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COMMUNITY ENGAGEMENT FOR VECTOR BORNE DISEASE CONTROL IN ASIA PACIFIC

TOOLS, APPROACHES AND LESSONS FROM ASIA PACIFIC

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The purpose of this document is to describe tools and approaches of community engagement for vector borne disease control by highlighting the experiences, historical lessons, opportunities and examples of country programmes and the projects of Partner Institutions.

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Introduction

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DEFINING COMMUNITY ENGAGEMENT FOR VECTOR BORNE DISEASES

Community engagement is core to any public health intervention. It is a process in which community groups, organisations and individuals come together to build a dynamic relationship with a collective vision for development and growth of the community. It is rooted in principles involving equity and empowerment, tailored and context-specific solutions, and practices comprising of communication, capacity strengthening and politically and culturally oriented activities. The goal is to engage and enable the communities to assume responsibility of factors influencing their surroundings and to improve their health, to promote equitable access to health services and ensure communities can engage in improving the quality of their health services.

The World Health Organization (WHO) defines community engagement as, “a process of developing relationships that enables stakeholders to work together to address health-related issues and promote well-being to achieve positive impact and outcomes.” But what does community engagement mean for vector borne diseases?

Some vector borne diseases such as malaria and Lymphatic Filariasis (LF) are rapidly declining as more and more countries are moving towards elimination. In order to achieve this, it is more crucial than ever to proactively engage communities in control and elimination activities. Active community engagement is required for successful community-driven interventions in vector control, drug administration, testing and treatment, as well as in ensuring accessibility of services to malaria at-risk and hard-to-reach populations. Control and elimination of vector borne diseases, such as dengue and malaria, is a multisectoral effort that is intricately linked to environmental factors, socio-economic conditions of the community, access to healthcare and services, support from communities, infrastructure and planning, education, and equity. Successful vector borne disease control and elimination requires efforts from all sectors. Engagement and empowerment of local communities is imperative to ensure healthy behaviours become part of local norms and social structure, that communities understand how they will benefit, and to allow for localised ownership of control and elimination efforts.

WHO Global Vector Control Response 2017–2030 has identified community engagement and mobilisation as one of the key areas of action to attain effective, locally adapted and sustainable vector control [1]. Community mobilisation brings all resources together to plan, carry out and evaluate the developmental activities to achieve sustainable development. This WHO response highlights the importance of harnessing local knowledge and skills within the community to improve vector control and build resilience against future disease.

The degree of community engagement can vary depending on the level of community involvement, from passive engagement – simply providing information – to active engagement – shared decision-making among all stakeholders. The University of California San Francisco‘s (UCSF) adapted continuum of engagement provides a useful framework for conceptualising different levels of community involvement. As the involvement of community increases, from left to right, it shows how the relationship looks between various stakeholders and its increasing public health impact [2].

Figure 1. UCSF's continuum of community engagement

	INCREASING LEVEL OF PUBLIC IMPACT				
	Inform	Consult	Involve	Collaborate	Empower
Goal	Provide balanced and objective information in a timely manner.	Obtain feedback on analysis, issues, alternatives, and decisions.	Work with the public to make sure that concerns and aspirations are considered and understood.	Partner with the public in each aspect of the decision-making.	Place final decision-making in the hands of the public.
Promise	We will keep you informed.	We will listen to and acknowledge your concerns.	We will work with you to ensure your concerns and aspirations are directly reflected in the decisions made.	We will look to you for advice and innovation and incorporate this in decisions as much as possible.	Together, we will work to implement the strategy you decide.

Source: UCSF Global Health Group, Community Engagement Summary Brief; Adapted from: IAP2 Continuum of Public Participation

In order to effectively control and manage vector borne diseases, it is critical that communities are involved actively, rather than passively, in the shared decision-making process of the interventions. Taking a participatory approach to community engagement ensures communities at risk are actively involved and leading the process in the design, implementation, monitoring and evaluation of vector borne disease control efforts. To support effective community engagement, various strategies can be adopted to initiate collaboration: community mapping, use of mass media, public campaigns, participatory approaches (such as community dialogues and participatory videos with segmentation approaches that ensure that the whole population receives the most appropriate information and support), face to face community meetings, focus groups, help for the community to establish community platforms and structures utilising the existing community networks, and creation of new groups where necessary to reach the least informed hard-to-reach and high-risk populations.

WHO presented four approaches to developing community engagement strategies. These approaches are interconnected with the levels of public impacts in Figure 1 above (i.e., inform, consult, involve, collaborate, and empower.) Considering the desired outcome, the most appropriate approach should be selected based on the context and nature of the disease and its severity.

Figure 2. WHO: Four approaches to community engagement

Community-oriented

The community is informed and mobilised to participate in addressing immediate short-term concerns with strong external support.

Community-based

The community is consulted and involved to improve access to health services and programs by locating interventions inside the community with some external support.

Community-managed

There is collaboration with leaders of the community to enable priority settings and decisions from the people themselves with or without external support of partners.

