



MALARIA IN UGANDA- STATISTICS REPORT

PREVALENCE OF MALARIA IN UGANDA

AFRICA HEALTH ORGANISATION

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Malaria prevalence using RDT by sub-region, 2009-2016, Uganda

Table 1: The results show the percent of children aged 0-59 months that tested positive for malaria using RDTs in the 2009 and 2014 Malaria Indicator Surveys (MIS) and in the 2016 Demographic Health Survey (DHS). Malaria risk areas pop (%)

Region	West Nile	Mid North	North East	Mid-Western	Central 2	Mid-Eastern	South Western	Central 1	Kampala	East Central	Total
2009	60%	80%	55%	48%	62%	40%	18%	45%	8%	65%	481%
2014	51%	34%	56%	18%	32%	27%	6%	13%	4%	49%	290%
2016	25%	63%	61%	25%	23%	24%	7%	16%	1%	53%	298%

Chart 1: Malaria Prevalence by sub region

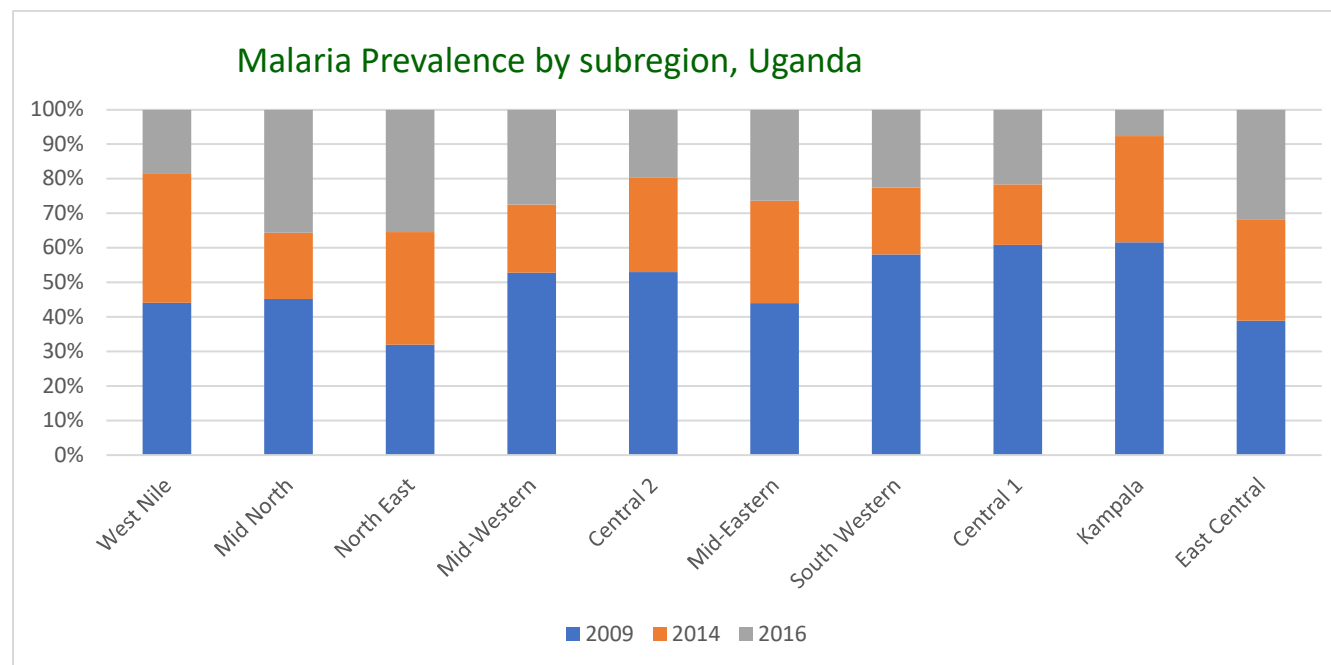


Table 2: Results showing Evolution of key malaria indicators reported through routine surveillance systems in Uganda 2012-2017. Number of Malaria reported cases

Indicator	2012	2013	2014	2015	2016	2017
Total # Cases	13,641,502	16,321,917	13,704,101	13,080,797	16,071,710	14,485,313
Total # Confirmed Cases	2,515,715	5,345,269	5,773,346	7,144,971	9,644,154	10,251,007

