



THE REPUBLIC OF UGANDA

UGANDA MALARIA SURVEILLANCE PROJECT

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UMSP sentinel site malaria surveillance report November 2009

Introduction

Uganda Malaria Surveillance Project (UMSP) manages 6 sentinel sites located around the country with varying malaria transmission intensity. Based on historical entomological and epidemiological data these sites include two with relatively low transmission intensity (Kamwezi and Kihhi), two sites with medium transmission intensity (Walakuba and Kasambya) and two sites with high transmission intensity (Nagongera and Aduku). The sentinel sites collect high quality malaria data, which is analyzed to produce monthly reports. Data is presented by sentinel site in the order of historical levels of transmission intensity. These reports aim to give an overview of the malaria situation in the different parts of the country where the sentinel sites are located. UMSP also maintains a website umsp.muucsf.org that can be accessed for more information

Data summary

District	Site	Total number of patients seen	Patients < 5 years of age (number and proportion) ¹	Malaria suspected (number and proportion) ¹	Patients sent to the laboratory (number and proportion) ²	Laboratory confirmed malaria (number and proportion) ³
Kabale	Kamwezi	2261	436 (19%)	1045 (46 %)	977 (93%)	504 (52%)
Kanungu	Kihhi	2567	928 (36%)	1970 (77%)	1920 (97%)	909 (47%)
Jinja	Walukuba	3328	794 (24%)	2166 (65%)	2098 (97%)	896 (43%)
Mubende	Kasambya	1284	430 (33%)	1057 (82%)	1046 (99%)	419 (40%)
Tororo	Nagongera	2204	748 (34%)	1297 (59%)	1076 (83%)	500 (46%)
Aduku	Aduku	1997	766 (38%)	1340 (67%)	1283 (96%)	765 (60%)

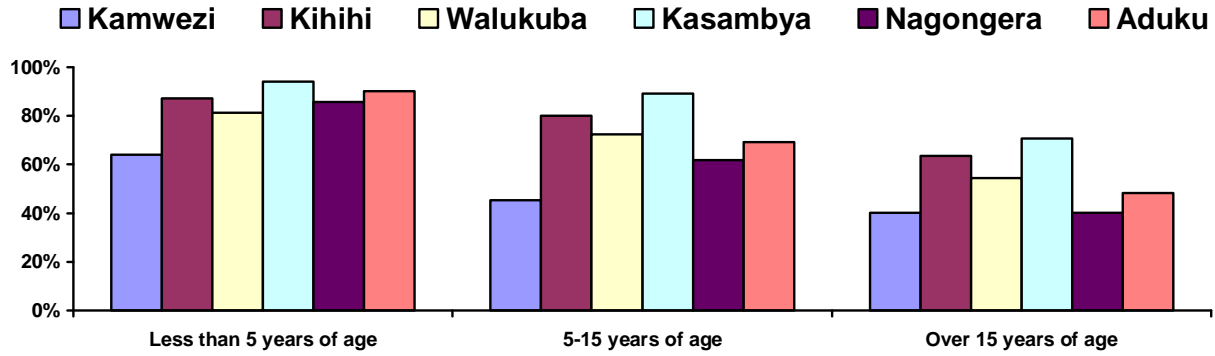
¹ Denominator used to calculate proportion is total number of patients seen

² Denominator used to calculate proportion is the number with malaria suspected

³ Denominator used to calculate proportion is the number of patients with laboratory test done

Overall, the numbers of patients seen at the sentinel sites were comparable to those seen in the previous month, however at all sites except Nagongera, there was increase in the numbers and proportions of suspected malaria cases this month. Likewise, there was an increase in the numbers and proportions of confirmed malaria cases at all sites except in Aduku.