Community-owned

Community assets are fully mobilised, and the community is empowered to develop systems for self-governance, establish and set priorities, implement interventions and develop sustainable mechanisms for health promotion with partners and external support groups as part of a network.

Source: WHO, Community engagement: A health promotion guide for universal health coverage in the hands of the people

Rationale for community engagement and participation

UNDERSTANDING NEEDS AND PREFERENCE

Strategies for effective disease control and elimination are very context specific. What works in one setting may not work in another; and hence, it is important to tailor interventions and elimination strategies in line with local needs and preferences. With the vector borne diseases map shrinking, the majority of the burden remains in geographical pockets and specific sub-sets of populations. This requires targeted and tailored interventions to ensure elimination is achieved. It is important that the programmes take into consideration the experiences of the malaria at-risk populations, the geographical diversities and socio-economic and cultural factors to help identify, deliver and assess solutions for control and elimination measures. Community engagement approaches allow adaptation and formulation of local interventions based on local beliefs, geographical context and disease specific needs. Hence, strategies and activities should be able to continuously adapt to the local disease pattern, health needs and cultural norms of the community, and to political, social and economic situations. They should also be adapted to population movement and climate change to ensure the disease control and elimination efforts stay relevant and useful.

EQUITABLE ACCESS

To successfully prevent malaria and other vector borne diseases, at-risk communities must be able to access the right tools, understand the benefits of using or facilitating vector control methods, seek diagnosis for fever and complete treatment for confirmed cases. It is important to ensure that strategies and innovative approaches for control and elimination are developed to account for those most affected, at-risk and with high barriers to accessing services due to language, disability, socio-economic status, transient lifestyle, gender, etc. Advocacy and implementation of elimination efforts should be based on community empowerment. We need to better understand how to effectively engage communities through removing barriers to accessing services and mobilising existing community resources to achieve elimination objectives for vector borne diseases.

LEVERAGE LOCAL CAPACITY AND SUSTAINABILITY

To ensure effective coverage and uptake of vector control interventions, diagnosis and treatment in vulnerable and underserved groups, in addition to improving diseases outcomes, it is important to integrate local capacity including human resources, health systems and infrastructure into disease control and elimination efforts. Most vector control interventions are based on community-delivered models. Malaria volunteers and local health workers play an important role in linking to and providing services for hard-to-reach and at-risk groups with point-of-care testing and treatment services [3]. In addition to service delivery, local capacity can be leveraged for surveillance and response activities including community-based case identification and investigation, particularly in settings where vector borne diseases are reaching the elimination phase. Community leaders and groups, who possess a deep understanding of community beliefs, practices and social norms, play an important role in improving awareness and knowledge of local populations on diseases prevention and control, ensuring strategies are acceptable, and ensuring services are taken up within the community [4]. Hence, communities need to be empowered with an aim to improve diagnosis, access to treatment, and vector control efforts. This will allow communities to identify and gain control over their specific challenges, develop context-specific strategies and ensure sustainable and locally owned interventions.

COST EFFECTIVENESS

With a decline in the burden of many vector borne diseases, particularly malaria and LF, the financial resources available for control and elimination efforts are also on the decline. It is important that resources are allocated efficiently with potential to maximise impact and improve sustainability, mainly in resource-limited settings [5]. Engaging communities in vector and disease management may prove more cost effective compared to a system-based service delivery model [6].

Lessons from experiences in Asia Pacific

Photo by GF/ Cambodia

This section highlights examples of successful community engagement initiatives from countries across the Asia Pacific region.

TESTING, TREATMENT AND SURVEILLANCE

Early diagnosis and effective treatment for all cases of vector borne diseases are critical components for any disease elimination or eradication programme. These require not only infrastructure and resources, but also active engagement and participation of communities for recognising symptoms and accessing health services. Mass Drug Administration (MDA), which is the key intervention for LF, also requires social mobilisation to encourage the community to participate in the MDA campaign.

Community health workers (CHWs) are key to bridging the gap between communities and programme implementers. Chosen from within their community, CHWs have a greater understanding of their community's needs, perceptions and beliefs, and are necessary for gaining their community's trust and acceptance. Community buy-in into interventions, communicated or undertaken by CHWs, is strongest when CHWs are selected by local leadership or a community-based election process [7].

Role of community health workers in reducing the malaria burden in Odisha, India

Community health workers in India, known as Accredited Social Health Activists (ASHAs), work as an interface between the community and the public health system [8]. ASHAs are trusted members of their communities who have provided routine healthcare in remote areas for decades. They look out for any fever cases and test for malaria. They also provide medicines and ensure that those who have tested positive complete their treatments as prescribed. ASHAs have actively participated in distribution and awareness-raising campaigns on correct usage of long-lasting insecticidal nets (LLINs) and increasing community acceptance of indoor residual spraying (IRS). ASHAs have successfully mobilised communities in support of malaria control. They conduct information, education, communication and behaviour change activities.