Total # Clinical Cases	11,125,787	10,976,648	7,930,755	5,935,826	6,427,556	4,234,306
Total # <5 Cases	4,387,768	4,935,631	4,079,086	3,886,786	4,464,146	3,566,893
Total # inpatient malaria deaths	5,582	6,183	5,043	4,672	5,635	6079
% Data Completeness**	69	91	97	99	97	92
% Test Positivity Rate	45	46	43	45	43	51

Chart 2: Key Malaria Indicators

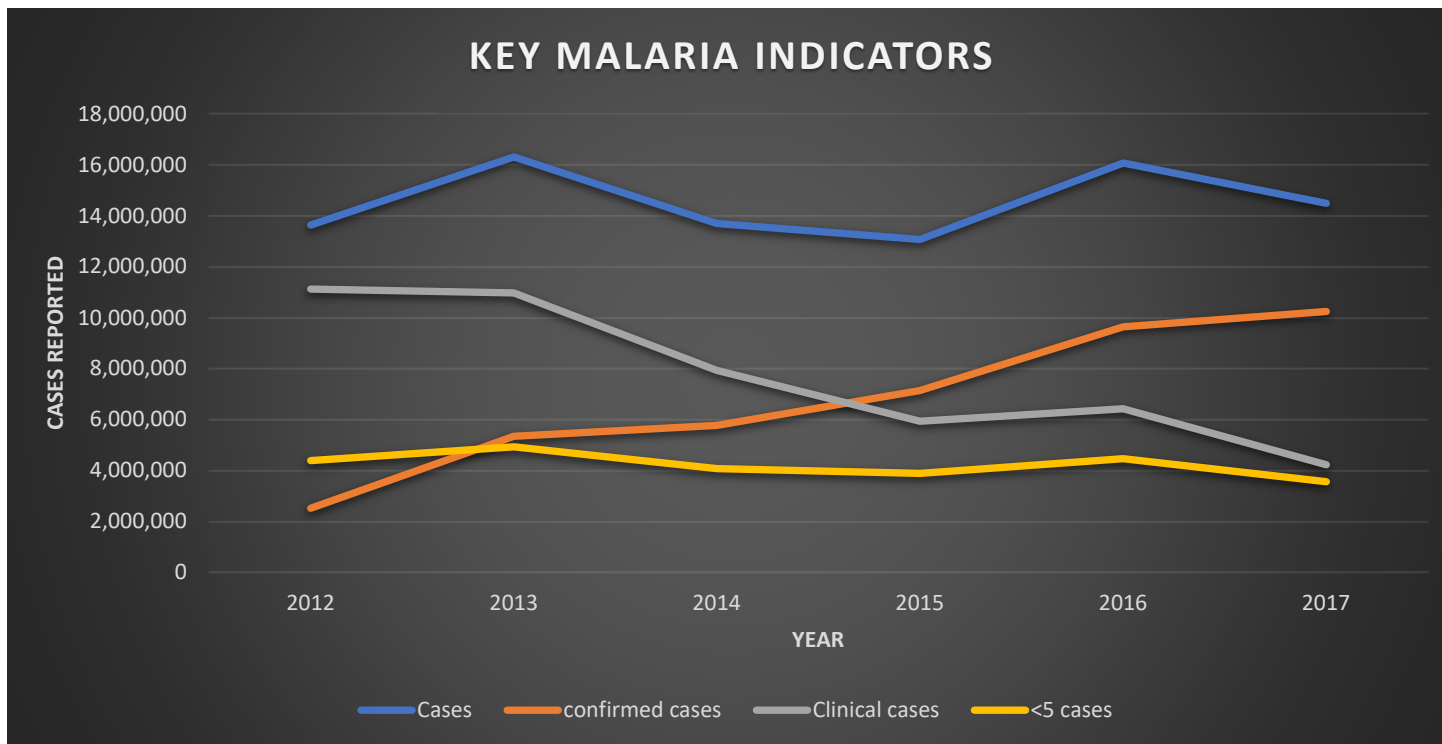
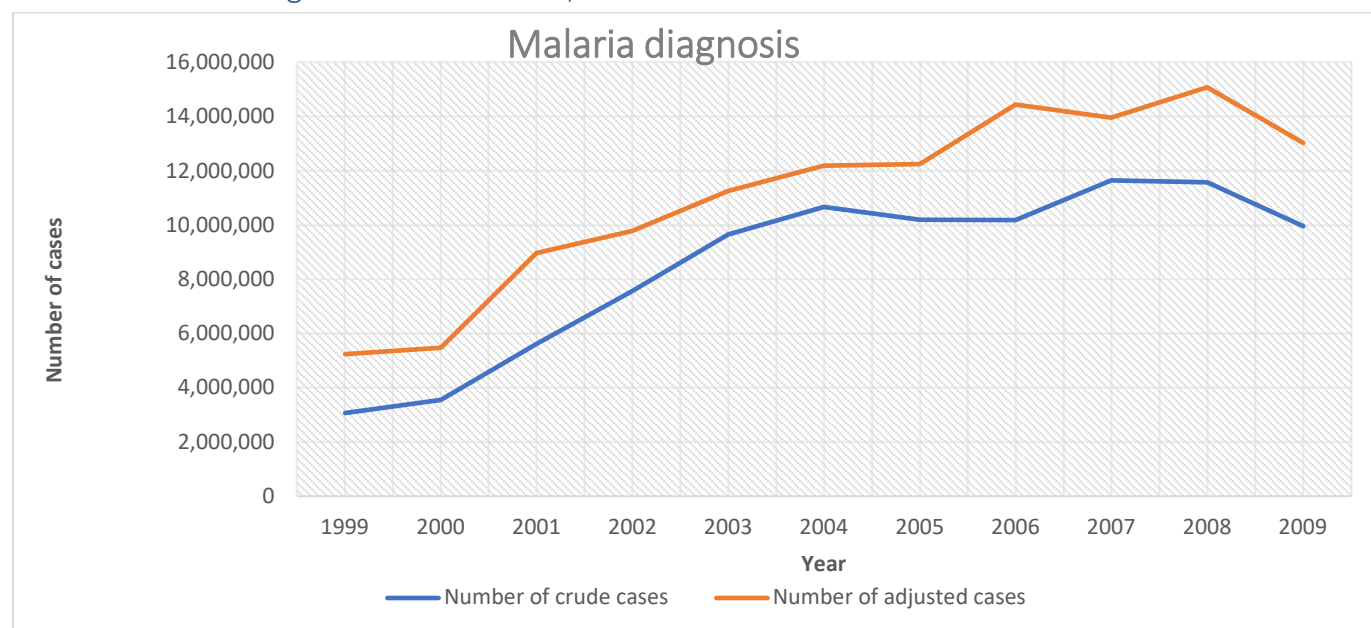


