

Assessment of antimicrobial use and prescribing practices among paediatric inpatients in Zimbabwe

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Background: Antimicrobial resistance threatens our ability to effectively treat infections. A key driver is inappropriate antimicrobial use. There is currently limited information on antibiotic utilisation in Zimbabwe including children. Consequently, the objective of this study was to assess antimicrobial consumption in the paediatric department of a tertiary care public hospital in Zimbabwe.

Methods: Clinical records of paediatric inpatients admitted to two general paediatric wards at Harare Central Hospital over a 3-week period were reviewed prospectively. Antimicrobial consumption was described as days of therapy per 100 inpatient days (DOT/100 PD). Adherence of antimicrobial drug prescriptions to the National Guidelines was also evaluated.

Results: A total of 121 (93.1%) children were prescribed at least one antimicrobial out of 130 children admitted. The median age was 14 months (IQR: 3 – 48 months). Overall antimicrobial consumption was 155.4 DOT / 100 PD (95% CI 146-165.2). The most frequently prescribed antimicrobials were benzylpenicillin, gentamicin and ceftriaxone. In 111 children, adherence to national guidelines was evaluated and 64 (57.7%) received antimicrobials according to guidelines. For instance, in children admitted with neonatal sepsis, nonadherence (64%) mostly due to prescribing of ceftriaxone or benzylpenicillin and gentamicin versus cloxacillin and gentamicin.

Conclusions: There is high antimicrobial drug usage in hospitalized children in Zimbabwe and a considerable proportion of prescriptions are non-adherent with national guidelines. These findings emphasize the need for antimicrobial stewardship programmes across Zimbabwe and for strengthening diagnostic capacity in low-income settings which is a concern enhancing AMR rates.