In Odisha, where over 47,000 ASHAs currently work to identify and prevent malaria in villages, ASHAs were included in the project Duragama Anchala Re Malaria Nirakaran (DAMaN), or "controlling malaria in remote locations," and Comprehensive Case Management Programme (CCMP). DAMaN was launched in 2016 and focuses on detection of all malaria infections (with or without fever), treatment of all positive cases, and vector control through the use of LLINs and IRS [9]. DAMaN camps are set up two or three times a year. In addition to malaria screening, the camps support innovative community mobilisation, information, education, and communication and behaviour change communication activities rooted in local realities. Initiated in 2013, CCMP involved the piloting of a range of intensified surveillance and case management strategies for which ASHAs were engaged. In 2021, there was a 94 percent decline in malaria cases as compared to the cases of 2016 in Odisha.

Implementing a comprehensive community engagement programme in Laos for facilitating Mass Drug Administration

The emergence of drug resistant parasites in the Greater Mekong Subregion requires prompt containment measures to interrupt transmission [10]. WHO recommends MDA as a strategy to curb the spread of these drug resistant parasites [11]. Effective MDA requires high population coverage and adherence, which is challenging for malaria-endemic villages located in remote places. Remote villages often have low levels of literacy, lack healthcare facilities, and face language and communication barriers [12]. A Targeted Malaria Elimination (TME) pilot programme in Laos with comprehensive community engagement highlighted the importance of understanding, engaging and mobilising the local community for MDA.

This TME project adopted a five-step approach to engage the local community: i) stakeholder and authority engagement, ii) leveraging local human resources, iii) formative research on local context, iv) creating a programme responsive to local needs, v) sharing control/leadership of the MDA programme with the community.

Prior to starting the MDA, the malaria team sought the approval and support of the local authority for the project. Local health volunteers chosen by the village heads were trained, and actively involved in the design and implementation of the community engagement activities. The team then conducted studies to understand the communities' receptiveness to these materials and activities. Volunteers made door-to-door visits with the TME health education tools to seek villagers' feedback about the study and their understanding of the intended health message. These studies improved the uptake and compliance rate of the MDA as the team could clarify villagers' concerns and misconceptions about the MDA project and tailor the community engagement materials according to the local context. As part of the MDA project, the team provided the malaria diagnostic tools and medicines to the local health volunteers and trained them to conduct the diagnostic tests and to administer malarial treatments to the community members. The active involvement and mobilisation of the local community contributed to success of this TME project in Laos with a remarkable population coverage of over 85% for this MDA programme [13].

VECTOR CONTROL

Historically, vector control programmes have been delivered using a "top-down" approach, heavily reliant on controlled distribution through community health workers by central authorities. Adopting community channels and community delivery approaches makes vector control products and interventions available where, when, and how communities need them.

Indonesia's experience in empowering communities to deliver vector control interventions for dengue control

WHO's *Global strategy for dengue prevention and control 2012–2020* encouraged sustainable vector control interventions as critical for reduction of human-mosquito interaction [14]. The strategy further stated that prevention and control of dengue needs a participatory approach and community leaders must be engaged for better coordination and collaboration.

Indonesia is highly endemic for dengue, with Java reporting one of the highest percentages of cases in the nation [15]. Vector control for malaria and dengue in Indonesia has come a long way, from solely relying on insecticides to engaging the community in removal of larval breeding sites [16]. In 1992, the Ministry of Health started the 3M programme, *Menutup*, *Menguras* and *Mengubur* (water container covering, water container cleaning and discarded water container burying), to reduce larval breeding. Later, this programme was expanded to the 3M Plus programme, which included community awareness and education on protective behaviours [17]. The 3M Plus programme was implemented along with the *Jumantik* programme, where mosquito larva monitoring cadres were engaged from the community to perform door-to-door larval inspection and to undertake Information, Education and Communication (IEC) activities [18]. To empower the community and to reduce the burden on Jumantiks, in 2015, the government extended the *Jumantik* programme to '*satu rumah satu jumantik*' (1 house 1 cadre) [19]. In 2004, the government also adopted the Communication for Behavioural Impact (COMBI) social mobilisation and marketing approach to bring about behavioural changes in people with respect to larval breeding [20]. A study conducted in Yogyakarta to assess the *Jumantik* programme did find some gaps in the implementation such as gaps in inspection, communication challenges and incorrect reporting [21]. The study recommended trainings to improve Jumantiks communication processes and a campaign to be undertaken to relay the importance of Jumantiks to the community.

How barangays in the Philippines took ownership of malaria control efforts

With over 7000 unique islands, each with its own malaria epidemiology and socio-political situation, the Philippines has successfully controlled malaria and is on track to eliminate malaria by 2030. In 1991, the Department of Health decentralised the malaria programme to the local government units and empowered them to adapt malaria vector control interventions to the local context. In the 1990s, community health workers, also known as *Barangay* (village) Health Workers (BHWs), were trained in community engagement. A community engagement model was developed through the formation of a Malaria Surveillance and Vector Control Council (MASUVECCO) and was piloted in Camarines Norte province. Effective relationship building between barangay leaders and BHWs helped to mobilise the broader community and strengthened community-driven vector control efforts. This piloted programme contributed the reduction of malaria incidence in the villages and, later, this was adopted in all malaria-endemic areas [22].

