



**The National Center for Parasitology, Entomology and Malaria Control
National Dengue Control Program**

PROGRESS REPORT OF THE DENGUE CONTROL PROGRAM

From January to mid-June 2019

26 June 2019

1. Dengue Control Strategies

1.1 Mission

To work closely with all stakeholders, development partners, relevant institutions and ministries especially with the community for sustainable service deliveries including dengue control, prevention and effective treatment in Cambodia.

1.2 Goal

To reduce the disease burden due to dengue and severe dengue to such an extent that they are no longer major public health problems.

1.3 Objectives

- To reduce dengue mortality by at least 50% by 2020.
- To reduce the morbidity of dengue by at least 25% by 2020.
- To strengthen surveillance system for getting a reliable data on burden of the disease by 2015.

1.4 Strategic activities

In its efforts to prevent and control dengue, the national strategy adapted for dengue control in Cambodia is based on the newly formulated WHO Global Strategy for Dengue Prevention and Control and the Asia Pacific Regional Dengue Strategic Plan:

- To expand and enhance existing surveillance systems to improve dengue case detection;
- To strengthen diagnostic capability and clinical management in public and private sectors, and promote early referral and hospitalization, and appropriate treatment;
- To guide the implementation of integrated mosquito control with community and inter-sectoral participation;
- To prepare emergency preparedness plan for responding to dengue outbreaks;
- To enhance public awareness; and
- To conduct vector control research.

2. Achievements and Progress

2.1. Improved clinical diagnosis and treatment of dengue

Clinical management guideline of DF/DHF has been revised based on the WHO guideline in 1997, old national dengue guideline 2004 and fit with the actual and practical practice of our pediatricians at central and provincial referral hospitals. Several meetings with WHO experts and clinical sub-committee were conducted for strengthening the case management and diagnosis. Two times of Dengue Clinical Sub-Committee Meetings were conducted including

processing the modification of clinical sub-committee members. With the supports from WHO, ADB and other partners, a total of 257 health staffs received the refresher training course on dengue clinical management and nursing care between January – mid-June 2019. Followed the minister recommendation as to counteract the increasing dengue transmission this year, a total of 224 doctors and nurses were received the institutional training by the doctors/nurses trained by the program including institutional training to 272 doctors (97 privates) and 562 nurses (223 privates) as at mid-Jun 2019.

The program distributed a total of 40,000 IV fluids to 25 provinces as part of dengue supporting treatment and 1300 dengue rapid tests to the national and provincial hospitals for dengue diagnosis at the national and provincial hospitals. Dengue program manager together with the technical team from the central levels visited the hospitals in 5 provinces, encouraging the health staff to spread the dengue key messages to the patients and leveraging the adherence to the dengue national treatment guideline.



Figure 5. Training-of-trainer courses for dengue case management

2.2. Strengthening Dengue Program Management and Planning

The program comprises of 4 responsible units including health education, clinical management, epidemiology and research, and vector control. The program has also formed the monitoring and evaluation group for monitoring and reporting all current progress and development from all units of dengue program. With the aim of ensuring the effectiveness of program management and coordination, the program has assigned the key persons responsible for communication and coordination with all 25 municipals and provinces. The communication between the national program and all provincial dengue supervisors in all 25 municipals and provinces has been done on weekly basis. This approach was to closely monitor the current dengue situation, medical supplies and logistics, provide supports and facilitate all kinds of challenges and constrains. With this information in hand, the national team can provide technical supports and deal with the urgency situations in time including dengue outbreak responses and mobilizing the community/inter-ministry participations and supports. Several

communications with the provinces with dengue high burden on weekly have been conducted on weekly basis.

The program had conducted 3 consultation meetings with the PHDs from 25 provinces. Dengue program manager led the supervision and monitoring team to 9 provinces, 8 provincial/referral hospitals, and 8 health centers over the first 4 months in 2019 including five meetings with partners and stakeholders.



Figure 6. Technical Working Group at MoH, with 25 PHDs presided over by H.E. Pof. Eng Huot

Since January 2019, two letters released by the Minister of Health was distributed to all 25 provinces and the general public about the risk of abusing the chemical spraying as well as the encouragement of dengue prevention and control at all 25 provinces in Cambodia. Between May – June 2019, public announcement about dengue situation, prevention and control has been released via social media, TV and radio. TWGH was interestingly focused on dengue topic for alerting to all meeting members several times.

