



THE REPUBLIC OF UGANDA



## UGANDA MALARIA SURVEILLANCE PROJECT

Mulago Hospital Complex, P.O.Box 7475, Kampala, Tel. 041-530692, Fax 041-540524;  
e-mail [mu-ucsf@infocom.co.ug](mailto:mu-ucsf@infocom.co.ug)

### Inpatient Surveillance Monthly Report

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#### Introduction

The Uganda Malaria Surveillance Project (UMSP) was formed in 2001 as a collaboration between researchers at the Makerere University-University of California San Francisco malaria research collaboration and the Ministry of Health. Although Uganda's Health Management Information System (HMIS) remains the primary source of malaria morbidity and mortality data, there are several limitations to this data. To address some of these limitations, UMSP started an inpatient health facility-based surveillance system in different epidemiological settings. The program began in 2010 with the goal of including 6 sentinel district hospitals by July 2011. The objective of this surveillance system is to provide accurate and timely data on malaria morbidity and mortality patterns among hospitalized children at participating sites to help guide policy makers and other stakeholders.

This monthly report is comprised of a table and graphs highlighting malaria indicators of morbidity and mortality including treatment practices at participating sites for a specified month. The table below provides a summary of the total number of hospitalized children per site who fulfil each of the criteria for specified indicators. For each indicator a bar graph allowing for comparison of results across the sites is generated, each bar representative of the results (in proportions) for each site for that particular indicator.

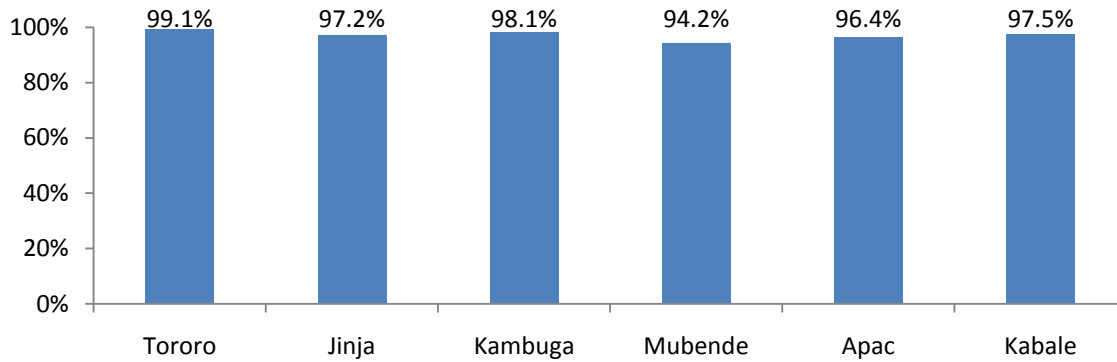
A list of definitions of terms used in the report and a table showing the numerators and denominator used to determine the indicators as proportions are included in the Appendix section (last page).

