Evidence for Malaria Medicines Policy

ACTwatch Study Reference Document
The United Republic of Tanzania Outlet Survey 2014

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Acronyms

ACT	Artemisinin combination therapy
ADDO	Acredited drug dispensing outlet
AETD	Adult equivalent treatment dose
AL	Artemether lumefantrine
AMFm	Affordable Medicines Facility – malaria
ASAQ	Artesunate amodiaquine
BMGF	The Bill and Melinda Gates Foundation
CHW	Community Health Worker
DFID	Department for International Development
DHA PPQ	Dihydroartemisinin piperaquine
DLDB	Duka La Dawa Baridi
EMA	European Medicines Agency
GFATM	Global Fund to Fight AIDS, TB, and Malaria
IM	Intramuscular injection
IPTp	Intermittent preventive treatment in pregnancy
IV	Intravenous injection
MOH	Ministry of Health
NGO	Non-governmental Organization
Oral AMT	Oral artemisinin monotherapy
OS	Outlet survey
Pf	*Plasmodium falciparum*
PMI	President's Malaria Initiative
PPS	Probability proportional to size
QA ACT	Quality-assured artemisinin combination therapy
mRDT	Rapid diagnostic test for malaria
SP	Sulfadoxine pyrimethamine
UK	United Kingdom
USAID	United States Agency for International Development
USD	US Dollar

Definitions

Survey Methods Definitions

Outlet	Any service delivery point or point of sale for commodities. Outlets are not restricted to stationary points of sale and may include mobile units or individuals.
Outlets eligible for inclusion in the study	Outlets were administered a full questionnaire if they met at least one of three inclusion criteria: (1) had one or more antimalarials in stock at the time of the survey visit; (2) reportedly had one or more antimalarials in stock in the previous three months; or (3) provide malaria blood testing (microscopy or rapid diagnostic tests) but do not provide antimalarial treatment. Outlets not providing services to the general public (e.g. army and military clinics) were excluded from the study.
Cluster	The primary sampling unit, or cluster, for the outlet survey. It is an administrative unit determined by the Ministry of Health (MOH) that hosts a population size of approximately 10,000 to 15,000 inhabitants. These units are defined by political boundaries. In Tanzania, they were defined as wards. Wards were selected through two-stage cluster sampling with selection of districts at first stage and urban and rural wards at second stage.
Census Ward	A cluster where field teams conducted a full census of all outlets with the potential to sell antimalarials.
Booster Sample	A booster sample was included for certain outlet types. Additional sampled wards were included to increase the sample size allowing for precise estimates among public health facilities, private-for-profit health facilities, pharmacies and accredited drug dispensing outlets (ADDOs). Within districts sampled at first stage, additional wards were sampled as booster wards. See Annex 9 for a detailed description of the booster sampling methods.

Malaria Product Indicator Definitions

Antimalarial	Any medicine recognized by the WHO for the treatment of malaria. Medicines used solely for the prevention of malaria were excluded from analysis of key indicators in this report.
Dosing/treatment regimen	The posology or timing and number of doses of an antimalarial used to treat malaria. This schedule often varies by patient weight.
Adult Equivalent Treatment Dose (AETD)	An AETD is the number of milligrams (mg) of an antimalarial drug required to treat a 60 kg adult (see Annex 11).
Monotherapy	An antimalarial medicine that has a single mode of action. This may be a medicine with a single active compound or a synergistic combination of two compounds with related mechanisms of action.
Artemisinin and its derivatives	Artemisinin is a plant extract or synthetic plant extract used in the treatment of malaria. The most common derivatives of artemisinin used to treat malaria are artemether, artesunate, and dihydroartemisinin.
Artemisinin-based Combination Therapy (ACT)	An antimalarial that combines artemisinin or one of its derivatives with an antimalarial or antimalarials of a different class.

Artemisinin monotherapy	An antimalarial medicine that has a single active compound, where this active compound is artemisinin or one of its derivatives.
Oral artemisinin monotherapy	Artemisinin or one of its derivatives in a dosage form with an oral route of administration. These include tablets, suspensions, and syrups and exclude suppositories and injections.
Non-artemisinin therapy	An antimalarial medicine that does not contain artemisinin or any of its derivatives.
First-line treatment	The government recommended treatment for uncomplicated malaria. Tanzania's first-line treatment for uncomplicated malaria is artemether lumefantrine (20mg / 120mg). The first-line treatment for uncomplicated malaria in pregnant women during the first trimester is quinine.
Second-line treatment	The government recommended second-line treatment for uncomplicated malaria. Tanzania's second-line treatment for uncomplicated malaria is dihydroartemisinin-piperaquine (40mg/320mg or 20mg/160mg pediatric).
Nationally registered ACTs	ACTs registered with a Tanzania's national drug regulatory authority and permitted for sale or distribution in Tanzania. Each country determines its own criteria for placing a drug on its nationally registered listing.
Severe malaria treatment	WHO recommends parenteral artesunate as first-line treatment in the management of severe *falciparum* malaria, with artemether or quinine injections as acceptable alternatives if parenteral artesunate is not available.[1] If complete treatment for severe malaria is not possible, patients with severe malaria should be given pre-referral treatment and referred immediately to an appropriate facility for further treatment. The following are options for pre-referral treatment: rectal artesunate, injectable quinine, injectable artesunate and injectable artemether.
Quality-assured Artemisinin-Based Combination Therapies (QA ACTs)	QA ACTs are ACTs that comply with the Global Fund to Fight AIDS, Tuberculosis and Malaria's Quality Assurance Policy. A QA ACT is any ACT that appeared on the Global Fund's indicative list of antimalarials meeting the Global Fund's quality assurance policy prior to data collection (see http://www.theglobalfund.org/en/procurement/quality/pharmaceutical/), or that previously had C-status in an earlier Global Fund quality assurance policy. QA ACTs also include ACTs that have been granted regulatory approval by the European Medicines Agency (EMA) – specifically Eurartesim® and Pyramax®.
Quality-assured ACT with the "green leaf" logo, or "co-paid ACTs"	The "green leaf" logo indicates that a quality-assured ACT was acquired through a co-payment mechanism administered by the Global Fund (Affordable Medicines Facility, malaria – or AMFm). These subsidized (co-paid) quality-assured ACTs were available to first-line buyers in Tanzania in the public and private sector from 2010-2014.
mRDTs with the "checkmark" logo	The "checkmark" logo indicates that the malaria RDT is quality-assured and low-cost. These low-cost quality-assured malaria RDTs were available to private-for-profit hospitals and clinics in Tanzania in August 2012.

[1] World Health Organization. (2010). *Guidelines for the treatment of malaria, 2nd edition*. Geneva: WHO.

Introduction

This Tanzania reference document is a detailed presentation of the 2014 national ACTwatch outlet survey (OS) conducted in Tanzania. The 2014 OS follows previous survey rounds conducted as part of the Independent Evaluation of the Affordable Medicines Facility, malaria (AMFm) in 2010 and 2011.

ACTwatch is a multi-country research project implemented by PSI (www.psi.org). Standardized tools and approaches are employed to provide comparable data across countries and over time. ACTwatch is designed to provide timely, relevant, and high quality antimalarial market evidence. The goal of providing this market evidence is to inform and monitor national and global policy, strategy, and funding decisions for improving malaria case management. The project was launched in 2008 with funding from the Bill and Melinda Gates Foundation (BMGF), and is currently funded through 2016 by the BMGF, UNITAID, and DFID. See Annex 1 for more information about the ACTwatch project.

Antimalarial market monitoring in Tanzania from 2010 to present has been implemented in the context of strategies designed and implemented to improve coverage of appropriate case management. These include:

- Scale up of quality-assured ACTs in the public and private sectors through mechanisms including the Global Fund co-payment mechanism piloted under the AMFm. The initial AMFm pilot period was 2010-2011 and co-paid ACTs were delivered to first-line buyers in Tanzania from 2010-2014.
- National efforts to improve availability of malaria blood testing and confirmatory testing prior to antimalarial treatment.
- Efforts to extend malaria blood testing and antimalarial treatment to community level through home-based management of malaria delivered through Accredited Dispensing Drug Outlets (ADDOs, also known as *duka la dawa muhimu*).

The 2014 OS was the third round of outlet surveys conducted in Tanzania. This report presents trend lines with three data points: 1) the 2010 outlet survey; 2) the 2011 outlet survey; and 3) the most recent 2014 survey. These surveys are designed to monitor key antimalarial market indicators at national level and within urban/rural domains. ACTwatch outlet survey findings can inform ongoing monitoring, evaluation, and adjustment to policy, strategy, and funding decisions to strengthen malaria case management.

Report notes

- This document is a complete reference for the 2014 outlet survey. Please see annexes for information about the study context, design, implementation and data analysis.
- Table numbers are consistent across all sections (excepting those in the Annex), and are reflective of table descriptions available in Annex 10
- Grey text for data appearing in report tables indicates that the estimate provided was derived from a small sample size. Specifically, grey text is used to indicate point estimates derived from an n of less than 50 and median prices derived from an n of less than 5.
- Malaria testing and treatment prices are reported in US dollars. Price information is captured in local currency and converted to US dollars based on exchange rates available from www.oanda.com using the historical exchange rates tool. The average exchange rate over the entire data collection period is used for converting local currency captured during data collection to US dollars.

Summary of Methods and Data Collection

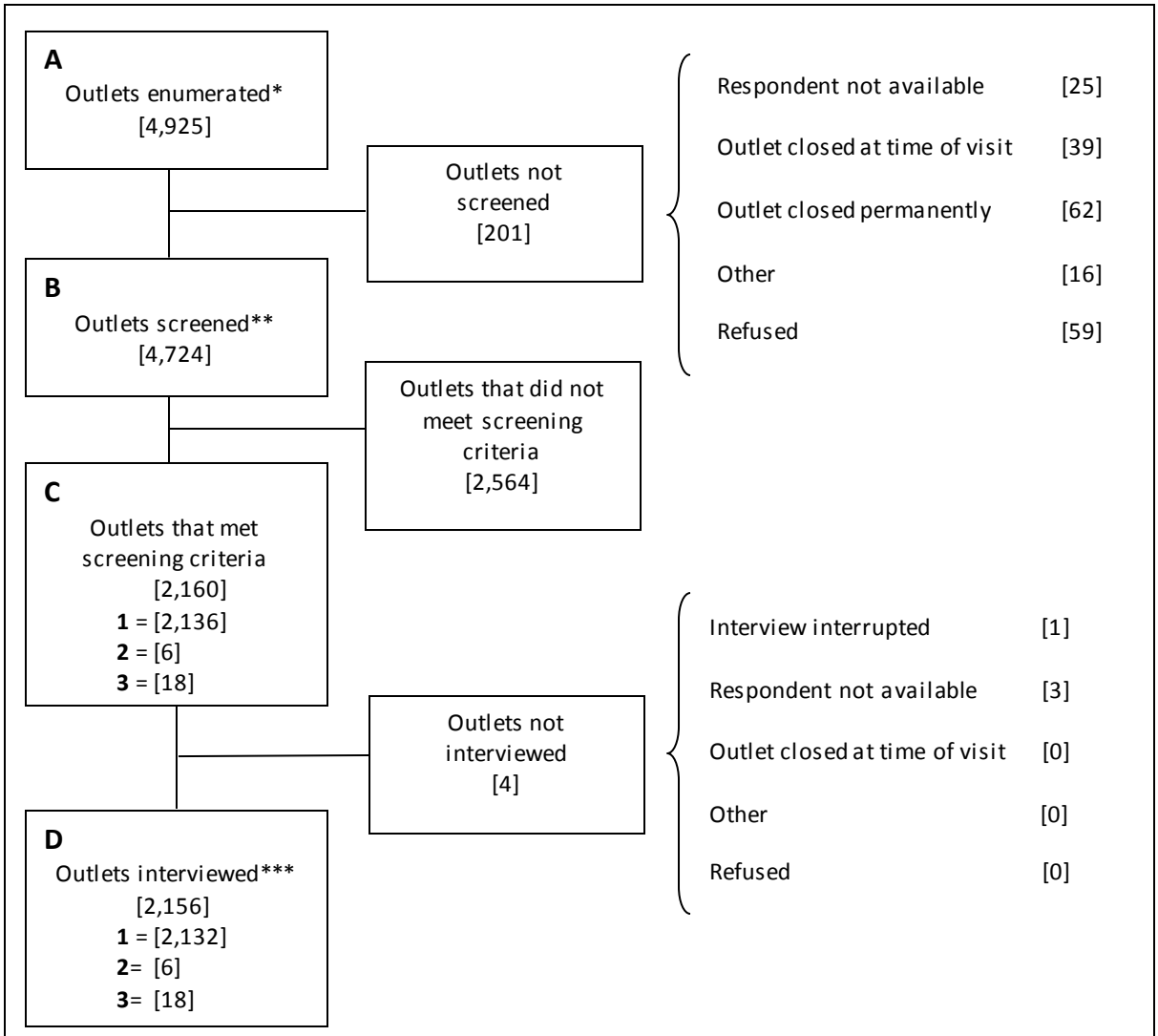
A nationally-representative antimalarial outlet survey was conducted in Tanzania between November 3, 2014 and December 16, 2014. A full description of research design and methods is provided in Annex 3. Briefly, a representative sample of wards was selected from urban and rural domains (see sampled wards in Annex 4). Within selected clusters, a census of all outlets with the potential to sell or distribute antimalarials and/or provide malaria blood testing was completed. Additional wards were selected for oversampling of public health facilities, private-for-profit health facilities, pharmacies and ADDOs. This booster sampling strategy was used to obtain a sufficient sample size for indicator estimates within these outlet types.

Outlets were screened to determine eligibility. Outlets eligible for the survey met at least one of three criteria: 1) one or more antimalarials were in stock on the day of the survey; 2) one or more antimalarials were in stock in the three months preceding the survey; and/or 3) malaria blood testing (microscopy or mRDT) was available. Outlets that do not serve the general public (e.g. military facilities) were excluded from the study. The results of the census are summarized in Figure 1. A detailed sample summary is provided in Annex 5.

A structured questionnaire was used to complete an audit of all antimalarials and malaria rapid diagnostic tests (mRDTs) as well as a provider interview (see Annex 6). See Annex 7 and Annex 8 for detailed summaries of antimalarials and RDTs audited. Key informant interviews were conducted with specific stakeholders to supplement information for the Tanzania background.

Double data entry was completed using Microsoft Access. All data cleaning and analysis was performed using Stata 13.1 (©StataCorp, College Station, TX). Data were weighted to account for variation in probability of outlet selection (see Annex 9), and standard error calculation reflected clustering of outlets at ward and district levels. Standard indicators were constructed according to definitions applied across ACTwatch project countries (see Annex 10).

Figure 1. Survey flow diagram, Tanzania, 2014



1: Antimalarials in stock on day of visit
2: Antimalarials reportedly in stock during the previous 3 months but not on the day of the visit
3: Malaria blood testing available but no antimalarials in stock
* Identified as outlets with potential to sell or distribute antimalarials and/or provide malaria blood testing during the census or booster sampling
** Administered questions to assess current or recent (previous 3 months) availability of antimalarials and malaria blood testing (microscopy or rapid diagnostic test)
*** A partial or complete interview was conducted with an outlet representative

Summary of Key Findings

Table S1: Key results, by outlet type, 2014

	Public Health Facility	**ALL Public / Not For-Profit[1]**	Private For-Profit Facility	Pharmacy	ADDO	DLDB	**ALL Private[2]**	**ALL Outlets**
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Readiness for malaria case management ***Proportion of all screened outlets* with*:**	N=298	N=337	N=194	N=364	N=1,133	N=117	N=4,387	N=4,724
Availability of malaria blood testing	88.7 (82.2, 93.0)	89.6 (83.5, 93.6)	93.0 (86.1, 96.6)	10.6 (6.8, 16.3)	7.1 (4.0, 12.4)	4.3 (1.4, 11.9)	1.8 (1.3, 2.5)	4.7 (3.5, 6.2)
Availability of QA ACT	98.1 (94.7, 99.3)	96.9 (93.9, 98.5)	78.5 (67.7, 86.5)	90.3 (84.6, 94.0)	86.3 (81.4, 90.0)	78.2 (64.6, 87.6)	12.2 (10.1, 14.7)	15.0 (12.3, 18.1)
Availability of QA ACT and malaria blood testing	87.7 (81.4, 92.1)	87.4 (81.7, 91.6)	74.8 (64.0, 83.3)	9.7 (5.9, 15.6)	6.2 (3.7, 10.2)	4.3 (1.4, 11.9)	1.5 (1.1, 2.2)	4.3 (3.2, 5.8)
Availability of QA ACT, blood testing not available	10.4 (6.2, 16.9)	9.5 (5.6, 15.7)	3.7 (1.5, 8.6)	80.6 (74.6, 85.4)	80.1 (73.6, 85.3)	74.0 (60.1, 84.3)	10.7 (8.8, 12.9)	10.6 (8.8, 12.8)
Availability of QA ACT, malaria blood testing, and provider correct knowledge of first line treatment	85.0 (78.0, 90.1)	84.9 (78.5, 89.7)	74.2 (63.5, 82.7)	9.7 (5.9, 15.6)	5.9 (3.5, 9.9)	2.7 (0.9, 7.9)	1.4 (1.0, 2.0)	4.2 (3.1, 5.6)
Availability of any severe malaria treatment	83.3 (75.6, 88.8)	82.9 (75.8, 88.2)	73.3 (63.4, 81.4)	57.9 (42.0, 72.3)	23.9 (18.0, 31.0)	4.5 (1.9, 10.4)	3.1 (2.3, 4.1)	5.7 (4.3, 7.6)
Readiness for malaria case management ***Proportion of antimalarial-stocking outlets Ψ with:***	N=297	N=335	N=172	N=361	N=1,126	N=114	N=1,794	N=2,129
Availability of malaria blood testing	89.1 (82.5, 93.4)	89.9 (83.7, 93.9)	93.5 (85.7, 97.2)	10.8 (6.9, 16.6)	7.2 (4.0, 12.5)	4.3 (1.4, 12.2)	11.5 (8.9, 14.8)	26.1 (21.9, 30.7)
Availability of QA ACT	98.5 (95.0, 99.5)	97.8 (95.0, 99.0)	88.8 (78.6, 94.5)	90.8 (85.9, 94.2)	86.9 (82.1, 90.6)	79.5 (65.8, 88.7)	83.0 (77.4, 87.5)	85.8 (81.2, 89.4)
Availability of QA ACT and malaria blood testing	88.0 (81.6, 92.4)	88.2 (82.2, 92.3)	84.6 (74.0, 91.4)	9.8 (6.0, 15.7)	6.2 (3.7, 10.3)	4.3 (1.4, 12.2)	10.5 (8.1, 13.5)	24.9 (20.9, 29.5)
Availability of QA ACT, blood testing not available	10.4 (6.2, 17.0)	9.6 (5.7, 15.8)	4.2 (1.8, 9.6)	81.0 (75.4, 85.6)	80.7 (74.2, 85.8)	75.2 (61.5, 85.1)	72.6 (66.5, 77.9)	60.9 (54.7, 66.6)
Availability of QA ACT, malaria blood testing, and provider correct knowledge of first line treatment	85.4 (78.2, 90.5)	85.7 (79.1, 90.5)	83.9 (73.3, 90.9)	9.8 (6.0, 15.7)	6.0 (3.5, 10.0)	2.7 (0.9, 8.2)	9.7 (7.6, 12.5)	23.9 (19.8, 28.5)
Availability of any severe malaria treatment	83.6 (76.0, 89.1)	83.6 (76.6, 88.8)	82.9 (73.1, 89.6)	58.2 (42.6, 72.4)	24.1 (18.2, 31.2)	4.6 (1.9, 10.6)	21.1 (16.5, 26.7)	32.8 (26.7, 39.4)

Table S1: Key results, by outlet type, 2014

	Public Health Facility	**ALL Public / Not For-Profit[1]**	Private For-Profit Facility	Pharmacy	ADDO	DLDB	**ALL Private[2]**	**ALL Outlets**
Readiness for IPTp ***Proportion of outlets with SP available*:**	*N=298 ΨN=297	*N=337 ΨN=335	*N=194 ΨN=172	*N=364 ΨN=361	*N=1,133 ΨN=1,126	*N=117 ΨN=114	*N=4,387 ΨN=1,794	*N=4,724 ΨN=2,129
Among all screened outlets*	29.4 (19.7, 41.4)	31.5 (22.2, 42.5)	65.0 (48.4, 78.6)	96.5 (91.9, 98.6)	93.8 (90.9, 95.8)	88.2 (75.8, 94.7)	13.2 (11.1, 15.7)	13.8 (11.7, 16.3)
Among antimalarial-stocking outlets Ψ	29.5 (19.8, 41.5)	31.7 (22.4, 42.8)	73.5 (53.6, 86.9)	97.1 (93.5, 98.7)	94.5 (91.7, 96.4)	89.7 (78.1, 95.5)	90.2 (84.9, 93.7)	79.3 (73.9, 83.8)
Malaria market performance								
% QA ACT market share within outlet type^	59.9	54.5	44.8	20.9	42.7	34.3	39.2	43.7
Median price for one QA ACT adult equivalent treatment dose (AETD)	--	--	$1.18 [0.89-2.36] (347)	$1.18 [1.18-2.36] (840)	$1.18 [1.18-1.58] (2,280)	$1.18 [1.18-1.77] (195)	$1.18 [1.18-1.77] (3,692)	$1.18 [0.00-1.48] (4,860)
Median price for one pre-packaged pediatric QA AL #	--	--	$0.59 [0.30-0.89] (78)	$0.59 [0.35-0.59] (197)	$0.59 [0.30-0.59] (574)	$0.59 [0.35-0.59] (50)	$0.59 [0.30-0.59] (906)	$0.35 [0.00-0.59] (1,217)
Median price for an mRDT ##	--	--	$0.65 [0.59-1.18] (101)	$0.89 [0.89-0.89] (8)	$0.59 [0.59-1.18] (53)	$0.59 [0.59-0.89] (4)	$0.59 [0.59-1.18] (169)	$0.00 [0.00-0.59] (436)
Median price for malaria microscopy ##	--	--	$0.59 [0.59-0.59] (160)	$0.59 [0.59-1.18] (5)	$0.30 [0.30-0.89] (5)	$0.59 (1)	$0.59 [0.59-0.59] (171)	$0.30 [0.00-0.59] (297)

1 Inclusive of N=39 screened and 38 antimalarial-stocking private not for-profit facility outlets.

2 Inclusive of N= 2,579 screened and 21 antimalarial-stocking general retail outlets.

* The denominator 43 includes outlets that met screening criteria for a full interview but did not complete the interview (were not interviewed or completed a partial interview).

Ψ Outlets with at least one antimalarial in stock on the day of the survey.

^ Percent market volume (adult equivalent treatment dosages sold/distributed in the previous week) accounted for by quality-assured ACT (QA ACT) sale/distribution within the outlet type.

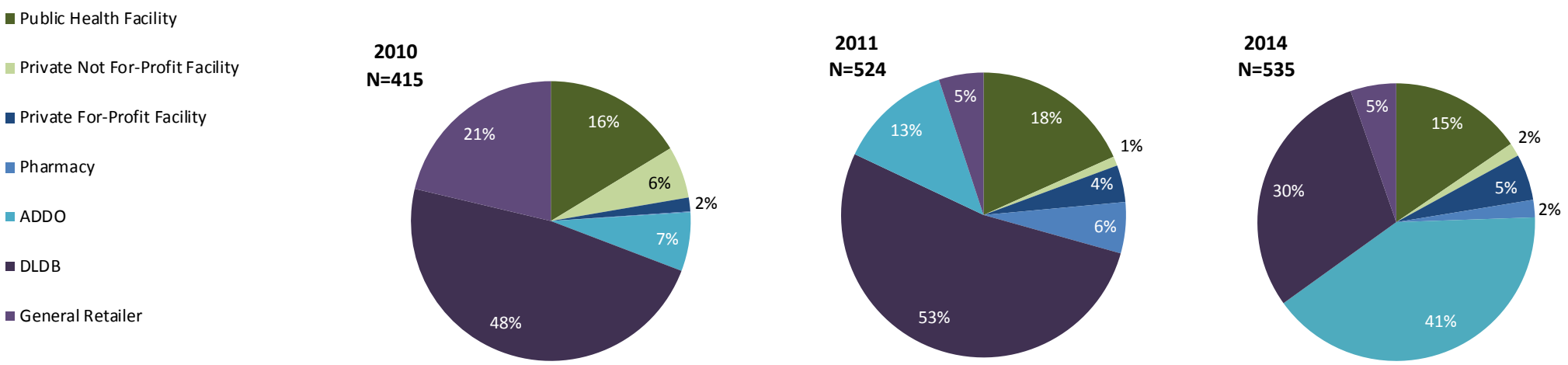
Pre-packaged QA AL for a 10kg child

Price inclusive of consultation / service fees for a child under five

Source: ACTwatch Outlet Survey, Tanzania, 2014.

Figure 2. Market composition: outlet type distribution, 2010-2014

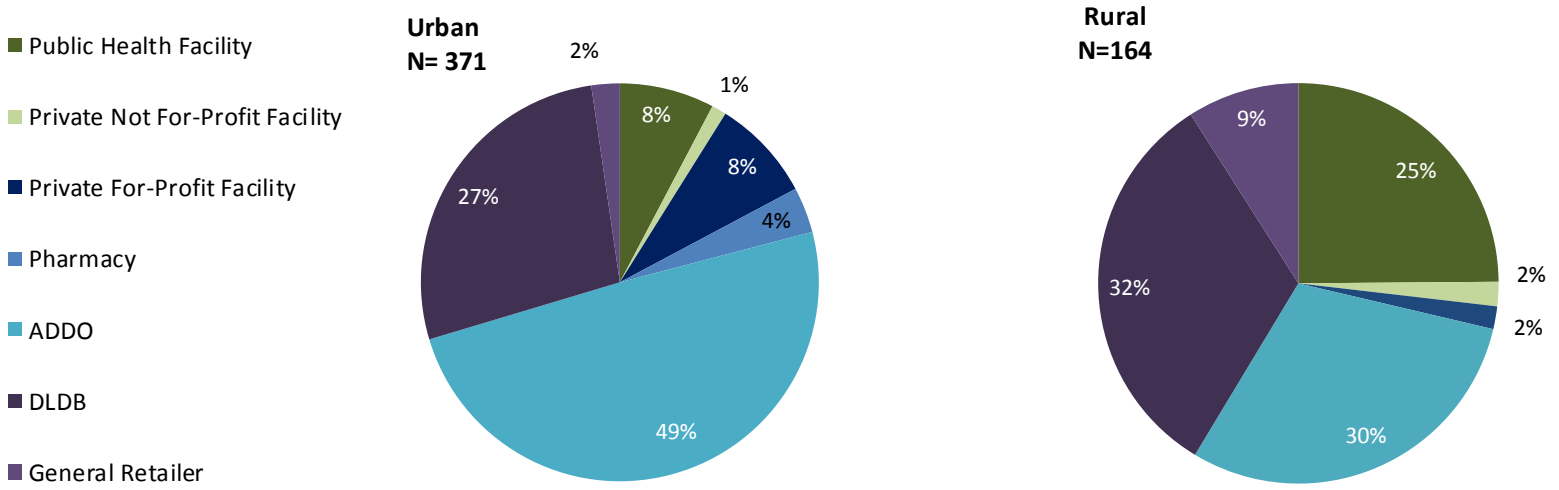
Among all outlets with at least one antimalarial in stock, across survey round



The private sector accounted for about 80% of all antimalarial-stocking outlets at each survey round. The proportion of antimalarial-stocking outlets that were non-accredited drug stores known as duka la dawa baridi (DLDB) accounted for about half of all antimalarial-stocking outlets in 2010 and 2011, and 30% in 2014. The proportion of antimalarial-stocking outlets that were Accredited Drug Dispensing Outlets (ADDO) increased over time to from 7% in 2010, to 13% in 2011, and finally, 41% in 2014. The proportion of outlets that were general retailers decreased to 5% in 2014.

Figure 3. Market composition: outlet type distribution, 2014, urban/rural

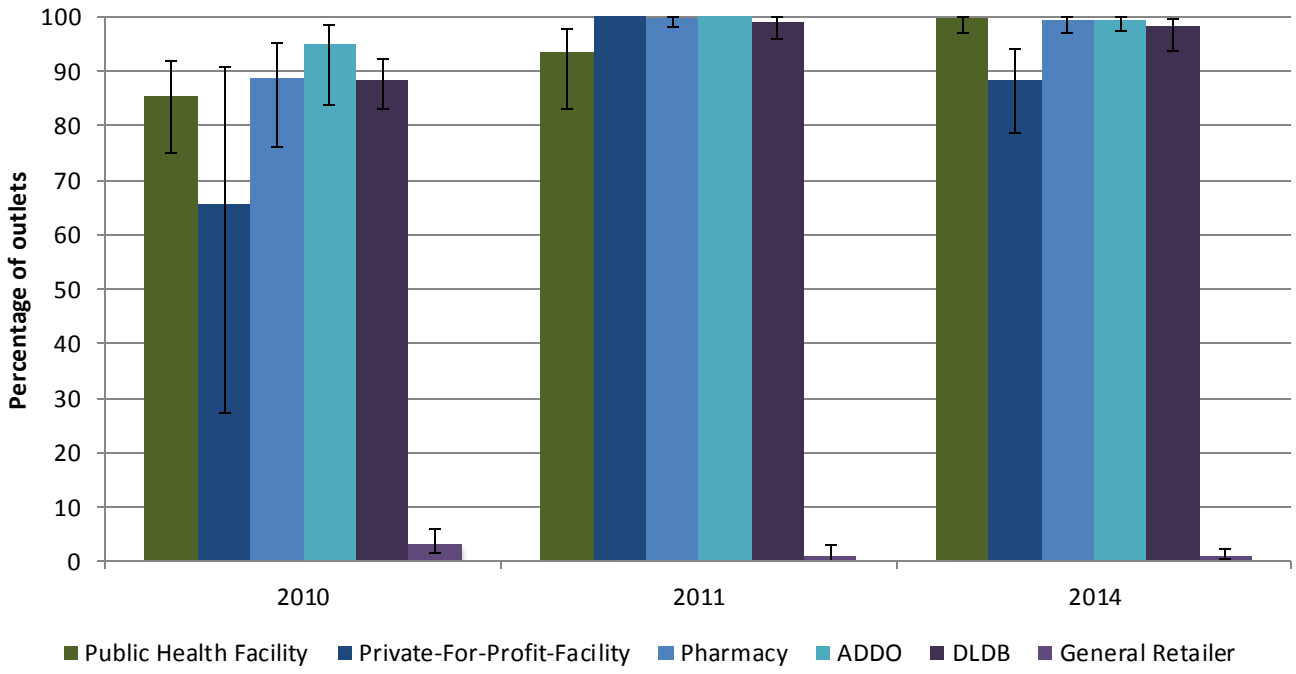
Among all outlets with at least one antimalarial in stock



The majority of antimalarial-stocking outlets in urban areas are drug stores including ADDOs (49% of all outlets) and DLDBs (27% of all outlets). In rural areas, more than half of antimalarial-stocking outlets are drug stores including ADDOs (30% of all outlets) and DLDBs (32% of all outlets). In contrast to low relative numbers of public health facilities in urban areas (8% of all outlets), in rural areas, 25% of all antimalarial-stocking outlets are public health facilities.

Figure 4. Percentage of outlets with at least one antimalarial in stock on the day of the survey, 2010-2014

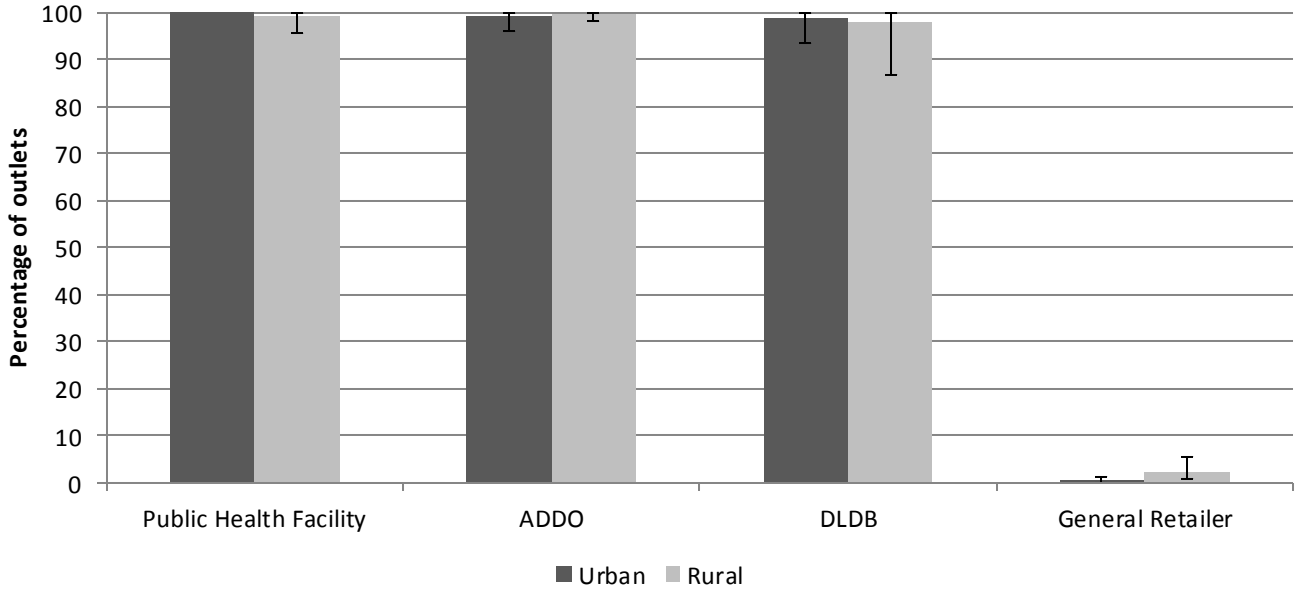
Among all screened outlets, across survey round



Availability of antimalarials across all outlet types has increased over time. Availability among public health facilities was 85% in 2010 and increased to 93% in 2011 and nearly 100% in 2014. Nearly all public health facilities, pharmacies, ADDOs, and DLDBs had antimalarials in stock in 2014. Availability was relatively lower among private for-profit (88%), and only 1% of all screened general retail outlets were stocking antimalarials in 2014.

Figure 5. Percentage of outlets with at least one antimalarial in stock on the day of the survey, 2014, urban/rural

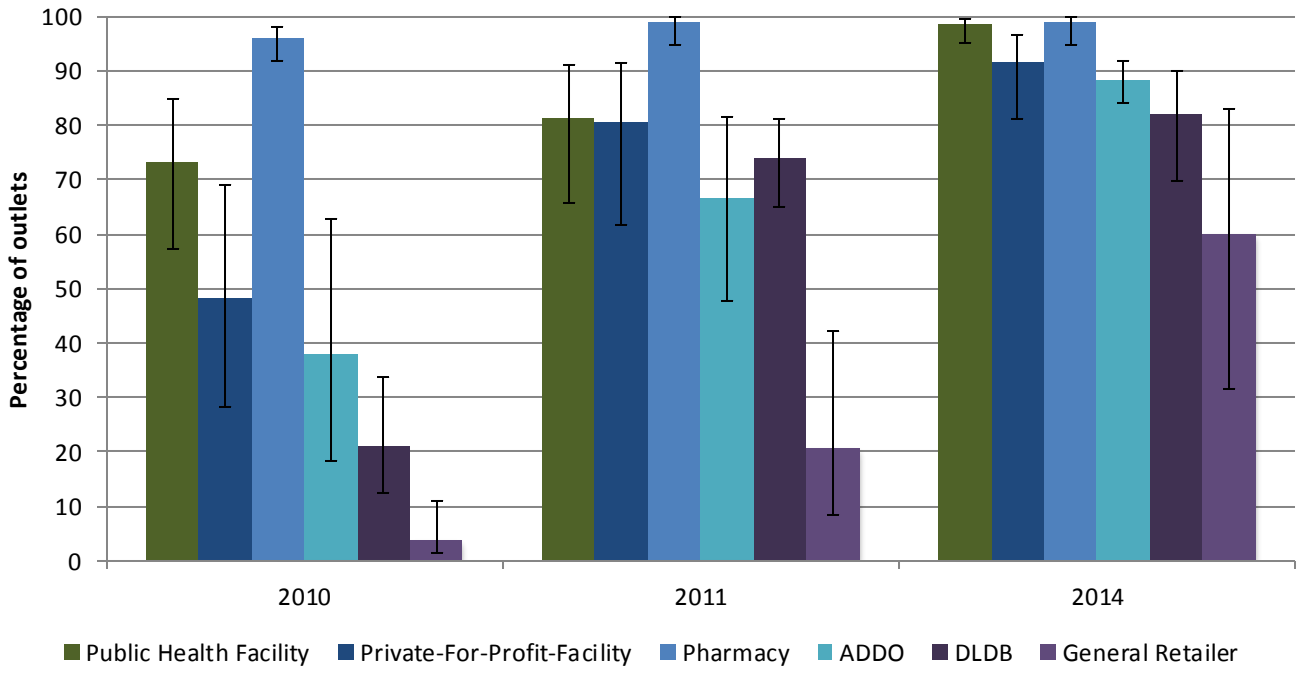
Among all screened outlets



Antimalarial availability was similar across urban and rural locations across outlet types.

Figure 6. Percentage of antimalarial-stocking outlets with ACT in stock on the day of the survey, 2010-2014

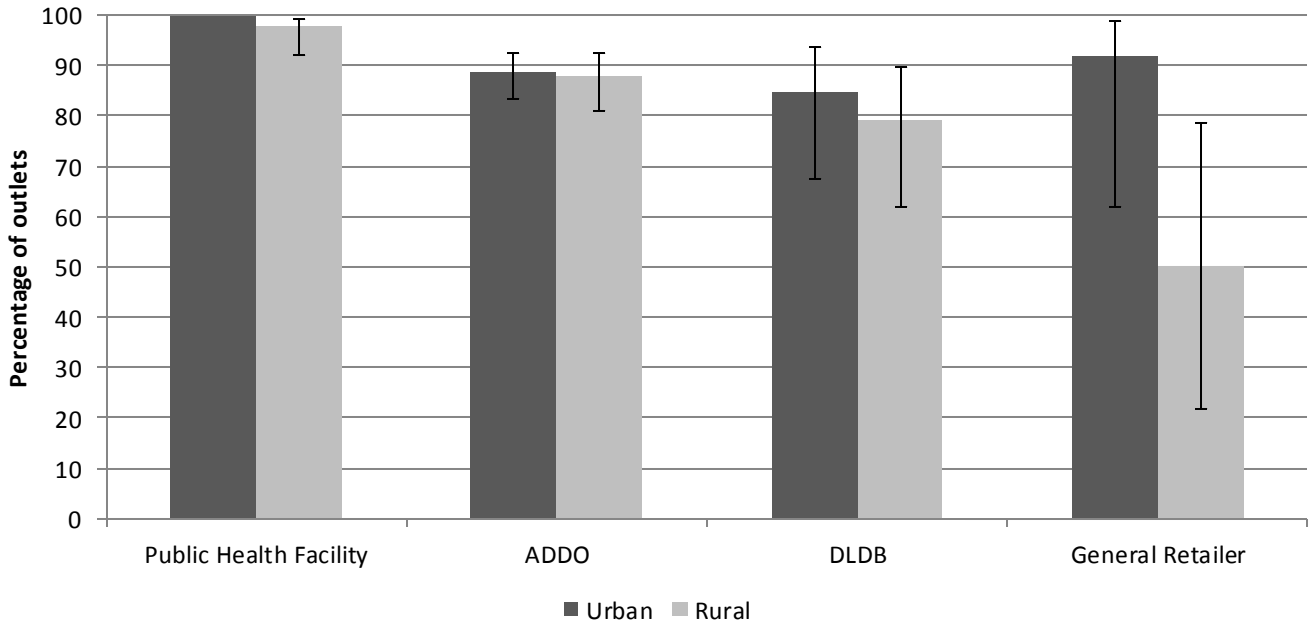
Among all outlets with at least one antimalarial in stock, across survey round



ACT availability among antimalarial-stocking outlets increased over time among all outlet types with important increases in public health facilities (2010, 73%; 2014, 98%) and notable increases among drug stores including ADDOs (2010, 40%; 2014, 88%), and DLDBs (2010, 21%; 2014, 82%). ACT availability also increased among antimalarial-stocking general retail outlets from 4% in 2010 to 60% in 2014.

Figure 7. Percentage of antimalarial-stocking outlets with ACT in stock on the day of the survey, 2014, urban/rural

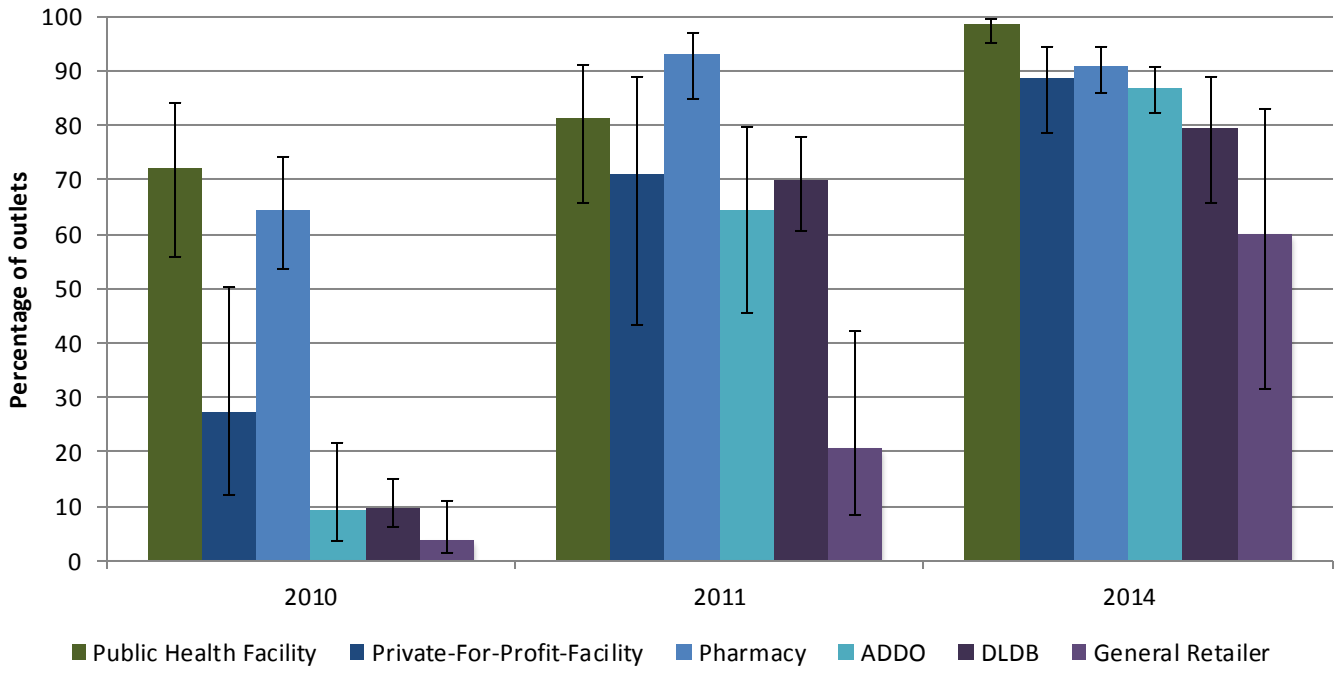
Among all outlets with at least one antimalarial in stock



ACT availability was similar among antimalarial-stocking outlets in urban versus rural areas across all outlet types. Data trends suggest higher availability among antimalarial-stocking general retailers in urban (92%) versus rural areas (50%).

Figure 8. Percentage of antimalarial-stocking outlets with quality-assured ACT in stock on the day of the survey, 2010-2014

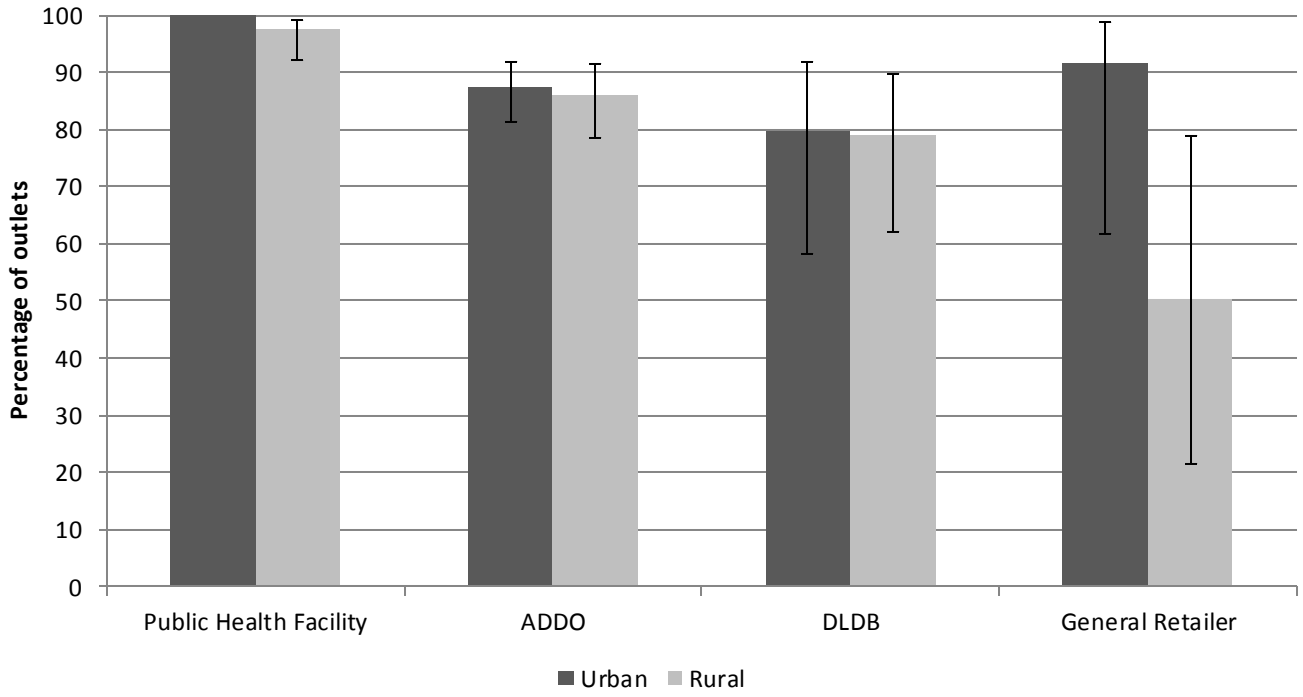
Among all outlets with at least one antimalarial in stock, across survey round



Availability of quality-assured ACT among antimalarial-stocking outlets increased over time among all outlet types with important increases in public health facilities (2010, 72%; 2014, 98%) and pharmacies (2010, 64%; 2014, 91%), and notable increases among drug stores including ADDOs (2010, 10%; 2014, 87%) and DLDBs (2010, 10%; 2014, 79%). QA ACT availability also increased among antimalarial-stocking general retail outlets from 4% in 2010 to 60% in 2014.

Figure 9. Percentage of antimalarial-stocking outlets with quality-assured ACT in stock on the day of the survey, 2014, urban/rural

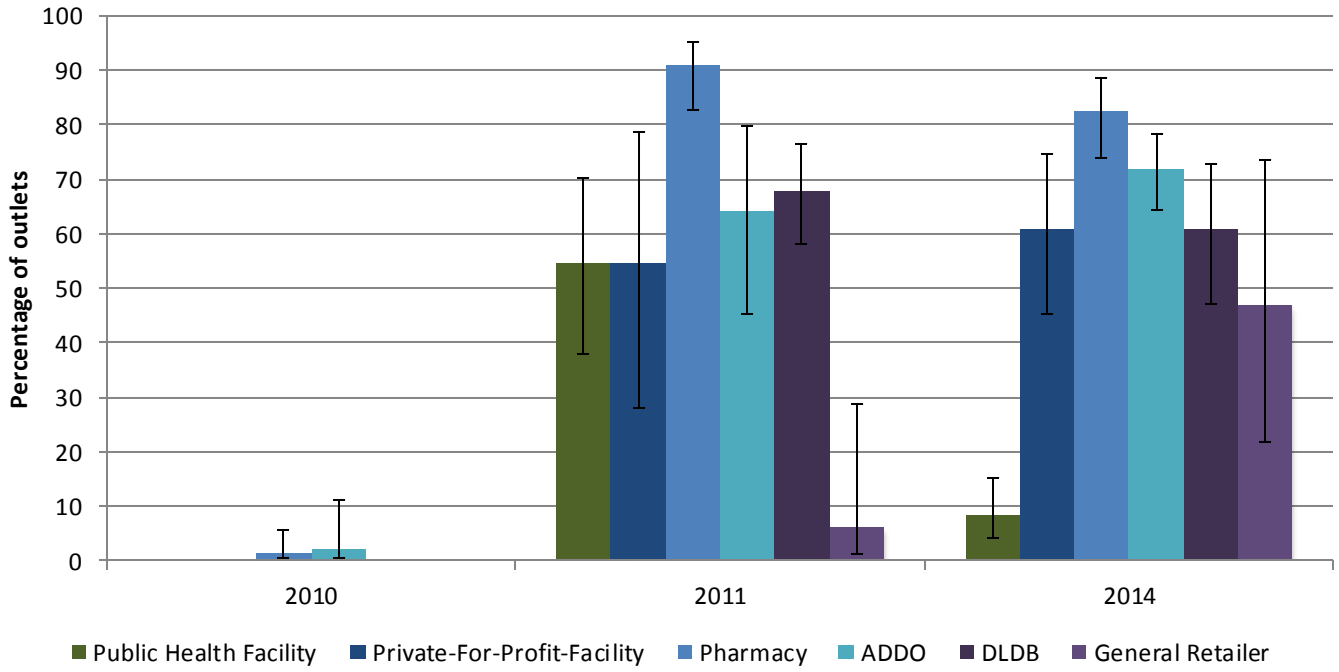
Among all outlets with at least one antimalarial in stock



Quality-assured ACT availability was similar among antimalarial-stocking outlets in urban versus rural areas across most outlet types. Data trends suggest higher availability among antimalarial-stocking general retailers in urban (92%) versus rural areas (50%).

Figure 10. Percentage of antimalarial-stocking outlets with quality-assured ACT marked with the 'green leaf' logo in stock on the day of the survey, 2010-2014

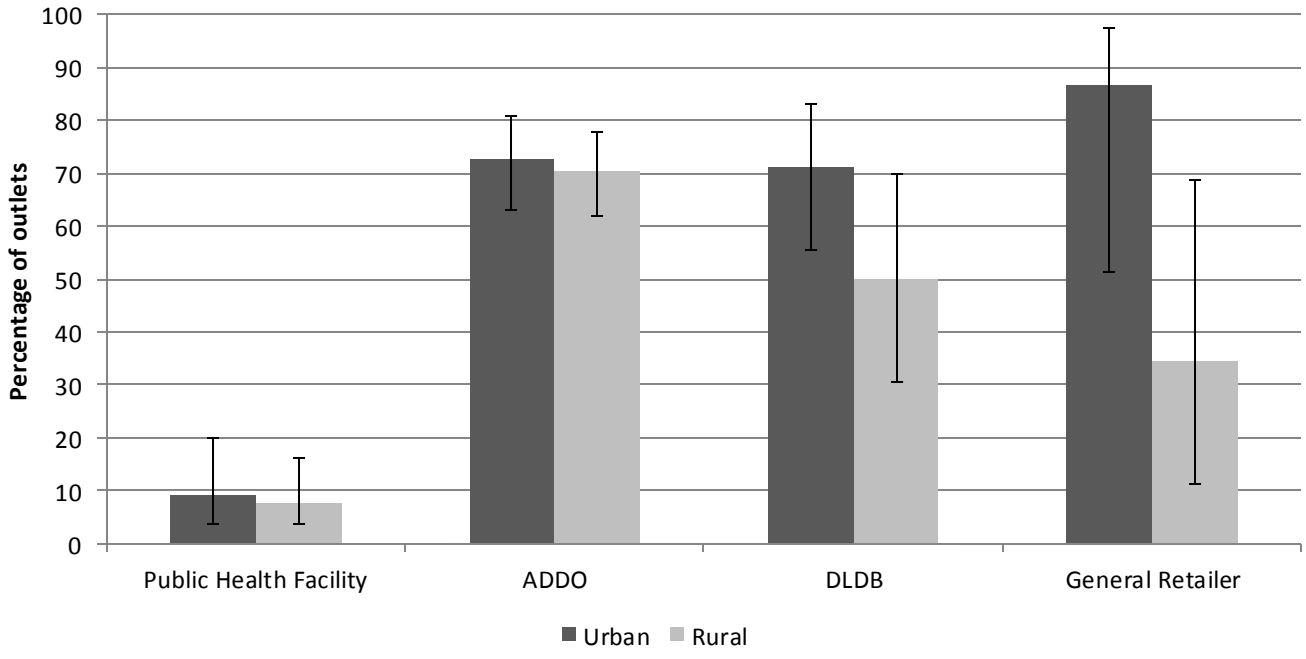
Among all outlets with at least one antimalarial in stock, across survey round



The availability of co-paid QA ACT marked with the 'green leaf' logo among antimalarial-stocking outlets decreased among public health facilities between 2011 (55%) and 2014 (8%). However, availability remained higher than 50% between 2011 and 2014 among private for-profit facilities, pharmacies, ADDOs, and DLDBs. QA ACT was largely not available among general retailers stocking antimalarials in 2010 (0%) and 2011 (6%), however, in 2014, nearly half (47%) had 'green leaf' ACTs available.

Figure 11. Percentage of antimalarial-stocking outlets with quality-assured ACT marked with the 'green leaf' in stock on the day of the survey, 2014, urban/rural

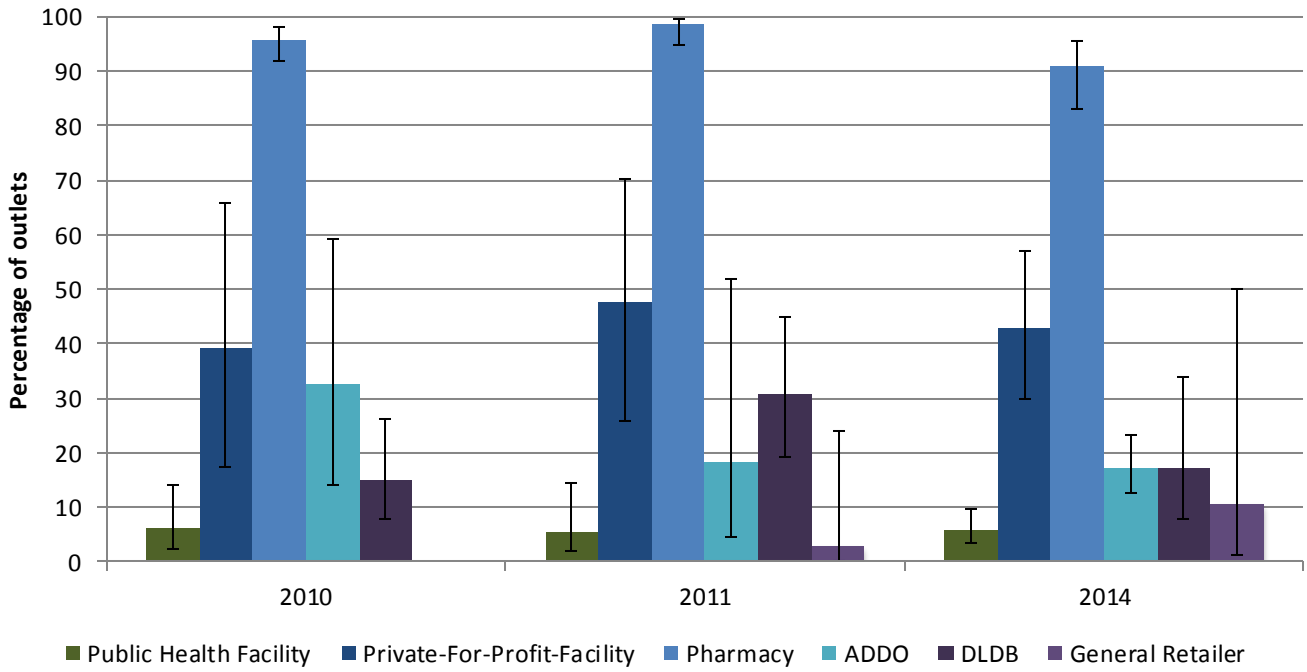
Among all outlets with at least one antimalarial in stock



Availability of co-paid ACT marked with the 'green leaf' logo was similar among urban and rural public health facilities and ADDOs in 2014. Data trends suggest higher availability among urban versus rural DLDBs (urban, 71%; rural, 50%) and general retailers (urban, 87%; rural, 35%).

