



Measuring antimicrobial use in Zambia : Results from the Global-PPS for six health facilities.

David Banda¹, Christopher Simoonga¹, Roydah Matipa Banda¹, Ann Versporten², Ines Pauwels², Herman Goossens², Aubrey C Kalungia³,

¹Chreso University, Lusaka, Zambia; ²Laboratory of Medical Microbiology, Vaccine and Infectious Diseases Institute, University of Antwerp, Antwerp, Belgium; ³University of Zambia, Lusaka, Zambia.

banda.chimbi@gmail.com



BACKGROUND & OBJECTIVES

Antimicrobial resistance is an emerging problem worldwide, also in Zambia. We aimed to evaluate the quality of antimicrobial prescriptions in four primary and two secondary care facilities in Zambia.

METHODS

A cross-sectional point prevalence survey was conducted in December 2021 using the Global-PPS protocol and web-based application for data entry, validation and reporting (www.global-pps.com). Data collected included details on the antimicrobial agents, reasons and indications for treatment as well as a set of quality indicators. The study was approved by Ethics Board Ref No: NHRA000013/28/12/2021 with funding from Royal Society of Tropical Medicine and Hygiene, UK under small grants.

RESULTS

- Overall, out of 315 admitted inpatients, 163 (51.7%) were receiving an antimicrobial on the day of PPS.
- Highest rates were observed in paediatric medical wards (63.0%) and intensive care units (60.0%) followed by adult medical- (55.6%), intensive care- (50%) and surgical wards (43.7%).
- Overall prevalence of healthcare associated infections was 2.2%.
- Antifungal and antiviral use was not reported.
- The commonest antibiotics prescribed were ceftriaxone (28.0%), metronidazole (19.3% of which 13.4% for oral use) amoxicillin and benzylpenicillin (both 10.2%).
- Top three most common reported diagnoses treated with therapeutic antibiotics were skin and soft tissue infections (13.3%), sepsis (12.7%) and obstetric/gynaecological infections (11.3%).

Quality indicators

- Empiric prescribing was 100%.
- Patients were most on IV therapy (**Figure 1**).
- Prescriptions belonging to the WHO Access group of antibiotics prevailed on paediatric wards (73.5%). In adult wards Watch antibiotics were common (53.2%). (**Figure 2**).
- Documentation of the reason of prescription was 0.8% and of stop/review date 15.4%.
- Guidelines missing was 1.4% and guideline compliance was 21.6%.

