

Malaria Epidemic Detection Initiative in Oromia, Ethiopia



President's Malaria Initiative



Highlights:

- Expansion of epidemic detection site to Health Post Level reaches all primary sites
- Malaria in pregnancy: what is the situation in Ethiopia?
- Trends in confirmed malaria cases with Test Positivity Rate (microscopy and with RDTs)

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A partnership between Addis Continental Institute of Public Health, Tulane University, the

Updates on Ethiopian Malaria Epidemic Detection Initiative Project

By *Honelgn Nahusenay*

Meetings: Initially review meetings were conducted every 3 months in the primary sentinel sites. These meetings helped to keep health professionals at the sentinel sites updated on the activities of the project, trends in malaria morbidity, and other important issues. Currently the project has shifted to monthly review meetings in both the primary and secondary sites. This began in May, 2011 and since then a total of 3 review meetings were conducted in each of the health centers. The meetings enable health professionals and ACIPH staff to communicate in a open dialogue regularly. It is also a forum to share progresses on activities, data quality issues and other challenges observed in the sites.

Additional staff recruitment: ACIPH has employed 2 new surveillance officers. Currently, the total number of staffs working in the project has reached 16 and one surveillance officer is assigned for one primary and one secondary sentinel site. This will strengthen the quality of supervision and accountability more in the future.

Long lasting Insect side treated net distribution: in addition to surveillance activities, ACIPH has provided logistic support for the district health offices. At the request of PMI/E, ACIPH has transported a total of more than 100,000 bed nets from District Health Offices to Health posts in Kersa, Asebot and Tullu Bollo Health Centers. It have also given financial support to Tulu Bollo Health Center for the transportation of the bed nets to the village level.

ACIPH attended PMI partners meeting: the 12th PMI partners meeting was held in June, 2011 in Addis Ababa. ACIPH attended the meeting and presented the activities of the project. This meeting always creates an opportunity for

the team to update different stakeholders and receive information on the ongoing activities of other PMI partner organizations in Ethiopia..

Reporting System: The Malaria Epidemic Detection and Sentinel Surveillance project, in collaboration with Apposit LLC, have developed a new reporting system supported by Short Message Service. The reporting system allows health extension workers to report weekly malaria morbidity using their mobile phones using SMS messages. This was first started in Bublula health center and currently 10 health centers and 25 health posts are reporting using the system.



Increasing Sentential Sites: The total number of health posts serving as a sentential site has increased from 25 to 30 as of July 15, 2011. All health extension workers under Tulu Bollo health center have taken the initial training of the project and they have started to collect data on July 15, 2011. This will complete the expansion of sentential sites to health post level in all primary sites.



SMS follow-up supervision in Bulbula Health center, July, 2011



SMS training in Asendabo Health center, May, 2011

Malaria in Pregnancy (special topic)

By, Hana Gulima

Malaria infection during pregnancy is a serious public health problem, with substantial risks for the mother, her fetus and the neonate in malaria prone areas. The burden of malaria during pregnancy is mainly caused by *Plasmodium falciparum*. Every year at least 30 million pregnancies occur among women in malarious areas of Africa, most of whom reside in areas of relatively stable malaria transmission. The seriousness and symptoms of malaria during pregnancy depends on the intensity of malaria transmission and thus the level of immunity pregnant women acquired. In areas of low transmission, where levels of acquired immunity are low, women are susceptible to episodes of severe malaria, which can result in stillbirths or spontaneous abortion or in the death of the mother. In these types of areas, pregnant women have three fold risk of acquiring severe forms of malaria compared with non-pregnant women. In areas of high transmission of *P. falciparum*, where levels of acquired immunity tend to be high, pregnant women are susceptible to asymptomatic infection. In these areas the principal impact of malaria infection is associated with malaria related anemia in the mother and with the presence of parasites in the placenta. Resulting in fetal nutritional impairment and contributing to low birth weight. It has been estimated that malaria during pregnancy is responsible for 5–12% of all low birth weight and 35% of pre-

ventable low birth weight and thereby contributes to 75,000 to 200,000 infant deaths each year.

The World Health Organization (WHO) currently recommends a package of interventions for controlling malaria during pregnancy in areas with stable (high) transmission of *P. falciparum*, which includes the use of insecticide treated nets (ITNs), intermittent preventive treatment in pregnancy (IPTp) and effective case management of malaria and anemia. In Ethiopia, use of insecticide treated nets and effective case management of malaria are the two strategies adopted to prevent malaria in pregnancy. The use of IPTp has not been adopted as a national strategy in Ethiopia since Ethiopia has a generally very low level of malaria transmission.