Table 3: All ages, crude and adjusted malaria diagnosis from HMIS and estimated confirmed cases based on SPR, 1999 - 2009

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Number of Crude cases	3,070,710	3,552,859	5,622,934	7,568,788	9,657,332	10,666,669	10,203,971	10,191,197	11,662,838	11,577,551	9,957,788
Number of Adjusted cases	5,247,359	5,470,361	8,966,564	9,791,014	11,260,686	12,197,533	12,255,312	14,444,829	13,963,542	15,091,914	13,028,907

Chart 3: Malaria diagnosis based on SPR, 1999 - 2009



Key Malaria Indicators from the 2018-19 Uganda Malaria Indicator Survey

The primary objective of the 2018-19 UMIS is to provide current estimates of key malaria indicators. Specific objectives are to measure the extent of ownership and use of mosquito bednets; measure the extent of indoor protect pregnant women; identify practices and specific medications used for treating malaria among children under age 5; measure indicators of behaviour change communication messages, knowledge, and practices residual spraying; assess coverage of intermittent preventive treatment to about malaria; and measure the prevalence of malaria and anaemia among children age 0-59 months.

Table 4: This table provides estimates of key indicators for the country, for each of the 15 regions in Uganda, and separately for the refugee settlements and districts targeted for indoor residual spraying in Uganda

Key Malaria Indicators from the 2018-19 Uganda Malaria Indicator Survey (UMIS)																			
National Malaria Control Division and Uganda Bureau of Statistics; fieldwork December 2018-January 2019; total number of households surveyed: 8,957; total number of de facto women surveyed: 8,868																			
Malaria indicator	National ⁴	National result of previous (2014-15) UMIS	REGION														SPECIAL AREAS		
			South Buganda	North Buganda	Kampala	Busoga	Bukedi	Bugisu	Teso	Karamoja	Lango	Acholi	West Nile	Bunyoro	Tooro	Kigezi	Ankole	Refugee settlements	Indoor residual spraying districts ⁵
MOSQUITO NETS AND INDOOR RESIDUAL SPRAYING																			
Percentage of households with at least one insecticide-treated net (ITN) ¹	83.0	90.2	83.2	76.7	73.9	84.1	82.7	86.0	90.1	58.1	82.5	83.0	92.4	87.6	88.4	88.9	86.2	78.5	85.5
Percentage of households with at least one ITN for every two persons who stayed in the household last night ¹	53.8	62.3	58.4	49.8	59.2	50.7	47.3	57.7	52.2	24.9	49.9	45.5	55.6	54.4	57.5	61.6	62.0	37.6	51.0
Percentage of children under age 5 who slept under an ITN last night ¹	60.2	74.3	58.5	52.4	61.7	57.1	61.2	74.4	71.9	34.6	61.1	58.5	64.1	67.1	68.3	55.1	62.3	63.4	65.3
Percentage of pregnant women age 15-49 who slept under an ITN last night ¹	65.4	75.4	(66.6)	(37.4)	*	(69.6)	(84.1)	(66.1)	(70.0)	36.8	73.7	65.6	81.1	80.1	84.7	(53.1)	(73.4)	63.2	80.6
Percentage of the de facto household population who could sleep under an ITN ¹ if each ITN in the household were used by up to two people (Access)	71.5	78.8	75.4	68.5	72.2	66.8	65.7	73.6	74.8	40.6	65.7	61.7	76.0	75.2	78.2	77.9	79.3	60.9	69.7
Percentage of the de facto household population who slept the night before the survey under an ITN in households owning at least one ITN ¹	68.0	73.8	71.1	62.9	73.1	59.3	66.2	78.8	71.0	47.5	66.5	65.0	66.3	74.1	74.1	64.8	72.6	75.1	66.5

Percentage of households with indoor residual spraying (IRS) in the past 12 months	10.5	4.9	2.3	0.3	4.7	11.7	60.0	8.1	39.3	1.2	57.3	14.5	0.9	0.4	2.1	1.4	0.7	0.4	76.4
INTERMITTENT PREVENTIVE MALARIA TREATMENT DURING PREGNANCY																			
Percentage of women age 15-49 with a live birth in the 2 years preceding the survey who, during the pregnancy preceding the last birth, received two or more doses of SP/Fansidar	72.1	48.9	65.7	71.0	63.2	72.4	77.4	73.9	86.1	70.9	65.6	66.0	78.0	70.8	73.0	81.1	70.6	74.3	77.0
Percentage of women age 15-49 with a live birth in the 2 years preceding the survey who, during the pregnancy preceding the last birth, received three or more doses of SP/Fansidar	41.0	27.5	36.3	41.5	38.6	36.3	40.2	43.6	48.2	42.7	38.9	39.1	45.7	41.5	40.3	52.2	37.8	48.1	39.5
PREVALENCE, DIAGNOSIS, AND PROMPT TREATMENT OF CHILDREN WITH FEVER																			
Among children under age 5 with fever in the 2 weeks preceding the survey, percentage for whom advice or treatment was sought ²	87.0	82.0	97.1	89.2	*	88.4	80.8	84.8	81.4	84.7	95.3	87.4	85.6	85.2	79.3	(87.5)	(91.4)	84.6	81.5
Among children under age 5 with fever in the 2 weeks preceding the survey, percentage who had blood taken from a finger or heel for testing	50.7	35.8	57.9	59.9	*	36.6	31.8	44.9	50.5	48.9	68.5	71.3	49.6	43.0	48.3	(36.9)	(69.7)	58.7	38.7
Among children under age 5 with fever in the 2 weeks preceding the survey who took any antimalarial medication, percentage who took an ACT ³	87.7	86.7	(84.7)	76.2	*	79.8	(89.2)	92.7	92.0	91.2	91.1	94.0	93.3	97.6	93.3	*	*	94.9	83.9
MALARIA PARASITE ESTIMATION THROUGH MICROSCOPY																			
Percentage of children age 0-59 months with a positive microscopy result	9.1	18.9	0.6	8.8	0.2	21.1	3.3	4.8	8.2	34.3	13.3	11.9	21.8	9.2	4.7	0.3	2.6	12.8	3.4

