



# Uganda Malaria Quarterly Bulletin



Issue 9: January — March 2015

Uganda Ministry of Health | National Malaria Control Program | P.O. Box 7272 | Kampala | Uganda

## Editorial

Welcome to the 9th issue of the Uganda Malaria Quarterly Bulletin that is focusing on the first quarter of 2015. The aim of this bulletin is to inform district, national, and global stakeholders on progress achieved and challenges encountered in malaria control in Uganda, to encourage use of this information at all levels in order to foster improvement of our efforts and to highlight achievements and create awareness for increased resource mobilization & allocation in order to maintain the gains we have achieved.

In this issue, we introduce to you, the special edition section. This will cover topics of interest to the Malaria fraternity in detail, as a way of adding information to the national level narratives. We shall start with a focus on Indoor residual spraying, the districts covered and malaria burden, and the exit strategy from the old districts.

We are also delighted to report very good news coming in from the Malaria Indicator Survey conducted in December 2014 to February 2015. Preliminary results released show that the prevalence of parasitaemia in children under 5 years, by microscopy, has dropped from 42% in 2009 to 19% in 2014, a 55% reduction. This is complemented by the HMIS data in this report that has shown a consistent reduction of malaria burden since 2013.

Updates from the National Malaria Control Program include completion of the Malaria Reduction Strategic Plan and the Monitoring and Evaluation Plan 2014– 2020. We are happy to hear from you regarding this publication, and we welcome your contributions to subsequent issues. Thank you again and we hope this will be an informative reading for you.

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- Malaria burden for this quarter is the lowest since 2013. This is both for the out-patients and in-patients admissions.
- Malaria prevalence among children under 5 years, by microscopy, has reduced by 23 points from 42% in the 2009 MIS to 19% in 2014 MIS.
- Rapid diagnostic tests contribute over 70% of all laboratory tests done. Test positivity rates are also the lowest since 2013 at 38% of all malaria tests performed.
- The number of doses of ACTs consumed were twice as much as the malaria cases.

### **Editorial Team**

#### **National Malaria Control Program**

Okui A Peter, Program Manager

Katamba Henry

Denis Rubahika

Agaba Bosco

Mathias Mulyazawo

Vincent Katamba

Wanzira Humphrey

#### **Resource Centre**

Mukoyo Eddie

Kyozira Carol

Kissa John

#### **World Health Organisation**

Katureebe Charles

#### **US President's Malaria Initiative**

Kassa Belay

BK Kapella

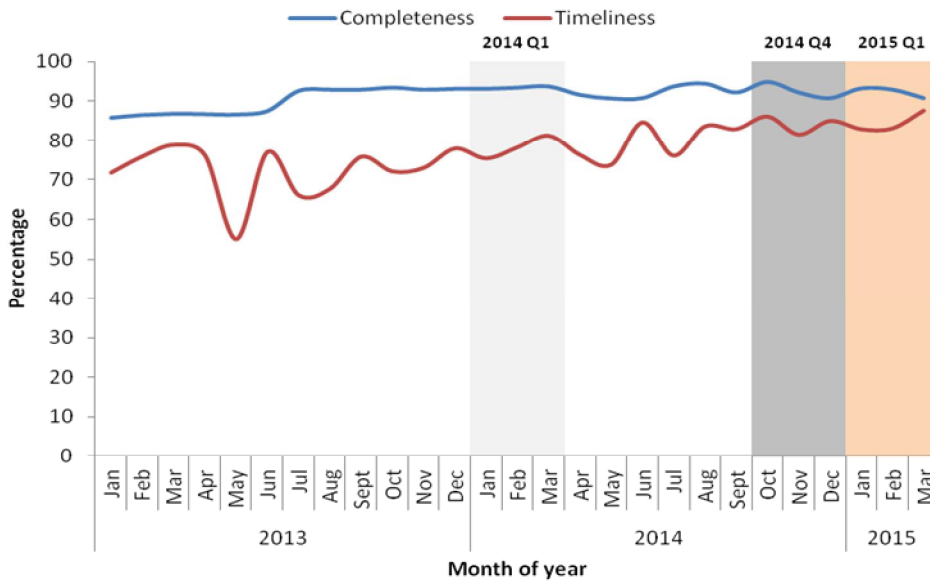
#### **Uganda Malaria Surveillance Project**