Sambalan barangay, located in a poorly accessible mountainous area, adopted a five-pronged community engagement approach for malaria control. First, a barangay action committee was formed with participation of local officials, teachers and community-based groups to plan and coordinate malaria prevention and control. Second, volunteers from the barangay were engaged to form anti-malaria brigades, who led vector control efforts in the community. Third, a partnership was forged with a local motorbike-taxi association that provided free transportation for patients with fever to the nearest health facility. Fourth, "personal selling" people, who had access to the villagers, were trained on health promotion. They promoted the use of LLINs and assisted in blood sample collection. Fifth, interventions were complemented with educational sessions on malaria and vector control in schools. The barangay was committed to implementing a sustainable malaria control programme and this is an example of community ownership of public health programmes [23].

SOCIAL AND BEHAVIOUR CHANGE COMMUNICATION

Sustaining demand for malaria testing, treatment and prevention and supporting risk reduction practices would require a shift from the traditional information dissemination approach – IEC – to a Social and Behaviour Change Communication (SBCC) approach.

Countries in the Asia Pacific are increasingly adopting innovative approaches to reach communities. In Bangladesh, *uthan boithak*[1] (courtyard meetings) are held to raise awareness amongst community members, and social mobilisation is done via *jatra* (popular theatre) and folklore. In Battambang province, Cambodia, the Village Drama Against Malaria project conducted by local health authorities, the Cambodian National Malaria Control Programme, and the Mahidol Oxford Tropical Medicine Research Unit uses art, music workshops and village concerts to raise awareness of malaria among rural populations. These awareness programmes, conducted in fun and entertaining ways, helped attract those who would not have otherwise received health education [24].

Other innovations occurred in Malaysia, where the COMBI project implemented in Johor Bahru for dengue control lasted for 12 weeks. Dengue Volunteer Inspection Teams (DEVITs) were formed in 48 localities to perform house inspection. Riders from the community went around on bicycles to raise awareness, and a checklist on how to deal with larva breeding sites at home was distributed in four major languages. Awareness about the COMBI project was raised via television, radio talk shows and newspapers, as well as through doctors and nurses. There was a decline in cases in areas where DEVITs were posted. The COMBI project led to positive behavioural outcomes and has now been adopted as the national approach to social mobilisation and communication for dengue fever prevention and control [25].

Programmes need to go beyond using traditional Behaviour Change Communication (BCC) techniques to engage mobile and migrant populations. Thailand and Cambodia have implemented several innovative BCC approaches to target these populations. Both countries have coordinated to develop IEC/BCC materials in both Thai and Khmer languages. Mass media such as television, radio, billboards, posters and stickers support awareness-raising. Cambodia has also engaged taxi drivers as agents for distribution of IEC/BCC materials [26].

[1]'Uthan Boithok' was first launched in December 2020 with an aim to bring more unbanked people under the financial services at the agent outlets and add value to the national economy, especially in geographically the remote and rural locations.

Community participation for malaria elimination in Tafea province of Vanuatu

In 2008, Tafea was selected as the first province in Vanuatu for intensified malaria elimination efforts. Raising community awareness about seeking treatment was key, specially in those areas where traditional medicines and home remedies were the preferred first treatment option. Thus, community-oriented campaigns in Tafea played a key role in eliminating malaria and preventing re-establishment of transmission. Cases dropped rapidly, with the last local case reported in September 2014 [27].

Community ownership and leadership were fostered through the involvement of chiefs and other community leaders, including church representatives and the Women's Group. The Tafea Malaria Elimination Committee was established in 2009 to support planning of community awareness activities and to maintain engagement with the community. Representatives from provincial malaria programmes, provincial health services and community members were also a part of this committee. The Committee has supported behaviour change in the community and played an important part in promoting universal access to IRS, LLINs, diagnosis and treatment. Tafea remains vulnerable to importation of cases from other islands and is therefore under constant vigilance by health authorities. Thus, the community is still key to maintaining their malaria-free status. As malaria becomes a thing of the past, it is important to continue motivating communities to come forward for diagnosis and treatment [28].

Raising community awareness for dengue prevention in Singapore

Community has a key role to play in the prevention of dengue via environment management. Since prevention of dengue solely rests on vector control strategies, a change in attitude and practices of communities is of utmost importance.

Located near the equator, with a hot and humid climate where all four distinct dengue virus variations thrive, Singapore deems dengue a public health threat. Singapore's key strategy for control of dengue transmission is source reduction, which includes both preventive surveillance and larval source reduction [29]. For efficiency in dengue vector control, the National Environment Agency (NEA), the government agency responsible for dengue control, uses technological innovations and a Whole-of-Government approach in coordinating dengue prevention measures and community engagement activities. The government emphasizes that advancement in mosquito suppression technology cannot replace community efforts for vector control [30]. With more than 80% of Singapore residents living in high-rise public housing, conducting inspections of all households and sites for potential dengue breeding is resource intensive. Thus, community engagement plays an important function in Singapore's vector control.

