

Malaria Morbidity in Pregnant Women in Cameroon

Less than half of pregnant women receive Intermittent Preventive Treatment!

Data Brief



Summary

The high morbidity of malaria among pregnant women - around 203 cases per 1,000 inhabitants in Cameroon - is a public health problem in that it is associated with risk factors for both maternal and newborn mortality. Nearly a quarter of pregnant women have been affected by malaria in the last three years. Both programmatic and surveillance data show that 50% of pregnant women receive three doses of Intermittent Preventive Treatment (IPTg), one of the two key strategies for preventing malaria in pregnancy. The training of multi-purpose Community Health Workers (ASCp) to actively seek out those lost to malaria, and targeted awareness-raising on the importance of early antenatal consultations (ANCs), is essential to improve health service coverage. Indeed, the proximity and relationship of trust linking ASCp to the population would make it easier to identify the reasons for dropping out of IPTg on the one hand. On the other hand, the dissemination through them of various awareness-raising messages concerning early prenatal care and compliance with the various doses of IPTg could have a more significant impact on the target population. This community involvement could encourage the prescription of at least three doses of IPTg, thereby reducing maternal morbidity due to malaria, ranging from serious complications to maternal death, and the risk of infant death (low birth weight, prematurity, etc.).



Key Data On The Subject Of Analysis

- In 2011, 12% of women had received at least one dose of IPTg in Cameroon.
- This figure has risen to 46% by 2022.
- Malaria morbidity in pregnancy has risen from around 13% in 2013 to around 26% in 2021 in Cameroon.
- In 2023, it was estimated to be around 21%.
- In 2023, there was approximately 203 cases per 1000 in Cameroon.
- In sub-Saharan Africa, malaria is responsible for 20% of all neonatal deaths.

Percentage of women with a live birth in the two years preceding the survey who, during the pregnancy of the last live birth, received at least 1, 2 or 3 doses of SP/Fansidar.

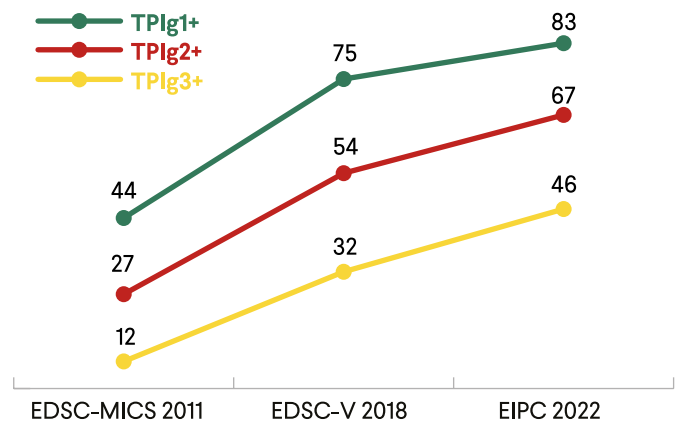


Figure 1: Trends in IPTg coverage in Cameroon

The Burden of Malaria in Pregnancy

Malaria is a public health problem, particularly for pregnant women (1). During pregnancy, a woman's weakened immune system makes her vulnerable to malaria. Hormonal changes can influence exposure to mosquito bites and create a favorable environment for parasite multiplication. Additionally, research indicates that increases in stress hormones can affect the replication rate of Plasmodium, the parasite responsible for malaria (2).

Malaria is associated with severe maternal, fetal and neonatal complications, including intrauterine growth retardation, premature delivery, miscarriage, maternal anemia and perinatal mortality (1). Indeed, in sub-Saharan Africa, malaria is responsible for 20% of all neonatal deaths (3). According to the World Health Organization's (WHO) Global Malaria Report 2020, the prevalence of gestational malaria in Africa was 35%, with an incidence of 40% in Central Africa; furthermore, a significant association was found between low birth weight and malaria in pregnancy (4). After a slight drop from 2011 to 2012 in Cameroon, malaria morbidity among pregnant women is fluctuating. It has risen from around 13% in 2013 (6) to around 26% in 2021 (7), while

in 2023 it will be around 21% (8). To effectively prevent malaria and its complications, the WHO recommends taking IPTg during pregnancy.

NATIONAL STRATEGY OR EXISTING INTERVENTIONS

In Cameroon, the strategy for preventing malaria in pregnant women is based on two main approaches: IPTg and the use of Long-Acting Impregnated Mosquito Nets (LLINs). Regarding IPTg, the National Malaria Control Program (PNLP) recommends the administration of at least three doses of Sulfadoxine-Pyrimethamine (SP) to pregnant women during prenatal consultations (CPN) from the 13^{ème} week of pregnancy. LLINs are distributed free of charge at prenatal consultations (CPN). Although these preventive measures are implemented by the Ministry of Public Health (MINSANTE), the targets set are not always met. For example, according to routine data, between January and December 2023, 51% of pregnant women received at least 3 doses of IPTg, compared with the expected target of 65%, while the distribution of LLINs to pregnant women had an approximate completion rate of 87% (8). Given the good performance of LLIN coverage (Table 1), persistent malaria morbidity among pregnant women could probably be attributed to low coverage with the third dose of IPTg.