Ruth Kigozi

#### **African Leaders Malaria Alliance**

Gasasira Anne

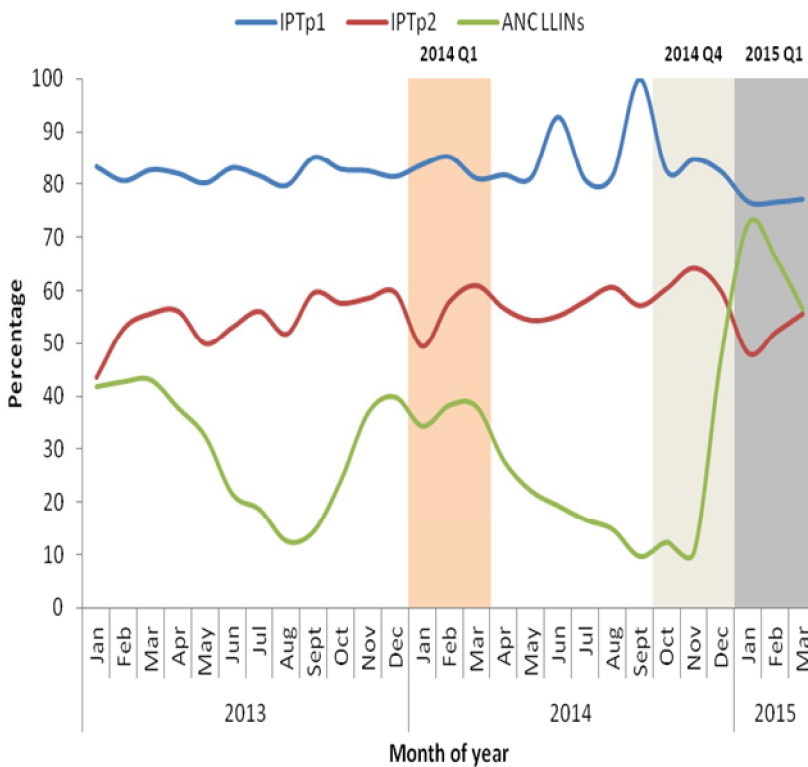
## HMIS reporting completeness



- The health facilities that send their data to the HMIS include all the public, private not for profit and some private facilities.
- Over 90% of expected health facilities send their monthly reports to the HMIS. Of these, over 80% send their reports within the first two weeks of the preceding month.

## Malaria Intervention updates

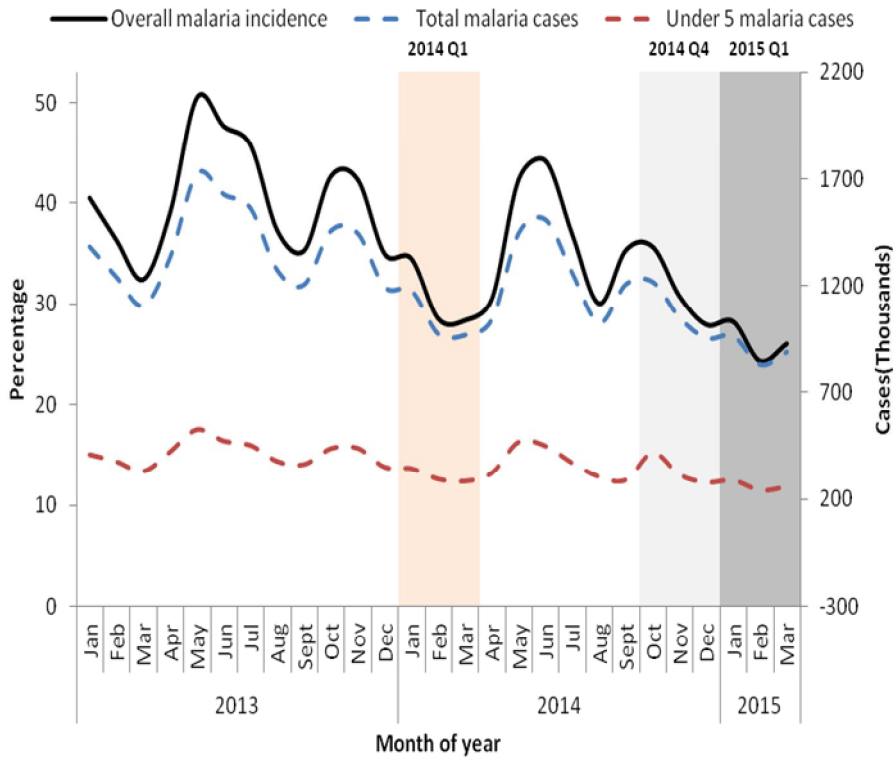
- After LLIN Universal distribution, the focus has now shifted to increasing LLIN usage. Routine ante natal LLIN distribution continues to be a major access channel especially for pregnant mothers.
- The first phase of IRS in the new districts has started with 7 of the 14 districts completed in December 2014. These include: Alebtong, Amolator, Dokolo, Kabaremaido, Lira, Otuke and Tororo district while the second phase-in is scheduled for May 2015 in Budaka, Bugiri, Butaleja, Kibuku, Namutumba, Pallisa and Serere district.



- The proportion of pregnant women attending their first ANC visit and receiving the first dose of IPTp continued to drop in this quarter (average 82 vs 76) as compared to the previous quarter, 2014 Q4.
- IPTp2 proportion in this quarter is still lower than IPTp1 with an average drop of 24%.
- The trend of IPTp2 coverage is similar to IPTp1, with lower proportion in this quarter as compared to the 2014 Q4 (average 64 vs 52)
- Proportion of routine ante-natal LLINs dropped by 10 points in this quarter (66 vs 56) of 2014 Q4.