Figure 12. Percentage of antimalarial-stocking outlets with non-quality-assured ACT in stock on the day of the survey, 2010-2014

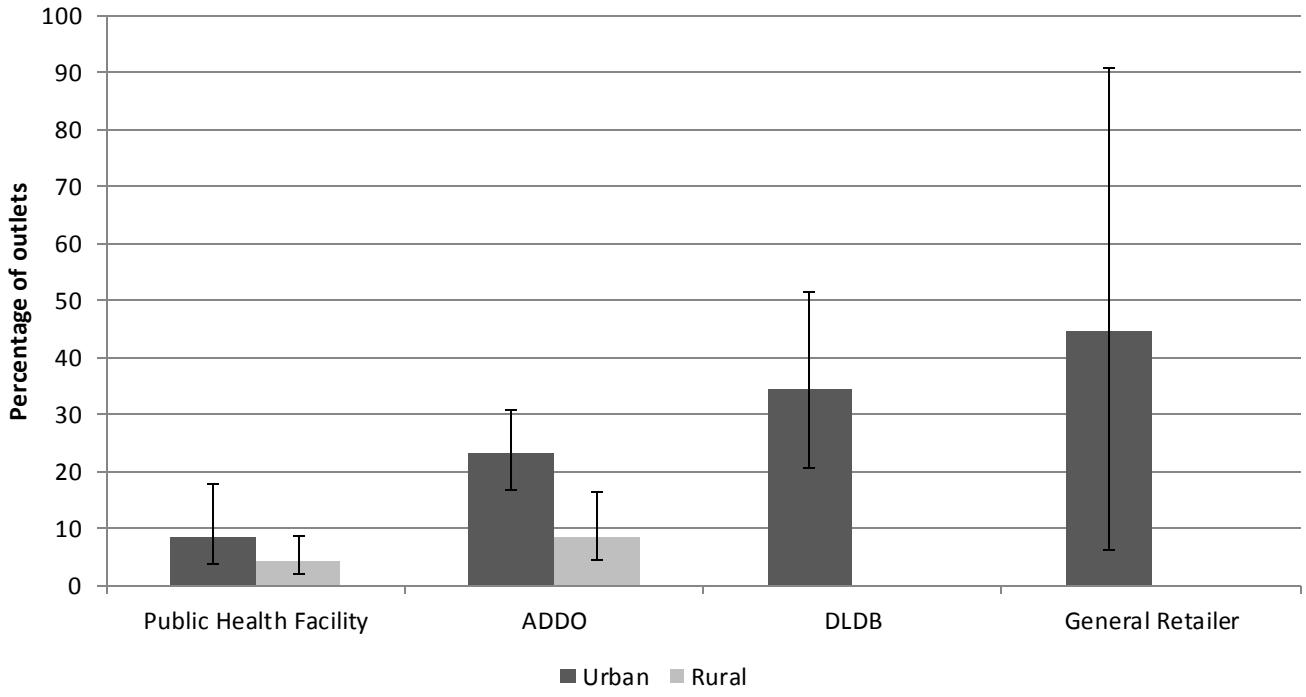
Among all outlets with at least one antimalarial in stock, across survey round



More than 90% of antimalarial-stocking pharmacies and approximately 40% of private for-profit facilitieshad non quality-assured ACT in stock across survey rounds. Availability was much lower among other outlet types including ADDOs and DLDBs (17% in 2014). Data trends suggest a decrease in non-QA ACT availability among ADDOs from 33% in 2010 to 17% in 2014.

Figure 13. Percentage of antimalarial-stocking outlets with non-quality-assured ACT in stock on the day of the survey, 2014, urban/rural

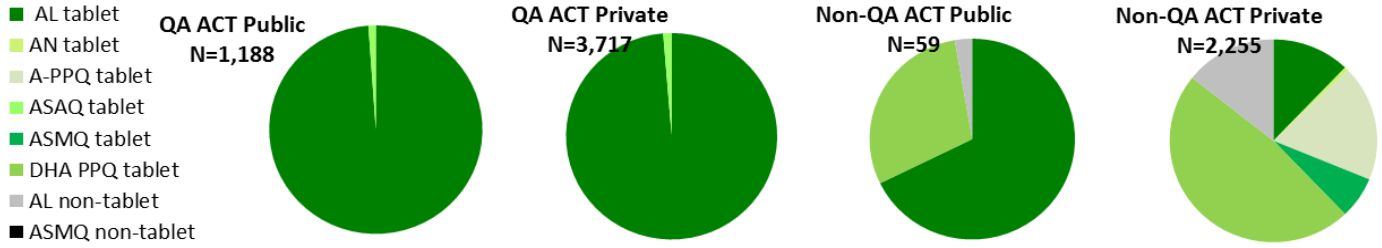
Among all outlets with at least one antimalarial in stock



Non-QA ACTs were generally found in urban areas, with higher availability among antimalarial-stocking ADDOs in urban (23%) versus rural areas (9%). Non-QA ACTs were found in urban antimalarial-stocking DLDBs (34%) and general retailers (45%) but were not found among these outlet types in rural areas.

Figure 14. Types of quality-assured ACT and non-quality-assured ACT found among public and private sector outlets, 2014

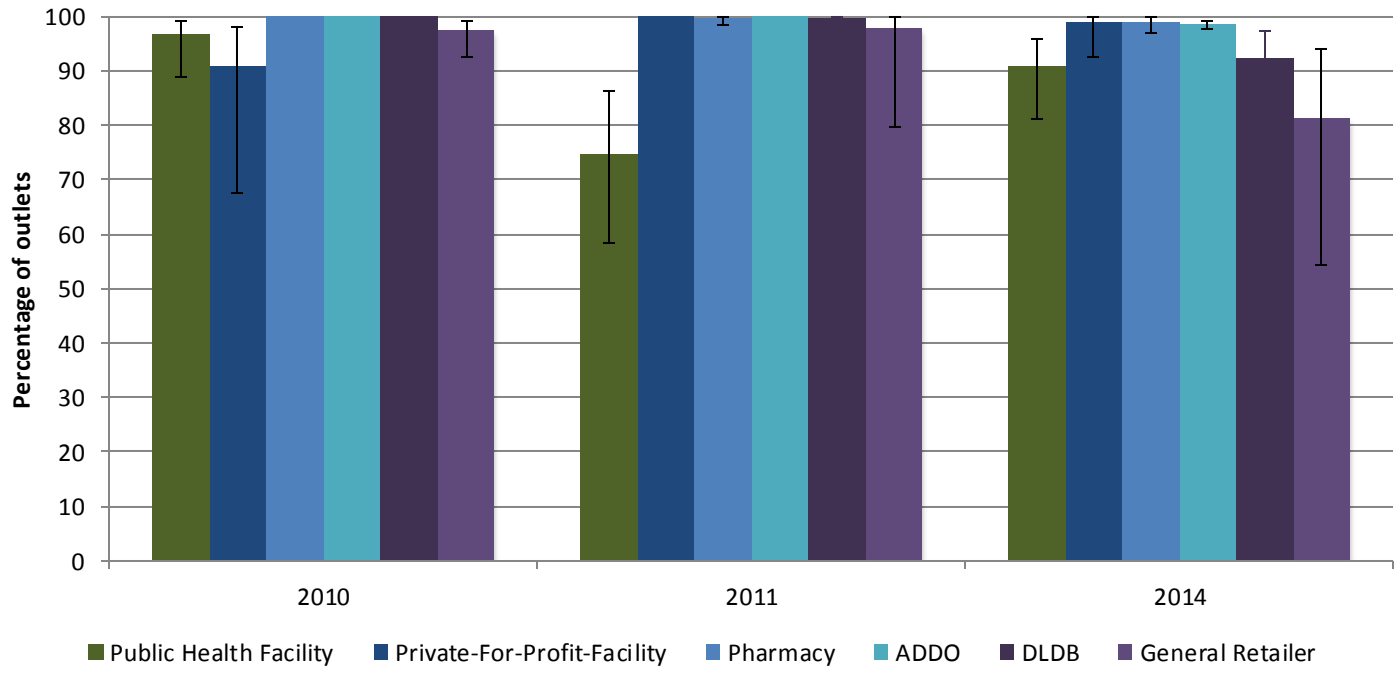
Among all ACT medicines audited, across sector



The majority of quality-assured ACT products audited in the public and private sector were AL tablets. Non-QA ACTs audited in the public sector were primarily AL tablets (68%) and dihydroartemisinin piperaquine (DHA PPQ) tablets (30%). In the private sector, a variety of non-QA ACTs were audited including DHA PPQ tablets (48%) and AL tablets (12%) and suspensions (14%).

Figure 15. Percentage of antimalarial-stocking outlets with non-artemisinin therapy in stock on the day of the survey, 2010-2014

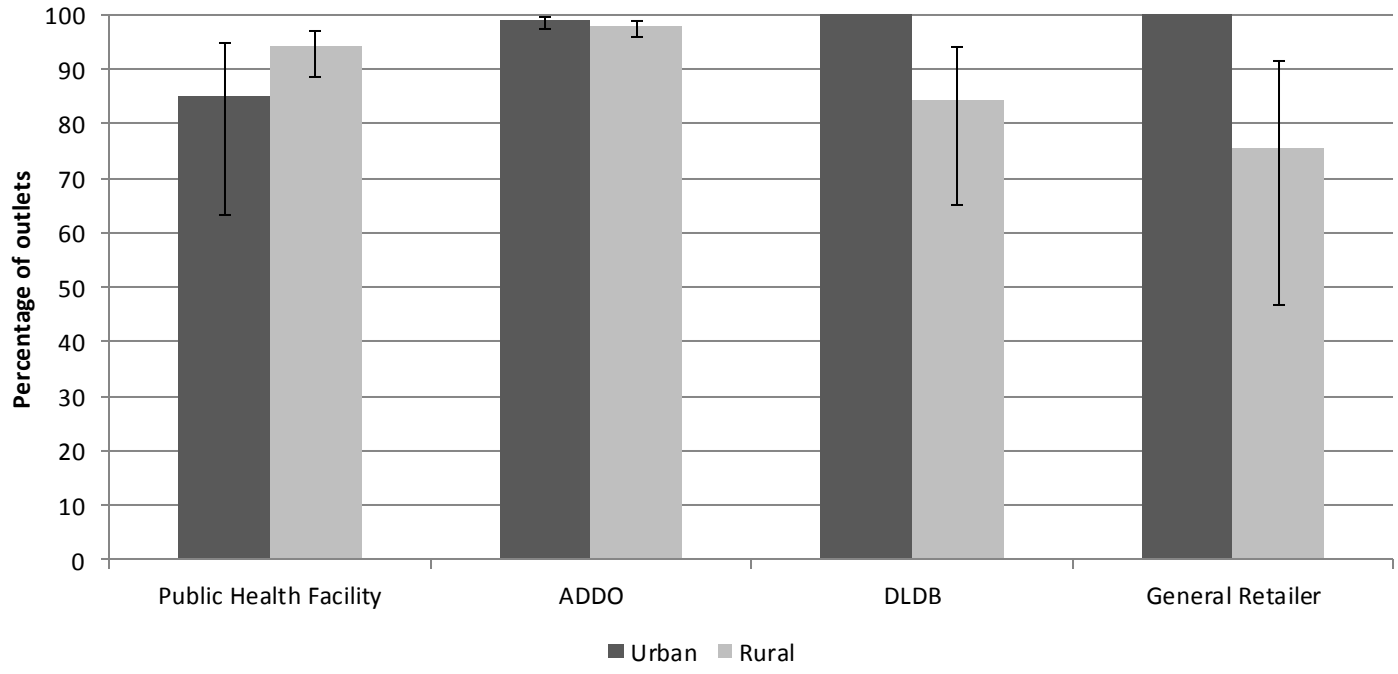
Among all outlets with at least one antimalarial in stock, across survey round



The availability of non-artemisinin therapies has generally remained high (>90%) across all outlet types over time. Exceptions include a decline among public health facilities between 2010 (97%) and 2011 (75%) and an increase to 91% in 2014. Among antimalarial-stocking general retailers, availability of non-artemisinin therapy has declined over time from 98% in 2010 to 81% in 2014.

Figure 16. Percentage of antimalarial-stocking outlets with non-artemisinin therapy in stock on the day of the survey, 2014, urban/rural

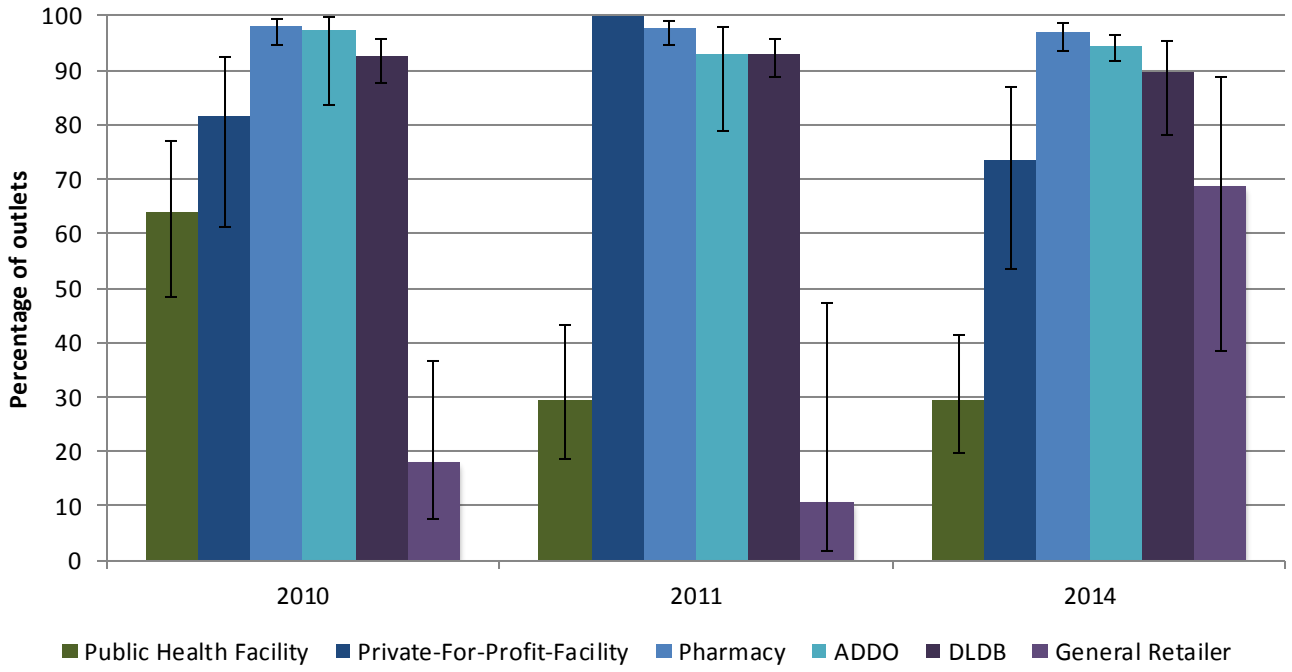
Among all outlets with at least one antimalarial in stock



Availability of non-artemisinin therapy was similar among antimalarial-stocking public health facilities and ADDOs in urban and rural areas in 2014. Urban antimalarial-stocking DLDBs and general retailers were more likely to stock non-artemisinin therapies (100%) in comparison with rural DLDBs (85%) and general retailers (76%).

Figure 17. Percentage of antimalarial-stocking outlets with SP in stock on the day of the survey, 2010-2014

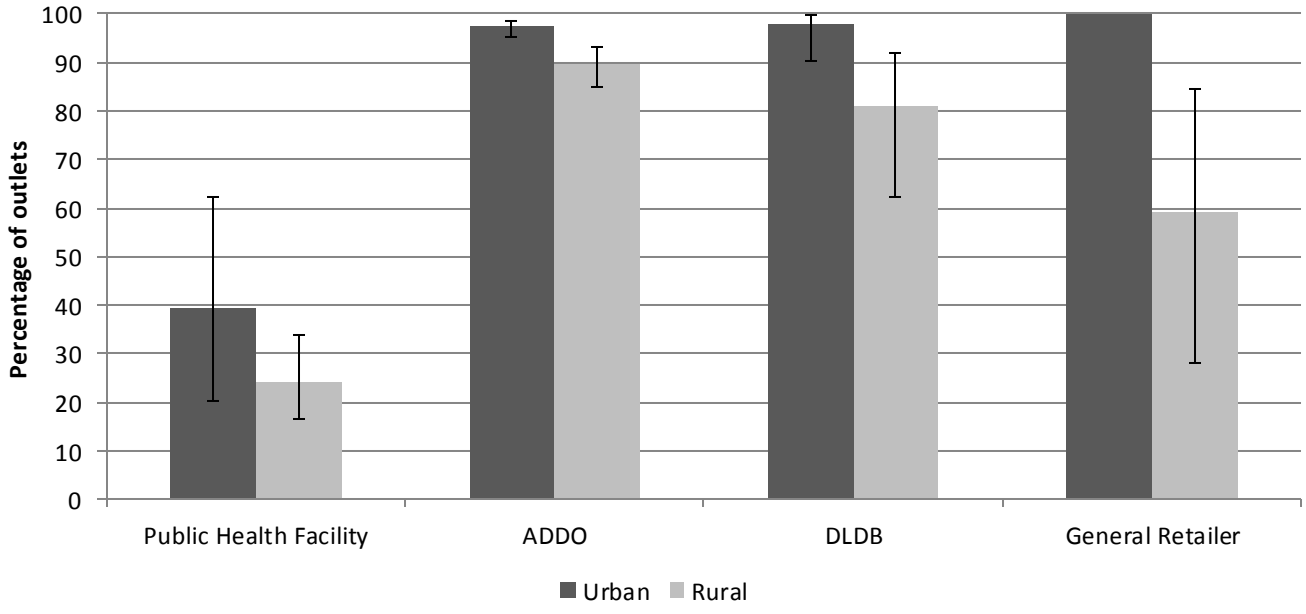
Among all outlets with at least one antimalarial in stock, across survey round



SP is used for intermittent preventive treatment of malaria in pregnancy and should be dispensed during antenatal clinic visits. SP availability among antimalarial-stocking public health facilities has declined in recent years from 64% in 2010 to 29% in 2011 and 30% in 2014. SP availability among antimalarial-stocking pharmacies, ADDOs, and DLDBs has remained high over time (90% or higher), and has increased among general retailers from 18% in 2010 to 69% in 2014.

Figure 18. Percentage of antimalarial-stocking outlets with SP in stock on the day of the survey, 2014, urban/rural

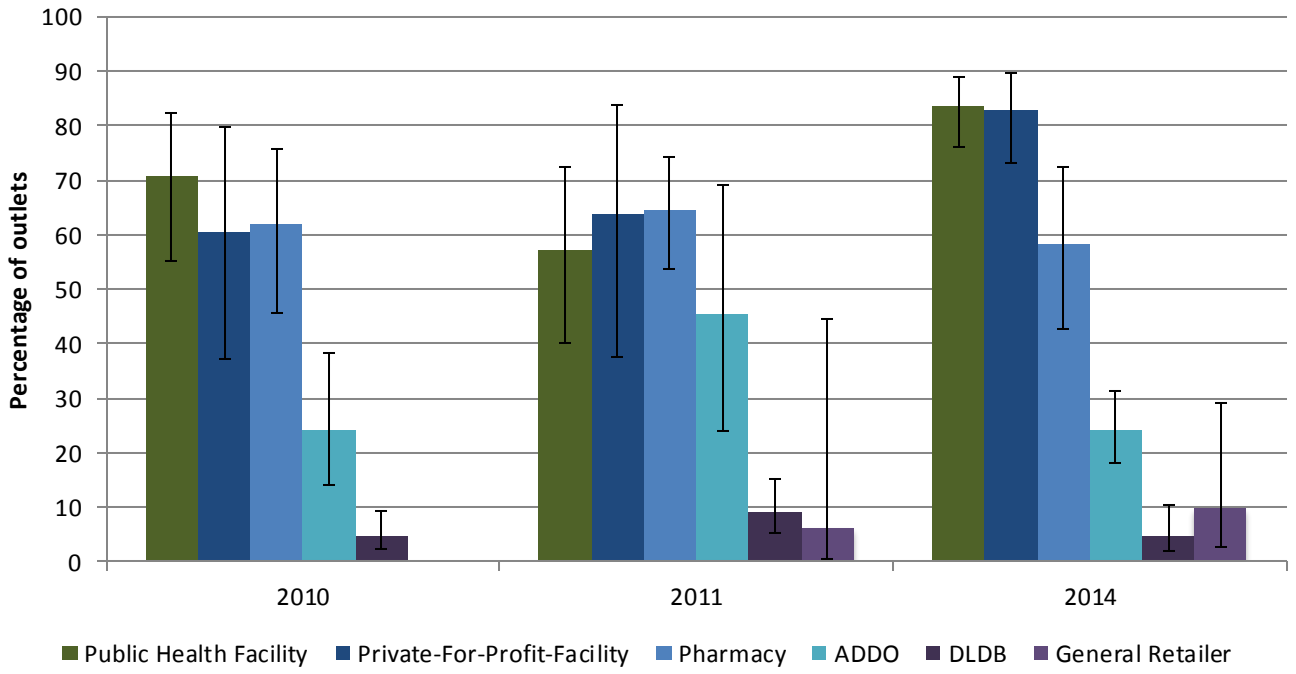
Among all outlets with at least one antimalarial in stock



Availability of SP among antimalarial-stocking outlets was generally higher in urban versus rural areas across all outlet types.

Figure 19. Percentage of antimalarial-stocking outlets with any severe malaria treatment in stock on the day of the survey, 2010-2014

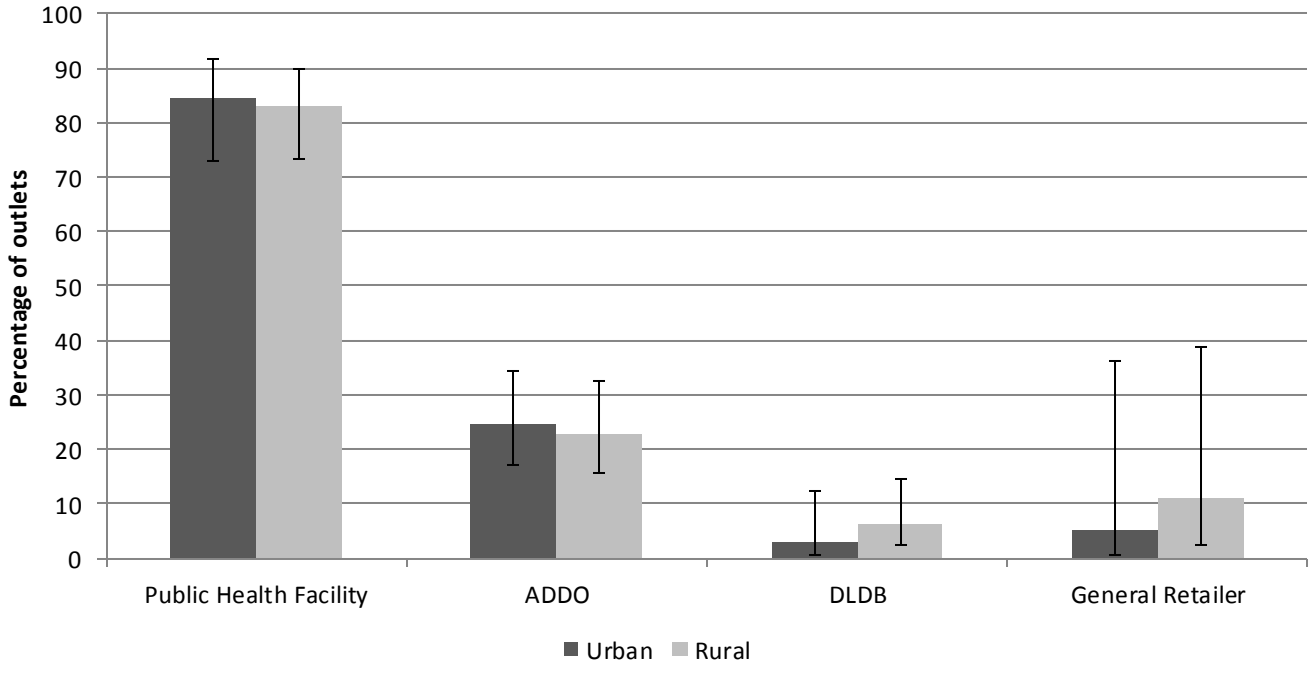
Among all outlets with at least one antimalarial in stock, across survey round



Treatments for severe malaria include artesunate IV/IM, quinine IV/IM, artemether IV/IM, artemotil IV/IM, and artesunate suppositories. Severe malaria treatment availability among antimalarial-stocking public and private for-profit facilities increased to over 80% in 2014. More than half of antimalarial-stocking pharmacies had severe malaria treatment in stock during each survey round.

Figure 20. Percentage of antimalarial-stocking outlets with any severe malaria treatment in stock on the day of the survey, 2014, urban/rural

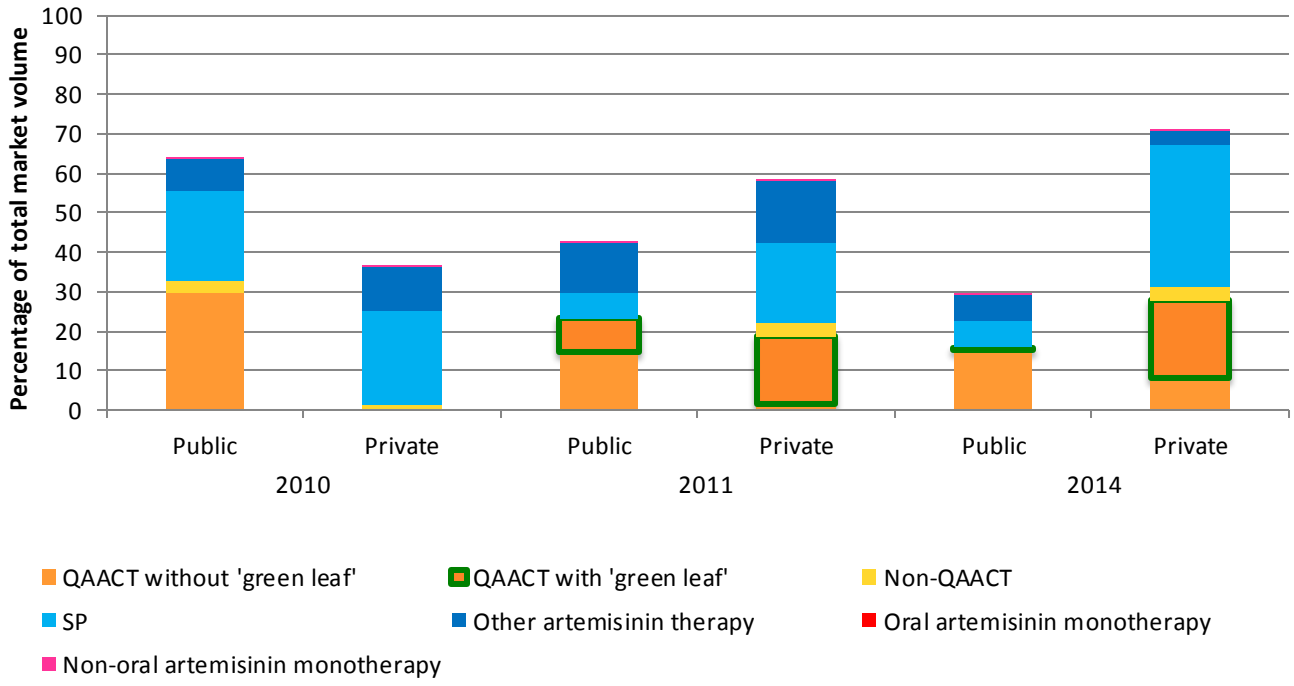
Among all outlets with at least one antimalarial in stock



Availability of severe malaria treatment was similar among antimalarial-stocking outlets in urban versus rural areas across outlet types.

Figure 21. Antimalarial market share, 2010-2014

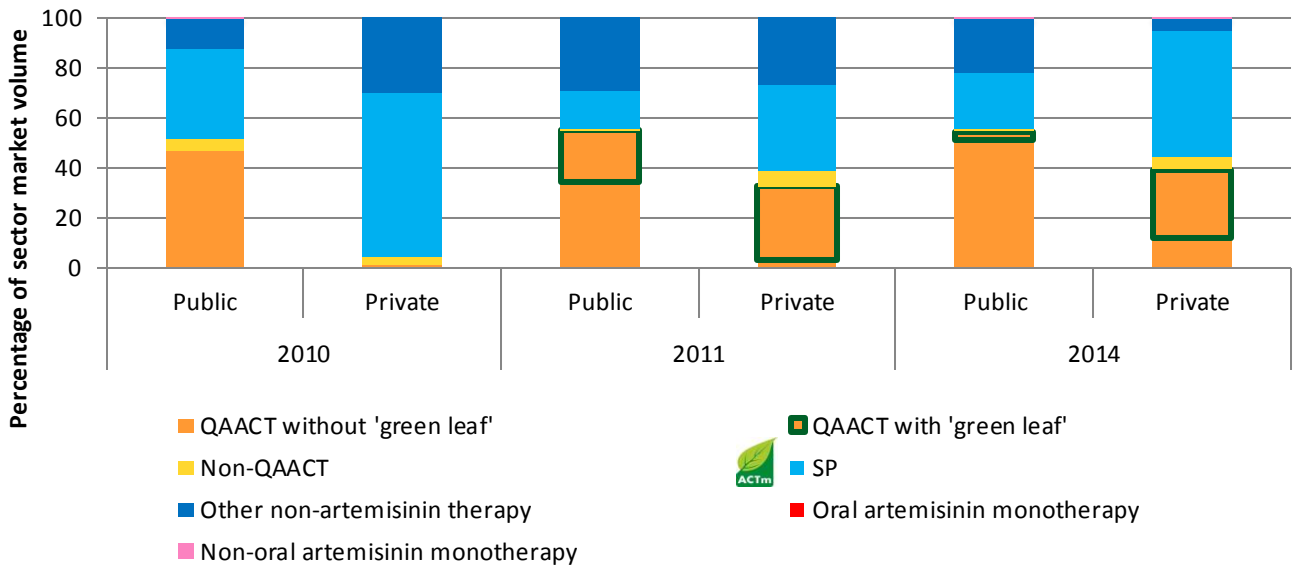
Relative market volume (sale/distribution) of antimalarial AETDs, by sector and antimalarial class, across survey round



The antimalarial market share for the private sector increased from 36% in 2010 to 58% in 2011 and 71% in 2014. Quality-assured ACT accounted for 30% of all antimalarials distributed in 2010 and were distributed almost exclusively by the public sector. QA ACT market share increased to 42% in 2011 and 44% in 2014. QA ACT with the 'green leaf' logo accounted for one-quarter of all antimalarials distributed in 2011 and 21% in 2014. Despite increases in market share for QA ACT, distribution of non-artemisinin therapy persisted over time, particularly distribution of SP by the private sector. SP accounted for 42% of all antimalarials distributed at the time of the 2014 survey.

Figure 22. Antimalarial market share within sector, 2010-2014

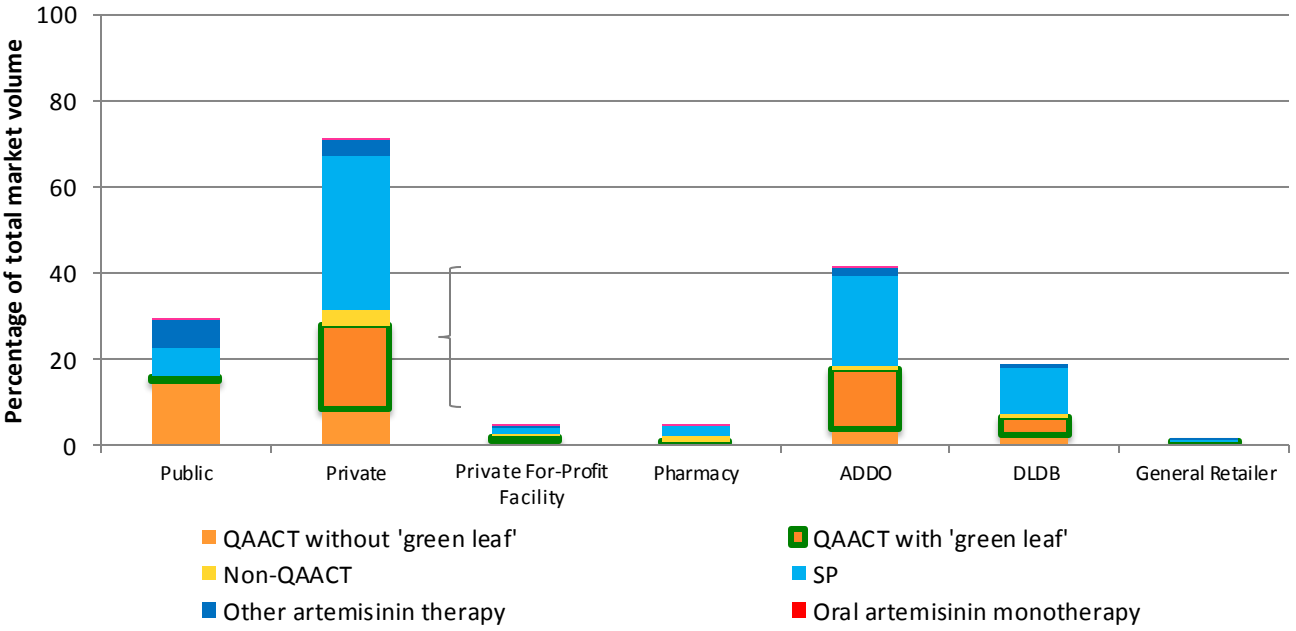
Relative market volume (sale/distribution) of antimalarial AETDs, within sector by antimalarial class, across survey round



QA ACT accounted for more than half of all antimalarials distributed by the public sector in 2014 (55%). QA ACT with the 'green leaf' logo accounted for 3% of antimalarial distribution in the public sector in 2014. Within the private sector, QA ACT market share was 39%. The majority of QA ACTs distributed by the private sector in 2014 were ACTs with the 'green leaf' logo. SP market share in the private sector was 51% in 2014.

Figure 23. Antimalarial market share, 2014

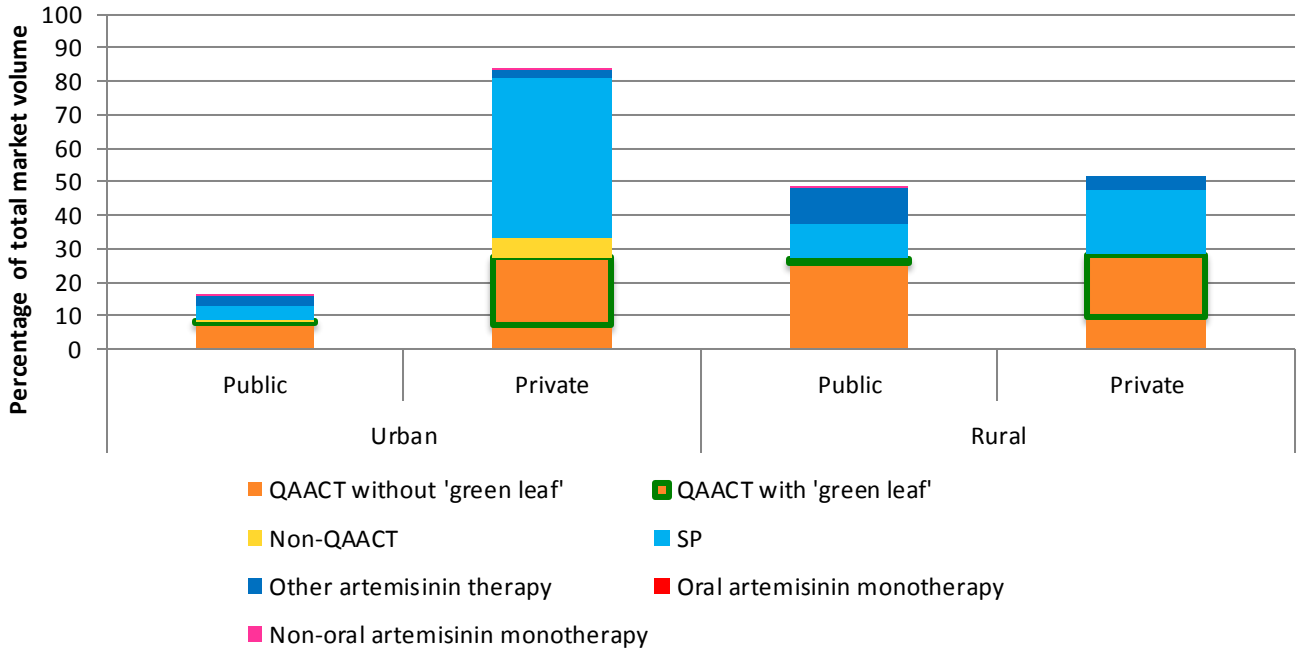
Relative market volume (sale/distribution) of antimalarial AETDs, by outlet type and antimalarial class



Private sector market share in 2014 (71%) was dominated by market share for ADDOs (41% of all antimalarial distribution) and DLDBs (19% of all antimalarial distribution). Taken together, drug stores (ADDOs and DLDBs) accounted for 60% of all antimalarial distribution in 2014.

Figure 24. Antimalarial market share, 2014, urban/rural

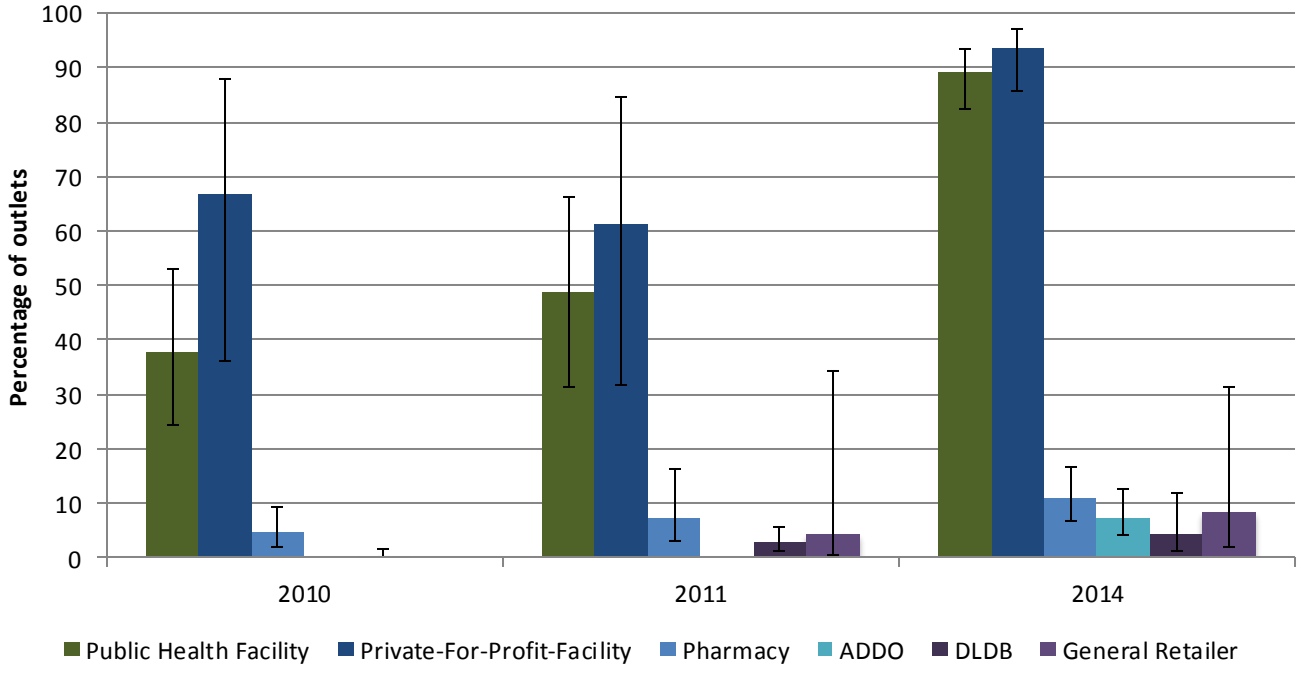
Relative market volume (sale/distribution) of antimalarial AETDs, by sector and antimalarial class



In urban areas, the private sector accounted for 84% of all antimalarial distribution and half of those antimalarials (52%) were SP. QA ACT accounted for 36% of the antimalarial market share in urban areas. In rural areas, antimalarial distribution was split equally among the public and private sectors, and more than half of all antimalarials distributed (55%) were QA ACT. SP accounted for 29% of the total market share in rural areas.

Figure 25. Percentage of antimalarial-stocking outlets with malaria blood testing available, 2010-2014

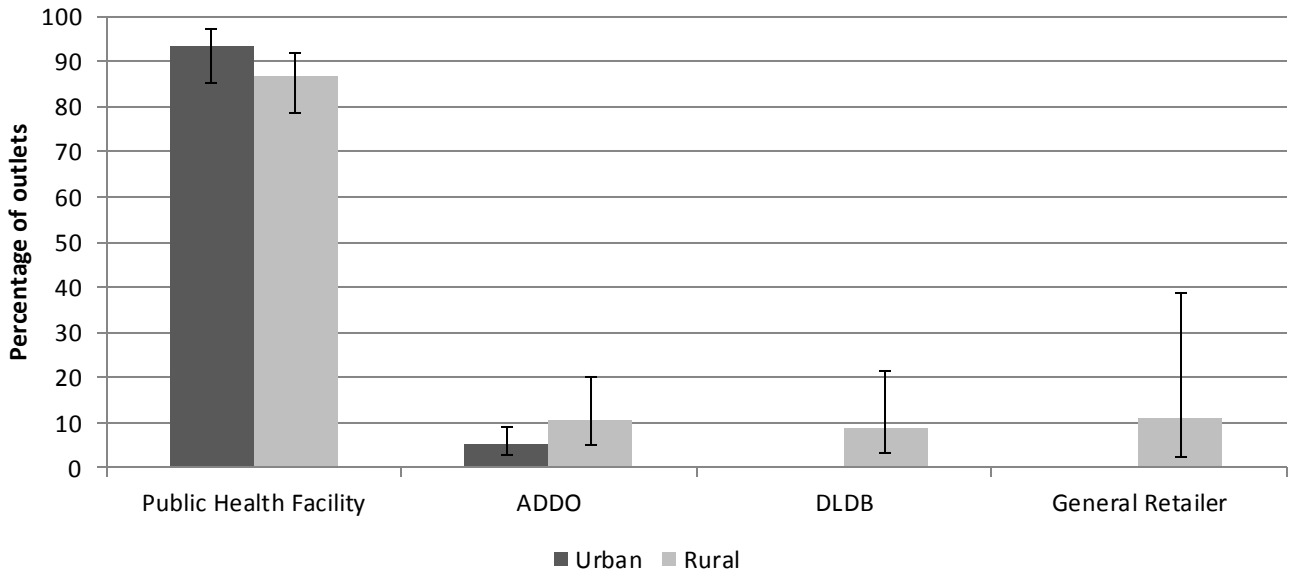
Among all outlets with at least one antimalarial in stock on the day of the survey or within the past three months, across survey round



Availability of malaria blood testing (mRDT or microscopy) among antimalarial-stocking outlets increased over time among public and private for-profit facilities such that by 2014, testing was available among nearly 90% of public health facilities and 93% of private for-profit facilities. Data trends suggest improved availability within other private sector outlet types over time; however, availability remains very low (<10%).

Figure 26. Percentage of antimalarial-stocking outlets with malaria blood testing available, 2014, urban/rural

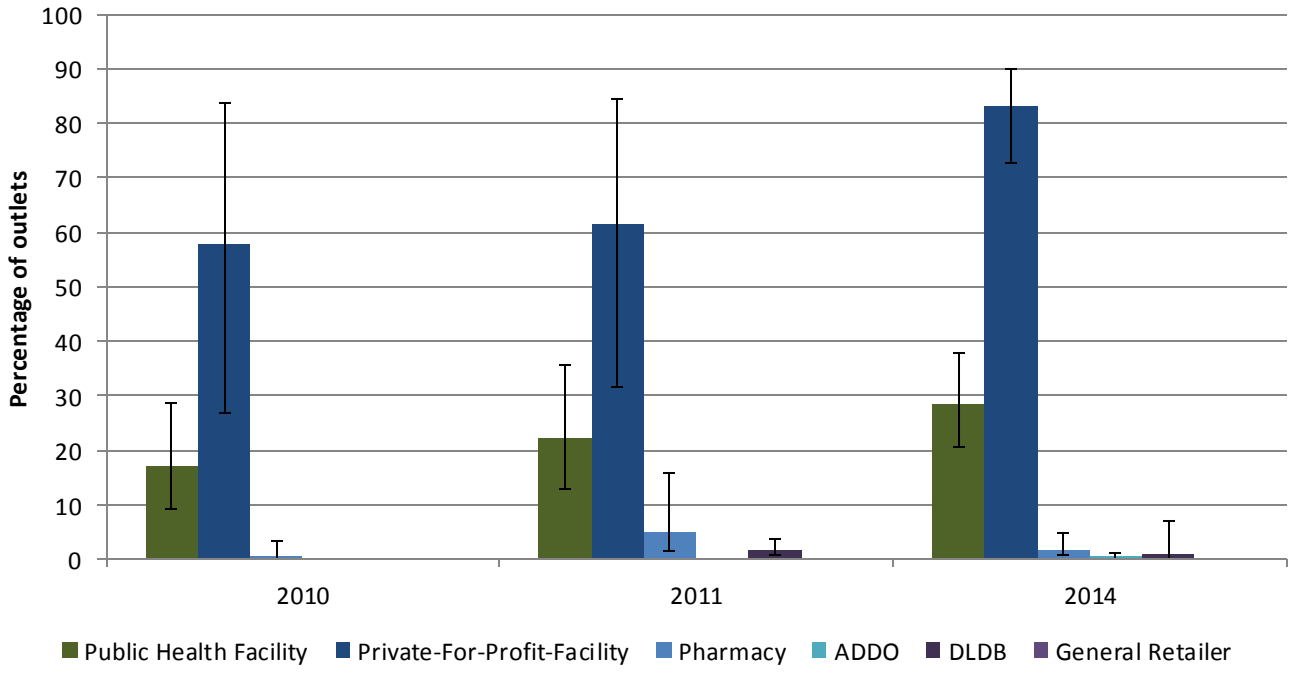
Among all outlets with at least one antimalarial in stock on the day of the survey or within the past three months



Availability of malaria blood testing was similar among urban versus rural public health facilities. Data trends suggest higher availability of malaria blood testing among antimalarial-stocking ADDOs in rural (11%) versus urban areas (5%). Blood testing was available in rural areas among a small proportion of antimalarial-stocking DLDBs (9%) and general retailers (11%).

Figure 27. Percentage of antimalarial-stocking outlets with malaria microscopy available, 2010-2014

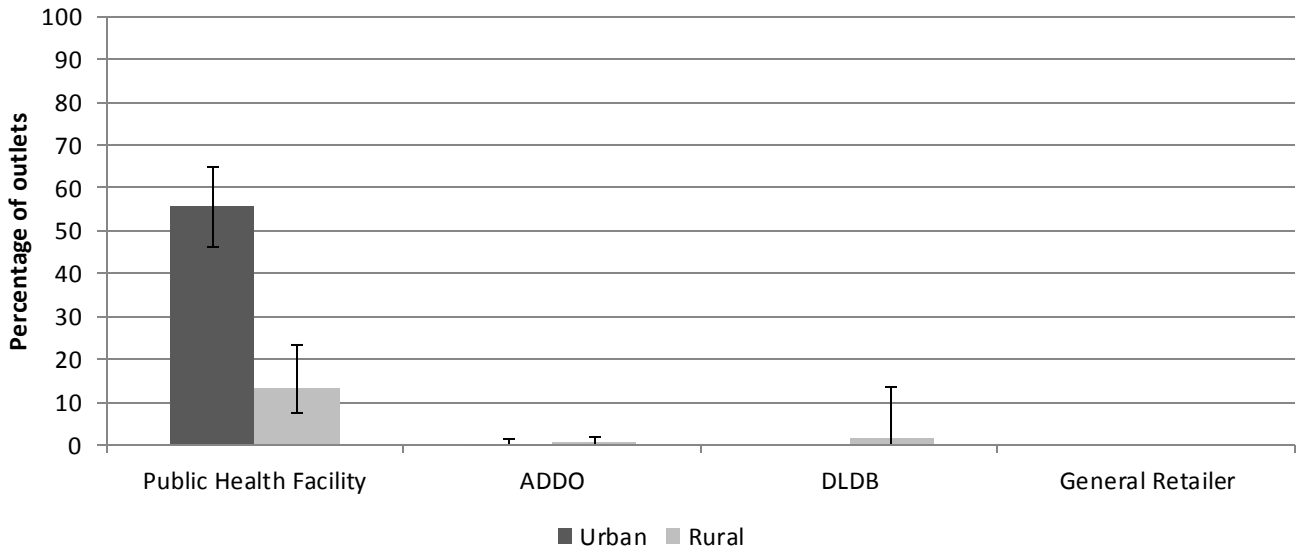
Among all outlets with at least one antimalarial in stock on the day of the survey or within the past three months, across survey round



Availability of malaria microscopy among antimalarial-stocking outlets has increased over time among public health facilities (2010, 17%; 2011, 22%; 2014, 29%) and private for-profit facilities (2010, 58%; 2011, 61%; 2014, 83%). Microscopy has remained largely unavailable in outlets other than public or private for-profit facilities.

Figure 28. Percentage of antimalarial-stocking outlets with malaria microscopy available, 2014, urban/rural

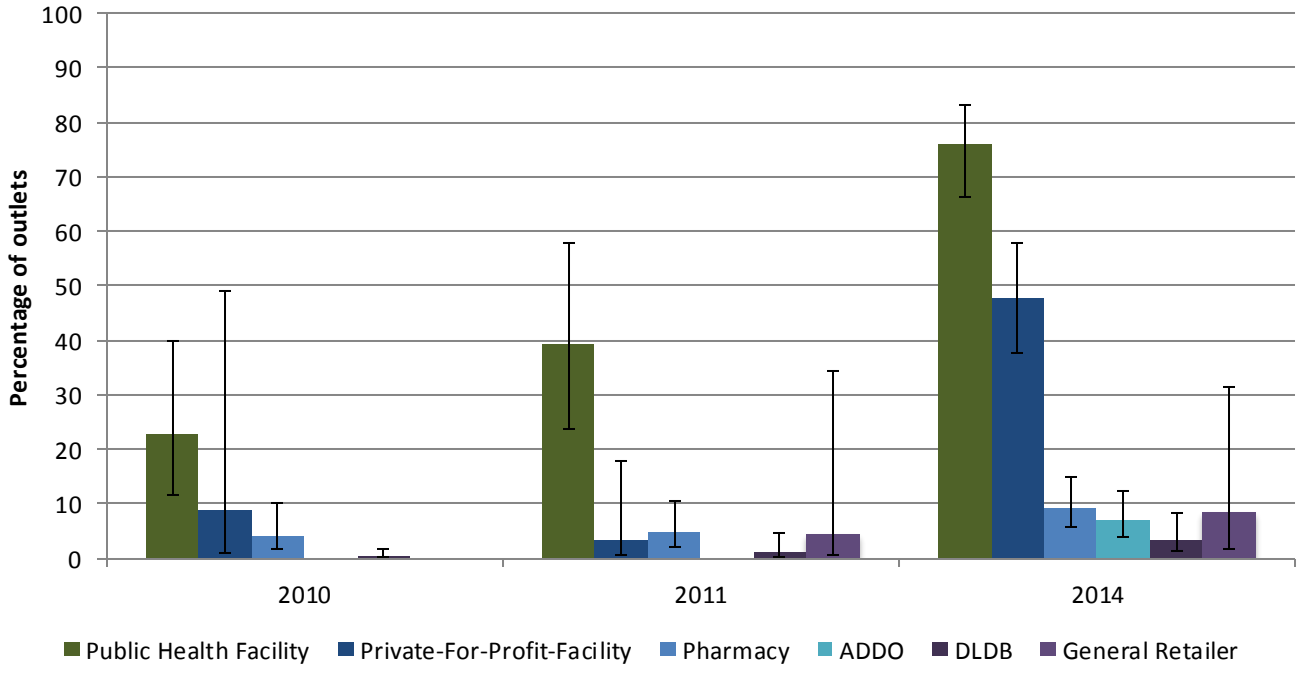
Among all outlets with at least one antimalarial in stock on the day of the survey or within the past three months



Microscopy availability was much higher among urban antimalarial-stocking public health facilities (56%) as compared to rural facilities (13%).

Figure 29. Percentage of antimalarial-stocking outlets with malaria RDTs, 2010-2014

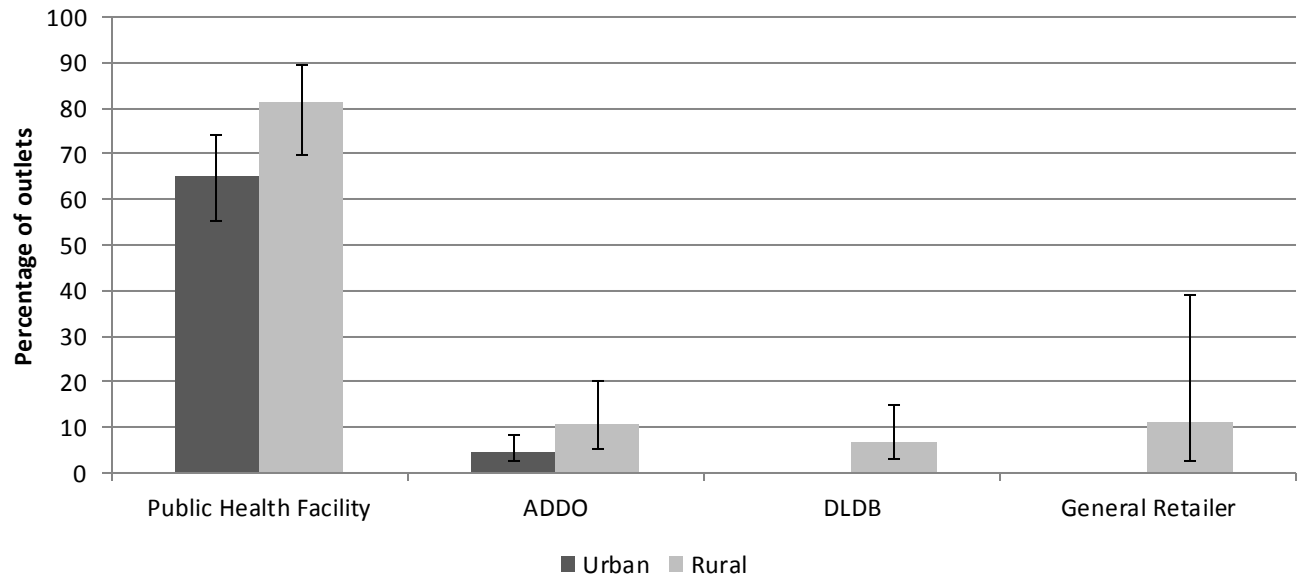
Among all outlets with at least one antimalarial in stock on the day of the survey or within the past three months, across survey round



Availability of mRDTs has increased across all outlet types in recent years, most notably among public health facilities (2010, 23%; 2011, 39%; 2012, 76%) and private for-profit facilities (2010, 9%; 2011, 3%; 2014, 48%). MRDT availability remained low among drug stores in 2014 including ADDOs (7%) and DLDBs (3%), and low among antimalarial-stocking general retail outlets (9%).

Figure 30. Percentage of antimalarial-stocking outlets with malaria RDTs, 2014, urban/rural

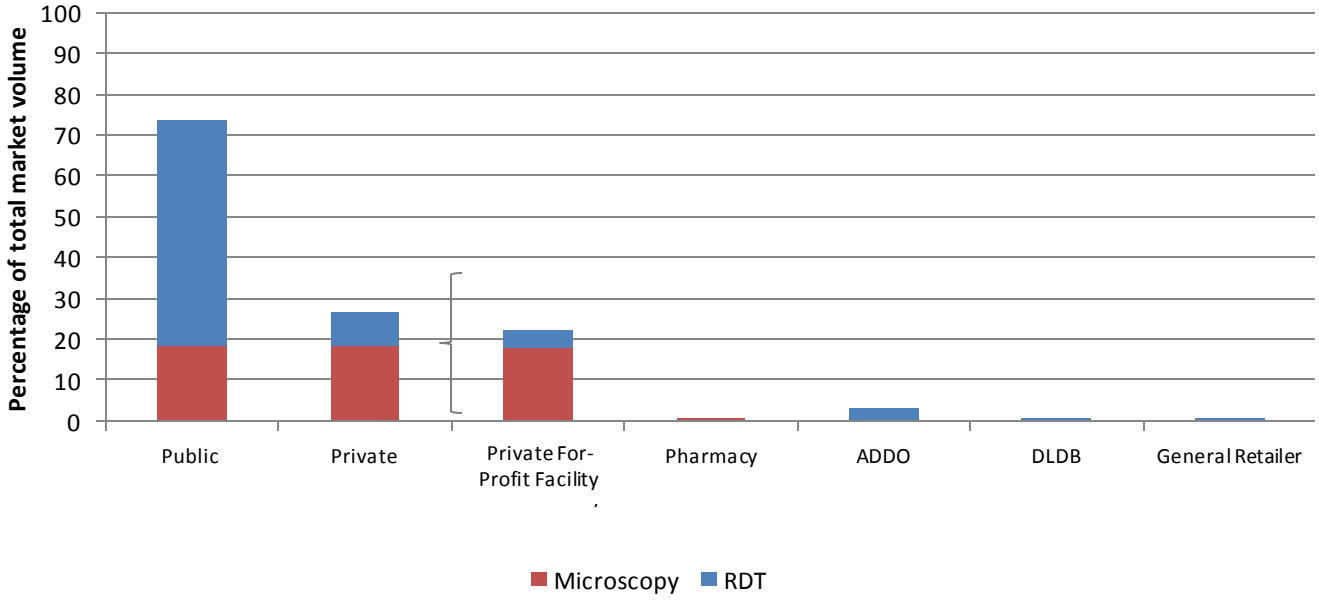
Among all outlets with at least one antimalarial in stock on the day of the survey or within the past three months, across urban and rural zones



Availability of mRDTs among antimalarial-stocking outlets was higher in rural versus urban public health facilities (urban, 65%; rural, 82%) and ADDOs (urban, 5%; rural 11%). MRDTs were available in rural areas only among a small proportion of antimalarial-stocking DLDBs (7%) and general retail outlets (11%).