The use of insecticide treated nets (ITNs) : Malaria prevention during pregnancy includes the use of **insecticide-treated bed nets (ITNs)**. Women should be encouraged to use ITNs as early in pregnancy as possible, throughout pregnancy, and in the postpartum period.

Intermittent preventive treatment (IPTp): Intermittent preventative treatment of pregnant women (IPTp) involves the administration of two or three

full, doses of an efficacious, preferably single-dose, anti-malaria drugs (e.g. sulfadoxine—pyrimethamine) at predefined intervals during pregnancy, beginning in the second trimester after quickening. IPTp can significantly reduce maternal anemia and low birth weight.

Effective case management of malaria and anemia: Anemia is one of the most important consequences of malaria infection during pregnancy. As part of routine antenatal care, every woman should receive iron/folate supplementation. All women should also be screened for anemia, and those with moderate to severe anemia should be managed according to national guidelines. Case management of malaria illness is an essential component of malaria control during pregnancy. Treatment aims to completely cure the infection, as any level of parasitaemia has consequences for mother and fetus.

Documenting the number of pregnant women with malaria in routine surveillance is important in order to appreciate any change in the occurrence of the disease in this group. Often there are challenges in capturing information on malaria in pregnancy in the health system

as clinicians fail to record the women's pregnancy status or record wrong status. This can lead to underestimates of the actual magnitude of the problem and misinform others such as policy makers. This could lead to delay possible actions to be taken. Thus, Accurately completing all fields in the register while recording patient information is crucial.

Table 1 shows the percentage distribution of malaria confirmed among pregnant women by sites. Guangua had higher percentage of confirmed malaria among pregnant followed by Dera,

Table 1. Percentage of Pregnant Women with Confirmed Malaria by Sentinal Sites from April, 2010-May 2011

Site Name	Confirmed Malaria in Pregnancy
Bulbula N= 331	35 (11%)
Asendabo N= 564	60 (11%)
Tulubolo N= 104	11 (11%)
Metehara N= 295	3 (1%)
Kersa N= 58	2 (3%)
Guangua N= 233	119 (51%)
Welenchity N= 51	2 (4%)
Dembi N= 34	0(0%)
Asebot N= 88	8 (9%)
Dera N= 26	4 (15%)
Total N=1788	244 (14%)

Selected results from the sentinel sites

Figure 2: Trends in confirmed malaria cases at the primary sites, since April, 2010.

The malaria trend at the primary sites has shown consistent reduction and remained low after December 2010; compared to April to June, 2010, significant change was observed for Bulbula and Tulubolo. In Bulbula, there was epidemic last year around June.

Figure 2. Trends of malaria confirmed cases at the primary sites, from April,2010-June 2011

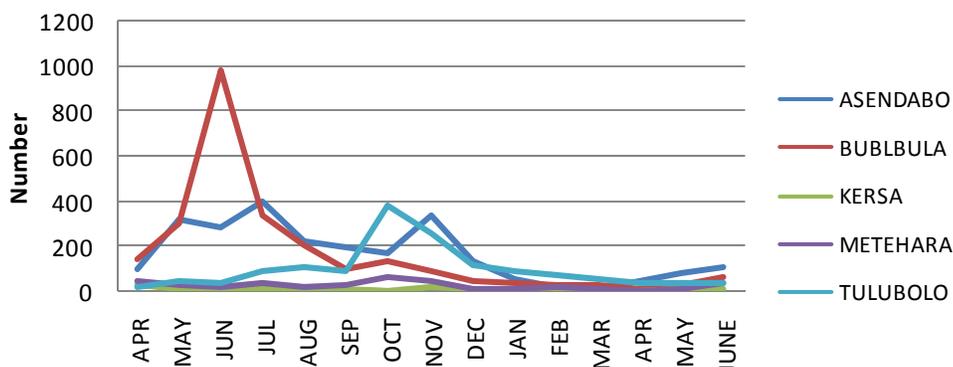


Figure 3. Trends of confirmed malaria cases at the secondary sites, from April, 2010-June, 2011