Community engagement in Singapore involves leveraging existing community structures, including the People's Association (a government agency responsible for promotion of social cohesion) and grassroot organisations. NEA's 3P (People, Private, Public) Network Division regularly engages and mobilises the community in dengue prevention measures such as checking and clearing of stagnant water in homes, promoting dengue prevention in schools, and training community residents from the grassroots Dengue Prevention Volunteers group. These volunteers, along with grassroots leaders, are crucial to the success of NEA's annual National Dengue Prevention Campaign. These volunteers conducted house visits and organised events to raise awareness of the "5-Step Mozzie Wipeout." The 5-Step Mozzie Wipeout, with the acronym BLOCK, recommended that residents prevent mosquito breeding by i) **B**reaking up hardened soil, ii) **L**ifting and emptying flowerpot plates, iii) **O**verturning pails and wiping their rim, iv) **C**hanging the water in vases, v) **K**eeping roof gutter clear and using insecticides. These BCC materials are often tailored to different languages and formats to target different groups in the community.

Local communities can also alert NEA on environmental and mosquito-related issues via a 24-hour hotline or via the OneService App. The OneService application also alerts users if they are close to dengue clusters [31]. NEA implemented the Community Dengue Alert system, which uses colour codes displayed on large banners to alert the neighbourhood of the dengue situation. The banners use three colours to suggest actions for the residents: red (high alert), yellow (medium alert), and green (low alert). As a part of the prevention campaign, booklets containing information of larvae breeding habitats and dengue prevention tips are also distributed to communities.

Social mobilisation activities to eliminate lymphatic filariasis in Thailand and South India

Mass Drug Administration, which is the key intervention for LF, also requires social mobilisation to encourage the community to participate in the MDA campaign.

Thailand eliminated LF in 2017. MDA was launched in 2002 and implemented from 2002 to 2006 in 11 endemic provinces, followed by stop-MDA surveys and Transmission Assessment Surveys [32]. MDA was implemented every April, with one week designated as "Filaria Week." The MDA implementation programme was supported by an IEC campaign in targeted villages, emphasising participation in the MDA programme. Community events were organised during Filaria Week with participation from national leaders to motivate the people.

In Tamil Nadu, a state in Southern India, IEC campaigns using school children's rallies and "autorickshaw" announcements were carried out before each MDA round encouraging people to participate. Women from the families were also educated about the benefits of MDA through the village Self Help Groups. Surveys carried out after four rounds of MDA revealed that 97% of the respondents were aware of LF [33].

Approaches for community engagement


Photo by Malaria Consortium

ETHNOGRAPHIC RESEARCH/ HUMAN-CENTRED DESIGN

Ethnographic research, Human-centred Design (HCD) and other qualitative research approaches have the potential to help programmes understand the needs and preferences of communities who are at risk of malaria, and to identify strategies for disease control and elimination. Ethnographic research allows researchers to dig deeper, beyond the relatively superficial aspects of culture, to identify the more complex – and often invisible – socio-cultural structures and beliefs that have the potential to influence malaria behaviours. The findings from ethnographic research thus enable programmes to design interventions that take into account communities' knowledge, attitude and practices on malaria, centred on local beliefs and culture.

HCD helps question core assumptions about a community at risk and inspires prototyping and iterating new solutions. The goal of HCD research is to uncover insights through in-context observations of, and discussions with, communities. The HCD approach facilitates learning from communities based on what they say, think, feel and practice. This approach is increasingly being used by commercial manufacturers and other partners to co-create health products that meet user needs and preferences. It can also be used to co-create messaging to promote health-seeking behaviour and consistent use of vector control products, as well as to co-identify distribution channels and strategies likely to resonate with targeted communities.

Empathy, Insights and Prototyping of Population Services International

Building on HCD, Population Services International (PSI) adopted the Empathy, Insights and Prototyping (EIP) approach to increasing engagement with a community. Empathising with the community allows for deeper emotional and functional insights and helps build solutions that are not only feasible, but also desirable. The EIP approach is implemented in six steps: i) empathising with the community to understand the reason for a particular behaviour, ii) identifying functional and emotional insights, iii) developing prototypes based on the insights, iv) testing prototypes with the audience, v) implementing creatives for BCC, vi) monitoring coverage and impact on behaviour change. PSI, in collaboration with UCSF, conducted a study in two provinces of Vietnam, Binh Phuoc and Kon Tum, using this approach to understand perspectives of forest-goers around malaria. Insights on health-seeking behaviours and access to services and commodities were gathered. Based on the findings of the formative research, the Zero Malaria Campaign was designed to encourage forest-goers with malaria symptoms to seek testing and treatment and to prompt them to complete the treatment regimen. The creative outputs designed to drive home campaign objectives were tested with a group of farmers and forest-goers, including ethnic minorities, to see if the messages resonated with them. Final creative outputs were designed based on the feedback received. The creative outputs developed were disseminated through billboards, YouTube and print materials distributed via Village Health Workers and worksite managers [34].