Figure 31. Malaria blood testing market share, 2014

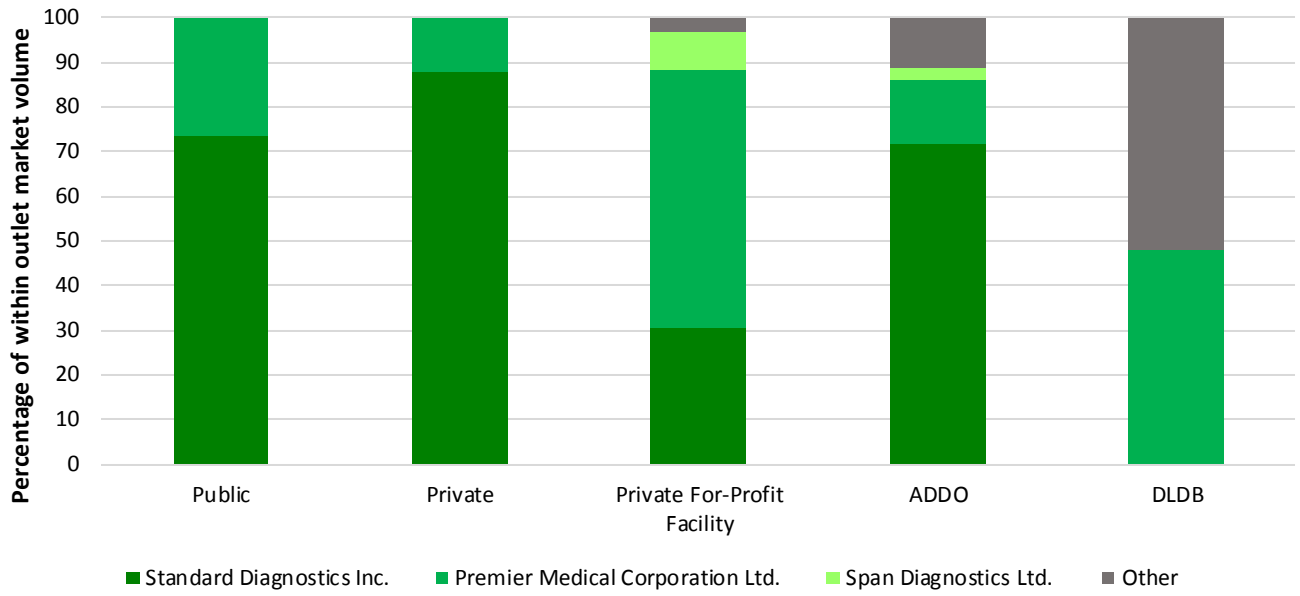
Relative market volume (sale/distribution) of malaria blood testing using mRDTs and microscopy, by outlet type and type of test



The majority of all malaria blood tests were performed by public sector outlets (74%). MRDTs accounted for over half of all malaria testing (64%). Private sector market share for malaria testing (27%) was largely accounted for by testing performed by private for-profit facilities (22% of all tests performed) primarily using microscopy. MRDTs performed by ADDOs accounted for 3% of the malaria testing market share.

Figure 32. Malaria RDT market share by manufacturer, across sector, 2014

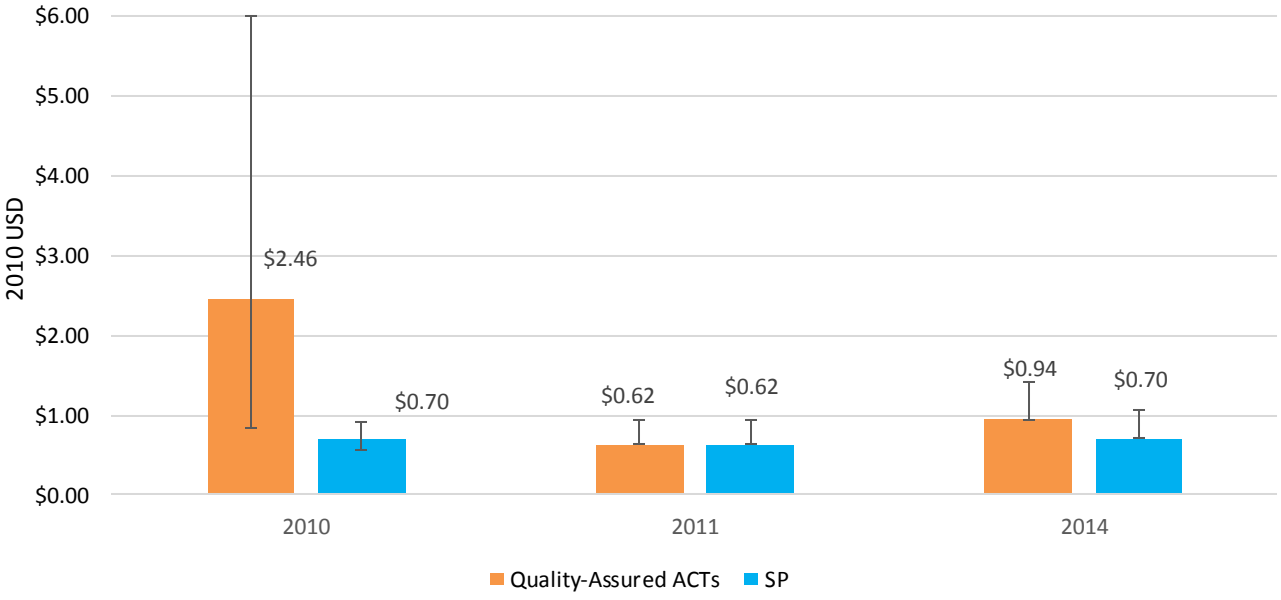
Relative market volume (sale/distribution) of malaria RDTs by manufacturer, within the public sector and private sector outlet types



Standard Diagnostics Inc. mRDTs accounted for 70% of all mRDT testing at the national level. Premier Medical Corporation mRDTs had 28% of the market share.

Figure 33. Private sector median price of antimalarial adult equivalent treatment dosages (AETD), 2010-2014

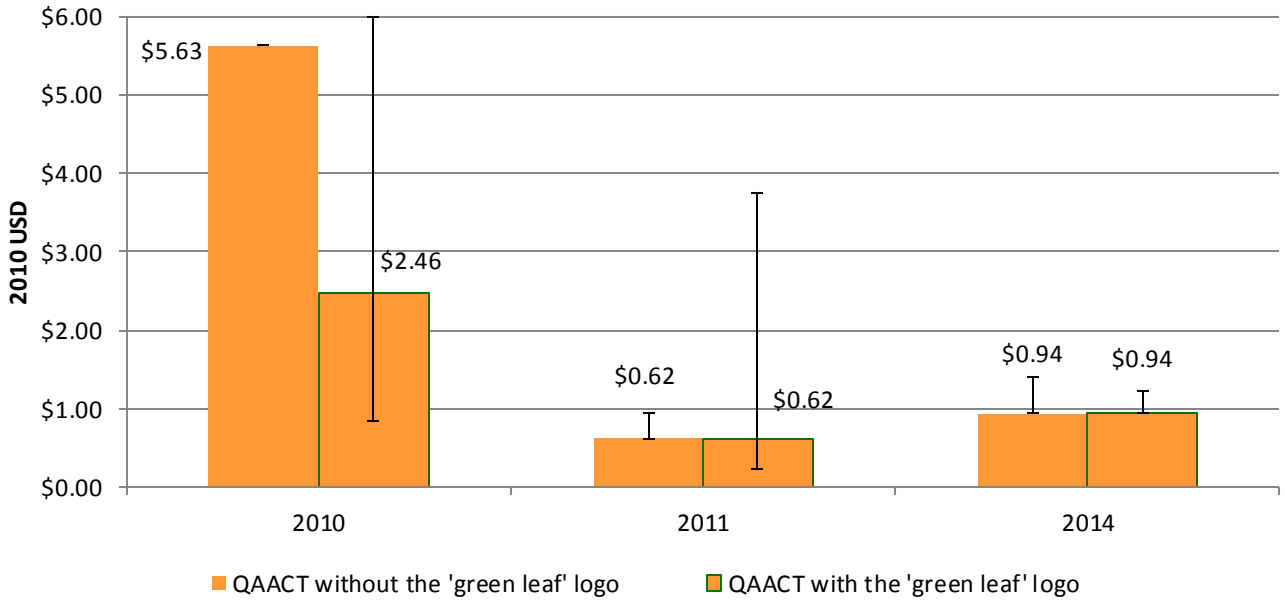
Among all SP and quality-assured ACT (tablet formulation only) available in the private sector, in 2010 US dollars to account for inflation, across survey round



The median private sector price for one adult equivalent treatment dose (AETD) of QA ACT decreased between 2010 and 2011 and was the same price as one AETD of the popular non-artemisinin therapy, SP. However, the price of QA ACT was 1.5 times more expensive in 2014 as compared with 2011, and was slightly more expensive than SP in 2014.

Figure 34. Private sector median price of QA ACT adult equivalent treatment dosages (AETD) with and without the 'green leaf' logo, 2010-2013

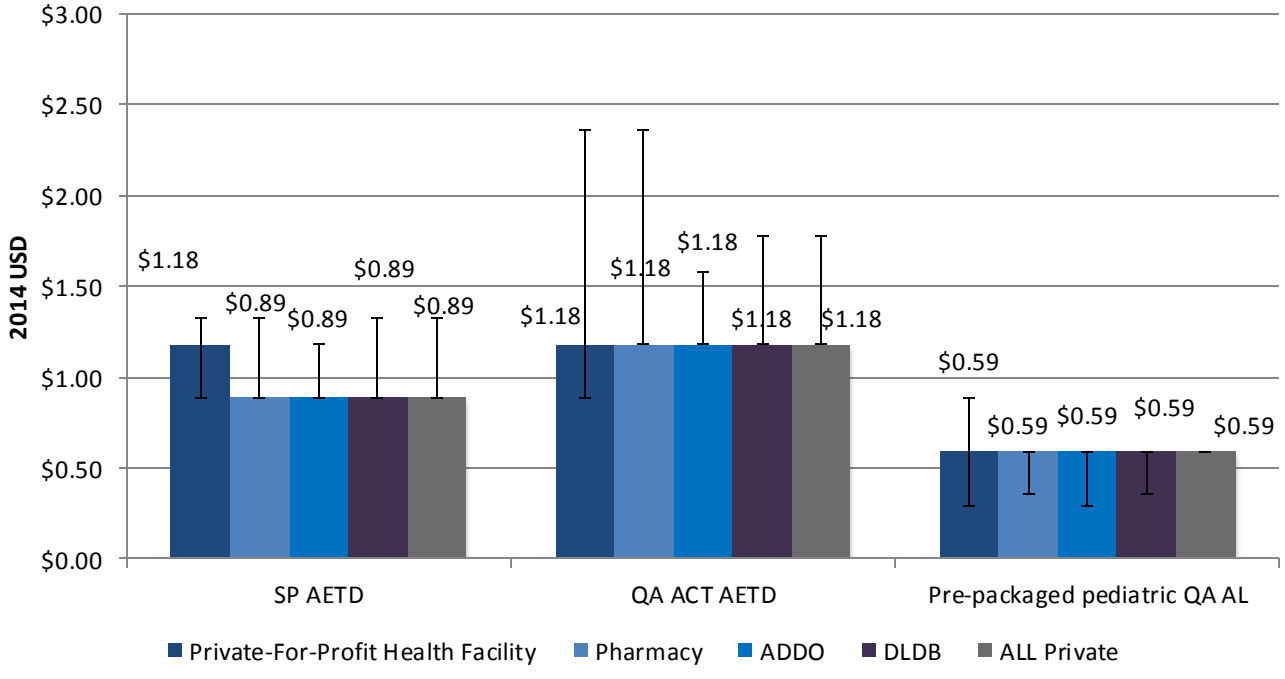
Among all quality-assured ACT (tablet formulation only) available in the private sector, in 2010 US dollars to account for inflation, across survey round



The median private sector price for one AETD of QA ACT with the green leaf logo was the same as the price of QA ACT without the logo in 2011 and 2014.

Figure 35. Private sector median price of SP and quality-assured ACT adult equivalent treatment dosages (AETD) and pre-packaged pediatric quality-assured AL, 2014

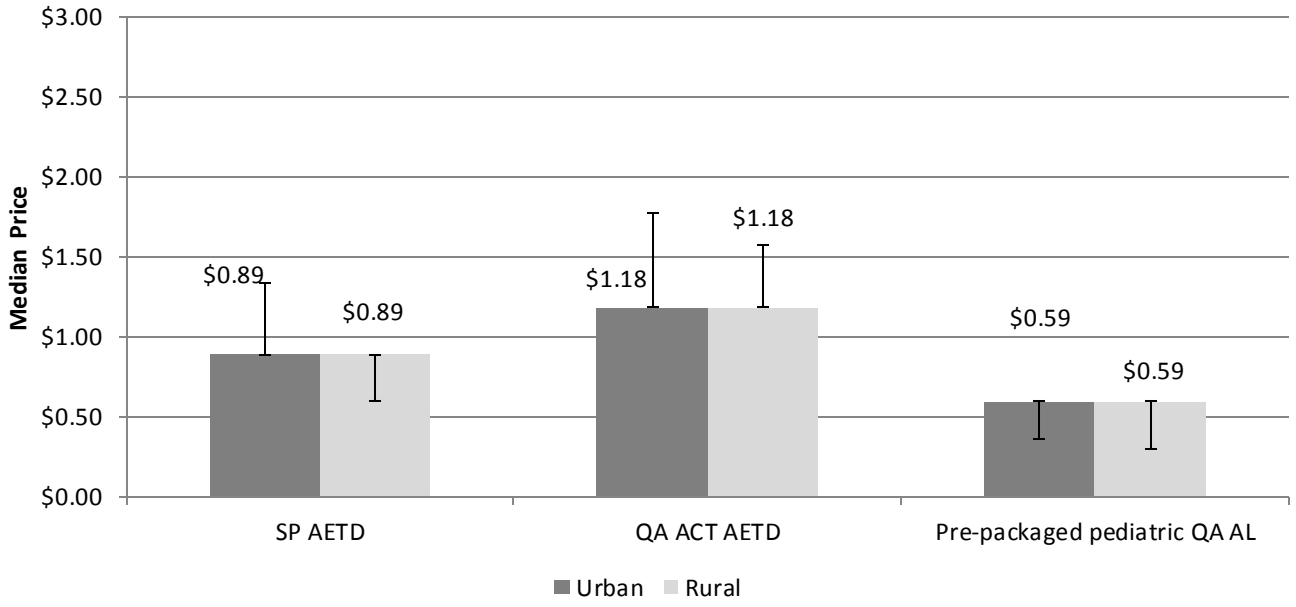
Among all SP, QA ACT, and pre-packaged pediatric (treatment for a 2 year old child) QA AL (tablet formulation only) available in the private sector, in 2014 US Dollars



The median private sector price was the same across all outlet types for one AETD of QA ACT ($1.18) and for one pre-packaged QA AL for a 2-year old child ($0.59). The median private sector price of SP was similar across outlet types, but higher among private for-profit facilities ($1.18) as compared to $0.89 elsewhere.

Figure 36. Private sector median price of SP and quality-assured ACT adult equivalent treatment dosages (AETD) and pre-packaged pediatric quality-assured AL, 2014, urban/rural

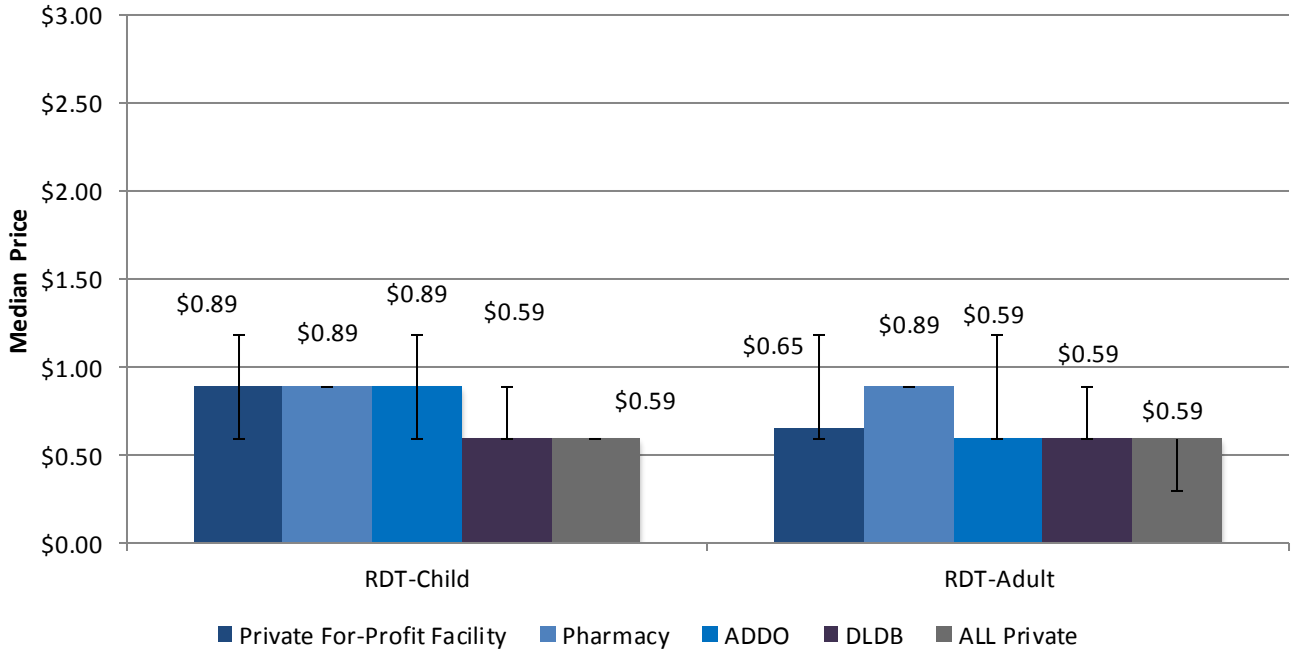
Among all SP, QA ACT, and pre-packaged pediatric (treatment for a 2 year old child) QA AL (tablet formulation only) available in the private sector, in 2014 US Dollars



The median private sector price was the same across urban and rural areas for SP and quality-assured ACT, including the QA ACT AETD and pre-packaged QA AL for a 2-year old child.

Figure 37. Median private sector consumer prices for malaria RDT testing for adults and children 2014

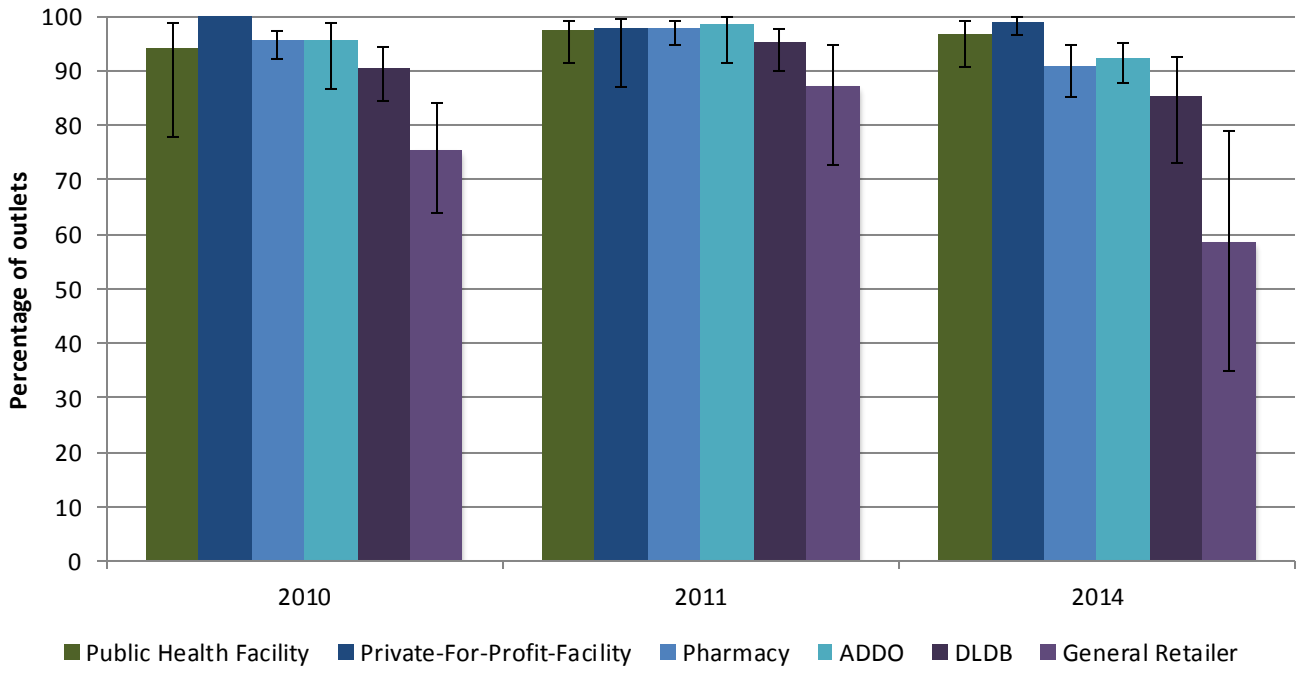
Among all mRDTs available within private for-profit facilities, pharmacies and drug stores, in 2014 US dollars



The median private sector price for a malaria RDT test including consultation and service fees was $0.59 for adults and for children.

Figure 38. Percentage of providers who correctly state the first-line treatment for uncomplicated malaria, 2010-2014

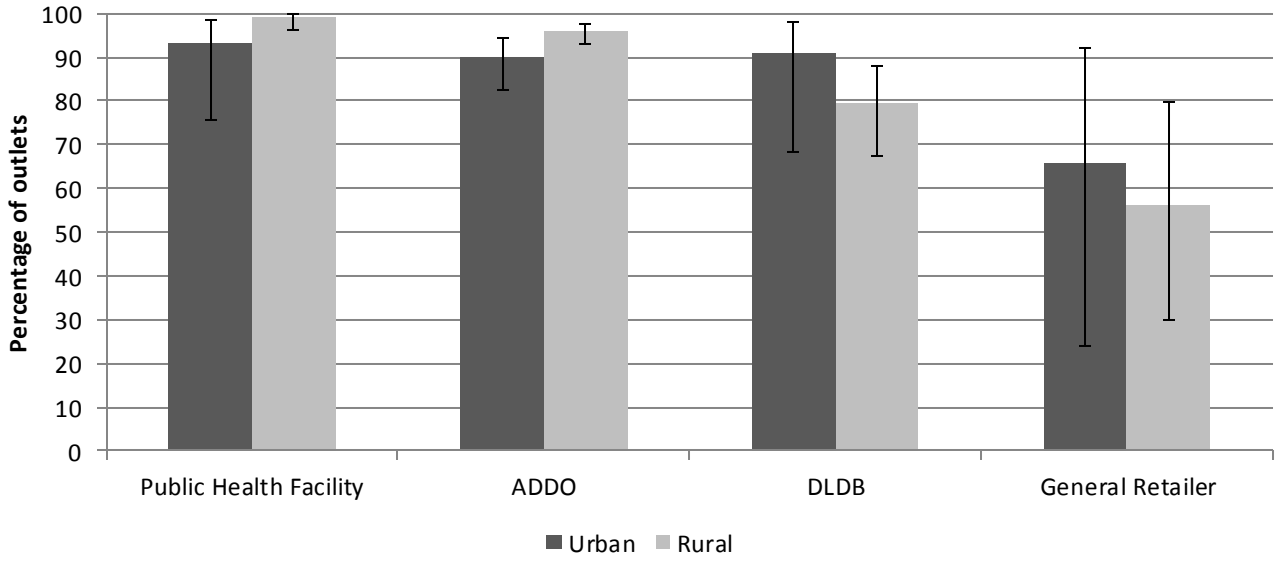
Among providers in outlets with at least one antimalarial in stock on the day of the survey or within the past three months, across survey round



Across survey rounds, more than 90% of providers in public and private for-profit facilities, pharmacies, and ADDOs correctly stated the first-line treatment for uncomplicated malaria (AL). Knowledge of the first-line treatment was also high among providers within DLDBs (85% in 2014), and moderate among general retailers (59% in 2014).

Figure 39. Percentage of providers who correctly state the first-line treatment for uncomplicated malaria, 2014, urban/rural

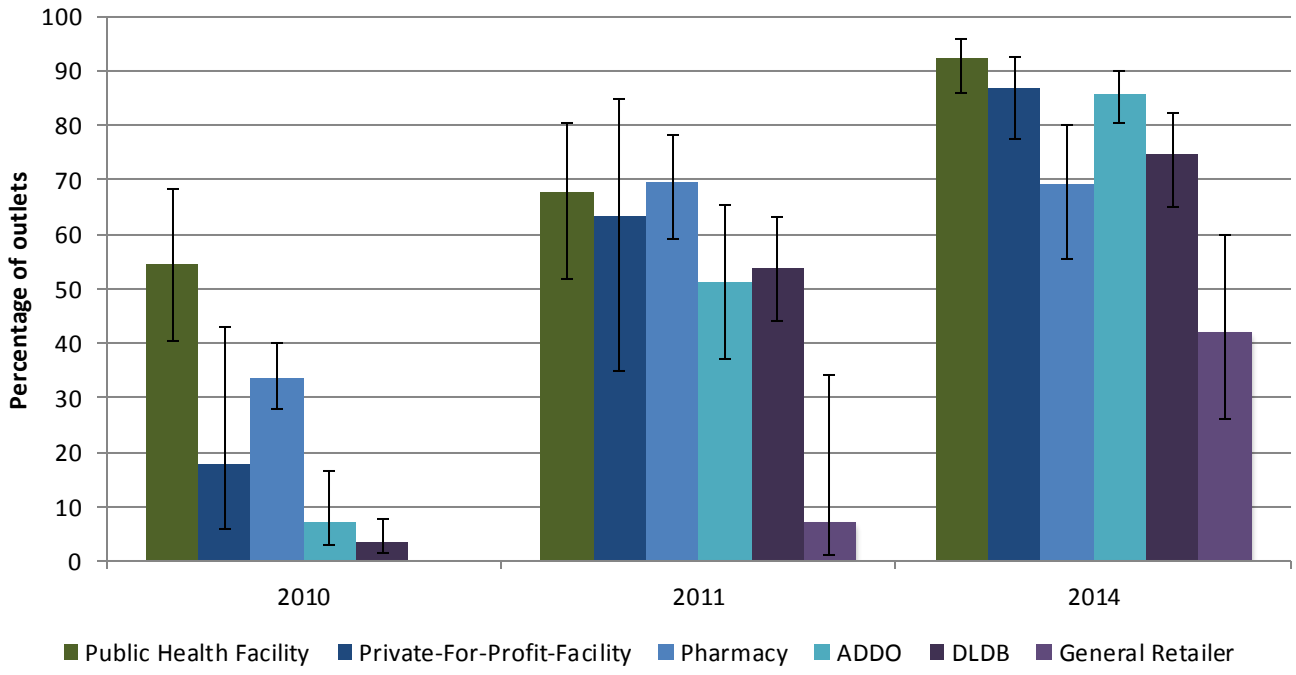
Among providers in outlets with at least one antimalarial in stock on the day of the survey or within the past three months



First-line treatment knowledge was similar among providers in urban versus rural areas across most outlet types. Data trends suggest that knowledge levels were higher among providers in urban versus rural DLDBs (urban, 91%; rural, 80%) and general retailers (urban, 66%; rural, 56%).

Figure 40. Percentage of providers who correctly state the first-line dosing regimen for uncomplicated malaria for a two-year old child, 2010-2014

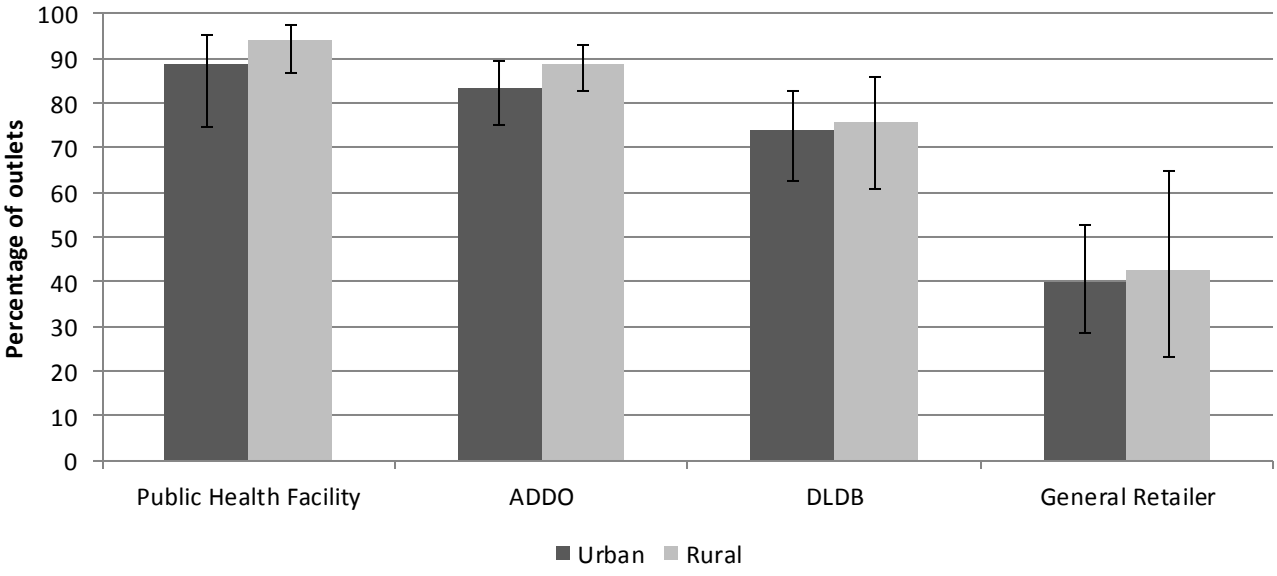
Among providers in outlets with at least one antimalarial in stock on the day of the survey or within the past three months, across survey round



Knowledge of the first-line-treatment dosing regimen for uncomplicated malaria for a two-year old child increased among providers across all outlet types over time. By 2014, providers correctly stated the regimen in 92% of public health facilities, more than 80% of private for-profit facilities (87%) and ADDOs (85%), in 75% of DLDBs, and in 70% of pharmacies. Dosing regimen knowledge was moderate among general retailers in 2014 (42%).

Figure 41. Percentage of providers who correctly state the first-line dosing regimen for uncomplicated malaria for a two-year old child, 2014, urban/rural

Among providers in outlets with at least one antimalarial in stock on the day of the survey or within the past three months



Knowledge of the dosing regimen for a two-year old child using the first-line treatment for uncomplicated malaria was similar among providers in urban versus rural areas across all outlet types.

Results Section A: Core Indicators

Table A1: Availability of antimalarials, among all screened outlets, by outlet type

	Public Health Facility	Private Not For-Profit Facility	**ALL Public**	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**ALL Private**	**ALL Outlets**
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Proportion of outlets*stocking:	N=298	N=39	N=337	N=194	N=364	N=1,133	N=117	N=2,579	N=4,387	N=4,724
Any antimalarial at the time of survey visit	99.6 (97.0, 99.9)	94.0 (66.8, 99.2)	99.1 (96.4, 99.8)	88.5 (78.5, 94.1)	99.4 (97.1, 99.9)	99.3 (97.5, 99.8)	98.4 (93.7, 99.6)	1.0 (0.5, 2.1)	14.7 (12.2, 17.6)	17.5 (14.4, 21.0)
Any ACT	98.1 (94.7, 99.3)	85.6 (67.5, 94.4)	97.0 (94.0, 98.6)	80.9 (69.6, 88.7)	98.2 (94.1, 99.5)	87.8 (83.5, 91.1)	80.6 (68.4, 88.9)	0.6 (0.3, 1.4)	12.5 (10.3, 15.0)	15.3 (12.6, 18.4)
Artemether Lumefantrine (AL) Ψ	98.1 (94.7, 99.3)	85.6 (67.5, 94.4)	97.0 (94.0, 98.6)	79.3 (68.4, 87.1)	97.1 (93.7, 98.7)	87.3 (82.9, 90.6)	78.2 (64.6, 87.6)	0.6 (0.3, 1.3)	12.3 (10.1, 14.8)	15.1 (12.4, 18.2)
Artemisinin Piperaquine (APPQ)	0.1 (0.0, 0.5)	1.5 (0.3, 5.9)	0.2 (0.1, 0.6)	14.5 (9.0, 22.7)	49.6 (41.5, 57.7)	7.5 (4.9, 11.3)	5.8 (2.3, 13.5)	0.0 (0.0, 0.2)	1.2 (0.8, 2.0)	1.2 (0.8, 1.9)
Artesunate Amodiaquine (ASAQ)	0.0 -	6.9 (1.0, 36.4)	0.6 (0.1, 4.1)	2.1 (0.9, 4.7)	9.0 (4.8, 16.4)	2.3 (1.0, 5.1)	2.1 (0.6, 6.7)	0.0 (0.0, 0.2)	0.4 (0.2, 0.6)	0.4 (0.2, 0.6)
DHAPPQ	1.3 (0.5, 3.6)	18.5 (6.6, 42.2)	2.7 (1.3, 5.6)	33.1 (21.3, 47.6)	78.8 (70.3, 85.4)	10.1 (6.8, 14.9)	16.2 (7.2, 32.3)	0.1 (0.0, 0.5)	2.3 (1.4, 3.7)	2.3 (1.4, 3.7)
Quality Assured ACT (QA ACT)	98.1 (94.7, 99.3)	84.6 (66.9, 93.7)	96.9 (93.9, 98.5)	78.5 (67.7, 86.5)	90.3 (84.6, 94.0)	86.3 (81.4, 90.0)	78.2 (64.6, 87.6)	0.6 (0.3, 1.4)	12.2 (10.1, 14.7)	15.0 (12.3, 18.1)
QA AL	98.1 (94.7, 99.3)	84.6 (66.9, 93.7)	96.9 (93.9, 98.5)	78.4 (67.5, 86.3)	90.3 (84.6, 94.0)	86.3 (81.4, 90.0)	78.2 (64.6, 87.6)	0.6 (0.3, 1.3)	12.2 (10.0, 14.7)	14.9 (12.3, 18.0)
QA ACT with the 'green leaf' logo	8.2 (4.3, 15.2)	46.6 (25.9, 68.7)	11.4 (7.0, 18.1)	53.9 (40.7, 66.6)	82.0 (73.3, 88.2)	71.4 (63.8, 78.0)	59.9 (46.0, 72.3)	0.5 (0.2, 1.2)	9.7 (8.0, 11.8)	9.8 (8.1, 11.9)
QA ACT without the 'green leaf' logo	96.9 (93.1, 98.6)	45.1 (26.4, 65.3)	92.6 (88.1, 95.4)	31.9 (19.9, 46.9)	28.5 (21.7, 36.5)	31.2 (27.2, 35.4)	27.5 (17.8, 39.9)	0.2 (0.1, 0.8)	4.4 (3.3, 5.8)	7.3 (5.5, 9.5)
QA ACT – child (<5 years)	94.9 (90.2, 97.4)	67.5 (46.4, 83.3)	92.6 (87.8, 95.6)	54.7 (42.7, 66.1)	57.6 (49.5, 65.3)	60.1 (53.2, 66.6)	44.2 (33.9, 55.0)	0.4 (0.2, 1.2)	8.0 (6.6, 9.5)	10.7 (8.8, 13.0)
QA ACT - adult	81.1 (72.6, 87.4)	55.6 (36.6, 73.1)	79.0 (71.3, 85.0)	59.4 (46.5, 71.2)	70.1 (63.0, 76.3)	62.7 (56.0, 68.9)	57.3 (46.3, 67.6)	0.4 (0.2, 0.8)	8.8 (7.2, 10.9)	11.1 (9.0, 13.7)
Non-quality-assured ACT (non-QA ACT)	5.7 (3.3, 9.7)	20.5 (7.8, 44.1)	6.9 (4.0, 11.7)	38.1 (26.3, 51.4)	90.6 (82.6, 95.1)	17.2 (12.6, 23.2)	17.1 (7.7, 33.6)	0.1 (0.0, 0.7)	3.0 (2.0, 4.5)	3.1 (2.1, 4.6)
Any non-artemisinin therapy	90.6 (80.9, 95.7)	92.5 (69.4, 98.5)	90.8 (82.0, 95.5)	87.6 (77.4, 93.6)	98.5 (94.2, 99.6)	97.9 (96.4, 98.8)	90.9 (79.2, 96.3)	0.8 (0.4, 1.7)	14.0 (11.7, 16.7)	16.5 (13.7, 19.8)
Sulfadoxine-Pyrimethamine	29.4 (19.7, 41.4)	54.2 (32.2, 74.6)	31.5 (22.2, 42.5)	65.0 (48.4, 78.6)	96.5 (91.9, 98.6)	93.8 (90.9, 95.8)	88.2 (75.8, 94.7)	0.7 (0.3, 1.5)	13.2 (11.1, 15.7)	13.8 (11.7, 16.3)

Table A1: Availability of antimalarials, among all screened outlets, by outlet type

	Public Health Facility	Private Not For-Profit Facility	**ALL Public**	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**ALL Private**	**ALL Outlets**
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Proportion of outlets*stocking:	N=298	N=39	N=337	N=194	N=364	N=1,133	N=117	N=2,579	N=4,387	N=4,724
Oral Quinine	57.6 (47.7, 66.9)	67.3 (43.2, 84.7)	58.4 (49.0, 67.2)	65.3 (51.9, 76.6)	81.1 (72.5, 87.5)	72.5 (66.0, 78.2)	62.5 (51.1, 72.6)	0.3 (0.1, 0.8)	9.9 (8.0, 12.2)	11.5 (9.3, 14.1)
Quinine IV/IM	73.5 (58.5, 84.5)	77.8 (54.7, 91.0)	73.9 (60.3, 84.0)	68.1 (58.9, 76.2)	40.6 (24.0, 59.6)	22.9 (17.0, 30.2)	4.5 (1.9, 10.4)	0.1 (0.0, 0.4)	2.9 (2.2, 3.9)	5.2 (3.9, 6.9)
Other non-artemisinin therapy**	2.2 (0.5, 8.7)	12.2 (3.5, 35.0)	3.0 (1.1, 8.2)	11.5 (5.6, 22.3)	29.7 (21.7, 39.2)	40.1 (34.1, 46.4)	35.4 (24.2, 48.5)	0.3 (0.1, 0.6)	5.3 (4.0, 7.0)	5.2 (4.0, 6.9)
Oral artemisinin monotherapy	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -
Non-oral artemisinin monotherapy	25.0 (14.2, 40.2)	26.2 (11.3, 49.7)	25.1 (14.5, 39.8)	37.7 (24.9, 52.4)	44.8 (32.3, 58.0)	2.3 (1.1, 4.7)	0.0 -	0.0 -	0.7 (0.5, 1.2)	1.5 (1.0, 2.3)
Injectable artemether	4.0 (1.9, 8.4)	25.3 (10.7, 48.9)	5.8 (3.3, 10.1)	36.6 (24.1, 51.2)	44.8 (32.3, 58.0)	2.3 (1.1, 4.7)	0.0 -	0.0 -	0.7 (0.4, 1.2)	0.9 (0.6, 1.3)
Injectable artesunate	22.5 (11.8, 38.5)	8.8 (1.8, 33.6)	21.3 (11.5, 36.1)	3.4 (1.6, 6.9)	8.2 (2.7, 21.9)	0.1 (0.0, 0.4)	0.0 -	0.0 -	0.1 (0.0, 0.1)	0.8 (0.4, 1.4)
Injectable artemotil	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -
Any treatment for severe malaria	83.3 (75.6, 88.8)	78.8 (55.2, 91.8)	82.9 (75.8, 88.2)	73.3 (63.4, 81.4)	57.9 (42.0, 72.3)	23.9 (18.0, 31.0)	4.5 (1.9, 10.4)	0.1 (0.0, 0.4)	3.1 (2.3, 4.1)	5.7 (4.3, 7.6)

* The denominator includes 43 outlets that met screening criteria for a full interview but did not complete the interview (were not interviewed or completed a partial interview).

Ψ At the time of the 2014 Tanzania ACTwatch outlet survey, artemether lumefantrine was the first-line treatment for uncomplicated malaria.

** The "other non-artemisinin therapy" includes quinine and amodiaquine

Source: ACTwatch Outlet Survey, Tanzania, 2014.

Table A2: Availability of antimalarials, among outlets stocking at least one antimalarial, by outlet type

	Public Health Facility	Private Not For-Profit Facility	**ALL Public**	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**ALL Private**	**ALL Outlets**
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Proportion of outlets*stocking:	N=297	N=38	N=335	N=172	N=361	N=1,126	N=114	N=21	N=1,794	N=2,129
Any ACT	98.5 (95.0, 99.5)	91.1 (78.3, 96.7)	97.9 (95.1, 99.1)	91.5 (81.2, 96.4)	98.8 (94.8, 99.7)	88.4 (84.1, 91.7)	81.9 (69.9, 89.9)	60.0 (31.7, 82.8)	85.0 (79.5, 89.2)	87.4 (83.1, 90.8)
Artemether Lumefantrine (AL) Ψ	98.5 (95.0, 99.5)	91.1 (78.3, 96.7)	97.9 (95.1, 99.1)	89.6 (79.7, 95.0)	97.6 (94.6, 99.0)	87.9 (83.6, 91.2)	79.5 (65.8, 88.7)	56.5 (30.4, 79.4)	83.6 (78.1, 87.9)	86.3 (81.8, 89.7)
Artemisinin Piperaquine (APPQ)	0.1 (0.0, 0.5)	1.6 (0.4, 6.3)	0.2 (0.1, 0.6)	16.4 (10.1, 25.5)	49.9 (41.7, 58.1)	7.6 (4.9, 11.5)	5.9 (2.4, 13.7)	3.5 (0.5, 21.0)	8.5 (5.4, 13.0)	6.9 (4.4, 10.9)
Artesunate Amodiaquine (ASAQ)	0.0 -	7.3 (1.0, 38.0)	0.6 (0.1, 4.1)	2.4 (1.0, 5.4)	9.1 (4.8, 16.5)	2.3 (1.0, 5.1)	2.2 (0.7, 6.8)	3.5 (0.5, 21.0)	2.5 (1.4, 4.4)	2.2 (1.3, 3.7)
DHAPPQ	1.3 (0.5, 3.6)	19.7 (7.0, 44.1)	2.8 (1.3, 5.6)	37.5 (24.2, 52.9)	79.3 (70.6, 85.9)	10.2 (6.8, 15.0)	16.4 (7.4, 32.7)	7.0 (0.9, 37.3)	15.6 (9.3, 25.0)	13.2 (7.9, 21.4)
Quality Assured ACT (QA ACT)	98.5 (95.0, 99.5)	90.0 (77.2, 96.0)	97.8 (95.0, 99.0)	88.8 (78.6, 94.5)	90.8 (85.9, 94.2)	86.9 (82.1, 90.6)	79.5 (65.8, 88.7)	60.0 (31.7, 82.8)	83.0 (77.4, 87.5)	85.8 (81.2, 89.4)
QA AL	98.5 (95.0, 99.5)	90.0 (77.2, 96.0)	97.8 (95.0, 99.0)	88.6 (78.5, 94.3)	90.8 (85.9, 94.2)	86.9 (82.1, 90.6)	79.5 (65.8, 88.7)	56.5 (30.4, 79.4)	82.8 (77.3, 87.2)	85.6 (81.1, 89.1)
QA ACT with the 'green leaf' logo	8.3 (4.3, 15.2)	49.6 (28.4, 71.0)	11.5 (7.1, 18.2)	60.9 (45.3, 74.5)	82.4 (74.1, 88.5)	71.9 (64.3, 78.5)	60.9 (47.2, 73.0)	46.8 (21.8, 73.6)	66.4 (58.9, 73.1)	56.2 (48.8, 63.2)
QA ACT without the 'green leaf' logo	97.3 (93.5, 98.9)	48.0 (27.7, 69.0)	93.4 (89.0, 96.1)	36.1 (22.8, 51.9)	28.7 (21.8, 36.7)	31.4 (27.5, 35.5)	27.9 (18.0, 40.7)	20.2 (5.0, 54.9)	29.8 (24.5, 35.6)	41.6 (35.8, 47.6)
QA ACT – child (<5 years)	95.3 (91.0, 97.6)	71.9 (49.5, 86.9)	93.4 (88.9, 96.1)	61.8 (49.0, 73.1)	57.9 (50.0, 65.4)	60.5 (53.7, 67.0)	44.9 (34.4, 55.8)	43.3 (21.9, 67.4)	54.3 (48.7, 59.7)	61.6 (56.7, 66.2)
QA ACT - adult	81.4 (72.9, 87.7)	59.2 (40.3, 75.6)	79.7 (72.2, 85.5)	67.2 (54.3, 77.9)	70.5 (63.7, 76.5)	63.2 (56.4, 69.4)	58.2 (47.2, 68.4)	35.1 (17.3, 58.3)	60.3 (54.3, 65.9)	63.9 (58.9, 68.6)
Non-quality-assured ACT (non-QA ACT)	5.7 (3.3, 9.8)	21.8 (8.3, 46.2)	7.0 (4.1, 11.8)	43.0 (29.9, 57.2)	91.1 (83.0, 95.6)	17.4 (12.6, 23.4)	17.4 (7.9, 34.0)	10.5 (1.4, 50.1)	20.5 (13.4, 30.1)	18.0 (11.9, 26.5)
Any non-artemisinin therapy	91.0 (81.2, 95.9)	98.4 (89.5, 99.8)	91.6 (82.4, 96.2)	99.0 (92.6, 99.9)	99.1 (96.7, 99.8)	98.6 (97.5, 99.2)	92.4 (80.8, 97.2)	81.3 (54.5, 94.0)	95.5 (90.7, 97.9)	94.8 (90.9, 97.1)
Sulfadoxine-Pyrimethamine	29.5 (19.8, 41.5)	57.7 (33.8, 78.4)	31.7 (22.4, 42.8)	73.5 (53.6, 86.9)	97.1 (93.5, 98.7)	94.5 (91.7, 96.4)	89.7 (78.1, 95.5)	68.8 (38.4, 88.6)	90.2 (84.9, 93.7)	79.3 (73.9, 83.8)
Oral Quinine	57.8 (47.9, 67.1)	71.6 (47.2, 87.6)	58.9 (49.6, 67.6)	73.8 (59.2, 84.6)	81.6 (73.5, 87.6)	73.1 (66.2, 78.9)	63.5 (52.5, 73.2)	28.5 (9.2, 60.9)	67.5 (61.3, 73.1)	65.9 (60.5, 70.8)
Quinine IV/IM	73.8 (58.7, 84.8)	82.8 (65.2, 92.5)	74.5 (60.6, 84.8)	77.0 (67.9, 84.2)	40.8 (24.3, 59.7)	23.1 (17.1, 30.4)	4.6 (1.9, 10.6)	9.7 (2.7, 29.3)	19.8 (15.2, 25.3)	30.0 (24.8, 35.6)
Other non-artemisinin therapy	2.2 (0.5, 8.7)	13.0 (3.7, 36.7)	3.0 (1.1, 8.2)	13.0 (6.2, 25.3)	29.9 (21.9, 39.3)	40.4 (34.3, 46.7)	36.0 (24.8, 48.9)	27.8 (15.4, 44.9)	36.2 (29.8, 43.3)	30.1 (24.6, 36.2)

Oral artemisinin monotherapy	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -
Non-oral artemisinin monotherapy	25.1 (14.2, 40.3)	27.9 (12.1, 51.9)	25.3 (14.7, 40.1)	42.6 (27.9, 58.7)	45.1 (32.7, 58.1)	2.3 (1.1, 4.7)	0.0 -	0.0 -	5.0 (3.2, 7.8)	8.8 (6.1, 12.5)
Injectable artemether	4.0 (1.9, 8.5)	26.9 (11.5, 51.1)	5.9 (3.3, 10.2)	41.3 (27.0, 57.3)	45.1 (32.7, 58.1)	2.3 (1.1, 4.7)	0.0 -	0.0 -	4.9 (3.1, 7.7)	5.1 (3.4, 7.5)
Injectable artesunate	22.6 (11.9, 38.6)	9.3 (1.9, 35.2)	21.5 (11.6, 36.4)	3.8 (1.8, 7.7)	8.2 (2.8, 22.0)	0.1 (0.0, 0.4)	0.0 -	0.0 -	0.5 (0.3, 0.9)	4.4 (2.5, 7.8)
Injectable artemotil	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -
Any treatment for severe malaria	83.6 (76.0, 89.1)	83.8 (66.0, 93.3)	83.6 (76.6, 88.8)	82.9 (73.1, 89.6)	58.2 (42.6, 72.4)	24.1 (18.2, 31.2)	4.6 (1.9, 10.6)	9.7 (2.7, 29.3)	21.1 (16.5, 26.7)	32.8 (26.7, 39.4)

* Antimalarial-stocking outlets have at least one antimalarial in stock on the day of the survey, verified by presence of at least one antimalarial recorded in the antimalarial audit sheet. There were 29 antimalarial stocking outlets with partially completed interviews.

Ψ At the time of the 2014 Tanzania ACTwatch outlet survey, artemether lumefantrine was the first-line treatment for uncomplicated malaria.

Source: ACTwatch Outlet Survey, Tanzania, 2014.

Table A3: Antimalarial market composition

Outlet type, among outlets with at least 1 antimalarial in stock on the day of the survey:*	Public Health Facility	Private Not For-Profit Facility	**ALL Public**	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**ALL Private**
	%	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**
N= 535 outlets	15.5 (11.0, 21.4)	1.6 (0.8, 3.1)	17.0 (12.3, 23.0)	5.4 (3.2, 9.0)	2.0 (0.5, 8.2)	40.6 (32.2, 49.6)	29.6 (21.3, 39.5)	5.3 (2.7, 10.4)	83.0 (77.0, 87.7)

* Excluding booster sample outlets. Outlets with at least one antimalarial in stock on the day of the survey, verified by presence of at least one antimalarial recorded in the antimalarial audit sheet.

Source: ACTwatch Outlet Survey, Tanzania, 2014.

Table A4a: Price of tablet formulation antimalarials, by outlet type

	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**ALL Private**
Median price of a tablet AETD*:	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)
Any ACT	$1.77 [1.18-5.91] (521)	$4.73 [1.35-7.94] (2,032)	$1.18 [1.18-2.36] (2,741)	$1.42 [1.18-2.36] (227)	$1.18 [1.18-2.36] (35)	$1.42 [1.18-2.36] (5,556)
Artemether Lumefantrine (AL) Ψ	$1.18 [0.89-2.36] (357)	$1.65 [1.18-3.54] (1,143)	$1.18 [1.18-1.58] (2,350)	$1.42 [1.18-1.77] (194)	$1.18 [0.89-1.77] (30)	$1.18 [1.18-1.77] (4,074)
Dihydroartemisinin Piperaquine (DHAPPQ)	$6.50 [5.91-7.09] (87)	$5.91 [5.91-7.09] (421)	$5.91 [5.91-5.91] (205)	$6.50 [5.91-7.09] (21)	$8.86 [5.91-12.41] (3)	$5.91 [5.91-7.09] (737)
Quality assured ACT (QA ACT)	$1.18 [0.89-2.36] (347)	$1.18 [1.18-2.36] (840)	$1.18 [1.18-1.58] (2,280)	$1.18 [1.18-1.77] (195)	$1.18 [0.89-1.77] (30)	$1.18 [1.18-1.77] (3,692)
QA ACT with 'green leaf' logo	$1.48 [1.18-2.36] (252)	$1.18 [1.18-1.77] (700)	$1.18 [1.18-1.65] (1,849)	$1.18 [1.18-1.97] (140)	$1.18 [0.89-1.58] (19)	$1.18 [1.18-1.77] (2,960)
QA ACT without the 'green leaf' logo	$1.18 [0.59-1.77] (93)	$2.36 [1.48-8.86] (140)	$1.18 [1.18-1.48] (430)	$1.42 [1.18-1.48] (55)	$1.18 [0.79-2.36] (11)	$1.18 [1.18-1.54] (729)
QA AL	$1.18 [0.89-2.36] (334)	$1.18 [1.18-2.36] (817)	$1.18 [1.18-1.58] (2,258)	$1.18 [1.18-1.77] (192)	$1.18 [0.89-1.58] (29)	$1.18 [1.18-1.77] (3,630)
Non-quality-assured ACT (non-QA ACT)	$7.09 [5.91-12.41] (174)	$6.75 [5.32-10.32] (1,192)	$5.91 [4.73-7.94] (461)	$6.50 [5.91-8.73] (32)	$7.94 [5.91-8.86] (5)	$6.50 [5.91-8.86] (1,864)
Sulfadoxine-Pyrimethamine	$1.18 [0.89-1.33] (283)	$0.89 [0.89-1.33] (1,224)	$0.89 [0.89-1.18] (3,090)	$0.89 [0.89-1.33] (263)	$0.89 [0.62-1.33] (33)	$0.89 [0.89-1.33] (4,893)
Quinine	$3.72 [2.11-4.96] (64)	$4.96 [4.47-5.38] (157)	$4.96 [2.48-4.96] (316)	$4.96 [2.48-12.41] (18)	$4.96 [4.96-14.89] (4)	$4.96 [2.48-4.96] (559)

* AETD - adult equivalent treatment dose - is or the number of milligrams required to treat a 60kg adult (see Annex 11). Information provided by the respondent about price for a specific amount of antimalarial drug (e.g. price per tablet or price per specific package size) was converted to the price per AETD.

Ψ At the time of the 2014 Tanzania ACTwatch outlet survey, artemether lumefantrine was the first-line treatment for uncomplicated malaria.

Figures in this table are derived using audited products with price information. The numbers of antimalarials captured in audit sheets with missing price information are as follows:
47 any ACT tablets, 26 artemether lumefantrine tablets, 8 dihydroartemisinin piperaquine tablets, 25 QA ACT tablets, 16 QA ACT with logo tablets, 9 QA ACT without logo tablets, 23 QA ACT AL tablets, 22 non-QA ACT tablets, 18 sulfadoxine pyrimethamine tablets, 10 quinine tablets.

Source: ACTwatch Outlet Survey, Tanzania, 2014.

Table A4b: Price of pre-packaged antimalarials, by outlet type

	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**ALL Private**
Median price of one pre-packaged therapy:	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)
Adult QA AL	$1.18 [0.89-1.48] (110)	$1.18 [0.89-1.77] (344)	$1.18 [0.89-1.18] (773)	$1.18 [0.89-1.42] (72)	$0.89 [0.59-1.42] (9)	$1.18 [0.89-1.18] (1,308)
Pediatric QA AL *	$0.59 [0.30-0.89] (78)	$0.59 [0.35-0.59] (197)	$0.59 [0.30-0.59] (574)	$0.59 [0.35-0.59] (50)	$0.59 [0.59-0.59] (7)	$0.59 [0.30-0.59] (906)

* Pediatric QA AL is the pre-packaged regimen appropriate for a 2 year old child.
Figures in this table are derived using audited products with price information. The numbers of antimalarials captured in audit sheets with missing price information are: 8 adult QA AL, 3 pediatric QA AL

Source: ACTwatch Outlet Survey, Tanzania, 2014.

