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A comparison of antimicrobial prescription between a Belgian and Rwandan tertiary care hospital using the Global Point Prevalence Survey (Global-PPS) tool

ECCMID 2024 (P2634)



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BACKGROUND & OBJECTIVES

Antimicrobial resistance is a global threat, mainly driven by inappropriate antimicrobial use. This study compares antimicrobial prescription patterns between two tertiary care hospitals, situated in Belgium and Rwanda.

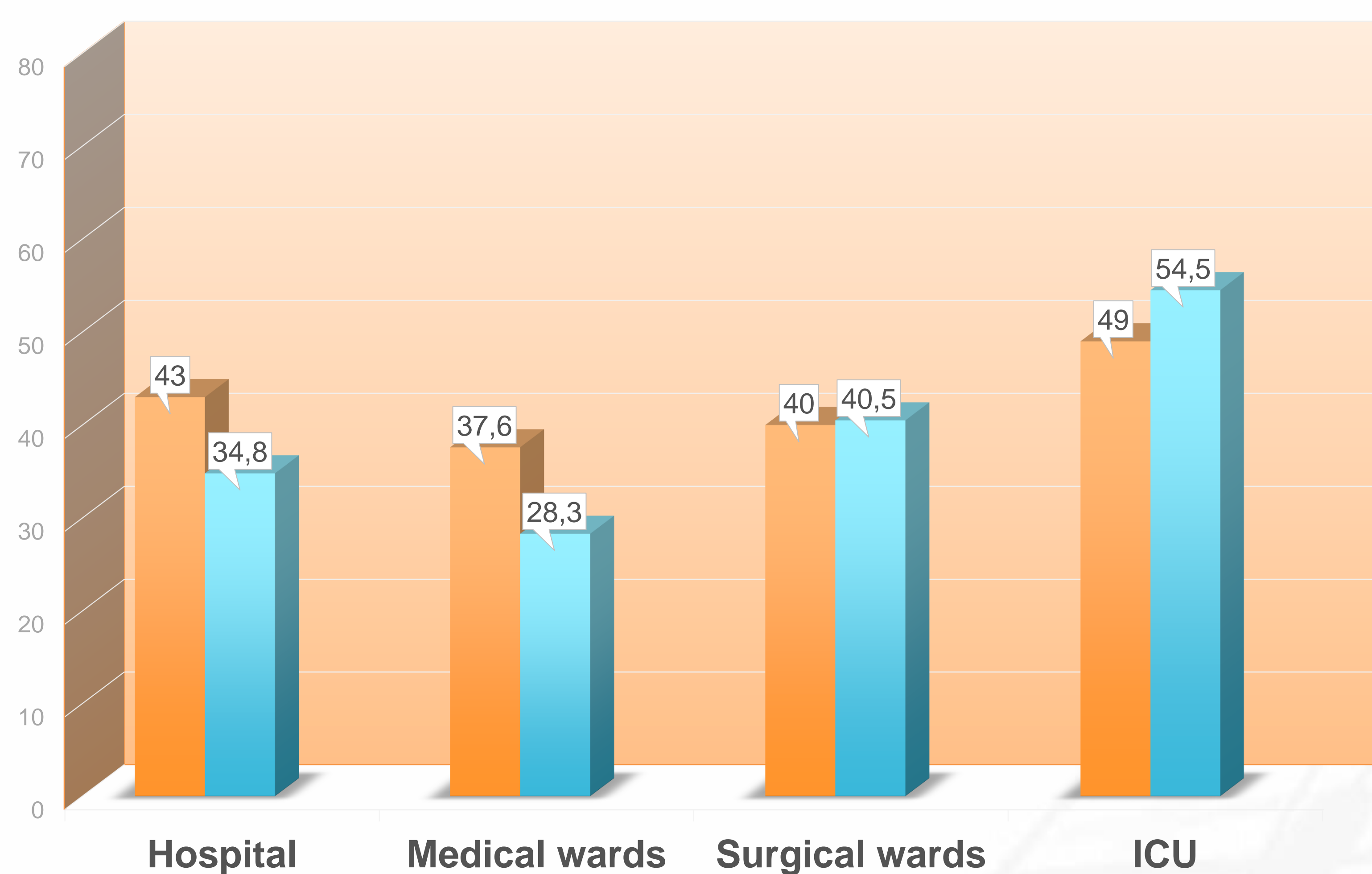
METHODS

A point prevalence survey of antimicrobial prescription was conducted in December 2022 at the Antwerp University Hospital in Belgium (UZA) and in March 2023 at the Kigali University Teaching Hospital in Rwanda (CHUK), using the Global-PPS tool. Data from both hospitals were compared.