#### Absolute numbers of children hospitalized

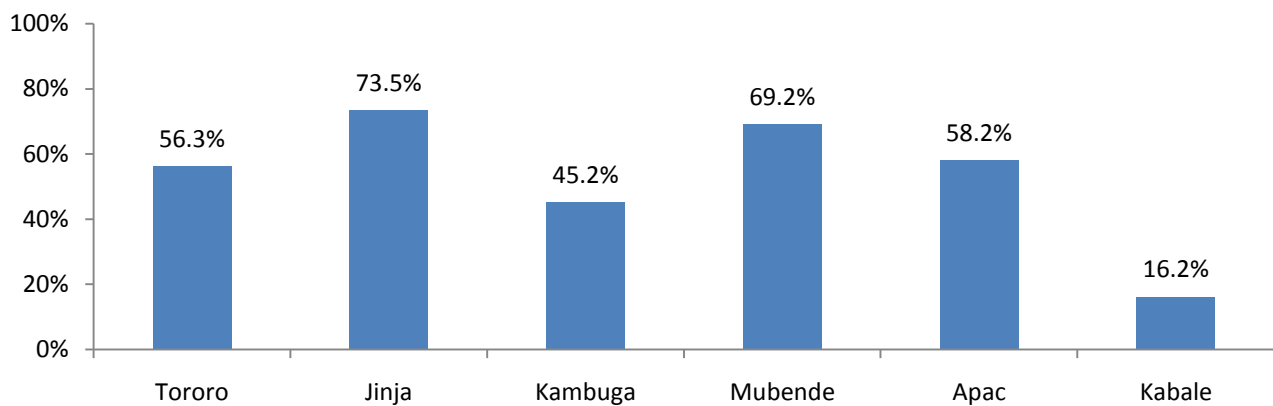
Site	Total	Hospitalized children under 5 years of age only						
		< 5 years	Any malaria lab test result	Clinical diagnosis of malaria	Lab confirmed malaria	Lab confirmed complicated malaria	Any death	Lab confirmed death with malaria
Tororo Hospital	628	584	579	329	318	255	18	3
Jinja Hospital	821	739	718	542	374	300	30	8
Kambuga Hospital	144	105	103	47	37	28	2	0
Mubende Hospital	255	225	212	155	113	103	20	3
Apac Hospital	199	165	159	96	82	43	7	2
Kabale Hospital	149	119	116	19	3	2	4	0

**Data below only includes children under 5 years of age admitted to the hospital**

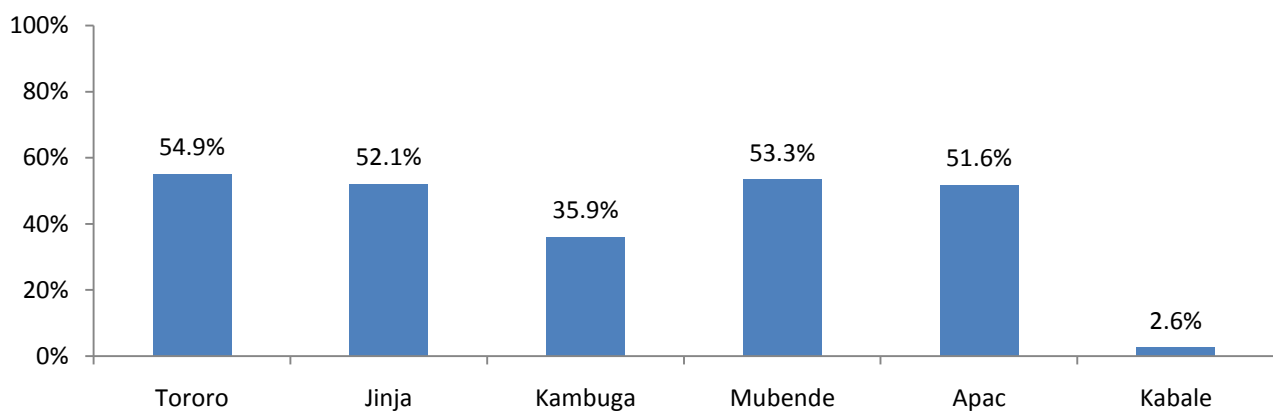
**Proportion of patients with any malaria diagnostic test result during hospitalization**



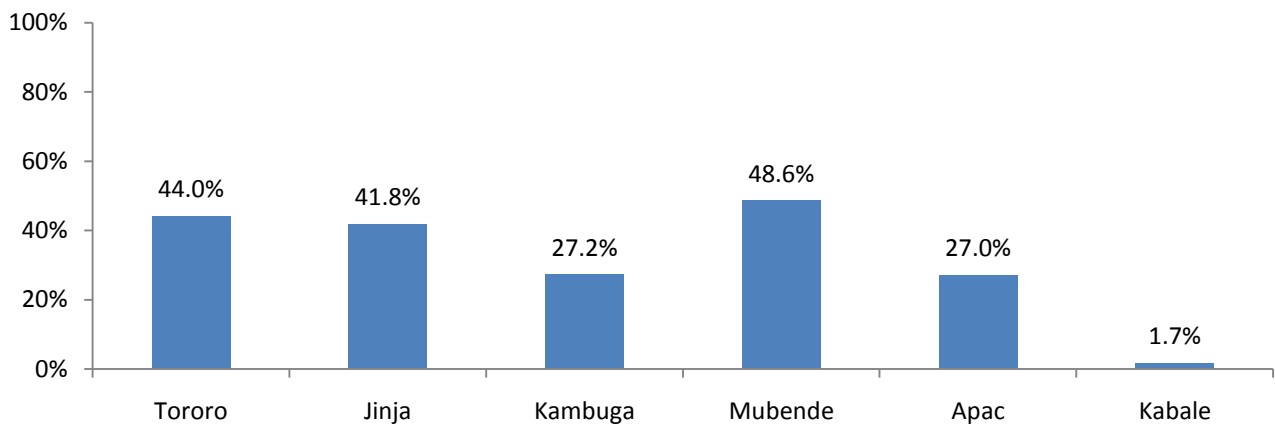
**Proportion of patients with clinical diagnosis of malaria at discharge**



