



## EVALUATION OF THE PATTERN OF PRESCRIBING ANTIMALARIA DRUGS

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### ABSTRACT

Malaria is caused by infection with the plasmodium virus that comes from the Anopheles mosquito. This disease often occurs in the rainy season and can cause morbidity and even death for humans. Based on data from the Ministry of Health, there were 304,607 cases of 247 malaria in Indonesia throughout 2021, this figure increased by 19.9% compared to the previous year of 254,050 cases, Papua is the province with the most cases. The highest number of malaria cases in Indonesia in 2021 was recorded at 275 cases. Objective: determine the pattern of prescribing anti-malaria drugs at the Sentani Health Center (period October-December 2023). Method: quantitative descriptive type. it is an evaluation of the pattern of prescribing antimalarial drugs at the Sentani Health Center for the period October-December 2023 with a sample of 33 prescriptions carried out in October-December 2023 using a technique, namely purposive sampling the Data was obtained using Excel and the processing was analyzed. Result: evaluation of the pattern of prescribing antimalarial drugs at the Sentani Health Center for the period October-December 2023. The highest prevalence of antimalarial drug use in Sentani Health Center in Jayapura regency is DHP (Dihydroartemisinin-Piperaquine) with a percentage of 100%.

Keywords: antimalarial: evaluation of prescribing patterns; puskesmas sentani

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## INTRODUCTION

Malaria is caused by infection with the plasmodium virus from the Anopheles mosquito. The disease often occurs during the rainy season and can cause pain to death for humans based on Ministry of Health data, there were 304,607 cases of 247 malaria in Indonesia throughout 2021, this number increased by 19.9% compared to the previous year which was 254,050 cases, Papua became the province with the highest malaria cases in Indonesia in 2021, there were 275,243 people infected with the disease last year (Ministry of Health, 2021). The cause of malaria in humans is plasmodium, which is transmitted through the bite of a female Anopheles mosquito. Some areas in Indonesia have been declared malaria-free such as Java and Bali, but in the eastern part of Indonesia it is still a health problem that needs attention from the government and the private sector.

Puskesmas sentani is a health care center that provides inpatient rooms as a support for outpatient services. This can show the number of pain experienced by the people of sentani city and the existence of supporting services from the sentani Health Center. Data from the 2023 JKN/KIS program report at the sentani Health Center show that malaria is included in the top 10 most common diseases that cause morbidity and morbidity in the Jayapura regency area. This Data shows compliance with the increasing number of outpatient prescriptions such as in October as many as 33 prescriptions, up from the previous month, namely December 2023, which amounted to 745 prescriptions. Based on this background, the researchers are purposed in conducting a study on “evaluation of the pattern of prescribing antimalarial drugs at the sentani Health Center at the age of adolescents and adults.

**METHOD**

This study uses a descriptive design with a quantitative approach. In this study describes the pattern of prescribing antimalarial drugs in patients at Puskesmas Sentani kota. While this type of research is classified into retrospective research. The population in this study was all prescriptions with antimalarial treatment for the period October-December 2023 at the Sentani Health Center. This study uses non probability sampling techniques or each member of the population does not have the same opportunity to be sampled, namely purposive sampling. The number of samples or the amount of samples taken into account in order to meet the requirements and obtain the truth. The type of data in this study is quantitative data. While the source of data or data used in this study came from secondary internal data, namely prescriptions with antimalarial treatment at the Sentani Health Center. The technique of data analysis in this study is to use descriptive data, which is poured into excel program in the form of a table that contains the analysis of the evaluation of antimalarial drug prescription patterns include: patient name, age, sex, weight, drug name, variation in the number of drugs, drug class, drug dose, duration of administration of plasmodium hiangga type.

**RESULT**

This evaluation aims to determine the use of the most types of antimalaria drugs in adolescent and adult patients at the Sentani Health Center in Jayapura regency during the period October-December 2023.

Table 1.

Consumption of antimalarial drug use in adolescent adult patients at sentani Health Center

Types of drugs	f	%
DHP	99	100
Primakuin	94	91,36

Tabel 2.

Variations in the use of antimalarial drugs in adolescent and adult patients

Variation number of drugs	f	%
Kombinasi	95	95
Tunggal	4	4

**DISCUSSION**

Based on table 1 & 2 shows the most use of antimalarial drugs in the sentani Health Center in jayapura regency in adolescent and adult patients, namely DHP (dihydroartemisinin-piperaquine) with a percentage of 100%, this shows the prescription in malaria patients using ACT therapy (Artemisinin-Based Combination therapy). The mechanism of action of DHP is the same as artemisin and since 2008 it has been used in papua province and gradually programmed. Dihydroartemisin-piperaquine is used only in cases that fail with chloroquine, such as in papua today (Moh, 2008)

ACT remains highly efficacious in treating uncomplicated falciparum malaria in Mali. The extremely high efficacy in both AL and non-AL treatment arms reported here suggests that non-AL therapy lines are available as potential alternatives to AL in the event of drug resistance or supply shortage. Pharmacy consultations and inventories offer potentially valuable data sources for monitoring ACT efficacy spatial and temporal patterns. Pharmacies maintain a wealth of information on ACT and are often the first point of contact for febrile subjects. However, pharmacy data sources are rarely adequately monitored or considered as a means for measuring community health (fatoumata, dkk (2021).

Dihydroartemisinin-Piperquine is a combination consisting of primaquine is a complementary or additional antimalarial drugs in the treatment of clinical malaria, radical treatment and treatment of severe malaria with complications. Mechanism of action of prmakuin interfere with mitochondria

and DNA binding (UI,2012), primaquin in use for relapse therapy in P.Tropical, and P.Tertiana P.Vivax and also as a complement to the treatment of radical P.Falciparum to prevent transmission. There were 94 malaria patients who received primaquine. It is also used to treat Plasmodium malaria. There were 99 malaria patients who received DHP.

## CONCLUSION

Based on the results of research conducted by researchers at Puskesmas Sentani, the researchers obtained the results based on age characteristics in Puskesmas sentani most ages >17-25 years as many as 58 people (71.60%), male gender as many as 52 people (52.53%), women 47 people (47.47%), the highest body weight is in the range of 50-70 kg with a percentage (57.58%), followed by a weight range of 30-50 kg with a percentage (28.28%), and 50-70 kg by percentage (14.14%). The most common types of malaria in Sentani Health Center are Terabanyak malaria Tertiana 18 (22.22%) malaria Tropic 42 (51.85%) malaria Vivax 27 (33.33%) Malaria malariae 7 (8.46%), the pattern of the largest use of antimalarial drugs in sentani Health Center jayapura regency in adolescent patients is DHP (dihydroartemisinin-piperaquine) with a percentage of 100%.

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