



Government of Nepal
Ministry of Health
Department of Health Services
Epidemiology and Disease Control Division
Teku, Kathmandu, Nepal
ewarsedcd@gmail.com
www.edcd.gov.np

Malaria Update

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Dr. Bishwo Raj Khanal, Executive Director of VBDRTC, formally opening the session of Entomology Training Program.

Basic Training on Medical Entomology

Save the Children-Global Fund in coordination with EDCD organized a month long training program on medical entomology which was conducted from 18th Dec 2016 to 14th Jan 2017 at VBDRTC, Hetauda. The objective of this training was to build a critical pool of trained staff, at national, regional and district level for entomology surveillance and monitoring. A total of 19 participants from the regions and districts participated in the training. The participants attending the course were Entomologist /VCI/VCA/VCSO/VCSI/MI who are currently involved in vector borne disease control program.

During the opening session, participants were provided with the course documents (schedule, handouts, etc.). The program started with opening session under the chairmanship of Dr. Bishwo Raj Khanal, ED, VBDRTC.

Dr. Kiran Raj Awasthi, Program Manager from GF/SCI-Malaria Program, welcomed the participants and explained the objectives and expected outcomes of the training program. He stressed, "Entomological research is the weakest aspect of VBDs research in Nepal and the consequence of this is lack of data available on malaria causing vectors in Nepal". He also highlighted on the importance of training for vector control monitoring within the perspectives of elimination of VBDs, a major task for the participants when they returned to their respective duty stations. Likewise, Mr. Badri Nath Jnawali, Surveillance Chief from EDCD, stated that this training program would help the national vector borne disease control program to more effectively monitor the dynamics of vectors and their susceptibility to WHOPEs approved insecticides currently in use. In the program, it was also highlighted on different aspects of entomology particularly importance of entomological surveillance in the control of vector borne diseases.

The training program was divided into four main blocks, each block of seven days. The first week was devoted to theoretical classes and demonstration; the second week concentrated on field- and laboratory-based practical classes; the third week focused on entomological survey in the field while the fourth week was again dedicated to theory, demonstration, practical, revisions & general discussion classes, participant's evaluation and course evaluation. At the end of the training, participants were evaluated by means of written & practical test. Results clearly indicated an improvement in the performance of the participants between pre-test and post-tests, suggesting a satisfactory achievement of the concepts given during the course.

Orientation on Global Fund Program under Red Book Budget

In this period, two days orientation program for Regional Health Director, District Public/Health Officers, Finance personnel and Store Keepers conducted in Rupandehi, Makwanpur and Sunsari districts to cover the participants from the program districts of mid-west, west, central and eastern region. Altogether 137 participants including focal staffs from 22 program districts and 4 Regional Health directorates attended the orientation programs.

The objective of the program was to make participants aware on Global Fund budget allocated under malaria program to the districts and regions. The program focused on auditing process which orients the participants to spend allocated budget in correct headings with supporting documents. The program expected to make a focal person more accountable during the expenses of the budget with proper documentation.



Participants during the orientation program at Butwal

Basic Malaria Microscopy Training

Basic Malaria Microscopy Training was organized in District Public Health Office (DPHO), Kanchanpur and Mid-West Regional Health Directorate (MWRHD), Surkhet, a step to promote decentralized training centres other than VBDRTC. Both the training facilities have been furnished and supported by the Global Fund. Previously, such trainings were only organized at VBDRTC, Hetauda.

The objective of this training was to improve parasite diagnosing capacity of the laboratory staffs who had never taken malaria microscopy training before and worked in districts outside the global fund supported 25 program districts.



Basic Malaria Microscopy Training at MWRHD, Surkhet

The 25 days training started on 16th January in Kanchanpur and 18th January in Surkhet. There were total 30 lab staffs, 15 in each, participated from Baitadi, Bajhang, Darchula, Bajura, Doti, Achham, Dailekh, Kalikot, Jajarkot, Jumla, Mugu, Rolpa, Rukum, Salyan, Pyuthan, Baglung, Kaski, Arghakhanchi, Palpa & Gorkha districts.

As per the experience from previous training, pre and post-analysis of the participants demonstrated that the training program has significantly improved the microscopic skills in differential diagnosis of the parasites. The skills of the participants on good quality smear preparation and staining has also improved during training program.