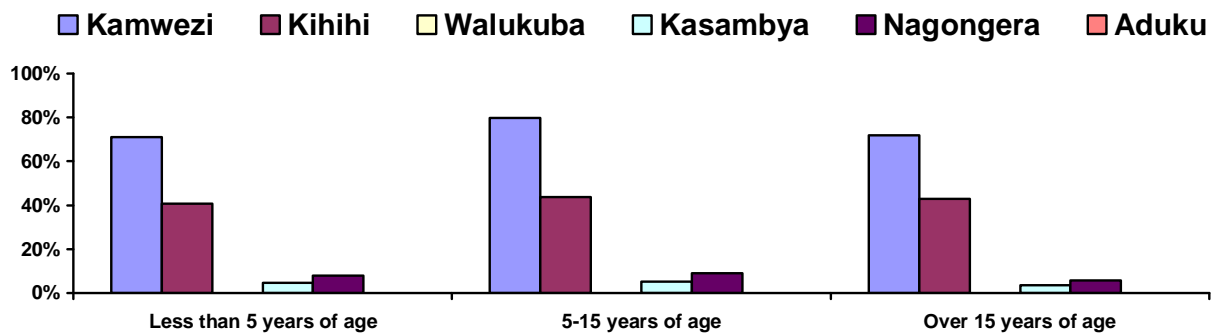
Proportion of total patients seen suspected of having malaria stratified by age group



Suspected malaria cases are defined as all patients referred for a malaria laboratory test plus all patients not referred for a malaria laboratory test but given a clinical diagnosis of malaria.

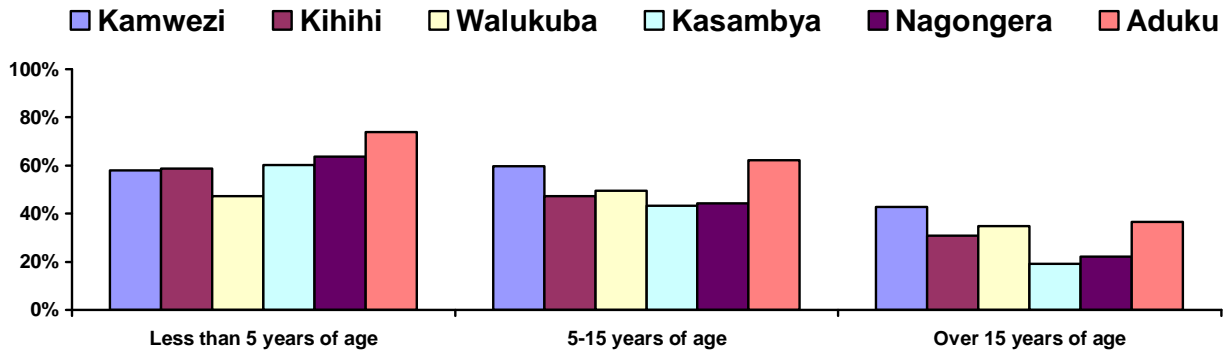
With the exception of Kamwezi, the majority of the patients were suspected of having malaria at the remaining sentinel sites. There was no association between the level of transmission intensity and the proportion of patients suspected of having malaria with the exception of the lowest transmission site. The proportion of patients suspected of having malaria decreased with increasing age at all the sites. In Kamwezi the proportions of suspected malaria cases were significantly higher in November compared to October for all age groups.

Proportion of laboratory tests done that were RDTs



Four out of the six sites use RDTs (Kamwezi, Kihihi, Kasambya and Nagongera). In Kamwezi 70% of patients sent for laboratory testing were tested using RDTs.

