

Background

- Malaria infection is a major cause of death and poses a threat to public health in many African countries.
- Pregnant women are at a higher risk of *Plasmodium falciparum* infection due to the presence of parasite infected red cells and eventual sequestering in the placenta thereby leading to adverse fetal outcomes.
- Failure of achieving therapeutic levels of anti-malarial drugs may provide room for parasite infected red cells to be released into the peripheral blood and cause recurrent maternal infection
- Irrational prescribing of antimalarial drugs is a common problem in many developing countries including Nigeria. This practice can lead to drug-induced side effects among pregnant women and contribute to the emergence of resistant malaria parasites.
- Adherence to standard guidelines in prescribing antimalarial drugs is crucial to ensure effective treatment and prevent the emergence of drug-resistant malaria parasites.

Aim

To evaluate antimalarial prescription pattern among pregnant women in State Specialist Hospital Gombe.

Method

Study design: Cross-sectional

Study area: State Specialist Hospital Gombe

Study population: Pregnant women attending antenatal clinic of the hospital

Ethical clearance: Ethical approval for the study protocol was obtained from the Research and Ethics committee Gombe State Ministry of Health with reference number: MOH/ADM/621/V.1/321

Sampling technique: A systematic random sampling was employed in this study to identify prescriptions with antimalarial medicines.

Data management and Analysis: Kruskal-Wallis or Mann Whitney test was performed using SPSS version 25.0 (SPSS Inc., Chicago, IL, USA). *P*-value < 0.05 was considered statistically significant (95% Confidence Interval).