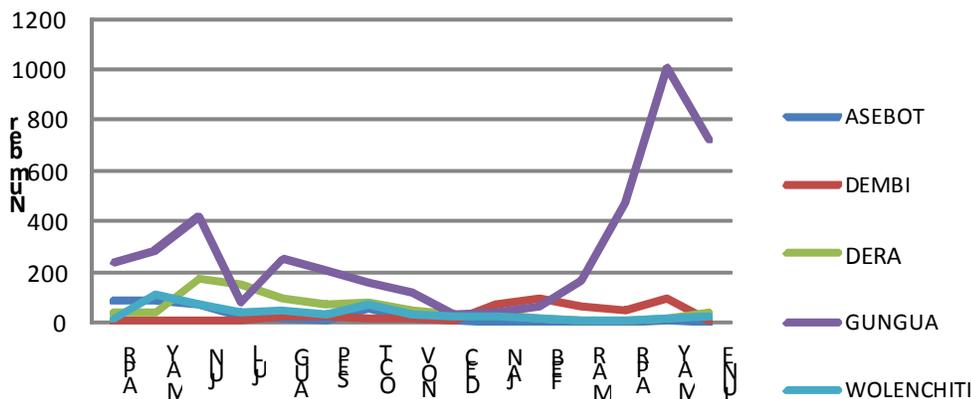


Figure 3: Trends at secondary sites

Cases at Guangua HC fell in June, 2011, but the facility remains in an epidemic situation.

There has been a slight increase in confirmed cases in Dembi health center as well. Otherwise the trend in the other facilities: Asebot, Dera, and Wolenchit has been consistently downward, and appears as though they will remain low throughout the main malaria transmission season.

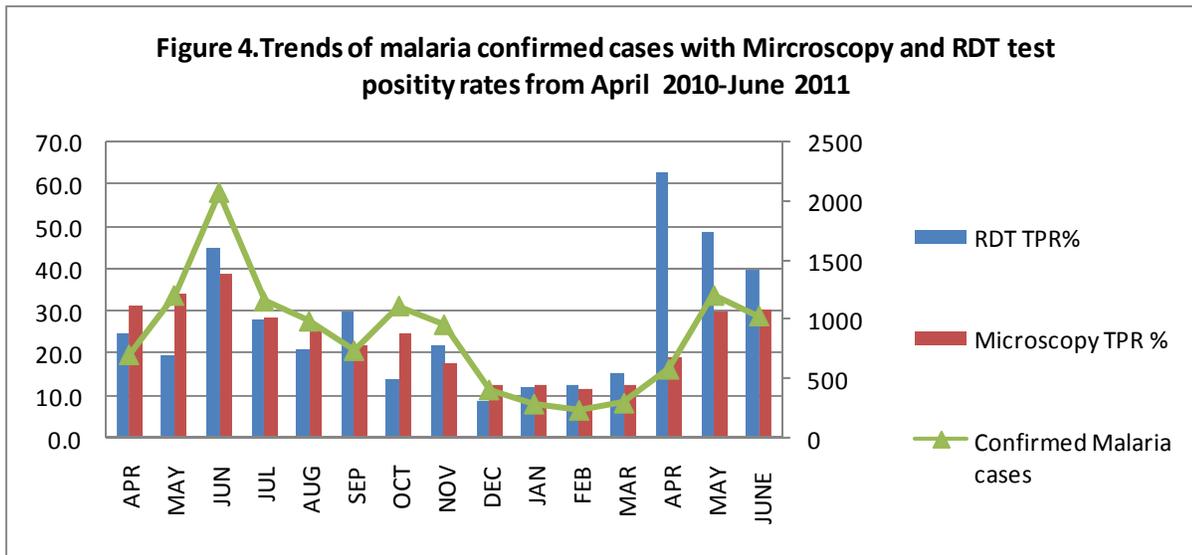


Figure 4: Summary of the trends in confirmed malaria cases with microscopy and RDT test positivity rate in all sites, since April, 2010. The trend in test positivity rate shows that higher test positivity rates coincide with the peak malaria seasons. In the last three months the test positivity rate was much higher for RDT compared to the Microscopy TPR.

According to the national guidelines, every patient with suspected malaria should receive a laboratory diagnostic test before being treated for malaria. Where microscopy is available, microscopy is the first choice for diagnosis, however, in the absence of microscopy the use of RDTs is recommended. At the epidemic detection sites RDTs are used during power cuts or stock outs of microscopy reagents.

For Further Information, please contact either ACIPH or Tulane University



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