Orientation to Physicians in Regions

One day orientation program for physicians organized in regions to make them aware on revised treatment protocol for malaria. The program was successfully conducted in Dharan, Nepalgunj, Butwal, Chitwan and Dhangadi on 11th, 16th, 20th, 23rd November and 1st December respectively. There were total 152 participants in the program. The program also focused on reporting treated malaria cases through hospitals including private sector into the HMIS system via the respective DHO/DPHOs.



Orientation program at Nepalgunj (left) and Chitwan

Slide Banking at VBDRTC

With the purpose of preparing quality malaria blood smears, technical team comprised of Mr. Ram Balak Ray and Kanjaya Kumar Chaudhary under the supervision of Dr. Bijay Bajracharya, Microbiologist from Vector Borne Disease Research Training Center (VBDRTC), Hetauda were mobilized in Darchula on December 2016. 600 malaria blood smears with proper thick and thin smears, of 32 varieties of different parasitic density of two different Plasmodium species - Plasmodium falciparum and Plasmodium vivax, were prepared from three malaria positive cases. These quality slides will be used as resource materials for future basic and refresher malaria microscopy trainings to be conducted at VBDRTC. The team has set the target of at least 10,000 good quality microscopy slides of various species and of different parasitic densities at VBDRTC for teaching, learning and on site proficiency testing.



School Health Program

School Health program was conducted with an aim to make the students responsible to prevent transmission of disease within their community through the dissemination of information from them to their family, relatives and the whole community. During this period, altogether 6,908 students received orientation and awareness class on malaria disease and preventive measures. The students were from 76 schools of high & moderate risk VDCs across 20 districts; Ilam, Jhapa, Morang, Sunsari, Sarlahi, Sindhuli, Udaypur, Rautahat, Mahottari, Bara, Parsa, Makwanpur, Chitwan, Nawalparasi, Rupandehi, Banke, Kailali, Kanchanpur, Dadeldhura & Surkhet. The program was successfully conducted in coordination with malaria focal persons from the respective districts.



School Health Program at Shree Kalika HS School, Rupandehi

Case Based Investigation

Case based investigation was conducted as per the cases notified in MDIS system via mobile sms. During this period, a total of 210 sms were received or notified in the system from different program districts out of which more than 150 cases were fully investigated. The team comprising of VCI & Lab personnel from the respective districts, local health facility incharge, Surveillance Medical Coordinators (SMCs) and entomologist promptly took the action for the investigation process.

TWG Meeting



Malaria Technical Working Group (TWG) meeting was held on 12th December, 2016 in the EDCD meeting hall. The main objective of the meetings was to form an expert's team to do an addendum to the existing NMSP 2014-2025. Similarly, the meeting proposed three members for developing an entomological training manual. The TWG also discussed on developing guideline for the implementation of malaria mobile clinic and verbal autopsy. The meeting was also successful to become agreed on purchasing G6PD kits from Govt. budget to treat malaria as per national treatment protocol.

Case Study:

Story of Tek Bahadur

After working for 24 months in Ethiopia, 41 year old, Tek Bahadur was all set to return home for the festivities when, one day, after work, he suddenly felt feverish, nauseous, loss of appetite and chills. A visit to the local doctor diagnosed him as a Typhoid case for which he was treated. The fever reoccurred after a week and again he was continued further treatment for Typhoid including IV drugs. The treatment worked and the symptoms eventually subsided. He came home to Nepal to celebrate Dashain and Tihar, after which he went to Bihar for a week to visit some friends. During that time, there was dengue outbreak in Bihar, and Tek Bahadur suffered from fever on his return to Nepalgunj, Nepal. Despite being suspected of dengue, scrub typhus or malaria and after being referred through three tertiary care centers including two in his hometown, he was discharged after the fever subsided. He was symptom free for another one week when the bouts started again. He visited a local physician in his home town who suspected Plasmodium malariae, a rare form of parasite, not common in Nepal and was treated with Artemether (patient had already undergone chloroquine and primaquine therapy before). Tek Bahadur had already spent more than 800 USD and was unaware that malaria treatment is free of cost in all the local public health facility. Further conversation during his investigation revealed that he had a history of similar episodes of fever during his 13 year stay in Gujarat in India before Ethiopia for which he was treated for Chikungunya along with malaria. After treatment, he has been symptom free for more than 2 weeks now and he owes his good health to the correct diagnosis of the doctors in his own country.

Glimpse of Program Activities



Monitoring visit in Letang PHC at Morang district.



Conducting case investigation at Fulbari VDC, Chitwan.



Loading LLINs to distribute in high & moderate risk areas of program districts.



Practical session for preparing quality slide (thick & thin smear) during Malaria Team Meeting in December 2016.