Proportion of laboratory tests done that were positive



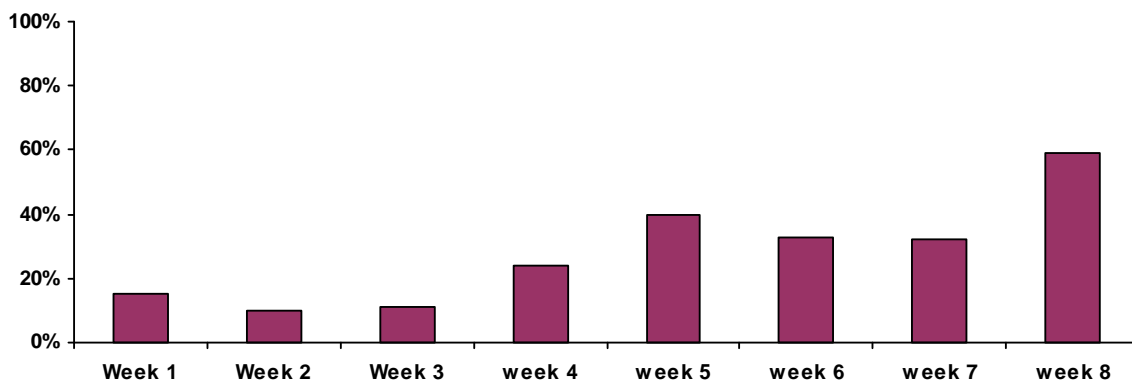
Overall, Aduku had the highest proportion of patients who tested positive for malaria as expected. In contrast Kamwezi, the site with the historically lowest transmission intensity registered the 2nd highest proportion of cases in the age group 5 – 15 years (59%), and the highest in patients over 15 years (43%), an increase from 15% and 11%, respectively, in the previous month. These figures are consistent with a malaria epidemic in catchment area of Kamwezi.

Weekly data from Kamwezi (below) shows a drastic increase in cases of malaria in November compared to October and an epidemic was confirmed in December.

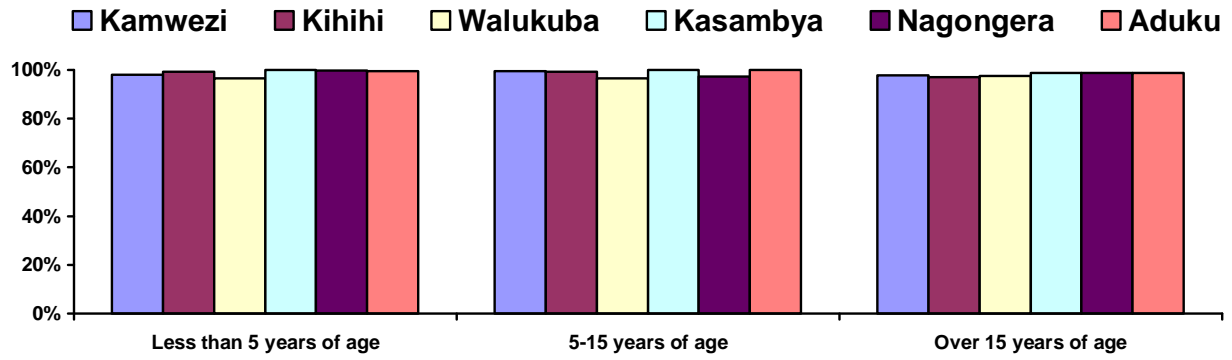
Weekly malaria data from Kamwezi for October and November 2009

	October 2009				November 2009			
	5 th – 11 th	12 th – 18 th	19 th – 25 th	26 th – 1 st	2 nd – 8 th	9 th – 15 th	16 th – 22 nd	23 rd – 29 th
Number of patients referred for laboratory testing	118	91	129	128	40	95	155	542
laboratory-confirmed malaria (number and proportion)	18 (15%)	9 (10%)	14 (11%)	31 (24%)	16 (40%)	31 (33%)	50 (32%)	319 (59%)

Weekly trends in the proportion of patients with a laboratory test for which the test is positive in Kamwezi (October – November 2009)