Table 1 Coverage of malaria prevention and management interventions in Cameroon, NMCP 2023 data summary (9)

Region	IPT in pregnant women (3 doses)	Distribution of LLINs to pregnant women	IPT in vaccinated infants (3 doses)	LLINs distributed to vaccinated infants	Parasitological diagnosis (RDT or GE) in health facilities	Treatment 1 ^{ère} intention simple malaria in health facilities	Treatment 1 ^{ère} severe malaria	Free malaria treatment in health facilities	Parasitological diagnosis (TDR or GE) in the community	Community treatment of uncomplicated malaria
Adamaoua	39.3%	94.9%	27.9%	131.5%	95.1%	81.8%	36.2%	37.6%	89.1%	95.6%
Center	42.5%	71.2%	12.9%	31.4%	94.1%	80.8%	57.0%	9.9%	92.8%	89.6%
East	51.4%	76.1%	44.6%	65.9%	96.5%	87.1%	32.7%	33.1%	96.3%	93.0%
Far North	53.8%	89.9%		49.8%	98.5%	93.1%	66.4%	62.2%	93.0%	96.9%
Coast	47.3%	87.2%	46.5%	54.8%	96.1%	83.0%	61.3%	12.1%	85.0%	81.7%
North	61.1%	93.0%		25.5%	98.6%	94.3%	61.8%	48.5%	93.1%	98.1%
Northwest	61.4%	100.1%	21.5%	79.8%	97.3%	92.7%	41.3%	26.7%	84.1%	90.3%
West	52.5%	90.9%	12.3%	32.5%	98.4%	89.2%	50.1%	35.8%	95.8%	96.2%
South	52.2%	94.7%	28.5%	62.2%	97.7%	91.1%	45.2%	46.4%	96.5%	97.5%
Southwest	59.5%	97.2%	42.7%	100.3%	97.3%	91.6%	60.3%	29.4%	94.4%	97.1%
Cameroon	51.3%	87.4%	21.7%	52.5%	96.8%	87.3%	55.2%	35.3%	92.4%	94.9%
Target covered	379 919	646 662	141 623	411 029	3 890 787	1 177 784	565 302	363 908	766 392	572 912
Target	739 878	739 878	653 799	783 124	4 020 697	1 349 393	1 024 353	1 031 845	829 813	604 008



According to the Cameroon Malaria Indicator Survey (EIPC) 2022, only 46% of pregnant women have received three or more doses of IPTg. As a result, coverage with the third dose of IPTg remains below target, even though the percentage of women having received at least three doses has risen from 12% in 2011 to 32% in 2018, then to 46% in 2022. It is also important to highlight a significant drop in the percentage between each dose, starting at 83% for the first dose and declining to just 46% for the third. What's more, there has been a loss of IPTg coverage, as shown in Table 2. In the same way, multiparity seems to be accompanied by a drop in IPTg coverage (10).

Table 2: TPIg use in Cameroon, EIPC 2022 (10)

Socio-economic characteristics	% who received 1 or more doses of SP/Fansidar	% who received 2 or more doses of SP/Fansidar	% who received 3 or more doses of SP/Fansidar
Birth rank			
1	83.6	69.6	49.7
2-3	81.9	65.4	43.3
4-5	*	*	*
Residence			
Yaoundé/Douala	89.9	72.3	50.3
Other urban	84.6	69.3	44.9
Urban set	86.6	70.4	46.9
Rural	79.0	64.3	44.9
Cameroon	82.5	67.1	45.8

Why Does This Problem Persist?

Despite the actions already undertaken by the government and development partners, there are still underlying causes that sustain malaria morbidity among pregnant women. These include

- **Poor access to health facilities** (lack of money/ no health training/health professional nearby) explains this phenomenon in 63% of cases (8);
- **Stock-outs of SP in health facilities**, which generally lead to SP being prescribed by providers. In addition, the absence of a counterpart from the State for the purchase of medicines contributes to this stock shortage (9). By way of illustration, in 2023, the number of months of SP stock varied from 2.2 to 3.3 months (PNLP,2023).
- **The low capacity of multi-purpose Community Health Workers (ASCp) to provide PH in the community (9).**

New Strategies To Consider

In view of the various factors indexed in the low coverage of IPTg, actions can be taken with medium and long-term effect on the community approach. Indeed, the community factor can be modifiable, requiring relatively inexpensive logistics and resources.

- **Option 1:** Ensure the permanent and continuous availability of SP at the various ANC sites to reduce the occurrence of SP stock-outs.
- **Option 2:** Reinforce the implementation of Social and Behavioral Change Communication with pregnant women through ASCp. The aim is to sensitize and mobilize pregnant women to attend health facilities early and receive IPT1 as early as 13^{ème} weeks of pregnancy. Early initiation of ANC will increase the chances of pregnant women receiving at least the third dose of IPT during their pregnancy. Capacity-building of ASCp in terms of Behavior Change Communication will be necessary to reduce wastage observed after the first dose.
- **Option 3:** Actively seek out those lost to follow-up and intensify implementation of the advanced strategy. Keeping a register of women seen at ANC with the dates of their next appointments (RDV) will enable the ASCp to contribute to the follow-up of women lost to follow-up. In addition,

the planning of home visits by the head of the leading health center in the health area could make it possible to catch up on missed doses of IPTg.

Recommendations

It is strongly recommend that MINSANTE take the following actions to enhance malaria prevention and treatment efforts:

- 1. Ensure state commitment to counterpart funding:** Secure effective funding from the State for the acquisition of the recommended drug for IPT (sulfadoxine-pyrimethamine), demonstrating a strong national commitment to tackling malaria.
- 2. Advocate for financial partner support:** Intensify lobbying efforts with financial partners to facilitate the procurement of sulfadoxine-pyrimethamine (SP) and ensure its free distribution, removing financial barriers to access.
- 3. Strengthening community-based interventions:** Reinforce the implementation of community directives by integrating Community IPT into existing health services, ensuring broader reach and sustainability of malaria prevention efforts.

**LET'S STEP UP THE COMMUNITY
APPROACH TO MALARIA-FREE
PREGNANCIES!**



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