World Health Organization
South Sudan

# MALARIA PERSISTENCE IN SOUTH SUDAN: Ups and Down

*World Malaria Day – 2026*

*"Driven to End Malaria: Now We Can. Now We Must"*

April 2026

Knowledge Management Series for Health

**348/1000**
Malaria incidence rate

**22%**
IPTp Rate

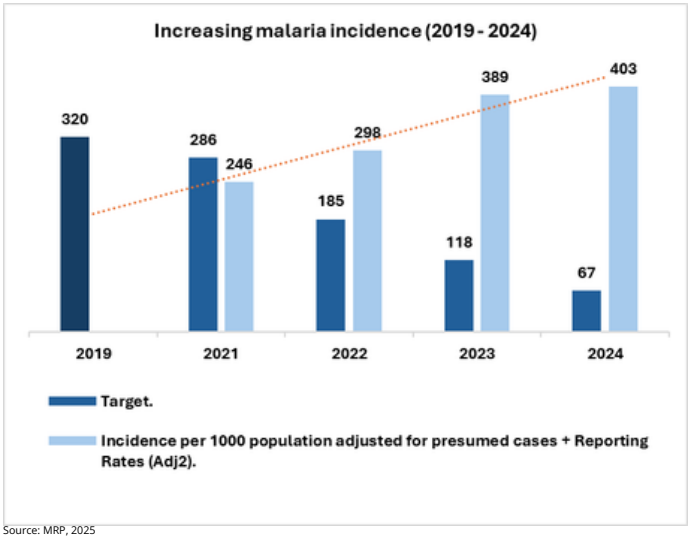
**62%**
ITN Usage

## BACKGROUND INFORMATION

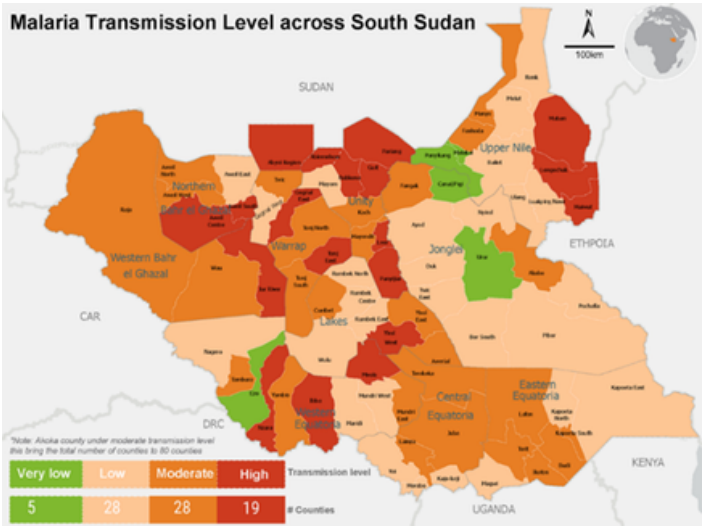
South Sudan remains a high malaria burden country within the High Burden to High Impact (HBHI) countries, with malaria continuing to be the leading cause of morbidity and mortality despite expanded interventions. The disease accounts for a significant share of outpatient visits and inpatient deaths, with transmission characterized by seasonal peaks, persistent hotspots, and periodic resurgences.