RESULTS

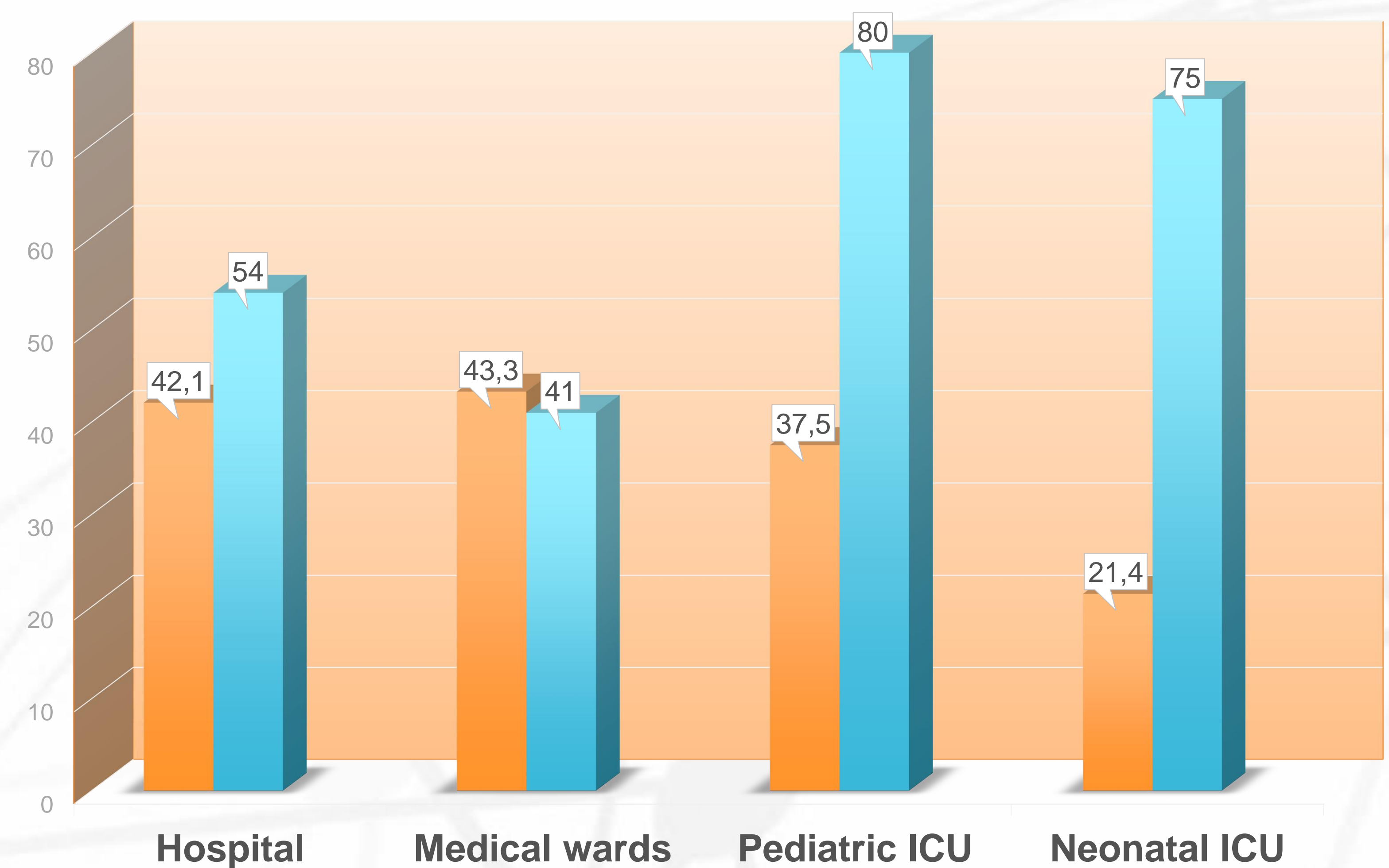
Antimicrobial prevalence in adults

■ UZA (N 374) ■ CHUK (N 282)



