

Malaria Epidemic Detection Initiative in Oromia, Ethiopia Newsletter



A partnership between Addis Continental Institute of Public Health, Tulane University, the Oromia Regional Health Bureau, MEASURE Evaluation & the United States Agency for International Development

President's Malaria Initiative



Highlights:

- Proper patient counseling is a useful approach to prevent anti-malaria drug resistance
- The malaria trend continues to show reduction in most of the sites.

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Anti-Malaria Drug Resistance and the Role of Patient Counseling

Anti-Malarial drug resistance is an important Public health problem in Ethiopia. The emergence of Malaria drug resistance in Ethiopia has necessitated policy changes that affected the first-line drug treatment of uncomplicated *Plasmodium falciparum* malaria from Chloroquine to Sulphadoxine-Pyrimethamine (SP).

Currently, Artemisinin-Lumefantrine, which is an Artemisinin-based Combination Therapy (ACTs), is the drug of choice for the treatment of uncomplicated *P. falciparum*. Artemisinin resistance has recently been documented in South East Asia although cure rates still exceed more than 90%. Any failure of artemisinin due to resistance would pose a major challenge since there is no current replacement for artemisinin.

ACTs is a combination of short acting artemisinin and a long acting drug lumefantrine. In areas where Malaria transmission is intense, the use of ACTs select for parasites resistant to the long acting drug lumefantrine. This is because patients who were treated with the combination drug might get re-infected when the duration of the short acting is over and the long acting drug is below the therapeutic levels required for killing of the parasite. This situation might facilitate drug resistance.

Drug resistance, which seems to occur through spontaneous mutations, confers reduced sensitivity to drugs. Drug resistance can also occur faster when there is a lot of drug pressure on the Malaria parasites eliminating susceptible ones and allowing resistant populations to survive. One study conducted in Southern Ethiopia showed 17.8% of Malaria patients self-treated at home with anti-malarial medication while 46.7% sought

treatment at health facilities after self-medication. It is therefore important to reduce overall drug pressure by limiting widespread use of anti-Malarial drugs. Transmission of mutant-derived gametocytes to the anopheles mosquito can spread drug resistance provided there are no changes in the resistant genes or the death of the vector.

Patient counseling is a useful approach that helps decrease non-compliance and medication-related problems. Lack of adherence to duration of therapy, poor absorption, incorrect directions and poor quality of anti-malarial drugs contribute to treatment failure but also indirectly to drug resistance.

Counseling increases patient's confidence and allows them to take their medications correctly while avoiding unnecessary hospital admissions. The clinician should explain to the patient what he/she is being treated for, how to take the medication, and what to expect from the medication. The Pharmacist should not only counsel the patient about the administration schedule but also about the common side effects of the anti-malarial drugs and their management. This approach will help improve patient compliance and allow the patient to complete the duration of therapy thereby reducing the exposure of suboptimal levels of the drug to the parasite.

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Selected Results from the Sentinel Sites (Health Centers)

Tulubolo and Kersa continue to have low number of lab tested patients. After the decline in February 2012 in Metehara, Bulbula and Asendabo, only Asendabo experienced upsurge around May 2012. However, the trend from April to August 2012 was lower compared to the same time last year for the three sites.

