HSD50

EVALUATING THE PEDIATRIC PRESCRIBING PATTERN IN A HEALTH FACILITY IN NIGERIA

[1]Blessing Ijeoma Okoye, [2]Jacintha Chibuogwu Udemba, Ebierinyo Andi Obed[3]

[1]Bingham University Teaching Hospital, Nigeria

[2]Lagos State University Teaching Hospital, Nigeria

[3]Military Hospital Port Harcourt, Nigeria

BACKGROUND AND OBJECTIVES

The World Health Organization (WHO) estimates that about half of the prescribed medicines are used irrationally. [1-3] Irrational use of medicines is common in low/middle-income countries, causing inefficient and costly services. [4]

The WHO, in collaboration with INRUD (The International Network for Rational Use of Drugs), has developed a set of core indicators for measuring the rational use of medicines in healthcare settings. These indicators will enable comparison between health facilities. [5]

This study aimed to access and address the drug use patterns of healthcare professionals among the paediatric population in a tertiary hospital in Nigeria.

METHOD

This study is an observational cross-sectional study that comprised of prescriptions (from 1 January to 30 April 2022) of paediatric patients (aged <12 years) at the outpatient paediatric clinic of Bingham University Teaching Hospital (BHUTH).

Using the WHO model of drug utilization study, a total of 800 patients were selected for the 4-month period by systematic sampling. All collected data were coded, entered and analysed using the SPSS V.22.

Outcome measures

The WHO core prescribing indicators were utilized and they include;

- The mean number of drugs per prescription/encounter
- The percentage of drugs prescribed using the generic name.

- The percentage of encounters with antibiotics prescribed.
- The percentage of encounters with an injection prescribed.
- The percentage of drugs in prescription from the Essential Medicines List.

RESULTS

Table 1: Core prescribing indicators

PRESCRIBING INDICATORS	TOTAL DRUGS PRESCRIBED	RESULT
The mean number of drugs per prescription	2723	3.4
Percentage of drugs prescribed by generic name	1406	51.60%
Percentage of encounters with an antibiotic(s)	651	81.40%
Percentage of encounters with an injection(s)	140	17.50%
Percentage of drugs prescribed from the Essential Medicines List	2441	89.60%

Figure 1: Bar chart showing the percentage of the types of antimalarial per total antimalarial prescribed