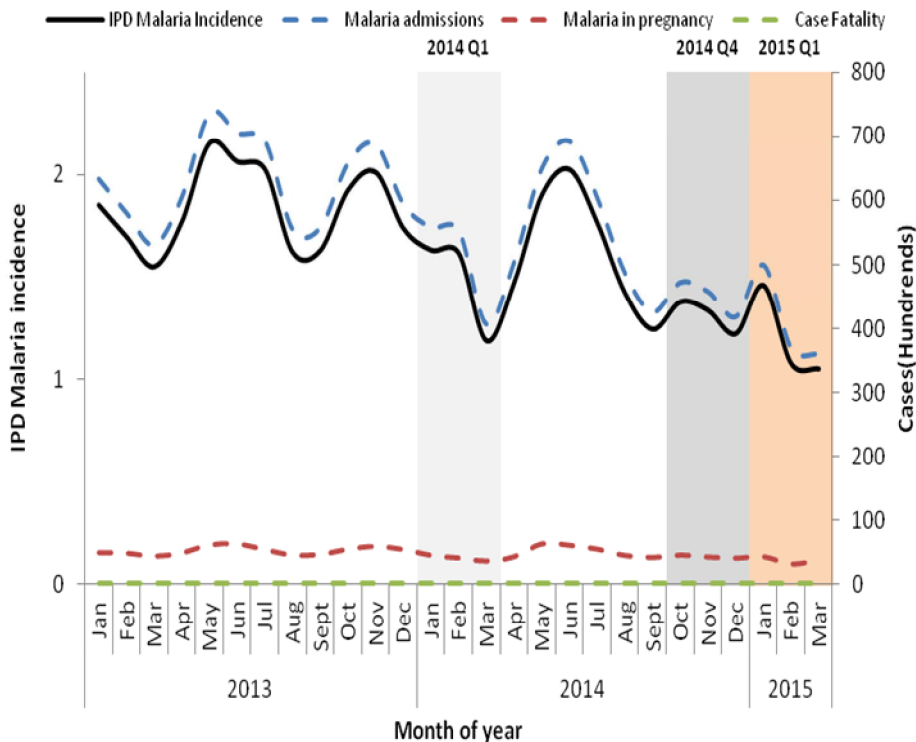
# Malaria Burden

## Out-patients



- This quarter recorded the lowest malaria cases since 2012.
- The number of monthly malaria cases diagnosed (lab confirmed and clinical) continued to drop from 953,627 cases at end of last quarter to 829,548 in March 2015
- Malaria incidence followed the same trend, from 28 case per 1,000 by end of previous quarter to 26 cases per 1,000 in March 2015.
- The number of children under 5 diagnosed with malaria contributed approximately 29%. There was a drop in number of malaria cases in this age-group from 276,556 in December 2014 to 238,961 in March 2015.

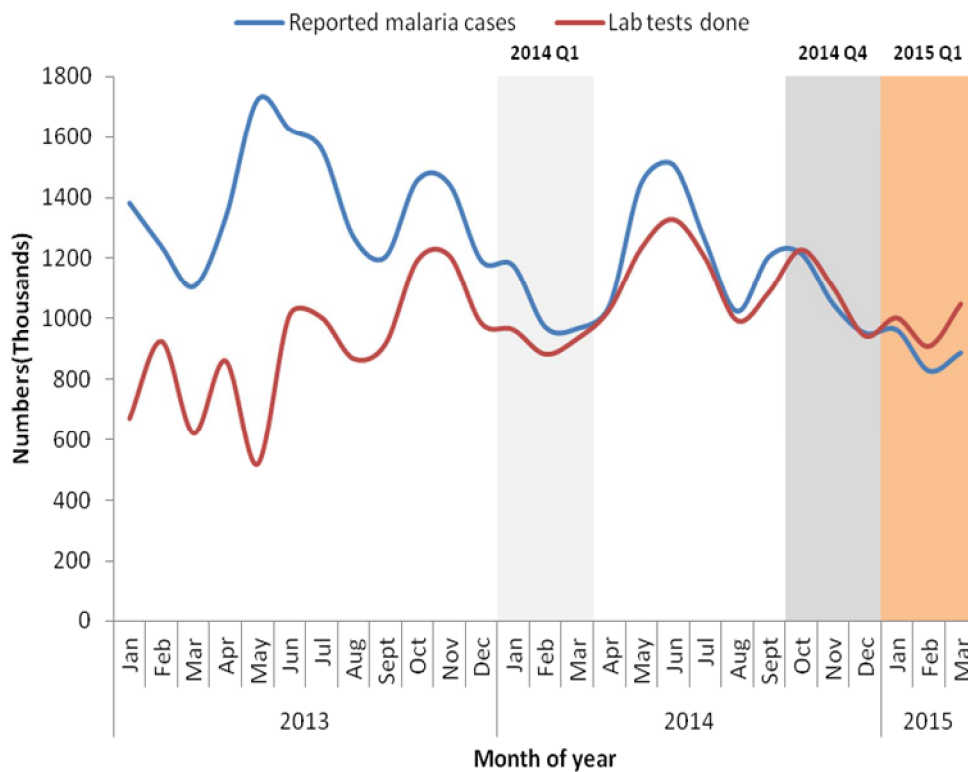
## In-patients



- The quarter also recorded the lowest number of malaria admissions from 2012.
- This quarter also recorded a drop in the number of monthly admissions from 41,840 to 36,863 in March 2015 when compared to end of 2014 Q4. In-patient Malaria incidence also followed the same trend.
- 10% of all admissions were among pregnant women.
- On average, malaria case fatality rate during the last quarter was less than 1%.