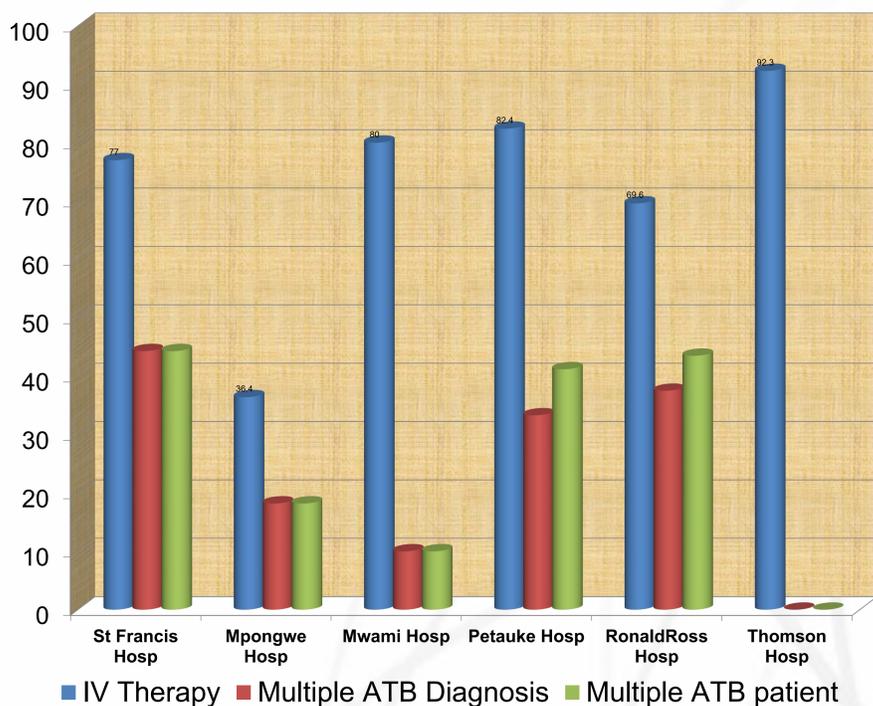


Figure 1. Key prescription patterns in all ages with most patients on IV therapy

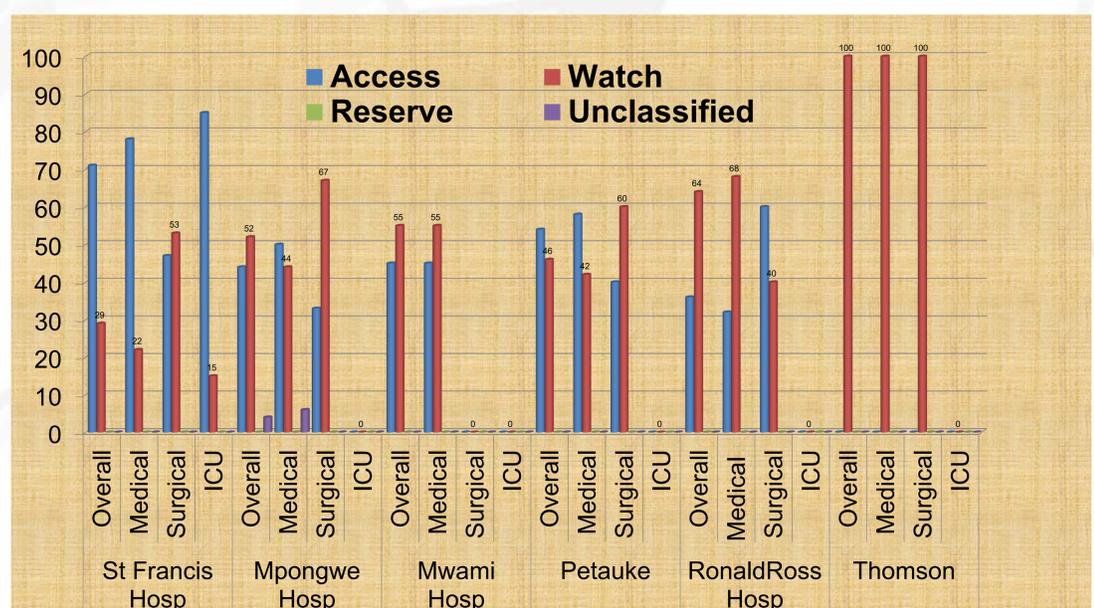


Figure 2. Overall antibiotic Use (ATC J01) according to WHO AWaRe classification by Activity.

CONCLUSION

Prevalence of antibiotic prescribing is high with over use of third generation cephalosporins and subsequent parenteral administration. Adherence to guidelines was poor. The Global-PPS helped us to identify possible intervention areas for antimicrobial stewardship actions such as improving documentation of prescriptions and improving infection prevention to contain wound and gynaecological infections.

REFERENCES

- WHO. Global action plan on antimicrobial resistance. 2015. http://apps.who.int/iris/bitstream/handle/10665/193736/9789241509763_eng.pdf
- World Health Organization (2018) Antimicrobial Resistance. Fact sheet. Geneva; <https://www.who.int/en/news-room/fact-sheets/detail/antimicrobial-resistance>
- WHO. Library of national action plans 2018. 2018, <http://www.who.int/antimicrobial-resistance/national-action-plans/library/en>