## MALARIA BURDEN AND TRANSMISSION

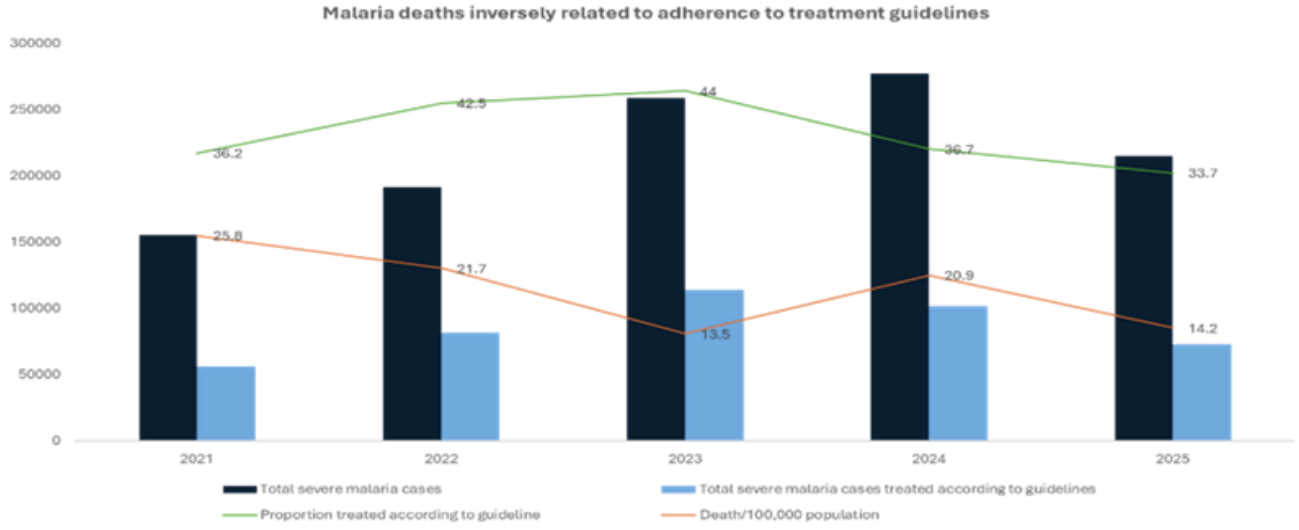
Analysis of confirmed malaria cases in South Sudan shows a persistently high burden, with malaria accounting for over 38% of outpatient visits and ~64% of inpatient deaths in 2025. Transmission remains perennial with seasonal peaks following the rainy season, and malaria incidence has increased from 246 cases per 1,000 population in 2021 to over 400 per 1,000 in 2024, with deaths closely mirroring case trends. Although overall case numbers remain high, incidence mapping reveals localized hotspots, underscoring geographic variation in transmission risk and the need for targeted interventions.




Source: MRP, 2025




Source: Malaria Intervention Tailoring and Prioritization Report (2025)



## Drivers of malaria transmission

### Climate variability

Recurrent flooding and changing rainfall patterns over recent years have:

- Expanded mosquito breeding sites
- Disrupted health services
- Increased population exposure

These conditions contribute to seasonal surges and prolonged transmission periods

### Population movement and emergencies

Conflict and displacement continue to play a major role in shaping malaria risk:

- Populations often move to high-risk areas
- Preventive tools such as nets are left behind
- Access to health services becomes limited

This increases vulnerability and intervention delivery

### Biological threats

Emerging threats such as:

- Insecticide resistance
- Drug resistance
- HRP2/3 gene deletions
- Invasive mosquito species

Pose significant risks to the effectiveness of current malaria control strategies.

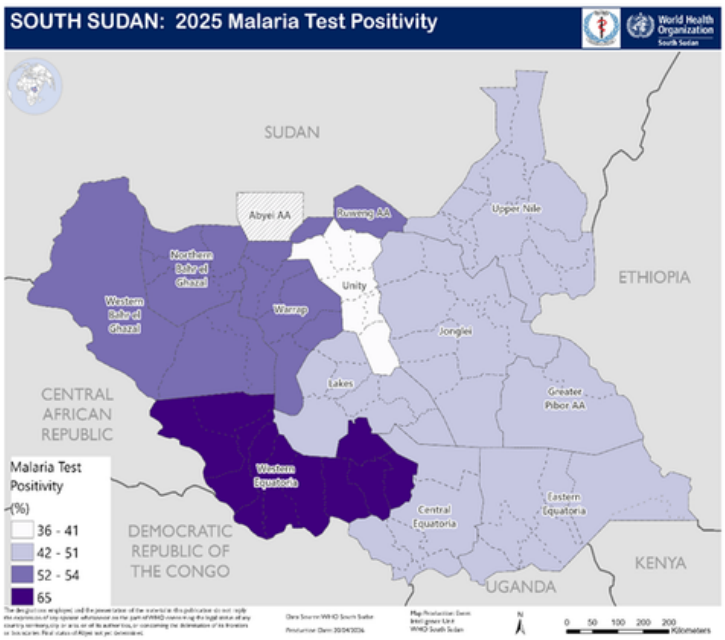
### Health system determinants of transmission