Table A5: Availability of malaria blood testing among antimalarial-stocking outlets*, by outlet type

	Public Health Facility	Private Not For-Profit Facility	**ALL Public**	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**ALL Private**	**ALL Outlets**
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Proportion of outlets*stocking**	N=297	N=39	N=336	N=172	N=356	N=1,127	N=117	N=21	N=1,794	N=2,129
Any malaria blood testing	89.1 (82.5, 93.4)	99.2 (95.2, 99.9)	89.9 (83.7, 93.9)	93.5 (85.7, 97.2)	10.8 (6.9, 16.6)	7.2 (4.0, 12.5)	4.3 (1.4, 11.9)	8.5 (1.9, 31.3)	11.4 (8.8, 14.7)	26.0 (21.9, 30.6)
	N=297	N=39	N=336	N=172	N=356	N=1,126	N=117	N=21	N=1,792	N=2,128
Microscopic blood tests	28.4 (20.6, 37.9)	74.2 (48.8, 89.7)	32.3 (24.5, 41.2)	83.1 (72.8, 90.0)	1.8 (0.6, 4.9)	0.4 (0.2, 1.1)	0.9 (0.1, 7.0)	0.0 -	5.5 (4.0, 7.4)	10.4 (8.5, 12.7)
	N=297	N=39	N=336	N=172	N=356	N=1,127	N=117	N=21	N=1,793	N=2,129
Rapid diagnostic tests (mRDTs)	75.8 (66.4, 83.3)	80.0 (63.1, 90.3)	76.2 (67.3, 83.2)	47.7 (37.7, 57.9)	9.4 (5.7, 15.0)	7.0 (3.9, 12.3)	3.3 (1.3, 8.4)	8.5 (1.9, 31.3)	8.3 (6.0, 11.3)	20.9 (16.9, 25.7)
	N=297	N=39	N=336	N=172	N=356	N=1,127	N=117	N=21	N=1,793	N=2,129
Checkmark mRDTs	0.7 (0.1, 4.6)	11.0 (2.8, 34.6)	1.6 (0.5, 4.7)	7.2 (4.0, 12.7)	5.4 (2.5, 11.3)	0.8 (0.3, 2.5)	0.0 -	6.0 (0.8, 33.5)	1.4 (0.7, 2.7)	1.4 (0.8, 2.5)

* Blood testing availability is reported among outlets that either had antimalarials in stock on the day of the survey or reportedly stocked antimalarials in the previous 3 months.
*** Results in this table are derived using responses captured among outlets with blood testing information. There are 8 antimalarial-stocking outlets with missing information about both availability of microscopy and availability of mRDTs. There were 11 antimalarial-stocking outlets that had partial information about blood testing availability.

Source: ACTwatch Outlet Survey, Tanzania, 2014.

Table A6: Malaria blood testing market composition

Outlet type, among outlets with malaria blood testing available on the day of the survey:*	Public Health Facility	Private Not For-Profit Facility	**ALL Public**	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**ALL Private**
	%	%	%	%	%	%	%	%	%
N=145 outlets	49.8 (38.4, 61.2)	5.7 (2.8, 11.4)	55.5 (44.0, 66.4)	22.0 (13.7, 33.4)	0.9 (0.2, 4.5)	15.1 (8.3, 25.9)	4.8 (1.7, 13.0)	1.7 (0.4, 7.5)	44.5 (33.6, 56.0)

* Excluding booster sample outlets. Outlets with malaria blood testing available on the day of the survey, verified by presence of at least one mRDT recorded in the mRDT audit sheet and/or reported availability of malaria microscopy.

Source: ACTwatch Outlet Survey, Tanzania, 2014.

Table A7: Price of malaria blood testing, by outlet type

Total median price to consumers:*	Private For-Profit Facility	Pharmacy	ADDO	**ALL Private**
	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)
Microscopic blood tests				
Adult	$0.59 [0.59-0.59] (160)	$0.59 [0.59-1.18] (5)	$0.30 [0.30-0.89] (5)	$0.59 [0.59-0.59] (171)
Child under age five	$0.59 [0.59-0.59] (160)	$0.59 [0.59-1.18] (5)	$0.30 [0.30-0.89] (5)	$0.59 [0.59-0.59] (171)
Rapid diagnostic tests (mRDTs)				
Adult	$0.89 [0.59-1.18] (102)	$0.89 [0.89-0.89] (9)	$0.89 [0.59-1.18] (53)	$0.59 [0.59-1.18] (171)
Child under five	$0.65 [0.59-1.18] (101)	$0.89 [0.89-0.89] (8)	$0.59 [0.59-1.18] (53)	$0.59 [0.59-1.18] (169)

* Total price to the consumer including consultation and/or service fees.
There were 8 outlets with missing or "don't know" responses for microscopic blood testing price information.
MRDT price information was not available (missing or "don't know" response) for: 49 adult mRDTs and 51 child mRDTs in median price to consumers.

Source: ACTwatch Outlet Survey, Tanzania, 2014.

Table A8: Antimalarial market share

AETDs sold or distributed in the previous week by outlet type and antimalarial type as a percentage of all AETDs sold / distributed:*	Public Health Facility	Private Not For-Profit Facility	**TOTAL Public**	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**TOTAL Private**	**ANTI-MALARIAL TOTAL*** **
	%	%	%	%	%	%	%	%	%	%
1. Any ACT	**15.0**	**1.1**	**16.1**	**2.7**	**2.2**	**18.5**	**7.2**	**0.7**	**31.2**	**47.3**
Artemether Lumefantrine (AL) Ψ	15.0	0.9	15.9	2.2	1.4	18.3	6.8	0.6	29.3	45.1
Artesunate Sulfadoxine Pyrimethamine (ASSP)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DHAPPQ	0.0	0.1	0.1	0.3	0.6	0.1	0.3	0.1	1.4	1.5
Quality Assured ACT (QA ACT)	14.9	1.0	15.9	2.1	1.0	17.6	6.5	0.6	27.8	43.7
QA ACT with the 'green leaf' logo	0.7	0.2	0.9	1.2	0.4	13.7	4.1	0.2	19.5	20.5
QA ACT without the 'green leaf' logo	14.2	0.8	15.0	0.9	0.6	3.9	2.4	0.5	8.2	23.1
Non-quality-assured ACT	0.1	0.1	0.2	0.5	1.3	0.9	0.7	0.1	3.5	3.7
2. Any non-artemisinin therapy	**9.8**	**3.2**	**13.1**	**2.0**	**2.4**	**22.7**	**11.7**	**0.7**	**39.4**	**52.5**
Sulfadoxine-Pyrimethamine	6.2	0.3	6.5	1.6	2.4	20.6	10.9	0.6	36.0	42.6
Oral Quinine	3.4	2.8	6.2	0.2	0.0	1.3	0.2	0.0	1.7	8.0
Quinine IV/IM	0.2	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.2	0.4
3. Oral artemisinin monotherapy	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
4. Non-oral artemisinin monotherapy	**0.0**	**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**0.2**
Injectable artesunate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Injectable artemether	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.2
Injectable artemotil	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5. Any treatment for severe malaria	0.2	0.1	0.3	0.3	0.0	0.0	0.0	0.0	0.3	0.6
OUTLET TYPE TOTAL**	**24.8**	**4.4**	**29.2**	**4.8**	**4.6**	**41.2**	**18.8**	**1.4**	**70.8**	**100.0**

* A total of 18,216 AETDs were reportedly sold or distributed in the previous seven days. See Annex 11 for a description of AETD calculation and Annex 12 for AETD numbers by outlet type and drug category.

***Row sum – market share for the specified antimalarial medicine.

**** Column sum – market share for the specified outlet type.

Categories 1 through 4 sum to 100% in the far-right column – antimalarial total column.

A total of 3551 antimalarials were audited. Of these, 240 audited antimalarials were not included in market share calculations due to incomplete or inconsistent information.

Source: ACTwatch Outlet Survey, Tanzania, 2014.

Table A9: Antimalarial market share across outlet type

AETDs sold or distributed in the previous week by antimalarial type as a percentage of all AETDs sold / distributed within each outlet type:*	Public Health Facility	Private Not For-Profit Facility	**TOTAL Public**	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**TOTAL Private**
	%	%	%	%	%	%	%	%	%
1. Any ACT	**60.3**	**25.9**	**55.1**	**55.3**	**48.5**	**44.9**	**38.1**	**49.9**	**44.1**
Artemether Lumefantrine (AL)Ψ	60.3	20.6	54.3	46.1	29.7	44.4	36.2	45.3	41.4
Artesunate Sulfadoxine Pyrimethamine (ASSP)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DHAPPQ	0.0	1.9	0.3	5.8	12.8	0.3	1.7	3.9	1.9
Quality Assured ACT (QA ACT)	59.9	23.7	54.5	44.8	20.9	42.7	34.3	46.0	39.2
QA ACT with the 'green leaf' logo	2.8	5.4	3.2	24.5	8.9	33.2	21.8	12.8	27.6
QA ACT without the 'green leaf' logo	57.1	18.4	51.3	18.8	12.0	9.5	12.5	33.2	11.5
Non-quality-assured ACT	0.4	2.2	0.7	10.5	27.6	2.2	3.8	3.9	4.9
2. Any non-artemisinin therapy	**39.6**	**73.7**	**44.7**	**41.9**	**51.4**	**55.1**	**61.9**	**50.1**	**55.7**
Sulfadoxine-Pyrimethamine	25.1	6.7	22.4	33.4	50.7	49.9	57.7	46.5	50.9
Oral Quinine	13.8	64.5	21.4	4.6	0.4	3.1	1.1	0.4	2.4
Quinine IV/IM	0.6	2.1	0.9	2.8	0.0	0.1	0.0	0.3	0.3
3. Oral artemisinin monotherapy	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
4. Non-oral artemisinin monotherapy	**0.1**	**0.4**	**0.1**	**2.7**	**0.1**	**0.0**	**0.0**	**0.0**	**0.2**
Injectable artesunate	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Injectable artemether	0.0	0.4	0.1	2.7	0.1	0.0	0.0	0.0	0.2
Injectable artemotil	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5. Any treatment for severe malaria	0.7	2.5	1.0	5.6	0.1	0.1	0.0	0.3	0.5

* AETDs reportedly sold or distributed in the previous seven days: 4324 public health facilities; 1096 private not for-profit facilities; 942 private for-profit facilities; 584 pharmacies; 8566 ADDOs; 2464 DLDBs; 239 general retailers. See Annex 11 for a description of AETD calculation and Annex 12 for AETD numbers by outlet type and drug category.

Ψ At the time of the 2014Tanzania ACTwatch outlet survey, artesunate amodiaquine was Tanzania's first line treatment for uncomplicated malaria.

Categories 1 through 4 sum to 100% within each column.

A total of 3551 antimalarials were audited. Of these, 240 audited antimalarials were not included in market share calculations due to due to incomplete or inconsistent information, including the following number of antimalarials by outlet type: 37 public health facilities; 3 private not for-profit facilities; 27 private for-profit facilities; 16 pharmacies; 92 ADDOs; 61 DLDBs; 4 general retailers.

Source: ACTwatch Outlet Survey, Tanzania, 2014.

Table A10: Malaria blood testing market share

Number of malaria blood tests provided in the previous week by outlet type and blood test type as a percentage of all blood tests provided:*	Public Health Facility	Private Not For-Profit Facility	**TOTAL Public**	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**TOTAL Private**	**BLOOD TEST TOTAL*** **
	%	%	%	%	%	%	%	%	%	%
1. Malaria microscopy	14.0	4.2	18.2	17.9	0.1	0.2	0.2	0.0	18.3	36.5
2. mRDT	54.1	1.2	55.3	4.4	0.0	2.9	0.3	0.5	8.2	63.5
Checkmark mRDTs	0.1	0.0	0.1	0.5	0.0	0.4	0.0	0.0	0.9	1.0
OUTLET TYPE TOTAL** **	68.1	5.4	73.5	22.3	0.1	3.1	0.5	0.5	26.5	100.0

* A total of 4155 malaria microscopy tests and 4610 mRDTs were reportedly administered in the previous seven days.

*** Row sum – market share for the specified type of blood testing medicine.

**** Column sum – market share for the specified outlet type.

Categories 1 and 2 sum to 100% in the far-right column – malaria blood testing total column.

A total of 198 malaria blood tests were audited. Of these, 5 malaria microscopy tests and 11 mRDTs were not included in market share calculations due to incomplete or inconsistent information.

Source: ACTwatch Outlet Survey, Tanzania, 2014.

Table A11: Malaria blood testing market share, across outlet type

Number of malaria blood tests provided in the previous week by blood test type as a percentage of all blood tests provided within each outlet type:*	Public Health Facility	Private Not For-Profit Facility	**TOTAL Public**	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**TOTAL Private**	**BLOOD TEST TOTAL*** **
	%	%	%	%	%	%	%	%	%	%
Total blood testing market										
1. Malaria microscopy	20.6	77.7	24.8	80.1	100.0	6.4	31.0	0.0	69.1	36.5
2. mRDT	79.4	22.3	75.2	19.9	0.0	93.6	69.0	100.0	30.9	63.5
Checkmark mRDTs	0.2	0.0	0.2	2.3	0.0	12.2	0.0	0.0	3.4	1.0
Malaria RDT marketΨ										
STANDARD DIAGNOSTICS INC.	73.2	88.0	73.5	30.3	0.0	71.8	0.0	96.0	47.9	70.2
PREMIER MEDICAL CORPORATION LTD	26.8	12.0	26.5	57.9	0.0	14.1	48.0	4.0	38.6	28.1
SPAN DIAGNOSTICS LTD	0.0	0.0	0.0	8.7	0.0	2.7	0.0	0.0	5.7	0.7
Other	0.0	0.0	0.0	3.0	0.0	11.3	52.0	0.0	7.8	1.0

* 8765 malaria blood tests reportedly administered in the previous seven days: 5383 public health facilities; 560 private not for-profit facilities; 2535 private for-profit facilities; 25 pharmacies; 215 ADDOs; 25 DLDBs; 22 DLDBs.

*** Categories 1 through 2 sum to 100% in within each column.

ΨThe manufacturer information was captured for all mRDTs audited.

A total of 198 malaria blood tests were audited. Of these, 5 malaria microscopy tests and 11 mRDTs were not included in market share calculations due to incomplete or inconsistent information.

Source: ACTwatch Outlet Survey, Tanzania, 2014.

Table A12: Provider case management knowledge and practices, by outlet type

	Public Health Facility	Private Not For-Profit Facility	**ALL Public**	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**ALL Private**	**ALL Outlets**
Proportion of providers who:	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Would refer a 2 year old child with symptoms of severe malaria to a health facility	-	-	-	-	N=355	N=1,125	N=117	N=21	N=1,618	N=1,618
Yes, would refer to health facility	NA	NA	NA	NA	92.6 (85.4, 96.4)	92.3 (88.7, 94.8)	90.2 (82.8, 94.6)	74.9 (56.5, 87.2)	90.4 (85.7, 93.7)	90.4 (85.7, 93.7)
Would recommend that a client with a negative malaria blood test take an antimalarial	N=295	N=39	N=334	N=167	N=220	N=837	N=85	N=14	N=1,323	N=1,657
Yes – sometimes	38.7 (31.0, 46.9)	40.4 (22.1, 61.9)	38.8 (31.6, 46.6)	60.0 (48.2, 70.8)	20.9 (13.8, 30.4)	27.1 (22.5, 32.1)	18.1 (10.3, 29.9)	23.5 (5.5, 61.6)	26.2 (22.7, 30.1)	29.2 (25.4, 33.2)
Yes – always	2.2 (0.8, 5.7)	0.0 -	2.0 (0.8, 5.2)	1.4 (0.5, 3.9)	2.1 (0.6, 7.0)	1.2 (0.5, 2.9)	1.3 (0.2, 9.5)	0.0 -	1.2 (0.5, 2.9)	1.4 (0.6, 3.1)
Circumstances cited for recommending antimalarial treatment to a client who tested negative for malaria:*	N=120	N=16	N=136	N=98	N=46	N=227	N=18	N=3	N=392	N=528
Patient has signs and symptoms of malaria.	99.0 (96.1, 99.8)	100.0 -	99.1 (96.4, 99.8)	99.1 (96.4, 99.8)	97.9 (92.8, 99.4)	96.8 (93.1, 98.5)	100.0 -	100.0 -	98.1 (96.3, 99.0)	98.4 (96.9, 99.2)
Provider doesn't trust the test results.	25.7 (13.6, 43.2)	17.1 (2.4, 63.7)	25.0 (13.5, 41.5)	12.4 (4.4, 30.5)	13.6 (3.8, 38.7)	8.9 (5.2, 14.9)	28.0 (11.3, 54.2)	0.0 -	13.7 (8.1, 22.3)	17.2 (11.8, 24.4)
When the patient is a child	9.8 (4.0, 21.8)	0.0 -	9.0 (3.7, 20.3)	3.0 (0.8, 10.4)	0.8 (0.1, 4.6)	2.3 (0.7, 7.8)	0.0 -	0.0 -	1.8 (0.7, 4.5)	4.0 (2.0, 7.8)
Other (all other reasons)**	17.3 (8.4, 32.3)	9.2 (2.0, 33.6)	16.6 (8.3, 30.6)	5.2 (2.3, 11.2)	7.1 (2.8, 17.3)	9.2 (5.4, 15.1)	14.3 (3.4, 44.5)	0.0 -	9.3 (4.8, 17.1)	11.5 (7.0, 18.6)

Provider questions were administered to one staff member working in each outlet eligible for a full interview (current/recent antimalarial-stocking outlets or outlets providing malaria blood testing).

* No providers were missing information on circumstances for recommending antimalarials to clients who tested negative for malaria.

**The 'other' responses included when patients asks, pregnant women, when patient is known, and when they have high fever, strong flu/symptoms for malaria (headache, joint pain)

Source: ACTwatch Outlet Survey, Tanzania, 2014.

Table A13: Provider antimalarial treatment knowledge and practices, by outlet type

	Public Health Facility	Private Not For-Profit Facility	**ALL Public**	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**ALL Private**	**ALL Outlets**
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Proportion of providers who:	N=297	N=39	N=336	N=172	N=361	N=1,129	N=117	N=23	N=1,802	N=2,138
Correctly state the national first-line treatment[Ψ] for uncomplicated malaria	96.9 (90.6, 99.0)	99.3 (95.4, 99.9)	97.1 (91.1, 99.1)	99.1 (96.5, 99.8)	91.0 (85.0, 94.7)	92.3 (87.9, 95.2)	85.4 (73.1, 92.7)	58.6 (35.0, 78.8)	88.3 (83.3, 92.0)	90.0 (86.1, 92.9)
Correctly state the first-line dosing regimen for:										
An adult	94.2 (87.8, 97.3)	99.3 (95.4, 99.9)	94.6 (88.6, 97.5)	96.5 (92.7, 98.4)	82.2 (76.1, 87.0)	90.4 (85.9, 93.5)	82.7 (71.5, 90.0)	48.1 (29.2, 67.5)	85.4 (80.6, 89.2)	87.1 (83.0, 90.3)
A two-year old child	92.2 (85.8, 95.9)	98.3 (93.4, 99.6)	92.8 (86.7, 96.2)	86.7 (77.6, 92.5)	69.1 (55.6, 80.0)	85.7 (80.3, 89.8)	74.7 (65.1, 82.4)	42.0 (26.0, 59.8)	79.0 (73.5, 83.6)	81.5 (76.9, 85.5)
Report an ACT as the most effective antimalarial medicine for:										
Adults	98.2 (94.9, 99.4)	90.2 (60.1, 98.2)	97.6 (94.0, 99.0)	88.5 (80.3, 93.5)	87.9 (83.4, 91.3)	78.7 (71.9, 84.2)	70.1 (58.1, 79.9)	79.2 (54.7, 92.3)	76.6 (69.9, 82.3)	80.6 (74.8, 85.3)
Children	96.7 (93.3, 98.4)	89.5 (70.0, 96.9)	96.1 (93.1, 97.8)	84.6 (73.8, 91.5)	83.5 (77.8, 87.9)	85.7 (80.6, 89.6)	73.9 (61.1, 83.6)	79.2 (54.7, 92.3)	81.2 (74.7, 86.4)	84.0 (78.4, 88.4)
Report an ACT as the antimalarial he/she most commonly recommends for:										
Adults	96.9 (93.2, 98.6)	91.2 (58.4, 98.7)	96.4 (92.6, 98.3)	85.4 (77.6, 90.8)	90.7 (85.9, 94.0)	77.6 (70.5, 83.3)	68.7 (56.5, 78.8)	73.0 (44.9, 90.0)	75.1 (68.2, 81.0)	79.1 (73.1, 84.1)
Children	94.5 (90.2, 97.0)	88.5 (62.5, 97.2)	94.0 (89.6, 96.6)	84.1 (73.1, 91.2)	84.5 (79.3, 88.5)	84.5 (77.4, 89.6)	71.9 (57.4, 82.9)	66.4 (40.7, 85.0)	79.3 (71.8, 85.2)	82.1 (75.7, 87.1)

[Ψ] At the time of the 2014 Tanzania ACTwatch outlet survey, artemether lumefantrine was Tanzania's first line treatment for uncomplicated malaria.
Numbers of providers (N) in this table are the total number of providers eligible for table indicators. There were 8 providers with missing information on the national first-line treatment, 8 on the first-line dosing regimen for adults and children, 24 on the most effective antimalarial medicine for adults and 32 for children and 27 on the most often recommended antimalarial for adults and 41 for children.

Source: ACTwatch Outlet Survey, Tanzania, 2014.

Results Section B: Core Indicators across Urban/Rural Location

Table B1: Availability of antimalarials, among all screened outlets, by outlet type, across urban/rural location

	Public Health Facility	Private Not For-Profit Facility	**ALL Public**	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**ALL Private**	**ALL Outlets**
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Proportion of outlets*stocking:	Urban N=151 Rural N=147	Urban N=28 Rural N=11	Urban N=179 Rural N=158	Urban N=176 Rural N=18	Urban N=364 Rural N=0	Urban N=886 Rural N=247	Urban N=67 Rural N=50	Urban N=1,960 Rural N=619	Urban N=3,453 Rural N=934	Urban N=3,632 Rural N=1,092
Any antimalarial at the time of survey visit										
Urban	100.0 -	100.0 -	100.0 -	86.1 (74.4, 92.9)	99.4 (97.1, 99.9)	99.0 (95.9, 99.7)	98.8 (93.5, 99.8)	0.4 (0.1, 1.1)	13.0 (10.2, 16.3)	14.6 (11.4, 18.5)
Rural	99.4 (95.6, 99.9)	88.5 (47.3, 98.5)	98.6 (94.5, 99.7)	95.0 (68.4, 99.4)	- -	99.7 (98.0, 100.0)	98.0 (86.8, 99.7)	2.3 (0.9, 5.3)	17.8 (13.9, 22.6)	22.5 (17.8, 27.9)
Any ACT										
Urban	99.9 (99.3, 100.0)	94.2 (81.0, 98.4)	99.3 (97.2, 99.8)	81.7 (70.6, 89.2)	98.2 (94.1, 99.5)	87.8 (82.2, 91.9)	83.6 (66.8, 92.8)	0.3 (0.1, 1.1)	11.5 (9.0, 14.5)	13.1 (10.2, 16.7)
Rural	97.1 (91.9, 99.0)	77.8 (44.3, 93.9)	95.7 (90.8, 98.1)	78.8 (50.0, 93.2)	- -	87.6 (80.9, 92.2)	77.6 (60.1, 88.8)	1.1 (0.4, 3.5)	14.3 (10.8, 18.8)	19.0 (14.8, 24.0)
Artemether Lumefantrine (AL)										
Urban	99.9 (99.3, 100.0)	94.2 (81.0, 98.4)	99.3 (97.2, 99.8)	79.4 (69.0, 87.0)	97.1 (93.7, 98.7)	87.2 (81.4, 91.4)	78.8 (57.9, 91.0)	0.3 (0.1, 0.9)	11.2 (8.8, 14.1)	12.8 (9.9, 16.4)
Rural	97.1 (91.9, 99.0)	77.8 (44.3, 93.9)	95.7 (90.8, 98.1)	78.8 (50.0, 93.2)	- -	87.4 (80.8, 91.9)	77.6 (60.1, 88.8)	1.1 (0.4, 3.5)	14.3 (10.8, 18.8)	19.0 (14.8, 24.0)
Artemisinin Piperaquine (APPQ)										
Urban	0.3 (0.1, 1.4)	3.1 (0.8, 11.8)	0.6 (0.2, 1.6)	18.7 (11.8, 28.4)	49.6 (41.5, 57.7)	11.3 (7.6, 16.3)	11.4 (5.6, 21.8)	0.1 (0.0, 0.4)	1.8 (1.2, 2.9)	1.8 (1.2, 2.8)
Rural	0.0 -	0.0 -	0.0 -	3.0 (0.4, 19.3)	- -	1.6 (0.4, 5.9)	0.0 -	0.0 -	0.2 (0.0, 0.7)	0.2 (0.0, 0.6)
Artesunate Amodiaquine (ASAQ)										
Urban	0.0 -	14.5 (2.1, 57.5)	1.6 (0.2, 10.8)	2.9 (1.2, 6.8)	9.0 (4.8, 16.4)	3.4 (1.5, 7.5)	1.2 (0.2, 6.6)	0.1 (0.0, 0.4)	0.4 (0.2, 0.8)	0.5 (0.3, 0.8)
Rural	0.0 -	0.0 -	0.0 -	0.0 -	- -	0.5 (0.1, 3.5)	3.0 (0.7, 12.8)	0.0 -	0.3 (0.1, 0.9)	0.2 (0.1, 0.8)

Table B1: Availability of antimalarials, among all screened outlets, by outlet type, across urban/rural location

	Public Health Facility	Private Not For-Profit Facility	**ALL Public**	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**ALL Private**	**ALL Outlets**
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Proportion of outlets*stocking:	Urban N=151 Rural N=147	Urban N=28 Rural N=11	Urban N=179 Rural N=158	Urban N=176 Rural N=18	Urban N=364 Rural N=0	Urban N=886 Rural N=247	Urban N=67 Rural N=50	Urban N=1,960 Rural N=619	Urban N=3,453 Rural N=934	Urban N=3,632 Rural N=1,092
DHAPPQ										
Urban	1.4 (0.5, 3.7)	30.5 (10.2, 63.1)	4.6 (1.8, 10.8)	42.2 (29.5, 55.9)	78.8 (70.3, 85.4)	13.8 (9.1, 20.4)	32.0 (18.9, 48.8)	0.1 (0.0, 0.8)	3.3 (2.1, 5.3)	3.3 (2.1, 5.3)
Rural	1.3 (0.3, 5.6)	7.6 (0.9, 41.3)	1.7 (0.5, 5.5)	8.3 (1.8, 31.0)	- -	4.3 (1.6, 11.1)	0.0 -	0.0 -	0.4 (0.1, 1.3)	0.5 (0.2, 1.3)
Quality Assured ACT (QA ACT)										
Urban	99.9 (99.3, 100.0)	92.1 (77.0, 97.6)	99.0 (96.7, 99.7)	78.5 (68.0, 86.2)	90.3 (84.6, 94.0)	86.5 (80.3, 90.9)	78.8 (57.9, 91.0)	0.3 (0.1, 1.1)	11.1 (8.7, 14.1)	12.7 (9.9, 16.3)
Rural	97.1 (91.9, 99.0)	77.8 (44.3, 93.9)	95.7 (90.8, 98.1)	78.8 (50.0, 93.2)	- -	85.9 (78.2, 91.2)	77.6 (60.1, 88.8)	1.1 (0.4, 3.5)	14.2 (10.6, 18.7)	18.9 (14.7, 23.9)
QA AL										
Urban	99.9 (99.3, 100.0)	92.1 (77.0, 97.6)	99.0 (96.7, 99.7)	78.2 (67.7, 86.0)	90.3 (84.6, 94.0)	86.5 (80.3, 90.9)	78.8 (57.9, 91.0)	0.3 (0.1, 0.9)	11.1 (8.7, 14.0)	12.7 (9.8, 16.2)
Rural	97.1 (91.9, 99.0)	77.8 (44.3, 93.9)	95.7 (90.8, 98.1)	78.8 (50.0, 93.2)	- -	85.9 (78.2, 91.2)	77.6 (60.1, 88.8)	1.1 (0.4, 3.5)	14.2 (10.6, 18.7)	18.9 (14.7, 23.9)
QA ACT with the 'green leaf' logo										
Urban	9.0 (3.8, 20.0)	39.4 (16.5, 68.2)	12.4 (6.7, 21.8)	63.7 (53.3, 72.9)	82.0 (73.3, 88.2)	72.0 (62.4, 80.0)	70.4 (54.9, 82.3)	0.3 (0.1, 1.1)	9.5 (7.4, 12.1)	9.5 (7.5, 12.0)
Rural	7.8 (3.6, 16.0)	53.2 (23.4, 80.9)	10.9 (6.0, 18.9)	27.0 (9.0, 57.9)	- -	70.3 (61.8, 77.6)	49.1 (29.4, 69.2)	0.8 (0.2, 3.3)	10.2 (7.2, 14.3)	10.3 (7.3, 14.2)
QA ACT without the 'green leaf' logo										
Urban	97.3 (87.9, 99.4)	52.7 (25.2, 78.7)	92.4 (85.0, 96.3)	23.8 (15.0, 35.6)	28.5 (21.7, 36.5)	31.6 (26.7, 36.9)	15.6 (7.8, 28.9)	0.1 (0.0, 0.7)	3.5 (2.4, 4.9)	5.1 (3.5, 7.4)
Rural	96.7 (91.6, 98.7)	38.3 (14.5, 69.4)	92.6 (86.9, 96.0)	54.2 (23.8, 81.7)	- -	30.5 (24.1, 37.8)	39.6 (29.8, 50.2)	0.4 (0.0, 2.5)	6.0 (4.4, 8.3)	11.0 (8.5, 14.2)
QA ACT - child (<5 years)										
Urban	96.6 (88.5, 99.0)	75.9 (51.8, 90.3)	94.3 (87.4, 97.6)	49.7 (37.9, 61.4)	57.6 (49.5, 65.3)	61.4 (51.7, 70.3)	49.2 (30.6, 68.1)	0.2 (0.1, 0.7)	7.5 (5.9, 9.4)	9.1 (7.1, 11.6)

Table B1: Availability of antimalarials, among all screened outlets, by outlet type, across urban/rural location

	Public Health Facility	Private Not For-Profit Facility	**ALL Public**	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**ALL Private**	**ALL Outlets**
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Proportion of outlets*stocking:	Urban N=151 Rural N=147	Urban N=28 Rural N=11	Urban N=179 Rural N=158	Urban N=176 Rural N=18	Urban N=364 Rural N=0	Urban N=886 Rural N=247	Urban N=67 Rural N=50	Urban N=1,960 Rural N=619	Urban N=3,453 Rural N=934	Urban N=3,632 Rural N=1,092
Rural	93.9 (87.2, 97.2)	59.9 (27.0, 85.8)	91.6 (85.2, 95.4)	68.4 (37.7, 88.6)	- -	58.0 (50.1, 65.6)	39.0 (28.3, 50.9)	0.9 (0.2, 3.3)	8.9 (6.5, 12.0)	13.6 (10.3, 17.7)
QA ACT - adults										
Urban	83.1 (65.6, 92.7)	65.5 (39.9, 84.4)	81.2 (66.1, 90.5)	60.7 (47.9, 72.1)	70.1 (63.0, 76.3)	66.3 (58.2, 73.5)	56.4 (44.4, 67.8)	0.2 (0.1, 0.7)	8.3 (6.4, 10.7)	9.7 (7.2, 12.8)
Rural	80.0 (68.9, 87.8)	46.7 (18.4, 77.2)	77.7 (67.0, 85.7)	56.1 (29.0, 80.0)	- -	57.0 (47.6, 66.0)	58.1 (42.0, 72.7)	0.7 (0.2, 2.1)	9.8 (7.2, 13.3)	13.7 (10.5, 17.7)
Non-quality-assured ACT (non-QA ACT)										
Urban	8.4 (3.8, 17.6)	34.9 (13.1, 65.4)	11.3 (5.5, 21.8)	48.9 (37.0, 60.9)	90.6 (82.6, 95.1)	22.8 (16.7, 30.3)	33.8 (20.1, 51.0)	0.2 (0.0, 1.1)	4.2 (2.8, 6.4)	4.4 (2.9, 6.5)
Rural	4.2 (2.1, 8.4)	7.6 (0.9, 41.3)	4.4 (2.1, 9.0)	8.3 (1.8, 31.0)	- -	8.6 (4.3, 16.2)	0.0 -	0.0 -	0.8 (0.4, 1.7)	1.0 (0.5, 1.9)
Any non-artemisinin therapy										
Urban	85.1 (63.3, 94.9)	96.8 (79.5, 99.6)	86.4 (65.8, 95.4)	86.1 (74.4, 92.9)	98.5 (94.2, 99.6)	98.0 (95.6, 99.1)	98.8 (93.5, 99.8)	0.4 (0.1, 1.1)	12.9 (10.2, 16.2)	14.3 (11.2, 18.0)
Rural	93.6 (87.3, 96.9)	88.5 (47.3, 98.5)	93.3 (87.3, 96.6)	91.7 (68.3, 98.3)	- -	97.6 (95.2, 98.8)	82.8 (64.5, 92.8)	1.7 (0.7, 4.0)	16.1 (12.8, 20.1)	20.5 (16.4, 25.4)
Sulfadoxine-Pyrimethamine										
Urban	39.2 (20.1, 62.3)	55.5 (27.5, 80.5)	41.0 (23.2, 61.6)	76.8 (65.5, 85.2)	96.5 (91.9, 98.6)	96.5 (93.6, 98.1)	96.9 (89.5, 99.1)	0.4 (0.1, 1.1)	12.6 (9.9, 15.8)	13.1 (10.3, 16.5)
Rural	24.0 (16.3, 33.9)	53.0 (22.7, 81.3)	26.0 (18.7, 35.0)	32.7 (12.1, 63.2)	- -	89.5 (84.2, 93.1)	79.5 (60.1, 90.8)	1.3 (0.5, 3.4)	14.4 (11.5, 18.0)	15.1 (12.2, 18.6)
Oral Quinine										
Urban	58.5 (43.1, 72.3)	89.8 (73.3, 96.6)	61.9 (47.3, 74.6)	60.2 (46.1, 72.8)	81.1 (72.5, 87.5)	71.1 (63.0, 78.1)	65.7 (54.4, 75.5)	0.4 (0.1, 1.1)	9.2 (7.0, 12.1)	10.2 (7.7, 13.4)
Rural	57.1 (45.4, 68.1)	46.9 (18.8, 77.1)	56.4 (45.0, 67.1)	79.3 (54.4, 92.5)	- -	74.6 (66.5, 81.4)	59.1 (40.9, 75.2)	0.2 (0.0, 1.2)	11.1 (8.7, 14.1)	13.7 (10.8, 17.3)
Quinine IV/IM										
Urban	60.4 (33.5, 82.2)	82.8 (61.5, 93.5)	62.9 (37.2, 82.9)	71.1 (62.0, 78.7)	40.6 (24.0, 59.6)	23.5 (15.7, 33.5)	3.0 (0.7, 12.3)	0.0 (0.0, 0.1)	2.9 (1.9, 4.4)	4.0 (2.8, 5.8)

Table B1: Availability of antimalarials, among all screened outlets, by outlet type, across urban/rural location

	Public Health Facility	Private Not For-Profit Facility	**ALL Public**	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**ALL Private**	**ALL Outlets**
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Proportion of outlets*stocking:	Urban N=151 Rural N=147	Urban N=28 Rural N=11	Urban N=179 Rural N=158	Urban N=176 Rural N=18	Urban N=364 Rural N=0	Urban N=886 Rural N=247	Urban N=67 Rural N=50	Urban N=1,960 Rural N=619	Urban N=3,453 Rural N=934	Urban N=3,632 Rural N=1,092
Rural	80.6 (70.7, 87.8)	73.3 (39.4, 92.0)	80.1 (70.6, 87.2)	60.1 (39.7, 77.6)	- -	22.0 (14.6, 31.7)	6.0 (2.4, 14.5)	0.3 (0.1, 1.1)	2.9 (1.9, 4.4)	7.4 (5.2, 10.3)
Other non-artemisinin therapy										
Urban	3.1 (0.7, 13.2)	18.7 (4.2, 55.0)	4.8 (1.6, 13.4)	12.5 (5.9, 24.6)	29.7 (21.7, 39.2)	39.0 (32.9, 45.5)	37.4 (22.8, 54.7)	0.1 (0.0, 0.5)	4.7 (3.3, 6.7)	4.7 (3.3, 6.7)
Rural	1.7 (0.4, 7.2)	6.3 (0.8, 36.8)	2.0 (0.6, 6.7)	8.8 (1.2, 44.0)	- -	41.7 (32.7, 51.4)	33.4 (19.1, 51.5)	0.5 (0.2, 1.5)	6.4 (4.7, 8.6)	6.1 (4.5, 8.2)
Oral artemisinin monotherapy										
Urban	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -
Rural	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -
Non-oral artemisinin monotherapy										
Urban	47.6 (25.4, 70.8)	45.4 (20.6, 72.7)	47.4 (26.8, 68.9)	43.8 (31.1, 57.2)	44.8 (32.3, 58.0)	3.2 (1.4, 6.9)	0.0 -	0.0 -	1.0 (0.6, 1.6)	1.9 (1.1, 3.1)
Rural	12.7 (7.3, 21.1)	8.8 (1.1, 45.4)	12.4 (7.3, 20.2)	20.9 (5.5, 54.4)	- -	1.0 (0.2, 4.5)	0.0 -	0.0 -	0.2 (0.1, 0.6)	0.9 (0.5, 1.6)
Injectable artemether										
Urban	7.0 (2.5, 17.9)	43.6 (19.3, 71.4)	11.0 (5.5, 20.8)	43.4 (30.7, 57.0)	44.8 (32.3, 58.0)	3.1 (1.4, 6.9)	0.0 -	0.0 -	1.0 (0.6, 1.6)	1.2 (0.8, 1.9)
Rural	2.4 (0.8, 7.2)	8.8 (1.1, 45.4)	2.8 (1.1, 7.3)	17.9 (4.7, 49.0)	- -	1.0 (0.2, 4.5)	0.0 -	0.0 -	0.2 (0.1, 0.6)	0.4 (0.2, 0.8)
Injectable artesunate										
Urban	44.8 (22.5, 69.4)	18.5 (4.0, 55.0)	41.9 (21.4, 65.7)	3.5 (1.6, 7.6)	8.2 (2.7, 21.9)	0.2 (0.0, 0.6)	0.0 -	0.0 -	0.1 (0.1, 0.2)	0.9 (0.4, 2.1)
Rural	10.3 (5.3, 19.1)	0.0 -	9.6 (5.0, 17.6)	3.0 (0.4, 19.3)	- -	0.0 -	0.0 -	0.0 -	0.0 (0.0, 0.2)	0.6 (0.3, 1.1)
Injectable artemotil										
Urban	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table B1: Availability of antimalarials, among all screened outlets, by outlet type, across urban/rural location

	Public Health Facility	Private Not For-Profit Facility	**ALL Public**	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**ALL Private**	**ALL Outlets**
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Proportion of outlets*stocking:	Urban N=151 Rural N=147	Urban N=28 Rural N=11	Urban N=179 Rural N=158	Urban N=176 Rural N=18	Urban N=364 Rural N=0	Urban N=886 Rural N=247	Urban N=67 Rural N=50	Urban N=1,960 Rural N=619	Urban N=3,453 Rural N=934	Urban N=3,632 Rural N=1,092
	-	-	-	-	-	-	-	-	-	-
Rural	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -
Any treatment for severe malaria										
Urban	84.4 (72.9, 91.6)	84.8 (62.9, 94.9)	84.4 (74.5, 91.0)	76.0 (66.3, 83.5)	57.9 (42.0, 72.3)	24.5 (16.9, 34.2)	3.0 (0.7, 12.3)	0.0 (0.0, 0.1)	3.1 (2.1, 4.6)	4.7 (3.0, 7.1)
Rural	82.6 (72.9, 89.4)	73.3 (39.4, 92.0)	82.0 (72.6, 88.7)	66.1 (44.0, 82.8)	- -	22.9 (15.5, 32.5)	6.0 (2.4, 14.5)	0.3 (0.1, 1.1)	3.1 (2.0, 4.6)	7.6 (5.4, 10.6)

* The denominator includes 43 outlets that met screening criteria for a full interview but did not complete the interview (were not interviewed or completed a partial interview).

Source: ACTwatch Outlet Survey, Tanzania, 2014.

Table B2: Availability of antimalarials, among all outlets stocking at least one antimalarial, by outlet type, across urban/rural location

	Public Health Facility	Private Not For-Profit Facility	**ALL Public**	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**ALL Private**	**ALL Outlets**
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Proportion of outlets*stocking:	Urban N=151 Rural N=146	Urban N=28 Rural N=10	Urban N=179 Rural N=156	Urban N=155 Rural N=17	Urban N=361 Rural N=0	Urban N=880 Rural N=246	Urban N=65 Rural N=49	Urban N=8 Rural N=13	Urban N=1,469 Rural N=325	Urban N=1,648 Rural N=481
Any ACT										
Urban	99.9 (99.3, 100.0)	94.2 (81.0, 98.4)	99.3 (97.2, 99.8)	94.9 (89.9, 97.5)	98.8 (94.8, 99.7)	88.8 (83.3, 92.6)	84.6 (67.3, 93.6)	91.7 (61.8, 98.7)	88.5 (83.3, 92.3)	89.9 (85.2, 93.2)
Rural	97.7 (92.3, 99.3)	87.9 (58.1, 97.4)	97.1 (92.3, 98.9)	83.0 (53.6, 95.4)	- -	87.9 (81.1, 92.5)	79.2 (62.0, 89.8)	50.2 (21.6, 78.7)	80.3 (70.4, 87.5)	84.6 (77.4, 89.7)
Artemether Lumefantrine (AL)										
Urban	99.9 (99.3, 100.0)	94.2 (81.0, 98.4)	99.3 (97.2, 99.8)	92.3 (85.7, 96.0)	97.6 (94.6, 99.0)	88.1 (82.6, 92.1)	79.8 (58.2, 91.8)	76.8 (47.6, 92.3)	86.2 (80.2, 90.5)	87.8 (82.5, 91.7)
Rural	97.7 (92.3, 99.3)	87.9 (58.1, 97.4)	97.1 (92.3, 98.9)	83.0 (53.6, 95.4)	- -	87.6 (81.0, 92.2)	79.2 (62.0, 89.8)	50.2 (21.6, 78.7)	80.2 (70.3, 87.4)	84.5 (77.3, 89.6)
Artemisinin Piperaquine (APPQ)										
Urban	0.3 (0.1, 1.4)	3.1 (0.8, 11.8)	0.6 (0.2, 1.6)	21.8 (13.8, 32.7)	49.9 (41.7, 58.1)	11.4 (7.7, 16.6)	11.6 (5.7, 22.0)	14.9 (3.4, 46.9)	14.2 (10.1, 19.6)	12.5 (8.6, 17.6)
Rural	0.0 -	0.0 -	0.0 -	3.1 (0.4, 20.2)	- -	1.7 (0.4, 5.9)	0.0 -	0.0 -	0.9 (0.2, 3.6)	0.7 (0.2, 2.7)
Artesunate Amodiaquine (ASAQ)										
Urban	0.0 -	14.5 (2.1, 57.5)	1.6 (0.2, 10.8)	3.3 (1.3, 7.9)	9.1 (4.8, 16.5)	3.4 (1.5, 7.5)	1.2 (0.2, 6.7)	14.9 (3.4, 46.9)	3.3 (1.8, 6.0)	3.1 (1.8, 5.4)
Rural	0.0 -	0.0 -	0.0 -	0.0 -	- -	0.5 (0.1, 3.5)	3.1 (0.7, 13.1)	0.0 -	1.4 (0.4, 4.6)	1.1 (0.3, 3.5)
DHAPPQ										
Urban	1.4 (0.5, 3.7)	30.5 (10.2, 63.1)	4.6 (1.8, 10.8)	49.0 (35.9, 62.3)	79.3 (70.6, 85.9)	14.0 (9.2, 20.6)	32.4 (19.2, 49.2)	29.8 (5.7, 75.1)	25.7 (16.9, 37.0)	23.0 (14.8, 33.8)
Rural	1.3 (0.3, 5.6)	8.5 (1.1, 44.9)	1.7 (0.5, 5.5)	8.7 (1.9, 32.4)	- -	4.3 (1.6, 11.1)	0.0 -	0.0 -	2.4 (0.8, 6.8)	2.2 (0.9, 5.2)
Quality Assured ACT (QA ACT)										
Urban	99.9 (99.3, 100.0)	92.1 (77.0, 97.6)	99.0 (96.7, 99.7)	91.1 (83.4, 95.5)	90.8 (85.9, 94.2)	87.4 (81.4, 91.7)	79.8 (58.2, 91.8)	91.7 (61.8, 98.7)	85.7 (79.5, 90.2)	87.4 (81.8, 91.4)
Rural	97.7 (92.3, 99.3)	87.9 (58.1, 97.4)	97.1 (92.3, 98.9)	83.0 (53.6, 95.4)	- -	86.1 (78.4, 91.4)	79.2 (62.0, 89.8)	50.2 (21.6, 78.7)	79.5 (69.5, 86.9)	83.9 (76.7, 89.2)

Table B2: Availability of antimalarials, among all outlets stocking at least one antimalarial, by outlet type, across urban/rural location

	Public Health Facility	Private Not For-Profit Facility	**ALL Public**	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**ALL Private**	**ALL Outlets**
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Proportion of outlets*stocking:	Urban N=151 Rural N=146	Urban N=28 Rural N=10	Urban N=179 Rural N=156	Urban N=155 Rural N=17	Urban N=361 Rural N=0	Urban N=880 Rural N=246	Urban N=65 Rural N=49	Urban N=8 Rural N=13	Urban N=1,469 Rural N=325	Urban N=1,648 Rural N=481
QA ACT AL										
Urban	99.9 (99.3, 100.0)	92.1 (77.0, 97.6)	99.0 (96.7, 99.7)	90.9 (83.1, 95.3)	90.8 (85.9, 94.2)	87.4 (81.4, 91.7)	79.8 (58.2, 91.8)	76.8 (47.6, 92.3)	85.3 (79.4, 89.7)	87.1 (81.7, 91.0)
Rural	97.7 (92.3, 99.3)	87.9 (58.1, 97.4)	97.1 (92.3, 98.9)	83.0 (53.6, 95.4)	- -	86.1 (78.4, 91.4)	79.2 (62.0, 89.8)	50.2 (21.6, 78.7)	79.5 (69.5, 86.9)	83.9 (76.7, 89.2)
QA ACT with the 'green leaf' logo										
Urban	9.0 (3.8, 20.0)	39.4 (16.5, 68.2)	12.4 (6.7, 21.8)	74.0 (63.6, 82.2)	82.4 (74.1, 88.5)	72.8 (63.2, 80.6)	71.3 (55.6, 83.1)	86.6 (51.4, 97.5)	73.3 (65.3, 79.9)	65.4 (57.8, 72.4)
Rural	7.8 (3.6, 16.1)	60.1 (27.8, 85.5)	11.1 (6.1, 19.1)	28.4 (9.3, 60.5)	- -	70.6 (61.9, 78.0)	50.1 (30.5, 69.7)	34.6 (11.4, 68.6)	57.3 (46.0, 67.8)	45.6 (36.1, 55.5)
QA ACT without the 'green leaf' logo										
Urban	97.3 (87.9, 99.4)	52.7 (25.2, 78.7)	92.4 (85.0, 96.3)	27.7 (17.5, 40.8)	28.7 (21.8, 36.7)	31.9 (27.1, 37.1)	15.8 (7.8, 29.3)	35.0 (8.2, 76.5)	26.7 (20.6, 33.9)	35.1 (27.9, 43.2)
Rural	97.3 (92.1, 99.1)	43.3 (16.2, 75.1)	93.9 (88.1, 97.0)	57.0 (25.4, 83.8)	- -	30.6 (24.2, 37.8)	40.4 (30.1, 51.6)	15.6 (1.8, 64.7)	33.8 (26.4, 42.0)	48.9 (42.0, 55.8)
QA ACT - child (<5 years)										
Urban	96.6 (88.5, 99.0)	75.9 (51.8, 90.3)	94.3 (87.4, 97.6)	57.7 (44.4, 69.9)	57.9 (50.0, 65.4)	62.1 (52.6, 70.7)	49.8 (30.8, 68.9)	55.9 (42.5, 68.4)	57.7 (49.5, 65.6)	62.4 (55.2, 69.1)
Rural	94.5 (88.6, 97.5)	67.7 (29.7, 91.2)	92.9 (87.0, 96.2)	72.0 (40.4, 90.8)	- -	58.2 (50.2, 65.8)	39.8 (29.1, 51.6)	39.4 (15.1, 70.4)	49.7 (42.3, 57.2)	60.6 (53.5, 67.2)
QA ACT - adults										
Urban	83.1 (65.6, 92.7)	65.5 (39.9, 84.4)	81.2 (66.1, 90.5)	70.5 (58.0, 80.5)	70.5 (63.7, 76.5)	67.0 (58.9, 74.2)	57.1 (44.8, 68.7)	55.9 (42.5, 68.4)	64.2 (57.6, 70.3)	66.4 (59.8, 72.4)
Rural	80.5 (69.5, 88.2)	52.7 (21.8, 81.7)	78.8 (68.4, 86.4)	59.0 (31.0, 82.2)	- -	57.2 (47.8, 66.1)	59.3 (43.6, 73.4)	28.8 (10.3, 58.6)	55.1 (46.1, 63.7)	61.0 (54.3, 67.3)
Non-quality-assured ACT (non-QA ACT)										
Urban	8.4 (3.8, 17.6)	34.9 (13.1, 65.4)	11.3 (5.5, 21.8)	56.8 (45.0, 67.9)	91.1 (83.0, 95.6)	23.0 (16.8, 30.7)	34.3 (20.4, 51.4)	44.8 (6.3, 90.7)	32.8 (23.6, 43.6)	30.0 (21.3, 40.5)

Table B2: Availability of antimalarials, among all outlets stocking at least one antimalarial, by outlet type, across urban/rural location

	Public Health Facility	Private Not For-Profit Facility	**ALL Public**	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**ALL Private**	**ALL Outlets**
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Proportion of outlets*stocking:	Urban N=151 Rural N=146	Urban N=28 Rural N=10	Urban N=179 Rural N=156	Urban N=155 Rural N=17	Urban N=361 Rural N=0	Urban N=880 Rural N=246	Urban N=65 Rural N=49	Urban N=8 Rural N=13	Urban N=1,469 Rural N=325	Urban N=1,648 Rural N=481
Rural	4.2 (2.1, 8.5)	8.5 (1.1, 44.9)	4.5 (2.2, 9.2)	8.7 (1.9, 32.4)	- -	8.6 (4.3, 16.3)	0.0 -	0.0 -	4.4 (2.0, 9.2)	4.4 (2.5, 7.7)
Any non-artemisinin therapy										
Urban	85.1 (63.3, 94.9)	96.8 (79.5, 99.6)	86.4 (65.8, 95.4)	100.0 -	99.1 (96.7, 99.8)	99.1 (97.4, 99.7)	100.0 -	100.0 -	99.4 (98.5, 99.8)	97.8 (93.9, 99.2)
Rural	94.2 (88.6, 97.1)	100.0 -	94.6 (89.3, 97.3)	96.5 (76.8, 99.6)	- -	97.9 (95.8, 98.9)	84.5 (65.1, 94.1)	75.5 (46.6, 91.6)	90.4 (80.7, 95.4)	91.4 (83.6, 95.7)
Sulfadoxine Pyrimethamine										
Urban	39.2 (20.1, 62.3)	55.5 (27.5, 80.5)	41.0 (23.2, 61.6)	89.2 (81.5, 93.9)	97.1 (93.5, 98.7)	97.5 (95.3, 98.7)	98.1 (90.4, 99.6)	100.0 -	97.1 (95.1, 98.3)	89.9 (84.3, 93.7)
Rural	24.1 (16.4, 34.0)	59.8 (25.0, 86.9)	26.4 (19.0, 35.4)	34.4 (12.4, 66.0)	- -	89.8 (84.8, 93.2)	81.1 (62.2, 91.8)	59.2 (27.9, 84.5)	81.0 (72.4, 87.4)	67.3 (61.4, 72.7)
Oral Quinine										
Urban	58.5 (43.1, 72.3)	89.8 (73.3, 96.6)	61.9 (47.3, 74.6)	69.9 (53.3, 82.6)	81.6 (73.5, 87.6)	71.9 (63.1, 79.2)	66.5 (54.9, 76.4)	95.8 (68.6, 99.6)	71.2 (64.0, 77.5)	70.0 (64.4, 75.1)
Rural	57.4 (45.7, 68.4)	53.0 (21.8, 82.0)	57.2 (46.0, 67.7)	83.5 (59.6, 94.6)	- -	74.9 (66.7, 81.6)	60.4 (42.5, 75.8)	7.8 (1.0, 40.8)	62.5 (52.5, 71.5)	61.2 (52.6, 69.1)
Quinine IV/IM										
Urban	60.4 (33.5, 82.2)	82.8 (61.5, 93.5)	62.9 (37.2, 82.9)	82.6 (75.0, 88.2)	40.8 (24.3, 59.7)	23.7 (15.9, 33.8)	3.0 (0.7, 12.5)	5.1 (0.5, 36.2)	22.3 (15.8, 30.5)	27.5 (21.7, 34.1)
Rural	81.1 (71.2, 88.2)	82.7 (48.1, 96.1)	81.2 (71.5, 88.2)	63.3 (42.3, 80.3)	- -	22.1 (14.7, 31.7)	6.2 (2.5, 14.7)	11.1 (2.4, 38.8)	16.4 (11.7, 22.6)	32.7 (25.6, 40.8)
Other non-artemisinin therapy										
Urban	3.1 (0.7, 13.2)	18.7 (4.2, 55.0)	4.8 (1.6, 13.4)	14.5 (6.7, 28.6)	29.9 (21.9, 39.3)	39.4 (33.1, 46.1)	37.9 (23.1, 55.3)	39.9 (28.4, 52.7)	36.7 (29.1, 44.9)	32.6 (26.1, 39.8)
Rural	1.7 (0.4, 7.2)	7.2 (0.9, 40.3)	2.0 (0.6, 6.8)	9.3 (1.2, 45.7)	- -	41.9 (32.8, 51.6)	34.0 (19.9, 51.8)	24.1 (11.0, 44.9)	35.7 (27.1, 45.4)	27.2 (20.2, 35.6)
Oral artemisinin monotherapy										
Urban	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -

Table B2: Availability of antimalarials, among all outlets stocking at least one antimalarial, by outlet type, across urban/rural location

	Public Health Facility	Private Not For-Profit Facility	**ALL Public**	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**ALL Private**	**ALL Outlets**
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Proportion of outlets*stocking:	Urban N=151 Rural N=146	Urban N=28 Rural N=10	Urban N=179 Rural N=156	Urban N=155 Rural N=17	Urban N=361 Rural N=0	Urban N=880 Rural N=246	Urban N=65 Rural N=49	Urban N=8 Rural N=13	Urban N=1,469 Rural N=325	Urban N=1,648 Rural N=481
Rural	0.0 -	0.0 -	0.0 -	0.0 -	- -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -
Non-oral artemisinin monotherapy										
Urban	47.6 (25.4, 70.8)	45.4 (20.6, 72.7)	47.4 (26.8, 68.9)	50.8 (36.6, 65.0)	45.1 (32.7, 58.1)	3.2 (1.5, 7.0)	0.0 -	0.0 -	7.8 (5.3, 11.3)	12.9 (8.7, 18.5)
Rural	12.7 (7.3, 21.2)	9.9 (1.2, 49.1)	12.6 (7.4, 20.5)	22.0 (5.8, 56.6)	- -	1.0 (0.2, 4.5)	0.0 -	0.0 -	1.3 (0.5, 3.3)	4.1 (2.6, 6.6)
Injectable Artemether										
Urban	7.0 (2.5, 17.9)	43.6 (19.3, 71.4)	11.0 (5.5, 20.8)	50.4 (36.0, 64.6)	45.1 (32.7, 58.1)	3.2 (1.4, 7.0)	0.0 -	0.0 -	7.7 (5.2, 11.3)	8.1 (5.7, 11.4)
Rural	2.4 (0.8, 7.3)	9.9 (1.2, 49.1)	2.9 (1.1, 7.4)	18.9 (4.9, 51.0)	- -	1.0 (0.2, 4.5)	0.0 -	0.0 -	1.2 (0.5, 3.0)	1.6 (0.8, 3.1)
Injectable Artesunate										
Urban	44.8 (22.5, 69.4)	18.5 (4.0, 55.0)	41.9 (21.4, 65.7)	4.1 (1.8, 8.8)	8.2 (2.8, 22.0)	0.2 (0.0, 0.6)	0.0 -	0.0 -	0.8 (0.5, 1.3)	6.1 (2.8, 12.5)
Rural	10.3 (5.3, 19.2)	0.0 -	9.7 (5.0, 17.8)	3.2 (0.4, 20.2)	- -	0.0 -	0.0 -	0.0 -	0.1 (0.0, 0.9)	2.5 (1.3, 4.9)
Injectable Artemotil										
Urban	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -
Rural	0.0 -	0.0 -	0.0 -	0.0 -	- -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -
Any treatment for severe malaria										
Urban	84.4 (72.9, 91.6)	84.8 (62.9, 94.9)	84.4 (74.5, 91.0)	88.2 (80.7, 93.1)	58.2 (42.6, 72.4)	24.8 (17.1, 34.4)	3.0 (0.7, 12.5)	5.1 (0.5, 36.2)	24.2 (17.8, 32.0)	31.9 (23.7, 41.4)
Rural	83.1 (73.4, 89.8)	82.7 (48.1, 96.1)	83.1 (73.5, 89.7)	69.6 (46.6, 85.7)	- -	23.0 (15.6, 32.5)	6.2 (2.5, 14.7)	11.1 (2.4, 38.8)	17.1 (12.3, 23.4)	33.7 (26.4, 42.0)

* Antimalarial-stocking outlets have at least one antimalarial in stock on the day of the survey, verified by presence of at least one antimalarial recorded in the antimalarial audit sheet. The denominator includes urban and rural outlets that met screening criteria and completed full interviews. 29 outlets in the denominator had partial interviews.

