



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

## Results of antimicrobial prescribing in Burkina Faso

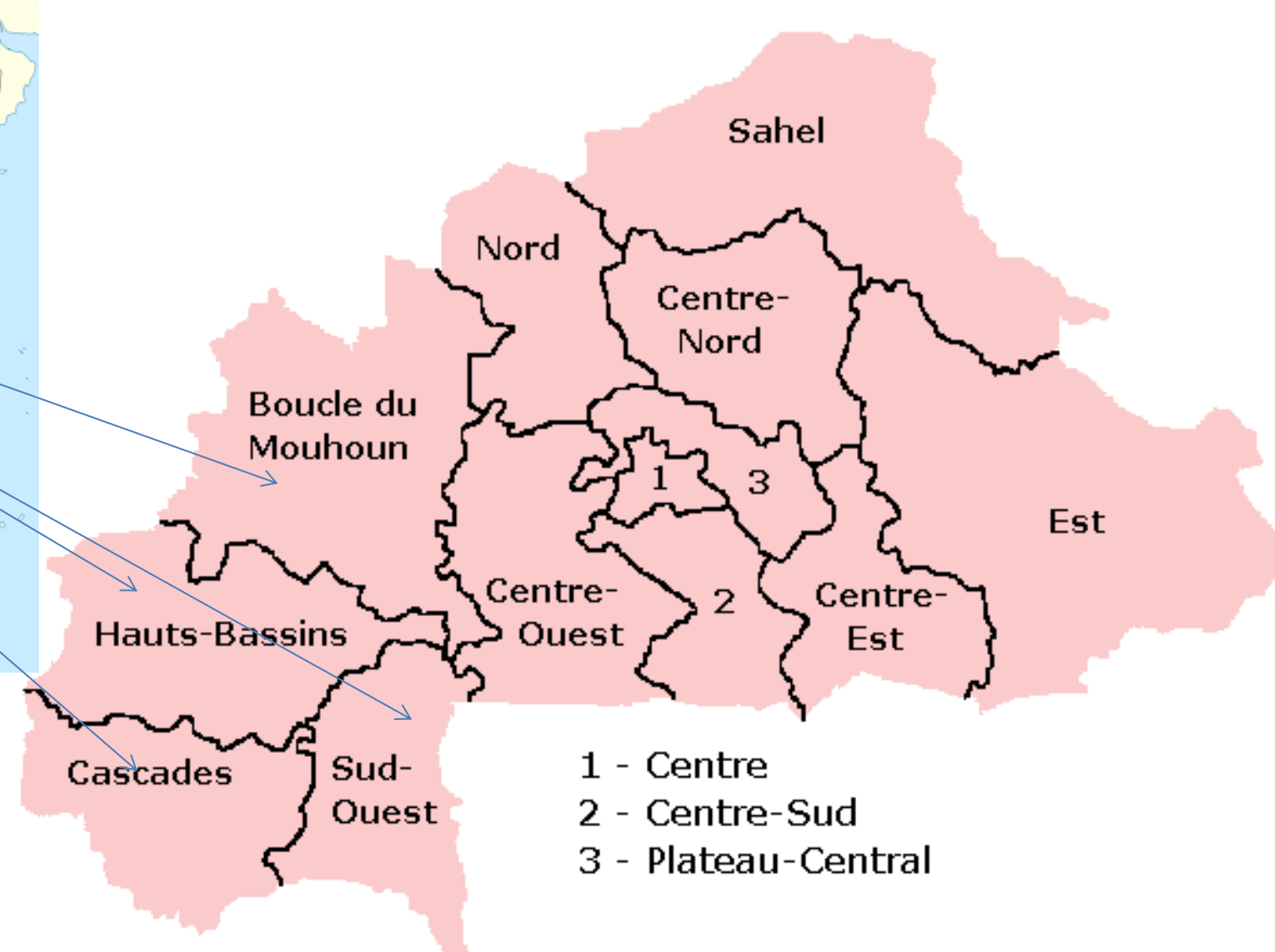
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### INTRODUCTION AND PURPOSE

Burkina Faso, a low-income country in West Africa, experiences difficulties in the management of inpatients due to increasing antimicrobial resistance which can be partly attributed to selection pressure due to irrational use of antimicrobials. We aimed to describe, for the first time at the national level, the use of antimicrobials in the different levels of care.

### METHODS

The standardized Global-PPS method assessed antimicrobial prescribing in 7 hospitals from 4 regions in Burkina Faso (see map) in February-March 2019. The survey included all inpatients receiving an antimicrobial on the day of the PPS. Data included details on the antimicrobial agents, reasons and indications as well as a set of antimicrobial quality indicators.

### RESULTS

- 859 inpatients including 512 adults, 264 children; and 83 newborns were enrolled.
- The overall antimicrobial prescription rate was 71.8% (range: 54.4% to 89.2%).
- Antimicrobials are more prescribed in newborn (89.2%) and child care units (81.4%) than in adult care units (64.1%).
- In adult patients, the prescription of antimicrobials is more frequent in the intensive care units (80.0%) as well as in the surgical units (73.2%) than in medical units (54.4%).
- In children's units, the antimicrobial prescription rate is lower in surgical units (60.7%), intensive care (76.9%) than in medical units (84.3%) (figure 1).