Facility readiness is one of the greatest drivers. HeRAMS report (>600 assessed facilities) shows:

- Only 58–78% of facilities were operational
- 79.5% of facilities reported physical access barriers.
- Infrastructure is compromised, with only 40–55% of facilities intact, while just
- 44% of equipment is fully functional.
- Referral capacity is inconsistent, falling as low as 49% in some states.

## Malaria testing

While malaria testing has improved, with parasitological testing of suspected cases steadily increasing between 2022 and 2025, as reported in the Malaria Program Review (MPR) 2025, adherence to national treatment guidelines has declined. Despite recommendations to treat all confirmed cases with ACTs, treatment guideline adherence dropped from 61% in 2017 to 44.9% in 2023. This gap increases the risk of inadequate treatment, continued transmission, and the potential emergence of drug resistance.




### Malaria test positivity

Malaria test positivity in 2025 shows marked variation across states, highlighting uneven transmission and testing coverage.

High-positivity (risk) states: Upper Nile, Ruweng Administrative Area, and Abyei Administrative Area, indicate areas of ongoing transmission.
States such as Eastern Equatoria, Greater Pibor, and Western Bahr el Ghazal reflect sustained transmission with moderate positivity levels, while lower-positivity states: Warrap, Lakes, and Western Equatoria, may indicate relatively better control or broader testing coverage, depending on testing volume.

Overall, the distribution identifies priority risk states requiring targeted scale-up of testing and control interventions, alongside strengthened surveillance in lower-positivity areas.

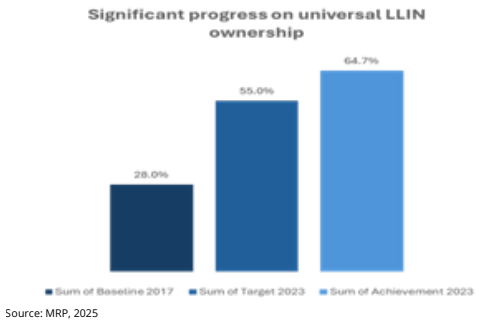
# INTERVENTIONS AND AVAILABILITY OF COMMODITIES

**Malaria vaccine roll-out: Improving continuity**

South Sudan introduced malaria vaccine in 2024 in 6 states with the highest burden. The roll-out was scaled up in 2025.

| | 2024 | 2025 |
|---|---|---|
| MV1–MV2: | 55% | → 37% |
| MV2–MV3: | 58% | → 26% |
| MV3–MV4: | 80% | → 63% |

However, gaps still exist that requires strengthening community acceptance and enhancing the capacity of health care workers to improve coverage.



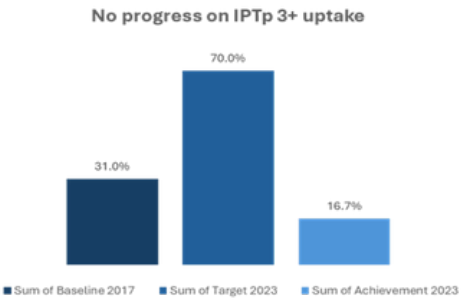

Source: MRP, 2025

**Long-lasting insecticide net distribution**

South Sudan has made significant progress in distributing long-lasting insecticide-treated nets (LLINs), with campaigns conducted every 2–3 years. Survey data show that net ownership has increased substantially, from 28% in 2017 to 55% in 2023. However, utilization remains a major challenge, particularly among vulnerable groups such as pregnant women and children under five. Many populations with access to nets do not use them consistently, leaving a large proportion unprotected and contributing to continued malaria transmission.