Results

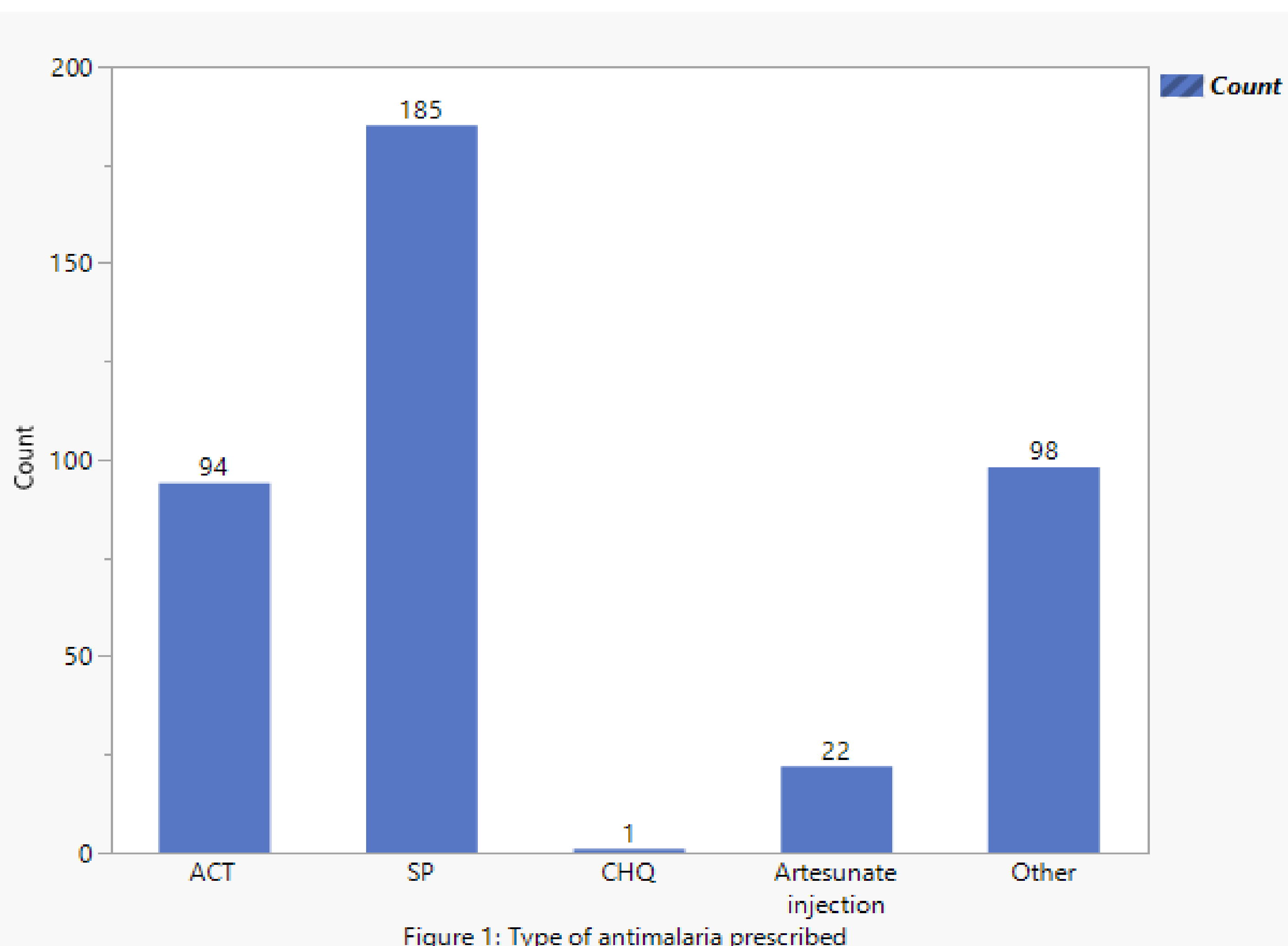


Figure 1: Type of antimalaria prescribed

Key

ACT: Artemisinin-based combination therapy

SP: Sulphadoxine pyremethamine

CHQ: Chloroquine

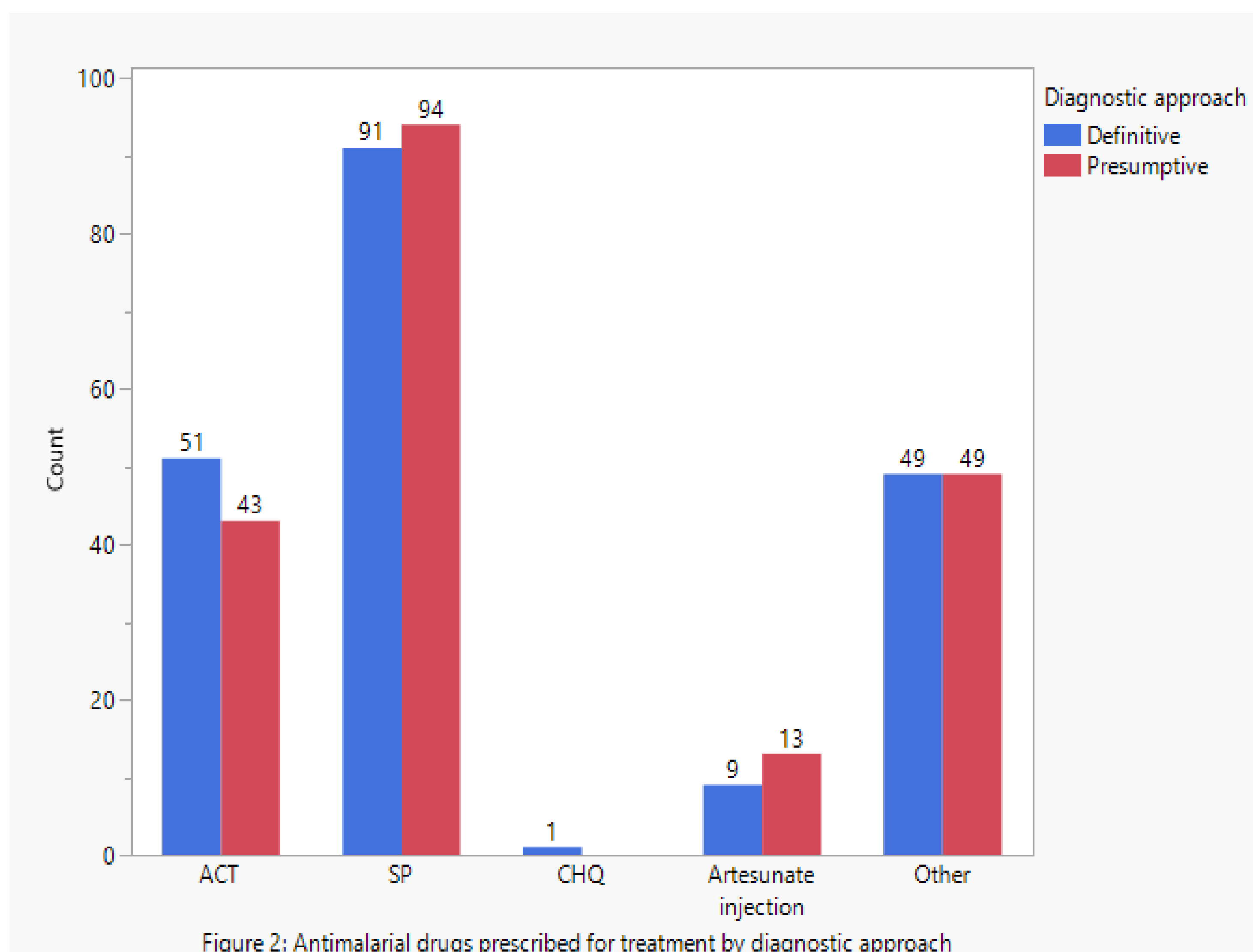


Figure 2: Antimalarial drugs prescribed for treatment by diagnostic approach

Table 1: Factors associated with antimalarial prescription (n = 400)

Variable	Mean rank	P value
Age(in years)		
15-25	205.68	0.49 ^b
26-35	196.07	
>35	197.61	
Number of pregnancy		
1-3	196.83	0.15 ^b
3-5	213.48	
>5	195.61	
Number of children alive		
1-3	180.68	0.55 ^b
3-5	187.41	
>5	175.38	
Residency		
Urban	198.46	0.725 ^b
Semi-urban	203.79	
Rural	193.59	
Comorbidity		
Yes	207.73	0.508 ^a
No	199.61	
Malaria Therapy		
Definitive	206.04	0.146 ^a
Presumptive	194.0	
Type of Antimalarial drug		
ACT	260.12	0.001 ^a
SP	185.61	
CHQ	167.00	
Artesunate injection	212.82	
Other		
Adherence to visit ANC		
Yes	201.23	0.784 ^a
No	198.99	
Dose of IPT		
First	192.35	0.168 ^b
Second	200.42	
Third	215.49	
Prescription has Antibiotic		
Yes	198.20	0.877 ^a
No	200.65	
Prescription has Injection		
Yes	232.37	0.005 ^a
No	191.25	
Medicine is in EDL		
Yes	218.51	<0.005 ^a
No	189.81	

a: Mann-Whitney test

b: Kruskal-Wallis test

Table 2: Predictors of antimalarial prescription

Variable	Standard error	95%, CI	P value
Age	0.051	-0.168 – 0.032	0.183
Number of pregnancy	0.052	-0.013 – 0.192	0.08
Number of children alive	0.052	-0.145 – 0.06	0.41
Residency	0.042	-0.10 – 0.057	0.55
Comorbidity	0.075	-0.22 – 0.07	0.34
Type of malaria therapy	0.049	-0.14 – 0.056	0.40
Prescription has injection	0.063	-0.32 – 0.07	0.003*
Antimalaria is in EDL	0.05	-0.19 – 0.025	0.13

*Significant at *p* < 0.05

Conclusion

Findings from this study suggest that the prescribing pattern of antimalarial drugs were done according to the WHO recommendations with the exception of prescribing in generic where only 65.8% of antimalarial drugs were prescribed in generic form. We therefore recommend generic prescription of antimalarial drugs.