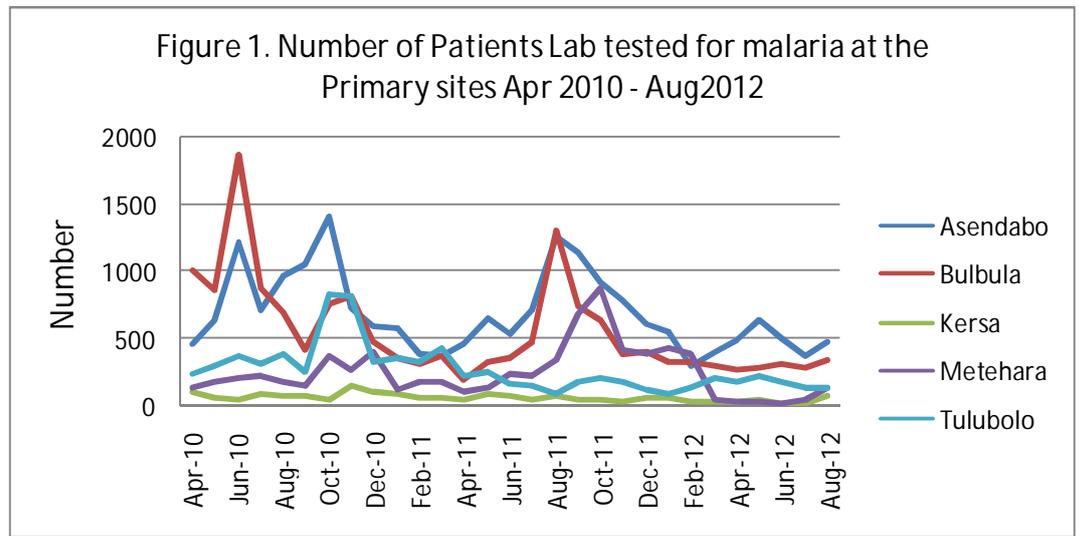
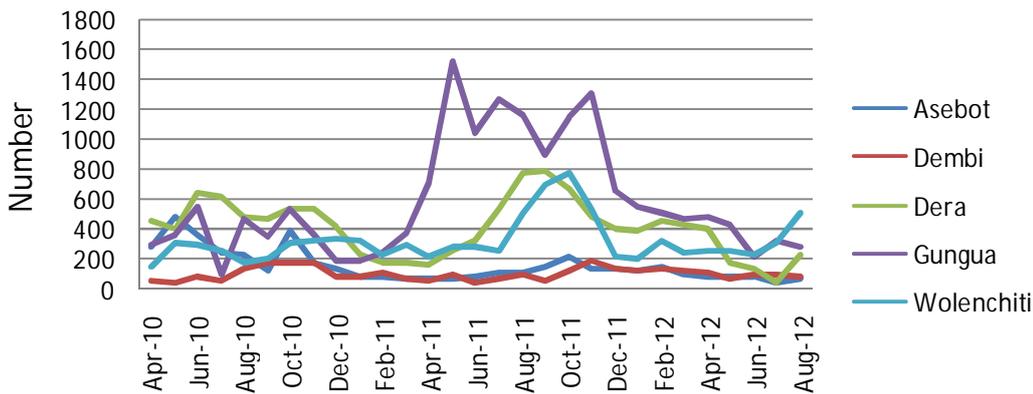


Figure 2. Number of Patients Lab Tested for Malaria at the Secondary Sites Apr 2010 -Aug 2012



The number of lab tested cases remained low throughout the year for Asebot and Dembi.

For Gungua, Dera and Wolenchiti, it falls after October 2011. While Gungua maintain low number of patients tested for malaria, Dera and Wolenchiti are experiencing a case buildup around June to July 2012 and afterwards.

After a seasonal case buildup in Bulbula, Asendabo and Metehara in July and August 2011, all the five primary sites continued to maintain low number of confirmed cases. However, Metehara has shown slight increment in August 2012 similar to the trend last year around the same time.

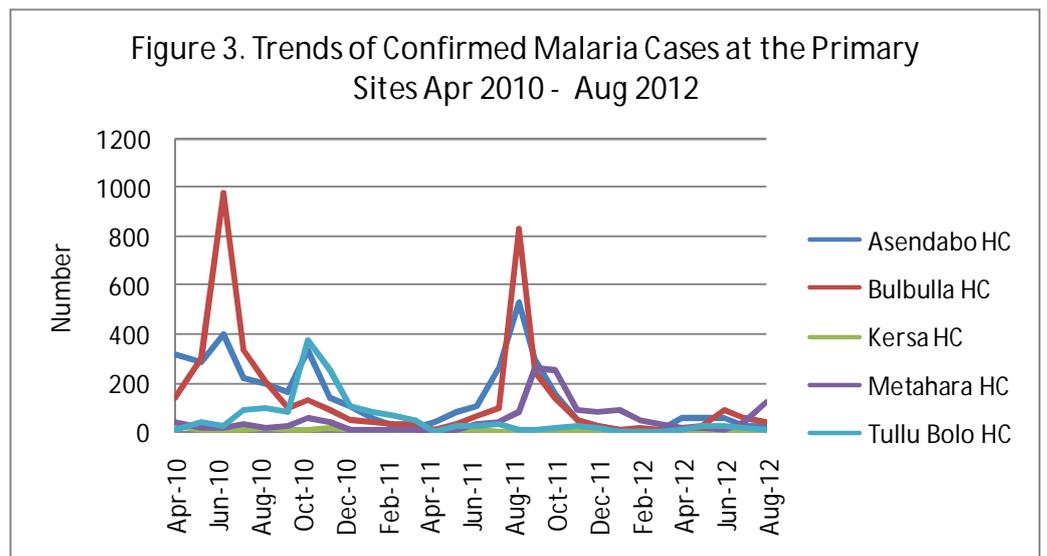
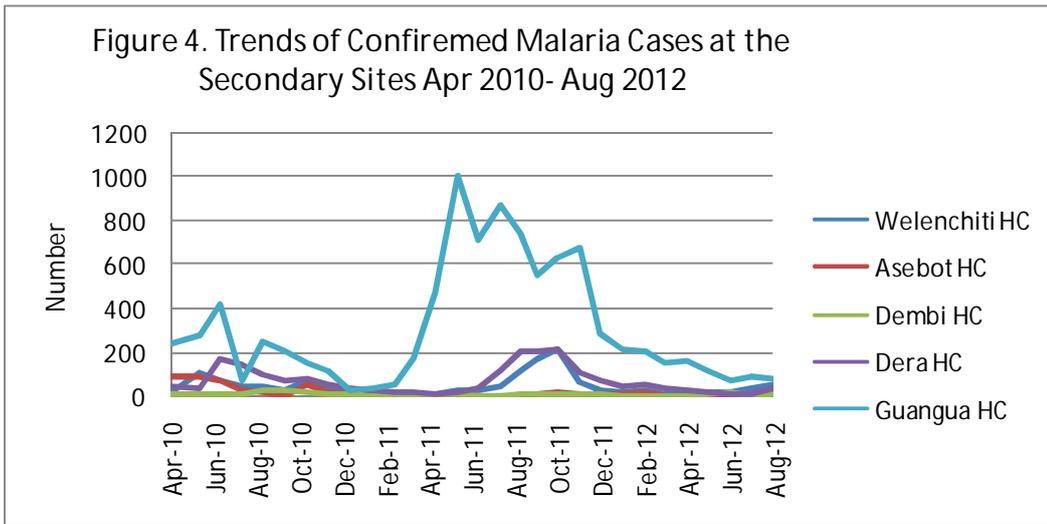