Source: ACTwatch Outlet Survey, Tanzania, 2014.

Table B3: Antimalarial market composition, across urban/rural location

Outlet type, among outlets with at least 1 antimalarial in stock on the day of the survey:*	Public Health Facility	Private Not For-Profit Facility	**ALL Public**	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**ALL Private**
	%	%	%	%	%	%	%	%	%
Urban, N=371	7.7 (4.5, 13.1)	1.2 (0.5, 3.1)	9.0 (5.4, 14.6)	8.3 (4.8, 14.1)	3.7 (0.9, 14.1)	49.4 (34.9, 64.0)	27.3 (16.6, 41.5)	2.3 (0.8, 6.2)	91.0 (85.4, 94.6)
Rural, N=164	24.9 (18.4, 32.8)	2.0 (0.7, 5.7)	26.8 (20.4, 34.5)	1.8 (0.6, 5.9)	- -	30.0 (21.8, 39.6)	32.3 (21.6, 45.3)	9.0 (3.8, 20.1)	73.2 (65.5, 79.6)

* Excluding booster sample outlets. Outlets with at least one antimalarial in stock on the day of the survey, verified by presence of at least one antimalarial recorded in the antimalarial audit sheet.

Source: ACTwatch Outlet Survey, Tanzania, 2014.

Table B4a: Price of tablet formulation antimalarials, by outlet type, across urban/rural location

	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**ALL Private**
Median price of a tablet AETD*:	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)
Any ACT						
Urban	$2.36 [1.18-6.50] (484)	$4.73 [1.35-7.94] (2,032)	$1.18 [1.18-2.36] (2,253)	$1.58 [1.18-4.14] (154)	$1.77 [1.18-5.91] (20)	$1.42 [1.18-3.54] (4,943)
Rural	$1.18 [0.00-2.36] (37)	- -	$1.18 [1.18-1.77] (488)	$1.42 [1.18-1.58] (73)	$1.18 [0.83-1.42] (15)	$1.18 [1.18-1.65] (613)
Artemether Lumefantrine (AL)						
Urban	$1.48 [1.18-2.36] (324)	$1.65 [1.18-3.54] (1,143)	$1.18 [1.18-1.58] (1,888)	$1.18 [1.18-1.97] (123)	$1.58 [1.18-2.36] (15)	$1.18 [1.18-1.77] (3,493)
Rural	$1.18 [0.00-1.77] (33)	- -	$1.18 [1.18-1.65] (462)	$1.42 [1.18-1.58] (71)	$1.18 [0.83-1.42] (15)	$1.18 [1.18-1.58] (581)
Dihydroartemisinin Piperaquine (DHAPPQ)						
Urban	$6.50 [5.91-7.09] (84)	$5.91 [5.91-7.09] (421)	$5.91 [5.91-6.50] (189)	$6.50 [5.91-7.09] (21)	$8.86 [5.91-12.41] (3)	$5.91 [5.91-7.09] (718)
Rural	$5.91 [5.91-8.27] (3)	- -	$5.91 [5.91-5.91] (16)	- -	- -	$5.91 [5.91-5.91] (19)
Quality Assured ACT (QA ACT)						
Urban	$1.42 [1.18-2.36] (315)	$1.18 [1.18-2.36] (840)	$1.18 [1.18-1.58] (1,831)	$1.18 [1.18-1.77] (122)	$1.58 [1.18-2.36] (15)	$1.18 [1.18-1.77] (3,123)
Rural	$1.18 [0.00-2.36] (32)	- -	$1.18 [1.18-1.58] (449)	$1.42 [1.18-1.58] (73)	$1.18 [0.83-1.42] (15)	$1.18 [1.18-1.58] (569)
QA ACT AL						
Urban	$1.42 [1.18-2.36] (302)	$1.18 [1.18-2.36] (817)	$1.18 [1.18-1.58] (1,811)	$1.18 [1.18-1.77] (121)	$1.58 [1.18-2.36] (14)	$1.18 [1.18-1.77] (3,065)
Rural	$1.18 [0.00-2.36] (32)	- -	$1.18 [1.18-1.58] (447)	$1.42 [1.18-1.58] (71)	$1.18 [0.83-1.42] (15)	$1.18 [1.18-1.58] (565)

Table B4a: Price of tablet formulation antimalarials, by outlet type, across urban/rural location

	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**ALL Private**
Median price of a tablet AETD*:	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)
Non-quality assured ACT (non-QA ACT)						
Urban	$7.09 [5.91-13.71] (169)	$6.75 [5.32-10.32] (1,192)	$6.35 [5.32-8.86] (422)	$6.50 [5.91-8.73] (32)	$7.94 [5.91-8.86] (5)	$6.79 [5.91-9.53] (1,820)
Rural	$5.91 [5.91-7.94] (5)	- -	$5.91 [1.48-7.09] (39)	- -	- -	$5.91 [1.48-7.09] (44)
Sulfadoxine-Pyrimethamine						
Urban	$1.18 [0.89-1.33] (269)	$0.89 [0.89-1.33] (1,224)	$0.89 [0.89-1.33] (2,586)	$0.89 [0.89-1.33] (190)	$0.89 [0.89-1.33] (24)	$0.89 [0.89-1.33] (4,293)
Rural	$0.89 [0.59-1.18] (14)	- -	$0.89 [0.89-1.06] (504)	$0.89 [0.59-0.89] (73)	$0.89 [0.53-1.33] (9)	$0.89 [0.59-0.89] (600)
Quinine						
Urban	$4.14 [2.48-4.96] (54)	$4.96 [4.47-5.38] (157)	$4.96 [3.72-4.96] (255)	$4.96 [2.89-14.89] (13)	$14.89 [4.96-14.89] (3)	$4.96 [2.95-4.96] (482)
Rural	$2.48 [1.77-3.72] (10)	- -	$3.72 [2.48-4.96] (61)	$4.96 [2.48-4.96] (5)	$4.96 (1)	$3.72 [2.48-4.96] (77)

* AETD - adult equivalent treatment dose - is or the number of milligrams required to treat a 60kg adult (see Annex 11). Information provided by the respondent about price for a specific amount of antimalarial drug (e.g. price per tablet or price per specific package size) was converted to the price per AETD.

Figures in this table are derived using audited products with price information. The numbers of antimalarials captured in audit sheets with missing price information are as follows:
47 any ACT tablets, 26 artemether lumefantrine tablets, 8 dihydroartemisinin piperaquine tablets, 25 QA ACT tablets, 23 QA ACT AL tablets,22 non-QA ACT tablets, 18 sulfadoxine pyrimethamine tablets, 10 quinine tablets.

Source: ACTwatch Outlet Survey, Tanzania, 2014.

Table B4b: Price of pre-packaged antimalarials, by outlet type, across urban/rural location

	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**ALL Private**
Median price of one pre-packaged therapy:	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)
Adult QA AL						
Urban	$1.18 [0.89-1.48] (101)	$1.18 [0.89-1.77] (344)	$1.18 [0.89-1.18] (620)	$1.18 [0.89-1.42] (43)	$0.89 [0.59-1.18] (5)	$1.18 [0.89-1.18] (1,113)
Rural	$0.59 [0.00-1.18] (9)	- -	$1.18 [0.89-1.18] (153)	$1.18 [0.89-1.42] (29)	$0.89 [0.59-1.42] (4)	$1.18 [0.89-1.42] (195)
Child QA AL*						
Urban	$0.59 [0.59-0.89] (67)	$0.59 [0.35-0.59] (197)	$0.59 [0.35-0.59] (452)	$0.59 [0.30-0.59] (34)	$0.59 [0.59-0.59] (4)	$0.59 [0.35-0.59] (754)
Rural	$0.59 [0.00-0.59] (11)	- -	$0.59 [0.30-0.59] (122)	$0.47 [0.35-0.59] (16)	$0.59 [0.30-0.59] (3)	$0.59 [0.30-0.59] (152)

*QA AL is the pre-packaged regimen appropriate for a child under age five.
Figures in this table are derived using audited products with price information. The numbers of antimalarials captured in audit sheets with missing price information are as follows:
8 adult QA AL, 3 child QA AL

Source: ACTwatch Outlet Survey, Tanzania, 2014.

Table B5: Availability of malaria blood testing among antimalarial-stocking outlets*, by outlet type, across urban/rural location

	Public Health Facility	Private Not For-Profit Facility	**ALL Public**	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**ALL Private**	**ALL Outlets**
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Proportion of outlets*stocking**	Urban N=151 Rural N=146	Urban N=28 Rural N=11	Urban N=179 Rural N=157	Urban N=155 Rural N=17	Urban N=357 Rural N=0	Urban N=880 Rural N=247	Urban N=67 Rural N=50	Urban N=8 Rural N=13	Urban N=1,467 Rural N=327	Urban N=1,646 Rural N=484
Any malaria blood testing										
Urban	93.6 (85.3, 97.3)	98.4 (89.2, 99.8)	94.1 (86.7, 97.5)	96.7 (91.1, 98.8)	10.8 (6.9, 16.6)	5.0 (2.8, 8.9)	0.0 -	0.0 -	10.4 (8.1, 13.4)	21.1 (17.1, 25.9)
Rural	86.6 (78.5, 91.9)	100.0 -	87.5 (79.7, 92.6)	85.5 (62.2, 95.5)	- -	10.5 (5.2, 20.0)	8.6 (3.1, 21.6)	11.1 (2.4, 38.8)	12.7 (8.6, 18.4)	31.5 (26.0, 37.7)
Microscopic blood tests										
Urban	55.8 (46.4, 64.9)	73.8 (36.8, 93.1)	57.8 (48.6, 66.5)	91.0 (84.8, 94.9)	1.8 (0.6, 4.9)	0.4 (0.1, 1.3)	0.0 -	0.0 -	7.0 (5.4, 9.1)	13.5 (11.4, 16.0)
Rural	13.4 (7.3, 23.3)	74.6 (34.6, 94.2)	17.6 (11.1, 26.8)	63.2 (37.5, 83.1)	- -	0.5 (0.1, 2.1)	1.9 (0.2, 13.4)	0.0 -	3.4 (1.6, 7.0)	7.0 (4.4, 10.9)
Rapid diagnostic tests (mRDTs)										
Urban	65.3 (55.1, 74.3)	73.3 (49.3, 88.6)	66.2 (56.7, 74.6)	48.6 (36.9, 60.4)	9.4 (5.7, 15.0)	4.7 (2.6, 8.5)	0.0 -	0.0 -	6.7 (5.0, 8.9)	14.3 (11.3, 17.9)
Rural	81.6 (70.0, 89.4)	85.9 (54.6, 96.9)	81.9 (70.9, 89.3)	45.6 (26.2, 66.4)	- -	10.5 (5.2, 20.0)	6.7 (2.9, 14.9)	11.1 (2.4, 38.8)	10.5 (6.8, 15.7)	28.4 (22.9, 34.7)
Checkmark mRDTs										
Urban	0.2 (0.0, 1.4)	7.7 (2.4, 22.3)	1.0 (0.3, 2.9)	10.1 (6.1, 16.3)	5.4 (2.5, 11.3)	0.9 (0.2, 3.5)	0.0 -	0.0 -	1.5 (0.8, 2.8)	1.4 (0.8, 2.5)
Rural	1.0 (0.1, 6.3)	14.1 (1.9, 58.5)	1.9 (0.5, 7.1)	0.0 -	- -	0.8 (0.2, 3.6)	0.0 -	7.8 (1.0, 40.8)	1.2 (0.3, 4.9)	1.4 (0.5, 3.9)

* Blood testing availability is reported among outlets that either had antimalarials in stock on the day of the survey or reportedly stocked antimalarials in the previous 3 months.

*** Results in this table are derived using responses captured among outlets with blood testing information. There were 8 antimalarial-stocking outlet with missing information about both availability of microscopy and availability of mRDTs. 11 antimalarial-stocking outlets had partial information about blood testing availability and are included in the denominator of the indicator "any blood testing available."

Source: ACTwatch Outlet Survey, Tanzania, 2014.

Table B7: Price of malaria blood testing, by outlet type, across urban/rural location

	Private For-Profit Facility	Pharmacy	ADDO	**ALL Private**
Total median price to consumers:*	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)
Microscopic blood tests				
Adult				
Urban	$0.59 [0.59-0.59] (151)	$0.59 [0.59-1.18] (5)	$0.59 [0.30-0.89] (4)	$0.59 [0.59-0.59] (160)
Rural	$0.30 [0.30-0.59] (9)	- -	$0.30 (1)	$0.59 [0.30-0.59] (11)
Child under age five				
Urban	$0.59 [0.59-0.59] (151)	$0.59 [0.59-1.18] (5)	$0.59 [0.30-0.89] (4)	$0.59 [0.59-0.59] (160)
Rural	$0.30 [0.00-0.59] (9)	- -	$0.30 (1)	$0.59 [0.00-0.59] (11)
Rapid diagnostic tests (mRDTs)				
Adult				
Urban	$0.89 [0.59-1.18] (94)	$0.89 [0.89-0.89] (9)	$0.59 [0.59-1.18] (27)	$0.89 [0.59-1.18] (130)
Rural	$0.00 [0.00-0.59] (8)	- -	$0.89 [0.59-1.18] (26)	$0.59 [0.59-1.18] (41)
Child under five				
Urban	$0.89 [0.59-1.18] (93)	$0.89 [0.89-0.89] (8)	$0.59 [0.59-1.18] (27)	$0.89 [0.59-1.18] (128)
Rural	$0.00 [0.00-0.59] (8)	- -	$0.89 [0.59-1.18] (26)	$0.59 [0.30-0.89] (41)

* Total price to the consumer including consultation and/or service fees.

There were 2 outlets with missing or "don't know" Microscopic blood testing price information responses.

mRDT price information was not available (missing or "don't know" response) for: 49 adult mRDTs and 51 child mRDTs in median price to consumers and 2 adult mRDTs and 2 child mRDTs in median price excluding fees.

Source: ACTwatch Outlet Survey, Tanzania, 2014.

Table B8a: Antimalarial market share, urban

AETDs sold or distributed in the previous week by outlet type and antimalarial type as a percentage of all AETDs sold/ distributed:*	Public Health Facility	Private Not For-Profit Facility	**TOTAL Public**	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**TOTAL Private**	**ANTI-MALARIAL TOTAL*** **
	%	%	%	%	%	%	%	%	%	%
1. Any ACT	**7.5**	**1.1**	**8.5**	**4.2**	**3.8**	**19.1**	**5.7**	**0.4**	**33.2**	**41.7**
Artemether Lumefantrine (AL)$^{\Psi}$	7.5	0.7	8.1	3.4	2.3	18.8	5.1	0.3	30.0	38.1
Artesunate Sulfadoxine Pyrimethamine (ASSP)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DHAPPQ	0.0	0.1	0.1	0.5	1.0	0.2	0.5	0.1	2.3	2.4
Quality Assured ACT (QA ACT)	7.4	0.9	8.3	3.3	1.6	17.7	4.5	0.3	27.5	35.8
QA ACT with the 'green leaf' logo	0.2	0.4	0.5	2.0	0.7	13.4	4.0	0.2	20.2	20.8
QA ACT without the 'green leaf' logo	7.3	0.5	7.8	1.3	0.9	4.3	0.6	0.1	7.2	15.0
Non-quality-assured ACT	0.0	0.2	0.2	0.8	2.2	1.4	1.2	0.1	5.7	5.9
2. Any non-artemisinin therapy	**4.4**	**3.1**	**7.5**	**3.1**	**4.0**	**29.0**	**13.5**	**0.9**	**50.5**	**58.1**
Sulfadoxine-Pyrimethamine	3.8	0.4	4.2	2.7	4.0	27.1	13.0	0.8	47.6	51.9
Oral Quinine	0.4	2.7	3.1	0.1	0.0	1.1	0.2	0.0	1.4	4.5
Quinine IV/IM	0.2	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.2	0.4
3. Oral artemisinin monotherapy	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
4. Non-oral artemisinin monotherapy	**0.0**	**0.0**	**0.0**	**0.2**	**0.0**	**0.0**	**0.0**	**0.0**	**0.2**	**0.3**
Injectable artesunate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Injectable artemether	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.2	0.2
Injectable artemotil	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5. Any treatment for severe malaria	0.2	0.0	0.2	0.4	0.0	0.0	0.0	0.0	0.5	0.7
OUTLET TYPE TOTAL** **	**11.9**	**4.2**	**16.1**	**7.5**	**7.8**	**48.1**	**19.2**	**1.2**	**83.9**	**100.0**

* A total of 13071 AETDs were reportedly sold or distributed in the previous seven days. See Annex 11 for a description of AETD calculation and Annex 12 for AETD numbers by outlet type and drug category.

*** Row sum – market share for the specified antimalarial medicine.

**** Column sum – market share for the specified outlet type.

Categories 1 through 4 sum to 100% in the far-right column – antimalarial total column.

A total of 2679 antimalarials were audited. Of these, 167 audited antimalarials were not included in market share calculations due to incomplete or inconsistent information.

Source: ACTwatch Outlet Survey, Tanzania, 2014.

Table B8b: Antimalarial market share, rural

AETDs sold or distributed in the previous week by outlet type and antimalarial type as a percentage of all AETDs sold/ distributed:*	Public Health Facility	Private Not For-Profit Facility	**TOTAL Public**	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**TOTAL Private**	**ANTI-MALARIAL TOTAL*** **
	%	%	%	%	%	%	%	%	%	%
1. Any ACT	**26.0**	**1.2**	**27.2**	**0.4**	**0.0**	**17.6**	**9.3**	**1.1**	**28.4**	**55.6**
Artemether Lumefantrine (AL) Ψ	26.0	1.2	27.2	0.4	0.0	17.5	9.3	1.1	28.3	55.5
Artesunate Sulfadoxine Pyrimethamine (ASSP)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DHAPPQ	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1
Quality Assured ACT (QA ACT)	25.8	1.2	27.0	0.4	0.0	17.3	9.3	1.1	28.2	55.1
QA ACT with the 'green leaf' logo	1.5	0.0	1.5	0.0	0.0	14.0	4.3	0.2	18.5	20.0
QA ACT without the 'green leaf' logo	24.3	1.2	25.5	0.4	0.0	3.3	5.0	0.9	9.6	35.1
Non-quality-assured ACT	0.2	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.2	0.4
2. Any non-artemisinin therapy	**17.8**	**3.4**	**21.2**	**0.4**	**0.0**	**13.4**	**9.0**	**0.4**	**23.2**	**44.4**
Sulfadoxine-Pyrimethamine	9.8	0.1	9.9	0.0	0.0	11.0	7.7	0.3	19.0	28.9
Oral Quinine	7.9	3.0	10.9	0.4	0.0	1.5	0.3	0.0	2.2	13.1
Quinine IV/IM	0.1	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.1	0.4
3. Oral artemisinin monotherapy	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
4. Non-oral artemisinin monotherapy	**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**
Injectable artesunate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Injectable artemether	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Injectable artemotil	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5. Any treatment for severe malaria	0.1	0.2	0.4	0.0	0.0	0.0	0.0	0.0	0.1	0.5
OUTLET TYPE TOTAL**	**43.8**	**4.6**	**48.4**	**0.8**	**0.0**	**31.0**	**18.3**	**1.6**	**51.6**	**100.0**

* A total of 5145 AETDs were reportedly sold or distributed in the previous seven days. See Annex 11 for a description of AETD calculation and Annex 12 for AETD numbers by outlet type and drug category.

*** Row sum – market share for the specified antimalarial medicine.

**** Column sum – market share for the specified outlet type.

Categories 1 through 4 sum to 100% in the far-right column – antimalarial total column.

A total of 872 antimalarials were audited. Of these, 73 audited antimalarials were not included in market share calculations due to incomplete or inconsistent information.

Source: ACTwatch Outlet Survey, Tanzania, 2014.

Table B9a: Antimalarial market share across outlets, urban

AETDs sold or distributed in the previous week by outlet type and antimalarial type as a percentage of all AETDs sold/ distributed:*	Public Health Facility	Private Not For-Profit Facility	**TOTAL Public / Not-For-Profit****	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**TOTAL Private**
	%	%	%	%	%	%	%	%	%
1. Any ACT	**62.8**	**25.6**	**53.0**	**55.7**	**48.5**	**39.7**	**29.8**	**29.9**	**39.5**
Artemether Lumefantrine (AL) Ψ	62.7	16.3	50.6	45.8	29.7	39.1	26.8	21.4	35.7
Artesunate Sulfadoxine Pyrimethamine (ASSP)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DHAPPQ	0.0	3.3	0.9	6.3	12.8	0.4	2.7	7.3	2.7
Quality Assured ACT (QA ACT)	62.5	21.8	51.8	44.4	20.9	36.8	23.5	22.6	32.8
QA ACT with the 'green leaf' logo	1.3	9.4	3.4	26.2	8.9	27.9	20.7	13.3	24.1
QA ACT without the 'green leaf' logo	61.2	12.4	48.4	16.6	12.0	9.0	2.9	9.3	8.5
Non-quality-assured ACT	0.3	3.9	1.2	11.3	27.6	2.8	6.3	7.3	6.7
2. Any non-artemisinin therapy	**37.1**	**74.4**	**46.8**	**41.4**	**51.4**	**60.3**	**70.2**	**70.1**	**60.2**
Sulfadoxine-Pyrimethamine	32.3	9.4	26.3	35.8	50.7	56.3	67.8	68.4	56.8
Oral Quinine	3.4	63.7	19.2	1.7	0.4	2.3	0.9	0.7	1.7
Quinine IV/IM	1.5	0.6	1.2	2.7	0.0	0.1	0.0	0.2	0.3
3. Oral artemisinin monotherapy	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
4. Non-oral artemisinin monotherapy	**0.1**	**0.0**	**0.1**	**2.9**	**0.1**	**0.0**	**0.0**	**0.0**	**0.3**
Injectable artesunate	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Injectable artemether	0.0	0.0	0.0	2.9	0.1	0.0	0.0	0.0	0.3
Injectable artemotil	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5. Any treatment for severe malaria	1.6	0.6	1.3	5.6	0.1	0.1	0.0	0.2	0.6

* 13071 AETDs reportedly sold or distributed in the previous seven days: 1909 public health facilities; 910 private not-for profit facilities; 903 private-for-profit facilities; 584 pharmacies; 6945 ADDOs; 1647 DLDBs; 173 general retailers. See Annex 11 for a description of AETD calculation and Annex 12 for AETD numbers by outlet type and drug category.

Categories 1 through 4 sum to 100% within each column.

A total of 2679 antimalarials were audited. Of these, 167 audited antimalarials were not included in market share calculations due to incomplete or inconsistent information, including the following number of antimalarials by outlet type: 17 public health facilities; 3 private not for-profit facilities; 27 private for-profit facilities; 16 pharmacies; 67 ADDOs; 36 DLDBs; 1 general retailer.

Source: ACTwatch Outlet Survey, Tanzania, 2014.

Table B9b: Antimalarial market share across outlets, rural

AETDs sold or distributed in the previous week by outlet type and antimalarial type as a percentage of all AETDs sold/ distributed:*	Public Health Facility	Private Not For-Profit Facility	**TOTAL Public / Not-For-Profit****	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**TOTAL Private**
	%	%	%	%	%	%	%	%	%
1. Any ACT	**59.3**	**26.4**	**56.2**	**50.0**	**0.0**	**56.7**	**50.8**	**73.2**	**55.0**
Artemether Lumefantrine (AL) Ψ	59.3	26.4	56.2	50.0	0.0	56.4	50.7	73.2	54.8
Artesunate Sulfadoxine Pyrimethamine (ASSP)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DHAPPQ	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1
Quality Assured ACT (QA ACT)	58.8	26.4	55.7	50.0	0.0	56.0	50.8	73.2	54.6
QA ACT with the 'green leaf' logo	3.4	0.0	3.1	0.0	0.0	45.3	23.4	12.3	35.9
QA ACT without the 'green leaf' logo	55.4	26.4	52.7	50.0	0.0	10.7	27.4	60.9	18.7
Non-quality-assured ACT	0.5	0.0	0.4	0.0	0.0	0.8	0.0	0.0	0.5
2. Any non-artemisinin therapy	**40.7**	**72.7**	**43.7**	**50.0**	**0.0**	**43.3**	**49.2**	**26.8**	**45.0**
Sulfadoxine-Pyrimethamine	22.3	3.0	20.4	0.0	0.0	35.4	42.1	20.9	36.8
Oral Quinine	18.0	65.5	22.5	45.1	0.0	5.0	1.5	0.0	4.2
Quinine IV/IM	0.3	4.2	0.7	4.9	0.0	0.1	0.1	0.4	0.2
3. Oral artemisinin monotherapy	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
4. Non-oral artemisinin monotherapy	**0.0**	**0.9**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Injectable artesunate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Injectable artemether	0.0	0.9	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Injectable artemotil	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5. Any treatment for severe malaria	0.3	5.1	0.8	4.9	0.0	0.1	0.1	0.4	0.2

* 5145 AETDs reportedly sold or distributed in the previous seven days: 2416 public health facilities; 186 private not for-profit facilities; 40 private for-profit facilities; 0 pharmacies; 1620 ADDOs; 817 DLDBs; 66 general retailers. See Annex 11 for a description of AETD calculation and Annex 12 for AETD numbers by outlet type and drug category.

Categories 1 through 4 sum to 100% within each column.

A total of 872 antimalarials were audited. Of these, 73 audited antimalarials were not included in market share calculations due to incomplete or inconsistent information, including the following number of antimalarials by outlet type: 20 public health facilities; 25 ADDOs; 25 DLDBs; 3 general retailers.

Source: ACTwatch Outlet Survey, Tanzania, 2014.

Table B12: Provider case management knowledge and practices, by outlet type, across urban/rural location

	Public Health Facility	Private Not For-Profit Facility	**ALL Public**	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**ALL Private**	**ALL Outlets**
Proportion of providers who:	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Would refer a 2 year old child with symptoms of severe malaria to a health facility	-	-	-	-	Urban N=355 Rural N=0	Urban N=879 Rural N=246	Urban N=67 Rural N=50	Urban N=8 Rural N=13	Urban N=1,309 Rural N=309	Urban N=1,309 Rural N=309
Yes, would refer to health facility										
Urban	NA	NA	NA	NA	92.6 (85.4, 96.4)	94.1 (90.3, 96.4)	90.0 (84.3, 93.8)	95.8 (68.6, 99.6)	92.7 (89.1, 95.2)	92.7 (89.1, 95.2)
Rural	NA	NA	NA	NA	- -	89.5 (83.5, 93.5)	90.4 (75.0, 96.7)	68.5 (50.8, 82.0)	87.5 (78.6, 93.1)	87.5 (78.6, 93.1)
Would recommend that a client with a negative malaria blood test take an antimalarial	Urban N=149 Rural N=146	Urban N=28 Rural N=11	Urban N=177 Rural N=157	Urban N=151 Rural N=16	Urban N=220 Rural N=0	Urban N=643 Rural N=194	Urban N=45 Rural N=40	Urban N=6 Rural N=8	Urban N=1,065 Rural N=258	Urban N=1,242 Rural N=415
Yes – sometimes										
Urban	45.5 (34.6, 57.0)	52.7 (26.3, 77.7)	46.3 (36.7, 56.2)	69.2 (57.7, 78.7)	20.9 (13.8, 30.4)	29.6 (23.2, 36.9)	7.7 (2.9, 18.9)	22.8 (4.3, 65.7)	26.7 (21.7, 32.3)	29.9 (24.1, 36.3)
Rural	34.9 (25.7, 45.4)	29.2 (8.0, 66.4)	34.5 (25.4, 45.0)	36.9 (18.2, 60.6)	- -	23.4 (18.3, 29.5)	27.5 (14.7, 45.5)	23.8 (3.2, 74.6)	25.7 (19.9, 32.6)	28.4 (22.9, 34.6)
Yes – always										
Urban	1.3 (0.3, 5.4)	0.0 -	1.2 (0.3, 4.8)	2.0 (0.7, 5.1)	2.1 (0.6, 7.0)	1.3 (0.6, 2.9)	0.0 -	0.0 -	1.0 (0.5, 2.0)	1.0 (0.5, 2.2)
Rural	2.7 (0.8, 8.3)	0.0 -	2.5 (0.8, 7.7)	0.0 -	- -	1.1 (0.2, 4.8)	2.5 (0.3, 16.4)	0.0 -	1.5 (0.4, 6.0)	1.8 (0.6, 5.6)
Circumstances cited for recommending antimalarial treatment to a client who tested negative for malaria:*	Urban N=63 Rural N=57	Urban N=13 Rural N=3	Urban N=76 Rural N=60	Urban N=92 Rural N=6	Urban N=46 Rural N=0	Urban N=179 Rural N=48	Urban N=5 Rural N=13	Urban N=1 Rural N=2	Urban N=323 Rural N=69	Urban N=399 Rural N=129
Patient has signs and symptoms of malaria.										
Urban	99.3 (96.7, 99.8)	100.0 -	99.4 (97.1, 99.9)	98.9 (95.5, 99.8)	97.9 (92.8, 99.4)	96.4 (91.9, 98.4)	100.0 -	100.0 -	97.5 (95.0, 98.7)	97.9 (95.9, 99.0)

Table B12: Provider case management knowledge and practices, by outlet type, across urban/rural location

	Public Health Facility	Private Not For-Profit Facility	**ALL Public**	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**ALL Private**	**ALL Outlets**
Proportion of providers who:	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Rural	98.9 (92.6, 99.8)	100.0 -	98.9 (92.9, 99.8)	100.0 -	- -	97.4 (83.7, 99.6)	100.0 -	100.0 -	98.9 (92.6, 99.8)	98.9 (95.8, 99.7)
Provider doesn't trust the test results.										
Urban	35.5 (12.4, 68.2)	27.6 (4.3, 76.2)	34.5 (13.3, 64.4)	15.0 (5.4, 35.5)	13.6 (3.8, 38.7)	7.8 (3.6, 16.1)	5.6 (0.6, 35.3)	- -	9.4 (4.7, 18.1)	15.7 (8.3, 27.8)
Rural	19.0 (10.4, 32.2)	- -	18.0 (9.7, 30.9)	- -	- -	11.1 (4.9, 23.3)	33.1 (13.3, 61.6)	- -	19.2 (9.4, 35.2)	18.7 (11.6, 28.8)
When the patient is a child.										
Urban	3.6 (1.2, 10.1)	- -	3.2 (1.1, 8.8)	3.6 (1.0, 11.9)	0.8 (0.1, 4.6)	1.9 (0.4, 8.2)	- -	- -	2.1 (0.8, 5.4)	2.4 (1.1, 4.9)
Rural	14.0 (5.6, 30.7)	- -	13.2 (5.2, 29.6)	- -	- -	3.2 (0.4, 21.0)	- -	- -	1.3 (0.2, 10.0)	5.7 (2.5, 12.8)
Other (all other reasons)										
Urban	9.0 (3.2, 22.6)	5.6 (1.1, 23.9)	8.6 (3.3, 20.4)	6.3 (2.9, 13.1)	7.1 (2.8, 17.3)	8.4 (4.1, 16.5)	52.4 (9.9, 91.7)	- -	11.1 (4.4, 25.1)	10.4 (4.8, 21.4)
Rural	23.0 (10.9, 42.0)	15.0 (1.3, 69.7)	22.5 (10.8, 41.2)	- -	- -	10.6 (4.3, 23.6)	5.6 (0.8, 31.1)	- -	7.0 (2.9, 15.9)	12.7 (6.7, 22.8)

Provider questions were administered to one staff member working in each outlet eligible for a full interview (current/recent antimalarial-stocking outlets or outlets providing malaria blood testing).
* No providers were missing information on circumstances for recommending antimalarials to clients who tested negative for malaria.

Source: ACTwatch Outlet Survey, Tanzania, 2014.

Table B13: Provider antimalarial treatment knowledge and practices, by outlet type, across urban/rural location

	Public Health Facility	Private Not For-Profit Facility	**ALL Public**	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**ALL Private**	**ALL Outlets**
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Proportion of providers who:	Urban N=151 Rural N=146	Urban N=28 Rural N=11	Urban N=179 Rural N=157	Urban N=155 Rural N=17	Urban N=361 Rural N=0	Urban N=882 Rural N=247	Urban N=67 Rural N=50	Urban N=9 Rural N=14	Urban N=1,474 Rural N=328	Urban N=1,653 Rural N=485
Correctly state the national first-line treatment$^{\Psi}$ for uncomplicated malaria										
Urban	93.2 (75.5, 98.4)	98.6 (91.1, 99.8)	93.8 (77.6, 98.5)	98.7 (95.2, 99.7)	91.0 (85.0, 94.7)	90.0 (82.6, 94.5)	91.0 (68.2, 97.9)	66.0 (23.9, 92.3)	90.4 (82.8, 94.9)	90.8 (84.9, 94.6)
Rural	99.0 (96.3, 99.7)	100.0 -	99.0 (96.5, 99.7)	100.0 -	- -	95.9 (93.1, 97.6)	79.7 (67.5, 88.1)	56.3 (29.7, 79.7)	85.6 (80.0, 89.9)	89.0 (84.3, 92.4)
Correctly state the first-line dosing regimen for an adult										
Urban	91.7 (75.9, 97.5)	98.6 (91.1, 99.8)	92.4 (78.0, 97.7)	95.1 (90.1, 97.6)	82.2 (76.1, 87.0)	88.1 (80.9, 92.9)	85.6 (66.3, 94.7)	66.0 (23.9, 92.3)	87.0 (80.4, 91.6)	87.7 (81.9, 91.9)
Rural	95.5 (89.2, 98.2)	100.0 -	95.8 (89.8, 98.4)	100.0 -	- -	93.8 (90.2, 96.1)	79.7 (67.5, 88.1)	42.6 (23.1, 64.8)	83.2 (76.4, 88.3)	86.4 (80.7, 90.6)
Correctly state the first-line dosing regimen for a child										
Urban	88.6 (74.4, 95.4)	96.5 (87.4, 99.1)	89.5 (76.7, 95.7)	86.3 (76.8, 92.4)	69.1 (55.6, 80.0)	83.6 (75.2, 89.5)	73.9 (62.6, 82.7)	39.9 (28.4, 52.7)	79.1 (71.8, 84.9)	80.4 (73.7, 85.7)
Rural	94.2 (86.7, 97.6)	100.0 -	94.6 (87.5, 97.8)	87.7 (62.1, 96.9)	- -	89.0 (82.6, 93.2)	75.6 (60.8, 86.1)	42.6 (23.1, 64.8)	78.9 (71.6, 84.7)	82.8 (77.0, 87.4)
Report an ACT as the most effective antimalarial medicine for an adult										
Urban	99.0 (96.8, 99.7)	79.3 (37.1, 96.1)	96.9 (88.8, 99.2)	87.9 (80.2, 92.8)	87.9 (83.4, 91.3)	77.5 (66.1, 85.9)	62.7 (46.6, 76.4)	84.4 (51.9, 96.5)	74.5 (64.4, 82.4)	77.3 (68.2, 84.5)
Rural	97.8 (92.6, 99.4)	100.0 -	98.0 (93.1, 99.4)	90.0 (62.7, 98.0)	- -	80.6 (75.4, 84.9)	77.7 (63.4, 87.5)	77.1 (44.7, 93.4)	79.6 (73.0, 84.9)	84.3 (79.1, 88.4)

Table B13: Provider antimalarial treatment knowledge and practices, by outlet type, across urban/rural location

	Public Health Facility	Private Not For-Profit Facility	**ALL Public**	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**ALL Private**	**ALL Outlets**
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Report an ACT as the most effective antimalarial medicine for a child										
Urban	97.7 (94.2, 99.1)	87.5 (60.5, 97.0)	96.6 (92.7, 98.5)	85.0 (77.2, 90.4)	83.5 (77.8, 87.9)	84.0 (76.3, 89.5)	60.1 (43.0, 75.0)	84.4 (51.9, 96.5)	76.8 (67.0, 84.4)	79.4 (70.4, 86.2)
Rural	96.1 (90.8, 98.4)	91.2 (54.6, 98.9)	95.8 (90.9, 98.1)	83.7 (49.9, 96.4)	- -	88.4 (82.2, 92.6)	88.0 (77.6, 93.9)	77.1 (44.7, 93.4)	87.1 (81.9, 91.0)	89.3 (85.2, 92.4)
Report an ACT as the antimalarial he/she most commonly recommends for adults										
Urban	97.8 (94.7, 99.1)	81.4 (35.7, 97.2)	96.0 (88.6, 98.7)	85.1 (78.5, 89.9)	90.7 (85.9, 94.0)	77.3 (65.9, 85.7)	61.3 (46.5, 74.3)	68.9 (23.4, 94.1)	73.5 (63.2, 81.8)	76.4 (66.9, 83.8)
Rural	96.4 (90.7, 98.6)	100.0 -	96.6 (91.3, 98.7)	86.2 (59.4, 96.4)	- -	78.0 (72.5, 82.6)	76.2 (58.9, 87.7)	74.8 (40.4, 92.9)	77.4 (68.5, 84.3)	82.3 (75.3, 87.7)
Report an ACT as the antimalarial he/she most commonly recommends for children										
Urban	96.4 (92.2, 98.4)	91.3 (57.4, 98.8)	95.8 (91.8, 97.9)	85.8 (78.9, 90.7)	84.5 (79.3, 88.5)	81.0 (69.3, 89.0)	57.9 (39.3, 74.6)	47.0 (33.0, 61.6)	73.8 (62.5, 82.6)	76.6 (66.5, 84.4)
Rural	93.5 (87.0, 96.9)	85.9 (41.5, 98.1)	93.0 (86.1, 96.6)	79.9 (47.3, 94.6)	- -	89.8 (84.8, 93.2)	86.1 (75.6, 92.5)	74.8 (40.4, 92.9)	86.8 (81.2, 90.9)	88.4 (83.8, 91.8)

Numbers of providers (N) in this table are the total number of providers eligible for table indicators.

Source: ACTwatch Outlet Survey, Tanzania, 2014.

Results Section C: Core Indicators by Type of Public Health Facility

Table C1: Availability of antimalarials, among screened outlets, by type of public health facility

	District Hospital	Public Health Center	Public Dispensary	**ALL Public Health Facilities*** **
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Proportion of outlets*stocking:	N=15	N=42	N=231	N=298
Any antimalarial at the time of survey visit	100.0 -	100.0 -	99.5 (96.4, 99.9)	99.6 (97.0, 99.9)
Any ACT	100.0 -	98.6 (89.2, 99.8)	97.9 (93.6, 99.3)	98.1 (94.7, 99.3)
Artemether Lumefantrine (AL)	100.0 -	98.6 (89.2, 99.8)	97.9 (93.6, 99.3)	98.1 (94.7, 99.3)
Quality Assured ACT (QA ACT)	100.0 -	98.6 (89.2, 99.8)	97.9 (93.6, 99.3)	98.1 (94.7, 99.3)
QA ACT AL	100.0 -	98.6 (89.2, 99.8)	97.9 (93.6, 99.3)	98.1 (94.7, 99.3)
QA ACT with the 'green leaf' logo	8.0 (1.1, 41.4)	11.1 (3.6, 29.7)	6.2 (3.0, 12.2)	8.2 (4.3, 15.2)
QA ACT without the 'green leaf' logo	100.0 -	98.6 (89.2, 99.8)	97.5 (93.4, 99.0)	96.9 (93.1, 98.6)
Non-quality-assured ACT (non-QA ACT)	21.9 (7.1, 50.8)	4.6 (1.1, 16.5)	4.8 (2.4, 9.2)	5.7 (3.3, 9.7)
Any non-artemisinin therapy	100.0 -	76.1 (29.7, 96.0)	93.8 (89.0, 96.6)	90.6 (80.9, 95.7)
Sulfadoxine-Pyrimethamine	33.3 (12.8, 63.0)	26.4 (11.5, 49.9)	28.6 (19.1, 40.4)	29.4 (19.7, 41.4)
Any treatment for severe malaria	100.0 -	95.1 (76.4, 99.2)	81.0 (72.0, 87.6)	83.3 (75.6, 88.8)

***Includes 3 regional referral hospitals and 7 parastatal health institutions

Table C2: Availability of antimalarials, among outlets stocking at least one antimalarial, by type of public health facility

	District Hospital	Public Health Center	Public Dispensary	**ALL Public Health Facilities*** **
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Proportion of outlets*stocking:	N=15	N=42	N=230	N=297
Any ACT	100.0 -	98.6 (89.2, 99.8)	98.4 (93.8, 99.6)	98.5 (95.0, 99.5)
Artemether Lumefantrine (AL)	100.0 -	98.6 (89.2, 99.8)	98.4 (93.8, 99.6)	98.5 (95.0, 99.5)
Quality Assured ACT (QA ACT)	100.0 -	98.6 (89.2, 99.8)	98.4 (93.8, 99.6)	98.5 (95.0, 99.5)
QA ACT AL	100.0 -	98.6 (89.2, 99.8)	98.4 (93.8, 99.6)	98.5 (95.0, 99.5)
QA ACT with the 'green leaf' logo	8.0 (1.1, 41.4)	11.1 (3.6, 29.7)	6.2 (3.0, 12.2)	8.3 (4.3, 15.2)
QA ACT without the 'green leaf' logo	100.0 -	98.6 (89.2, 99.8)	98.0 (93.8, 99.3)	97.3 (93.5, 98.9)
Non-quality-assured ACT (non-QA ACT)	21.9 (7.1, 50.8)	4.6 (1.1, 16.5)	4.8 (2.5, 9.2)	5.7 (3.3, 9.8)
Any non-artemisinin therapy	100.0 -	76.1 (29.7, 96.0)	94.3 (90.1, 96.8)	91.0 (81.2, 95.9)
Sulfadoxine-Pyrimethamine	33.3 (12.8, 63.0)	26.4 (11.5, 49.9)	28.8 (19.3, 40.6)	29.5 (19.8, 41.5)
Any treatment for severe malaria	100.0 -	95.1 (76.4, 99.2)	81.4 (72.4, 87.9)	83.6 (76.0, 89.1)

***Includes 3 regional referral hospitals and 7 parastatal health institutions

Table C5: Availability of malaria blood testing among antimalarial-stocking outlets*, by type of public health facility

	District Hospital	Public Health Center	Public Dispensary	**ALL Public Health Facilities*** **
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Proportion of outlets that stocked:**	N=15	N=42	N=230	N=297
Any malaria blood testing	100.0 -	94.9 (82.0, 98.7)	87.3 (79.7, 92.3)	89.1 (82.5, 93.4)
	N=15	N=42	N=230	N=297
Microscopic blood tests	95.9 (74.2, 99.5)	86.1 (67.5, 94.8)	13.3 (7.6, 22.3)	28.4 (20.6, 37.9)
	N=15	N=42	N=230	N=297
Rapid diagnostic tests (mRDTs)	82.2 (36.5, 97.4)	40.8 (19.7, 65.9)	81.7 (71.2, 88.9)	75.8 (66.4, 83.3)
Checkmark mRDTs	0.0 -	2.4 (0.3, 17.0)	0.4 (0.1, 2.9)	0.7 (0.1, 4.6)

* Blood testing availability is reported among outlets that either had antimalarials in stock on the day of the survey or reportedly stocked antimalarials in the previous 3 months.

** Results in this table are derived using responses captured among outlets with blood testing information. There were no antimalarial-stocking outlet with missing information about both availability of microscopy and availability of mRDTs, and no antimalarial-stocking outlets had partial information about blood testing availability.

***Includes 3 regional referral hospitals and 7 parastatal health institutions

Source: ACTwatch Outlet Survey, Tanzania, 2014.

Table C12: Provider antimalarial treatment knowledge and practices, by type of public health facility

	District Hospital	Public Health Center	Public Dispensary	**ALL Public Health Facilities*** **
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Proportion of providers who:	N=15	N=42	N=230	N=297
Correctly state the national first-line treatment[Ψ] for uncomplicated malaria	90.1 (59.9, 98.2)	88.6 (49.8, 98.4)	98.6 (96.8, 99.4)	96.9 (90.6, 99.0)
Correctly state the first-line dosing regimen for:				
An adult	87.0 (59.1, 96.9)	88.6 (49.8, 98.4)	95.4 (89.8, 98.0)	94.2 (87.8, 97.3)
A two-year old child	84.9 (56.1, 96.1)	83.8 (52.0, 96.1)	93.9 (87.7, 97.1)	92.2 (85.8, 95.9)
Report an ACT as the most effective antimalarial medicine for				
Adults	94.8 (69.4, 99.3)	99.0 (93.0, 99.9)	98.1 (94.0, 99.4)	98.2 (94.9, 99.4)
Children	89.2 (63.3, 97.5)	92.8 (76.5, 98.1)	97.5 (93.6, 99.0)	96.7 (93.3, 98.4)
Report an ACT as the antimalarial he/she most commonly recommends for:				
Adults	94.8 (69.4, 99.3)	97.3 (91.0, 99.2)	96.7 (92.1, 98.7)	96.9 (93.2, 98.6)
Children	86.8 (57.0, 97.0)	95.1 (86.8, 98.3)	94.4 (88.8, 97.3)	94.5 (90.2, 97.0)

[Ψ] At the time of the 2014 Tanzania ACTwatch outlet survey, artemether lumefantrine was Tanzania's first line treatment for uncomplicated malaria.

***Includes 3 regional referral hospitals and 7 parastatal health institutions

Numbers of providers (N) in this table are the total number of providers eligible for table indicators. There were no providers with missing information.

Source: ACTwatch Outlet Survey, Tanzania, 2014.

Results Section D: Core Indicators across Survey Round: 2010, 2011, 2014

Table D1: Availability of antimalarials, among all screened outlets, by outlet type, across survey round

	Public Health Facility	**ALL Public****	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**ALL Private**	**ALL Outlets**
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Proportion of outlets*stocking:	2010 N=73 2011 N=59 2014 N=298	2010 N=105 2011 N=68 2014 N=337	2010 N=13 2011 N=26 2014 N=194	2010 N=261 2011 N=313 2014 N=364	2010 N=36 2011 N=56 2014 N=1,133	2010 N=227 2011 N=318 2014 N=1,250	2010 N=2,478 2011 N=2,921 2014 N=2,579	2010 N=3,015 2011 N=3,634 2014 N=4,387	2010 N=3,120 2011 N=3,702 2014 N=4,724
Any antimalarial at the time of survey visit									
2010	85.4 (75.0, 91.9)	83.1 (72.6, 90.1)	65.7 (27.3, 90.7)	88.7 (76.2, 95.1)	94.9 (83.9, 98.5)	88.4 (83.1, 92.2)	3.1 (1.6, 5.8)	10.7 (8.1, 13.9)	13.2 (10.0, 17.2)
2011	93.4 (83.0, 97.6)	92.2 (82.9, 96.7)	100.0 -	99.7 (98.0, 100.0)	100.0 -	99.0 (95.9, 99.8)	0.9 (0.2, 3.1)	11.5 (9.8, 13.6)	14.0 (12.2, 16.1)
2014	99.6 (97.0, 99.9)	99.1 (96.4, 99.8)	88.5 (78.5, 94.1)	99.4 (97.1, 99.9)	99.3 (97.5, 99.8)	98.4 (93.7, 99.6)	1.0 (0.5, 2.1)	14.7 (12.2, 17.6)	17.5 (14.4, 21.0)
Any ACT									
2010	62.5 (46.9, 75.9)	58.5 (47.2, 69.0)	31.7 (14.1, 56.9)	85.1 (71.7, 92.8)	36.0 (17.1, 60.7)	18.7 (11.4, 29.2)	0.1 (0.0, 0.5)	2.3 (1.7, 3.0)	4.2 (3.4, 5.2)
2011	76.1 (60.3, 86.9)	75.4 (60.7, 85.9)	80.7 (61.7, 91.5)	98.7 (94.6, 99.7)	66.6 (47.7, 81.3)	73.1 (63.8, 80.8)	0.2 (0.1, 0.5)	8.1 (6.5, 10.2)	10.2 (8.5, 12.1)
2014	98.1 (94.7, 99.3)	97.0 (94.0, 98.6)	80.9 (69.6, 88.7)	98.2 (94.1, 99.5)	87.8 (83.5, 91.1)	80.6 (68.4, 88.9)	0.6 (0.3, 1.4)	12.5 (10.3, 15.0)	15.3 (12.6, 18.4)
Artemether Lumefantrine (AL)									
2010	61.6 (45.9, 75.3)	55.8 (43.6, 67.3)	17.9 (7.2, 37.9)	74.6 (65.3, 82.1)	11.1 (4.3, 25.7)	7.4 (4.0, 13.2)	0.1 (0.0, 0.5)	1.1 (0.6, 2.0)	3.0 (2.0, 4.5)
2011	76.1 (60.3, 86.9)	75.4 (60.7, 85.9)	71.0 (43.3, 88.7)	93.8 (85.3, 97.5)	66.6 (47.7, 81.3)	70.2 (60.0, 78.7)	0.2 (0.1, 0.5)	7.8 (6.1, 9.9)	9.9 (8.1, 11.9)
2014	98.1 (94.7, 99.3)	97.0 (94.0, 98.6)	79.3 (68.4, 87.1)	97.1 (93.7, 98.7)	87.3 (82.9, 90.6)	78.2 (64.6, 87.6)	0.6 (0.3, 1.3)	12.3 (10.1, 14.8)	15.1 (12.4, 18.2)
Quality Assured ACT (QA ACT)									
2010	61.6 (45.9, 75.3)	55.3 (43.1, 66.8)	17.9 (7.2, 37.9)	57.2 (50.6, 63.6)	9.0 (3.7, 20.7)	8.6 (5.6, 13.0)	0.1 (0.0, 0.5)	1.1 (0.7, 1.7)	3.0 (2.1, 4.2)
2011	76.1 (60.3, 86.9)	75.4 (60.7, 85.9)	71.0 (43.3, 88.7)	92.9 (84.8, 96.9)	64.3 (45.4, 79.7)	69.1 (59.4, 77.3)	0.2 (0.1, 0.5)	7.7 (6.0, 9.7)	9.7 (8.1, 11.7)
2014	98.1 (94.7, 99.3)	96.9 (93.9, 98.5)	78.5 (67.7, 86.5)	90.3 (84.6, 94.0)	86.3 (81.4, 90.0)	78.2 (64.6, 87.6)	0.6 (0.3, 1.4)	12.2 (10.1, 14.7)	15.0 (12.3, 18.1)

Table D1: Availability of antimalarials, among all screened outlets, by outlet type, across survey round									
	Public Health Facility	**ALL Public****	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**ALL Private**	**ALL Outlets**
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
QA ACT with the 'green leaf' logo									
2010	0.0 -	0.0 -	0.0 -	1.3 (0.3, 5.2)	2.1 (0.4, 11.0)	0.0 -	0.0 -	0.0 (0.0, 0.1)	0.0 (0.0, 0.1)
2011	51.0 (35.4, 66.4)	50.1 (35.4, 64.7)	54.6 (28.1, 78.8)	90.6 (82.4, 95.2)	64.3 (45.4, 79.7)	67.3 (57.2, 76.0)	0.1 (0.0, 0.2)	7.3 (5.7, 9.4)	8.6 (6.9, 10.6)
2014	8.2 (4.3, 15.2)	11.4 (7.0, 18.1)	53.9 (40.7, 66.6)	82.0 (73.3, 88.2)	71.4 (63.8, 78.0)	59.9 (46.0, 72.3)	0.5 (0.2, 1.2)	9.7 (8.0, 11.8)	9.8 (8.1, 11.9)
QA ACT without the 'green leaf' logo									
2010	61.6 (45.9, 75.3)	55.3 (43.1, 66.8)	17.9 (7.2, 37.9)	56.0 (48.8, 62.9)	7.0 (2.8, 16.5)	8.6 (5.6, 13.0)	0.1 (0.0, 0.5)	1.1 (0.7, 1.7)	2.9 (2.1, 4.2)
2011	60.0 (44.7, 73.6)	58.5 (44.1, 71.5)	24.2 (6.7, 58.7)	40.3 (32.9, 48.1)	6.7 (1.6, 24.7)	7.7 (4.6, 12.5)	0.1 (0.0, 0.5)	1.1 (0.8, 1.7)	2.9 (2.2, 3.8)
2014	96.9 (93.1, 98.6)	92.6 (88.1, 95.4)	31.9 (19.9, 46.9)	28.5 (21.7, 36.5)	31.2 (27.2, 35.4)	27.5 (17.8, 39.9)	0.2 (0.1, 0.8)	4.4 (3.3, 5.8)	7.3 (5.5, 9.5)
Non-quality-assured ACT									
2010	5.2 (2.2, 11.8)	10.0 (5.4, 17.7)	25.7 (9.5, 53.3)	85.1 (71.7, 92.8)	31.1 (13.0, 57.7)	13.2 (7.2, 22.9)	0.0 -	1.7 (1.2, 2.4)	2.0 (1.4, 2.7)
2011	5.1 (1.8, 13.6)	6.8 (3.0, 14.7)	47.6 (25.7, 70.4)	98.4 (94.3, 99.6)	18.3 (4.5, 51.8)	30.4 (19.1, 44.7)	0.0 (0.0, 0.2)	3.4 (2.2, 5.4)	3.5 (2.3, 5.5)
2014	5.7 (3.3, 9.7)	6.9 (4.0, 11.7)	38.1 (26.3, 51.4)	90.6 (82.6, 95.1)	17.2 (12.6, 23.2)	17.1 (7.7, 33.6)	0.1 (0.0, 0.7)	3.0 (2.0, 4.5)	3.1 (2.1, 4.6)
Any non-artemisinin therapy									
2010	82.5 (71.2, 90.0)	81.1 (70.7, 88.4)	59.6 (28.6, 84.5)	88.7 (76.2, 95.1)	94.9 (83.9, 98.5)	88.4 (83.1, 92.2)	3.0 (1.6, 5.6)	10.6 (8.1, 13.7)	13.0 (9.9, 16.9)
2011	69.7 (54.2, 81.8)	70.1 (55.4, 81.6)	100.0 -	99.2 (97.3, 99.8)	100.0 -	98.6 (95.7, 99.5)	0.8 (0.2, 3.2)	11.5 (9.8, 13.5)	13.3 (11.5, 15.3)
2014	90.6 (80.9, 95.7)	90.8 (82.0, 95.5)	87.6 (77.4, 93.6)	98.5 (94.2, 99.6)	97.9 (96.4, 98.8)	90.9 (79.2, 96.3)	0.8 (0.4, 1.7)	14.0 (11.7, 16.7)	16.5 (13.7, 19.8)
Sulfadoxine-Pyrimethamine									
2010	54.5 (38.5, 69.6)	55.0 (40.7, 68.5)	53.5 (26.0, 79.1)	87.0 (73.4, 94.2)	92.3 (82.1, 96.9)	81.9 (76.4, 86.3)	0.6 (0.2, 1.6)	7.8 (6.1, 9.9)	9.4 (7.5, 11.8)
2011	27.4 (17.3, 40.5)	26.9 (17.3, 39.3)	100.0 -	97.3 (94.0, 98.8)	93.1 (78.7, 98.0)	92.1 (87.3, 95.2)	0.1 (0.0, 0.3)	10.2 (8.5, 12.2)	10.7 (9.0, 12.6)
2014	29.4	31.5	65.0	96.5	93.8	88.2	0.7	13.2	13.8

Table D1: Availability of antimalarials, among all screened outlets, by outlet type, across survey round

	Public Health Facility	**ALL Public****	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**ALL Private**	**ALL Outlets**
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
	(19.7, 41.4)	(22.2, 42.5)	(48.4, 78.6)	(91.9, 98.6)	(90.9, 95.8)	(75.8, 94.7)	(0.3, 1.5)	(11.1, 15.7)	(11.7, 16.3)
Oral Quinine									
2010	44.8 (32.3, 58.0)	49.7 (37.7, 61.8)	31.8 (12.0, 61.3)	68.6 (56.1, 78.9)	69.6 (54.9, 81.2)	50.8 (44.3, 57.2)	0.3 (0.1, 1.3)	5.0 (3.8, 6.4)	6.5 (5.1, 8.3)
2011	43.7 (30.4, 57.9)	44.6 (31.7, 58.3)	81.4 (62.9, 91.9)	87.3 (81.6, 91.4)	81.9 (66.3, 91.2)	62.9 (53.7, 71.3)	0.0 (0.0, 0.1)	7.4 (5.9, 9.3)	8.6 (7.0, 10.4)
2014	57.6 (47.7, 66.9)	58.4 (49.0, 67.2)	65.3 (51.9, 76.6)	81.1 (72.5, 87.5)	72.5 (66.0, 78.2)	62.5 (51.1, 72.6)	0.3 (0.1, 0.8)	9.9 (8.0, 12.2)	11.5 (9.3, 14.1)
Oral artemisinin monotherapy									
2010	0.0 -	0.0 -	0.0 -	1.2 (0.4, 4.1)	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -
2011	0.0 -	0.0 -	0.0 -	0.4 (0.1, 1.8)	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -
2014	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -
Non-oral artemisinin monotherapy									
2010	1.0 (0.1, 7.2)	3.8 (1.1, 12.6)	5.8 (0.7, 33.5)	35.7 (24.3, 48.9)	0.0 -	0.0 -	0.0 -	0.2 (0.1, 0.4)	0.3 (0.1, 0.7)
2011	0.7 (0.1, 4.9)	3.0 (1.1, 8.1)	17.7 (6.0, 42.4)	38.2 (27.2, 50.7)	2.6 (0.4, 14.9)	0.7 (0.3, 1.8)	0.0 -	0.4 (0.2, 0.7)	0.4 (0.2, 0.8)
2014	25.0 (14.2, 40.2)	25.1 (14.5, 39.8)	37.7 (24.9, 52.4)	44.8 (32.3, 58.0)	2.3 (1.1, 4.7)	0.0 -	0.0 -	0.7 (0.5, 1.2)	1.5 (1.0, 2.3)
Any treatment for severe malaria									
2010	60.3 (46.9, 72.4)	60.3 (46.5, 72.6)	39.7 (19.8, 63.6)	54.9 (36.7, 71.8)	22.9 (13.3, 36.4)	4.1 (1.9, 8.5)	0.0 -	0.9 (0.5, 1.6)	2.9 (2.0, 4.1)
2011	53.4 (37.0, 69.0)	53.0 (37.6, 67.7)	63.8 (37.7, 83.7)	64.5 (53.6, 74.0)	45.6 (24.1, 69.0)	9.0 (5.2, 15.2)	0.1 (0.0, 0.4)	2.3 (1.4, 3.7)	3.8 (2.8, 5.1)
2014	83.3 (75.6, 88.8)	82.9 (75.8, 88.2)	73.3 (63.4, 81.4)	57.9 (42.0, 72.3)	23.9 (18.0, 31.0)	4.5 (1.9, 10.4)	0.1 (0.0, 0.4)	3.1 (2.3, 4.1)	5.7 (4.3, 7.6)

* The denominator includes outlets that met screening criteria for a full interview but did not complete the interview (were not interviewed or completed a partial interview).

