Malaria Surveillance Bulletin

DIVISION OF MALARIA CONTROL (DOMC) ▪ ISSUE 1 ▪ JUNE 2012

Message from the Program Manager

Welcome to the first Malaria Surveillance Bulletin from the Division of Malaria Control (DOMC). In our efforts to achieve the vision of malaria-free Kenya, surveillance remains a key strategy in malaria control. This bulletin is intended to be a scorecard of the progress made towards achieving the set targets in our National Malaria Control Strategy and Millennium Development Goals.

The Bulletin will be produced quarterly, and will report on key malaria indicators that are necessary to bolster our ability to predict, respond and monitor malaria situations in the country. Data on these indicators will be presented using the essential surveillance graphs as recommended by the World Health Organization (WHO) and adopted by the DOMC.

In addition, we hope the bulletin will provide a unique opportunity for counties to showcase their progress in terms of performance in Malaria control efforts. Maps and data summaries on key malaria indicators will be covered on a rolling out basis

The Malaria Surveillance Bulletin is produced by the Division of Malaria Control and is a quarterly production.

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Vision for a Malaria-Free Kenya

In order to realize the vision for a malaria-free Kenya, good quality data will be needed to inform our actions. The importance of accurate collection of data on malaria from facilities and timely reporting can, therefore, not be overemphasized. This is one area that will require concerted efforts from every health worker tasked with the collection, compilation and onward transmission of the weekly reports. In the last quarter the DOMC achieved several milestones; key among them was the completion of the external evaluation of the Affordable Medicines Facility for malaria (AMFm) that showed Kenya achieved all the objectives set by the pilot, although sustainability remains a challenge after the pilot ends in December 2012. In addition the quarter saw the start of mass net distribution in Coast Province supported by World Bank. The distribution was completed by September 2012. The roll out of the rapid diagnostic tests (RDT) to the whole country is expected in October. This is expected to increase the diagnostic capacity in the country in line with the policy in case management. Part of the roll out will be to undertake a one-day training of health workers on RDT use. Additional trainings on malaria case management are planned for both public-sector and private-sector health workers.

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As we wrap up activities under AMFm there will be training of health workers on community education on malaria followed by holding of community meetings by community workers in endemic and epidemic-prone malaria zones. As the division embarks on this quarterly bulletin we look forward to the continued support from all the stakeholders in malaria control. The information contained in this bulletin is essential for directing resources to the populations most in need and responding to unusual trends. This will ensure progress in malaria control and avoid wasting resources. This inaugural issue focuses on the achievements made towards data collection and production of the nine core surveillance graphs as recommended by the WHO.

WHO Malaria Core Surveillance Graphs

The nine malaria core surveillance graphs are aimed at helping monitor the malaria situation in the country based on the recommendation by the WHO. The graphs show performance in the nine core areas which include:

1. the outpatient malaria total positivity rate (TPR) among children under five years;
2. total inpatient malaria cases;
3. the total inpatient malaria deaths in children under five years of age;
4. the outpatient confirmed malaria cases and percentage of suspected malaria cases tested with positive-based tests;
5. outpatient all-cause cases and suspected malaria cases across ages;
6. the percentage coverage of patients treated with Artemisin-based Combination Therapies (ACT);
7. the number of antenatal care (ANC) clients receiving insecticide-treated bed nets (ITN) and second dose of intermittent preventive treatment (IPT2);
8. the percentage of health facilities without stockouts, and those with stockouts of ACTs, Rapid Diagnostic Tests (RDT) and long-lasting insecticidal nets (LLIN); and
9. the completeness of reporting and the percentage of health facilities and districts that report.

