

Antibiotic Prescribing Patterns in Pediatric Patients Using the WHO Access, Watch, Reserve (AWaRe) Classification at a Quaternary Hospital in Nampula, Mozambique

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This study evaluated antibiotic prescriptions in pediatric patients in Nampula, Mozambique. 74.8% of antibiotics were from the Access group, 23.7% from the Watch group, and none from the Reserve group. 97.5% of the prescriptions were for antibiotics, with 96.2% administered by injection.

BACKGROUND

- The primary research question of this study was: What is the pattern of antibiotic prescribing in pediatric patients hospitalized at a quaternary hospital in Nampula, Mozambique, and how does it align with the World Health Organization's (WHO) AWaRe classification framework?
- This study was conducted to assess whether the antibiotic prescriptions in the pediatric ward followed appropriate guidelines to avoid the overuse of broad-spectrum antibiotics, which is a major contributor to antimicrobial resistance (AMR). Given the global rise of AMR and its significant impact on healthcare, particularly in low-resource settings like Mozambique, there was an urgent need to evaluate the local antibiotic prescribing practices and identify areas for improvement.

METHODS

- Data on antibiotic prescriptions for pediatric patients (0-10 years) at a quaternary hospital in Nampula were collected in 2020. We analyzed the data using WHO indicators and the AWaRe classification to categorize antibiotics and applied descriptive statistics to summarize prescription patterns.

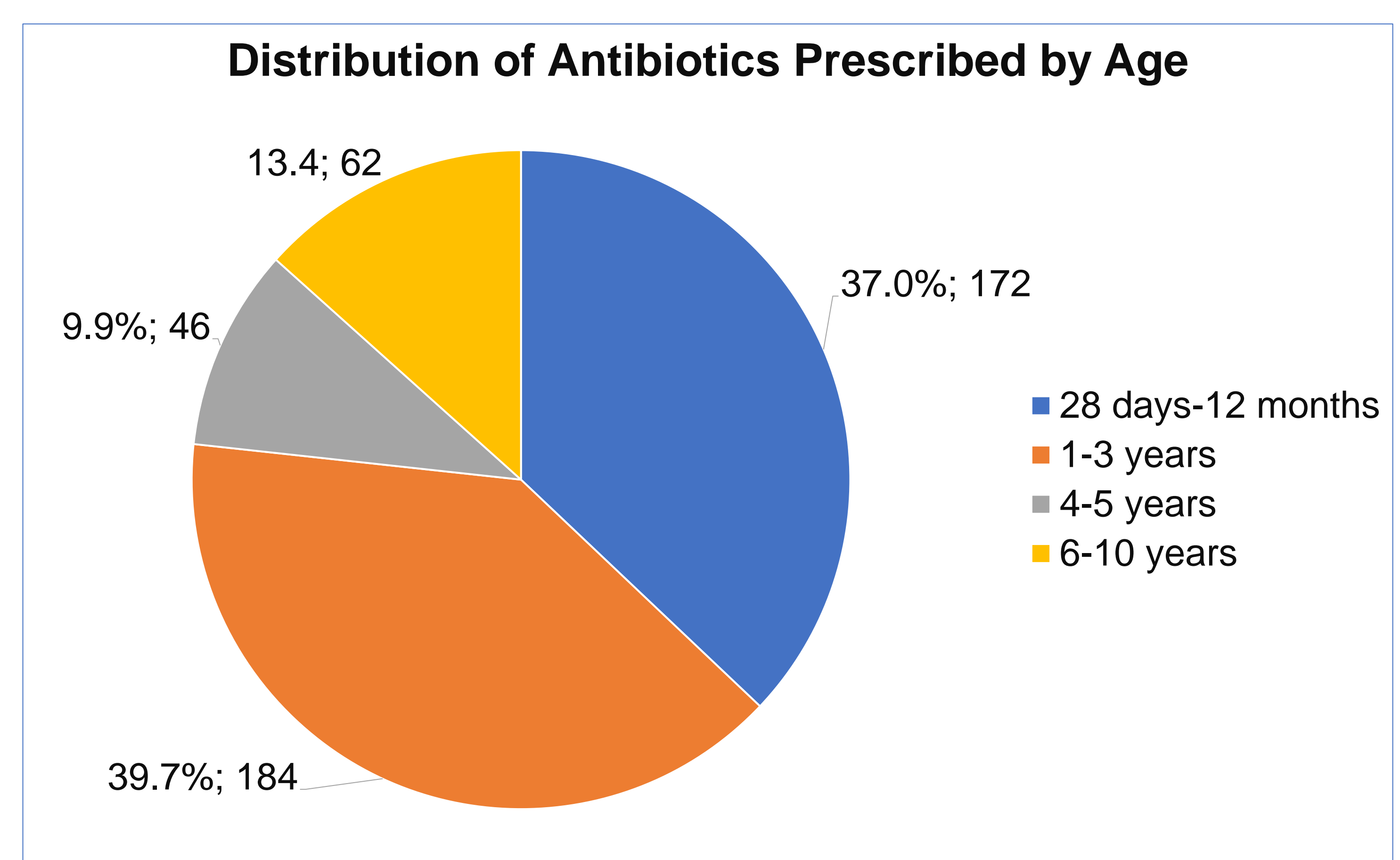
RESULTS

- Of 464 antibiotic prescriptions for children in Nampula, 74.8% were in the Access group and 23.7% in the Watch group. Ceftriaxone and crystalline penicillin were the most common. On average, 1.51 antibiotics were prescribed per prescription. 97.7% of prescriptions contained at least one antibiotic, with 96.2% administered by injection. These findings highlight the need for improved antimicrobial management and the adoption of the AWaRe framework to combat AMR.

Table 1. Distribution of Antibiotics Prescribed According to Age

Antibiotics	ATC Code	Age							
		28 days-12 months		1-3 years		4-5 years		6-10 years	
		n	%	n	%	n	%	N	%
Crystallized penicillin	J01CE01	44	28,39	62	40,0	20	12,90	29	18,1
Sulphonamides and trimethoprim	J01EE01	47	54,65	30	34,9	4	4,65	5	5,81
Ceftriaxone	J01DD04	33	34,74	39	41,1	14	14,74	9	9,47

RESULTS CONTINUED



CONCLUSIONS

- The study reveals significant issues with antibiotic prescribing among pediatric patients at a tertiary hospital in Nampula, Mozambique. There is a high reliance on antibiotics, particularly intravenous ones, with most prescriptions falling into the Access group.
- This pattern underscores the urgent need to improve antimicrobial stewardship and adopt the AWaRe framework to optimize antibiotic use and address antimicrobial resistance (AMR), ensuring more effective treatments and better health outcomes.

ADDITIONAL KEY INFORMATION

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