** Indicator estimation includes 27 private not for-profit outlets and 5 community health workers in 2010; 8 private not for-profit outlets and 1 community health worker in 2011 and 39 private not for-profit outlets in 2014.

Source: ACTwatch Outlet Survey, Tanzania, 2010, 2011, 2014.

Table D2: Availability of antimalarials, among outlets stocking at least one antimalarial, by outlet type, across survey round

	Public Health Facility	**ALL Public/Not For-Profit****	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**ALL Private**	**ALL Outlets**
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Proportion of outlets*stocking:	2010 N=62 2011 N=55 2014 N=297	2010 N=85 2011 N=61 2014 N=335	2010 N=10 2011 N=26 2014 N=172	2010 N=224 2011 N=311 2014 N=361	2010 N=34 2011 N=56 2014 N=1,126	2010 N=201 2011 N=316 2014 N=114	2010 N=70 2011 N=17 2014 N=21	2010 N=539 2011 N=726 2014 N=1,794	2010 N=624 2011 N=787 2014 N=2,129
Any ACT									
2010	73.2 (57.3, 84.8)	70.5 (59.0, 79.8)	48.3 (28.1, 69.1)	95.9 (91.9, 98.0)	38.0 (18.3, 62.6)	21.2 (12.5, 33.6)	3.9 (1.3, 11.0)	21.1 (13.6, 31.3)	31.8 (25.6, 38.7)
2011	81.4 (65.9, 90.9)	81.7 (67.0, 90.8)	80.7 (61.7, 91.5)	99.0 (94.5, 99.8)	66.6 (47.7, 81.3)	73.9 (65.0, 81.1)	20.6 (8.5, 42.1)	70.3 (61.4, 77.9)	72.6 (65.4, 78.8)
2014	98.5 (95.0, 99.5)	97.9 (95.1, 99.1)	91.5 (81.2, 96.4)	98.8 (94.8, 99.7)	88.4 (84.1, 91.7)	81.9 (69.9, 89.9)	60.0 (31.7, 82.8)	85.0 (79.5, 89.2)	87.4 (83.1, 90.8)
Artemether Lumefantrine (AL)									
2010	72.2 (55.9, 84.2)	67.2 (54.0, 78.1)	27.2 (12.2, 50.2)	84.1 (74.2, 90.6)	11.7 (4.6, 26.9)	8.3 (4.5, 14.8)	3.9 (1.3, 11.0)	10.4 (6.7, 16.0)	22.7 (17.8, 28.5)
2011	81.4 (65.9, 90.9)	81.7 (67.0, 90.8)	71.0 (43.3, 88.7)	94.0 (85.3, 97.7)	66.6 (47.7, 81.3)	70.9 (61.1, 79.1)	20.6 (8.5, 42.1)	67.6 (58.2, 75.8)	70.5 (62.9, 77.0)
2014	98.5 (95.0, 99.5)	97.9 (95.1, 99.1)	89.6 (79.7, 95.0)	97.6 (94.6, 99.0)	87.9 (83.6, 91.2)	79.5 (65.8, 88.7)	56.5 (30.4, 79.4)	83.6 (78.1, 87.9)	86.3 (81.8, 89.7)
Quality Assured ACT (QA ACT)									
2010	72.2 (55.9, 84.2)	66.5 (53.3, 77.6)	27.2 (12.2, 50.2)	64.5 (53.7, 74.0)	9.5 (3.8, 21.8)	9.8 (6.2, 15.0)	3.9 (1.3, 11.0)	10.4 (7.2, 14.8)	22.6 (18.3, 27.5)
2011	81.4 (65.9, 90.9)	81.7 (67.0, 90.8)	71.0 (43.3, 88.7)	93.2 (85.0, 97.1)	64.3 (45.4, 79.7)	69.8 (60.4, 77.7)	20.6 (8.5, 42.1)	66.4 (57.3, 74.5)	69.5 (62.2, 75.9)
2014	98.5 (95.0, 99.5)	97.8 (95.0, 99.0)	88.8 (78.6, 94.5)	90.8 (85.9, 94.2)	86.9 (82.1, 90.6)	79.5 (65.8, 88.7)	60.0 (31.7, 82.8)	83.0 (77.4, 87.5)	85.8 (81.2, 89.4)
QA ACT with the 'green leaf' logo									
2010	0.0 -	0.0 -	0.0 -	1.4 (0.3, 5.8)	2.2 (0.4, 11.3)	0.0 -	0.0 -	0.2 (0.0, 1.2)	0.2 (0.0, 0.9)
2011	54.6 (38.1, 70.1)	54.3 (38.5, 69.2)	54.6 (28.1, 78.8)	90.8 (82.8, 95.4)	64.3 (45.4, 79.7)	68.0 (58.2, 76.4)	6.2 (1.1, 28.9)	63.3 (53.3, 72.3)	61.5 (52.8, 69.5)
2014	8.3 (4.3, 15.2)	11.5 (7.1, 18.2)	60.9 (45.3, 74.5)	82.4 (74.1, 88.5)	71.9 (64.3, 78.5)	60.9 (47.2, 73.0)	46.8 (21.8, 73.6)	66.4 (58.9, 73.1)	56.2 (48.8, 63.2)
QA ACT without the 'green leaf' logo									

Table D2: Availability of antimalarials, among outlets stocking at least one antimalarial, by outlet type, across survey round

	Public Health Facility	**ALL Public/Not For-Profit****	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**ALL Private**	**ALL Outlets**
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
2010	72.2 (55.9, 84.2)	66.5 (53.3, 77.6)	27.2 (12.2, 50.2)	63.1 (51.7, 73.1)	7.4 (2.9, 17.7)	9.8 (6.2, 15.0)	3.9 (1.3, 11.0)	10.2 (7.0, 14.5)	22.4 (18.1, 27.4)
2011	64.2 (48.3, 77.5)	63.4 (48.3, 76.2)	24.2 (6.7, 58.7)	40.4 (32.9, 48.3)	6.7 (1.6, 24.7)	7.7 (4.7, 12.6)	14.4 (6.0, 30.7)	9.9 (7.1, 13.7)	20.6 (16.4, 25.6)
2014	97.3 (93.5, 98.9)	93.4 (89.0, 96.1)	36.1 (22.8, 51.9)	28.7 (21.8, 36.7)	31.4 (27.5, 35.5)	27.9 (18.0, 40.7)	20.2 (5.0, 54.9)	29.8 (24.5, 35.6)	41.6 (35.8, 47.6)
Non-Quality Assured ACT (non-QA ACT)									
2010	6.0 (2.5, 14.0)	12.0 (6.5, 21.3)	39.1 (17.5, 65.9)	95.9 (91.9, 98.0)	32.8 (14.1, 59.3)	14.9 (8.0, 26.2)	0.0 -	15.8 (9.2, 25.7)	15.0 (9.8, 22.2)
2011	5.5 (2.0, 14.5)	7.4 (3.3, 15.9)	47.6 (25.7, 70.4)	98.7 (94.8, 99.7)	18.3 (4.5, 51.8)	30.7 (19.3, 45.0)	2.8 (0.3, 23.9)	29.8 (19.9, 42.1)	25.3 (16.7, 36.5)
2014	5.7 (3.3, 9.8)	7.0 (4.1, 11.8)	43.0 (29.9, 57.2)	91.1 (83.0, 95.6)	17.4 (12.6, 23.4)	17.4 (7.9, 34.0)	10.5 (1.4, 50.1)	20.5 (13.4, 30.1)	18.0 (11.9, 26.5)
Any non-artemisinin therapy									
2010	96.7 (88.7, 99.1)	97.6 (91.5, 99.3)	90.8 (67.6, 97.9)	100.0 -	100.0 -	100.0 -	97.5 (92.5, 99.2)	99.2 (97.3, 99.7)	98.8 (97.4, 99.5)
2011	74.7 (58.2, 86.2)	76.0 (60.1, 87.0)	100.0 -	99.5 (98.2, 99.9)	100.0 -	99.6 (97.3, 99.9)	97.7 (79.7, 99.8)	99.5 (98.3, 99.9)	94.8 (90.4, 97.3)
2014	91.0 (81.2, 95.9)	91.6 (82.4, 96.2)	99.0 (92.6, 99.9)	99.1 (96.7, 99.8)	98.6 (97.5, 99.2)	92.4 (80.8, 97.2)	81.3 (54.5, 94.0)	95.5 (90.7, 97.9)	94.8 (90.9, 97.1)
Sulfadoxine-Pyrimethamine									
2010	63.8 (48.3, 77.0)	66.2 (52.7, 77.4)	81.6 (61.2, 92.5)	98.1 (94.8, 99.3)	97.3 (83.6, 99.6)	92.7 (87.5, 95.8)	18.0 (7.7, 36.5)	73.2 (62.0, 82.1)	71.7 (61.1, 80.3)
2011	29.4 (18.5, 43.2)	29.2 (18.7, 42.4)	100.0 -	97.6 (94.5, 98.9)	93.1 (78.7, 98.0)	93.1 (88.7, 95.8)	10.6 (1.5, 47.3)	88.2 (77.0, 94.3)	76.3 (66.7, 83.9)
2014	29.5 (19.8, 41.5)	31.7 (22.4, 42.8)	73.5 (53.6, 86.9)	97.1 (93.5, 98.7)	94.5 (91.7, 96.4)	89.7 (78.1, 95.5)	68.8 (38.4, 88.6)	90.2 (84.9, 93.7)	79.3 (73.9, 83.8)
Oral Quinine									
2010	52.5 (39.7, 65.0)	59.8 (47.7, 70.9)	48.4 (18.7, 79.3)	77.3 (69.4, 83.7)	73.4 (56.0, 85.7)	57.5 (49.6, 64.9)	9.1 (2.3, 29.6)	46.5 (38.4, 54.8)	49.4 (41.7, 57.1)

Table D2: Availability of antimalarials, among outlets stocking at least one antimalarial, by outlet type, across survey round

	Public Health Facility	**ALL Public/Not For-Profit****	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**ALL Private**	**ALL Outlets**
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
2011	46.8 (32.5, 61.6)	48.4 (34.3, 62.7)	81.4 (62.9, 91.9)	87.6 (81.7, 91.7)	81.9 (66.3, 91.2)	63.5 (54.7, 71.6)	2.2 (0.2, 19.9)	64.3 (54.9, 72.7)	61.1 (53.4, 68.3)
2014	57.8 (47.9, 67.1)	58.9 (49.6, 67.6)	73.8 (59.2, 84.6)	81.6 (73.5, 87.6)	73.1 (66.2, 78.9)	63.5 (52.5, 73.2)	28.5 (9.2, 60.9)	67.5 (61.3, 73.1)	65.9 (60.5, 70.8)
Oral artemisinin monotherapy									
2010	0.0 -	0.0 -	0.0 -	1.4 (0.4, 4.6)	0.0 -	0.0 -	0.0 -	0.0 (0.0, 0.2)	0.0 (0.0, 0.1)
2011	0.0 -	0.0 -	0.0 -	0.4 (0.1, 1.8)	0.0 -	0.0 -	0.0 -	0.0 (0.0, 0.1)	0.0 (0.0, 0.1)
2014	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -
Non-oral artemisinin monotherapy									
2010	1.2 (0.2, 8.5)	4.5 (1.2, 15.2)	8.8 (1.0, 49.1)	40.2 (29.7, 51.7)	0.0 -	0.0 -	0.0 -	1.6 (0.8, 3.1)	2.2 (1.0, 5.0)
2011	0.8 (0.1, 5.3)	3.3 (1.2, 8.8)	17.7 (6.0, 42.4)	38.3 (27.2, 50.9)	2.6 (0.4, 14.9)	0.7 (0.3, 1.8)	0.0 -	3.1 (1.7, 5.7)	3.1 (1.8, 5.5)
2014	25.1 (14.2, 40.3)	25.3 (14.7, 40.1)	42.6 (27.9, 58.7)	45.1 (32.7, 58.1)	2.3 (1.1, 4.7)	0.0 -	0.0 -	5.0 (3.2, 7.8)	8.8 (6.1, 12.5)
Any treatment for severe malaria									
2010	70.7 (55.3, 82.5)	72.6 (58.0, 83.5)	60.4 (37.1, 79.8)	61.8 (45.7, 75.7)	24.1 (14.1, 38.2)	4.7 (2.2, 9.5)	0.0 -	8.2 (5.1, 12.9)	22.1 (18.4, 26.3)
2011	57.1 (40.1, 72.6)	57.4 (41.2, 72.1)	63.8 (37.7, 83.7)	64.7 (53.7, 74.3)	45.6 (24.1, 69.0)	9.1 (5.2, 15.4)	6.2 (0.5, 44.7)	19.7 (12.3, 30.1)	27.3 (20.9, 34.7)
2014	83.6 (76.0, 89.1)	83.6 (76.6, 88.8)	82.9 (73.1, 89.6)	58.2 (42.6, 72.4)	24.1 (18.2, 31.2)	4.6 (1.9, 10.6)	9.7 (2.7, 29.3)	21.1 (16.5, 26.7)	32.8 (26.7, 39.4)

* Antimalarial-stocking outlets have at least one antimalarial in stock on the day of the survey, verified by presence of at least one antimalarial recorded in the antimalarial audit sheet.

** Includes 22 private not for-profit outlets and 1 community health worker in 2010; and 6 private not for-profit outlets in 2011.

Source: ACTwatch Outlet Survey, Tanzania, 2010, 2011, 2014.

Table D3: Antimalarial market composition, across survey round

Outlet type, among outlets with at least 1 antimalarial in stock on the day of the survey:*	Public Health Facility	**ALL Public**	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**ALL Private**
	%	%	%	%	%	%	%	%
2010, N=415 outlets	16.3 (12.2, 21.4)	22.3 (18.3, 26.8)	1.6 (0.8, 3.1)	0.1 (0.1, 0.4)	6.8 (4.2, 10.8)	47.9 (38.5, 57.5)	21.3 (13.5, 32.0)	77.7 (73.2, 81.7)
2011, N=524 outlets	18.3 (14.2, 23.3)	19.4 (15.2, 24.3)	4.2 (2.6, 6.7)	5.8 (3.1, 10.6)	12.9 (7.8, 20.6)	52.7 (44.0, 61.1)	5.1 (1.3, 17.3)	80.6 (75.7, 84.8)
2014, N=535 outlets	15.5 (11.0, 21.4)	17.0 (12.3, 23.0)	5.4 (3.2, 9.0)	2.0 (0.5, 8.2)	40.6 (32.2, 49.6)	29.6 (21.3, 39.5)	5.3 (2.7, 10.4)	83.0 (77.0, 87.7)

* Excluding booster sample outlets. Outlets with at least one antimalarial in stock on the day of the survey, verified by presence of at least one antimalarial recorded in the antimalarial audit sheet.

Source: ACTwatch Outlet Survey, Tanzania, 2010, 2011, 2014.

Table D4: Price of tablet formulation antimalarials in 2010 USD, by outlet type, across survey round

	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**ALL Private**
Median price of a tablet AETD*:	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)
Any ACT						
2010	$5.63 [2.15-10.56] (10)	$6.34 [4.65-7.04] (1,289)	$4.58 [2.82-7.04] (26)	$5.49 [2.46-7.04] (92)	$0.42 [0.28-0.85] (5)	$5.63 [2.82-7.04] (1,422)
2011	$0.75 [0.50-3.56] (76)	$3.12 [0.62-6.25] (2,664)	$0.62 [0.62-1.25] (118)	$0.94 [0.62-3.12] (794)	$0.00 [0.00-0.62] (12)	$0.75 [0.62-3.75] (3,664)
2014	$1.41 [0.94-4.69] (521)	$3.75 [1.07-6.31] (2,032)	$0.94 [0.94-1.88] (2,741)	$1.13 [0.94-1.88] (227)	$0.94 [0.94-1.88] (35)	$1.13 [0.94-1.88] (5,556)
Quality-assured ACT (QA ACT)						
2010	$1.06 [0.00-2.15] (4)	$7.04 [4.93-9.16] (246)	$1.41 [0.70-5.63] (6)	$2.46 [1.06-5.63] (25)	$0.42 [0.28-0.85] (5)	$2.46 [0.85-5.99] (286)
2011	$0.62 [0.31-0.62] (45)	$0.62 [0.62-0.62] (1,207)	$0.62 [0.62-0.62] (89)	$0.62 [0.62-0.94] (498)	$0.00 [0.00-0.62] (11)	$0.62 [0.62-0.94] (1,850)
2014	$0.94 [0.70-1.88] (347)	$0.94 [0.94-1.88] (840)	$0.94 [0.94-1.25] (2,280)	$0.94 [0.94-1.41] (195)	$0.94 [0.70-1.41] (30)	$0.94 [0.94-1.41] (3,692)
QA ACT with the 'green leaf' logo						
2010	- -	$219.72 [8.45-219.72] (2)	$5.63 (1)	- -	- -	$5.63 [5.63-5.63] (3)
2011	$0.62 [0.47-0.62] (40)	$0.62 [0.50-0.62] (1,014)	$0.62 [0.62-0.62] (83)	$0.62 [0.62-0.94] (465)	$0.62 [0.31-0.62] (6)	$0.62 [0.62-0.94] (1,608)
2014	$1.17 [0.94-1.88] (252)	$0.94 [0.94-1.41] (700)	$0.94 [0.94-1.31] (1,849)	$0.94 [0.94-1.56] (140)	$0.94 [0.70-1.25] (19)	$0.94 [0.94-1.41] (2,960)
QA ACT without the 'green leaf' logo						
2010	$1.06 [0.00-2.15] (4)	$7.04 [4.93-9.16] (244)	$1.41 [0.42-1.41] (5)	$2.46 [1.06-5.63] (25)	$0.42 [0.28-0.85] (5)	$2.46 [0.85-5.99] (283)
2011	$0.31 [0.00-3.75] (5)	$7.50 [0.62-9.37] (193)	$0.62 [0.50-0.62] (6)	$0.94 [0.31-6.25] (33)	$0.00 [0.00-0.00] (5)	$0.62 [0.22-3.75] (242)
2014	$0.94 [0.47-1.41] (93)	$1.88 [1.17-7.04] (140)	$0.94 [0.94-1.17] (430)	$1.13 [0.94-1.17] (55)	$0.94 [0.63-1.88] (11)	$0.94 [0.94-1.22] (729)
Non-quality assured ACT						

Table D4: Price of tablet formulation antimalarials in 2010 USD, by outlet type, across survey round

	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**ALL Private**
Median price of a tablet AETD*:	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)
2010	$8.75 [5.63-10.56] (6)	$5.99 [4.58-7.04] (1,043)	$5.63 [2.82-7.04] (20)	$5.99 [3.52-7.04] (67)	- -	$5.99 [3.52-7.04] (1,136)
2011	$5.00 [3.12-6.56] (31)	$5.62 [4.37-7.50] (1,457)	$6.25 [2.50-6.25] (29)	$6.25 [3.44-6.25] (296)	$0.31 (1)	$6.25 [3.12-6.25] (1,814)
2014	$5.63 [4.69-9.85] (174)	$5.36 [4.22-8.20] (1,192)	$4.69 [3.75-6.31] (461)	$5.16 [4.69-6.94] (32)	$6.31 [4.69-7.04] (5)	$5.16 [4.69-7.04] (1,864)
Sulfadoxine-Pyrimethamine						
2010	$1.06 [0.70-6.52] (15)	$0.70 [0.56-1.06] (852)	$0.70 [0.70-0.85] (97)	$0.70 [0.56-0.99] (466)	$0.70 [0.56-0.70] (11)	$0.70 [0.56-0.92] (1,441)
2011	$0.94 [0.62-0.94] (51)	$0.62 [0.62-0.94] (991)	$0.62 [0.62-0.94] (148)	$0.62 [0.62-0.94] (823)	$0.62 [0.00-0.94] (5)	$0.62 [0.62-0.94] (2,018)
2014	$0.94 [0.70-1.06] (283)	$0.70 [0.70-1.06] (1,224)	$0.70 [0.70-0.94] (3,090)	$0.70 [0.70-1.06] (263)	$0.70 [0.49-1.06] (33)	$0.70 [0.70-1.06] (4,893)
Pre-packaged adult QA AL						
2010	$13.05 (1)	$8.45 [6.34-9.51] (187)	$5.63 [1.41-9.86] (3)	$5.28 [2.46-8.45] (11)	$0.85 [0.42-2.11] (3)	$5.63 [2.11-8.45] (205)
2011	$0.62 [0.31-1.25] (13)	$0.62 [0.62-6.25] (447)	$0.62 [0.62-0.94] (40)	$0.62 [0.62-0.94] (221)	$0.62 [0.00-0.62] (5)	$0.62 [0.62-0.94] (726)
2014	$0.94 [0.70-1.17] (110)	$0.94 [0.70-1.41] (344)	$0.94 [0.70-0.94] (773)	$0.94 [0.70-1.13] (72)	$0.70 [0.47-1.13] (9)	$0.94 [0.70-0.94] (1,308)
Pre-packaged Pediatric QA AL						
2010	$2.15 (1)	$2.11 [1.76-2.29] (31)	$0.70 (1)	$0.35 [0.35-0.35] (4)	$0.28 (1)	$0.35 [0.35-1.76] (38)
2011	$0.31 [0.00-0.62] (14)	$0.62 [0.31-0.62] (214)	$0.44 [0.31-0.62] (19)	$0.62 [0.31-0.62] (118)	$0.00 (1)	$0.62 [0.31-0.62] (366)
2014	$1.88 [0.94-2.82] (78)	$1.88 [1.13-1.88] (197)	$1.88 [0.94-1.88] (574)	$1.88 [1.13-1.88] (50)	$1.88 [1.88-1.88] (7)	$1.88 [0.94-1.88] (906)

* AETD - adult equivalent treatment dose - is or the number of milligrams required to treat a 60kg adult (see Annex 11). Information provided by the respondent about price for a specific amount of antimalarial drug (e.g. price per tablet or price per specific package size) was converted to the price per AETD.

Figures in this table are derived using audited products with price information.

Source: ACTwatch Outlet Survey, Tanzania, 2010, 2011, 2014.

Table D5: Availability of malaria blood testing among antimalarial-stocking outlets*, by outlet type, across survey round

	Public Health Facility	**ALL Public**	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**ALL Private**	**ALL Outlets**
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Proportion of outlets*stocking**	2010 N=64 2011 N=58 2014 N=296	2010 N=89 2011 N=64 2014 N=335	2010 N=10 2011 N=25 2014 N=172	2010 N=222 2011 N=304 2014 N=356	2010 N=34 2011 N=56 2014 N=1,126	2010 N=199 2011 N=313 2014 N=117	2010 N=90 2011 N=22 2014 N=21	2010 N=555 2011 N=720 2014 N=1,792	2010 N=644 2011 N=784 2014 N=2,127
Any malaria blood testing									
2010	37.7 (24.4, 53.1)	46.2 (34.1, 58.7)	66.8 (36.1, 87.8)	4.6 (2.2, 9.4)	0.0 -	0.3 (0.0, 1.8)	0.0 -	1.5 (0.6, 3.7)	11.0 (8.3, 14.5)
2011	48.7 (31.3, 66.4)	50.1 (33.2, 67.0)	61.4 (31.6, 84.6)	7.4 (3.2, 16.2)	0.0 -	2.7 (1.3, 5.7)	4.4 (0.4, 34.2)	5.6 (3.7, 8.4)	14.8 (10.8, 20.0)
2014	89.1 (82.5, 93.4)	89.9 (83.7, 93.9)	93.5 (85.7, 97.2)	10.8 (6.9, 16.6)	7.2 (4.0, 12.5)	4.3 (1.4, 11.9)	8.5 (1.9, 31.3)	11.4 (8.8, 14.7)	26.0 (21.9, 30.6)
	2010 N=64 2011 N=58 2014 N=296	2010 N=89 2011 N=64 2014 N=335	2010 N=10 2011 N=25 2014 N=172	2010 N=222 2011 N=304 2014 N=356	2010 N=34 2011 N=56 2014 N=1,126	2010 N=199 2011 N=314 2014 N=117	2010 N=90 2011 N=22 2014 N=21	2010 N=555 2011 N=721 2014 N=1,792	2010 N=644 2011 N=785 2014 N=2,127
Microscopic blood tests									
2010	16.9 (9.4, 28.7)	27.6 (19.4, 37.8)	58.0 (27.0, 83.8)	0.6 (0.1, 3.5)	0.0 -	0.0 -	0.0 -	1.1 (0.3, 3.7)	6.7 (5.1, 8.8)
2011	22.2 (12.9, 35.5)	25.0 (15.4, 37.8)	61.4 (31.6, 84.6)	4.9 (1.4, 15.9)	0.0 -	1.6 (0.7, 3.8)	0.0 -	4.4 (2.8, 6.8)	8.7 (6.1, 12.2)
2014	28.5 (20.6, 37.9)	32.3 (24.5, 41.2)	83.1 (72.8, 90.0)	1.8 (0.6, 4.9)	0.4 (0.2, 1.1)	0.9 (0.1, 7.0)	0.0 -	5.5 (4.0, 7.4)	10.4 (8.5, 12.7)
	2010 N=64 2011 N=58 2014 N=296	2010 N=89 2011 N=64 2014 N=335	2010 N=10 2011 N=25 2014 N=172	2010 N=222 2011 N=304 2014 N=356	2010 N=34 2011 N=56 2014 N=1,127	2010 N=199 2011 N=314 2014 N=117	2010 N=90 2011 N=22 2014 N=21	2010 N=555 2011 N=721 2014 N=1,793	2010 N=644 2011 N=785 2014 N=2,128
Rapid diagnostic tests (mRDTs)									
2010	22.7 (11.5, 39.8)	20.4 (9.9, 37.6)	8.8 (1.0, 49.1)	3.9 (1.5, 10.0)	0.0 -	0.3 (0.0, 1.8)	0.0 -	0.4 (0.1, 1.4)	4.7 (2.3, 9.3)
2011	39.5 (23.7, 57.8)	38.6 (23.5, 56.3)	3.4 (0.6, 17.8)	4.8 (2.1, 10.6)	0.0 -	1.1 (0.3, 4.4)	4.4 (0.4, 34.2)	1.4 (0.6, 3.7)	9.1 (5.7, 14.3)
2014	75.8 (66.4, 83.3)	76.2 (67.3, 83.2)	47.7 (37.7, 57.9)	9.4 (5.7, 15.0)	7.0 (3.9, 12.3)	3.3 (1.3, 8.4)	8.5 (1.9, 31.3)	8.3 (6.0, 11.3)	20.9 (16.9, 25.7)

* Blood testing availability is reported among outlets that either had antimalarials in stock on the day of the survey or reportedly stocked antimalarials in the previous 3 months.

** Results in this table are derived using responses captured among outlets with blood testing information.

Source: ACTwatch Outlet Survey, Tanzania, 2010, 2011, 2014.

Table D7: Price of malaria blood testing in 2010 USD, by outlet type, across survey round

	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**ALL Private**
Total median price to consumers:*	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)
Microscopic blood tests						
Adult						
2010	$0.35 [0.35-0.70] (6)	$0.35 (1)	- -	- -	- -	$0.35 [0.35-0.70] (7)
2011	$0.31 [0.31-0.62] (19)	$0.62 [0.62-0.62] (3)	- -	$0.31 [0.31-0.31] (4)	- -	$0.31 [0.31-0.62] (26)
2014	$0.47 [0.47-0.47] (160)	$0.47 [0.47-0.94] (5)	$0.23 [0.23-0.70] (5)	$0.47 (1)	- -	$0.47 [0.47-0.47] (171)
Child under age five						
2010	$0.35 [0.35-0.35] (6)	$0.35 (1)	- -	- -	- -	$0.35 [0.35-0.35] (7)
2011	$0.31 [0.31-0.62] (18)	$0.62 [0.62-0.62] (3)	- -	$0.31 [0.31-0.31] (4)	- -	$0.31 [0.31-0.62] (25)
2014	$0.47 [0.47-0.47] (160)	$0.47 [0.47-0.94] (5)	$0.23 [0.23-0.70] (5)	$0.47 (1)	- -	$0.47 [0.47-0.47] (171)
Rapid diagnostic tests (mRDTs)						
Adult						
2010	$5.85 (1)	$1.06 [0.70-12.68] (6)	- -	$1.41 (1)	- -	$5.85 [1.41-5.85] (8)
2011	- -	$0.62 [0.62-1.25] (8)	- -	$0.94 [0.62-0.94] (3)	$0.00 (1)	$0.62 [0.00-0.94] (12)
2014	$0.70 [0.47-0.94] (102)	$0.70 [0.70-0.70] (9)	$0.70 [0.47-0.94] (53)	$0.47 [0.47-0.70] (4)	$0.47 [0.47-0.47] (3)	$0.47 [0.47-0.94] (171)
Child under five						
2010	$5.85 (1)	$12.68 [1.06-14.08] (6)	- -	$1.41 (1)	- -	$5.85 [1.41-5.85] (8)
2011	- -	$0.62 [0.62-1.25] (8)	- -	$0.94 [0.62-0.94] (3)	$0.00 (1)	$0.62 [0.00-0.94] (12)
2014	$0.52 [0.47-0.94] (101)	$0.70 [0.70-0.70] (8)	$0.47 [0.47-0.94] (53)	$0.47 [0.47-0.70] (4)	$0.23 [0.23-0.23] (3)	$0.47 [0.47-0.94] (169)

* Total price to the consumer including consultation and/or service fees.

Source: ACTwatch Outlet Survey, Tanzania, 2010, 2011, 2014.

Table D8: Antimalarial market share, across survey round

AETDs sold or distributed in the previous week by outlet type and antimalarial type as a percentage of all AETDs sold/ distributed:	Public Health Facility	TOTAL Public/Not For-Profit**	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	TOTAL Private	ANTI-MALARIAL TOTAL*
	%	%	%	%	%	%	%	%	%
2010									
1. Any ACT	**27.7**	**32.7**	**0.1**	**0.1**	**0.2**	**1.0**	**0.0**	**1.5**	**34.2**
Quality Assured ACT (QA ACT)	26.4	29.6	0.0	0.0	0.1	0.2	0.0	0.4	30.0
QA ACT with the 'green leaf' logo	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
QA ACT without the 'green leaf' logo	26.4	29.6	0.0	0.0	0.1	0.2	0.0	0.4	30.0
Non-quality-assured ACT	1.4	3.1	0.1	0.1	0.2	0.8	0.0	1.1	4.2
2. Any non-artemisinin therapy	**16.4**	**30.8**	**1.2**	**0.4**	**5.9**	**24.6**	**2.7**	**34.7**	**65.5**
Sulfadoxine-Pyrimethamine	14.7	22.9	1.0	0.3	4.1	17.4	0.9	23.7	46.6
3. Oral artemisinin monotherapy	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
4. Non-oral artemisinin monotherapy	**0.3**	**0.4**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.4**
5. Any treatment for severe malaria	0.6	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.8
OUTLET TYPE TOTAL* **	**44.5**	**63.8**	**1.3**	**0.5**	**6.1**	**25.6**	**2.7**	**36.2**	**100.0**
2011									
1. Any ACT	**22.9**	**23.3**	**2.1**	**6.4**	**5.0**	**8.6**	**0.1**	**22.1**	**45.4**
Quality Assured ACT (QA ACT)	22.8	23.0	1.7	4.6	4.3	7.9	0.1	18.6	41.6
QA ACT with the 'green leaf' logo	8.3	8.6	1.4	4.0	3.6	7.8	0.1	16.9	25.5
QA ACT without the 'green leaf' logo	14.4	14.5	0.3	0.6	0.7	0.1	0.0	1.7	16.2
Non-quality-assured ACT	0.1	0.2	0.3	1.8	0.7	0.6	0.0	3.5	3.8
2. Any non-artemisinin therapy	**18.7**	**18.9**	**6.1**	**5.0**	**6.1**	**18.2**	**0.2**	**35.6**	**54.6**
Sulfadoxine-Pyrimethamine	6.5	6.6	1.4	4.0	4.0	10.7	0.0	20.1	26.6
3. Oral artemisinin monotherapy	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
4. Non-oral artemisinin monotherapy	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
5. Any treatment for severe malaria	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2
OUTLET TYPE TOTAL* **	**41.6**	**42.2**	**8.1**	**11.4**	**11.1**	**26.8**	**0.3**	**57.8**	**100.0**
2014									
1. Any ACT	**15.0**	**16.1**	**2.7**	**2.2**	**18.5**	**7.2**	**0.7**	**31.2**	**47.3**
Quality Assured ACT (QA ACT)	14.9	15.9	2.1	1.0	17.6	6.5	0.6	27.8	43.7
QA ACT with the 'green leaf' logo	0.7	0.9	1.2	0.4	13.7	4.1	0.2	19.5	20.5
QA ACT without the 'green leaf' logo	14.2	15.0	0.9	0.6	3.9	2.4	0.5	8.2	23.1
Non-quality-assured ACT	0.1	0.2	0.5	1.3	0.9	0.7	0.1	3.5	3.7
2. Any non-artemisinin therapy	**9.8**	**13.1**	**2.0**	**2.4**	**22.7**	**11.7**	**0.7**	**39.4**	**52.5**
Sulfadoxine-Pyrimethamine	6.2	6.5	1.6	2.4	20.6	10.9	0.6	36.0	42.6
3. Oral artemisinin monotherapy	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
4. Non-oral artemisinin monotherapy	**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**0.2**

Table D8: Antimalarial market share, across survey round

AETDs sold or distributed in the previous week by outlet type and antimalarial type as a percentage of all AETDs sold/ distributed:	Public Health Facility	**TOTAL Public/Not For-Profit****	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**TOTAL Private**	**ANTI-MALARIAL TOTAL***
	%	%	%	%	%	%	%	%	%
5. Any treatment for severe malaria	0.2	0.3	0.3	0.0	0.0	0.0	0.0	0.3	0.6
OUTLET TYPE TOTAL***	**24.8**	**29.2**	**4.8**	**4.6**	**41.2**	**18.8**	**1.4**	**70.8**	**100.0**

* Row sum – market share for the specified antimalarial medicine.

** Includes 22 private not for-profit outlets and 1 community health worker in 2010; and 6 private not for-profit outlets in 2011.

*** Column sum (within each survey round) – market share for the specified outlet type.

Categories 1 through 4 sum to 100% in the far-right column – antimalarial total column (within in survey round).

Source: ACTwatch Outlet Survey, Tanzania, 2010, 2011, 2014.

Table D9: Antimalarial market share, across outlet type, across survey round

AETDs sold or distributed in the previous week by outlet type and antimalarial type as a percentage of all AETDs sold/ distributed:	Public Health Facility	**TOTAL Public / Not For-Profit***	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**TOTAL Private**
	%	%	%	%	%	%	%	%
2010								
1. Any ACT	**62.4**	**51.2**	**9.5**	**22.0**	**3.8**	**3.8**	**1.2**	**4.1**
Quality Assured ACT (QA ACT)	59.2	46.4	1.1	3.9	1.2	0.9	1.2	1.0
QA ACT with the 'green leaf' logo	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
QA ACT without the 'green leaf' logo	59.2	46.4	1.1	3.9	1.2	0.9	1.2	1.0
Non-quality-assured ACT	3.1	4.8	8.4	18.2	2.5	3.0	0.0	3.1
2. Any non-artemisinin therapy	**36.9**	**48.2**	**90.5**	**77.8**	**96.2**	**96.2**	**98.8**	**95.9**
Sulfadoxine-Pyrimethamine	33.0	35.9	78.8	67.2	67.0	68.0	33.3	65.6
3. Oral artemisinin monotherapy	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
4. Non-oral artemisinin monotherapy	**0.7**	**0.6**	**0.0**	**0.2**	**0.0**	**0.0**	**0.0**	**0.0**
5. Any treatment for severe malaria	1.3	1.2	0.7	0.4	0.1	0.0	0.0	0.1
2011								
1. Any ACT	**54.9**	**55.1**	**25.3**	**56.2**	**45.0**	**31.9**	**22.4**	**38.3**
Quality Assured ACT (QA ACT)	54.7	54.5	21.1	40.4	38.3	29.5	22.0	32.1
QA ACT with the 'green leaf' logo	20.0	20.3	17.5	35.1	32.5	29.1	22.0	29.3
QA ACT without the 'green leaf' logo	34.7	34.3	3.5	5.3	5.8	0.5	0.0	2.9
Non-quality-assured ACT	0.2	0.6	4.2	15.8	6.7	2.4	0.3	6.1
2. Any non-artemisinin therapy	**45.0**	**44.9**	**74.6**	**43.7**	**55.0**	**68.1**	**77.6**	**61.7**
Sulfadoxine-Pyrimethamine	15.6	15.6	17.4	34.8	35.9	39.8	6.0	34.7
3. Oral artemisinin monotherapy	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
4. Non-oral artemisinin monotherapy	**0.0**	**0.0**	**0.1**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**
5. Any treatment for severe malaria	0.2	0.2	0.8	0.2	0.2	0.0	0.0	0.2
2014								
1. Any ACT	**60.3**	**55.1**	**55.3**	**48.5**	**44.9**	**38.1**	**49.9**	**44.1**
Quality Assured ACT (QA ACT)	59.9	54.5	44.8	20.9	42.7	34.3	46.0	39.2
QA ACT with the 'green leaf' logo	2.8	3.2	24.5	8.9	33.2	21.8	12.8	27.6
QA ACT without the 'green leaf' logo	57.1	51.3	18.8	12.0	9.5	12.5	33.2	11.5
Non-quality-assured ACT	0.4	0.7	10.5	27.6	2.2	3.8	3.9	4.9
2. Any non-artemisinin therapy	**39.6**	**44.7**	**41.9**	**51.4**	**55.1**	**61.9**	**50.1**	**55.7**
Sulfadoxine-Pyrimethamine	25.1	22.4	33.4	50.7	49.9	57.7	46.5	50.9
3. Oral artemisinin monotherapy	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
4. Non-oral artemisinin monotherapy	**0.1**	**0.1**	**2.7**	**0.1**	**0.0**	**0.0**	**0.0**	**0.2**
5. Any treatment for severe malaria	0.7	1.0	5.6	0.1	0.1	0.0	0.3	0.5

Categories 1 through 4 sum to 100% within each column (within each survey round).

Source: ACTwatch Outlet Survey, Tanzania, 2010, 2011, 2014.

Table D12: Provider antimalarial treatment knowledge and practices, by outlet type, across survey round

	Public Health Facility	**ALL Public / Not For-Profit***	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**ALL Private**	**ALL Outlets**
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Proportion of providers who:	2010 N=64 2011 N=59 2014 N=296	2010 N=89 2011 N=65 2014 N=335	2010 N=10 2011 N=26 2014 N=172	2010 N=222 2011 N=311 2014 N=357	2010 N=35 2011 N=56 2014 N=1,127	2010 N=203 2011 N=317 2014 N=117	2010 N=90 2011 N=23 2014 N=21	2010 N=560 2011 N=733 2014 N=1,794	2010 N=649 2011 N=798 2014 N=2,129
Correctly state the national first-line treatment[Ψ] for uncomplicated malaria									
2010	94.3 (77.9, 98.7)	95.9 (83.1, 99.1)	100.0 -	95.5 (92.3, 97.4)	95.8 (86.7, 98.7)	90.5 (84.6, 94.3)	75.4 (64.0, 84.1)	86.5 (82.6, 89.7)	88.5 (85.5, 91.0)
2011	97.4 (91.4, 99.2)	97.0 (91.5, 98.9)	97.9 (87.0, 99.7)	97.8 (94.7, 99.1)	98.7 (91.3, 99.8)	95.3 (90.1, 97.8)	87.3 (72.9, 94.6)	95.3 (91.2, 97.6)	95.7 (92.4, 97.6)
2014	96.9 (90.6, 99.0)	97.1 (91.1, 99.1)	99.1 (96.5, 99.8)	91.0 (85.0, 94.7)	92.3 (87.9, 95.2)	85.4 (73.1, 92.7)	58.6 (35.0, 78.8)	88.3 (83.3, 92.0)	90.0 (86.1, 92.9)
Correctly state the first-line dosing regimen for:									
An adult									
2010	53.6 (39.3, 67.3)	48.4 (36.3, 60.7)	18.0 (6.0, 42.9)	38.1 (30.7, 46.1)	9.3 (3.8, 20.8)	2.9 (1.2, 6.6)	0.8 (0.1, 4.3)	4.1 (2.4, 7.0)	13.5 (10.4, 17.2)
2011	71.1 (54.9, 83.2)	71.3 (55.8, 83.0)	62.9 (35.7, 83.9)	83.4 (76.5, 88.5)	60.9 (44.6, 75.1)	63.9 (54.5, 72.4)	14.5 (6.1, 30.5)	59.5 (50.2, 68.1)	61.9 (54.0, 69.2)
2014	94.2 (87.8, 97.4)	94.7 (88.6, 97.6)	96.5 (92.7, 98.4)	81.8 (75.8, 86.6)	90.4 (86.0, 93.6)	82.7 (71.5, 90.0)	48.1 (29.2, 67.5)	85.4 (80.6, 89.2)	87.1 (83.0, 90.3)
A two-year old child									
2010	54.7 (40.4, 68.2)	50.0 (37.4, 62.7)	18.0 (6.0, 42.9)	33.7 (27.9, 40.1)	7.1 (2.9, 16.6)	3.4 (1.4, 7.7)	0.0 -	3.8 (2.2, 6.5)	13.6 (10.5, 17.4)
2011	67.7 (51.9, 80.4)	67.3 (52.1, 79.6)	63.5 (34.8, 85.0)	69.7 (59.3, 78.4)	51.3 (37.1, 65.2)	53.6 (44.0, 63.0)	7.1 (1.1, 34.2)	50.0 (40.5, 59.6)	53.6 (45.0, 62.0)
2014	92.2 (85.8, 95.9)	92.7 (86.7, 96.2)	86.7 (77.6, 92.5)	69.1 (55.6, 80.0)	85.7 (80.3, 89.8)	74.7 (65.1, 82.4)	42.0 (26.0, 59.8)	79.0 (73.5, 83.6)	81.5 (76.9, 85.5)

Table D12: Provider antimalarial treatment knowledge and practices, by outlet type, across survey round

	Public Health Facility	**ALL Public / Not For-Profit***	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General Retailer	**ALL Private**	**ALL Outlets**
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Proportion of providers who:	2010 N=64 2011 N=59 2014 N=296	2010 N=89 2011 N=65 2014 N=335	2010 N=10 2011 N=26 2014 N=172	2010 N=222 2011 N=311 2014 N=357	2010 N=35 2011 N=56 2014 N=1,127	2010 N=203 2011 N=317 2014 N=117	2010 N=90 2011 N=23 2014 N=21	2010 N=560 2011 N=733 2014 N=1,794	2010 N=649 2011 N=798 2014 N=2,129
Report an ACT as the most effective antimalarial medicine									
For adults									
2010	93.0 (74.3, 98.4)	89.7 (79.2, 95.2)	72.4 (45.4, 89.2)	73.0 (63.2, 81.0)	45.1 (23.7, 68.4)	29.7 (21.7, 39.1)	25.5 (18.2, 34.5)	31.8 (25.6, 38.6)	44.0 (36.8, 51.4)
2011	96.7 (78.5, 99.6)	96.1 (81.0, 99.3)	81.7 (59.0, 93.2)	89.1 (84.8, 92.3)	82.0 (69.2, 90.2)	75.5 (69.1, 81.0)	58.2 (44.5, 70.8)	76.2 (70.3, 81.3)	80.4 (75.0, 84.8)
2014	98.2 (94.9, 99.4)	97.6 (94.0, 99.0)	88.5 (80.3, 93.5)	87.9 (83.4, 91.3)	78.7 (71.9, 84.2)	70.1 (58.1, 79.9)	79.2 (54.7, 92.3)	76.6 (69.9, 82.3)	80.6 (74.8, 85.3)
For children									
2010	89.4 (74.6, 96.0)	84.6 (75.9, 90.6)	60.4 (37.1, 79.8)	62.9 (52.0, 72.6)	49.8 (29.8, 69.9)	29.7 (21.9, 38.8)	27.2 (19.6, 36.3)	32.1 (26.7, 38.1)	43.2 (37.2, 49.4)
2011	94.1 (79.2, 98.5)	94.3 (79.8, 98.6)	56.6 (32.0, 78.3)	86.2 (78.6, 91.4)	72.7 (55.9, 84.9)	69.1 (61.6, 75.8)	63.4 (30.2, 87.4)	69.3 (62.9, 74.9)	74.7 (68.9, 79.8)
2014	96.7 (93.3, 98.4)	96.1 (93.1, 97.8)	84.6 (73.8, 91.5)	83.5 (77.8, 87.9)	85.7 (80.6, 89.6)	73.9 (61.1, 83.6)	79.2 (54.7, 92.3)	81.2 (74.7, 86.4)	84.0 (78.4, 88.4)

Numbers of providers (N) in this table are the total number of providers eligible for table indicators.

$^{\Psi}$ The first-line recommended treatment for uncomplicated malaria, according to the NMCP policy change in 2006, is Artemether-lumefantrine

Source: ACTwatch Outlet Survey, Tanzania, 2010, 2011, 2014.

Annex 1: ACTwatch Background

ACTwatch is a multi-country research project implemented by PSI (www.psi.org). Standardized tools and approaches are employed to provide comparable data across countries and over time. Project countries include: Benin, Cambodia, the Democratic Republic of Congo, Kenya, Laos, Madagascar, Myanmar, Nigeria, Tanzania (currently mainland only, previous work in Zanzibar), Thailand, Uganda, Vietnam, and Zambia. The project was launched in 2008 with funding from the Bill and Melinda Gates Foundation (BMGF), and is currently funded through 2016 by the BMGF, UNITAID, and DFID.

ACTwatch is designed to provide timely, relevant, and high quality antimalarial market evidence.[2] The goal of providing this market evidence is to inform and monitor national and global policy, strategy, and funding decisions for improving malaria case management. ACTwatch is monitoring antimalarial markets in the context of policy shifts and investments in the scale-up of first-line ACT and blood testing using mRDTs. This has included adaptation of project methods for the evaluation of the Affordable Medicines Facility-malaria (AMFm) pilot.[3] The project implements a set of research tools designed to:

1) **Provide a picture of the total market for malaria case management** including: all providers carrying antimalarials and mRDTs and providing case management services; the relative antimalarial market share for each provider type; the antimalarial supply chain; and price markups within the supply chain for antimalarials and mRDTs.

2) **Monitor the readiness of market components for appropriate malaria case management**, including: availability of antimalarials and malaria blood testing; consumer price of antimalarial treatment and malaria blood testing; and provider qualifications, training and knowledge.

3) **Monitor the performance of market components for appropriate malaria case management**, including: the relative market share for quality-assured ACT relative to other antimalarial medicines; the demand for appropriate malaria case management captured through consumer knowledge, attitudes, and fever treatment seeking behavior; and the quality of provider service delivery measured against national policies, guidelines and minimum standards.

ACTwatch research tools for malaria market monitoring include:

1. Outlet surveys

Outlet surveys entail collecting quantitative data from all outlets and providers with the potential to sell or distribute antimalarials and/or provide malaria blood testing. These include health facilities, community health workers, pharmacies, drug stores, retail outlets, market stalls, and mobile providers. A screening process identifies outlets that provide antimalarials and/or malaria blood testing. Among these eligible outlets, service providers are interviewed and all antimalarials and mRDTs are audited. The audit collects information about each antimalarial and mRDT in stock (e.g. brand name, drug active ingredients and strengths, manufacturer, etc.) and retailer reports on consumer price and sale/distribution volumes for each product. A representative sample of outlets is identified within target study domains such that findings from the outlet survey provide estimates of antimalarial and mRDT availability, price, and relative market share across the entire market as well as within key market segments.[4]

[2] Shewchuk T, O'Connell KA, Goodman C, Hanson K, Chapman S, Chavasse D. 2011. The ACTwatch project: methods to describe anti-malarial markets in seven countries. *Malaria Journal, 10*: 325.
[3] AMFm Independent Evaluation Team. 2012. *Independent evaluation of Phase 1 of the Affordable Medicines Facility – malaria (AMFm), multi-country independent evaluation report: final report.* Calverton, MD and London: ICF International and London School of Hygiene and Tropical Medicine.
[4] O'Connell KA, Poyer S, Solomon T, et al. 2013. Methods for implementing a medicine outlet survey: lessons from the anti-malarial market. *Malaria Journal, 12*: 52.

From 2008 through 2014, ACTwatch conducted 35 national outlet surveys across the 10 project countries.[5] Reports are available at www.actwatch.info, and peer-reviewed publications have appeared in *Malaria Journal* and *The Lancet.*[6,7]

2. Supply chain studies

Supply chain studies employ quantitative and qualitative research methods to effectively map the antimalarial supply chain in a given Tanzania. The supply chain is mapped from the antimalarial outlets (service delivery points) identified during an outlet survey to national importers and distributors with identification of all mid-level distributers in between. Retail prices are documented along the supply chain to facilitate calculation of commodity mark-ups. From 2008 through 2012, ACTwatch conducted 8 national supply chain studies. Reports are available at www.actwatch.info, and a peer-reviewed publication has appeared in *PLoS One*.[8]

3. Population-based surveys

Population-based surveys are conducted among consumers to document fever treatment-seeking behavior. A representative sample of the target population (caregivers of children and/or adults according to burden and risk) is identified, and a screening tool is used to identify individuals who have recently experienced fever. The surveys investigate the extent to which health care was sought, as well as common sources of care received. Respondent reports of malaria blood testing and antimalarials acquired are documented and summarized. The survey includes measures of demographic and other individual, household/family, and community characteristics that can be used to develop consumer profiles as well as monitor equity in access to malaria case management. From 2008 through 2012, ACTwatch conducted 14 household surveys focused on fever treatment-seeking behavior. Reports are available at www.actwatch.info, and a peer-reviewed publication has appeared in *Malaria Journal.*[9]

4. Fever case management quality of care

Fever case management quality of care is monitored using a set of research tools designed to measure aspects of the interaction between providers and clients. In 2015-2016, ACTwatch will launch fever case management quality of care studies in a subset of project countries. The tool or set of tools that is most appropriate and feasible in a given context is employed. These include:

- Exit interviews conducted with target consumers immediately after receiving fever case management services from target providers. A structured interview documents client reports about key aspects of service delivery including malaria blood testing, test results, medicines recommended/prescribed and obtained, counseling, and costs of services and commodities received. Exit interviews are also used to measure client recall and comprehension of provider counseling including instructions for completing prescribed drug regimens, as well as client satisfaction with services provided. Exit interviews may include measures of demographic characteristics to monitor equity in access to services and commodities.

- Structured observation documents aspects of the provider-client interaction using a checklist. A trained observer completes the checklist designed to document provider compliance with standard practice and procedures as well as aspects of client demand for specific products or services. The observer remains silent during the consultation.

[5] Surveys in the DRC (2) and Myanmar (3) were sub-national.
[6] O'Connell K, Gatakaa H, Poyer S, et al. 2011. Got ACTs? Availability, price, market share and provider knowledge of anti-malarial medicines in public and private sector outlets in six malaria-endemic countries. *Malaria Journal*, 10: 326.
[7] Tougher S, the ACTwatch Group, Ye Y, et al. 2013. Effect of the Affordable Medicines Facility-malaria (AMFm) on the availability, price, and market share of quality-assured artemisinin-based combination therapies in seven countries: a before-and-after analysis of outlet survey data. *Lancet, 380*: 1916-26.
[8] Palafox B, Patouillard E, Tougher S, et al. 2014. Understanding private sector antimalarial distribution chains: a cross-sectional mixed methods study in six malaria-endemic countries. *PLoS One, 9*(4).
[9] Littrell M, Gatakaa H, Evance I, et al. (2011). Monitoring fever treatment behavior and equitable access to effective medicines in the context of initiatives to improve ACT access: baseline results and implications for programming in six African countries. *Malaria Journal, 10*: 327.

ACTwatch in Tanzania

The first outlet survey was conducted in Tanzania in 2010 as a baseline for the AMFm pilot. Follow-up outlet surveys were conducted in 2011 and 2014. Results from the 2010 and 2011 studies are reported in the AMFm Independent Evaluation report.[10]

[10] AMFm Independent Evaluation Team. 2012. *Independent evaluation of Phase 1 of the Affordable Medicines Facility – malaria (AMFm), multi-country independent evaluation report: final report.* Calverton, MD and London: ICF International and London School of Hygiene and Tropical Medicine.

Annex 2: Tanzania Background

The mainland of The United Republic of Tanzania is in East Africa, bordered by Mozambique, Malawi, and Zambia to the south, the Democratic Republic of the Congo, Burundi, and Rwanda to the West, Uganda and Kenya to the north, and the Indian Ocean to the east[11]. It covers an area of nearly 1 million square kilometers and has a population of approximately 43.6 million according to the 2012 census[12], and an average annual population growth rate of 3.2%[13]. It is divided into 21 administrative regions and 113 districts.

The country's economy depends heavily on agriculture which accounts for more than one-fourth of gross domestic product (GDP) reported at $503 in 2009 (World Development Indicators 2011, World Bank, 2011). An estimated 34% of the population lives on less than $1 dollar per day and 36% live below the poverty line.

Malaria endemicity varies across the landscape, with most regions mesoendemic with perennial and stable malaria transmission. The highland regions of Tanzania, including Mount Kilimanjaro, are hypoendemic for malaria, where transmission is low and unstable[14]. More than 93% of mainland Tanzania's population resides in areas where malaria is transmitted. In recent years, mainland Tanzania has seen considerable declines in malaria prevalence, from 18% in 2007/2008 to 10% in 2011/2012[15].

Health care system

Approximately 80% of the population has access to health services and over 90% of the population live within 10 km of a health facility. There are about 4,844 health facilities across Tanzania[16]. The current referral system reflects a pyramidal structure. Patients are first referred from dispensaries to health centers, then to larger health facilities such as district and regional hospitals. The referral system is organized by the skills required to address the problems of the patients.