This approach is especially useful in identifying strategies to develop, deliver and promote vector control products for optimal coverage and use. At a minimum, if ethnographic or HCD research is not possible, some qualitative research is recommended during the design and re-design phases of elimination programming to ensure communities are engaged and to plan programmes that i) use locally acceptable and community-driven approaches, ii) address barriers identified by communities themselves. Engaging with communities at the formative phase is critical to understanding which vector control products are needed and how to effectively deliver and promote these products to communities for optimal use.

COMMUNITY DIALOGUE APPROACH

Photo by APMEN Vector Control Working Group

Contrary to traditional health education and awareness approaches, the Community Dialogue Approach (CDA) is based on the belief that communities already have the solution to their own problems. CDA is a participatory approach where a facilitator informs, consults, involves and collaborates with a community to facilitate the process of finding the solution. This approach poses fewer cultural and language barriers as the facilitator guiding the discussions has been chosen from the community. The facilitator is trained and supervised by the local health staff on the key messages and facilitation techniques. The steps in a CDA are to i) explore and develop a common understanding of the problem, ii) frame the problem in the context of the community by identifying the determinants of the problem, iii) have the community commit to a set of collective actions [35], v) evaluate the effectiveness of the projects. CDA has been proved to be effective in bridging the knowledge gaps of a community and helping communities to make collective decisions for improved health outcomes [36].

Community Dialogue Approach in Bangladesh

CDA was piloted as an intervention in one sub-district of Comilla, Bangladesh, to tackle the issue of antimicrobial resistance. Antimicrobial resistance poses a significant threat to public health in Bangladesh [37]. People often buy medicines directly from pharmacies without consulting a doctor. Community members even share antibiotics among themselves and often do not complete the required course, thereby adding to the antimicrobial resistance problem. To address the challenge of antimicrobial resistance, raising awareness among communities, interventions, and monitoring for accountability are key. An embedded approach was adopted whereby community engagement was facilitated through existing health system community clinics and community infrastructure to ensure sustainability. This approach allowed for each community, supported by a facilitator in a workshop, to be engaged in developing interventions and then for intervention materials to be designed and pre-tested before implementation. As a result, the key messages for the developed interventions were appropriate for the local context. The communities reported a positive change in their antibiotic consumption practices after the intervention [38].

While this approach may be time and resource intensive, it does have the potential to increase community ownership of interventions and could lead to improved health prevention and treatment-seeking behaviours. This approach can be used to collect feedback from the community on vector control products for preferred product characteristics. Additionally, this can also be used to collect information around delivery channels of vector control products for LLIN/IRS campaigns. This approach can also be helpful in determining how best to repair or dispose of nets, and other simple community solutions.

ROLE MODEL APPROACH

Photo by GF/ Cambodia

The Role Model (RM) Approach works by identifying individuals within a community who follow good practices, can act as role models, and with training share their behaviours to increase the reach and coverage of behaviour change in their communities. Messages delivered by these role models within their community have greater impact and are more acceptable because other community members can see these behaviours being practised by one of their own [39]. This works on the principle that promoting and amplifying positive behaviours within a community have greater impact on behaviour change as opposed to correcting negative behaviours. The approach has been applied to drive outcomes for sanitation and hygiene, maternal and child health, breastfeeding, prevention of Neglected Tropical Diseases such as Chagas disease, Seasonal Malaria Chemoprevention and reduction of hospital acquired infection.

Role Model Approach of Malaria Consortium in Cambodia

The RM Approach was applied to malaria control for the first time in Battambang province of Cambodia by Malaria Consortium. The selected population for the proof-of-concept study was composed of three villages with a mix of residents and migrants. The villages were also classified as having a high risk to artemisinin resistance.

The RM Approach occurred in August 2010 over the course of one week and involved: i) preorientation meetings with Village Malaria Workers (VMWs), health centre staff, malaria programme staff and village chiefs to garner support for the programme, ii) a community orientation meeting where participants such as community residents, migrant workers, teachers, religious leaders, health volunteers and health facility staff were introduced to the RM Approach, iii) Focus Group Discussions (FGDs) and In-depth Interviews (IDIs) were conducted with participants to understand normative behaviour around malaria control and prevention, iv) RM enquiry was conducted to identify positive behaviours with respect to malaria control, their determinants and to select role models, v) community members were called to verify the outputs of the FGDs and IDIs and identify behaviours that were uncommon, vi) once the RM behaviours were identified, community members were engaged to devise strategies that would encourage other members to follow the positive behaviours.

Once the RM Approach was completed, the strategies were implemented and later handed over to the community for continuity and sustainability. Programme evaluation showed that the RM approach linked to behaviour change interventions resulted in greater usage of mosquito nets by forest-goers and use of public health facilities for malaria diagnosis and treatment. The community continued to implement the activities even a year after discontinuation of external assistance [40].

USE OF INNOVATIVE CHANGE AND DELIVERY AGENTS

Multisectoral delivery approaches are required for effective control of vector borne diseases given the multisectoral nature of diseases and community behaviour. Community actors and channels relevant to the environment, water sanitation and hygiene, education, housing/urban planning and health have potential to assist in the delivery of products and interventions. Non-health distribution channels outside the health sector, such as retail outlets and schools, can expand access for communities. One example of this is Cambodia's use of community rangers to distribute "forest packs," which contain multiple vector control products, to forest-goers at risk of malaria [41].

