

WHO AFRO II DEMO Project: Evaluating the feasibility and impact of community-based winter (dry season) larviciding on malaria transmission as additional vector control interventions in Southern African countries committed to malaria elimination

INTRODUCTION:

Vector control mainly through the use of long-lasting insecticide-treated nets (LLINs) and indoor residual spraying (IRS) is among the key strategies that have contributed to significant reduction in malaria disease burden in southern African countries. To further reduce low malaria densities achieved by the use of LLINs and IRS to levels that may lead to faster and sustainable elimination of malaria transmission, the two primary interventions will need to be augmented with additional interventions such as larval source management with winter larviciding to reduce

STUDY AREA



emergence of adult mosquitoes.

HYPOTHESIS:

Fortnightly winter larviciding (targeted 4 months per year prior to IRS) with Bacillus thuringiensis israelensis (Bti) in addition to IRS at the start of a rainy season reduces habitat positivity (Anopheles larvae present) and Anopheles adult densities indoors and outdoors by 70% as compared to areas/times when only IRS is implemented

OBJECTIVES:

Major Objective

To provide technical support to 3 southern of African countries, to evaluating the feasibility and impact of community-based winter larviciding using *Bti* as additional vector control intervention in the context of malaria elimination.

Specific objectives Entomological endpoints

Primary objective: To assess whether winter larviciding combined with IRS prior to the rainy season reduces adult vector densities inside and outside houses when compared to areas where only IRS is implemented

Clinical endpoints

Primary objective: To assess whether winter larviciding combined with IRS prior to rainy season provide additional protection against clinical malaria when compared with areas that receive IRS alone

Economic and social science

To assess the incremental costs and benefits of larviciding intervention.

INTERVENTION

Namibia

| Countries | Malaria transmission | Control (non- | Test intervention |
|-----------|----------------------|-----------------|-------------------|
| | settngs | intervention) | added to control |
| Botswana | Low transmission in | Coverage of all | Winter season |

STUDY DESIGN



LARVAL SOURCE MANAGEMENT METHODOLOGY





TEAM

5.

6.

UNÔ

environment

United Nations Environment Programme

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