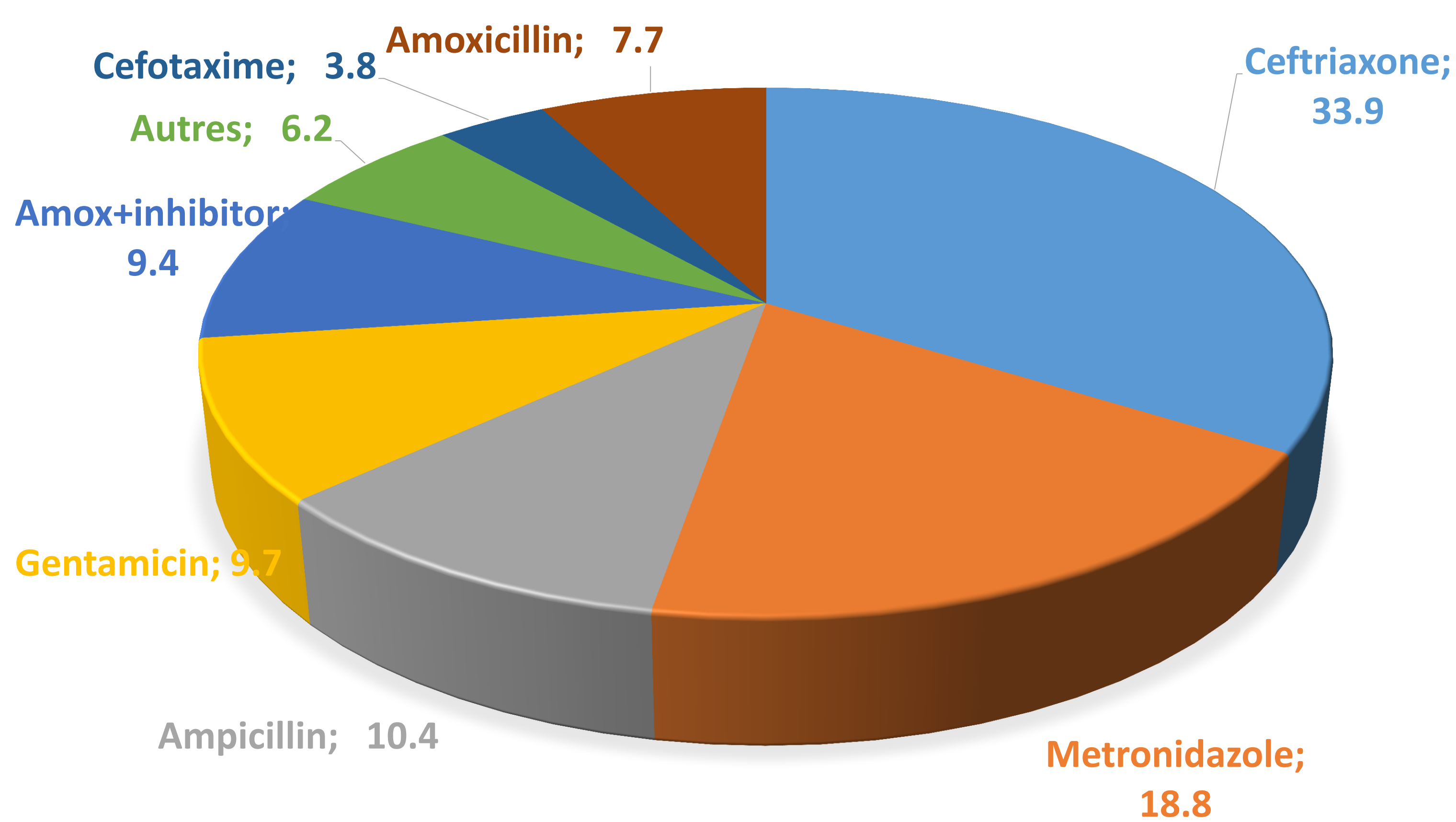


Figure 2: Proportion of the most used antibiotics (%)

- Community acquired infections were common (85.2%). Healthcare-associated infections accounted for less than 5% of antimicrobials.
- Surgical prophylaxis (n=62 antibiotics; 5.7%) lasted mostly for more than 2 days (87.1%). Antimicrobial therapy was oriented towards ESBL (3 cases/7), MRSA (2cases/7) and non-fermenter gram negative bacilli producer of ESBL (1case/7) only.
- According to the quality indicators (Table I), reason in notes and guideline compliance was high but varied in a statistically significant according to the level of hospital competence ( $p < 0.05$ ). Documentation of a stop/review date remained weak whatever the level of the hospital ( $p > 0.05$ ).