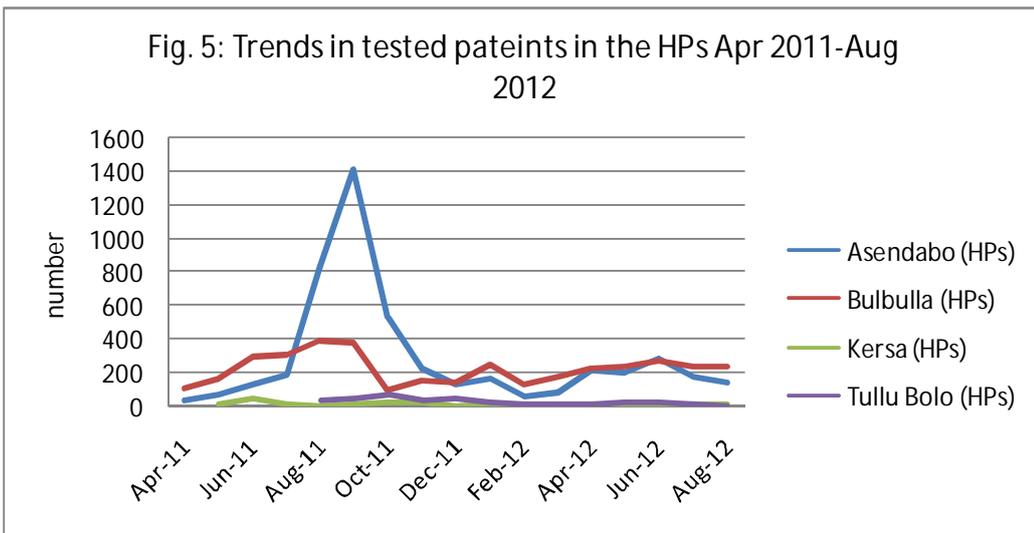
Figure 4. Trends of Confirmed Malaria Cases at the Secondary Sites Apr 2010- Aug 2012



The trend in malaria confirmed cases follow similar trend with the number of lab tested in the same sites. The trend for Gungua, Dera, and Wolenchiti, dropped after October 2011 and maintained lower number of confirmed cases through the year.

Selected Results from the Sentinel Sites (Health Posts)

Fig. 5: Trends in tested patients in the HPs Apr 2011-Aug 2012



After the reduction in the number of tested patients in February 2012 for Asendabo and Bulbulla gradual increase was observed around June 2012. the trend for Asendabo slowly decreased while Bulbulla maintained the same level till August 2012.

Kersa and Tulubolo continued to have very low number of tested patients

The trend in confirmed malaria cases remain low throughout the year for Kersa and Tullubolo.

after October 2011, the trend for Asendabo and Bulbulla also remained low. The high pick which was observed last year around July to September 2011 is not there this year.

