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# Malaria Update

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## Workshop to Develop Strategy for Private Sector

*Dr. Dipendra Raman Singh from MoHP during his opening remarks directing the participants to unite and collectively work together to beat malaria.*

Epidemiology & Disease Control Division (EDCD) organized a one-day workshop to develop the strategy for private sector engagement in malaria elimination on 17th April 2019 at Kathmandu.

In a malaria elimination setting, all suspected malaria cases must be tested, identified, classified, documented and investigated. The private sector is often the first source of primary healthcare services, particularly in urban areas. These patterns are similar for malaria testing, treatment, and in some regions more than half of all treatment-seeking for fevers occur in the private/non-public health sector. The prominent role of the private/non-public health sector for healthcare services is likely a result of the greater availability and ease of access to private providers, availability of service round the clock, perceptions of the relative quality of services compared to the public sector and greater flexibility in time and prescribing medicine. The rural poor, who are often at a higher risk of malaria infection, are also more likely to use informal private/non-public providers in many settings.

Private/Non-Public health Institutions are crucial, particularly in settings where the private sector is a major source of healthcare. Timely diagnosis, notification of each malaria case, complete and timely reporting of all malaria cases and effective case management and follow-up is requisite for elimination. However, research on the role and performance of the private sector in malaria diagnosis, case management and recording reporting in malaria elimination settings is limited.

Hence, the workshop was fruitful to prepare a baseline information for development of most effective national strategy for private sector engagement in malaria elimination settings. It was conducted with the participation of representatives from Ministry of Health & Population (MoHP), Department of Health Services (DoHS), Federation of Nepal Chamber of Commerce and Industry (FNCCI), National Public Health Laboratory (NPHL), Health Management Information System (HMIS), WHO, JHPIEGO and from private hospitals. The program was honored with the presence of Dr. Dipendra Raman Singh from MoHP and Dr. Guna Raj Lohani, Director General of DoHS as a chief guest.

The objectives of the program was to outline and share the existing status of public and private sector programs in the country; to define and identify activities to engage the private sector for accelerating malaria elimination in Nepal; and to work together with the private sector to meet the targets set for elimination in terms of diagnosis, treatment, timely recording, reporting and referral of malaria cases.

## Role of Molecular Tools for Malaria Elimination Program

*- Dr. Narayan Raj Bhattarai*

Malaria is one of the world's most prevalent parasitic infections and is considered as a major public health problem in Nepal as well. Till now, *Plasmodium vivax* and *Plasmodium falciparum* are reported as an etiological agent of malaria in Nepal. However, precise data on epidemiology are always lacking e.g. risk factors for infection, transmission dynamics, relapse rate, drug resistance and parasite population structure etc. Likewise, analyzing the genetic diversity and the structure of the local parasite population in time and space would provide new insights on the local distribution and dynamics of parasite transmission. However, scantier studies have also been undertaken using conventional strategies like microscopy and serology which indeed do not provide enough evidences for the implementation of more effective tools and to improve its control therefore the application of molecular tools would be an important asset to strengthen its existing control strategies.

Among others, rapid diagnosis and adequate treatment with effective drugs are considered as main objectives of malaria elimination program but a difficulty in achieving this goal is represented by the occurrence of low parasitemia, which is not possible to detect by conventional microscopy and other methods. Similarly, the precise approaches are lacking to confirm the probable/suspicious cases, to identify asymptomatic carriers, to monitor drug efficacy, to understand the genetic structure of circulating parasites population and parasite tracking to evaluate the elimination strategies by conventional approach. In this context, development and application of DNA based methods like PCR (uses nucleotide sequence of *Plasmodium* parasites) can be an alternative to increase specificity, sensitivity and speed up the diagnosis procedure and would be also helpful to detect low level of parasitemia, to know the parasitic load, to understand the clinical severity and to explore the micro-epidemiology of disease by understanding the genetic structure of circulating parasite population in this region. That's why elimination program requires the application of molecular tools to detect clinically suspected malarial cases (confirmed and probable) which would also be an opportunity to implement latter not only the regular diagnosis of malarial cases but also to explore the genetics of parasite circulating in this endemic region as well.

*(Writer is Additional Professor in Department of Microbiology at B.P. Koirala Institute of Health Sciences, Dharan)*

## World Malaria Day Celebration

*Press meet to observe World Malaria Day*

Epidemiology and Disease Control Division (EDCD) organized a press meet on 25th April 2019 to share the National celebrate the World Malaria Day at National Health Training Center in Teku, Kathmandu. The day was celebrated with this year's slogan "Zero malaria starts with me".

The program was organized to share the information on malaria disease burden and the initiatives taken by EDCD malaria program to help the country reach elimination. The event also provided a platform for reporters from national media to promote and advocate for public awareness thereby supporting national program.