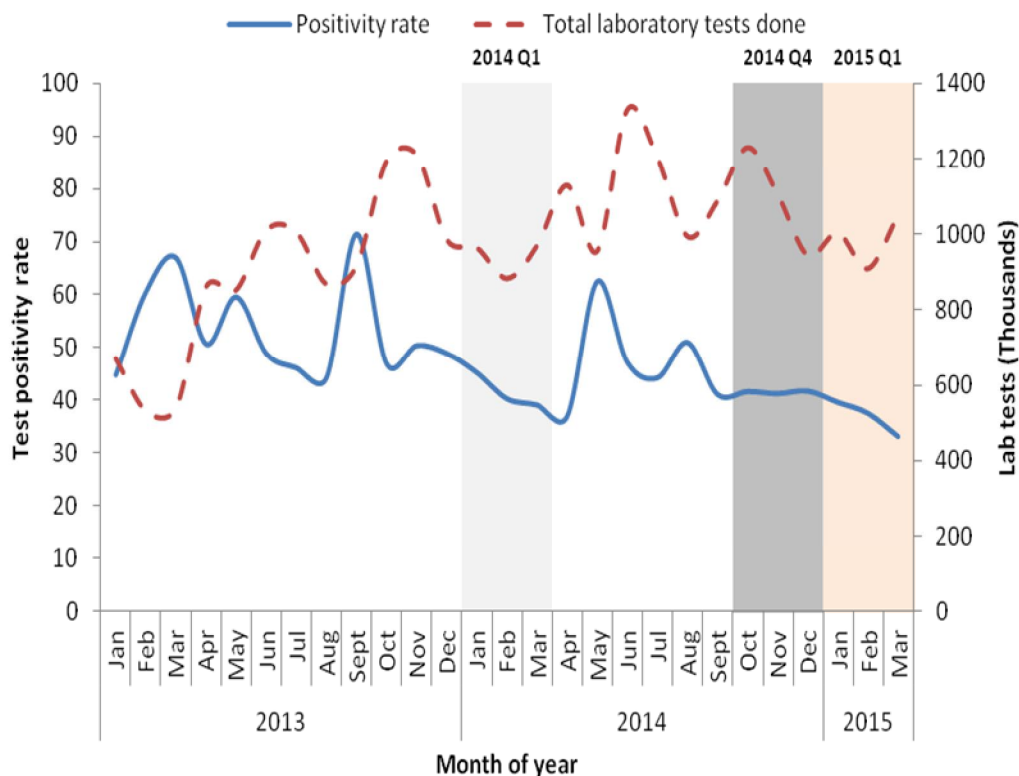
# Malaria diagnosis

## Comparison of reported Malaria cases with laboratory test done



- RDTs contribute over 70% of all the malaria laboratory tests performed in this quarter.
- The comparison of reported malaria cases with laboratory test done followed the same trend, with higher number of laboratory tests done compared to the number of malaria cases in this quarter (2,957,382 laboratory tests vs 2,682,501 malaria cases)

## Test positivity rate

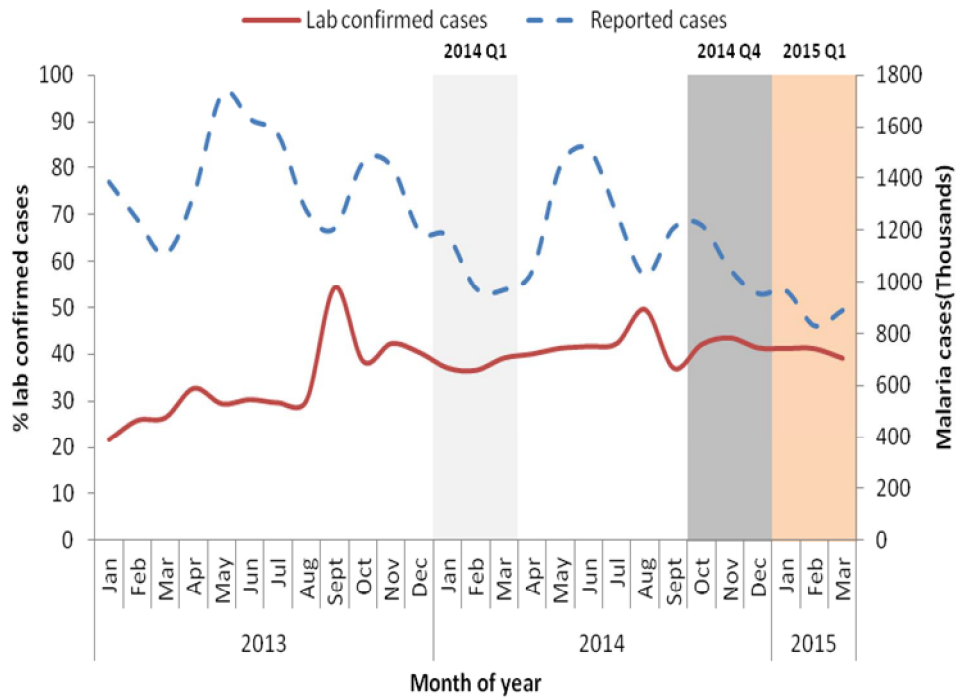


- Among those who had a laboratory test done, 38% had a positive result for malaria in this quarter.
- This is a drop of 3 points (41 to 38) from the previous quarter and a 4 points drop (42 to 38) from the same quarter of last year (2014 Q1)