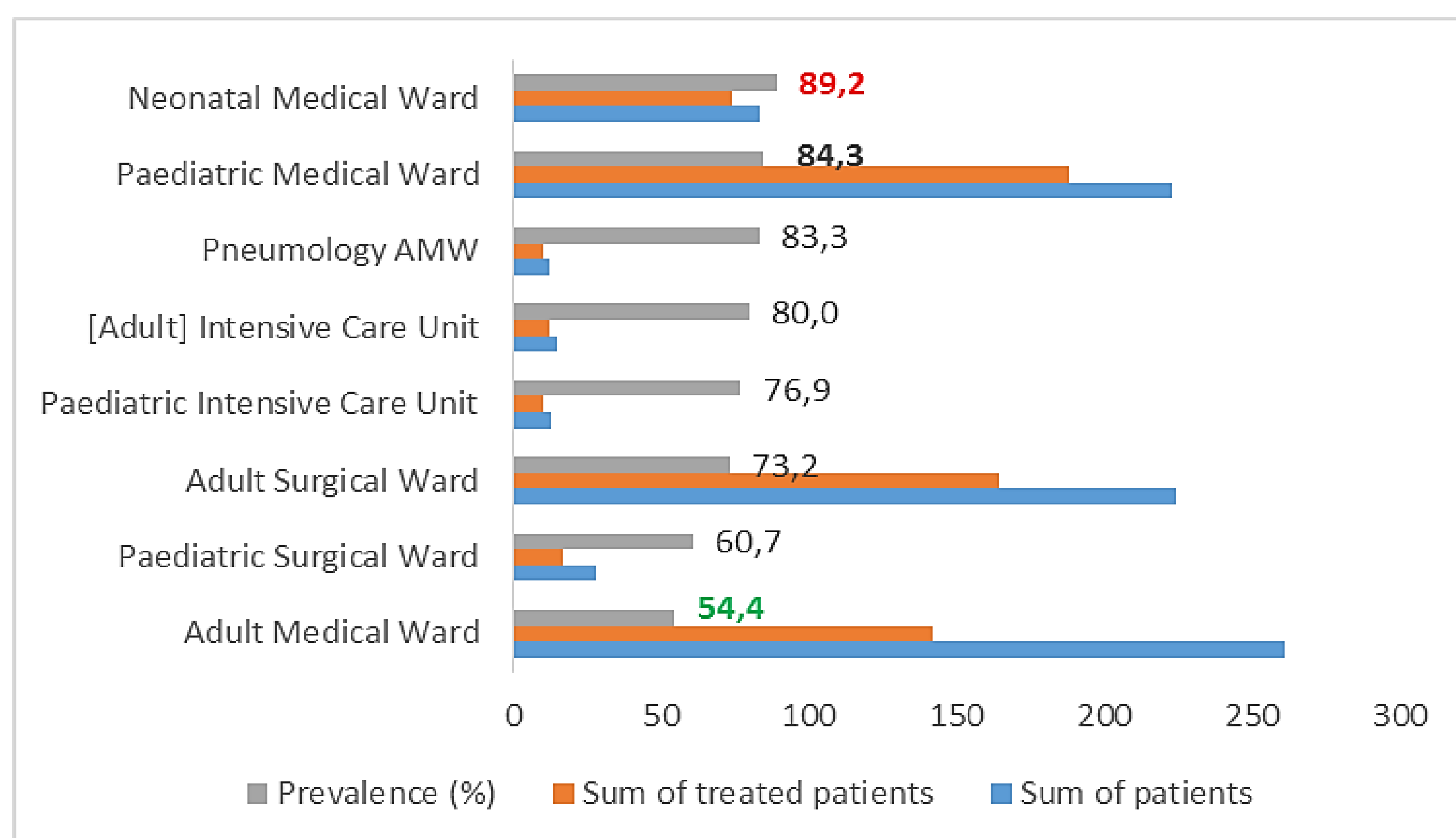


Figure 1: Antimicrobial prescription prevalence by types of wards

- Prophylaxis in neonates (12.4%) and digestive tract infections (11.9%) were the most common indications for antimicrobial therapy.
- Systemic antibacterials (78.9%), antiparasitics (13.4%), and antimycobacterials (3.2%) were the most prescribed classes of antimicrobials.
- The most commonly antimicrobial agents used were ceftriaxone (26.8%), metronidazole (14.8%) and artesunate (9.5%). These antimicrobials were prescribed mainly for curative (91%) referred to preventive use (9%).

Table 1: Quality indicators by hospital level

Quality indicators	All hospital	1 <sup>st</sup> hospital	2 <sup>nd</sup> hospital	3 <sup>rd</sup> hospital	p-value
Reason in notes (%)	82.96	87.88	79.34	86.28	0.005
Guideline compliant (%)	52.13	69.70	39.12	64.09	0.000
Stop/review date documented (%)	6.20	3.79	5.85	7.48	0.277

### CONCLUSION

Antimicrobial prescription prevalence in hospitals in Burkina Faso is high. Curative use is rarely documented. Community infections remain predominant. Regardless of the indication or type of infection, third-generation cephalosporins are the most prescribed. Continued education of caregivers on rational antimicrobial use and improved access to microbiological lab-capacity is needed. We will expand the study to all health regions to provide a picture of the national situation and needs.