The Ministry of Health and Social Welfare of Tanzania (MOHSW) primarily constitutes the public health sector, with support from other government agencies such as the Ministry of Finance and Economic Affairs (MOF) and the Ministry of Science, Technology, and Higher Education (MOSTHE)[17]. The MOHSW primarily focuses on policy, governance, and financing of health services.

Despite the public sectors' strong influence throughout the health care system, the private sector is involved in many of the heath related activities. The private sector has been primarily responsible for expanding service delivery and supportive functions such as pharmaceutical dispensing and laboratory diagnostics. The level of involvement from the private sector has increased over the past 20 years due to government policy changes[17].

The private not for-profit- sector (PNFP) is the second largest group offering health services[17]. These include faith-based organizations, charitable not-for-profit organizations, non-governmental organizations and community-based

[11] "The World Factbook." Central Intelligence Agency, 1 May 2007. Web. 4 Jan. 2016.
[12] "Basic Demographic and Socio-economic Profile Statistical Tables, Tanzania Mainland." Tanzania National Bureau of Statistics, 1 Apr. 2014. Web. 4 Jan. 2016.
[13] "Population Growth (annual %)." The World Bank. Web. 4 Jan. 2016.
[14] Ministry of Health and Social Welfare. National Guidelines for Diagnosis and Treatment of Malaria. World Health Organization, January 2006. Web. 4 Jan 2016.
[15] Tanzania Commission for AIDS (TACAIDS), Zanzibar AIDS Commission (ZAC), National Bureau of Statistics (NBS), Office of the Chief Government Statistician (OCGS), and ICF International. "Tanzania HIV/AIDS and Malaria Indicator Survey 2011-12." The DHS Program, March 2013. Web. 4 Jan 2016.
[16] Ministry of Health and Social Welfare. "Reforms Towards Delivering Quality Health Services and Clients Satisfaction." Second Health Sector Strategic Plan (HSSP) (July 2003-June 2008), April 2003: 6-8. Print.
[17] White, James, et al. "Tanzania Private Health Sector Assessment." Abt Associates, January 2013. Web. 04 Jan 2016.

organizations. PNFP health facilities are located in both urban and rural communities. Despite a lesser-known presence, the private-for-profit sector is diverse and also offers a variety of health services.

Malaria risk and burden

More than 93% of mainland Tanzania's population resides in areas where malaria is transmitted, while the entire population of Zanzibar is at risk for malaria infection[17]. Mainland Tanzania transmission zones have been categorized into three groups where 20% of malaria transmission occurs in unstable seasonal malaria, another 20% is grouped as stable malaria with seasonal variations, and the remaining 60% is characterized as stable perennial transmission. Approximately 96% of malaria infections are caused by *Plasmodium falciparum*, and 4% is caused by *P. malariae* and *P. ovale*. Principal vectors of malaria on the mainland include the *Anopheles gambiae* complex (*An. gambiae s.s* and *An. arabiensis*).

Malaria case management guidelines

Diagnosis

The World Health Organization (WHO) recommends parasitological confirmation for all cases treated as malaria[18]. Since the rollout implementation of mRDTs in Tanzania began in 2010 (between 2010 and 2012), over diagnosis of malaria in Tanzania has been reduced[19]. Close to 57% of patients who test positive for malaria receive ACT treatment, compared to approximately 8% of patients who test negative and are treated with an antimalarial.

Treatment

In 2001, Tanzania changed its recommended first-line treatment of uncomplicated malaria from chloroquine (CQ) to sulfadoxine/pyrimethamine (SP)[20]. CQ was withdrawn from public health facilities and banned from sale in the private sector leading to decreased availability of antimalarial in the private sector. Due to increased SP resistance, WHO policy guidance prompted the adoption of Artemisinin-based combination therapy (ACT) for treatment of uncomplicated malaria in 2006. Since then, Artemether-lumefantrine has remained the recommended first-line therapy while quinine is recommended as the second-line treatment.

According to the national guidelines, ACT is provided for free at public health facilities for children under five, pregnant women, the elderly, and is sold at a subsidized price for other patients[21]. AL may be inaccessible in pharmacies due to cost, while SP and other antimalarials remain widely available at affordable prices in private health facilities and drug shops, even though it is not government policy for SP to be sold in lower-level pharmacies. Oral artemisinin monotherapies have been banned since 2008, while non-oral artemisinin monotherapies are allowed for treatment of severe disease.

[18] Guidelines for the Treatment of Malaria. World Health Organization, 2010. Web. 04 Jan. 2016.

[19] Bruxvoort K., Kalolella A., Nchimbi H., Festo C., Taylor M., Thomson R., Cairns M., Thwing J., Kleinschmidt I., Goodman C., Kachur S.P. "Getting Antimalarials on Target: Impact of National Roll-out of Malaria Rapid Diagnostic Tests on Health Facility Treatment in Three Regions of Tanzania." *Tropical Medicine & International Health* 18.10 (2013). Web. 4 Jan. 2016.

[20] National Guidelines for Malaria Diagnosis and Treatment. World Health Organization, 2006. Web. 04 Jan. 2016.

[21] Thomson, Rebecca et al. "Has Tanzania Embraced the Green Leaf? Results from Outlet and Household Surveys before and after Implementation of the Affordable Medicines Facility -Malaria." *PLoS ONE* 9.5 (2014): 1-3. Print.

Financing and major initiatives to improve malaria case management

The NMCP strategic plan for 2014-2020 includes the following goals[22]:

- To reduce malaria morbidity and malaria deaths by 80% from the 2012 levels by 2020
- To reduce malaria prevalence from 10% in 2012 to 5% in 2016 and to 1% in 2020
- To increase the proportion of women receiving two or more doses of SP during their pregnancy from 32% in 2012 to 80% by 2016

Tanzania's malaria funding comes primarily from the Global Fund (GF) and the President's Malaria Initiative (PMI). Together, both the GF and PMI provide approximately 90% of malaria funding in Tanzania[22]. The level of funding for malaria under the Global Fund New Modeling Fund is $185 million. A large portion of funding supports an insecticide-treated net (ITN) universal coverage campaign as well as effective treatment of malaria cases and containment of the epidemic. PMI is funding a school net program as well as focusing on antenatal clinic (ANC) distribution of ITNS. These programs will begin in 2016 and continue throughout 2017.

In 2010, the Affordable Medicines Facility-malaria (AMFm) was introduced to Tanzania[21]. Acting as an ACT subsidy mechanism and set up by the Global Fund, AMFm was created in order to resolve ACT access challenges. By the end of 2011, 4.9 million doses had been delivered to the public sector and another 4.9 million doses followed in 2012. PMI provided an additional 6.5 million ACT doses to the public sector, followed by 4.7 million doses in 2012. However, even with these additional doses, intermittent stock outs were experienced in public health facilities. Approximately 8 million ACT doses were delivered to the private-for-profit sector, followed by an additional 16.6 in 2012.

[22] "Malaria Operational Plan FY 2016." President's Malaria Initiative, 2015. Web. 04 Jan. 2016.

Annex 3: Outlet Survey Methods

Design and Study Population

ACTwatch implements repeat cross-sectional outlet surveys in project countries. The study population is defined as all outlets with the potential to sell or distribute antimalarial medicines and/or provide malaria blood testing. In Tanzania, this includes the following outlet types:

Public health facilities	National referral hospital, regional hospitals, district hospitals, health centers and dispensaries.
Private not for-profit facilities	NGO hospitals, NGO clinics, faith-based hospitals, faith-based clinics.
Private for-profit facilities	Private hospitals, clinics, and diagnostic laboratories. There are approximately 800 private facilities in Tanzania.
Pharmacies	Pharmacies are licensed and regulated by a national regulatory authority, and are staffed by pharmacists and qualified health practitioners. There are approximately 800 registered pharmacies in Tanzania.
Accredited Drug Dispensing Outlet (ADDO)	Drug shops that primarily sell medicines. These outlets are trained and regulated by a national regulatory authority. As of December 2013, there were over 5,500 ADDOs across 21 regions (out of a total of 30 regions nationally) and over 3,600 applications in process
Duka La Dawa Baridi (DLDB)	Drug shops that primarily sell medicines. These outlets are not guaranteed to be staffed by qualified health dispensers/ practitioners and not licensed by a national regulatory authority.
General retailers	Grocery stores and village shops.

Stratification

The Tanzania 2014 outlet survey is stratified to provide estimates for urban and rural domains. Urban and rural designations for all census enumeration areas were obtained from the 2012 Tanzania Population and Housing Census. Wards containing both urban and rural enumeration areas were classified as urban if 70% or more of the ward's population was residing in urban areas.

Eligibility Criteria

All outlets with the potential to sell or distribute antimalarials were included in the census screening. Outlets were eligible for a provider interview and malaria product audit if they met at least one of three study criteria: 1) one or more antimalarials reportedly in stock on the day of the survey; 2) one or more antimalarials reportedly in stock within the three months preceding the survey; and/or 3) provides malaria blood testing (microscopy or mRDT). Outlets that do not serve the general public (e.g. military facilities) were excluded from the study.

Sample Size

The outlet survey was powered to detect a 20 percentage point increase between 2011 and 2014 within each research domain (and nationally) in the indicator, *the proportion of outlets that have quality-assured ACT in stock among all outlets with antimalarials in stock at the time of the survey.* The required sample size for each research domain (urban and rural strata) was calculated in three steps: 1) determine the required number of antimalarial-stocking outlets; 2) determine the number of outlets to be enumerated to arrive at this number of antimalarial-stocking outlets; and 3) determine the number of clusters for the census to arrive at this number of outlets.

Required number of private sector antimalarial-stocking outlets

The number of antimalarial-stocking outlets required to detect a change over time in availability of ACT between survey rounds is given by:

$$n = deff\left[Z_a\sqrt{2P(1-P)} + Z_{1-b}\sqrt{P_1(1-P_1)+P_2(1-P_2)} \right]^2 \Big/ (P_2 - P_1)^2$$

where:

- n= desired sample size
- P_1= the proportion of antimalarial-stocking outlets with quality-assured ACT in stock in 2011
- P_2= the expected proportion of antimalarial-stocking outlets with quality-assured ACT in stock in 2014.
- P= $(P_1+P_2)/2$
- $Z_{\alpha/2=}$ The standard normal deviate value for a α type I error (two-sided)
- $Z_{1-\beta}$= The standard normal deviate value for a β type type II error
- Deff= design effect anticipated due to the cluster survey design. Design effects observed from the 2011 survey were used for sample size calculations.

The required size for the 2014 survey has been calculated based on the following assumed values of key parameters, taken from the 2011 outlet survey:

	Urban	**Rural**
P_1	0.716	0.683
Z_α	1.96	1.96
$Z_{1-\beta}$	0.84	0.84
Deff	5.3	2.0

Applying the above parameters to the stated formula yields the following required sample sizes: urban: 488; rural 192.

Required number of antimalarial-stocking outlets

The estimated total number of outlets enumerated needed for the QA ACT availability indicator was determined by the following formula for each urban/rural strata separately:

$$N = n / P_{am}$$

Where P_{am} is the proportion of outlets having antimalarial stocks at the time of the survey among all outlets enumerated. In this equation, the assumptions are as follows: N = desired sample size of all outlets for monitoring availability indicators, n is the number of outlets with antimalarial stocks at the time of the survey. P_{am} is the proportion of outlets with antimalarials in stock at the time of the survey among all outlets enumerated estimated from 2011 survey data for each domain (see below).

	Urban	Rural
Proportion of outlets with antimalarials in stock	0.231	0.149

Applying the above parameters to the stated formula yields the following required sample sizes: urban: 2,112; rural 1,296.

Required number of clusters (wards)

The primary sampling approach entails sampling a set of administrative units (geographic clusters) with a corresponding population of approximately 10,000 to 15,000 inhabitants. The appropriate administrative unit in Tanzania corresponding to this desired population size is ward. The desired number of clusters (wards) was selected with probability of cluster selection proportionate to size (PPS). A census of all outlets with the potential to sell or distribute antimalarials was conducted in sampled wards.

The average number of outlets screened per cluster from the 2011 outlet survey was used to estimate the number of clusters required in 2014 to achieve the desired sample size. Applying these averages to the required number of outlets for the study, the number of clusters required in each domain was: urban: 80.8; rural: 68.

Similar calculations were completed to determine the number of clusters required to detect change over time within public and private sector outlets, public health facilities, pharmacies, and ADDOs. Taking into account potential booster sampling scenarios, a final sample size of up to 30 urban and 30 rural clusters from sampled districts plus booster sample clusters was determined sufficient to meet sample size requirements for each of these outlet types.

Sampling

A representative sample of wards was selected in each research domain. At first stage a sample of 30 districts was selected with probability proportional to population size (PPS) from a list of all 161 districts in Tanzania. Within each sampled district, from a list of wards in each domain (urban and rural), the required number of wards was selected with PPS. Required numbers included 1 urban and 1 rural ward for the main sample, and additional wards for a booster sample of public health facilities, private for-profit facilities, pharmacies, and ADDOs. The total number of wards selected per district was therefore 9 urban (1 main sample and 8 booster sample) and 4 rural (1 main sample and 3 booster sample). This strategy yielded 66 main census wards and 239 booster wards for a total of 305 study wards. Wards with population sizes greater than 30,000 were segmented into streets or villages and segments were selected to achieve a sample size of segments with approximately 10-15,000 population size. All pharmacies located within the 30 sampled districts were included in the study.

Selection of districts and wards with PPS was completed based on the 2012 Tanzania Population and Housing Census. A sampling frame with population sizes was used for selecting the sample because accurate estimates on the total number of outlets per geographic/administrative unit that may be eligible for a medicine outlet survey do not exist. A list of selected wards is provided in Annex 4.

Data Collection

Interviewers, supervisors, and quality controllers received training that included an orientation to the study, questionnaire, and classroom training on completing antimalarial and mRDT audits, and a field exercise. Following training, data collection was implemented from November10, 2014 to December13, 2014.

For all interviews, a structured questionnaire was administered using paper questionnaires (see Annex 6). A series of screening questions were administered at all outlets to determine eligibility for the survey. Outlets where antimalarial medicines were reportedly sold and/or malaria blood testing was reportedly provided were invited to participate in the survey. Following informed consent procedures, an audit of all available antimalarial medicines and mRDTs was conducted. Antimalarial audit information included formulation, package size, brand name, active ingredients and strengths, manufacturer, country of manufacture, reported sale/distribution in the week preceding the survey, retail price, and wholesale price. MRDT audit information included brand name, manufacturer, and country of manufacture,

reported sale/distribution in the week preceding the survey, retail price, and wholesale price. Detailed descriptions of antimalarials and mRDTs audited are provided in Annex 7 and Annex 8. In addition to the product audit, a series of questions was administered to the senior-most provider regarding malaria case management knowledge and practices as well as provider training and qualifications. Geo-coordinates were recorded for each outlet using a handheld Global Positioning System (GPS) unit.

Up to three visits were made to all outlets to complete the screening process, audit, and provider interview as needed (e.g. where outlets were closed or providers were not available).

Data Entry, Processing, and Analysis

Data was collected using paper questionnaires. All data cleaning and analysis was completed using Stata 13.1 (©StataCorp, College Station, TX). Sampling weights were applied to account for variations in probability of selection (see Annex 9) and standard error estimation accounted for clustering at the ward and district levels. Indicator definitions are provided in Annex 10.

Protection of Human Subjects

The 2014 outlet survey protocol received ethical approval from the Tanzania National Institute of Medical Research. The PSI Research Ethics Board ceded review to the ethics committee in Tanzania. Provider interviews and product audits were completed only after administration of a standard informed consent form and provider consented to participate in the study. Providers had the option to end the interview at any point during the study. Standard measures were employed to maintain provider confidentiality and anonymity.

Annex 4: Sampled Wards

Table X1: Sampled wards

Region	District	Ward	Urban/ Rural	Population	Segment*	Population	Census/ Booster**
DODOMA	CHAMWINO	MVUMI MISSION	U	15876	NA	NA	C
GEITA	MBOGWE	LUGUNGA	U	14806	NA	NA	C
IRINGA	IRINGA MANISPAA	NDULI	U	6499	NA	NA	C
KAGERA	BIHARAMULO	BIHARAMULO MJINI	U	23024	NA	NA	C
KAGERA	MISSENYI	KYAKA	U	13126	NA	NA	C
KILIMANJARO	SAME	HEDARU	U	18160	NA	NA	C
MANYARA	HANANG	BASSOTU	U	24013	NA	NA	C
MARA	BUTIAMA	BUTIAMA	U	18114	NA	NA	C
MBEYA	RUNGWE	KIWIRA	U	25011	NA	NA	C
MWANZA	KWIMBA	MALYA	U	15059	NA	NA	C
MWANZA	SENGEREMA	IBISABAGENI	U	12959	NA	NA	C
PWANI	BAGAMOYO	MSOGA	U	10033	NA	NA	C
RUKWA	KALAMBO	MATAI	U	16125	NA	NA	C
RUKWA	SUMBAWANGA MANISPA	CHANJI	U	23367	NA	NA	C
RUVUMA	SONGEA MANISPAA	MJIMWEMA	U	11891	NA	NA	C
SHINYANGA	KAHAMA	BULYANHULU	U	24831	NA	NA	C
SIMIYU	BARIADI	MALAMBO	U	10358	NA	NA	C
SINGIDA	MANYONI	MITUNDU	U	22632	NA	NA	C
TABORA	NZEGA	BUKENE	U	7290	NA	NA	C
TABORA	SIKONGE	SIKONGE	U	16936	NA	NA	C
TANGA	LUSHOTO	SONI	U	12587	NA	NA	C
DAR ES SALAAM	ILALA	KIWALANI	U	81076	KIGILAGILA	13536	C
DAR ES SALAAM	KINONDONI	SARANGA	U	102583	STOPOVER	16594	C
DAR ES SALAAM	TEMEKE	YOMBO VITUKA	U	75772	MACHIMBO	31017	C
GEITA	BUKOMBE	IGULWA	U	43667	BULANGWA	8041	C
KATAVI	MPANDA	MISHAMO	U	60464	RUGUFU	4261	C
KATAVI	MPANDA	MISHAMO	U	60464	MGANSA	3798	C
KATAVI	MPANDA	MISHAMO	U	60464	BULAMATA	4282	C
KIGOMA	KASULU MJI	KASULU MJINI	U	65637	KUMNYIKA	11219	C
MBEYA	KYELA	KYELA	U	46513	MIKUMI	2130	C
MBEYA	KYELA	KYELA	U	46513	NDANDALO	961	C
MBEYA	KYELA	KYELA	U	46513	IDARA YA MAJI	2658	C
MBEYA	KYELA	KYELA	U	46513	BUSILIKA	1218	C
MBEYA	KYELA	KYELA	U	46513	MBUGANI	14851	C
MOROGORO	MOROGORO MANISPAA	MWEMBESONGO	U	42720	MAFISA	6964	C
MOROGORO	MOROGORO MANISPAA	MWEMBESONGO	U	42720	KIHONDA MBUYUNI	4428	C
MOROGORO	MOROGORO MANISPAA	MWEMBESONGO	U	42720	SUME	1401	C
MOROGORO	MOROGORO MANISPAA	MWEMBESONGO	U	42720	JUMAHAMSINI	1609	C
MOROGORO	MOROGORO MANISPAA	MWEMBESONGO	U	42720	MTAWALA	2092	C
MOROGORO	MVOMERO	MTIBWA	U	31152	MADIZINI	14064	C
MOROGORO	MVOMERO	MTIBWA	U	31152	KIDUDWE	6725	C
DAR ES SALAAM	ILALA	G/MBOTO	U	56581	NA	NA	B
DAR ES SALAAM	ILALA	KIPAWA	U	72725	NA	NA	B
DAR ES SALAAM	ILALA	KIVULE	U	71081	NA	NA	B
DAR ES SALAAM	ILALA	PUGU	U	48595	NA	NA	B
DAR ES SALAAM	ILALA	UKONGA	U	77079	NA	NA	B
DAR ES SALAAM	ILALA	VINGUNGUTI	U	105721	NA	NA	B
DAR ES SALAAM	KINONDONI	BUNJU	U	58843	NA	NA	B
DAR ES SALAAM	KINONDONI	KIJITONYAMA	U	56992	NA	NA	B
DAR ES SALAAM	KINONDONI	MABIBO	U	84391	NA	NA	B
DAR ES SALAAM	KINONDONI	MAKUMBUSHO	U	65544	NA	NA	B
DAR ES SALAAM	KINONDONI	MBURAHATI	U	33662	NA	NA	B
DAR ES SALAAM	KINONDONI	SINZA	U	39267	NA	NA	B

DAR ES SALAAM	TEMEKE	AZIMIO	U	75738	NA	NA	B
DAR ES SALAAM	TEMEKE	CHARAMBE	U	100749	NA	NA	B
DAR ES SALAAM	TEMEKE	KIJICHI	U	68161	NA	NA	B
DAR ES SALAAM	TEMEKE	MBAGALA	U	51817	NA	NA	B
DAR ES SALAAM	TEMEKE	MIBURANI	U	41909	NA	NA	B
DAR ES SALAAM	TEMEKE	TANDIKA	U	48638	NA	NA	B
DODOMA	CHAMWINO	BUIGIRI	U	16690	NA	NA	B
GEITA	BUKOMBE	UYOVU	U	28851	NA	NA	B
GEITA	MBOGWE	MASUMBWE	U	18412	NA	NA	B
GEITA	MBOGWE	NYAKAFULU	U	21393	NA	NA	B
IRINGA	IRINGA MANISPAA	ISAKALILO	U	8893	NA	NA	B
IRINGA	IRINGA MANISPAA	KITWIRU	U	11220	NA	NA	B
IRINGA	IRINGA MANISPAA	MAKORONGONI	U	7368	NA	NA	B
IRINGA	IRINGA MANISPAA	MTWIVILA	U	20731	NA	NA	B
IRINGA	IRINGA MANISPAA	MWANGATA	U	13212	NA	NA	B
IRINGA	IRINGA MANISPAA	RUAHA	U	16323	NA	NA	B
KAGERA	MISSENYI	KASSAMBYA	U	26476	NA	NA	B
KAGERA	MISSENYI	MUTUKULA	U	15210	NA	NA	B
KATAVI	MPANDA	KAREMA	U	7397	NA	NA	B
KILIMANJARO	SAME	KIHURIO	U	10152	NA	NA	B
KILIMANJARO	SAME	KISIWANI	U	8896	NA	NA	B
KILIMANJARO	SAME	MAORE	U	15587	NA	NA	B
KILIMANJARO	SAME	MWEMBE	U	10374	NA	NA	B
KILIMANJARO	SAME	NDUNGU	U	13497	NA	NA	B
KILIMANJARO	SAME	STESHENI	U	6364	NA	NA	B
MANYARA	HANANG	ENDASAK	U	9988	NA	NA	B
MANYARA	HANANG	GANANA	U	7392	NA	NA	B
MANYARA	HANANG	KATESH	U	8365	NA	NA	B
MANYARA	HANANG	NANGWA	U	12692	NA	NA	B
MARA	BUTIAMA	KUKIRANGO	U	23978	NA	NA	B
MBEYA	KYELA	IPINDA	U	20671	NA	NA	B
MBEYA	RUNGWE	BAGAMOYO	U	3191	NA	NA	B
MBEYA	RUNGWE	BULYAGA	U	6251	NA	NA	B
MBEYA	RUNGWE	IBIGHI	U	8831	NA	NA	B
MBEYA	RUNGWE	IKAMA	U	3755	NA	NA	B
MBEYA	RUNGWE	MAKANDANA	U	7244	NA	NA	B
MBEYA	RUNGWE	MSASANI	U	5615	NA	NA	B
MOROGORO	MOROGORO MANISPAA	K / NDEGE	U	12087	NA	NA	B
MOROGORO	MOROGORO MANISPAA	KIHONDA	U	43742	NA	NA	B
MOROGORO	MOROGORO MANISPAA	KINGO	U	2538	NA	NA	B
MOROGORO	MOROGORO MANISPAA	MAZIMBU	U	71588	NA	NA	B
MOROGORO	MOROGORO MANISPAA	MBUYUNI	U	11609	NA	NA	B
MOROGORO	MOROGORO MANISPAA	MLIMANI	U	4792	NA	NA	B
MOROGORO	MVOMERO	LANGALI	U	8561	NA	NA	B
MOROGORO	MVOMERO	MHONDA	U	19622	NA	NA	B
MOROGORO	MVOMERO	MVEMERO	U	21090	NA	NA	B
MOROGORO	MVOMERO	MVOMERO	U	15588	NA	NA	B
MWANZA	KWIMBA	NGUDU	U	27142	NA	NA	B
MWANZA	SENGEREMA	MWABALUHI	U	10781	NA	NA	B
MWANZA	SENGEREMA	NYAMPULUKANO	U	31451	NA	NA	B
MWANZA	SENGEREMA	NYATUKALA	U	19905	NA	NA	B
PWANI	BAGAMOYO	BWILINGU	U	34383	NA	NA	B
PWANI	BAGAMOYO	DUNDA	U	13568	NA	NA	B
PWANI	BAGAMOYO	MAGOMENI	U	28332	NA	NA	B
PWANI	BAGAMOYO	MBWEWE	U	14320	NA	NA	B
PWANI	BAGAMOYO	MIONO	U	16797	NA	NA	B
PWANI	BAGAMOYO	PERA	U	12486	NA	NA	B
RUKWA	SUMBAWANGA MANISPA	IZIA	U	19239	NA	NA	B

RUKWA	SUMBAWANGA MANISPA	KATANDALA	U	12317	NA	NA	B
RUKWA	SUMBAWANGA MANISPA	KIZWITE	U	15957	NA	NA	B
RUKWA	SUMBAWANGA MANISPA	MAJENGO	U	15153	NA	NA	B
RUKWA	SUMBAWANGA MANISPA	MAZWI	U	4213	NA	NA	B
RUKWA	SUMBAWANGA MANISPA	OLD SUMBAWANGA	U	22965	NA	NA	B
RUVUMA	SONGEA MANISPAA	BOMBAMBILI	U	27849	NA	NA	B
RUVUMA	SONGEA MANISPAA	LIZABONI	U	14626	NA	NA	B
RUVUMA	SONGEA MANISPAA	MATEKA	U	12672	NA	NA	B
RUVUMA	SONGEA MANISPAA	MJINI	U	7919	NA	NA	B
RUVUMA	SONGEA MANISPAA	MSHANGANO	U	8067	NA	NA	B
RUVUMA	SONGEA MANISPAA	SEEDFARM	U	5535	NA	NA	B
SHINYANGA	KAHAMA	BUGARAMA	U	18067	NA	NA	B
SHINYANGA	KAHAMA	ISAKA	U	21149	NA	NA	B
SHINYANGA	KAHAMA	SEGESE	U	17945	NA	NA	B
SHINYANGA	KAHAMA	ULOWA	U	19052	NA	NA	B
SIMIYU	BARIADI	BARIADI	U	11161	NA	NA	B
SIMIYU	BARIADI	DUTWA	U	15634	NA	NA	B
SIMIYU	BARIADI	NKOLOLO	U	21494	NA	NA	B
SIMIYU	BARIADI	NYAKABINDI	U	19669	NA	NA	B
SIMIYU	BARIADI	SIMA	U	13217	NA	NA	B
SIMIYU	BARIADI	SOMANDA	U	16174	NA	NA	B
SINGIDA	MANYONI	ITIGI	U	5502	NA	NA	B
SINGIDA	MANYONI	ITIGI MAJENGO	U	15368	NA	NA	B
SINGIDA	MANYONI	KINTINKU	U	8754	NA	NA	B
SINGIDA	MANYONI	MANYONI	U	24259	NA	NA	B
SINGIDA	MANYONI	SOLYA	U	3849	NA	NA	B
TABORA	NZEGA	NZEGA	U	234	NA	NA	B
TABORA	NZEGA	NZEGA MJINI	U	33393	NA	NA	B
TANGA	LUSHOTO	KWEMSHASHA	U	7892	NA	NA	B
TANGA	LUSHOTO	LUSHOTO	U	27284	NA	NA	B
TANGA	LUSHOTO	MLALO	U	8099	NA	NA	B
DODOMA	CHAMWINO	MANDA	R	9700	NA	NA	C
GEITA	MBOGWE	ILOLANGULU	R	11623	NA	NA	C
KAGERA	BIHARAMULO	NYAKAHURA	R	25934	NA	NA	C
KAGERA	MISSENYI	KAKUNYU	R	19964	NA	NA	C
KATAVI	MPANDA	MPANDANDOGO	R	25175	NA	NA	C
KILIMANJARO	SAME	NJORO	R	5358	NA	NA	C
MANYARA	HANANG	GISAMBALANG	R	10853	NA	NA	C
MARA	BUTIAMA	NYAKATENDE	R	18900	NA	NA	C
MBEYA	KYELA	MAKWALE	R	12592	NA	NA	C
MBEYA	RUNGWE	NKUNGA	R	15368	NA	NA	C
MOROGORO	MVOMERO	KIKEO	R	14275	NA	NA	C
MWANZA	KWIMBA	FUKALO	R	17340	NA	NA	C
MWANZA	SENGEREMA	BUPANDWA	R	29966	NA	NA	C
PWANI	BAGAMOYO	UBENAZOMOZI	R	15174	NA	NA	C
RUKWA	KALAMBO	MNAMBA	R	9856	NA	NA	C
RUKWA	SUMBAWANGA MANISPA	NTENDO	R	13233	NA	NA	C
SHINYANGA	KAHAMA	IDAHINA	R	23601	NA	NA	C
SIMIYU	BARIADI	MWAUBINGI	R	15748	NA	NA	C
SINGIDA	MANYONI	IDODYANDOLE	R	11058	NA	NA	C
TABORA	NZEGA	NDALA	R	16734	NA	NA	C
TABORA	SIKONGE	KISANGA	R	10344	NA	NA	C
TANGA	LUSHOTO	MTAE	R	12810	NA	NA	C
GEITA	BUKOMBE	NAMONGE	R	30246	BWENDA	5719	C
GEITA	BUKOMBE	NAMONGE	R	30246	MJIMWEMA	2929	C
GEITA	BUKOMBE	NAMONGE	R	30246	NYAMALANDULA	9675	C
KIGOMA	KASULU MJI	MUHUNGA	R	32500	HERU JUU	8995	C
DODOMA	CHAMWINO	HANETI	R	13016	NA	NA	B

DODOMA	CHAMWINO	MAKANG'WA	R	20130	NA	NA	B
DODOMA	CHAMWINO	MUUNGANO	R	10631	NA	NA	B
GEITA	BUKOMBE	BUSONZO	R	10193	NA	NA	B
GEITA	BUKOMBE	NG'ANZO	R	22092	NA	NA	B
GEITA	BUKOMBE	RUNZEWE MASHARIK	R	15772	NA	NA	B
GEITA	MBOGWE	IKOBE	R	10227	NA	NA	B
GEITA	MBOGWE	LULEMBELA	R	18108	NA	NA	B
GEITA	MBOGWE	NYASATO	R	10900	NA	NA	B
KAGERA	BIHARAMULO	KABINDI	R	25118	NA	NA	B
KAGERA	BIHARAMULO	LUSAHUNGA	R	36287	NA	NA	B
KAGERA	BIHARAMULO	NYANTAKARA	R	16137	NA	NA	B
KAGERA	MISSENYI	BUYANGO	R	8822	NA	NA	B
KAGERA	MISSENYI	KASHENYE	R	5657	NA	NA	B
KAGERA	MISSENYI	MUSHASHA	R	5043	NA	NA	B
KATAVI	MPANDA	KABUNGU	R	22528	NA	NA	B
KATAVI	MPANDA	KATUMA	R	8724	NA	NA	B
KATAVI	MPANDA	SIBWESA	R	17429	NA	NA	B
KIGOMA	KASULU MJI	KIGONDO	R	16411	NA	NA	B
KIGOMA	KASULU MJI	MUGANZA	R	17692	NA	NA	B
KIGOMA	KASULU MJI	NYUMBIGWA	R	11448	NA	NA	B
KILIMANJARO	SAME	LUGULU	R	6422	NA	NA	B
KILIMANJARO	SAME	MYAMBA	R	12994	NA	NA	B
KILIMANJARO	SAME	VUMARI	R	5777	NA	NA	B
MANYARA	HANANG	GENDABI	R	10820	NA	NA	B
MANYARA	HANANG	LALAJI	R	9624	NA	NA	B
MANYARA	HANANG	SIROP	R	5490	NA	NA	B
MARA	BUTIAMA	BUKABWA	R	10830	NA	NA	B
MARA	BUTIAMA	ETARO	R	10007	NA	NA	B
MARA	BUTIAMA	MURIAZA	R	10139	NA	NA	B
MBEYA	KYELA	BUJONDE	R	7494	NA	NA	B
MBEYA	KYELA	ITOPE	R	6674	NA	NA	B
MBEYA	KYELA	MATEMA	R	16775	NA	NA	B
MBEYA	RUNGWE	ISONGOLE	R	18564	NA	NA	B
MBEYA	RUNGWE	KISONDELA	R	10947	NA	NA	B
MBEYA	RUNGWE	MASOKO	R	6083	NA	NA	B
MOROGORO	MVOMERO	HEMBETI	R	20879	NA	NA	B
MOROGORO	MVOMERO	MASKATI	R	14305	NA	NA	B
MOROGORO	MVOMERO	SUNGAJI	R	14442	NA	NA	B
MWANZA	KWIMBA	BUNGULWA	R	10207	NA	NA	B
MWANZA	KWIMBA	MALIGISU	R	20688	NA	NA	B
MWANZA	KWIMBA	MWANKULWE	R	9351	NA	NA	B
MWANZA	SENGEREMA	CHIFUNFU	R	22940	NA	NA	B
MWANZA	SENGEREMA	KATWE	R	23961	NA	NA	B
MWANZA	SENGEREMA	NYAMAZUGO	R	16191	NA	NA	B
PWANI	BAGAMOYO	KEREGE	R	16650	NA	NA	B
PWANI	BAGAMOYO	KIWANGWA	R	14364	NA	NA	B
PWANI	BAGAMOYO	VIGWAZA	R	16443	NA	NA	B
RUKWA	KALAMBO	KASANGA	R	18293	NA	NA	B
RUKWA	KALAMBO	KISUMBA	R	17156	NA	NA	B
RUKWA	KALAMBO	MWAZYE	R	8768	NA	NA	B
RUKWA	SUMBAWANGA MANISPA	MATANGA	R	9422	NA	NA	B
RUKWA	SUMBAWANGA MANISPA	MOLLO	R	15665	NA	NA	B
RUKWA	SUMBAWANGA MANISPA	SENGA	R	6763	NA	NA	B
SHINYANGA	KAHAMA	IGUNDA	R	6494	NA	NA	B
SHINYANGA	KAHAMA	MWANASE	R	14698	NA	NA	B
SHINYANGA	KAHAMA	USHETU	R	17138	NA	NA	B
SIMIYU	BARIADI	GUDUWI	R	10464	NA	NA	B
SIMIYU	BARIADI	MWADOBANA	R	25131	NA	NA	B

SIMIYU	BARIADI	SAKWE	R	25434	NA	NA	B
SINGIDA	MANYONI	KITARAKA	R	9651	NA	NA	B
SINGIDA	MANYONI	MVUMI	R	7802	NA	NA	B
SINGIDA	MANYONI	SASILO	R	11935	NA	NA	B
TABORA	NZEGA	ITILO	R	14456	NA	NA	B
TABORA	NZEGA	MIZIBAZIBA	R	11543	NA	NA	B
TABORA	NZEGA	SEMEMBELA	R	16535	NA	NA	B
TABORA	SIKONGE	CHABUTWA	R	7776	NA	NA	B
TABORA	SIKONGE	KIPANGA	R	8123	NA	NA	B
TABORA	SIKONGE	MOLE	R	12130	NA	NA	B
TANGA	LUSHOTO	BUMBULI	R	10119	NA	NA	B
TANGA	LUSHOTO	MALIBWI	R	17666	NA	NA	B
TANGA	LUSHOTO	MNAZI	R	11161	NA	NA	B

* Wards with a population greater than 30,000 were segmented into segments of 10-15,000 population and one segment was sampled for the census.

** All outlets with potential to sell/distribute antimalarials were screened in census clusters. Public and private for-profit facilities and ADDOs were screened in booster clusters. All pharmacies in the sampled districts were included in the study.

Annex 5: Detailed Sample Description

Table X2: Detailed sample description

	Public Health Facility	Private Not For-Profit Facilities	Private For-Profit Facilities	Pharmacy	ADDO	DLDB	General Retailer	**ALL Outlets**
Number of outlets screened (Figure 1 Box B)	298	39	194	364	1133	117	2579	4724
Urban	151	28	176	364	886	67	1960	3632
Census	34	8	42	9	221	67	1960	2341
Booster	117	20	134	355	665	0	0	1291
Rural	147	11	18	0	247	50	619	1092
Census	40	3	4	0	57	50	619	773
Booster	107	8	14	0	190	0	0	319
Number of outlets eligible and interviewed (Figure 1 Box D)	297	39	190	361	1129	117	23	2156
Urban	151	28	172	361	882	67	9	1670
Census	34	8	40	9	219	67	9	386
Booster	117	20	132	352	663	0	0	1284
Rural	146	11	18	0	247	50	14	486
Census	39	3	4	0	57	50	14	167
Booster	107	8	14	0	190	0	0	319
Number of outlets eligible but not interviewed (interview non-participation)	0	0	1	3	0	0	0	4
Urban	0	0	1	3	0	0	0	4
Census	0	0	1	0	0	0	0	1
Booster	0	0	0	3	0	0	0	3
Rural	0	0	0	0	0	0	0	0
Census	0	0	0	0	0	0	0	0
Booster	0	0	0	0	0	0	0	0
Number of interviewed outlets with at least one antimalarial in stock on the day of the survey (Figure 1, Box D1)	297	38	172	361	1127	114	23	2132
Urban	151	28	155	361	881	65	9	1650
Census	34	8	28	9	219	65	9	372
Booster	117	20	127	352	662	0	0	1278
Rural	146	10	17	0	246	49	14	482
Census	39	3	3	0	57	49	14	165
Booster	107	7	14	0	189	0	0	317

Table X2: Detailed sample description

	Public Health Facility	Private Not For-Profit Facilities	Private For-Profit Facilities	Pharmacy	ADDO	DLDB	General Retailer	**ALL Outlets**
Number of interviewed outlets with at least one antimalarial in stock on the day of the survey or at least one antimalarial reportedly in stock in the previous 3 months (Figure 1 sum of Box 1 and Box 2)	297	39	172	361	1129	117	23	2138
Urban	151	28	155	361	882	67	9	1653
Census	34	8	28	9	219	67	9	374
Booster	117	20	127	352	663	0	0	1279
Rural	146	11	17	0	247	50	14	485
Census	39	3	3	0	57	50	14	166
Booster	107	8	14	0	190	0	0	319
Number of interviewed outlets that provide malaria blood testing, but do not stock antimalarial medicines (Figure 1 Box D3)	0	0	18	0	0	0	0	18
Urban	0	0	17	0	0	0	0	17
Census	0	0	12	0	0	0	0	12
Booster	0	0	5	0	0	0	0	5
Rural	0	0	1	0	0	0	0	1
Census	0	0	1	0	0	0	0	1
Booster	0	0	0	0	0	0	0	0
Proportion of eligible and interviewed antimalarial-stocking outlets with at least one provider with a health-related qualification*	297	38	172	357	1113	109	12	2098
Urban	151	28	155	357	873	63	8	1635
Census	34	8	28	9	218	63	8	368
Booster	117	20	127	348	655	0	0	1267
Rural	146	10	17	0	240	46	4	463
Census	39	3	3	0	54	46	4	149
Booster	107	7	14	0	186	0	0	314

* Health-related qualifications include: medical doctor, medical officer, pharmacist, nurse, assistant nurse, laboratory technician, pharmacy technician, physician, clinical officer, and community health worker

Source: ACTwatch Outlet Survey, Tanzania, 2014.

Annex 6: Questionnaire

ACTwatch Outlet Survey **TANZANIA2014**

Section I: Census Information

Interviewer completes this section for <u>all</u> outlets.

Outlet ID Interviewer-District- Constituency-Ward-OutletID [___|___]-[___|___]-[___|___|___]-[___|___|___|___]-[___|___|___]	
C1. Today's date(dd/mm/yyyy)	[___|___]-[___|___]-[_2_|_0_|_1_|_4_]
C2. Interviewer's name	C2a. Interviewer's code
C3. District	C3a. District code
C4. Ward	C4a. Ward code
C5. Village/Street	C5a. Village/street code
C6. Name ofoutlet***Ifnoname, record"noname"orowner'sname***	C6a. Outletcode

C7. Type of Outlet

01 = National Referral Hospital	21 = Private for profit hospital	51 = Itinerant medicine seller	[___|___]
02 = Regional Referral Hospital	22 = Private for profit clinic	61 = Private diagnostic lab (lab only)	
03 = District Hospital	23 = Private dispensary	62 = NGO/Mission diagnostic lab	
04 = Public Health Centre	31 = Pharmacy	(lab only)	
05 = Public Dispensary	32 = ADDO		
06 = Parastatal	33 = DLDB	96 = Other ***(specify)***	
11 = NGO/Mission Hospital	41 = Grocery store		
12 = NGO/Mission Health Center	42 = Market stalls	[_____]	

C8. Is this area partofthebooster sample?	1 = Yes	0=No	[___]
C8a. Is this outlet on the list of PSI outlets?	1 = Yes	0=No	[___]

Hello, my name is _____, I work on behalf of Population Services International. We are conducting a study on the availability of antimalarial medicines and diagnostic testing services. The results will be used to improve the availability of appropriate antimalarial treatment in Tanzania. I would like to ask you a few questions to see if you could be part of the survey.

Section 2: Screening & Eligibility

S1. Do you have any medicines in stock today?

1 = Yes ***Go to S3***
0 = No [___]

S2. Are there any medicines that are out of stock today, but that you stocked in the **<u>past 3 months?</u>**

1 = Yes ***Go to S4***
0 = No ***Go to S5***
8 = Don't know ***Go to S5*** [___]

S3. Do you have any antimalarial medicines in stock today?

1 = Yes ***Provide information sheet & gain consent. Record start time in C9. Proceed to Section 3: Antimalarial Audit.***
0 = No **Verify with prompt card.*Go to S4*** [___]

S4. Are there any antimalarial medicines that are out of stock today, but that you stocked in the **<u>past 3 months?</u>**

1 = Yes ***Provide information sheet & gain consent. Record start time in C9. Proceed to A16.***
0 = No ***Verify with prompt card. Go to S5***
8 = Don't know ***Verify with prompt card. Go to S5*** [___]

S5. Are you offering any diagnostic services or selling any diagnostic tests here today?

1 = Yes ***Go to S6***
0 = No ***Verify with prompt card.***
Record details in C9 then complete Sec 7:ORS & Zinc and Sec X: Ending Interview [___]

S6. Are any of these services or tests for suspected malaria?

1 = Yes ***Provide information sheet & gain consent. Record start time in C9.***
Go *to Section 4:Diagnostic Audit*
0 = No ***Verify with prompt card.***
Record details in C9 then complete Sec 7:ORS & Zinc and Sec X: Ending Interview [___]

Before proceeding to the full interview ensure you have given the respondent a study information sheet, explained the study and obtained informed consent.

C9. Result of Visit(s)

Date (dd/mm/yy)	Visit1	Visit 2	Visit 3
	[___|___]-[___|___]-[_1_|_4_]	[___|___]-[___|___]-[_1_|_4_]	[___|___]-[___|___]-[_1_|_4_]
Time started ***(use 24hr clock)***	[___|___]:[___|___]	[___|___]:[___|___]	[___|___]:[___|___]
Time completed ***(use 24hr clock)***	[___|___]:[___|___]	[___|___]:[___|___]	[___|___]:[___|___]
Result	[___|___]	[___|___]	[___|___]

01=Outlet eligible & survey completed ***go to E1***
02 = Outlet ineligible: does not meet any screening criteria ***go to E1***
03= Interview interrupted ***go to C11***
04= Respondent not available / Time not convenient ***go to C11***
05 =Outlet not open at the time ***go to C11***
06=Outlet closed permanently ***go to E1***
96=Other ***(specify):***[_____]
97 = Refused ***go to C10***

C10. If the provider refused, why? [___]

1=Client load ***Ask respondent for a time they would prefer to be interviewed and note in C11***
2 =Thinks it's an inspection/ nervous about license ***go to E1***
3 =Not interested ***go to E1***
6 = Other ***(specify):***
[_____]
7 =Refuses to give reason ***go to E1***

C11. ***Use this space to record call back details. If it is not possible to complete the interview at another time, go to E1.***

Section 7: ORS & Zinc: *Read to the provider:* I have a few questions for you about availability of treatments for diarrhea.

ORS1. Do you have any oral rehydration salts, also known as ORS in stock today? ***Verify with prompt card.*** [___]
1 = Yes
0 = No

ORS2. Do you have any zinc tablets for treatment of diarrhea in children in stock today? ***Verify with prompt card.*** [___]
1 = Yes
0 = No ***Go to C9***

ORS3. Which strength of zinc tablets for treatment of diarrhea in children do you have in stock today?
Read list, circle ALL that apply
A = 10mg
B = 20mg
C = other, specify ***:***[_____]

ORS4. Do you have any ORS that is packaged together with zinc treatment for diarrhea in children in stock today? ***Verify with prompt card*** [___]
1 = Yes
0 = No

Section X: Ending the interview

E1. Name of interviewee: [___]
5 = Not applicable, no respondent; 7 = Refused

E2. Physical address or location identifiers of outlet (not PO box)
(Give detailed description that will help supervisor to find the outlet)

E3. Telephone number
9999999995 = Not applicable: no respondent or has no telephone
9999999997 = Refused
[___|___|___|___|___|___|___|___|___|___]

E4.Latitude: [_**S**_]-[___|___|___]-[___|___|___|___|___]

E5.Longitude: [_**E**_]-[___|___|___]-[___|___|___|___|___]

E7. **Additional observations by interviewer (if any)**

THANK THE PROVIDER AND END INTERVIEW

Section II: Antimalarial Audit

A0. Read to the provider:
Can you please show us the full range of antimalarials that you currently have in stock? Do you currently have any of the following?
Prompt entire list using antimalarial prompt card; No response to be recorded.

- Artemether lumefantrine, such as *Lonart, Artefan, Lumartem, Coartem*
- Artesunate amodiaquine, such as *DUAC, Coarsucam, Winthrop*
- Other artemisinin combination therapies, such as *Asunate, Co-arinate, Arco*
- Artemether monotherapies, such as *Artemedine, Artenam, Romether, Erither, G-vither*
- Artesunate monotherapies, such as *Plasmotrim, Artesun, G-Sunate*
- SP, such as *Fansidar, Pharmadar, Maladox, Malamine, Malostat, Novidar, Sulphadar*
- Quinine, such as *, Quinalin, Quinizin, QSM,*
- Amodiaquine, such as *Amobin, Amodar, Malarid*
- Mefloquine, such as *Mephaquin, Meflotas*
- Syrups or suspensions, such as *Quinine-K, Quinimix ,Requin, Fantem , Co-artesiane, Co-malartem*
- Injectables, such as *Rogoquin, Artemether, Quinax, Larither, Kwinil, Emal, Artesiane*
- Granules or powders, such as *Artequin, Artesun*

If the outlet has no antimalarials in stock cross-check screening results then proceed to question A16.

Proceed to the antimalarial audit. Different antimalarial audit sheets will be used to record the antimalarial information based on the dosage form of the medicine.

Separate the antimalarials into two piles:

- ***The first pile should contain all the antimalarials in the form of tablets, suppositories, or granules. Use the Tablets, Suppositories & Granules Drug Audit Sheet to record these.***

- ***The second pile should contain all the antimalarials in any form other than tablets, suppositories or granules. Use the Non-Tablet Drug Audit Sheet to record these.***

If additional audit sheets are used, add these sheets after the ones provided and staple the questionnaire again. All pages should be in order before you move onto the next outlet.

Number <u>each drug</u> by assigning a Product Number (starting from 1 for TSG drugs and again from 1 for NT drugs). Number <u>each audit sheet used</u> in the spaces provided at the bottom of the page.

ADDITIONAL NOTES ON THE SUB-OUTLET CODE

In all outlets, complete the <u>Sub-Outlet Code</u> (as well as the Product Number) for each drug audited. These codes are listed below.

SUB-OUTLET CODES	
X	ALL outlets that have only ONE dispensing/distribution point for medicines/diagnostics
A	Outpatient department / dispensary/Main pharmacy (if used by all patients)
B	Adult outpatient department / adult dispensary / adult clinic
C	Child outpatient department / child dispensary / child clinic
D	Antenatal / maternity clinic/MCH
E	ART / HIV/AIDS clinic
G	Private dispensing unit within a public health facility (High cost)
L	Laboratory ***(for RDT audit)***
Z	Comprehensive Clinic / Other ***(specify the type in the space for audit comments –TSG 13 or NT 13)***

TABLET, SUPPOSITORY & GRANULE DRUG AUDIT SHEET (TSG) OUTLET ID: [___|___]-[___|___]-[___|___|___]-[___|___|___|___]-[___|___|___]

Sub-outlet code [_____] Product number [__|__]	[__|__] [__|__] [__|__] [__|__]	1. Generic name	2. Strength [__|__|__].[__]mg [__|__|__].[__]mg [__|__|__].[__]mg	2a. Is this base strength? [__] 1 = Yes [__] 0 = No 8 = Don't know [__] *If no, specify salt:* [_____]	3. Dosage form 1 = Tablet 2 = Suppository 3 = Granule [___]	4. Brand name *(Include weight and age information)*

5. Manufacturer	6. Tanzania of manufacture [__|__|__]	7. Package size There are a total of [___|___|___|___] tablets/ suppositories/ granule packs in each: 1 = Package 2 = Pot/tin [___]	8. Is product a fixed-dose combination (FDC) 1 = Yes 0 = No 8 = Don't know [___]	9. Does product have the AMFm logo? 1 = Yes 0 = No 8 = Don't know [___]	10. Amount sold/distributed in the last 7 days to individual consumers (*Record # of packages / tins described in* Q7 *OR record the total # of tablets / suppositories / granule packs sold*) This outlet sold [___|___|___|___] **packages/ tins** in the last 7 days **OR** This outlet sold [___|___|___|___] **tablets/ suppositories or granule packs** in the last 7 days ***Not applicable = 9995; Refused = 9997; Don't know = 9998***	11. Stocked out at any point in the past **3 months**? 1 = Yes 0 = No 8 = Don't know [___]

12. Retail selling price	13. Wholesale purchase price	14. Why do you stock this medicine [SHOW PRODUCT]? ***Do not read list***. ***Circle ALL responses given***	15. Comments
[___|___] **tablets, suppositories or granule packs** cost an individual customer [___|___|___|___|___]TZS	For the outlet's most recent wholesale purchase [___|___|___|___|___] **tablets, suppositories or granule packs** cost [___|___|___|___|___|___]TZS	Profitable A Recommended by the government B Low price C Customer demand or preference D Positive brand reputation E Often prescribed by doctors F Most effective for treating malaria G Don't know X Other Z ***specify*** [_____]	
Free = 00000 ***Refused = 99997*** ***Don't know = 99998***	***Free = 000000*** ***Refused = 999997*** ***Don't know = 999998***		

TABLET, SUPPOSITORY & GRANULE DRUG AUDIT SHEET (TSG) OUTLET ID: [___|___]-[___|___]-[___|___|___]-[___|___|___|___]-[___|___|___]

Sub-outlet code [_____] _____ Product number [__|__]	[__|__] [__|__] [__|__] [__|__]	1. Generic name	2. Strength [__|__|__].[__]mg [__|__|__].[__]mg [__|__|__].[__]mg	2a. Is this base strength? [__] 1 = Yes [__] 0 = No 8 = Don't know [__] *If no, specify salt:* [_____]	3. Dosage form 1 = Tablet 2 = Suppository 3 = Granule [__]	4. Brand name *(Include weight and age information)*

5. Manufacturer	6. Tanzania of manufacture	7. Package size	8. Is product a fixed-dose combination (FDC)	9. Does product have the AMFm logo?	10. Amount sold/distributed in the last 7 days to individual consumers (*Record # of packages / tins described in* Q7 *OR record the total # of tablets / suppositories / granule packs sold*)	11. Stocked out at any point in the past 3 months?
	[__|__|__]	There are a total of [__|__|__|__] tablets/ suppositories/ granule packs in each: 1 = Package 2 = Pot/tin [__]	1 = Yes 0 = No 8 = Don't know [__]	1 = Yes 0 = No 8 = Don't know [__]	This outlet sold [__|__|__|__] **packages/ tins** in the last 7 days **OR** This outlet sold [__|__|__|__] **tablets/ suppositories or granule packs** in the last 7 days ***Not applicable = 9995; Refused = 9997; Don't know = 9998***	1 = Yes 0 = No 8 = Don't know [__]

12. Retail selling price	13. Wholesale purchase price	14. Why do you stock this medicine [SHOW PRODUCT]? ***Do not read list***. ***Circle ALL responses given***		15. Comments
[__|__] **tablets, suppositories or granule packs** cost an individual customer [__|__|__|__|__]TZS	For the outlet's most recent wholesale purchase [__|__|__|__|__] **tablets, suppositories or granule packs** cost [__|__|__|__|__|__]TZS	Profitable	A	
		Recommended by the government	B	
		Low price	C	
		Customer demand or preference	D	
		Positive brand reputation	E	
		Often prescribed by doctors	F	
		Most effective for treating malaria	G	
		Don't know	X	
		Other	Z	
		specify [_____]		
Free = 00000 ***Refused = 99997*** ***Don't know = 99998***	***Free = 000000*** ***Refused = 999997*** ***Don't know = 999998***			

TABLET, SUPPOSITORY & GRANULE DRUG AUDIT SHEET (TSG) OUTLET ID: [___|___]-[___|___]-[___|___|___]-[___|___|___|___]-[___|___|___]

Tablet Audit Sheet [__|__] of [__|__]

Sub-outlet code [_____] Product number [__|__]	[__|__] [__|__] [__|__] [__|__]	1. Generic name	2. Strength [__|__|__].[__]mg [__|__|__].[__]mg [__|__|__].[__]mg	2a. Is this base strength? [__] 1 = Yes [__] 0 = No 8 = Don't know [__] *If no, specify salt:* [_____]	3. Dosage form 1 = Tablet 2 = Suppository 3 = Granule [__]	4. Brand name *(Include weight and age information)*

5. Manufacturer	6. Tanzania of manufacture [__|__|__]	7. Package size There are a total of [___|___|___|___] tablets/ suppositories/ granule packs in each: 1 = Package 2 = Pot/tin [___]	8. Is product a fixed-dose combination (FDC) 1 = Yes 0 = No 8 = Don't know [___]	9. Does product have the AMFm logo? 1 = Yes 0 = No 8 = Don't know [___]	10. Amount sold/distributed in the last 7 days to individual consumers (*Record # of packages / tins described in* Q7 *OR record the total # of tablets / suppositories / granule packs sold*) This outlet sold [___|___|___|___] **packages/ tins** in the last 7 days **OR** This outlet sold [___|___|___|___] **tablets/ suppositories or granule packs** in the last 7 days ***Not applicable = 9995; Refused = 9997; Don't know = 9998***	11. Stocked out at any point in the past **3 months**? 1 = Yes 0 = No 8 = Don't know [___]

12. Retail selling price	13. Wholesale purchase price	14. Why do you stock this medicine [SHOW PRODUCT]? ***Do not read list***. ***Circle ALL responses given***		15. Comments
[___|___] **tablets, suppositories or granule packs** cost an individual customer [___|___|___|___|___]TZS	For the outlet's most recent wholesale purchase [___|___|___|___|___|___] **tablets, suppositories or granule packs** cost [___|___|___|___|___|___]TZS	Profitable	A	
		Recommended by the government	B	
		Low price	C	
		Customer demand or preference	D	
		Positive brand reputation	E	
		Often prescribed by doctors	F	
		Most effective for treating malaria	G	
		Don't know	X	
		Other	Z	
Free = 00000 ***Refused = 99997*** ***Don't know = 99998***	***Free = 000000*** ***Refused = 999997*** ***Don't know = 999998***			

		specify [_____]	

Tablet Audit Sheet [__|__] of [__|__]

NON-TABLET DRUG AUDIT SHEET (NT): SYRUP, SUSPENSION, INJECTIONS & OTHERS

OUTLET ID: [___|___]-[___|___]-[___|___|___]-[___|___|___|___]-[___|___|___]

Sub-outlet code

[_____]

_____

Product number

[__|__]

[__|__]

[__|__]

[__|__]

1. Generic name

_____

_____

_____

_____

[__|__]

2. Strength

[__|__|__|__].[__]mg/**[__|__|__].**[__]mL

[__|__|__|__].[__]mg/**[__|__|__].**[__]mL

[__|__|__|__].[__]mg/**[__|__|__].**[__]mL

(***Note: no mL recorded for powder injection***)

2a. Is this base strength?