# Malaria diagnosis

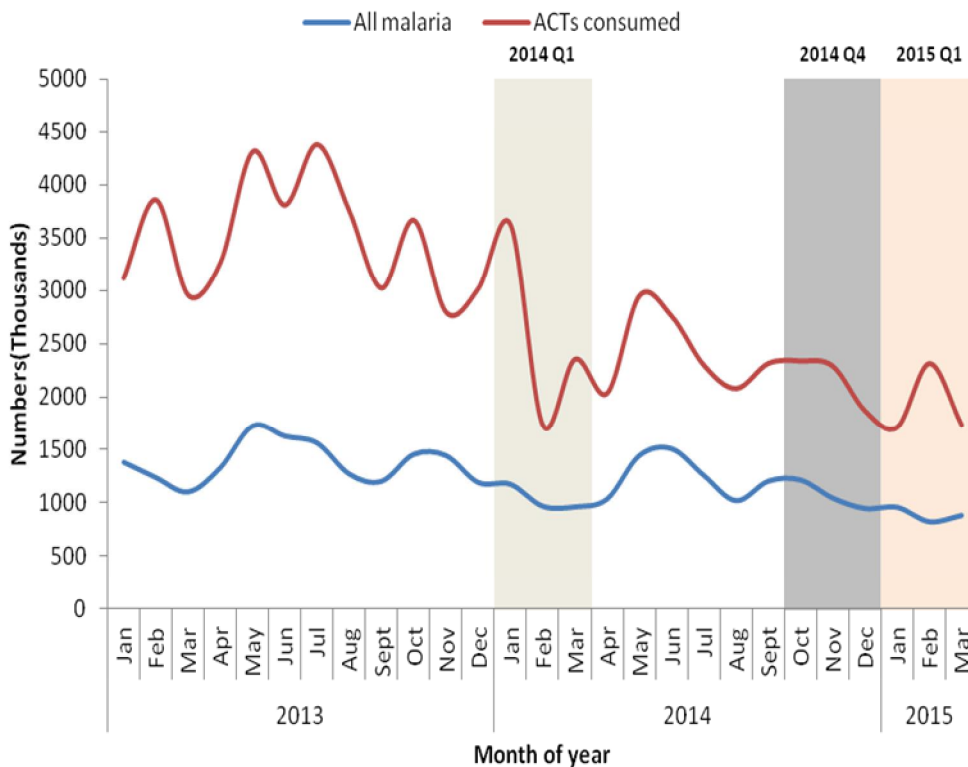
## Proportion of laboratory confirmed cases among all malaria diagnosed cases

- Among those diagnosed/ reported to have malaria, the average proportion of laboratory confirmed cases in this quarter was 41%, a similar trend with the previous, 2014 Q4.



# Treatment practices

## ACTs consumed



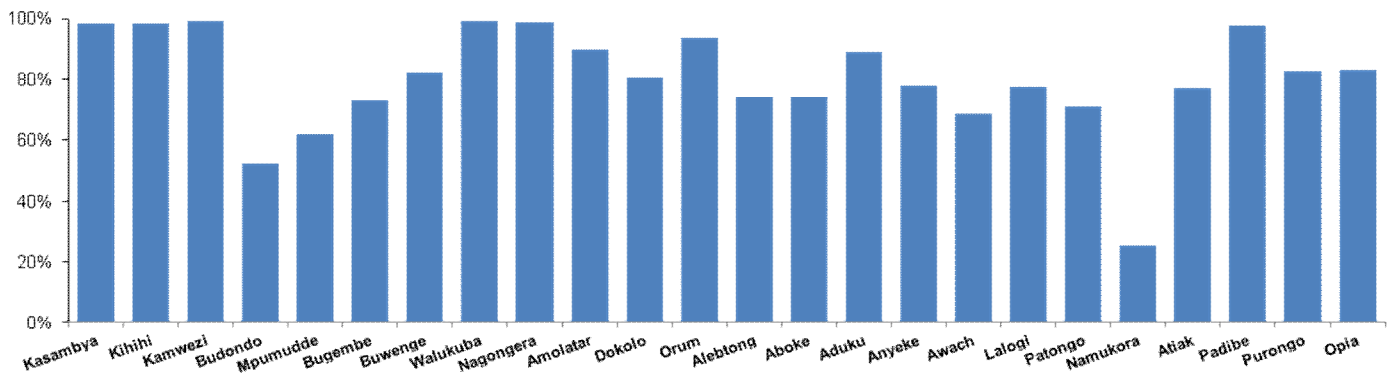
- The number of ACT doses prescribed is more than twice as much as number of malaria cases diagnosed. In this quarter, the number ACTs rose by close to 35% in contrast to the reducing number of malaria cases.
- The National Malaria Control Program, working with its partners are designing an operation study to study the reasons for this discrepancy.

# Uganda Malaria Surveillance Project

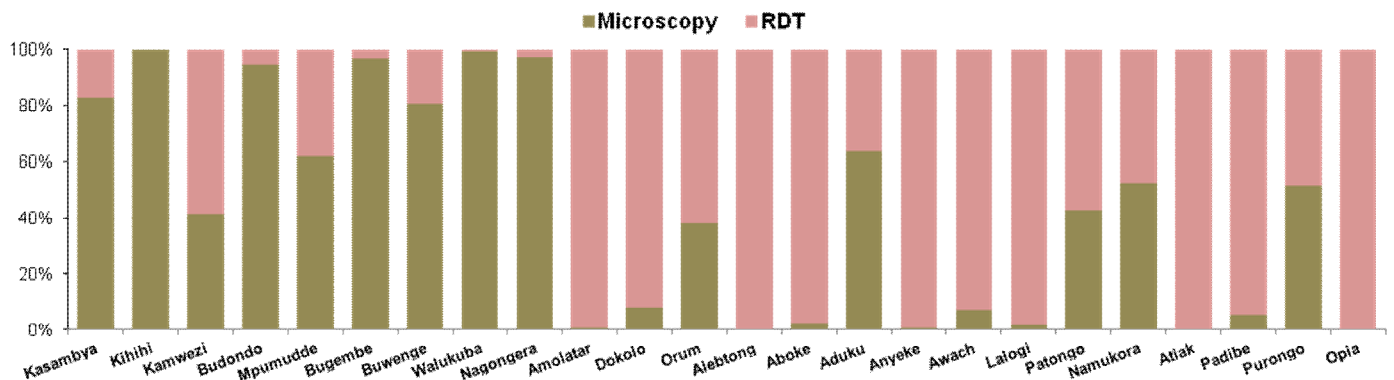
At the start of 2014, UMSP embarked on expanding the malaria sentinel site surveillance program with the overall aim of increasing geographical coverage of the malaria surveillance and attaining a more refined picture of the burden of disease in Uganda, beyond the scope of the six sentinel site surveillance districts. There are now 32 sentinel sites termed as the Malaria Reference Centres. The program is conducted within the existing HMIS system, strengthening HMIS to collect high quality malaria surveillance data. The system uses a modified HMIS outpatient register that includes two new columns capturing data on fever status, and laboratory testing status and results.

