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POLICY BRIEF

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Thirty-Five Years of Malaria Control in Kilifi: Protecting Gains and Preventing Resurgence

Priority recommendations

- **Sustain the essential malaria control package:** The National Malaria control programme and Kilifi County should define and cost the core interventions needed to maintain low transmission, including effective vector control, reliable diagnosis, prompt treatment, adequate commodity and outbreak preparedness.
- **Review clinical guidelines and strengthen health-worker preparedness:** The Ministry of Health and Kilifi county should review clinical guidelines and training to reflect the changing age profile of children with malaria and the greater relative contribution of cerebral malaria among severe cases.
- **Strengthen routine malaria surveillance and analysis:** Kilifi County and the National Malaria Programme should routinely analyse routinely collected by age, malaria outcome and severe-malaria phenotype to detect changes in disease patterns and guide clinical and programme responses.

Background

Malaria control has delivered measurable impact in Kenya. Long-term surveillance in Kilifi shows a marked reduction in malaria transmission, severe childhood admissions and malaria-related hospital deaths reflecting the benefits of sustained investment in malaria prevention, diagnosis and treatment.

Severe malaria is now less common, however, children admitted with malaria are older, and cerebral malaria accounts for a greater proportion of the remaining severe cases. These changes have important implications for clinical preparedness, surveillance and resource allocation.

As malaria cases decline, changes in disease pattern can become difficult to detect through routine aggregate reporting. At the same time, the declining burden may reduce the perceived need to sustain investment in malaria control, surveillance and long-term data system, potentially undermining the gains achieved.

Kenya's malaria strategy emphasises optimising coverage of interventions, strengthening surveillance and targeting responses according to risk. The Kilifi findings reinforce the need to maintain these investments while strengthening surveillance to detect changes in the age and clinical profile of severe disease, and stable support for the longitudinal platforms that identify such changes.

The findings describe are specific to Kilifi and should not be assumed to represent all of Kenya, they demonstrate how malaria epidemiology can change as transmission declines. Other counties should use routine data to assess whether similar shifts are occurring in their populations and adapt malaria control and clinical strategies accordingly.

Key findings

1. Community Transmission Has Fallen Dramatically

- Malaria prevalence declined from 35% in the 1990s to 2% in 2020–2024.
- Children today experience substantially lower parasite exposure than previous generations.

2. Severe Childhood Malaria Has Become Rare

- Malaria admissions fell from a peak of 25.5 per 1,000 children annually in 1999 to 0.65 per 1,000 in 2020–2024. (Figure 1)
- The burden on hospitals has reduced substantially.

