

Driving household behaviour change for dengue prevention



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Introduction

Dengue is a neglected tropical disease that causes major morbidity and mortality. In 2008, WHO estimated that of the 2.5 billion at risk globally, over 70% lived in the Asia Pacific region.

HLSP is supporting an ADB-funded pilot project in Lao PDR, Cambodia and the Philippines, in collaboration with WHO. The pilot aims to develop and demonstrate the application of effective, sustainable strategies for community-based control of mosquitoes – the dengue vector.

HLSP has led on the design of an innovative monitoring and evaluation framework for the community-based interventions. The framework will assess the extent to which the approach can effectively contribute to dengue prevention at the household level and sustainability of the approach overtime.

A dual approach

One of the main factors contributing to dengue transmission by mosquitoes is that they breed in the water storage jars used by all households. To address this, the primary objective of the project is to mobilise the community to take responsibility for dengue prevention at the household level by preventing mosquitoes from breeding in the household water supply. The two main strategies to achieve this objective are:

- 1. Building community capacity** for source reduction (physical removal/prevention of breeding sites). This includes activities such as community meetings, household checks by school-based 'dengue brigades' and displaying posters to highlight the importance of both source reduction (e.g. water containers) and prevention behaviours (e.g. water jar lids).
- 2. Introducing biological control** in household water containers through the introduction of larval predators (guppy fish), as well as a support structure to maintain the fish population.

The dual approach (community mobilisation and a biological control) aims to reduce vector breeding sites by helping people change their behaviour through community mobilisation. Biological control is added as a line of defence against water jar larvae. This approach to community mobilisation is based on the WHO-COMBI model.

Information and communication strategies are being prepared in consultation with health and non-health staff, including teachers, school children, parents, women's organizations, religious groups and communities, to ensure the pilot interventions are embraced and utilised effectively. This will include training on the identification of mosquito breeding sites and on non-chemical source reduction measures, including the use of guppy fish as well as encouraging positive treatment seeking behaviour.

The M&E framework: linking project interventions to behaviour change

The COMBI approach relies on number of community based interventions to bring about behaviour change that directly affects mosquito populations, thus helping to reduce both the incidence of disease and treatment in the event of illness.

Based on potential drivers of behaviour change (such as the media, influential community leaders, champions, peers, and feelings of social responsibility), the project interventions include:

- Advocacy meetings (promotion and motivation);
- Household visits (motivation, education and compliance);
- Community meetings (motivation);
- Advertising TV and/or radio (education, motivation);
- Mobile education and motivation campaigns;
- Community drama shows (education, motivation); buntings/posters (education and reminder); calendars and households stickers (point of impact promotion);
- Prizes for high achievement (motivational).

It is crucial that the project methodology captures the **link between these interventions and compliant behaviour** (lid placement, guppy presence and removal of dishes or of other breeding sites). By establishing the strength of the causal links between project interventions and the compliant behaviours they elicit, the effectiveness of interventions can be ranked. This will help optimise future rollouts of COMBI both in terms of the scale and scope of individual interventions and in terms of respective budget allocations.

The following tables show how community interventions are measured quantitatively (Table 1), and how the outputs and outcomes of COMBI strategies are monitored (Table 2).

Data collection instruments (quantitative and qualitative) include: monthly reports, activity and monitoring reports from village workers, health centres and project managers, entomological surveys (baseline, 3-monthly and final), KAP surveys (baseline and final), key informant interviews and focus groups.

Table 1. Quantitative assessment of community mobilisation strategies

Activities to influence behaviour change	Performance Indicators	Operational Definitions	Performance Targets	Sources of information
Advocacy meetings	No. of meetings held	N: no. of meetings held; D: no. of meetings planned	90%	Project activity reports
Household visits	No. of household visited	N: no. of households visited; D: no. of households participating	85%	
Community meetings	No. of meetings held	N: no. of meetings held; D: no. of meetings planned	85%	
Advertising TV and or radio	No. of TV or radio spots completed	N: no. of TV/radio spots; D: no. of TV/radio spots planned	100%	
Tuk tuk (small mobile vehicle)	No. of tuk tuk community visits	N: no. of tuk tuk visits; D: no. of meetings planned	85%	
Community drama show	No. of household visited	N: no. of meetings held; D: no. of tuk tuk/jepney campaigns	90%	
Buntings/posters	No. of posters distributed No. of posters on display	N: no. of posters distributed; D: no. posters planned to be distributed N: no. of posters on display; D: no. of posters distributed	90% 75%	
Calendar	No. calendars distributed No. of calendars on display in houses	N: no. of calendars distributed; D: no. of calendars planned to be distributed N: no. of calendars on display; D: no. of calendars distributed	80% 70%	
Prizes for high achievement	No. of prizes given	N: no. of prizes given; D: no. of prizes planned	70%	

Table 2. Monitoring the outputs and outcomes of COMBI strategies

Assessment of behaviour change					
Level 1*: Behaviours (household/village level)	Level 2*: Behaviour monitored over time (critical success factors)	Performance indicators	Performance targets	Operational definitions	Sources of information
Check all water storage jars and large water storage containers for the presence of at least two Guppy fish every week	Householders maintain 2 or 3 male guppies in all large water storage containers.	Percentage of households with 2-3 guppy fish per container	90%	D: no. of households with up to 3 live guppies in containers N: total households checked for guppies	Tracking surveys – community health centre reports
	Communities establish guppy stocks in at least two large containers. The stocks are maintained either by village health workers and/or schools.	Percentage of communities with established and properly maintained guppy stocks	90%	D: no. of communities with established and well maintained guppy stocks N: no. of communities participating in the pilot	Community health centre reports Entomology 3 monthly survey reports
	Designated health workers and/or school children make regular checks to ensure that households maintain guppies in all large water containers.	Percentage of household per village that are regularly checked for the presence of guppies	80%	D: no. households checked by VHW or school children for guppy; N: total households in the pilot area	Community health centre reports Entomology 3 monthly survey reports
Clear away discarded containers from houses, and if they cannot be moved, empty the water from them once per week	Once a week school children and households check their homes and compounds for water containers. All containers are either emptied or removed and destroyed.	Percentage of householders and school children that regularly report having checked their homes and compounds for water containers weekly	80%	D: no. of householders and school children who conducted weekly checks for water containers; N: total school children registered in teachers' roll list	School records
	Once a week community volunteers check public areas and unoccupied properties for containers. All containers are either emptied or destroyed.	Percentage of communities that regularly check unoccupied properties and public areas for containers	80%	D: no. of inspections conducted by volunteers N: total no. of site inspections scheduled per month	Community health centre reports Entomology 3 monthly survey reports
Anyone having fever for 2 days to go to the doctor, clinic or hospital	Persons with fever for more than 2 days go to the doctor, clinic or hospital for check up	Percentage of patients having fever that report having sought treatment within 2 days of onset	95%	D: no. of patients with fever who sought treatment within 2 days of onset; N: total patients with fever registered in the health centre	Health Centre, doctor and hospital reports Household surveys

Notes:
Level 1 is the end result (behaviours at household level) which depends on a number of critical success factors (Level 2).
D: Denominator; N: Nominator.

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