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Webinar

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Houses improving as a supplemental intervention tools for reducing indoor vector densities and malaria prevalence in Eman, center Cameroon

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Improvement of Typical rural houses can effectively reduce indoor vector densities and consequently malaria transmission. We assessed this supplemental control effects in a MILDA low coverage area of center Cameroon.

Fields Practices:

16 houses were firstly selected based on their indoor density of resting malaria vectors. Half of them randomly had chosen for eaves screens (experimental) with fibreglass coated wire mesh and half left unscreened (control). Entomological baseline was collected monthly in both groups. Outdoors and indoors adults mosquitoes were sampling for entomological data collection in each houses using Human Landing Catch (HLC). Malaria prevalence surveys were conducted after mosquitoes sampling in both groups.

Conclusion:

A total of 300 mosquitoes were collected over six months period using HLC in 16 houses (mean mosquitoes=18.75). Among *An. funestus*, 63.9% were unfed, 32.9% blood fed, 0.39% gravid and 1.56% half gravid females. 17.7% of *An. gambiae* were unfed and 82.2% blood fed. More indoor adult mosquitoes were collected in the control (n=74) than experimental houses (n=56). Parasitological surveys results to relatively low malaria parasite

prevalence rates in screened houses compared to the control houses. Overall, malaria prevalence was 57.8% (95% CI: 0.32-0.74) n=90, with baseline prevalence rate of 58.5% (95% CI: 0.67-1.13), n=65 and 2nd follow-up survey prevalence of 42.0% (95% CI: 0.52-0.76) n=66. At all the two parasitological follow-up survey points, house screening significantly reduced the malaria prevalence by 43% (p<0.001). Housing improvement has potential to reduce indoor vector densities and malaria prevalence.

Biography

POUMACHU is an Assistant Researcher of Parasitology and Medical entomology at the Malaria Research Unit at OCEAC in Yaounde working on: Generating approach for sexing mosquitoes OCEAC, Yaounde. He received his PhD in mosquito's genetics at the University of Dschang (Cameroon) in 2021 in collaboration with the International Atomic Energy Agency (Austria) Insect Pest Control Laboratory, Insect Pest Control Section of the Joint FAO/IAEA Division of Nuclear Techniques in Food and Agriculture in Vienna. He is a current member of Royal Society of Tropical Medicine and Hygiene has been awarded several research projects including the prestigious Royal Society of Tropical Medicine and Hygiene Small Grant Fellowship.

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