## Proportion of patients with suspected malaria for whom a lab test was done

Testing rates among suspected malaria cases were above 80% at all former sentinel sites and at Buwenge, Amolatar, Dokolo, Orum, Padibe, Purongo and Opia. The lowest rate, less than 59% was recorded at Namukoro

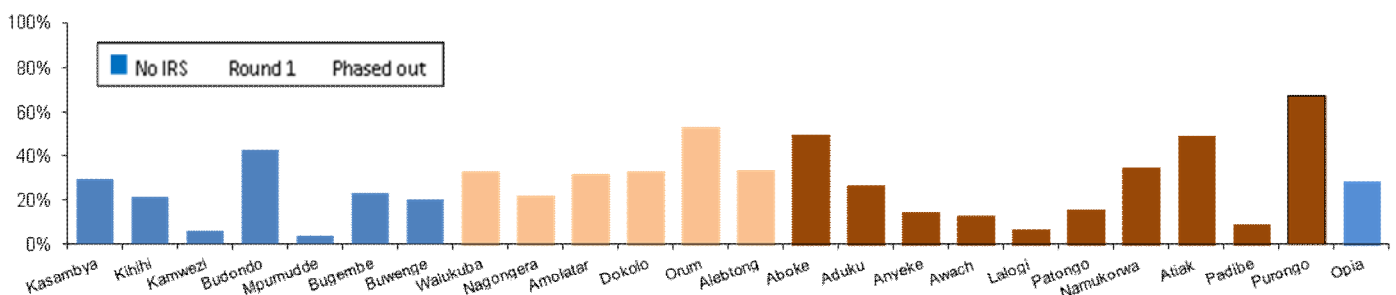


## Proportion of laboratory tests that were Microscopy or RDTs



## Test Positivity Rate (Jan – Mar 2015) and IRS status

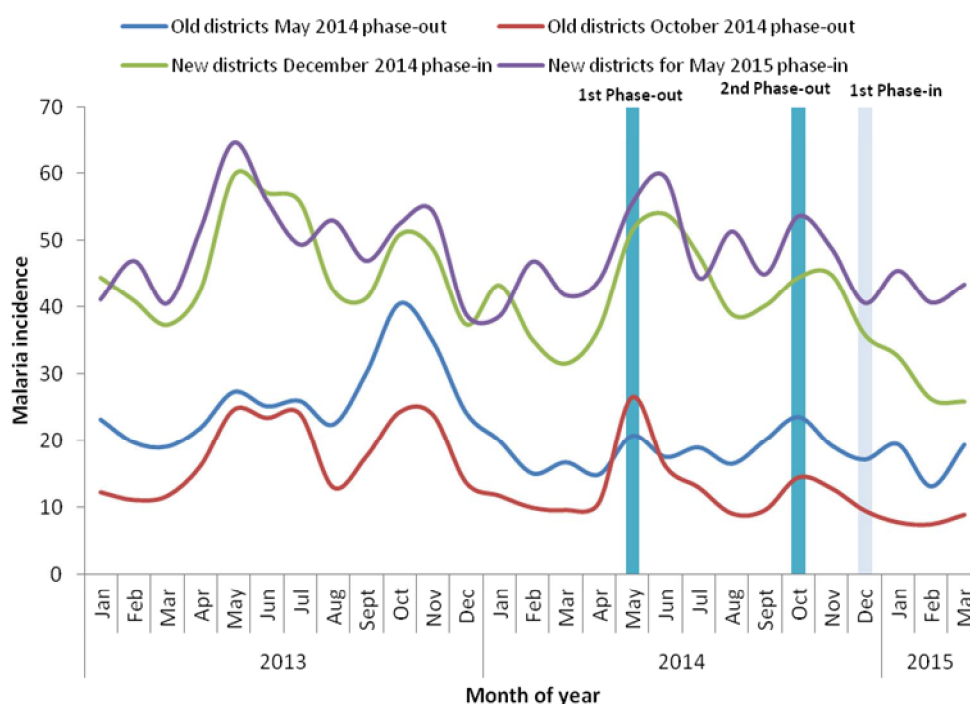
Test positivity rate ranged in this quarter from 4% (Mpumudde) to 67% (Purongo)