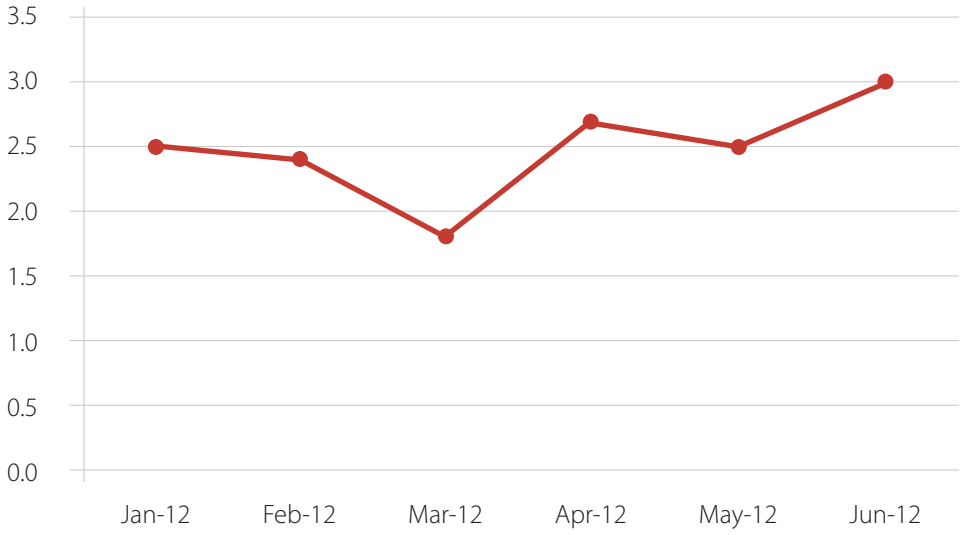
Practice View

In this premier issue, we present only 5 out of the possible 9 graphs. The five are covering both surveillance (3 graphs) and logistical aspects logistics (two graphs). Overall, these graphs are aimed at demonstrating the situation with regard to health facility diagnostic capability and malaria case management in Kenya. The five graphs were generated from the routine data sources including District Health Information Software 2 (DHIS2), Division of Disease Surveillance and Response (DDSR) weekly data reports and the Logistical Management Information System (LMIS).

OUTPATIENT CONFIRMED MALARIA CASES

Graph 1 shows the percentage of suspected malaria cases that were confirmed by use of microscopy or RDT per 1000 outpatients. Ideally, a rate of less than 1 case per 1000 people indicates readiness for elimination phase.

Graph 1: Number of Outpatient Confirmed Malaria Cases per 1,000 of Population



Sources: DDSR, HMIS, Census 2009

The month of March recorded the lowest number of confirmed outpatient malaria cases, before increasing to nearly 3 cases per 1,000 outpatients in June.

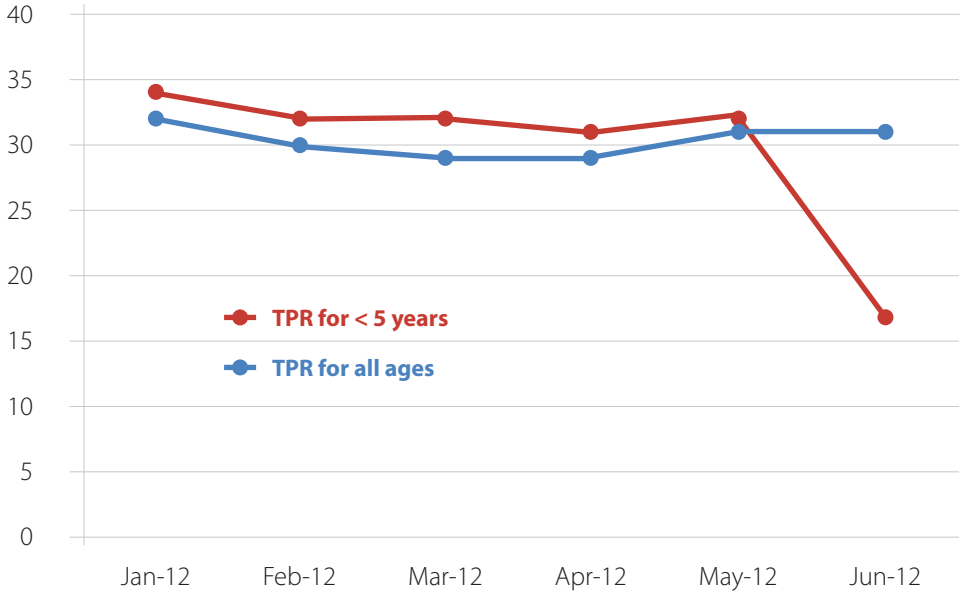
Outpatient Test Positivity Rates Among the Under 5 Years and All Ages

In Graph 2, the outpatient test positivity rates for the under fives and all ages are presented. The graph is based on data from the weekly reports by the Division of Disease Surveillance and Response (DDSR). The figure demonstrates the trends with regard to the percentage of the malaria cases that tested positive against the total number of cases tested for parasites over a period of five months.

Overall the number of cases that tested positive for all ages fell slightly from close to 32.5 to 29 percent between January and March 2012. There was however a slight increase to almost 31 percent between May and June.

