



AMDR ACTION

Immediate country action needed to avert health security and economic risk

Protecting malaria treatment now safeguards health, economies, and interconnected systems. Policy Brief for National Malaria Programs, partners, and the border health community.

Focus: Artemisinin Partial Resistance (ART-R)

Once the miracle cure for malaria, Artemisinin-based combination therapies (ACTs) have saved millions of African lives over two decades but are now losing their effectiveness as artemisinin partial resistance (ART-R) spreads across sub-Saharan Africa, driven by the interaction of treatment pressure, transmission dynamics, and population movement across borders, highlighting a broader health security and systems challenge. The implications include increasing mortality risk, and substantial economic costs across countries. **Countries and partners must take immediate, coordinated decisions and actions to protect the cure and prevent a regional health-security crisis.**

- **The emerging threat and confirmed regional spread:** Partial Artemisinin resistance (ART-R) has been reported in three major clusters in East Africa (Rwanda, Uganda, Tanzania, and high risk of spread into Kenya, eastern DRC and Burundi), Southern Africa (Angola, Namibia, Zambia, with high risk of spread into Botswana and Zimbabwe), and the Horn of Africa (Eritrea, Ethiopia, and high risk for spread into Sudan – with evidence of multiple independent emergence, not a single source of spread, increasing the complexity of containment).
- **What drives the resistance:** Africa relies predominantly on a single ACT: Artemether-Lumefantrine (ALU). This continued reliance on one ACT across multiple transmission settings creates uniform drug pressure; an ideal environment for resistance to expand, further amplified by population movement, uneven access to quality diagnosis and treatment, and transmission dynamics influenced by vector ecology and health system constraints.
- **What happens if we delay** ART-R historically precedes ACT treatment failure and widespread antimalarial drug resistance (AMDR). Without intervention, the region faces: rising treatment failure rates and associated economic costs, increased malaria cases and mortality, escalating healthcare expenditures, and communities losing trust in curative health services. ART-R is currently limited to specific subnational regions and needs to be recognized as a major health security threat and addressed early to prevent further spread of resistant parasites and preserve treatment efficacy. We must 'Protect the Cure'. Therefore, this is not solely a malaria issue; it is a regional health security threat with implications for economic productivity, cross-border stability, and long-term health system resilience.

- **Economic imperative for early action:** Modeling from East Africa demonstrates that early actions to contain ART-R are significantly more cost-effective than delayed crisis response. Failure to act could result in USD 0.5–1.3 billion in avoidable costs over 13 years. Early investment is therefore cost-saving, risk-reducing, and critical to protecting prior malaria gains.

Facing this situation countries and partners must take immediate, practical actions over the next 6–12 months:

1. National malaria programs and partners to treat ART-R as an immediate threat to treatment effectiveness and health security in affected areas, **requiring coordinated action across surveillance, policy, and implementation – including linking surveillance data to predefined response triggers.**
2. Countries and partners to implement No-Regret actions, prioritizing:
 - Mobilizing financing for the procurement of appropriate alternative ACTs in ART-R risk areas as a no-regret measure, including, where necessary, switching away from Artemether-Lumefantrine in high-risk geographies, reducing reliance on ALU where resistance risk is identified.
 - Mobilize financing for rapid subnational roll out of ACT change/diversification including funds for training supervision and guidelines updates to ensure timely and effective implementation.

High-risk areas have a narrow opportunity to act before treatment failure becomes widespread. Early coordinated action will protect the cure, safeguard economic stability, and preserve two decades of malaria gains. Delays will be far more costly – in lives, budgets, and political credibility, particularly in interconnected regions where resistance can spread rapidly. The decision now is whether to act while containment is still feasible—or to respond later, when options are fewer and costs are significantly higher.

For further details see AMDR ACTIONS: 7 No-regrets actions to address Drug-Resistant Malaria in Africa (attached below)

For further information: **Prof. Roland Gosling; roly.gosling1@lshtm.ac.uk**