Fig. 6: Trends of confirmed malaria cases in the HPs Apr2011-Aug2012

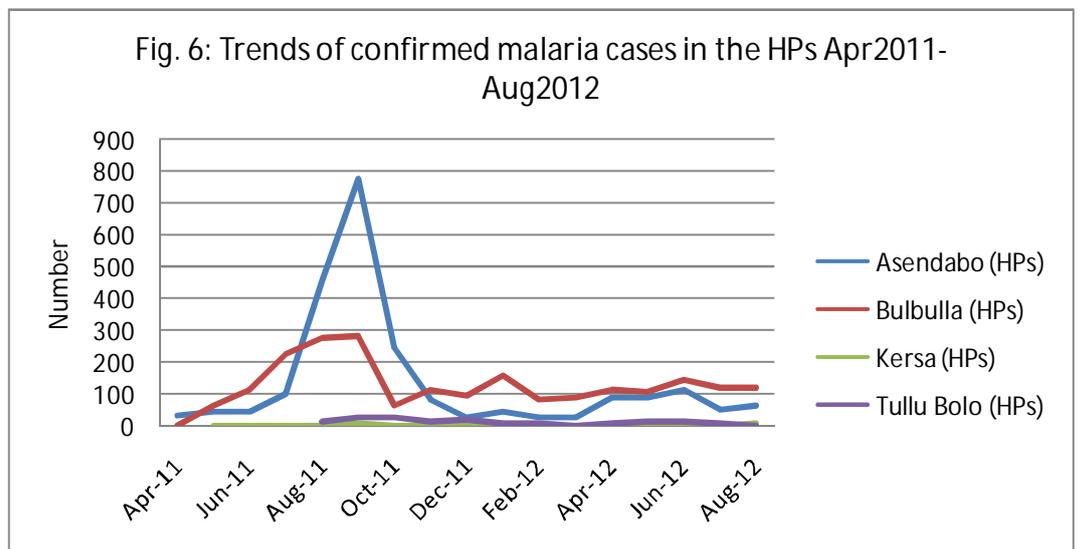
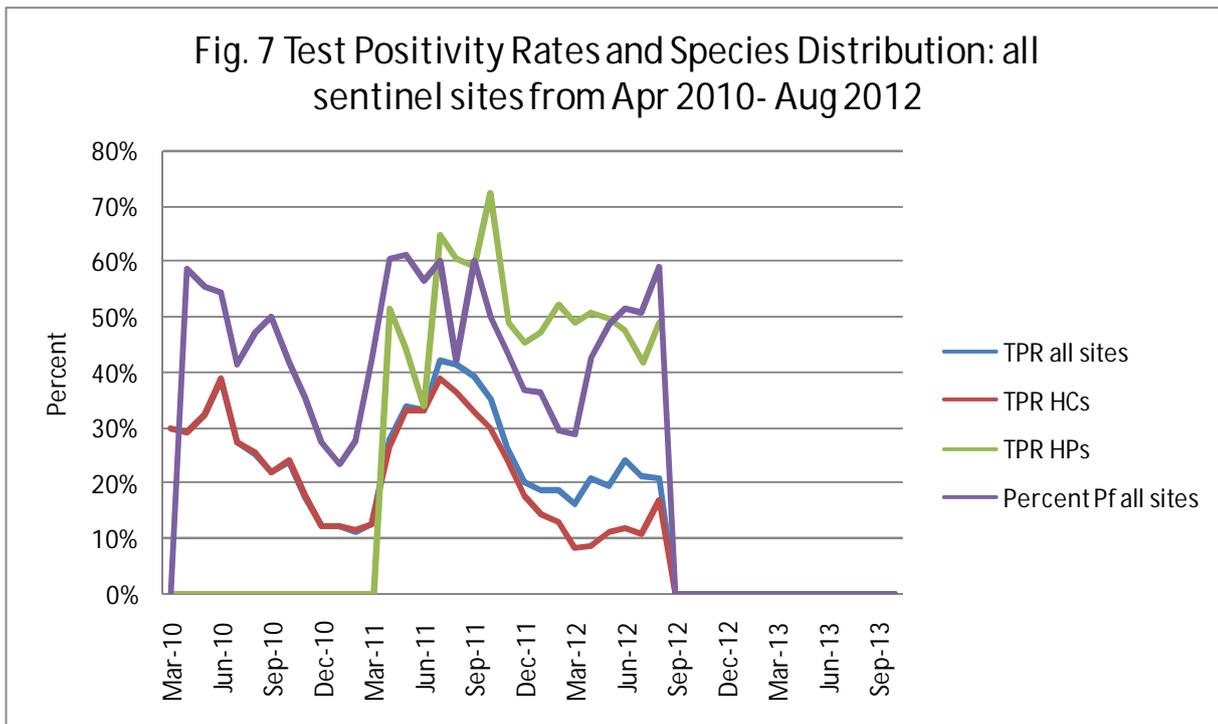


Fig. 7 Test Positivity Rates and Species Distribution: all sentinel sites from Apr 2010- Aug 2012



Peaks in test positivity rate coincided with one of the high malaria transmission seasons last year; however the trend continue to show reduction afterwards. the reduction in TPR also has similar trend with the reduction in percent of Pf cases in all sites. Test Positivity Rates at Health Posts remain higher than those at Health centers.

For Further Information, please contact either ACIPH or Tulane University



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