Among the under fives, there was a decrease in the number of cases testing positive from 33.8 in January 2012, to 31.5 in April to nearly 31 per cent in May, before a further reduction to almost 16 per cent in June.

Graph 2: Outpatient Test Positivity Rates < 5 Years and All Ages



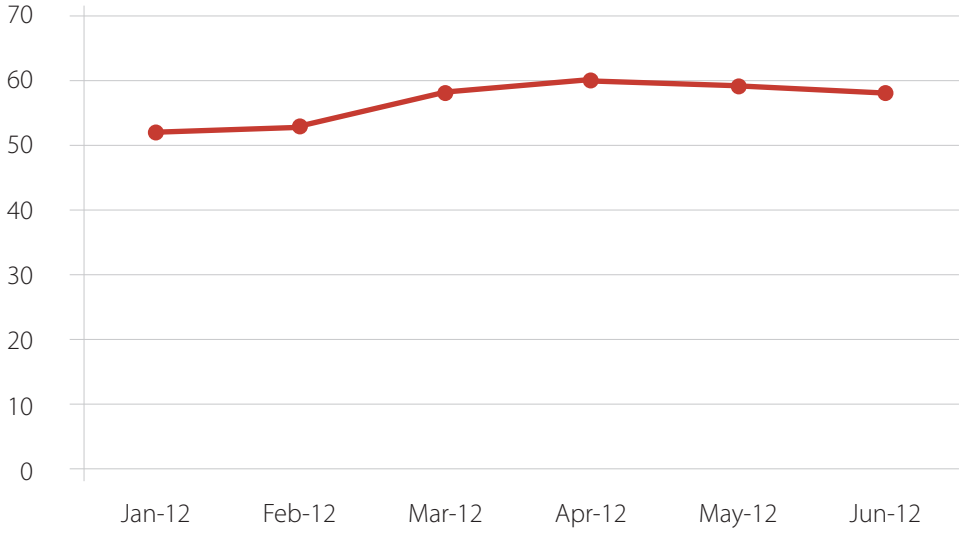
Source: DDSR

Suspected Malaria Cases Tested with Parasite-Based Test

The diagnostic capability of health facilities in the country is illustrated through the data presented in Graph 3, which is expressed as the percentage of the suspected malaria cases among the outpatients that underwent a laboratory diagnosis over the reporting period. This demonstrates the diagnostics capability of health facilities in Kenya which is very low given the number of facilities that can perform microscopy.

With the roll out of RDTs country wide, it expected that the percentage of suspected malaria cases being tested will go higher and achieve the global target of 90% and above.

Graph 3: Percentage of Suspected Malaria Cases Tested with Parasite-Based Test



Source: DDSR

This has obvious implications; key among these are resource wastage and the threat of developing resistance to ACTs due to misuse. It is, however, expected that the situation currently being observed will improve with the planned roll out of RDTs in all health facilities in Kenya.

Coverage for Outpatients Treated with Artemisinin-based Combination Therapy

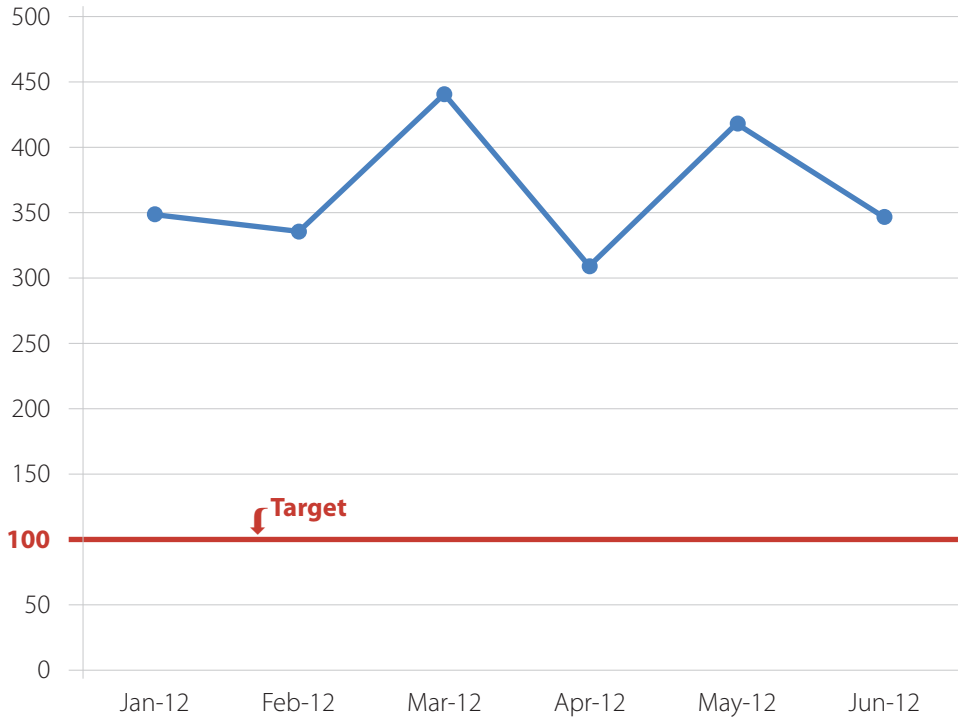
Kenya has adopted the policy of testing before treatment and the ACTs should only be administered to patients who are tested for malaria parasites using a parasitic laboratory test, and the results are positive. The ability of health facilities to achieve this has in the past been hampered by low coverage of the rapid diagnostic test kits (RDTs) or microscopy.

