

Eave tubes to control malaria

This note last updated: March 2021

Current status: Revisit after 2021

Eaves are the gaps between the roof and the walls of a house.¹ Eave tubes are tubes with insecticide-treated netting that are inserted into eaves. The insecticide is designed to kill mosquitoes when they try to enter the house.²

A 2019 [Cochrane review](#) of housing interventions to prevent malaria transmission ([Furnival-Adams et al. 2021](#)) indicated that while one initial trial of eave tubes demonstrated reduced mosquito density, additional research on the impact of eave tubes on clinical malaria is needed.³ We conducted a light review and identified one ongoing randomized trial examining the impact of eave tubes on cases of clinical malaria, scheduled to be completed in November 2020.⁴

We will revisit this intervention when evidence on its effect on clinical malaria becomes available.

¹ "Eaves, which constitute the gap between the roof and the walls of houses, have long been incriminated as the primary entry point into houses for malaria vectors..." [Knols et al. 2016](#), p. 2

² "...eave tubes, insecticide-treated netting fitted into tubes inserted into closed eaves..." [Furnival-Adams et al. 2021](#), p. 7

"By installing a physical barrier inside the tube (i.e. netting), mosquitoes could be prevented from entering the house and at the same time be exposed to insecticidal agents that were applied to the netting. In doing so, mosquitoes would not simply be presented with a mosquito-proof house and be diverted to other houses in the vicinity but have a significant chance of becoming exposed to insecticide during any of the 3–4 host-feeding cycles before becoming infectious and contribute to malaria transmission." [Knols et al. 2016](#), p. 4

³ "A study assessing the effect of eave tubes, insecticide-treated netting fitted into tubes inserted into closed eaves, showed a 50% to 70% reduction in the number of mosquitoes recaptured compared to eave tubes with untreated inserts (Sternberg 2016). These data indicate that various housing interventions show promise. Further experimental epidemiological studies will help clarify whether these are true effects, and identify what seems to work best in what circumstances." [Furnival-Adams et al. 2021](#), p. 7

⁴ "This project aims to conduct a large randomized controlled trial, complemented by a series of smaller implementation trials, to demonstrate the epidemiological impact of screening + eave tubes on malaria transmission, and identify appropriate routes to implementation and commercialization across different socio-economic sectors in Africa....Date: 2015 Nov - 2020 Nov" [MESA Alliance. "Transition of Eave Tubes from Concept to Implementation," 2019](#)