

SOP for Evaluation and Collection in West African Style Huts

Purpose: The purpose of this document is to provide instructions for the evaluation of IRS applications in West African style experimental huts, using wild, free flying mosquitoes.

Definitions

IRS Indoor residual spray
SOP Standard operating procedure

Scope

Verandah-trap experimental huts (West African style) provide an effective means of evaluating the efficacy of novel indoor interventions or combinations of intervention against free-flying, wild populations of malaria vectors under controlled field conditions. This SOP provides instructions on the collection of free flying mosquitoes in huts. The study design was adapted from the WHO phase 2 guidelines. This procedure is applied for all treatment applied in experimental huts..

Responsibilities

The Study Director is responsible for ensuring these procedures are followed. The Sleeper Supervisor and Evaluation Supervisor are to ensure that all procedures are correctly followed by all Sleepers under their supervision.

Instructions

1. Equipment

- 1.1. Storing bags (one bag per hut compartment)
- 1.2. Haemolysis tubes for mosquito collection (catching)
- 1.3. Torch (one for each hut)
- 1.4. Watch (one for each hut)
- 1.5. Cotton wool
- 1.6. Sleeping mattress (for each hut)
- 1.7. Bed sheets (for each hut)

Author	Date	Authorised by	Date	Version	Replacement for

SOP for Evaluation and Collection in West African Style Huts

2. Personnel

- 2.1. 6 sleeper volunteers (Assuming a 6 hut study)
- 2.2. 1 sleeper supervisor
- 2.3. 1 evaluation supervisor

3. Recruitment of volunteers for sleeping in the experimental huts

- 3.1. Adult volunteers (Sleepers) will be recruited for the duration of the experimental hut study (in accordance with the study protocol).
- 3.2. Sleepers are to sleep within the hut every night for the duration of the study (if the study protocol includes bed nets, then the Sleepers will sleep under the nets provided).
- 3.3. Each morning, the Sleepers collect mosquitoes from the hut in which they have slept.
- 3.4. Sleepers are to be recruited locally, i.e. from village(s) close to the experimental hut site and will be remunerated for participating in the study.
- 3.5. Only adults of 18 years or older are selected.
- 3.6. Pregnant women are excluded.
- 3.7. All Sleepers are required to sign a consent form (translated into the local language).
- 3.8. Sleepers are to be offered chemoprophylaxis and the risks of malaria explained. Sleepers are monitored each day for signs of fever or possible side effects of the treatments and provided medical attention if necessary.

4. Procedure

4.1. Preparation

- 7:45 pm, Sleepers arrive at the experimental hut site.
- Sleepers Supervisor checks that each hut contains sufficient haemolysis tubes and cotton wool.
- 8:00 pm, Sleepers enter their respective huts

4.2. For each sleeper:

- Raise the separating curtain.

Author	Date	Authorised by	Date	Version	Replacement for

SOP for Evaluation and Collection in West African Style Huts

- Place the storing bags in their specific areas
- Install the mattress, (bed net) and bed sheet
- Place the torch close to the mattress
- Set up the watch alarm for 5:30 am.

4.3. For the sleeper supervisor

- Ensure that all the sleepers have entered their huts.
- Open the window traps.
- Check that the curtain inside each hut is raised.
- 5:00 am, the window traps of each hut are closed by the sleeper supervisor prior to initiating capture of mosquitoes.

4.4. Collection of Mosquitoes

For each sleeper:

- The Sleeper is to collect all mosquitoes inside the hut. Collection may take 2 hours or more, and stops only when all mosquitoes have been collected.
- Switch on the torch
- Begin to collect mosquitoes inside the hut.
- Mosquitoes are to be carefully aspirated into haemolysis tubes. Mosquitoes are introduced separately into each haemolysis tube and secured with cotton wool. The Sleeper must remain in the hut side while doing this operation and avoid stepping on mosquitoes on the floor.
- If a bed net has been used, collect from inside the net first. Check for live mosquitoes on the different parts of the net. Make sure all mosquitoes in the net are collected. Leave the "net bag" inside the net while moving out the net to avoid mixing of mosquitoes.
- Move out of the net by the curtain side.
- Before setting down the curtain, first check to make sure there are no mosquitoes resting on it (if there are collect these mosquitoes).
- Set down the curtain gently.

Author	Date	Authorised by	Date	Version	Replacement for

SOP for Evaluation and Collection in West African Style Huts

- Collect mosquitoes within the hut. Always start at the floor. Check for mosquitoes within the hut at least three times. Leave the “hut bag” in the hut.
- Move to veranda by making a small passage beside the curtain. Do not open it completely to prevent free flying mosquitoes from flying into the hut.
- Collect mosquitoes from the verandah. Always start at the floor. Check for mosquitoes within the verandah at least three times. Leave the “verandah bag” in the hut.

For sleeper supervisor

- Ensure that all sleepers remain in their allocated hut for the duration of the night.
- Ensure all Sleepers are up at the required capture starting time.

For evaluation supervisor

- Ensure that all collections are conducted according to this SOP.
- Once collections are complete, collect all the bags and take them to the lab as quick as possible.

4.5. Processing of mosquitoes

- Sorting Mosquitoes in the field refer to separate SOP for this activity
- Refer to SOP AVECNET EH 002.01 for instructions related to processing mosquitoes after they have been collected and transferred to the laboratory

5. References

- 5.1. Guidelines for laboratory and field testing of Long Lasting Insecticidal mosquito Nets (LLIN). WHO/CDS/WHOPES/GCDPP/2005.11
- 5.2. Guidelines for testing mosquitoes adulticides for indoor residual spraying and treatment of mosquito nets. WHO/CDS/NTD/WHOPES/GCDPP/2006.3

Author	Date	Authorised by	Date	Version	Replacement for