Women and children are promising agents of delivery and change with the potential to leverage their community-level access and influence to improve gender equity as well as sustain disease control efforts [42] [43]. Women in particular are deemed to be more knowledgeable about household members and environments, which further strengthens disease elimination efforts. Women from the community are increasingly being engaged in vector control, programme implementation, vector surveillance community mobilisation efforts, research, spraying and environmental management, and in the selling and marketing of personal protection equipment [44]. Community interventions that involve women will increase the effectiveness of interventions and improve long-term sustainability. This could also lead to potential benefits for women in terms of social and economic empowerment.

Children in Papua New Guinea as change agents for malaria control efforts

In Papua New Guinea (PNG), children are particularly at risk of malaria. There is an average of 5.94% prevalence of malaria in children under five in lowlands, while the prevalence is high among older school children (5–14 years) in some parts of the country, such as the Southern, Momase and Islands regions [45]. In the Momase region, the prevalence of malaria infection in children aged 5–9 years is almost 25%.

The Chasing Malaria Programme, supported by Rotarians Against Malaria (RAM) PNG and RAM Australia since 2012, is an initiative where schools and children are involved in malaria control efforts [46]. This programme is designed to proactively seek out, treat and map malaria cases in the National Capital District, Central and Gulf Provinces of PNG. The programme helps identify hot spots where more intensive interventions are required: additional nets, diagnostic kits, drugs and additional training to test and treat new cases. The Chasing Malaria Programme relies on community involvement, particularly the children of 11 schools who now play a part in identifying and cleaning up mosquito breeding sites. The programme also trains teachers to deliver basic malaria services where health workers may not be available, or where there are no health facilities nearby.

The surveys conducted in schools to monitor prevalence among children can also be extended to map malaria at the village level and better target interventions. Empowering children and other residents of villages where malaria or other diseases pose a risk to the growth and development of the community is critical for success of community-based interventions.

PARTICIPATORY MONITORING AND EVALUATION

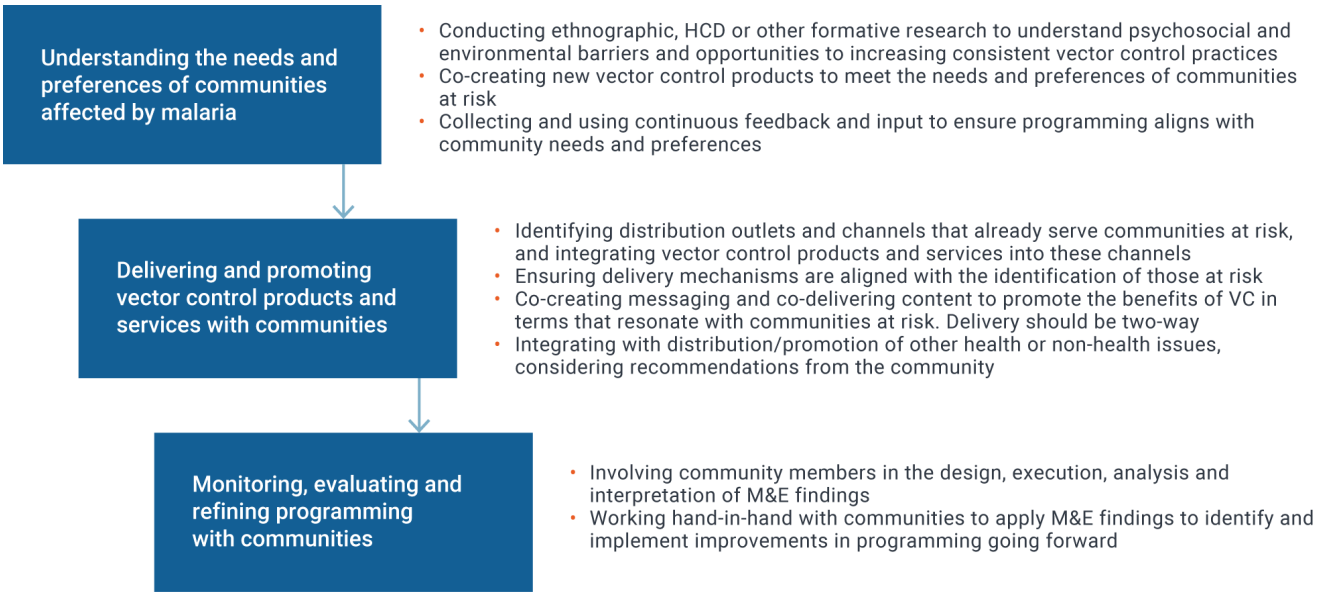
Participatory Monitoring and Evaluation (M&E) is a specific technique to engage community members as active participants in all stages of malaria programming, including monitoring and evaluating results. Defined as, "systematic recording and periodic analysis of information that has been chosen and recorded by insiders with the help of outsiders," participatory M&E differs from conventional M&E in that the community is involved in driving the process together with implementers and other stakeholders [47]. This approach allows the community to be engaged to analyse and interpret M&E data, and to assess whether programme modifications are needed. As such, participatory M&E can facilitate iterative programming and rapid, evidence-based pivots if needed to optimise elimination programme outcomes. Feeding M&E findings back to communities and discussing programme implications with them is critical to effective community engagement. Participatory M&E is especially applicable for programmes that need a rapid response in rapidly changing environments.