2.3. Epidemic preparedness and outbreak response

Emergency preparedness and anticipated response planning are an integral part of dengue control. Different measures need to be implemented depending on the context of dengue in the area. The capacity of identifying and responding an outbreak response has been strengthened at the provincial levels. The principles of outbreak response planning included: a clearly articulated aims, objectives, and scope, establishing an emergency response plan, engaging the involvement and support from stakeholders, defining roles and responsibilities of key stakeholders and criteria for spraying application in the community. Once dengue outbreaks were highly suspected, the national team worked closely with provincial health department to begin an aggressive campaign of public engagement involving the community-based meetings, door-to-door campaigns to identify case-patients and educate the public about mosquito abatement, and mass media messaging. The team went to the target community for checking

the abate coverage, gathering the people for health education and engaging them for their participation such as environmental cleaning, prevention methods, appropriate treatment seeking behaviors and spraying if needed. Closely monitoring the epidemiological threshold at national and provincial levels. The program ensured the enough stock of abate (174 tones delivery and on progress of application), Bti (1000kg from WHO just arrived in CMS) and IV fluids in the national, and provincial hospitals in 25 provinces. In addition, the program has constantly provided technical support and recommendations to the provinces experiencing the increase in dengue transmission. As a result, more than 85% of people living in high endemic areas received the protected effect against dengue.

2.4. Improved epidemiological and disease surveillance

Epidemiological surveillance is the ongoing systematic collection, recording, analysis, interpretation and dissemination of data reflecting the current health status of a community or population so that action may be taken to prevent or control a disease. Surveillance is a critical component of any dengue prevention and control program as it provides the information necessary for risk assessment, epidemic response and program evaluation. Surveillance can utilize both passive and active data collection processes. A sentinel surveillance system was established in mid-2002 to acquire high quality surveillance data from a small number of public health facilities. The purposes of the surveillance system include the timing of surveillance activities, the signal(s) and thresholds for investigation and response. The objectives of epidemiological surveillance are to detect epidemics quickly for early intervention, measure the burden of disease, monitor trends in the distribution and spread of dengue over time and geographically, evaluate the effectiveness of dengue prevention and control program, facilitate planning and resource allocation based on lessons learned from program evaluation.



Figure 6. Data management Figure

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Figure7. Dengue reports from PDHs

The program managed to mobilize the resource for conducting one training on the dengue epidemiology and surveillance with a total of 50 participants from 13 provinces under ADB support.

2.5. Health education and community mobilization

Health education and personal sanitation are the foremost important steps in dengue control and prevention strategies. It involves removal of breeding sites of larvae. Public awareness and health education such as habitat and life cycle of the vectors are essential for the community action. Health education contributes to sustaining efficient information and basic knowledge to the society on transmitted diseases and their vectors. The knowledge on the vector life cycle and its ecology and biology were delivered especially before and during the dengue outbreaks in the community. The national team from the central level in collaboration with the provincial levels conducted the health education in the community. Public awareness was promoted for prevention and control the dengue fever and it involved the cooperation between private and public sectors. The people were also educated and motivated to break the mosquito life cycle by destroying the possible mosquito breeding sites such as water tanks, discard containers, coconut shells and as well disposable tires. More than 10,000 posters and 500 banners were distributed and disseminated to communities. Social media are currently focusing on dengue topic within several channels and frequencies releasing message broadcasting daily.



Figure 7. Community-based health education and social mobilization led by Dengue program manager in the provinces with dengue high burden

The immediate-action principle was activated associated with effective communication and cooperation between different government sectors. During the community-based health

education campaign the suspected/positive dengue cases were referred to the nearest public health facilities and followed by an intensive management of the vector in the possible breeding sites where the case came from. The people in the community were not necessarily aware of control activities carried out by the dengue response team but also motivated to interact with health education key messages. More than 28,000 people in 250 villages and more than 17, 250 students in schools, 76 monks in 15 pagodas. The program manager with technical team conducted the community-based health education and promoted the dengue key messages in 46 villages over the first 4 months in 2019.

3. Collaborative activities

The program has received the support from the Early Harvest Mekong Lancang to conduct the joint research on the development of dengue early warning system and other vector-borne disease. The project has been conducted in 13 provinces namely Takeo, Kandal, Tbong Khum, Kampong Cham, Stung Treng, Kampong Thom, Preah Vihear, Odar Meanchey, Sihanouk Vill, Koh Kong, Battambang, Rattanakiri and Kratie. The main activities were entomological surveys and fever screening. The project has finished the data collection and the program is under the process of writing the final report.



Figure 8. Launching the project in Kg. Cham



Figure 9. Results dissemination workshop

4. Wayforeward

Following are the key activities for the dengue work plans over the next 3 months in 2018:

- Continuing the Minister’s recommendation focusing on the improvement of dengue case management through the peer-to-peer training conducted by the doctors and nurses received the training from the program in the previous year;
- Conducting the training for the new National Guidelines for clinical diagnosis and case management of dengue;
- Conduct two TOT dengue cases management in Siem Reap and Pursat in May, with 115 doctors and nurses;
- Conduct two training courses on Dengue Emergency Rapid Response in July, with 112 dengue staff and Rapid Response Team from 10 provinces with dengue high burden;
- Working closely with stakeholders for dengue control action framework;
- Continue the monitoring and supervision on health education to the sub-national levels;
- Continue seeking for the additional fund support for the national program and the sub-national levels;
- Continue strengthening the community-based health education (community, schools, pagodas, etc.);