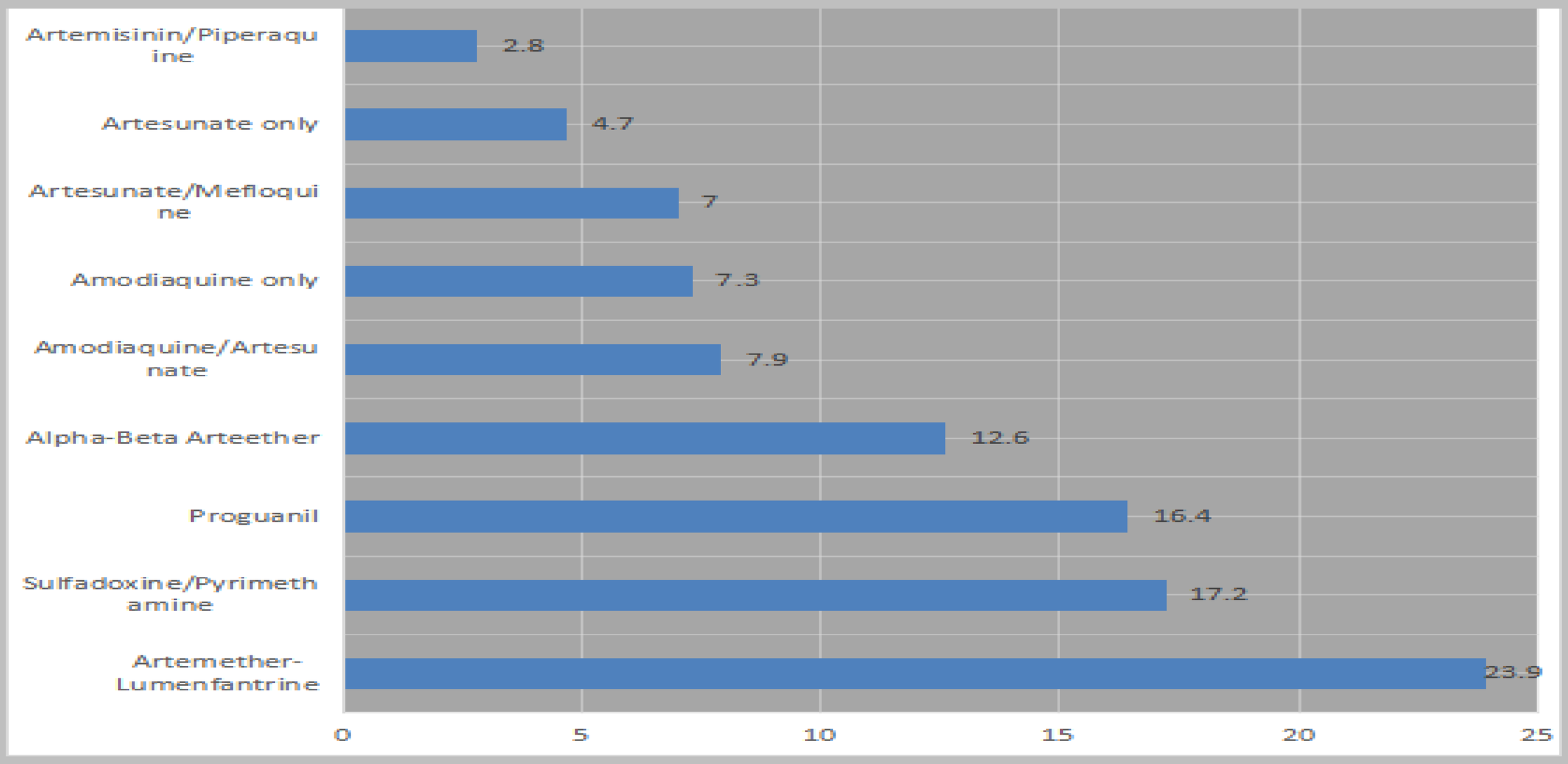


Figure 2: Bar chart showing the percentage per total drugs prescribed

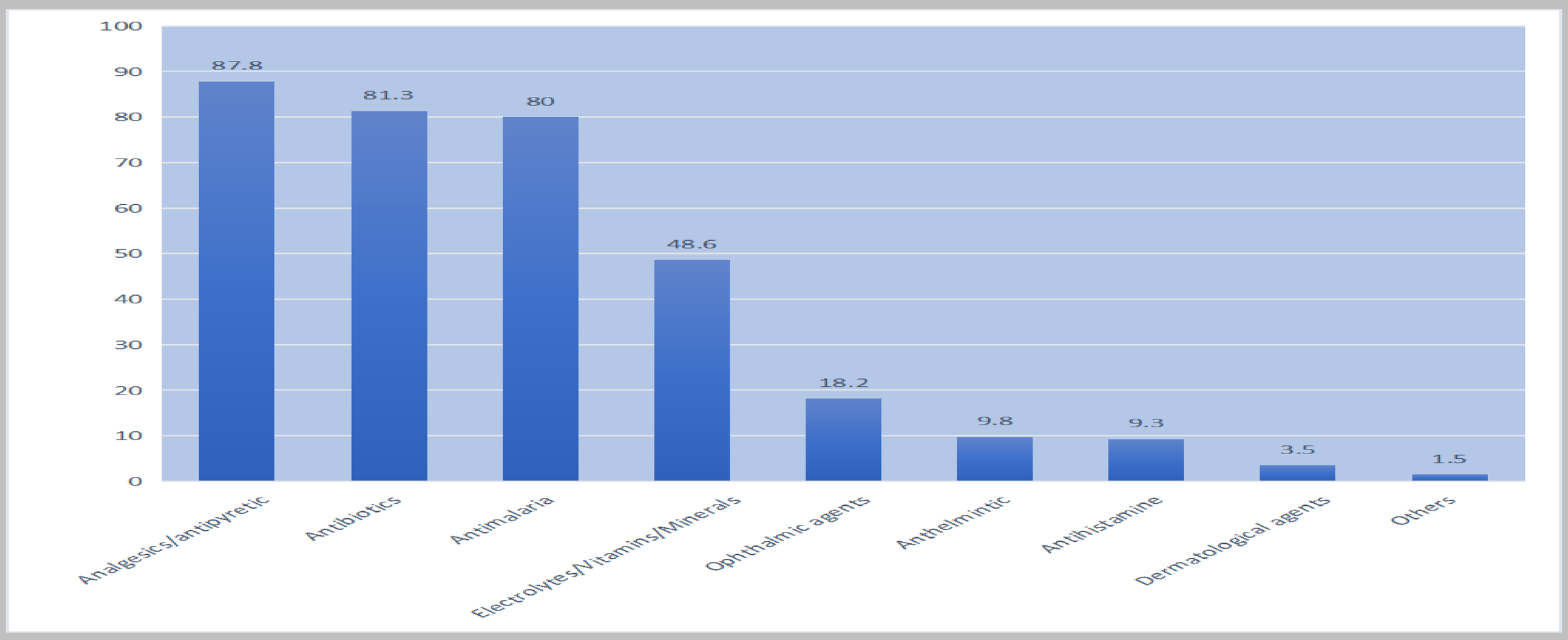
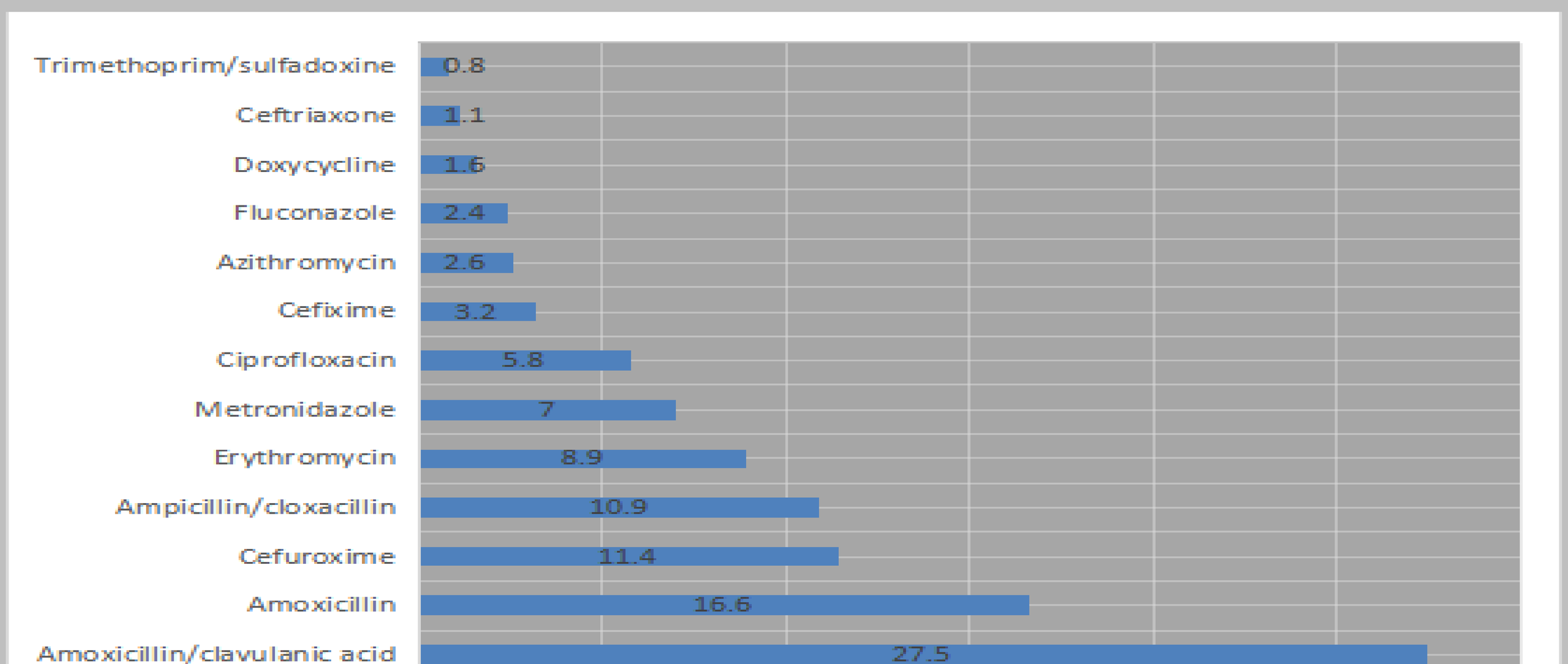