**Malaria in pregnancy: IPTp Uptake**

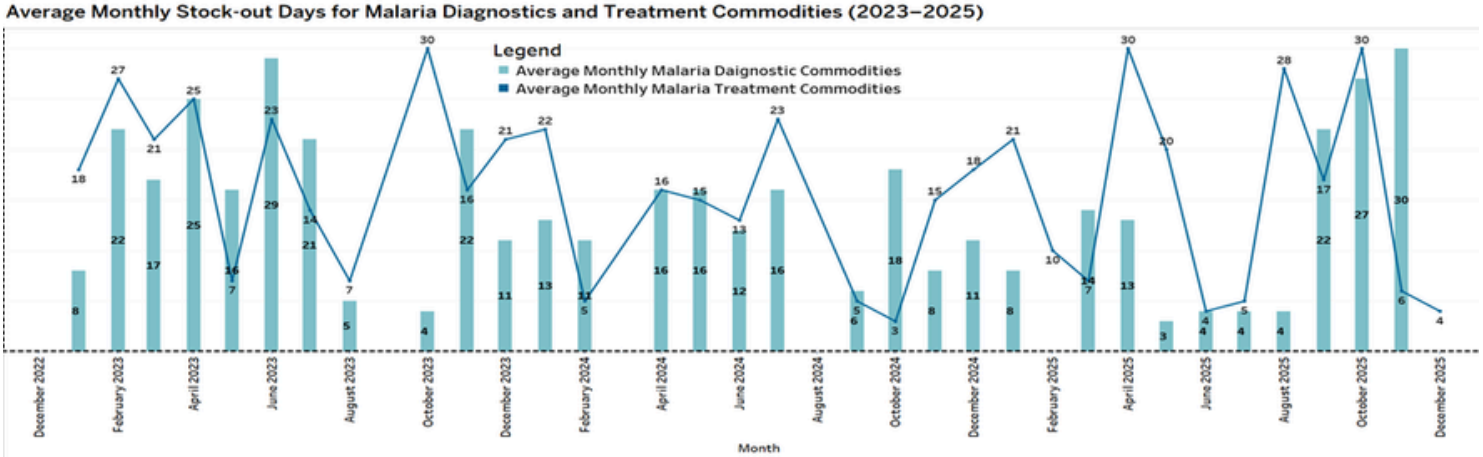
Malaria disproportionately affects vulnerable groups, particularly pregnant women and children under five. Despite WHO recommendations for at least three doses of IPTp during pregnancy, uptake has declined from 31% in 2017 to 16.7% in 2023. This indicates that pregnant women are not adequately protected. Contributing factors include declining ANC attendance, inadequate health worker support tools, limited client awareness, incomplete reporting, and poor adherence to IPTp administration guidelines, reflected in a ~70% gap between ANC1 and IPTp1 and over 30% drop-off between the first and third IPTp doses.




Source: MRP, 2025

**Commodity availability**

Monthly trends from 2023 to 2025 show highly irregular stockout patterns across both diagnostic and treatment commodities, with no consistent seasonal trend. While treatment stockouts remain persistently elevated, diagnostic stockouts exhibit extreme volatility, with sharp spikes observed in 2025. These patterns suggest systemic supply chain weaknesses characterized by both chronic supply pressure and acute disruptions, likely affecting malaria testing capacity and case management."