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

1 An insecticide-treated net (ITN) is a factory-treated net that does not require any further treatment. In the 2014-15 UMIS, this was known as a long-lasting insecticidal net (LLIN). 2 Excludes advice or treatment from a traditional practitioner

3 ACT=artemisinin-based combination therapy

4 National total includes the 15 regions and excludes the refugee settlements

5 The 14 districts currently targeted for indoor residual spraying are Bugiri, Kaberamaido, Koboko, Lira, Otuke, Serere, Tororo, Alebtong, Amolatar, Budaka, Butaleja, Dokolo, Namutumba and Paliisa

OWNERSHIP OF MOSQUITO NETS

Table: Presents information on the percentage of households that have at least one insecticide-treated net (ITN) and the average number of ITNs per household, by background characteristics. Table 4 shows that 90 percent of households own at least one insecticide-treated

net (ITN) and, on average, households own 2.5 ITNs. This is a dramatic increase since 2009 when just 47 percent of households owned at least one ITN, and the average number of nets owned was 0.8.

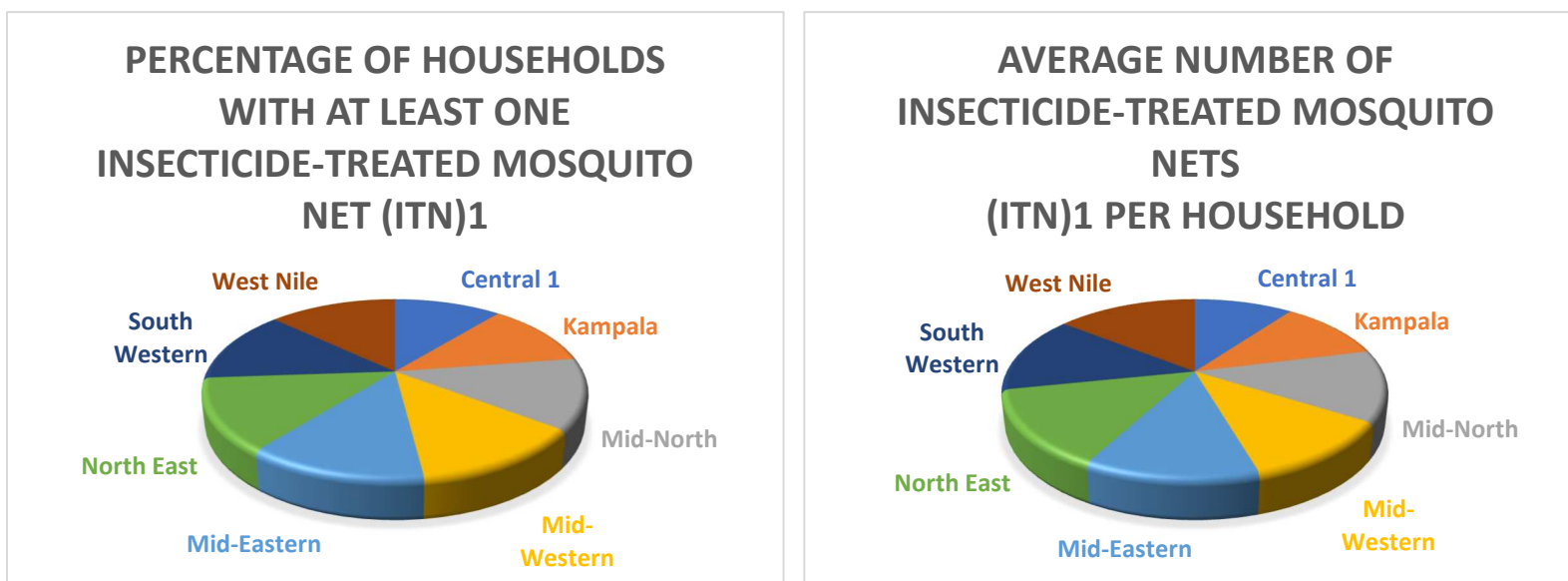
Table 5: Household ownership of insecticide-treated mosquito nets
 Percentage of households with at least one insecticide-treated mosquito net (ITN) and average number of ITNs
 per household, by background characteristics, Uganda 2014-15