## Special Topic: Indoor residual spraying

- Indoor residual spraying, is a vector control method, recommended by the WHO and adopted by the National Malaria Control Program, as a Malaria intervention especially in areas of high transmission intensity. Uganda currently uses Bendiocarp, a carbamate, as the drug of choice for IRS since August 2010. This was after DDT, an organochloride and Alpha cypermetherine, a pyrethroid were phased out due to increasing mosquito vector resistance to these chemicals.
- The NMCP, together with its partners, Abt Associates and with support from Presidential Malaria Initiative started IRS in 2007 in 10 selected districts of Northern Uganda that included: Apac, Kole, Gulu, Amuru, Nwoya, Pader, Agago, Kitgum, Oyam and Lamwo.
- In September 2014, Uganda shifted IRS to 14 new districts that included: Alebtong, Amolatar, Dokolo, Lira, Otuke, Kaberemaido, Serere, Tororo, Pallisa, Kibuku, Budaka, Butaleja, Namutumba and Bugiri.
- This decision was based on evidence derived from the HMIS and from partners who included the Uganda Malaria Surveillance Project, which showed that IRS in the old districts had achieved a low malaria prevalence and disease burden.
- The phase-out was done in two periods of 5 districts each: Amuru, Gulu, Kitgum, Lamwo and Nwoya in May 2014 and Agago, Apac, Kole, Oyam and Pader in October 2014. Preparing the new 14 districts for IRS started in October 2014 with the phase-in also planned in two periods of 7 districts each: Alebtong, Amolatar, Dokolo, Kabaremaido, Lira, Otuke and Tororo district in December 2014 while Budaka, Bugiri, Butaleja, Kibuku, Namutumba, Pallisa and Serere are planned for May 2015.
- Steps were put in place in the 10 old districts, to maintain the achieved low malaria burden, termed as the exit strategy. These included:
  - Enhanced case surveillance in former IRS districts. Partners will collaborate to monitor and discuss surveillance data.
  - Any upsurges will be detected early with enhanced surveillance, and managed together with partners in accordance with MOH guidelines. Upsurges should be minimized with high LLIN coverage, spraying of neighboring districts, and improved case management.
  - Entomological surveillance will continue in six sites that will monitor the vector and offer appropriate and timely advice according to the MOH guidelines to the NMCP and district health teams.

## Comparison of malaria burden in old and new IRS districts



- The districts that were phased-out in October 2014 have the lowest malaria incidence (averaging 8 cases per 1000) followed by those phased-out in May 2014 (17 cases per 1000).
- While those phased-in December had a reduction of malaria burden from 44 cases per 1000 in November 2014 to 25 cases per 1000 in March 2015.
- The highest malaria incidence is in the 7 new districts that are planned for the May 2015 phase-in (averaging 43 cases per 1000)

# District Malaria burden

2011 DHS Regions	District	Malaria Incidence			% difference	
		2014 Q1	2014 Q4	2015 Q1	2015 Q1 - 2014 Q4	2015 Q1 - 2014 Q4
Central 1	Bukomansimbi District	44	39	37	-5	-20
Central 1	Butambala District	142	115	101	-15	-41
Central 1	Gomba District	79	70	51	-37	-55
Central 1	Kalangala District	103	92	82	-12	-25
Central 1	Kalungu District	72	51	56	9	-29
Central 1	Lwengo District	61	44	46	5	-34
Central 1	Lyantonde District	394	255	289	12	-36
Central 1	Masaka District	88	45	59	24	-49
Central 1	Mpigi District	96	64	57	-12	-67
Central 1	Rakai District	150	98	107	9	-40
Central 1	Sembabule District	61	70	57	-21	-6
Central 1	Wakiso District	57	49	45	-9	-27
Central 2	Buikwe District	70	64	65	3	-7
Central 2	Buvuma District	68	69	83	17	19
Central 2	Kayunga District	68	86	71	-21	4
Central 2	Kiboga District	45	54	43	-27	-4
Central 2	Kyankwanzi District	33	57	35	-63	5
Central 2	Luwero District	83	87	80	-9	-4
Central 2	Mityana District	90	93	91	-1	2
Central 2	Mubende District	88	88	64	-37	-37
Central 2	Mukono District	54	54	67	19	19
Central 2	Nakaseke District	85	88	66	-33	-29
Central 2	Nakasongola District	152	108	121	10	-26
East Central	Bugiri District	104	118	115	-3	9
East Central	Busia District	128	153	153	0	16
East central	Buyende District	49	59	63	8	23
East Central	Iganga District	111	115	110	-5	-1
East Central	Jinja District	107	90	120	25	11
East Central	Kaliro District	94	121	98	-24	4
East Central	Kamuli District	141	100	120	17	-18
East Central	Luuka District	131	89	119	25	-10
East Central	Mayuge District	106	107	87	-23	-22
East Central	Namayingo District	138	92	161	43	14
East Central	Namutumba District	138	158	153	-3	10
Eastern	Amuria District	62	95	65	-47	5
Eastern	Budaka District	158	166	136	-22	-16
Eastern	Bududa District	87	50	45	-13	-94
Eastern	Bukedea District	35	60	48	-25	28
Eastern	Bukwo District	119	101	88	-15	-36
Eastern	Bulambuli District	129	114	104	-10	-24
Eastern	Butaleja District	184	193	179	-8	-3
Eastern	Kaberamaido District	98	152	99	-53	1
Eastern	Kapchorwa District	112	116	115	-1	3
Eastern	Katakwi District	148	172	162	-6	8
Eastern	Kibuku District	100	93	89	-4	-12
Eastern	Kumi District	78	91	98	7	21
Eastern	Kween District	92	107	75	-43	-24
Eastern	Manafwa District	52	47	45	-3	-14
Eastern	Mbale District	101	57	51	-11	-97
Eastern	Ngora District	53	105	77	-35	32
Eastern	Pallisa District	118	139	129	-8	8
Eastern	Serere District	116	153	112	-37	-3
Eastern	Sironko District	73	83	81	-3	11
Eastern	Soroti District	162	188	157	-19	-3
Eastern	Tororo District	177	175	136	-29	-31