Graph 4 demonstrates the percentage of outpatient cases that were treated using artemisinin-based combination therapy over the reporting period. The entire reporting period recorded more than threefold use of ACTs over the expected target. Clearly, there is huge challenge in terms of the over consumption of ACTs in the country.

Percentage of Coverage with Outpatients Treated with ACTs and Number of LLINs Distributed at ANC

The prevention of malaria in pregnancy involves combination strategies that together are aimed at reducing maternal and perinatal morbidity and mortality occasioned by malaria. The strategies comprise the antenatal care (ANC) package that comprise at least two doses of intermittent preventive treatment for expectant women (IPT2), provision of Long Lasting Insecticide Nets(LLINs) and provision of prompt diagnosis and treatment of fever. Graph 5 shows the percentage of malaria cases among the outpatients who received appropriate anti-malarial treatment as recommended by the national policy.

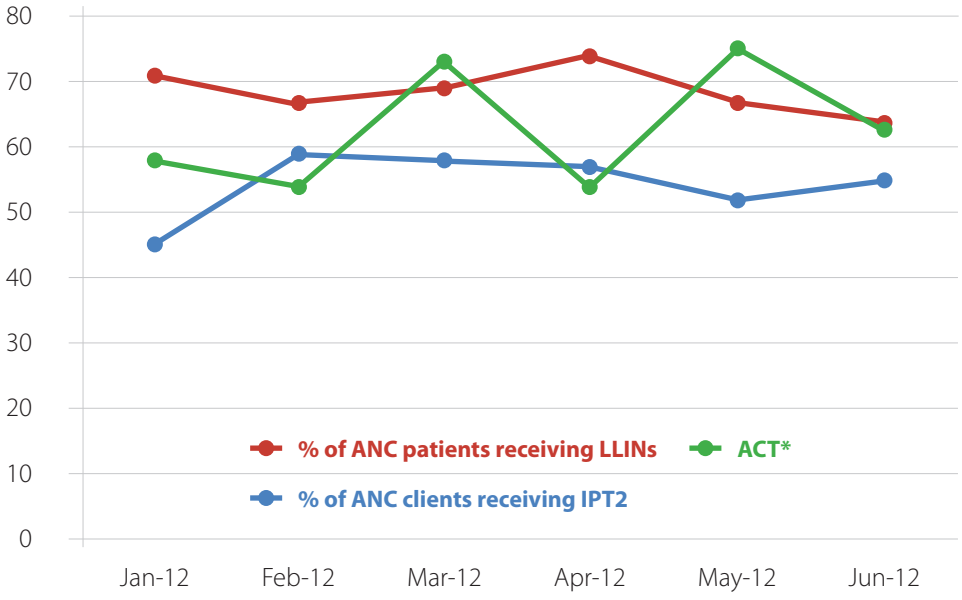
Graph 4: Percentage of Coverage with Outpatient Treated with Artemisinin-Based Combindation Therapy (confirmed cases)



Sources: DDSR/LMIS

Interestingly, the uptake of IPT2 remains low among pregnant women in the selected malaria zones, perhaps indicating the need to revisit the policy on intermittent treatment of malaria in pregnancy in the disaggregated malaria endemic and epidemic zones. Overall 69% of women attending their first ANC visit received an LLIN as per the policy, which was close to the expected target of 80%.