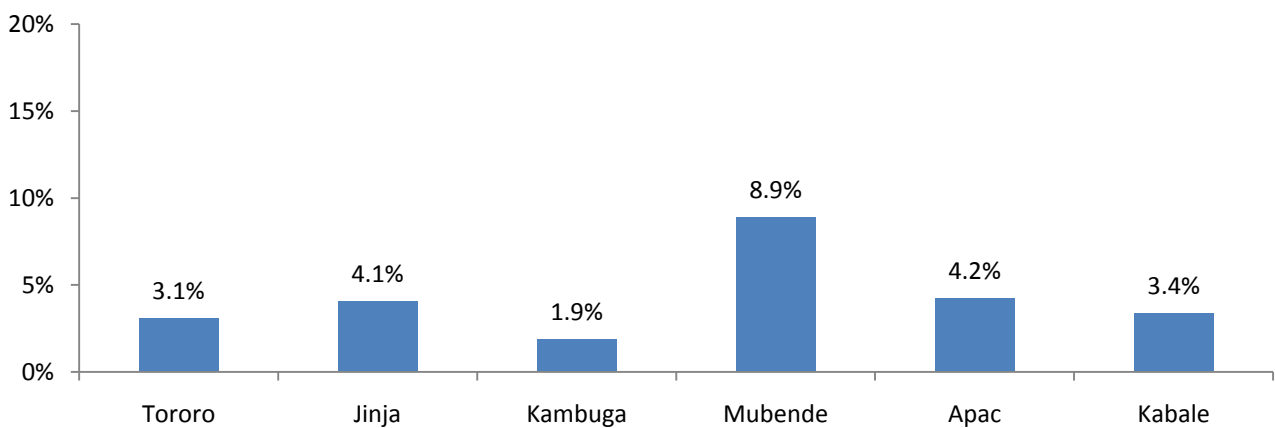
**Proportion of patients with laboratory confirmed malaria**



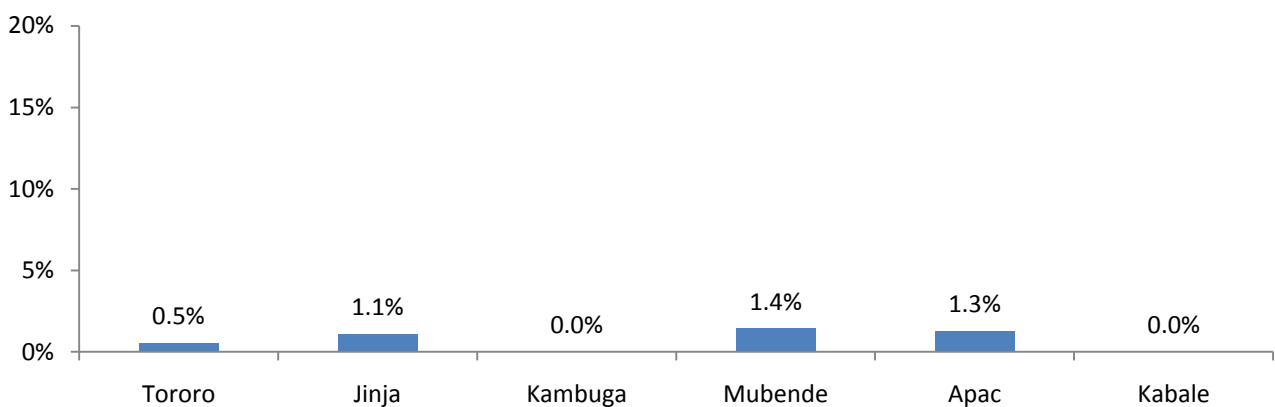
### Proportion of patients with laboratory confirmed complicated malaria



