



# Single-low dose Primaquine (SLD PQ) in Sinda, Zambia

**Zambia Medical Association**  
**Scientific Conference and AGM**

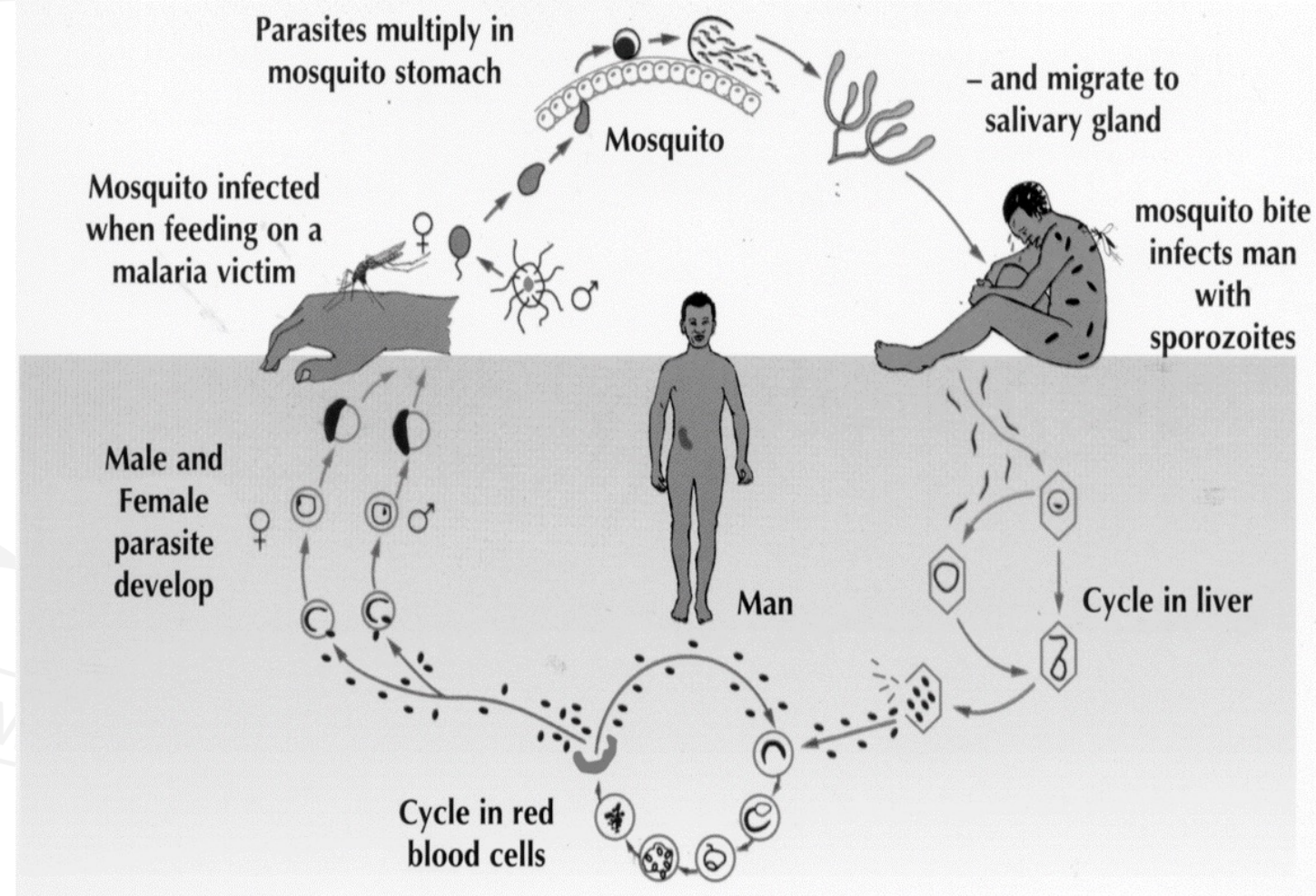
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Avani, Livingstone

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**Deputy Chief of Party**  
**PATH, PAMO Plus Project**

# Plasmodium falciparum life cycle

- Asexual forms of the *Plasmodium sp.* are responsible for causing Malaria symptoms
- Sexual forms (male and female gametocytes) are responsible for infecting the mosquito
- Gametocytes do not cause clinical symptoms of malaria, but are essential for human-to-human transmission of malaria



# Single-low dose primaquine (SLD PQ)

- Antimalarial medication, effective against *Plasmodium falciparum* gametocytes
- Primaquine poses a dose dependent risk of causing **acute-hemolytic anemia (AHA)** in people with Glucose-6-phosphate dehydrogenase deficiency (G6PD)
- **G6PD deficiency** is an X-linked recessive disease due to defective G6PD enzyme activity, which makes red blood cells susceptible to oxidative damage leading to AHA
- WHO (2015) recommended SLD PQ in low malaria transmission areas, as a single dose of 0.25 mg/kg primaquine with ACT, **without** need for G6PD testing





# Single-low dose primaquine (SLD PQ)

- Renewed global interest in SLDPQ as an intervention that could curb the transmission of artemisinin resistant parasites – a threat of global concern.
- SLD PQ recommended in Zambian health facility catchment areas with malaria case incidence of less than 125 cases per 1,000 population
- SLD PQ included in the upcoming updated versions of the national malaria treatment guidelines (6<sup>th</sup> edition) as an addition to standard ACTs

## SLDPQ in the 2022 to 2026 NMESP, Page 31

The intervention packages/activities planned for each level of transmission are shown in **table 5**.

