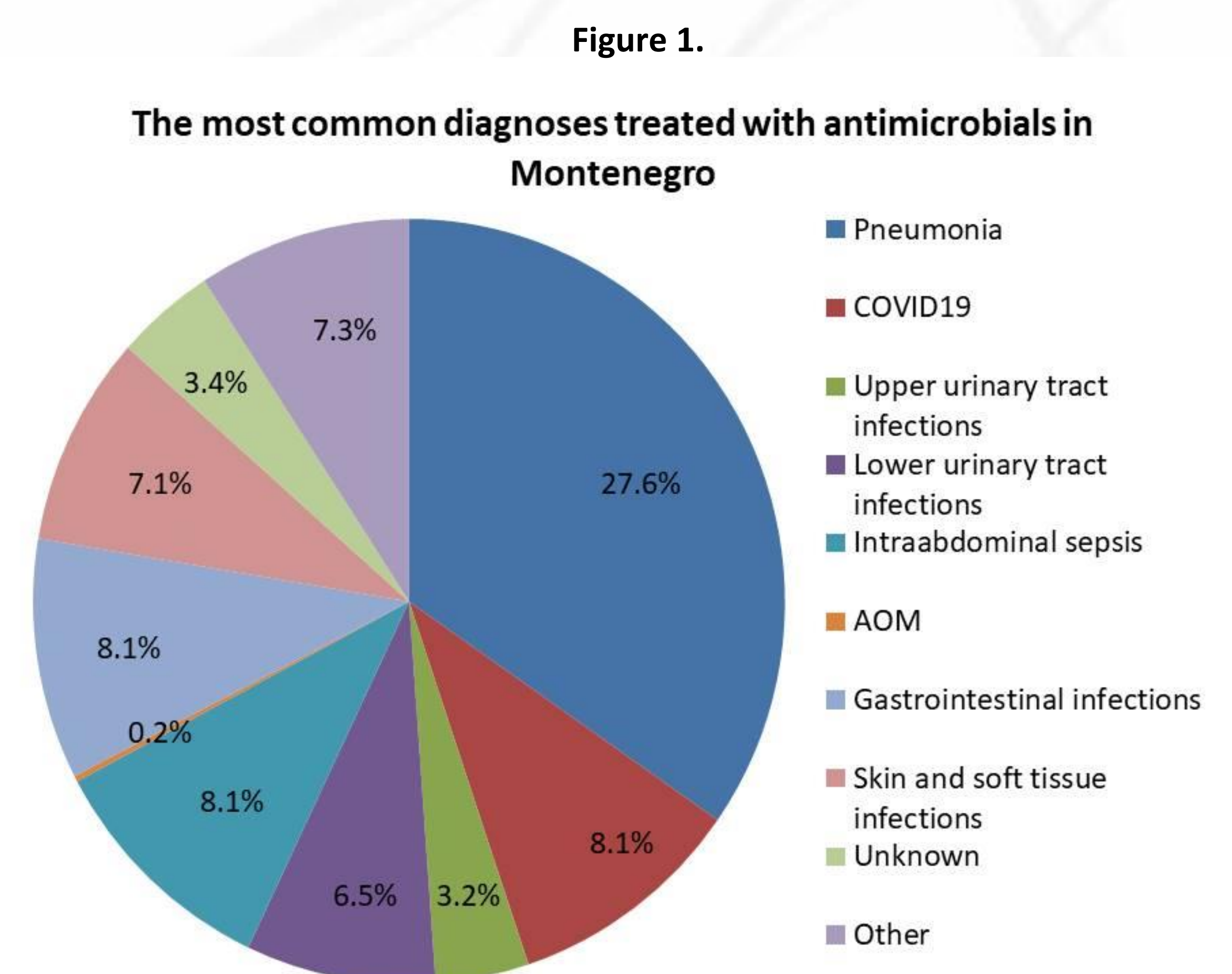


Figure 2. Duration of surgical prophylactic prescribing in 8 hospitals in Montenegro.

- Prolonged surgical prophylaxis (SP>1 day) is common (Fig 2).
- Overall, 60% of antibiotics prescribed for SP belonged to the Access WHO AWaRe class (Fig 3).