### Proportion of patients who died from any cause during hospitalization

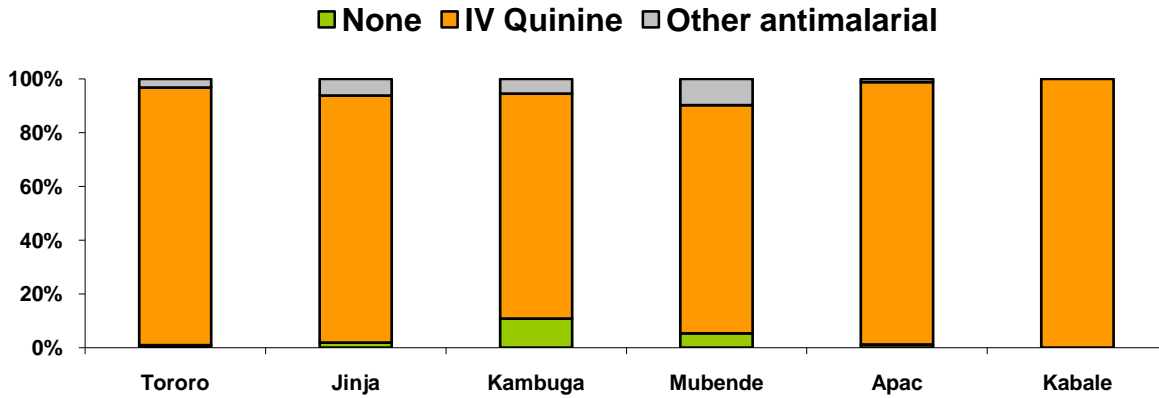


### Proportion of patients who died with laboratory confirmed malaria during hospitalization

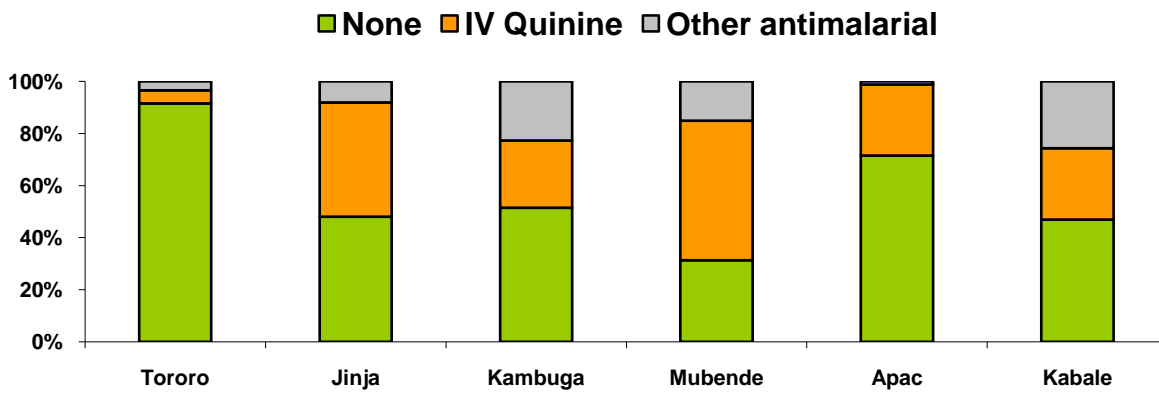


# Antimalarial treatment practices based on laboratory testing

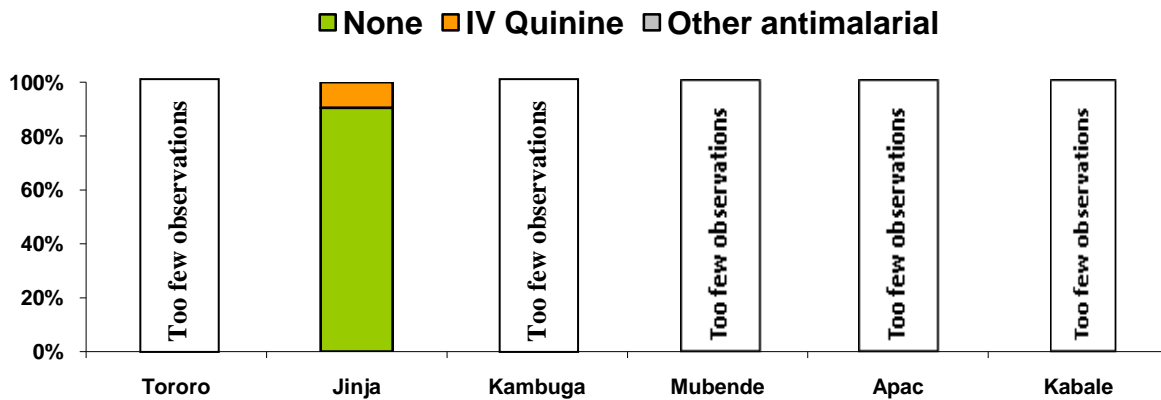
## Any positive laboratory test result



## Only negative laboratory test results



## No laboratory test done



## Appendix I. Definitions

**Laboratory confirmed malaria:** Any hospitalized child with a positive malaria test (thick blood smear or RDT) result

**Clinical diagnosis of malaria:** Any hospitalized child with a final discharge diagnosis of malaria (confirmed or unconfirmed) as indicated by the clinician.

**Laboratory confirmed complicated malaria:** Any hospitalized child with a positive malaria test result and fulfils any of the following: 1) any criteria for severe malaria. 2) one or more general danger signs (vomiting everything, inability to drink, feed or breastfeed, lethargy or unconscious or convulsions) or 3) dies during hospitalization

### Indicators expressed as proportions

Indicator	Definition
Proportion of hospitalized children < 5 years of age with malaria diagnostic test result	<p><b>Numerator:</b> Number of hospitalized children &lt; 5 years of age with a malaria test result</p> <p><b>Denominator:</b> Number of hospitalized children &lt; 5 years of age</p>