Background characteristic	Percentage of households with at least one insecticide-treated mosquito net (ITN) ¹	Average number of insecticide-treated mosquito nets (ITN) ¹ per household	Number of households
RESIDENCE			
Urban	83.9	2.2	1,187
Rural	92.0	2.6	4,158
REGION			
Central 1	80.8	2.1	660
Kampala	86.3	2.3	299
Mid-North	94.3	2.7	569
Mid-Western	93.6	2.4	612
Mid-Eastern	94.6	2.6	571
North East	97.0	2.9	444
South Western	96.9	2.9	691
West Nile	96.3	3.0	370
WEALTH QUINTILE			
Lowest	91.5	2.2	1,109
Second	94.0	2.5	1,073

Middle	93.0	2.7	961
Fourth	88.4	2.6	1,014
Highest	84.9	2.4	1,189
Total	90.2	2.5	5,345

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. ¹ Indoor residual spraying (IRS) is limited to spraying conducted by a government, private, or non-governmental organization. ¹ An insecticide-treated mosquito net (ITN) is a factory-treated net that does not require any further treatment (LLIN) or a net that has been soaked with insecticide within the past 12 months.

Chart 4: Household ownership of insecticide-treated mosquito nets



COMMODITY GAP ANALYSIS

Table 6: ITN Gap Analysis

Calendar Year	2017	2018	2019
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Total targeted population¹	37,846,217	38,981,604	40,151,052
Continuous Distribution Needs			
Channel #1: ANC²	1,892,311	1,949,080	2,007,553
Channel #2: EPI³	1,627,387	1,676,209	1,726,495
Channel #3: Facility outreach distribution points	175,000	09	09
Channel #: School-based distribution⁵	600,000	600,000	600,000
<i>Estimated Total Need for Continuous</i>	4,294,698	4,225,289	4,334,048
MASS DISTRIBUTION NEEDS			
2017 mass distribution campaign	21,025,676	0	0
<i>Estimated Total Need for Campaigns</i>	21,025,676	0	0
Total Calculated Need: Routine and Campaign	25,320,373	4,225,289	4,334,048
Partner Contributions			
ITNs carried over from previous year	700,000	1,113,356	0
ITNs from MoH	0	0	0
ITNs from Global Fund⁶	13,533,729	257,938	1,000,000
ITNs from other donors DFID⁷	500,000	500,000	500,000
AMF 8	10,700,000	0	0
ITNs planned with PMI funding	1,000,000	1,575,000	500,000
Total ITNs Available	26,433,729	3,446,294	2,000,000
Total ITN Surplus (Gap)	1,113,356	(778,995)	(2,334,048)

Footnotes: 1Total targeted population is based on the 2014 national census data, adjusted for 2.88% annual population growth. 2Assuming 5% of the population becomes pregnant. 3Assuming 4% of the population are children under five years of age. For facility outreach distributions to vulnerable populations in hard-to-reach areas, assuming approximately 3,000 ITNs/school. 5Traditional school-based distribution of ITNs. 6,7Exact figures for Global Fund and DFID's contributions in 2018, and 2019 are not yet known, therefore expected projections are included. 8There is no current information on AMF 2018 or 2019 contributions. 9 Continuous distribution channel allocations may be adjusted following successful facility-distribution pilot in 2018 and 2019

Table 7: Indoor residual spraying against mosquitoes

Percentage of households in which someone has come into the dwelling to spray the interior walls against mosquitoes (IRS) in the past 6 months, the percentage of households with at least one ITN and/or IRS in the past 6 months, and, and, among households with IRS in the past 6 months, percentage of households paying for IRS, by background characteristics, Uganda 2014-15