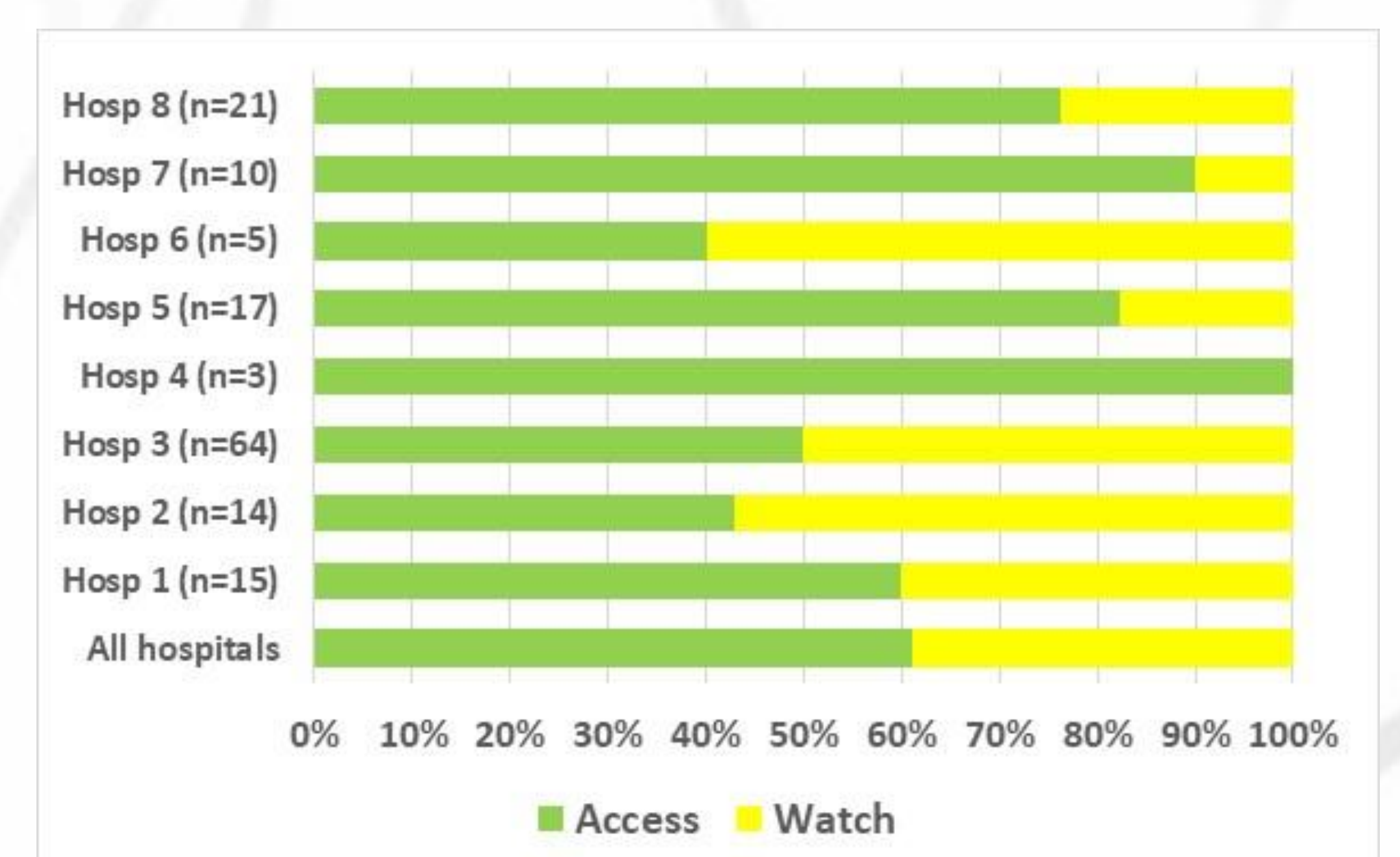


Figure 3. Prescriptions (%) for surgical prophylaxis according to the WHO AWaRe classification in 8 hospitals in Montenegro.

CONCLUSION

- Global PPS results underlined the weaknesses of antimicrobial prescription in 2021 in Montenegro.
- COVID19 is the second most common cause for antibiotics usage.
- Guideline compliance is quite low in treating adults.
- Antimicrobial therapy is rarely targeted.
- Prolonged surgical prophylaxis is common for some hospitals.
- We have identified our goals for our next action plan to improve antimicrobial usage in the country.