**Table 5: Intervention Package/Activities**

Epidemiologic Level (Stratum)	Malaria Indicator	Intervention Package/Activities
0	0 cases, No local transmission	<b>No malaria - Maintenance of malaria-free zone</b> <ul style="list-style-type: none"> <li>Ensure uninterrupted availability and rational use of malaria commodities in health facilities and communities</li> <li>Maintain quality case management at facility and community levels – Malaria case investigation</li> <li>Reactive case detection</li> <li><b>Primaquine administration</b></li> <li>ITN continuous distribution</li> <li>ITN mass campaigns, except in Lusaka city</li> <li>Responsive IRS in eligible HFCAs</li> <li>LSM in select urban sites</li> <li>Entomologic surveillance</li> <li>Enhanced epidemiologic surveillance</li> <li>Social and Behaviour Change</li> </ul>
1	1–49 cases/1,000 population, <1% parasite prevalence	<b>Very low malaria transmission</b> <ul style="list-style-type: none"> <li>Ensure uninterrupted availability and rational use of malaria commodities in health facilities and communities</li> <li>Maintain quality case management at health facility and community levels</li> <li>Maintain and scale up community case management – Malaria case investigation</li> <li>Reactive case detection</li> <li>Targeted Mass Drug Administration</li> <li><b>Primaquine administration</b></li> <li>ITN continuous distribution</li> <li>ITN mass campaigns, except in Lusaka city</li> <li>Responsive IRS in eligible HFCAs</li> </ul>

# Exclusion criteria for SLDPQ

- The following have been excluded from the Sinda SLDPQ Pilot

- Pregnant women
- Infants under 6 months
- Mothers of lactating infants under 6 months
- Patients with severe anaemia Hb < 7g/dL
- Patients from outside the catchment area implementing the SLDPQ pilot

## SLDPQ in the 2022 to 2026 NMESP, Page 31

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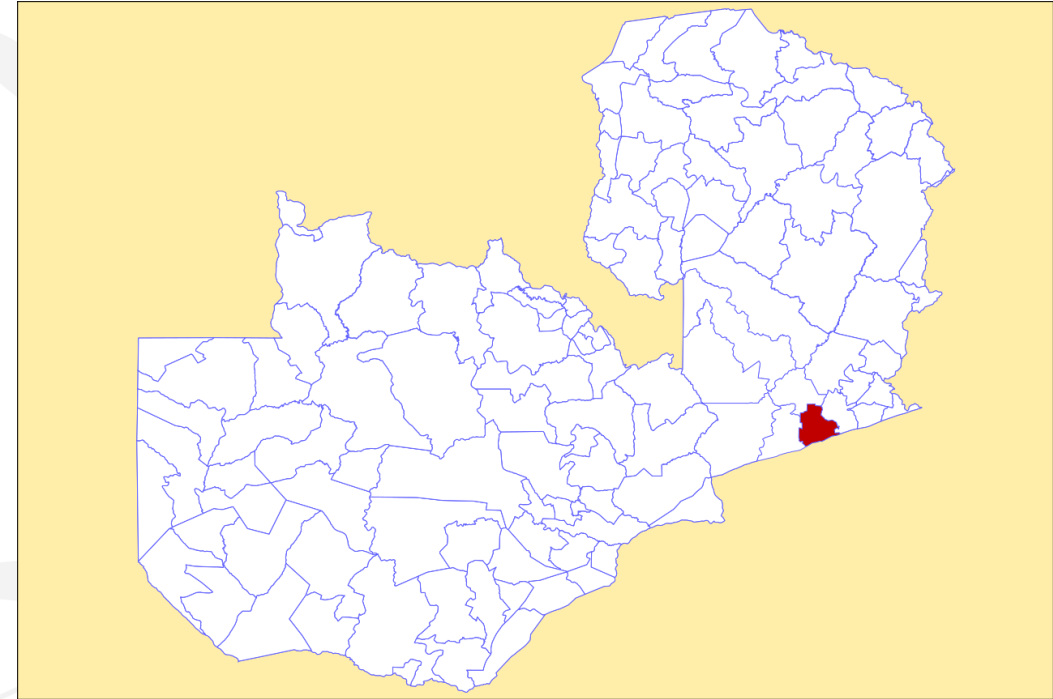
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# The SLD PQ pilot in Sinda, Zambia



- Implemented by the Zambian Ministry of Health, National Malaria Elimination Program, supported by the U.S. President's Malaria Initiative Project (PMI) PAMO Plus Project
- Objectives
  - Pilot SLD PQ with active pharmacovigilance
  - Advice for nationwide rollout of SLD PQ in Zambia
- Geographical area
  - Zambia population: 20,966,971, 100% at risk of Malaria
  - Sinda District Population: 226,780.
  - 13 of 33 health facilities selected for the SLD PQ pilot (Pop: 122,658)



# The SLD PQ pilot in Sinda, Zambia



- Pharmacovigilance for hemolytic anaemia when patients receive standard anti-malarial therapy + SLDPQ
  - Day 0 – Urine scale on Hillmen Chart + Hb on Hemocue
  - Day 7 – Urine scale on Hillmen Chart + Hb on Hemocue
- Preliminary findings (patient enrolment since 8 April 2024)
  - 250+ patients documented
  - 1 adverse event recorded, not hemolytic anaemia
- Timelines
  - Mid year pilot evaluation – November 2024
  - End of year evaluation – May 2025
- Challenges
  - Patient follow up on Day 7 (esp. patients outside catchment area)





# Anticipated steps after the SLDPQ Pilot



- Evaluation of pharmacovigilance data
- Scale up implementation of SLDPQ to all eligible Health Facility Catchment Areas (HFCAs) in Zambia with an incidence of less than 125 malaria cases per 1,000 population.
- Transition from active to passive pharmacovigilance
- SLDPQ to be administered by Community Health Workers
- Evaluation of the impact of SLDPQ on malaria transmission and elimination in low burden areas







**Thank you for your  
attention**