Graph 5: Percentage of Coverage with Outpatients Treated with Artemisinin-Based Combindation Therapy (All Malaria Cases) and of Antenatal Care Clients Receiving Insecticide Treated Nets or At Least Two Doses of Intermitte



Sources: DHIS/DDSR/LMIS

From the Counties

This section provides a general overview in terms of how the counties performed in data collection and reporting for selected malaria indicators as shown in Table 1. While there are numerous challenges relating to the quality of the data collected and reported, its clear that there is overtreatment of malaria cases across the counties, perhaps owing to the limited diagnostic capacity of the health facilities.

Table 1: Malaria Indicator Summary

Province	County	Quarter	Total number of malaria cases tested	Total number of outpatient confirmed malaria cases	Total number of outpatients treated for malaria	No of LLINs distributed to pregnant women	No of LLINs distributed to under 5 years
Central	Kiambu	4	33,732	3,839	7,302	2,583	1,480
	Kirinyaga	4	20,614	331	9,886	1,832	4,124
	Muranga	4	6,604	279	8,314	3,832	4,770
	Nyandarua	4	9,914	911	8,720	85	
	Nyeri	4	3,556	38	1,110		
Coast	Kilifi	4	24,919	3,220	55,293	6,098	7,844
	Kwale	4	29,176	9,645	47,354	3,980	3,693
	Lamu	4	3,825	177	7,922	412	
	Mombasa	4	46,882	13,012	42,107	2,413	2,826
	Taita Taveta	4	21,753	2,965	13,484	1,038	701
	Tana River	4	4,614	749	10,035	686	407
Eastern	Embu	4	45,357	15,673	60,558	2,428	3,021
	Isiolo	4	4,631	1,151	12,101	715	100
	Kitui	4	25,282	9,819	86,640	4,095	5,962
	Machakos	4	28,676	4,818	55,632	4,603	8,107
	Makueni	4	22,795	3,114	53,800	3,140	4,507
	Marsabit	4	3,654	487	7,828	158	1,208
	Meru	4	104,959	47,400	124,270	4,660	6,419
	Tharaka Nithi	4	34,285	9,066	54,913	1,852	4,106
Nairobi	Nairobi	4	38,438	7,400	40,730	418	370
North Eastern	Garissa	4	13,831	1,244	8,377	843	45
	Mandera	4	4,056	525	7,360	67	
	Wajir	4	6,106	1,979	9,697	256	383
Nyanza	Homa Bay	4	44,575	13,092	102,455	5,191	7,641
	Kisii	4	40,301	4,500	66,326	6,472	2,784
	Kisumu	4	46,185	17,325	106,593	7,665	6,850
	Migori	4	28,762	8,715	90,586	5,368	8,628
	Nyamira	4	11,638	412	34,287	3,338	4,638
	Siaya	4	58,067	25,532	134,986	3,639	3,823
Rift Valley	Baringo	4	8,415	2,322	44,022	3,415	3,477
	Bomet	4	8,353	656	36,914	4,439	4,685
	Elgeyo-Marakwet	4	4,743	1,272	24,303	2,101	2,813
	Kajiado	4	11,588	1,640	35,503	4,073	5,068
	Kericho	4	15,286	1,824	59,943	4,600	5,800

Table 1: Malaria Indicator Summary *continued*

Province	County	Quarter	Total number of malaria cases tested	Total number of outpatient confirmed malaria cases	Total number of outpatients treated for malaria	No of LLINs distributed to pregnant women	No of LLINs distributed to under 5 years
Rift Valley *continued*	Laikipia	4	5,015	913	12,631		
	Nakuru	4	28,565	7,923	92,097	86	1,058
	Nandi	4	14,069	3,257	67,368	4,530	4,716
	Narok	4	10,487	1,699	28,447	3,509	3,873
	Samburu	4	0	0	11,467	215	818
	Trans-Nzoia	4	23,055	7,486	49,869	4,224	3,636
	Turkana	4	22,653	10,533	34,045	1,215	986
	Uasin Gishu	4	21,571	6,568	62,137	6,022	8,340
	West Pokot	4	12,770	3,045	25,593	1,485	2,507
Western	Bungoma	4	67,525	30,958	125,054	7,670	11,375
	Busia	4	41,915	21,130	108,592	4,905	4,741
	Kakamega	4	91,414	37,970	197,348	10,210	11,161
	Vihiga	4	28,357	10,437	68,206	2,956	3,767
Total			1,182,968	357051	2,352,205	143,522	173,258

Sources: DDSR, HMIS

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