Proportion of hospitalized children < 5 years of age with a clinical diagnosis of malaria	<p><b>Numerator:</b> Number of hospitalized children &lt; 5 years of age with a final diagnosis of malaria</p> <p><b>Denominator:</b> Number of hospitalized children &lt; 5 years of age with any final diagnosis</p>
Proportion of hospitalized children < 5 years of age with laboratory confirmed malaria	<p><b>Numerator:</b> Number of hospitalized children &lt; 5 years of age with a positive malaria lab test</p> <p><b>Denominator:</b> Number of hospitalized children &lt; 5 years of age with a malaria test result</p>
Proportion of hospitalized children < 5 years of age with complicated malaria	<p><b>Numerator:</b> Number of hospitalized children &lt; 5 years of age with + lab test and complicated malaria</p> <p><b>Denominator:</b> Number of hospitalized children &lt; 5 years of age with a malaria test result</p>
Proportion of hospitalized children < 5 years of age who died of any cause	<p><b>Numerator:</b> Number of hospitalized children &lt; 5 years of age who died of any cause</p> <p><b>Denominator:</b> Number of hospitalized children &lt; 5 years of age with a disposition</p>
Proportion of hospitalized children < 5 years of age who died with malaria	<p><b>Numerator:</b> Number of hospitalized children &lt; 5 years of age who died with a positive malaria lab test</p> <p><b>Denominator:</b> Number of hospitalized children &lt; 5 years of age with a malaria test result &amp; disposition</p>
Antimalarial treatment practices	<p><b>Numerator:</b> Number in each treatment category stratified by malaria test results</p> <p><b>Denominator:</b> Totals for each malaria test results strata</p>