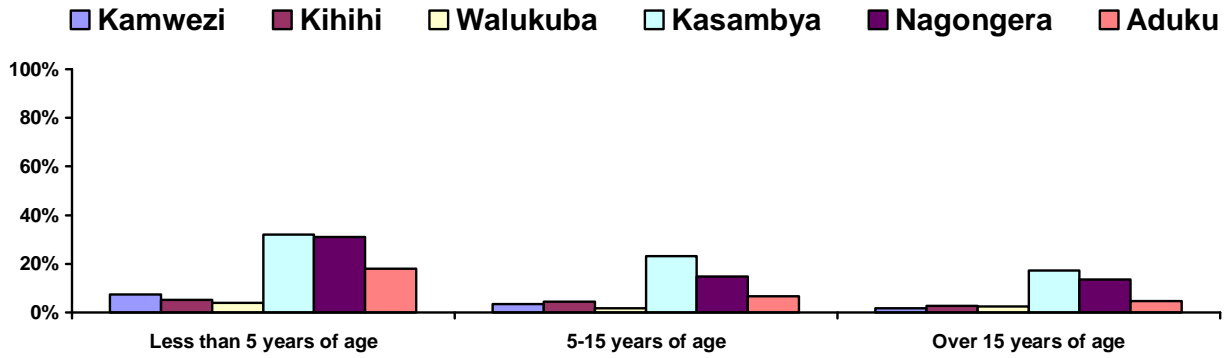


Proportion of patients with positive lab test results who were prescribed antimalarials



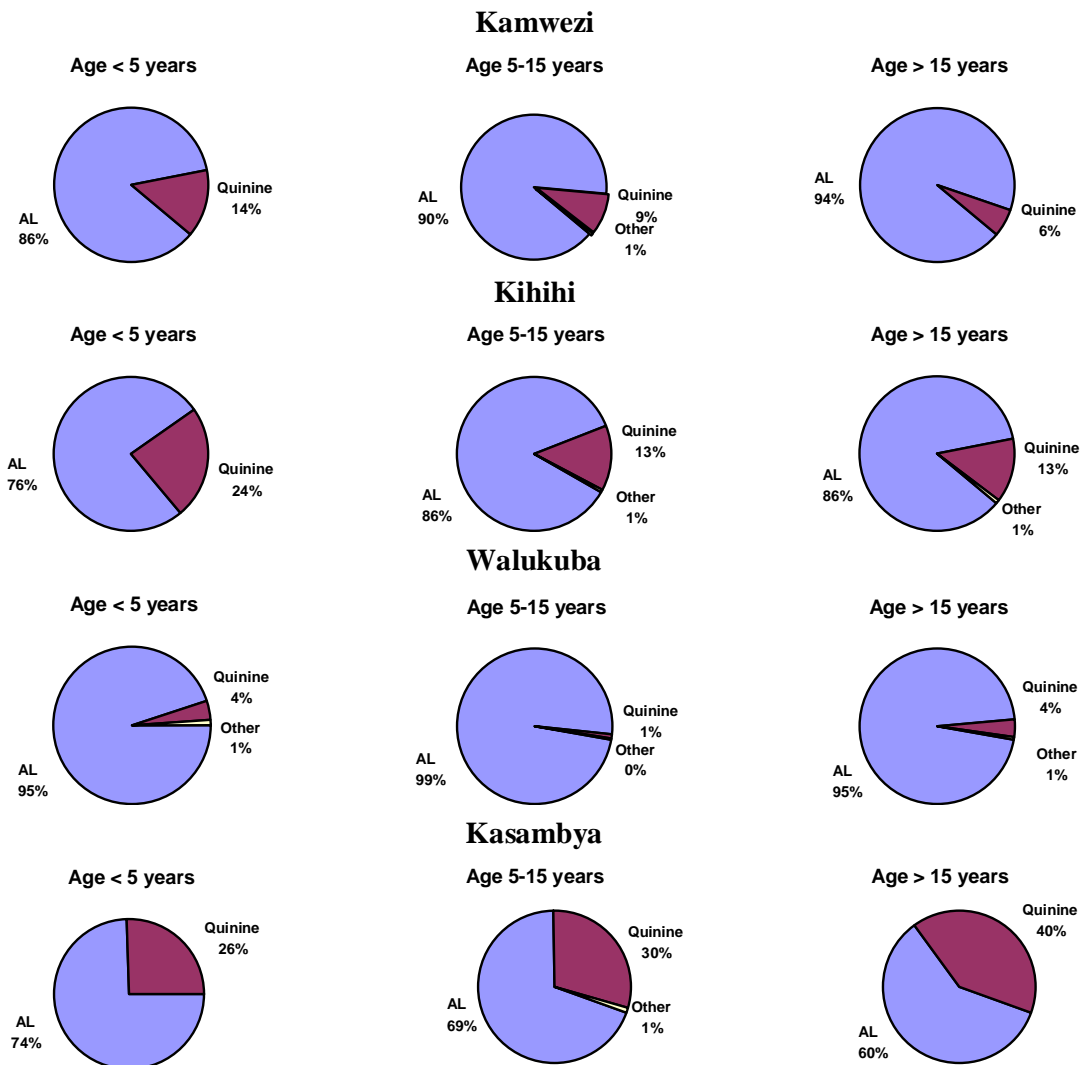
Almost all patients with a positive laboratory test were prescribed an antimalarial at all the sites.