2011 DHS regions	District	Malaria Incidence			% difference	
		2013 Q4	2014 Q3	2014 Q4	2014 Q4 - 2014 Q3	2014 Q4 - 2013 Q4
Kampala	Kampala District	48	37	38	3	-26
Karamoja	Abim District	239	340	212	-60	-13
Karamoja	Amudat District	33	83	44	-89	25
Karamoja	Kaabong District	76	87	63	-39	-22
Karamoja	Kotido District	81	103	84	-23	3
Karamoja	Moroto District	105	133	93	-43	-13
Karamoja	Nakapiripirit District	91	124	95	-30	5
Karamoja	Napak District	74	83	64	-30	-15
North	Agago District	48	47	23	-101	-103
North	Alebtong District	44	60	29	-105	-53
North	Amolatar District	105	144	82	-75	-28
North	Amuru District	40	65	56	-17	28
North	Apac District	32	60	47	-30	32
North	Dokolo District	102	129	67	-91	-51
North	Gulu District	71	76	52	-46	-36
North	Kitgum District	38	43	42	-1	11
North	Kole District	17	18	10	-77	-64
North	Lamwo District	31	30	40	24	22
North	Lira District	75	79	58	-36	-29
North	Nwoya District	86	104	123	16	31
North	Otuke District	116	135	72	-86	-60
North	Oyam District	26	24	17	-46	-58
North	Pader District	29	25	15	-61	-90
South West	Buhweju District	71	32	23	-40	-215
South West	Bushenyi District	100	67	65	-3	-54
South West	Ibanda District	131	113	137	17	4
South West	Isingiro District	165	60	96	38	-73
South West	Kabale District	14	10	9	-17	-61
South West	Kanungu District	97	64	45	-42	-116
South West	Kiruhura District	146	119	127	6	-15
South West	Kisoro District	21	17	14	-21	-47
South West	Mbarara District	100	51	47	-8	-113
South West	Mitooma District	112	100	77	-30	-46
South West	Ntungamo District	129	184	95	-93	-35
South West	Rubirizi District	99	84	77	-9	-28
South West	Rukungiri District	105	92	64	-44	-64
South West	Sheema District	118	79	91	13	-30
West Nile	Adjumani District	101	120	93	-29	-9
West Nile	Arua District	82	100	110	9	25
West Nile	Koboko District	79	88	64	-37	-22
West Nile	Maracha District	78	118	86	-37	9
West Nile	Moyo District	84	100	66	-51	-26
West Nile	Nebbi District	103	159	101	-57	-2
West Nile	Yumbe District	39	70	41	-71	3
West Nile	Zombo District	57	43	41	-7	-40
Westen	Bundibugyo District	122	98	84	-17	-46
Western	Buliisa District	103	146	115	-26	10
Western	Hoima District	75	59	53	-10	-40
Western	Kabarole District	91	75	69	-8	-32
Western	Kamwenge District	97	117	79	-48	-23
Western	Kasese District	86	54	54	0	-58
Western	Kibaale District	47	44	34	-29	-37
Western	Kiryandongo District	46	80	54	-50	14
Western	Kyegegwa District	135	146	98	-49	-38
Western	Kyenjojo District	53	43	37	-14	-42
Western	Masindi District	60	59	43	-38	-40
Western	Ntoroko District	62	64	49	-31	-26

## Regional Malaria burden

2011 DHS regions	Malaria Incidence			% difference	
	2014 Q1	2014 Q4	2015 Q1	2015 Q1 - 2014 Q4	2015 Q1 - 2014 Q1
<b>National level</b>	85	84	73	-14	-16
<b>Central 1</b>	74	94	75	-25	1
<b>Central 2</b>	94	92	87	-6	-8
<b>East Central</b>	106	91	87	-4	-22
<b>Eastern</b>	77	71	66	-8	-17
<b>Kampala</b>	21	17	14	-21	-47
<b>Karamoja</b>	58	71	59	-20	1
<b>North</b>	88	73	66	-10	-33
<b>South West</b>	94	98	86	-15	-10
<b>West Nile</b>	81	104	71	-46	-13
<b>Western</b>	91	88	75	-18	-22

## Indicator definitions

- Malaria cases reported/diagnosed comprises both laboratory confirmed and clinically diagnosed cases
- Absolute number of malaria cases (OPD and IPD) and number of laboratory diagnostic tests done (Microscopy and Rapid diagnostic tests) during the month
- Malaria incidence : Number of malaria cases diagnosed per 1000 population per month( in graphs) and quarter( in tables)
- Case fatality: Percentage of deaths among all malaria related admissions
- Comparison of reported malaria cases with laboratory tests done : Total laboratory tests done divided by the total malaria reported cases.
- Test positivity rate: Percentage of malaria positive laboratory tests among all tests done (Microscopy and RDTs)
- Proportion of diagnosed cases with a positive laboratory test
- IPTp1, IPTp2 and ANC coverage: Percentage of pregnant mothers attending their first Ante natal visit who receive IPTp1, IPTp2 and ANC LLINs
- Reporting completeness: Percentage of monthly reports received from health facilities in relation to the expected
- Reporting timeliness: Percentage of monthly reports received from the health facilities within two weeks of end of month.
- Malaria prevalence by microscopy among children 0-59 months is the proportion of children in the community in that age range with a positive blood slide result for malaria.