Figure 3: Bar chart showing the percentage of the types of antibiotics prescribed per total antibiotics



DISCUSSION

- The mean number of drugs per prescription was above the WHO recommended range of 1.6-1.8[6]. This indicates an increasing rate of polypharmacy. Polypharmacy increases the risk of adverse effects in children [7], dispensing errors and reduces patient compliance with medication [8]

- More than half of the drugs were prescribed with their generic name. The non-compliance with the 100% recommended standard by WHO can be attributed to a number of factors, some of which are the influence of pharmaceutical sales representatives on physicians, and the varying level of training and experience of prescribers.

- 81.4% of the total prescriptions contained an antibiotic and not all the antibiotic prescriptions were appropriate. The commonly implicated antibiotics in the study was amoxicillin/clavulanic acid. The irrational use of antibiotics has contributed significantly to the development of antibiotic resistance. A more assertive antibiotic policy will help reduce the irrational prescribing of antibiotics.

- 17.5% of the prescriptions contained an injectable. This value is within the recommended range by WHO and can be attributed to practitioners' better awareness and understanding of injection risk in pediatrics.

- 89.6% of all the drugs prescribed are in the WHO EML. This shows that the hospitals's stock list is robust enough to handle the needs of the patients.

- This study was carried out in a holo-endemic malarial environment and therefore 80% rate of antimalarial prescribing was recorded.

In conclusion, the findings of this study reveals the need to target paediatric clinics further and enforce national strategies to tackle irrational prescribing practices among the pediatric population.

POLICY RECOMMENDATION

- Establish a drug and therapeutics committee in each hospital, with the specific responsibility of monitoring and ensuring rational use of medicines. The committee should operate independently, and members should represent all the major medical specialties and the administration.

- Eliminate perverse financial incentives. As earlier stated, some of the prescribers receive incentives from pharmaceutical sales representatives to prescribe their brand of medicines.
- Monitoring, supervision, and using group processes to promote the rational use of medicines. Some examples of an effective form of supervision are prescription audit and feedback, peer review, and group processes of self-identified medicine use problems and solutions in a group of prescribing professionals.
- Support is also needed from the government. The government should provide sufficient expenditure to ensure the availability of medicines and staff.
- Continuing in-service medical education and targeted educational programs by professional societies, universities, and the government.

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