Among all households			Among households with IRS in the past 6 months		
Background characteristic	Percentage of households with IRS1 in the past 6 months	Percentage of households with at least one ITN2 and/or IRS in the past 6 months	Number of households	Percentage of households paying for IRS	Number of households with IRS in the past 6 months
RESIDENCE					
Urban	2.9	84.2	1,187	10.5	35
Rural	5.4	92.3	4,158	3.2	226
Region					
Central 1	0.0	80.8	660	*	0
Central 2	0.4	81.9	593	*	3
East Central	0.0	82.1	536	*	0
Kampala	1.0	86.3	299	*	3
Mid-North	43.9	97.0	569	1.8	249
Mid-Western	0.2	93.6	612	*	1
Mid-Eastern	0.3	94.6	571	*	2
North East	0.1	97.0	444	*	0
South Western	0.0	96.9	691	*	0
West Nile	0.6	96.3	370	*	2

WEALTH QUINTILE					
Lowest	12.3	92.3	1,109	2.4	137
Second	5.8	94.5	1,073	1.9	62
Middle	2.3	93.1	961	(10.0)	22
Fourth	2.3	88.4	1,014	(5.2)	24
Highest	1.3	85.0	1,189	*	16
Total	4.9	90.5	5,345	4.2	261

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. 1Indoor residual spraying (IRS) is limited to spraying conducted by a government, private, or non-governmental organization. 1An insecticide-treated mosquito net (ITN) is a factory-treated net that does not require any further treatment (LLIN) or a net that has been soaked with insecticide within the past 12 months.

USE OF MOSQUITO NETS

Table shows use of mosquito nets by persons in the household. Overall, 72 percent of the household population slept under a mosquito net the night before the survey; 69 percent slept under an ITN the night before the survey. Seventy percent of the household population slept under an ITN the previous night or in a dwelling sprayed with IRS in the past 6 months. In households that own at least one ITN, 74 percent of the household population slept under an ITN the night before the survey.

The percentage of the household population that slept under an ITN varies little by residence. By region, however, ITN use varies widely; for example, 59 percent of the household population in Central 1 and Central 2 slept under an ITN compared with 81 percent in the North East. ITN use generally decreases with increasing wealth quintile.

Table 8: Use of mosquito nets by persons in the household

Percentage of the de facto household population who, the night before the survey, slept under any mosquito net (treated or untreated), under an insecticide-treated mosquito net (ITN), and under an ITN or in a dwelling in which the interior walls have been sprayed against mosquitoes (IRS) in the past 6 months; and among the de facto household population with at least one ITN, the percentage who slept under an ITN the night before the survey, by background characteristics, Uganda 2014-15

Background characteristic	Household population			Household population in households with at least one ITN		
	Percentage who slept under any net last night	Percentage who slept under an ITN1 last night	Percentage who slept under an ITN1 last night or in a dwelling sprayed with IRS2 in the past 6 months	Number	Percentage of those who slept under ITN1 last night	Number
Residence						
Urban	72.2	65.4	66.6	4,886	73.2	4,369
Rural	71.5	69.3	70.7	21,336	73.9	19,999
Region						
Central 1	68.0	59.0	59.0	2,985	68.6	2,567
Central 2	64.6	59.2	59.3	2,663	67.2	2,348
East Central	63.9	61.9	61.9	2,764	71.5	2,394
Kampala	78.6	70.6	71.0	1,165	79.0	1,041
Mid-North	77.0	75.2	87.6	2,833	78.8	2,704
Mid-Western	77.3	75.9	75.9	3,006	80.2	2,842
Mid-Eastern	71.6	71.1	71.1	2,971	74.3	2,844
North East	81.2	80.7	80.7	2,586	83.1	2,511
South Western	65.7	63.0	63.0	3,283	64.1	3,229

West Nile	74.5	72.4	72.5	1,967	75.5	1,887
Wealth quintile						
Lowest	73.2	72.3	76.1	5,177	78.7	4,756
Second	74.4	73.0	74.6	5,213	76.1	5,004
Middle	71.9	69.8	70.4	5,235	74.0	4,940
Fourth	67.1	64.0	64.6	5,264	68.7	4,903
Highest	71.8	63.8	64.2	5,333	71.4	4,765
Total	71.6	68.6	69.9	26,222	73.8	24,368

An insecticide-treated mosquito net (ITN) is a factory-treated net that does not require any further treatment (LLIN) or a net that has been soaked with insecticide within the past 12 months.

Indoor residual spraying (IRS) is limited to spraying conducted by a government, private, or nongovernmental