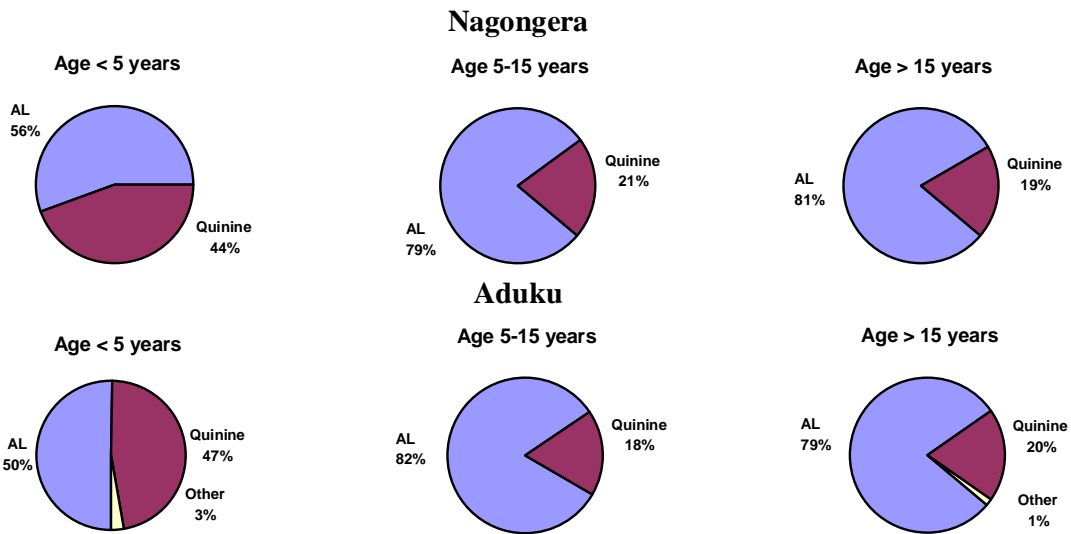
Proportion of patients with negative lab test result who were prescribed antimalarials



The practice of prescribing an antimalarial when the patient has a negative laboratory result is generally uncommon with the exception of Kasambya and Nagongera where the proportion exceeds 20% in those under 5 years of age.

Antimalarial drug treatment practices among those prescribed antimalarials





Artemether-lumfantrine (AL) or quinine made up almost all the antimalarials prescribed at all the sites. Treatment with quinine is most common at the two highest transmission sites (Nagongera and Aduku), especially in children under 5 years where quinine made up over 40% of the antimalarials prescribed. In Kasambya, Kihihi, and Kamwezi quinine made up 14-26% of the antimalarials prescribed in children under 5 years with this proportion generally decreasing in the older age groups (with the exception of Kasambya where quinine treatment was higher in the older age groups). Treatment with quinine was uncommon (< 5%) in Walakuba.

Temporal trends in the proportion of patients with a laboratory test for which the test is positive