Antimicrobial prevalence in children

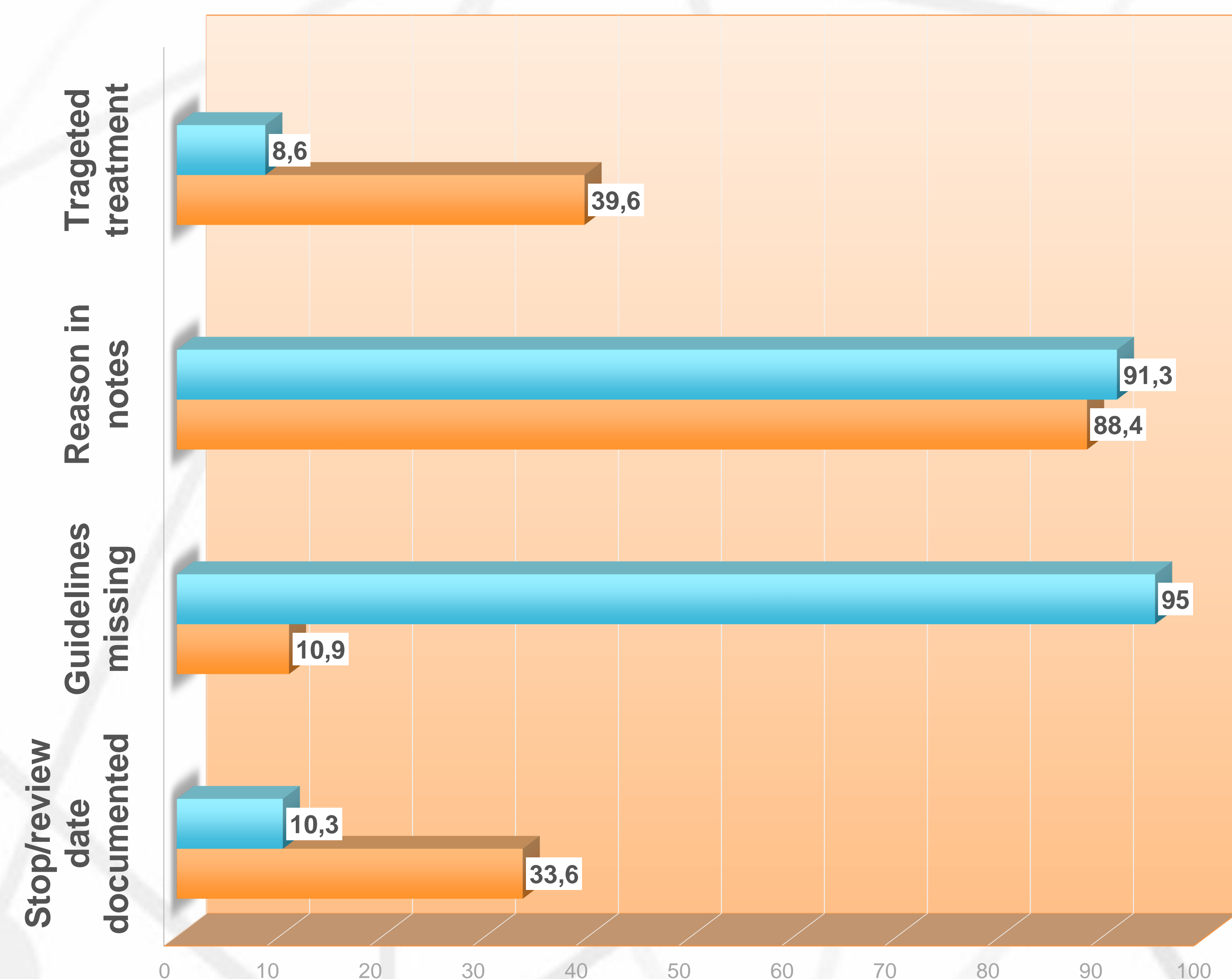
■ UZA (N 66) ■ CHUK (N 87)



	UZA	CHUK
Overall antimicrobial prevalence (%)	42.5	39.3
Prescribed antimicrobials (N, total)	208	232
<i>Beta-lactams (%)</i>	64.3	64.1
<i>Imidazole derivatives (%)</i>	1.4	13.4
<i>Glycopeptides (%)</i>	4.8	7.3
<i>Fluoroquinolones (%)</i>	6.7	5.6
<i>WATCH group (%)</i>	52	65
Treatment indication		
<i>Pneumonia (%)</i>	26.8	18.9
<i>Skin and soft tissues infections (%)</i>	15.8	8.7
<i>Intra-abdominal infections (%)</i>	6.7	9.5
Surgical prophylaxis (SP) > 24 h (%)	53.0	84.0
3rd gen cephalosporin for SP (%)	0	72.3
Watch for community-acquired infection (CAI)	8.8	56.1

Quality of prescription

■ CHUK ■ UZA



CONCLUSION

Despite significant differences in organization of healthcare, availability of infectious diseases specialists and microbiology laboratory capacities, antimicrobial use in both hospitals was comparable in terms of overall prevalence, antimicrobials used and treatment indications. Main differences were noted regarding antimicrobial prevalence in PICU and NICU, surgical prophylaxis (antimicrobial and duration), treatment of CAI and the quality of prescription, showing the need for tailored antimicrobial stewardship interventions. Furthermore, findings from this Global-PPS require further in-depth analysis and contextualization.

Disclosures: bioMérieux is the sole industrial partner of the Global-PPS. The company has no role in study design, data collection, data analysis, data interpretation, or writing the report. Data are strictly confidential and stored anonymously at the coordinating centre of the University of Antwerp, Belgium.