Way forward

Photo taken at 3rd Malaria Vector Surveillance for Elimination course

Vector borne disease control and elimination will require holistic and integrated approaches to empower communities to co-drive the design, delivery and evaluation of interventions. Promoting community ownership of disease control efforts – including testing, treatment, surveillance, vector control delivery, demand creation and evaluation – is key to "last mile" elimination targets. The framework below, adapted from the APMEN Vector Control Working Group Online Workshop discussions held in July 2020, offers a holistic and integrated approach to community engagement.

Figure 3. A Lifecycle Approach to promote community engagement for improved vector control and malaria elimination



Source: Community Engagement: Lessons from Asia Pacific, Josselyn Neukom, 2020

EMERGING PRIORITIES

Photo taken at 2nd Malaria Vector Surveillance for Elimination course

Below are a few suggestions that would support a conducive environment for meaningful community engagement and participation:

- Include community-based organisations and civil society partners in national elimination taskforces (or equivalent). Civil society plays a vital role in improving access to services in remote areas and among hard-to-reach populations by building trust with affected communities.
- Develop community engagement approaches and standard operating procedures based on best practices from the region that place community ownership at the centre of elimination efforts, coordinate "last mile" responses in hard-to-reach areas and ensure sustainability of programmes.
- Strengthen the technical capacity of non-government actors involved in community engagement activities in different approaches for jointly designing, delivering and assessing interventions together with meaningful participation from communities at risk.
- Leverage technology and digital health advances with potential for promoting community engagement principles to improve local effectiveness, efficiency and sustainability.
- Develop a framework to measure community engagement for the lifespan of a project. This is critical as assessing the aspects and their effectiveness in these approaches is not straightforward given the fluid and ongoing nature of engagement [48]. Qualitative feedback loops and, where resources allow, cross-tabulation efforts merit further investment to assess positive correlation between involvement in community engagement and vector borne disease control interventions.

Increasingly, programmes and partners are recognising and acknowledging that communities have an active role to play in highlighting and addressing the issues that matter to them, including vector borne disease interventions. Control and elimination of vector borne diseases require not just consulting with communities but partnering with them to implement interventions. The Asia Pacific region offers several models for engaging the community in vector borne disease control, health systems strengthening and beyond. Locally tailored community engagement approaches continue to be an integral component of successful public health programmes and need to be fully integrated into vector borne disease programming.

Annexes

ABBREVIATIONS

3M	Menutup, Menguras and Mengubur
3P	People, Private and Public
APMEN	Asia Pacific Malaria Elimination Network
APLMA	Asia Pacific Leaders Malaria Alliance
ASHA	Accredited Social Health Activist
BCC	Behaviour Change Communication
BHW	Barangay Health Workers
CCMP	Comprehensive Case Management Programme
CDA	Community Dialogue Approach
CHW	Community Health Workers
COMBI	Communication for Behavioural Impact
DAMaN	Duragama Anchala Re Malaria Nirakaran
DEVIT	Dengue Volunteer Inspection Team
EIP	Empathy, Insights, and Prototyping
FGD	Focus Group Discussion
HCD	Human-centred Design
IDI	In-depth Interview
IEC	Information, Education and Communication
IRS	Indoor Residual Spraying
LF	Lymphatic Filariasis
LLIN	Long-Lasting Insecticidal Net
M&E	Monitoring and Evaluation
MDA	Mass Drug Administration
NEA	National Environment Agency
PNG	Papua New Guinea
PSI	Population Services International
RAM	Rotarians Against Malaria
RM	Role Model
SBCC	Social and Behaviour Change Communication
TME	Targeted Malaria Elimination
UCSF	University of California San Francisco
WHO	World Health Organization

ABOUT

About APLMA-APMEN

Asia Pacific Leaders Malaria Alliance (APLMA) is an alliance of heads of government committed to achieving a region free from malaria by 2030. APLMA is a distinctive platform facilitating collective regional leadership for malaria elimination and health security.

Asia Pacific Malaria Elimination Network (APMEN) is a network of 22 countries and 53 partner institutions. APMEN facilitates regional and multisectoral collaboration around evidence-based practices and fosters innovation. Jointly, APMEN and APLMA act as an "evidence-to policy" vehicle that links directly to leadership levels across the region.

About Malaria Consortium

Established in 2003, Malaria Consortium is one of the world's leading non-profit organisations specialising in the prevention, control and treatment of malaria and other communicable diseases among vulnerable populations. Malaria Consortium's mission is to save lives and improve health in Africa and Asia, through evidence-based programmes that combat targeted diseases and promote universal health coverage. Malaria Consortium's Head Office is based in London, UK.

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