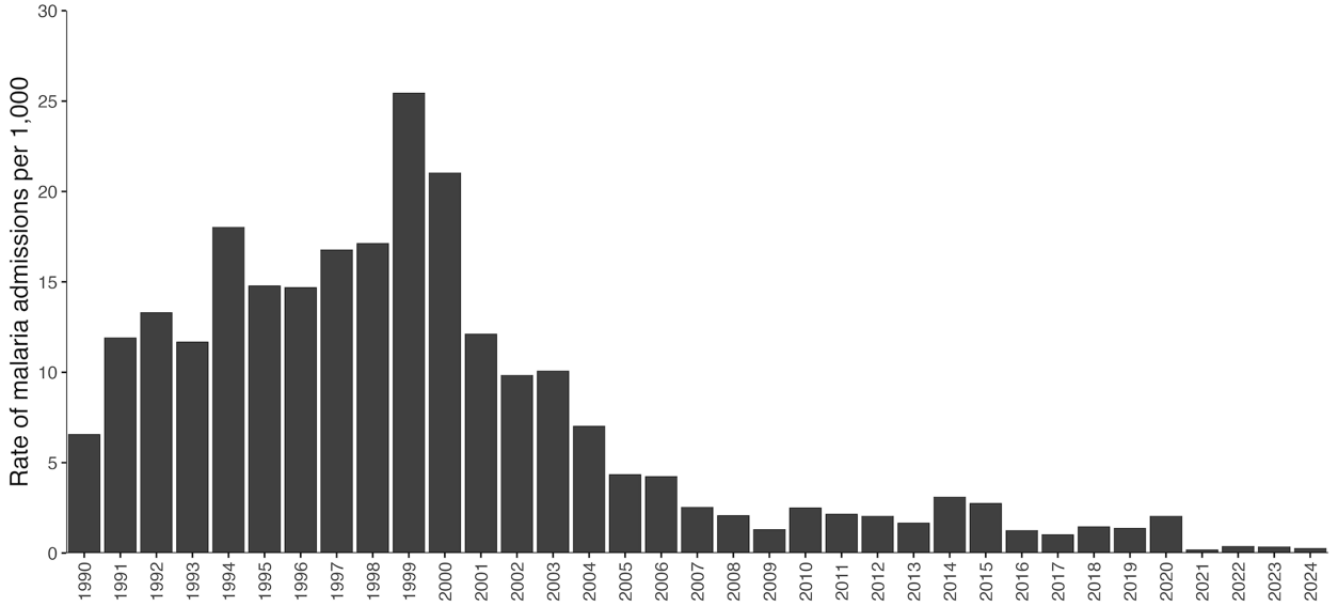


Figure 1: Changing rate of malaria admissions between 1990 and 2024 among children aged 1 month -14 years at Kilifi County Hospital

3. Child Deaths Have Been Prevented

- Malaria-specific mortality among hospitalised children declined from 0.43 to 0.03 deaths per 1,000 children annually.
- Thousands of severe illnesses and deaths have likely been averted through sustained malaria control.

4. Disease Presentation Is Changing

- Children admitted with malaria are older than in previous decades. (Figure 2)
- Cerebral malaria now represents a larger proportion of severe cases than severe anaemia.
- Clinical services must adapt to changing disease patterns in low-transmission settings.

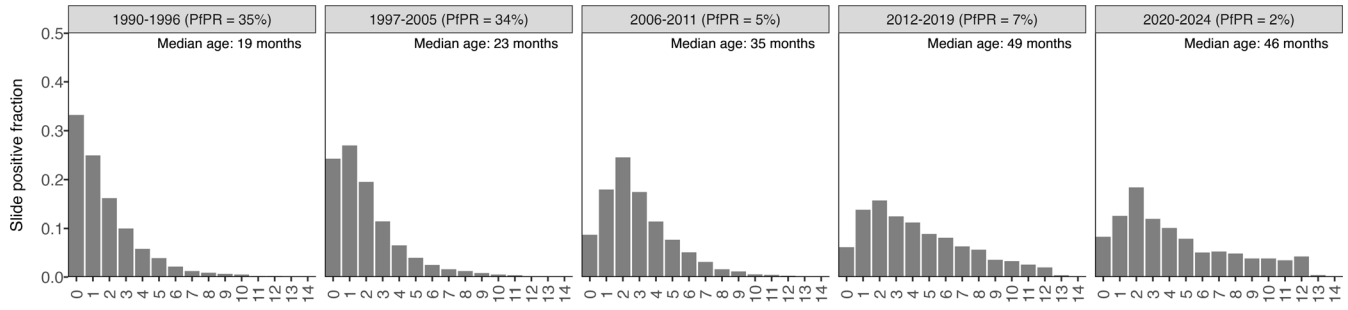


Figure 2: Proportion of admissions by age with malaria positive blood slide at Kilifi County Hospital across five periods of changing community malaria transmission, 1990-2024

Policy implications

- The substantial decline in malaria burden supports continued investment in malaria control. However, this study cannot determine the contribution of individual interventions to this decline.
- Lower burden increases the value of sensitive surveillance because changes in age and clinical presentation may be missed by aggregate case counts.
- Adapt clinical preparedness to reflect the patients and presentations now seen in Kilifi.
- Longitudinal surveillance should be protected and have defined responsibilities, outputs and sustainable financing if it is expected to support public health decisions.
- National policy changes require comparison with evidence from other transmission settings.

Conclusion

Drawing on 35 years of hospital surveillance, this study documents major declines in malaria transmission, childhood parasite exposure, hospital admissions and malaria-related death in Kilifi. As malaria burden has fallen, the profile of disease has also changed, with older children increasingly affected and cerebral malaria accounting for a greater proportion of severe presentations. Kilifi demonstrates the gains that can be achieved through sustained malaria control, while highlighting the need to adapt programmes as burden falls. Protecting these gains will requires continued intervention coverage, clinically responsive services and surveillance systems capable of detecting changing patterns and early signs of resurgence.

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Decline to near-zero malaria hospitalisation over 35 years on the Kenyan Coast