The program was formally chaired by Dr. Guna Raj Lohani, Director General from Department of Health Services (DoHS). Dr. Jos Vandelaer, Country Representative from WHO, Mr. Rajan Kumar Bhattarai, DCoP, from Save the Children International and Dr. Basudev Pandey, Director from Sukraraj Tropical & Infectious Disease Hospital (STIDH) were the high-profile attendees at the event. Dr. Bibek Kumar Lal, Director of EDCD welcomed the participants, shared the objective of the program and presented the national malaria strategic plan along with the national malaria status.

Similarly, Provincial Health Directorate (PHD) organized rallies in all 7 provinces to mark the day in their respective districts/areas. There was active participation from Ministry of Social Development (MoSD), PHD and Health Offices. Various community-based organizations, students, health workers took part in the rally which succeeded in raising awareness about the disease and the role of the communities in eliminating malaria.

## Microscopy Workshop for Private HFs


*Microscopy workshop for private health institutions in Rupandehi*

Epidemiology & Disease Control Division (EDCD) with support from USAID/MCSP-Jhpiego is running 2-day workshop on malaria microscopy for lab personnel working in private health facilities. The objective of this workshop is to enhance knowledge, skills and train laboratory personnel from private based hospitals and medical colleges in malaria diagnosis and contribute in national malaria elimination program through quality diagnosis and recording and reporting. The program was piloted in Chitwan district on December and 56 participants from different health institutions were participated in the workshop which was very much effective. The program is planned at major cities throughout the country where there is a greater number of private facilities providing malaria testing and treatment. The program conducted in Rupandehi and Palpa districts between 4th to 13th April had 71 participants from 58 private health institutions.

## HMIS Training on Malaria

Epidemiology & Disease Control Division (EDCD) in coordination with Save the Children/Global Fund organized a one-day HMIS training for non-public/private sector health institutions. The objective of the program is to reflect malaria testing and treatment records of non-public/private sector health services into the National Government system (HMIS). It also further stressed on the role of private sector in prompt, complete, and correct reporting to help surveillance activities.

The training program was organized for institutions from Kathmandu, Lalitpur and Bhaktapur districts which was conducted at World Trade Center, Kathmandu on 21st, 22nd and 23rd May respectively. Similarly, the program was conducted for institutions from Morang and Jhapa on 28th May at Biratnagar and 6th June at Birtamod respectively. The participants for the training were medical recorder or the person who were working in recording reporting section. Total 98 participants from 95 non-public/private institutions attended the program.

This type of training program was conducted in Chitwan district before and judging by the success of the training it is further planned to take place in 8 other districts. The program is fruitful to inform the participants about government strategy, current malaria activities and roles & responsibilities of non-public/private sector in malaria elimination. At the same time, they are oriented on malaria related HMIS forms/formats, data entry in DHIS-2, zero reporting, notification in MDIS etc.

*Group work during the HMIS training session conducted at World Trade Center, Kathmandu*

## Intervention in Humla

In the fiscal year 2075/076, a total of 13 positive cases from Humla notified in MDIS and reported in DHIS-2. The cases were from 3 municipalities; Tanjakot, Aadanchuli and Sarkegad rural municipalities where all the cases were *Plasmodium Vivax* and classified as indigenous. On 19th May 2019, a team was mobilized to Humla for distribution of Long-Lasting Insecticidal Nets (LLINs) and conduct awareness program to manage case and reduce malaria transmission during the peak transmission season ahead.

The team visited the municipalities and health posts in Maila HP, Madana HP, Gothelbada CHU & Kandagaun CHU at Tanjakot, Lauthi HP & Shreenagar HP at Aadanchuli, and Ripa HP & Saya HP at Sarkegad for discussion, orientation and coordination for malaria elimination. Moreover, community engagement and awareness activities on malaria disease was also conducted. Furthermore, household survey and distribution costs for LLIN distribution was incurred by the concerned local Municipality. A total of 3,845 LLINs were distributed through mass population in Ward No. 3 & 4 of Tanjakot, Ward No. 5 of Aadanchuli and Ward No. 2 of Sarkegad Rural Municipality in coordination with respective municipalities.

## Glimpse of Humla Intervention

*Long & close-up view of village at Tanjakot Rural Municipality where the intervention was done.*

*Transporting LLINs using muel as no accessibility of motor road in the intervening areas.*

*Vice-chairperson of Aadanchuli Rural Municipality distributing LLIN to the people living in Ward No. 5 at Aadanchuli.*

*Community awareness regarding malaria, use of LLIN and its importance at Lauthi HP in Aadanchuli.*

*Conducting ACD of febrile cases at Maila village in Tanjakot.*

*Team member passing on narrow trail to reach the destination.*

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