# ANALYSIS: WHY BURDEN IS NOT REDUCING

**Access**

Access to malaria services shows progress but remains constrained by system inefficiencies. Frequent stockouts highlight weak supply chain reliability. Despite expected universal use of mRDTs, many cases are still clinically diagnosed, increasing the risk of misdiagnosis and weakening surveillance. ITN ownership has improved, though impact on burden remains limited. The introduction of the malaria vaccine, with scale-up in 2025, shows promising improvements in continuity of care. However, remaining dropout levels indicate ongoing gaps in community acceptance and health worker capacity that need to be addressed to maximize coverage.

**Quality of care**

Quality of care is affected by inconsistent adherence to guidelines and weak system support. Although mRDT use has increased, continued clinical diagnosis reflects suboptimal adherence to testing protocols, leading to inappropriate treatment and potential drug resistance. Limited data on antimalarial resistance and HRP2/3 gene deletions further constrains the ability to respond to emerging threats. Referral systems are also weak, with capacity as low as 49% in some states, limiting timely management of severe malaria cases and contributing to avoidable complications.

**Demand**

Demand for malaria interventions remains low despite improved access. ITN ownership has increased (up to 62%), yet usage is declining, particularly among vulnerable groups. IPTp uptake has also dropped significantly from 31% in 2017 to 16.7% in 2023, reflecting challenges such as late ANC attendance and high dropout rates. These trends point to persistent community awareness gaps, particularly around the importance of consistent ITN use and IPTp, indicating that behavior change efforts have not been sufficiently effective.

**Resilience**

Health system resilience remains a major constraint to sustained malaria control. Only 58–78% of facilities are operational, limiting consistent service delivery. Persistent stockouts further reflect weak supply chain systems, disrupting both access and quality of care. In addition, the malaria programme is heavily reliant on external donor funding, with persisting funding gaps, raising concerns about long-term sustainability and the ability to maintain interventions without continued external support.

**OUR FUTURE. MALARIA FREE.**
**NOW WE CAN. NOW WE MUST.**

**ZERO MALARIA STARTS WITH ME**

# CALLS TO ACTION

**Access**

- Strengthen follow-up systems to reduce vaccine dropout and ensure children complete the three-dose malaria vaccine schedule.
- Prioritize high-volume but high-dropout states
- Expand outreach and mobile sessions in remote and flood-prone areas, including health facilities located within one kilometer of inundation zones.
- Invest in facility readiness, especially infrastructural access and service availability

**Quality**

- Improve adherence to malaria case management and IPTp protocols through integration with antenatal and child health services.
- Address operational gaps by prioritizing facilities with frequent stockouts and low treatment rates.
- Support frontline health workers through regular supervision, on-site mentorship, and timely payment of incentives.

**Demand**

- Increase community-level demand through consistent and targeted malaria messaging.
- Focus on counties with low care-seeking, low ITN use, and high vaccine dropout.
- Strengthen interpersonal communication strategies and link them to service delivery.

**Resilience**

- Mobilize resources to close gaps for malaria commodities
- Preposition supplies in high-burden, flood-prone counties with known access challenges.
- Improve real-time surveillance of vaccine coverage, commodity availability, and treatment uptake using DHIS2

**PROTECT LIVES NOW.**
**NOW WE CAN.**
**NOW WE MUST.**

**ZERO MALARIA STARTS WITH ME**


Data Sources and references
· South Sudan DHIS 2
· 2024-2025 Annual health sector performance report
· MPR (2025)
· MSP (2026)



Authors: Dr. Apal Toby (NMCP), Atemthi Dau (NMCP), Dr. Humphery Karamagi (WR) Dr. Mutale Senkwe (WHO), Dr. Lasu Mustafa (WHO), Robert Lasu (WHO), Oluwaseun Abiola Egbinola (WHO), Tumisang Malebo Madisa (WHO)



This is part of the South Sudan Knowledge Management Series coordinated by Tumisang Malebo Madisa.
For more access: https://www.afro.who.int/countries/south-sudan/publication/south-sudan-knowledge-management-series-health-2025