[__]

1 = Yes

[__] 0 = No

8 = Don't know

[__]

If no, specify salt:

[_____]

3. Dosage form

1 = Syrup
2 = Suspension
3 = Liquid inj.
4 = Powder inj.
5 = Drops
6 = Other ***(specify)***[_____]

[___]

4. Brand name

(Include weight and age information)

5. Manufacturer

6. Tanzania of manufacture

[__|__|__]

7. Package size

There are a total of

[___|___|___|___].[__] mL (or mg for powder injections) in each:

1 = Bottle
2 = Ampoule/vial

[___]

9. Does this product have the AMFm logo?

1 = Yes
0 = No
8 = Don't know

[___]

10. Amount sold/ distributed in the last 7 days to individual consumers

This outlet sold

[___|___|___|___] **bottles, ampoules or vials** in the last 7 days

Refused = 9997;
Don't know = 9998

11. Stocked out at any point in the past 3 months?

1 = Yes
0 = No
8 = Don't know

[___]

12. Retail selling price

[___|___|___]
bottles ampoules or vials cost an individual customer

[___|___|___|___|___]TZS

Free = 00000
Refused = 99997
Don't know = 99998

13. Wholesale purchase price

For the outlet's most recent wholesale purchase:

[___|___|___|___]
bottles, ampoules or vials cost

[___|___|___|___|___|___]TZS

Free = 000000
Refused = 999997
Don't know = 999998

14. Why do you stock this medicine [SHOW PRODUCT]?

Do not read list.
Circle ALL responses given

Profitable	A
Recommended by the government	B
Low price	C
Customer demand or preference	D
Positive brand reputation	E
Often prescribed by doctors	F
Most effective for treating malaria	G
Don't know	X
Other	Z

specify

[_____]

15. Comments

NON-TABLET DRUG AUDIT SHEET (NT): SYRUP, SUSPENSION, INJECTIONS & OTHERS

OUTLET ID: [___|___]-[___|___]-[___|___|___]-[___|___|___|___]-[___|___|___]

Sub-outlet code [_____] _____ Product number [__|__]	[__|__] [__|__] [__|__]	1. Generic name [__|__]	2. Strength [__|__|__|__].[__]mg/[__|__|__].[__]mL [__|__|__|__].[__]mg/[__|__|__].[__]mL [__|__|__|__].[__]mg/[__|__|__].[__]mL (*Note: no mL recorded for powder injection*)	2a. Is this base strength? [__] 1 = Yes [__] 0 = No 8 = Don't know [__] *If no, specify salt:* [_____]	3. Dosage form 1 = Syrup 2 = Suspension 3 = Liquid inj. 4 = Powder inj. 5 = Drops 6 = Other *(specify)*[_____] [__]

4. Brand name *(Include weight and age information)*	5. Manufacturer	6. Tanzania of manufacture [__|__|__]	7. Package size There are a total of [___|___|___|___].[__] mL (or mg for powder injections) in each: 1 = Bottle 2 = Ampoule/vial [___]	9. Does this product have the AMFm logo? 1 = Yes 0 = No 8 = Don't know [___]	10. Amount sold/ distributed in the last 7 days to individual consumers This outlet sold [___|___|___|___] **bottles, ampoules or vials** in the last 7 days *Refused = 9997;* *Don't know = 9998*	11. Stocked out at any point in the past 3 months? 1 = Yes 0 = No 8 = Don't know [___]

12. Retail selling price	13. Wholesale purchase price	14. Why do you stock this medicine [SHOW PRODUCT]?	15. Comments
[___|___|___] **bottles ampoules or vials** cost an individual customer [___|___|___|___|___]TZS	For the outlet's most recent wholesale purchase: [___|___|___|___] **bottles, ampoules or vials** cost [___|___|___|___|___|___]TZS	*Do not read list*. *Circle ALL responses given* Profitable A Recommended by the government B Low price C Customer demand or preference D Positive brand reputation E Often prescribed by doctors F Most effective for treating malaria G Don't know X Other Z *specify* [_____]	
Free = 00000 *Refused = 99997* *Don't know = 99998*	*Free = 000000* *Refused = 999997* *Don't know = 999998*		

NON-TABLET DRUG AUDIT SHEET (NT): SYRUP, SUSPENSION, INJECTIONS & OTHERS

OUTLET ID: [___|___]-[___|___]-[___|___|___]-[___|___|___|___]-[___|___|___]

Non-Tablet Audit Sheet [___|___] of [___|___]

Antimalarials recently in stock

A16. Are there any antimalarial medicines that are out of stock <u>today</u>, but that you stocked in the past **<u>3 months?</u>** 1 = Yes ***go to A17*** 0 = No ***go to Section 3: Diagnostic Audit*** 8 = Don't know ***go to Section 3: Diagnostic Audit***	[___]
A17.Do you know the names of the treatments that are out of stock? ***Will accept generic or brand names. Record one medicine per line.*** 1 = Yes, ***specify*** [_____] [_____] [_____] [_____] [_____] [_____] [_____] [_____] [_____] [_____] 0 = No	[___]

Interviewer: Go to Section 3: Diagnostic Audit

Section III: Diagnostic Audit

This section is about availability of malaria blood testing. Completing the questions may require speaking with more than 1 staff member at the outlet. If the respondent does not know the answer to a question in this section, ask to speak with another staff member who can provide the information.

D1. Does this outlet/facility have disposable gloves available today for staff to use when seeing customers/patients? 1 = Yes 0 = No 8 = Don't know	[___]
D2. Does this outlet/facility have a sharps container, also called a sharps disposal box or safety box, available today for staff to use? 1 = Yes 0 = No 8 = Don't know	[___]
D3. Is malaria microscopic testing available here today? 1= Yes 0= No ***go to D7***	[___]
D4. How many people were tested for **malaria** at this facility/outlet **using microscopy** within the past 7 days? 9998 = Don't know	[___|___|___|___]
D5. What is the total cost for a microscopic test for malaria for an adult: [___|___|___|___|___]TZS ***Free = 00000; NA =99995; Refused = 99997; Don't know=99998***	
D6. What is the total cost for a microscopic test for malaria for a child under five: [___|___|___|___|___]TZS ***Free = 00000; NA = 99995; Refused = 99997; Don't know=99998***	
D7. Malaria rapid diagnostic tests, also called RDTs, are small, individually wrapped blood tests that are able to quickly diagnose whether a person has malaria. ***Show RDT images in prompt card*** Are malaria RDTs available here today? 1 = Yes ***go to D8*** 0 = No***go to D9*** Don't know ***ask to speak with a respondent who has this information***	[___]
D8. Please show us the full range of RDTs that you currently have in stock. Do you currently have any of the following? ***Read entire list; No response to be recorded.*** • *SD Bioline, SD Malaria Antigen, U-Test Malaria* • *Wondfo One Step, Nova Test* • *First Response, ParaCheck, CareStart*	

Proceed to the RDT audit.

If additional audit sheets are used, add these sheets after the ones provided and staple the questionnaire again. All pages should be in order before you move onto the next outlet.

Number each RDT by assigning a Product Number.
Number each audit sheet used in the spaces provided at the bottom of the page.

In health facilities complete the Sub-outlet Code as well as the Product Number for each RDT audited.
Sub-outlet codes are listed on page 3.

RAPID DIAGNOSTIC TEST AUDIT SHEET (RDT) OUTLET ID: [___|___]-[___|___]-[___|___|___]-[___|___|___|___]-[___|___|___]

Sub-outlet code [_____] Product number [__|__]	1. Brand name	2. Antigen test *(circle ALL that apply)* Not indicated **Z** HRP2 **A** pLDH **B** Aldolase **C**	3. Parasite species *(circle ALL that apply)* Not indicated **Z** Pf **A** Pv **B** Po **C** pm **D** pan **E** vom/Pvom **F** other **G** Specify **[_____]**	4. Manufacturer	5. Tanzania of Manufacture ***Not indicated = 998***	6. Lot Number

7. Number of tests sold/ distributed /used in the last 7 days to individual consumers *(Record total # of tests)* This outlet sold or distributed [___|___|___] **tests** in the last 7 days ***Refused = 997 ; Don't know=998***	8. Has this test been stocked out at any point in the past 3 months? 1 = Yes 0 = No 8 = Don't know [___]	9a. Do you or other staff use this brand of RDT to test clients here at this facility/outlet? 1 = Yes 0 = No ***go to 10a*** 8 = Don't know ***go to 10a*** [___] **9b. If yes, what is the total cost for an adult to have a test conducted with this RDT, including RDT cost and service fee?** **[___|___|___|___] TSH** **9c. If yes, what is the total cost for a child under the age of five to have a test conducted with this RDT, including RDT cost and service fee?** **[___|___|___|___]TSH**	10a. Does this facility/outlet provide this brand of RDT for clients to take away for testing somewhere else? 1 = Yes 0 = No ***go to 11*** 8 = Don't know ***go to 11*** [___] **10b. If yes, what is cost of this RDT for an adult?** **[___|___|___|___] TSH** **10c. If yes, what is the cost of this RDT for a child under the age of five?** **[___|___|___|___] TSH**	11. Wholesale purchase price For the outlet's most recent wholesale purchase: [___|___|___|___] **tests** cost **[___|___|___|___|___]TSH** ***Free = 00000*** ***NA = 99995*** ***Refused = 99997*** ***Don't know=99998***	12. Comments

Free = 0000; NA = 9995; Refused = 9997; Don't know=9998

RAPID DIAGNOSTIC TEST AUDIT SHEET (RDT) OUTLET ID: [___|___]-[___|___]-[___|___|___]-[___|___|___|___]-[___|___|___]

Sub-outlet code [_____] Product number [__|__]	1. Brand name	2. Antigen test *(circle ALL that apply)* Not indicated **Z** HRP2 **A** pLDH **B** Aldolase **C**	3. Parasite species *(circle ALL that apply)* Not indicated **Z** Pf **A** Pv **B** Po **C** pm **D** pan **E** vom/Pvom **F** other **G** Specify **[_____]**	4. Manufacturer	5. Tanzania of Manufacture ***Not indicated = 998***	6. Lot Number

7. Number of tests sold/ distributed /used in the last 7 days to individual consumers *(Record total # of tests)* This outlet sold or distributed [___|___|___] **tests** in the last 7 days ***Refused = 997 ; Don't know=998***	8. Has this test been stocked out at any point in the past 3 months? 1 = Yes 0 = No 8 = Don't know [___]	9a. Do you or other staff use this brand of RDT to test clients here at this facility/outlet? 1 = Yes 0 = No ***go to 10a*** 8 = Don't know ***go to 10a*** [___] **9b. If yes, what is the total cost for an adult to have a test conducted with this RDT, including RDT cost and service fee?** **[___|___|___|___] TSH** **9c. If yes, what is the total cost for a child under the age of five to have a test conducted with this RDT, including RDT cost and service fee?** **[___|____|___|___]TSH**	10a. Does this facility/outlet provide this brand of RDT for clients to take away for testing somewhere else? 1 = Yes 0 = No ***go to 11*** 8 = Don't know ***go to 11*** [___] **10b. If yes, what is cost of this RDT for an adult?** **[___|___|___|___] TSH** **10c. If yes, what is the cost of this RDT for a child under the age of five?** **[___|___|___|___] TSH**	11. Wholesale purchase price For the outlet's most recent wholesale purchase: [___|___|___|___] **tests** cost **[___|___|___|___|___]TSH** ***Free = 00000*** ***NA = 99995*** ***Refused = 99997*** ***Don't know=99998***	12. Comments
		Free = 0000; NA = 9995; Refused = 9997; Don't know=9998			

RDT Audit Sheet [___|___] of [___|___]

RDT stock outs

D9. Are there any malaria RDTs that are out of stock today, but that you stocked in the past **3 months**? 1 = Yes 0 = No ***go to D11*** 8 = Don't know ***go to D11***	[___]
D10.Do you know the brand names of the malaria RDTs that are out of stock? ***Record one brand per line.*** 1 = Yes, ***specify*** [_____] [_____] [_____] 0 = No	[___]
D11.Does this facility/outlet **provide medicines or prescription** for medicines? 1 = Yes ***go to Section 4: Provider Module*** 0 = No ***Confirm response in S3 and S4 is not equal to 1 and outlet type recorded in C7 is 21 or 22 ("lab only"). Go to Section X: Ending the interview***	[___]

Section IV: Provider Module

This section is for the senior-most staff member who is responsible for providing treatment, prescriptions or medicines to clients/patients.

P1. Do your responsibilities at this outlet/facility include: providing prescriptions, treatment, or medicines to clients? 1 = Yes No***ask to speak with the senior-most person at the outlet with 1 or more of these responsibilities***	|___]
P2. For how many years have you worked in this outlet/facility? **If less than 1 year, enter 01**	[___|___]
P3.What age are you today?***Write age in years*** *Don't know=997 ; Refuse=998*	[___|___|__]
P4.***Don't read:*** Is respondent male or female? 1= Male 2= Female	[___|___]
P5.What is the highest level of education you completed? 1 = No formal education 2 = Some primary school 3 = Completed primary school 4 = Some secondary school 5 = Completed secondary school 6 = Some university/college 7 = Completed a university/college degree or diploma	[___]
P6. Have you received any training in the last 12 months that included a component on malaria diagnosis, including malaria rapid diagnostic tests or microscopy? ***Include pre-service training and stand-alone workshops.*** 1 = Yes 0 = No 8 = Don't know	[___]
P7. Have you received any training in the last 12 months on the national treatment guidelines for malaria? ***Include pre-service training and stand-alone workshops.*** 1 = Yes 0 = No 8 = Don't know	[___]
P8. Do you have any of the following **health qualifications**? ***Read list***. ***Record 1 for yes, 0 for no***	
I. Pharmacist	[___]
II. Physician	[___]
III. Medical Officer / Assistant Medical Officer	[___]
IV. Clinical Officer / Assistant Clinical Officer	[___]
V. Nurse / Nurse Midwife	[___]
VI. Assistant Nurse	[___]
VII. Laboratory technologist / Lab assistant	[___]
VIII. Pharmacy technician / Pharmacy assistant / Drug Dispenser	[___]
IX. Community based distributor/Community Health Worker	[___]

P9. **Not** including yourself, do any other people working in this outlet or facility have the following **health qualifications**? ***Read list***. ***Record 1 for yes, 0 for no, 8 for don't know***	
I. Pharmacist	[___]
II. Physician	[___]
III. Medical Officer / Assistant Medical Officer	[___]
IV. Clinical Officer / Assistant Clinical Officer	[___]
V. Nurse / Nurse Midwife	[___]
VI. Assistant Nurse	[___]
VII. Laboratory technologist / Lab assistant	[___]
VIII. Pharmacy technician / Pharmacy assistant / Drug Dispenser	[___]
IX. Community based distributor/Community Health Worker	[___]

Interviewer: For the following four questions record the antimalarial brand name or generic name, and dosage form, in the spaces provided.
Ask the provider to show you the medicine if it is in stock to verify the name and dosage form.

P10. In your opinion, for treating uncomplicated malaria in adults, what is the most effective antimalarial medicine?

Generic or brand name	**Dosage form**		
	01 = Tablet	04 = Syrup	95 = No preference
	02 = Suppository	05 = Suspension	96 = Other ***(specify)***
	03 = Granule	06 = Liquid inj.	98 = Don't know
		07 = Powder inj.	
[_____]	[___|___]		
Don't know = 98	***If Other, specify*** [_____]		

P11. In your opinion, for treating uncomplicated malaria in children under five, what is the most effective antimalarial medicine?

Generic or brand name	**Dosage form**		
	01 = Tablet	04 = Syrup	95 = No preference
	02 = Suppository	05 = Suspension	96 = Other ***(specify)***
	03 = Granule	06 = Liquid inj.	98 = Don't know
		07 = Powder inj.	
[_____]	[___|___]		
Don't know = 98	***If Other, specify*** [_____]		

P12. What antimalarial medicine for treating uncomplicated malaria in adults do you most often recommend to customers?

Generic or brand name	**Dosage form** 01 = Tablet 02 = Suppository 03 = Granule 04 = Syrup 05 = Suspension 06 = Liquid inj. 07 = Powder inj. 95 = No preference 96 = Other ***(specify)*** 98 = Don't know
[_____]	[___|___]
Don't know = 98	***If Other, specify*** [_____]

P13. What antimalarial medicine for treating uncomplicated malaria in children under five do you most often recommend to customers?

Generic or brand name	**Dosage form** 01 = Tablet 02 = Suppository 03 = Granule 04 = Syrup 05 = Suspension 06 = Liquid inj. 07 = Powder inj. 95 = No preference 96 = Other ***(specify)*** 98 = Don't know
[_____]	[___|___]
Don't know = 98	***If Other, specify*** [_____]

P14. Please name the first line medicine recommended by the government to treat uncomplicated malaria fever.

Do not read list. Only one response allowed.

01 = Artemether Lumefantrine (Lonart, Artefan, Lumartem, Coartem)..... ***go to P15***
02 = ACT..... ***go to P15***
03 = ACTm..... ***go to P15***
04 = Artesunate Amodiaquine (DUAC, Coarsucam, Winthrop)
05 = Dihydroartemisinin Piperaquine
06 = Amodiaquine
07 = Artemether
08 = Artemisinin
09 = Artesunate
10 = Chloroquine
11 = Quinine
12 = Sulfadoxine Pyrimethamine (Fansidar, SP,)
96 = Other ***specify***: [_____]
98 = Don't know

go to P17

[___|___]

P15.Please explain the government recommended treatment regimen for this drug for an adult (60kg)
Read the following 3 questions to the provider

I. How many tablets should they take at a time? [___|___].[___|___]

II. How many times per day? [___|___]

III. Over how many days? [___|___]

Don't know = 98

NA = 95

If respondent has the medicine available use the package to complete the table below.
If the medicine is not available ask respondent to identify from prompt card.
If identification not possible, ask respondent to recall medicine details.

	Generic name	Strength	Brand name	Manufacturer
[__|__]	_____	[__|__|__].[__]mg		
[__|__]	_____	[__|__|__].[__]mg		
[__|__]	_____	[__|__|__].[__]mg		
[___|___]				

Is this drug a **fixed-dose combination**

1 = Yes
0 = No [___]
8 = Don't know

P16.Please explain the government recommended treatment regimen for this drug for a 2-year old child (10kg) ***Read the following 3 questions to the provider***

I. How many tablets should they take at a time? [___|___].[___|___]

II. How many times per day? [___|___]

III. Over how many days? [___|___]

Don't know = 98

NA = 95

Syrup/Suspension=94

If respondent has the medicine available use the package to complete the table below.
If the medicine is not available ask respondent to identify from prompt card.
If identification not possible, ask respondent to recall medicine details.

	Generic name	Strength	Brand name	Manufacturer
[__|__]	_____	[__|__|__].[__]mg		
[__|__]	_____	[__|__|__].[__]mg		
[__|__]	_____	[__|__|__].[__]mg		
[___|___]				

Is this drug a **fixed-dose combination**

1 = Yes
0 = No [___]
8 = Don't know

P17. Malaria rapid diagnostic tests, also called RDTs, are small, individually wrapped blood tests that are able to quickly diagnose whether a person has malaria. ***Show RDT images in prompt card***

Have you ever tested a client for malaria using an RDT? [___]

1 = Yes ***go to P18***
0 = No ***go to P20***
8 = Don't know ***go to P20***

P18. Would you ever recommend a patient/customer take an antimalarial if a blood test using a rapid diagnostic test produced a negative test result for malaria? **Read list. Record only one response.** 1 = Yes, Sometimes 2 = Yes, Always 3 = No, Never ***go to P20*** 8 = Don't know ***go to P20***	[___]
P19. Under what circumstances would you recommend a patient/customer take an antimalarial following a negative RDT test for malaria? ***Do not read list. Prompt "anything else" until the respondent is finished.*** ***Circle ALL responses given***	
When they have signs/symptoms of malaria	A
When they ask for antimalarial treatment	B
When they are a child	C
When they are an adult	D
When they are a pregnant woman	E
When I do not trust/believe the test	F
When I know the patient/customer	G
Other **Other (specify)** [_____]	X

P20. What are the danger signs of <u>severe</u> illness in a child under 5? ***Do not read list. Prompt "anything else" until the respondent is finished.*** ***Circle ALL responses given***	
Unable to drink /unable to breastfeed	A
Vomits everything	B
Convulsions	C
Lethargic or unconscious	D
Aneamia/Paleness/lack of enough blood	E
Body aches and pains/Joint pains	F
Difficulty in breathing, Abnormal breathing	G
Fever, Hot body, High temperature	H
Don't know	Z
Other Other (specify) [_____]	X

P21. What would you do if a 2-year old child was brought to this outlet with the danger signs of **severe** illness? ***Do not read list. Only one response allowed.*** 01 = Seek advice/help from someone in this facility 02 = Treat the child in this facility 03 = Refer to a health facility (clinic, hospital) with or without treating here 04 = Refer to a non health facility outlet (not a clinic or hospital) with or without treating here 05 = Send them away/home without medicine 06 = Send them away/home with medicine 96 = Other – *specify:* [_____] 98 = Don't know	[___|___]

Complete the audit sheet tracker on the next page then follow the instructions for ending the interview.

Section V: Audit Tracking Sheet

T1. Were there any antimalarial TABLETS/SUPPOSITORIES/GRANULES in stock at this outlet? 1 = Yes 0 = No ***go to T4*** 8 = Don't know ***go to T4***	[___]
T2. Total number of TABLET/SUPPOSITORY/GRANULE audit sheets completed	[___|___]
T3. Did you complete audit sheet information for all available TABLETS/SUPPOSITORIES/GRANULES? 1 = Yes, audit complete 0 = No, audit not complete	[___]

T4. Were there any antimalarial NON TABLETS (Syrups, suspensions, Injectables) in stock at this outlet? 1 = Yes 0 = No ***go to T7*** 8 = Don't know ***go to T7***	[___]
T5. Total number of NON-TABLET audit sheets completed	[___|___]
T6. Did you complete audit sheet information for all available NON-TABLETS? 1 = Yes, audit complete 0 = No, audit not complete	[___]

T7. Were there any RDTs in stock at this outlet? 1 = Yes 0 = No ***go to T10*** 8 = Don't know ***go to T10***	[___]
T8. Total number of RDT audit sheets completed	[___|___]
T9. Did you complete audit sheet information for all available RDT? 1 = Yes, audit complete 0 = No, audit not complete	[___]

T10. COMMENTS: Reason for incomplete audit sheets (if response is no to T3, T6, or T9):

THANK THE PROVIDER FOR THEIR PARTICIPATION

***Return to C9** and record the final status of the interview and time completed. Then complete Section X: Ending the Interview.*

Annex 7: Antimalarial Reference

Table X3: Number of antimalarials audited

	Public Health Facility	Private Not For-Profit	**ALL Public / Not For-Profit**	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General retailer	**Total Private**	**ALL Outlets**
Urban	981	205	1186	1293	4794	6798	499	67	13451	14637
Census	216	58	274	201	95	1543	499	67	2405	2679
Booster	765	147	912	1092	4699	5255	0	0	11046	11958
Rural	822	49	871	91	0	1458	219	31	1799	2670
Census	223	21	244	8	0	370	219	31	628	872
Booster	599	28	627	83	0	1088	0	0	1171	1798
TOTAL	1803	254	2057	1384	4794	8256	718	98	15250	17307

Source: ACTwatch Outlet Survey, Tanzania, 2014.

Table X4: Quality-Assured (QA ACT) and Non-Quality Assured ACTs

Quality-Assured ACT (QA ACT)

QA ACTs are ACTs that comply with the Global Fund to Fight AIDS, Tuberculosis and Malaria's Quality Assurance Policy. A QA ACT is any ACT that appeared on the Global Fund's indicative list of antimalarials meeting the Global Fund's quality assurance policy* prior to data collection, or that previously had C-status in an earlier Global Fund quality assurance policy and was used in a program supplying subsidized ACTs. QA ACTs also include ACTs that have been granted regulatory approval by the European Medicines Agency (EMA)** – specifically Eurartesim® and Pyramax®.

Artesunate Amodiaquine Tablets	**Artemether Lumefantrine Tablets**
Apmod 25/67.5 Infant^#	ARTEFAN 20/120 15-24KG
Apmod 50/135 1-5 Years #	ARTEFAN 20/120 15-24KG DISPERSIBLE
Apmod 100/270 Adult ^#	ARTEFAN 20/120 25-34KG
Winthrop Infant 2-11 Months #	ARTEFAN 20/120 35+ KG ADULTS
Winthrop Toddler 1-5 Years^#	ARTEFAN 20/120 5-14KG
Winthrop Child 6-13 Years^#	ARTEFAN 20/120 5-14KG DISPERSIBLE
Winthrop Adult +14 Years #	ARTEFAN 20/120 AGE:9-14YEARS WEIGHT:25-34KGS
	ARTEFAN DISPERSIBLE 20/120
	ARTEMETHER + LUMEFANTRINE <3 YEARS
	ARTEMETHER + LUMEFANTRINE >14 YEARS
	ARTEMETHER + LUMEFANTRINE 3-8 YEARS
	ARTEMETHER + LUMEFANTRINE 9-14 YEARS
	COARTEM 20/120 15-25 KG
	COARTEM 20/120 25-35 KG
	COARTEM 20/120 35 KG +
	COARTEM 20/120 5-15 KG
	COMBIART 20/120 15-24 KG
	COMBIART 20/120 25-34 KG
	COMBIART 20/120 35 KG AND ABOVE
	COMBIART 20/120 5-14 KG
	LUMARTEM 15-<25KG
	LUMARTEM 25-<35KG
	LUMARTEM 35KGS AND ABOVE
	LUMARTEM 5-<15KG
	LUMERAX 20/120

Non-Quality-Assured ACT

ACTs that do not meet the definition of being quality-assured.

Artemether Lumefantrine Tablets	**Artemisinin Napthoquine Tablets**
Artefan 80/480 ^#	ARCO
Co-Malather #	
Co-Malather Compact ^#	**Artemisinin Piperaquine Tablets**
Lonart Dispersible #	ARTEQUICK
Lumerax 80/480 #	
	Artesunate Mefloquine Tablets
Artemether Lumefantrine Suspensions	ARTEQUIN 300/375 CHILD
Co-Artesiane Pediatric ^#	ARTEQUIN 600/750 ADULT
Artesunate Amodiaquine Tablets	**Dihydroartemisinin Piperaquine Tablets**
ARTEQUIN 300/375 CHILD	DUO-COTECXIN 40/320 ADULT & CHILDREN OVER 6 YEARS
ARTEQUIN 600/750 ADULT	DUO-COTECXIN CHILDREN 5-20KG
	RIDMAL 40/320

* http://www.theglobalfund.org/en/procurement/quality/pharmaceutical
**http://www.ema.europa.eu/
^ Product audited in the public sector
# Product audited in the private sector

Table X5: Severe Malaria Treatment

WHO recommends parenteral artesunate as first-line treatment in the management of severe falciparum malaria, with artemether or quinine injections as acceptable alternatives if parenteral artesunate is not available*. If complete treatment for severe malaria is not possible, patients with severe malaria should be given pre-referral treatment and referred immediately to an appropriate facility for further treatment. The following are options for pre-referral treatment: rectal artesunate, injectable quinine, injectable artesunate, injectable artemether, and injectable arteether/artemotil.

Quinine Liquid Injection (Manufacturer)	**Artemether Liquid Injection (Manufacturer)**
Kwinil (Intas Pharmaceuticals Ltd) ^#	Artem (Kunming Pharmaceutical Corp) ^#
Quimed Injection (Syner-Med Pharmaceutical Ltd) ^#	Artemal-M Injection (Plethico Pharma Ltd) ^#
Quinaquin (Elys Chemical Industries Ltd) ^#	Artemedine (Kunming Pharmaceutical Corp) #
Quinine Dihydrochloride (Wuhan Grand Pharmaceutical Group Co. Ltd) ^#	Artenam 100 (Arenco Pharmaceutical) ^#
Quinine Dihydrochloride (Intas Pharmaceutical Ltd) ^#	Artenam 40 (Arenco Pharmaceutical) ^#
Quinine Dihydrochloride (Gland Pharma Ltd) #	Artesiane 20 (Dafra Pharma Ltd) #
Quinine Dihydrochloride (Laboratory And Allied Ltd) ^#	Artesiane 80 (Dafra Pharma Ltd) ^#
Quinine Dihydrochloride (Greenfield Pharmaceutical (Jiangsu) Co Ltd) ^#	Artesiane 100 (Dafra Pharma Ltd) #
Quinine Dihydrochloride (Shandong Xier Kangtai Pharmaceutical Co. Ltd) ^	Larither 80 (Ipca Laboratories Ltd) ^#
Quinine Dihydrochloride (Indus Pharma (Pvt.) Ltd) #	
Quinine Injection (Ningbo Tisun Medic Biochemic Co. Ltd) #	
Artesunate Powder Injection (Manufacturer)	
Artesun 120mg (Guilin Pharmaceutical Co Ltd) ^#	
Artesun 30mg (Guilin Pharmaceutical Co Ltd) ^#	
Artesun 60mg (Guilin Pharmaceutical Co Ltd) ^#	

* Guidelines for the treatment of malaria, 2nd edition – revision 1.WHO. Geneva: 2010.
^ Product audited in the public sector
# Product audited in the private sector

Annex 8: RDT Reference

Table X6: Number of RDTs audited

	Public Health Facility	Private Not For-Profit Facility	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General retailer	**ALL Outlets**
Urban	135	19	101	33	41	0	0	329
Census	35	4	23	1	9	0	0	72
Booster	100	15	78	32	32	0	0	257
Rural	120	10	9	0	29	4	3	175
Census	31	3	2	0	13	4	3	56
Booster	89	7	7	0	16	0	0	119
TOTAL	255	29	110	33	70	4	3	504

Source: ACTwatch Outlet Survey, Tanzania, 2014.

Table X7: RDT Brand Names and Manufacturers*	
Brand Name	**Manufacturer**
CARESTART#	ACCESS BIO INC.
FIRST RESPONSE^#	PREMIER MEDICAL CORPORATION LTD
PARACHECK#	ORCHID BIOMEDICAL SYSTEMS
PARAHIT^#	SPAN DIAGNOSTICS LTD
SD BIOLINE^#	STANDARD DIAGNOSTICS INC.

* 504 RDTs were audited. 1 RDT product was missing brand name information (missing or don't know) or 4 RDT products were missing manufacturer name (missing or don't know).
^ Product audited in the public sector
# Product audited in the private sector

Annex 9: Sampling Weights

Sampling weights were applied for analysis of the Tanzania 2014 outlet survey data to account for variations in probability of selection as a result of the sampling design:

1) **Stratification**: Disproportionate allocation stratification was used to ensure adequate sample size within the urban and rural domains to allow for domain-specific estimates. The research domains were based on national designation of urban and rural wards. A representative sample was selected within each domain.

2) **Two-stage cluster sampling**: Districts were selected from a national sampling frame with probability proportional to size (PPS). Within each sampled district, 1 urban and 1 rural main census ward was selected with PPS. Within each ward, a census of all outlets with the potential to sell or distribute antimalarials and/or provide malaria blood testing was conducted.

3) **Booster sample – public health facilities, private for-profit health facilties and ADDOs**: Additional wards were sampled from urban and rural areas within each district for over-sampling of certain outlet types. Within booster sample wards, all public health facilities, private for-profit facilitiesand ADDOs were included in the study.

4) **Booster sample – pharmacies**: All pharmacies within sampled districts were included in the study.

The sampling weights applied during analysis are the inverse of the probability of selection:

$$W_i = \frac{1}{\mathrm{a} \times \frac{\mathrm{D}_\alpha}{\sum \mathrm{D}_\alpha} \times \ \mathrm{b} \times \frac{\mathrm{M}_\alpha}{\sum \mathrm{M}_\alpha}}$$

Where:

1st Stage of selection:

- D_α = estimated district population size
- ΣD_α = sum of estimated district population sizes
- a = number of districts selected

2nd Stage of selection:

- M_α = estimated ward population size
- ΣM_α = sum of estimated ward population sizes in the stratum (urban/rural)
- b = number of wards selected within the district

Sampling weights are calculated at the cluster level and are applied to all outlets within a given cluster, irrespective of outlet type.

Market share was calculated amongwards selected for the full census (i.e. the booster sample wards were not included in market share calculations). These sampling weights were applied to all other indicators in the report for all outlet types with the exception of:

1. Public health facilities, private for-profit facilitiesand ADDOs: Additional wards were selected within sampled districts as booster sample wards and all public health facilities, private for-profit facilitiesand ADDOs within these wards were included in the study. The above formula was used for weights applied to these outlet types with b number of wards selected within the district reflecting inclusion of booster sample wards.

2. Pharmacies: Given that pharmacies were included in the sample through a district-wide census, the weights applied to pharmacies for all indicators other than market share were calculated using the following formula:

$$W_i = \frac{1}{\mathrm{a} \times \frac{\mathrm{D}_\alpha}{\sum \mathrm{D}_\alpha}}$$

Where:

- D_α = estimated district population size
- ΣD_α = sum of estimated district population sizes
- a = number of districts selected

The population estimates used to select districts and wards with PPS and to create sampling weights were obtained from the 2012 Tanzania Population and Housing Census. A sampling frame with population sizes was used for selecting the sample because accurate estimates on the total number of outlets per geographic/administrative unit that may be eligible for a medicine outlet survey do not exist. The major assumption in using population figures for sampling and weighting is that distribution of outlets and/or distribution of medicines moving through outlets in a given cluster is correlated with population size.

Annex 10: Indicator Definitions

Table definitions below are reflective of the corresponding table numbers in each results section above (Table 1 definition corresponds to Table A1, Table B1, Table C1, etc.)

Table 1: Availability of antimalarials, among all screened outlets

Table 1 reports the proportion of all outlets enumerated that had any antimalarial in stock at the time of the survey visit. Antimalarial availability is reported among all outlets as well as among individual outlet types, all public outlets, and all private outlets. Availability is reported for any antimalarial as well as specific types of antimalarial medicines.

Numerator	Number of outlets with any antimalarial in stock at the time of the survey visit, as confirmed by presence of at least one antimalarial (defined as a medicine with antimalarial ingredients) recorded in the antimalarial audit section.
Denominator	Number of outlets screened.
Calculation	Numerator divided by denominator.
Handling missing values	All screened outlets will contribute to the denominator. This includes outlets that were eligible for interview (including antimalarial audit) but: 1) were not interviewed; or 2) the interview was partially completed.
Notes and considerations	Given partial or non-completion of interviews among eligible outlets and the inclusion of these outlets in the denominator, these availability indicators can be considered conservative estimates of antimalarial availability.

Table 2: Availability of antimalarials, among outlets stocking at least one antimalarial

Table 2 reports the proportion of antimalarial-stocking outlets with specific antimalarial in stock at the time of the survey visit. Antimalarial availability is reported among all outlets as well as among individual outlet types, all public outlets, and all private outlets. Availability is reported for any antimalarial as well as specific types of antimalarial medicines.

Numerator	Number of outlets with any antimalarial in stock at the time of the survey visit, as confirmed by presence of at least one antimalarial (defined as a medicine with antimalarial ingredients) recorded in the antimalarial audit section.
Denominator	Number of outlets with at least 1 antimalarial audited.
Calculation	Numerator divided by denominator.
Handling missing values	All outlets with at least one antimalarial recorded in the antimalarial audit sheet will contribute to the denominator. This includes outlets where the interview was not fully completed (partial interview).
Notes and considerations	Given partial completion of interviews among antimalarial-stocking outlets and the inclusion of these outlets in the denominator, these availability indicators can be considered conservative estimates of antimalarial availability.

Table 3: Antimalarial market composition

Table 3 reports the distribution of outlet types among outlets with at least one antimalarial in stock on the day of the survey.

Numerator	By outlet type, the number of outlets with any antimalarial in stock at the time of the survey visit, as confirmed by presence of at least one antimalarial (defined as a medicine with antimalarial ingredients) recorded in the antimalarial audit section.
Denominator	Total number of outlets with any antimalarial in stock at the time of the survey visit, as confirmed by presence of at least one antimalarial (defined as a medicine with antimalarial ingredients) recorded in the antimalarial audit section.
Calculation	Numerator for each outlet type divided by the denominator.
Handling missing values	All outlets with at least one antimalarial recorded in the antimalarial audit sheet will contribute to the indicator. This includes outlets where the interview was not fully completed (partial interview).
Notes and considerations	Market composition is calculated among outlets located within the representative sample of clusters, and excludes the booster sample.

Table 4: Price of antimalarials

Table 4a provides the median price of an adult equivalent treatment dose (AETD, see Annex 11) for select tablet formulation types of antimalarials across outlet types. The inter-quartile range (IQR) is provided as a measure of dispersion.

Calculation	Median antimalarial AETD (see Annex 11) price in US dollars with inter-quartile range (25^{th} and 75^{th} percentiles).
Handling missing values	Antimalarials with missing price information are excluded from the median price calculation.
Notes and considerations	Price in US dollars is calculated based on exchange rates available from www.oanda.com using the historical exchange rates tool. The average exchange rate over the entire data collection period is used for converting local currency captured during data collection to US dollars.

A. Table 4b reports the median price of one injection of an antimalarial that should be used for severe malaria treatment only (artemether injection, quinine injection). The inter-quartile range (IQR) is provided as a measure of dispersion.
B. Table 4b also provides the median price of two pre-packaged QA ACT therapies: pediatric appropriate for a 10kg child (2 years of age), and adult appropriate for a 60kg adult. The inter-quartile range (IQR) is provided as a measure of dispersion.

Calculation	Median antimalarial injection price in US dollars with inter-quartile range (25th and 75th percentiles). Median pre-packaged therapy price in US dollars with inter-quartile range (25th and 75th percentiles.
Handling missing values	Antimalarials with missing price information are excluded from the median price calculation.
Notes and considerations	Price in US dollars is calculated based on exchange rates available from www.oanda.com using the historical exchange rates tool. The average exchange rate over the entire data collection period is used for converting local currency captured during data collection to US dollars.

Table 5: Availability of malaria blood testing among antimalarial-stocking outlets

Table 5 reports the proportion of antimalarial-stocking outlets that had malaria blood testing available. Testing availability is reported among all outlets as well as among individual outlet types, all public outlets, and all private outlets. Availability is reported for any blood test as well as specific test types: microscopy and rapid diagnostic test (mRDT).

Numerator	Number of outlets with malaria blood testing available (any, microscopy, mRDT).
Denominator	Number of outlets with any antimalarial in stock at the time of the survey visit or reportedly stocked any antimalarial in the previous three months.
Calculation	Numerator divided by denominator.
Handling missing values	• Antimalarial-stocking outlets with missing information about both availability of microscopy and availability of mRDTs are excluded from this table. The number of such outlets is provided in a footnote. • Outlets with partial information about availability of blood testing (information about microcopy or mRDTs) are included in the denominator of the indicator "any blood testing available." The number of such outlets is provided in a footnote. • Indicators for mRDT and microscopy availability exclude outlets with missing availability information respectively (i.e. outlets missing information about microscopy availability are excluded from the microscopy indicator).
Notes and considerations	Survey inclusion criteria extended to outlets providing blood testing but not stocking antimalarials ("diagnosis/testing-only outlets"). These outlets are excluded from this availability table.

Table 6: Malaria blood testing market composition

Table 6 reports the distribution of outlet types among outlets with malaria blood testing available on the day of the survey.

Numerator	By outlet type, the number of outlets with malaria blood testing available at the time of the survey visit, as confirmed by presence of at least one mRDT recorded in the mRDT audit section and/or reported availability of malaria microscopy services.
Denominator	Total number of outlets with malaria blood testing available at the time of the survey visit, as confirmed by presence of at least one mRDT recorded in the mRDT audit section and/or reported availability of malaria microscopy services.
Calculation	Numerator for each outlet type divided by the denominator.
Handling missing values	All outlets with non-missing values for the mRDT audit or malaria microscopy availability questions are included in the indicators. This includes outlets where the interview was not fully completed (partial interview).
Notes and considerations	Market composition is calculated among outlets located within the representative sample of clusters, and excludes the booster sample.

Table 7: Price of malaria blood testing

A. Table 7 reports the median price of blood testing to consumers including any consultation or service fees. The inter-quartile range (IQR) is provided as a measure of dispersion.

Calculation	Median total blood test price in US dollars with inter-quartile range (25^{th} and 75^{th} percentiles).
Handling missing values	Microscopy-stocking outlets that are missing information about price of microscopy are excluded from this indicator. Audited mRDTs with missing information about price of testing are excluded from this indicator.
Notes and considerations	Price in US dollars is calculated based on exchange rates available from www.oanda.com using the historical exchange rates tool. The average exchange rate over the entire data collection period is used for converting local currency captured during data collection to US dollars.

Table 8: Antimalarial market share

Antimalarial market share is the amount of adult equivalent treatment doses (AETD) reportedly sold or distributed in the previous week by outlet type and antimalarial type as a percentage of all AETDs sold/distributed in the previous week. Expressed as a percentage, market share is the amount of a specific antimalarial sold/distributed by a specific outlet type relative to the entire antimalarial market (all antimalarial types sold/distributed by all outlet types). Totals are reported per antimalarial medicine type and per outlet type. Across antimalarial medicine types and outlet types, percentages in the entire table sum to 100% (the total market).

Numerator	Number of AETDs sold/distributed for a specific antimalarial drug category and outlet type.
Denominator	Total number of AETDs sold/distributed.
Calculation	Numerator divided by denominator.
Handling missing values	AETDs sold/distributed are calculated among audited medicines with complete and consistent information. Antimalarials with incomplete or inconsistent information among key variables that define AETD sold/distributed (active ingredients, strength, formulation, package size, amount sold/distributed) are excluded from the calculation.
Notes and considerations	See Annex 11 for a description of AETD calculation.

Table 9: Antimalarial market share across outlet type

Antimalarial market share across outlet type is the amount of adult equivalent treatment doses (AETD) reportedly sold or distributed in the previous week by antimalarial type within each outlet type as a percentage of all AETDs sold/distributed in the previous week within the specified outlet type. Expressed as a percentage, outlet-type market share is the amount of a specific antimalarial sold/distributed relative to the entire antimalarial market segment for the specified outlet type (all antimalarial types sold/distributed by the specific outlet type). Totals are reported per antimalarial medicine type for each outlet type. Across antimalarial medicine types within each outlet type, percentages sum to 100%.

Numerator	Number of AETDs sold/distributed for a specific antimalarial drug category within the specified outlet type.
Denominator	Total number of AETDs sold/distributed within the specific outlet type.
Calculation	Numerator divided by denominator.
Handling missing values	AETDs sold/distributed are calculated among audited medicines with complete and consistent information. Antimalarials with incomplete or inconsistent information among key variables that define AETD sold/distributed (active ingredients, strength, formulation, package size, amount sold/distributed) are excluded from the calculation.
Notes and considerations	See Annex 11 for a description of AETD calculation.

Table 10: Malaria blood testing market share

Malaria blood testing market share is the number of malaria blood tests reportedly sold or distributed in the previous week by outlet type and malaria blood test type (mRDT, microscopy) as a percentage of all malaria blood tests sold/distributed in the previous week. Expressed as a percentage, market share is the number of a specific malaria blood test type by a specific outlet type relative to the entire malaria blood testing market (all malaria blood tests sold/distributed by all outlet types). Totals are reported per test type and per outlet type. Across malaria blood test types and outlet types, percentages in the entire table sum to 100% (the total market).

Numerator	Number of malaria blood tests sold/distributed for a specific blood test type (mRDT, microscopy) and outlet type.
Denominator	Total number of malaria blood tests sold/distributed.
Calculation	Numerator divided by denominator.
Handling missing values	Malaria blood tests sold/distributed are calculated among audited mRDTs and microscopy services with complete and consistent information. MRDTs and microscopy services with incomplete or inconsistent information about the amount sold/distributed) are excluded from the calculation.
Notes and considerations	Records and/or recall of testing with microscopy versus malaria RDT may differ within a given outlet, introducing an unquantifiable bias in estimating total tests performed.

Table 11: Malaria blood testing market share across outlet type

Malaria blood testing market share across outlet type is the number of malaria blood tests reportedly sold or distributed in the previous week by blood test type within each outlet type as a percentage of all blood tests sold/distributed in the previous week within the specified outlet type. Expressed as a percentage, outlet-type market share is the amount of a specific malaria blood test sold/distributed relative to the entire blood testing market segment for the specified outlet type (all malaria tests sold/distributed by the specific outlet type). Totals are reported per test type for each outlet type. Across malaria blood test types within each outlet type, percentages sum to 100%.

The market share for each RDT manufacturer is also reported across outlet type. Within each outlet type, the number of RDTs for a specific manufacturer sold/distributed relative to all RDTs distributed within that outlet type is reported as a percentage. Totals for RDT market share across all manufacturers' sums to 100% within each outlet type.

Numerator	Number of malaria blood tests sold/distributed for a specific blood test type (RDT, microscopy), or number of malaria RDTs sold/distributed for a specific manufacturer, within the specified outlet type.
Denominator	Total number of malaria blood tests/mRDTs sold/distributed within the specific outlet type.
Calculation	Numerator divided by denominator.
Handling missing values	Malaria blood tests sold/distributed are calculated among audited mRDTs and microscopy services with complete and consistent information. MRDTs and microscopy services with incomplete or inconsistent information about the amount sold/distributed) are excluded from the calculation.
Notes and considerations	Records and/or recall of testing with microscopy versus malaria RDT may differ within a given outlet, introducing an unquantifiable bias in estimating total tests performed.

Table 12: Provider case management knowledge and practices

Table 12 reports key indicators of provider case management knowledge and practices. These include referral practices for severe malaria; and self-reported practices for managing clients who test negative for malaria.

Numerator	A. Referral: respondents who indicated that they would refer to a health facility (response option #3). Note this numerator excludes providers located in a public or private health facility. B. Recommends antimalarials to test-negative clients: respondents who indicated "yes, always," or "yes sometimes." C. Circumstances for recommending an antimalarial: individual indicators for the most common responses provided to this open-ended question. Note this numerator excludes providers who did not respond to the previous question about recommending antimalarials to test-negative clients with "yes always" or "yes sometimes."
Denominator	A. Referral: respondents who provided a response to this question, including "don't know." Note this denominator excludes providers located in a public or private health facility. B. Recommends antimalarials to test-negative clients: respondents who provided a response to this question, including "don't know." C. Circumstances for recommending an antimalarial: respondents who provided at least 1 response to this question, including "don'tknow" (i.e. at least 1 variable in this series is non-missing). Note this denominator excludes providers who did not respond to the previous question about recommending antimalarials to test-negative clients with "yes always" or "yes sometimes."
Calculation	Numerator divided by denominator.
Handling missing values	A. Providers missing a response to this question will be excluded from the indicator. B. Providers missing a response to this question will be excluded from the indicator. C. This indicator is assessed using an open-ended multiple response option question. Providers with at least one non-missing response in the variable series for this question will be included in the indicator. Among these sets of responses, missing will be treated as not mentioned.
Notes and considerations	In some cases, multiple providers were interviewed at one outlet. A provider with responsibilities related to diagnosis may have responded to questions about malaria diagnosis and diagnostics (indicators B and C in Table 9), while a different provider responsible for prescribing and/or dispensing medicines may have responded to questions about danger signs of severe illness and referral for severe malaria (indicator A in Table 8). In all cases, the questions assessing provider knowledge and practices were administered only one time per outlet. As such, indicators are tabulated at the outlet level.

Table 13: Provider antimalarial treatment knowledge and practices

Table 13 reports key indicators of provider antimalarial treatment knowledge and practices. These include knowledge of the first-line treatment; knowledge of the first-line treatment dosing regimen for adults and children; citing ACT as most effective to treat malaria in adults and children; and citing ACT as most commonly recommended by the provider to manage malaria in adults and children.

Numerator	A. State first-line: providers who responded to p17 with a generic or brand name consistent with a national first-line treatment, or responded to p17 with "ACT," or "ACTm" and in p18 provided a generic or brand name consistent with a national first-line treatment. In other words, providers must specifically name the first-line treatment using generic or brand name language in either p17 or p18. B. First-line regimen, adult: providers who correctly stated the first-line generic ingredients and strengths in p18, and correctly stated: number of days, times per day, and tablets per dose to be taken. C. ACT most effective, adult & child: Any response for this open-ended question whereby: 1) one medicine or a set of medicines to be used in combination is mentioned only i.e. multiple antimalarial medicines mentioned will be counted as incorrect; and 2) the combination of medicines is an ACT – defined either by using a brand name, generic name, "ACT," or "ACTm." If the provider mentions a correct ACT response and also mentioned an anti-pyretic (e.g. paracetamol), this response will be counted as correct. However, if the provider mentions a correct ACT response and also mentioned other drugs – such as an antibiotic – this answer will be counted as incorrect. D. ACT most often recommended, adult & child: Any response for this open-ended question whereby: 1) one medicine or a set of medicines to be used in combination is mentioned only i.e. multiple antimalarial medicines mentioned will be counted as incorrect; and 2) the combination of medicines is an ACT – defined either by using a brand name, generic name, "ACT," or "ACTm." If the provider mentions a correct ACT response and also mentioned an anti-pyretic (e.g. paracetamol), this response will be counted as correct. However, if the provider mentions a correct ACT response and also mentioned other drugs – such as an antibiotic – this answer will be counted as incorrect.
Denominator	A. State first-line: All providers who responded to p17 – please name the first-line medicine. B. First-line regimen, adult: All providers who responded to p17 (starting the series on first-line knowledge). C. ACT most effective, adult & child: All providers who responded to p13/14, including providers who responded with "don't know," who provided names of non-antimalarial medicines, and who responded with more than one antimalarial medicine not intended to be used as combination therapy. D. ACT most often recommended, adult & child: All providers who responded to p13/14, including providers who responded with "don't know," who provided names of non-antimalarial medicines, and who responded with more than one antimalarial medicine not intended to be used as combination therapy.
Calculation	Numerator divided by denominator.
Handling missing values	A. Providers missing a response to this question will be excluded from this indicator. B. Providers with partial information for the regimen questions will be included in the denominator (i.e. missing treated as not mentioned). C. Providers missing a response to this question will be excluded from the indicator. D. Providers missing a response to this question will be excluded from the indicator.

Annex 11: Adult Equivalent Treatment Dose (AETD)

Definition

Antimalarial medicines are manufactured using a variety of active pharmaceutical ingredients, dosage forms, strengths, and package sizes. ACTwatch uses the adult equivalent treatment dose (AETD) as a standard unit for price and sale/distribution analyses. One AETD is defined as the number of milligrams (mg) of an antimalarial drug required to treat an adult weighing 60 kilograms (kg). For each antimalarial generic, the AETD is defined as the number of mg recommended in treatment guidelines for uncomplicated malaria in areas of low drug resistance issued by the WHO. Where WHO treatment guidelines do not cover a specific generic, the AETD is defined based on peer-reviewed research or the product manufacturer's recommended treatment course for a 60kg adult. Table X9 lists AETD definitions used in this report.

While it is recognized that the use of AETDs may over-simplify and ignore many of the complexities of medicine consumption and use, this analytical approach was selected because it standardizes medication dosing across drug types and across countries (which may sometimes vary) thus permitting comparisons on both prices and volumes calculated on the basis of an AETD.

Additional considerations:

- Where combination therapies consist of two or more active antimalarial ingredients packaged together (co-formulated or co-blistered), the strength of only one principal ingredient is used. The artemisinin derivative is used as the principal ingredient for ACT AETD calculations.

- Co-blistered combinations are generally assumed to be 1:1 ratio of tablets unless otherwise documented during fieldwork or through manufacturer websites.

- Sulfamethoxpyrazine-pyrimethamine is assumed to have the same full course adult treatment dose as sulfadoxine-pyrimethamine.

Calculation

Information collected on drug strength and unit size as listed on the product packaging was used to calculate the total amount of each active ingredient found in the package. The number of AETDs in a unit was calculated.[23] The number of AETDs in a monotherapy is calculated by dividing the total amount of active ingredient contained in the unit by the AETD (i.e. the total number of mg required to treat a 60kg adult). The number of AETDs for a combination therapy was calculated by dividing the total amount of the active ingredient that was used as the basis for the AETD by the AETD.

[23] The unit is dependent on the drug dosage form. The unit for antimalarials in tablet, suppository, or granule form is the package. The unit for injectable antimalarials is the ampoule. The unit for syrup and suspension antimalarials is the bottle.

Table X8: Adult Equivalent Treatment Dose Definitions		
Antimalarial Generic [Ingredient used for AETD mg dose value]	**Dose used for calculating 1 AETD (mg required to treat a 60kg adult)**	**Source**
Amodiaquine	1800mg	WHO Model Formulary, 2008
Artemether	960mg	WHO Use of Antimalarials, 2001
Artemether-Lumefantrine [Artemether]	480mg	WHO Guidelines for the treatment of malaria 2nd edition, 2010
Artemisinin-Naphthoquine [Artemisinin]	2400mg	WHO Use of Antimalarials, 2001
Artemisinin-Piperaquine [Artemisinin]	504mg	Thanh NX, Trung TN, Phong NC, et al. 2012. The efficacy and tolerability of artemisinin-piperaquine (Artequick®) versus artesunate-amodiaquine (Coarsucam™) for the treatment of uncomplicated Plasmodium falciparummalaria in south-central Vietnam.*Malaria Journal*,*11*:217.
Artesunate	960mg	WHO Use of Antimalarials, 2001
Artesunate-Amodiaquine [Artesunate]	600mg	WHO Guidelines for the treatment of malaria 2nd edition, 2010
Artesunate-Mefloquine [Artesunate]	600mg	WHO Guidelines for the treatment of malaria 2nd edition, 2010
Atovaquone-Proguanil [Atovaquone]	3000mg	WHO Guidelines for the treatment of malaria 2nd edition, 2010
Chloroquine	1500mg	WHO Guidelines for the treatment of malaria 2nd edition, 2010
Dihydroartemisinin-Piperaquine [Dihydroartemisinin]	360mg	WHO Guidelines for the treatment of malaria 2nd edition, 2010
Halofantrine	1398mg	Manufacturer Guidelines (*Plaquenil – Sanofi Aventis)*
Mefloquine	1000mg	WHO Model Formulary, 2008
Quinine	10408mg	WHO Model Formulary, 2008
Sulfadoxine-Pyrimethamine	1500mg	WHO Model Formulary, 2008

Annex 12: Antimalarial Volumes

Table X9: Antimalarial volumes, by outlet type

AETDs sold or distributed in the previous week by outlet type and antimalarial type:*	Public Health Facility	Private Not For-Profit Facility	**ALL Public / Not For-Profit**	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General retailer	**TOTAL Private**	**ALL Outlets**
	# AETD (95% CI)	# AETD (95% CI)	# AETD (95% CI)	# AETD (95% CI)	# AETD (95% CI)	# AETD (95% CI)	# AETD (95% CI)	# AETD (95% CI)	# AETD (95% CI)	# AETD (95% CI)
1. Any ACT	115130.2 (65021.6, 165238.9)	8733.3 (1088.3, 16378.3)	123863.5 (72876.7, 174850.4)	20424.0 (6447.1, 34400.8)	17316.5 (0.0, 54425.1)	142204.4 (84948.2, 199460.7)	55233.3 (21955.7, 88510.8)	5254.9 (0.0, 12373.6)	240433.0 (161727.6, 319138.4)	364296.5 (256289.9, 472303.1)
Artemether Lumefantrine (AL) Ψ	115112.3 (65005.4, 165219.2)	6940.0 (480.2, 13399.8)	122052.3 (71120.2, 172984.3)	17012.8 (5289.1, 28736.6)	10628.7 (0.0, 33380.9)	140657.2 (83545.2, 197769.2)	52448.2 (20272.9, 84623.6)	4772.3 (0.0, 12088.9)	225519.3 (152122.5, 298916.1)	347571.6 (242235.7, 452907.4)
Artesunate Sulfadoxine Pyrimethamine (ASSP)	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -
DHAPPQ	17.9 -	641.5 -	659.4 (0.0, 8519.0)	2158.0 (0.0, 4413.7)	4585.7 (0.0, 22854.1)	969.5 (408.0, 1531.1)	2404.9 (0.0, 5436.9)	413.6 -	10531.7 (0.0, 22870.9)	11191.2 (0.0, 23489.5)
Quality Assured ACT (QA ACT)	114344.7 (64335.7, 164353.6)	7990.9 (979.9, 15002.0)	122335.6 (71540.7, 173130.5)	16543.9 (4959.0, 28128.8)	7469.5 (0.0, 21489.2)	135248.2 (78595.7, 191900.6)	49685.7 (18780.6, 80590.9)	4841.2 (0.0, 12114.9)	213788.5 (141592.9, 285984.2)	336124.1 (230203.1, 442045.2)
QA ACT with the 'green leaf' logo	5316.9 (0.0, 13806.1)	1807.9 -	7124.8 (0.0, 15737.7)	9050.1 (0.0, 19571.9)	3195.8 (0.0, 11430.2)	105160.9 (53905.5, 156416.4)	31561.0 (12738.8, 50383.3)	1351.7 (515.2, 2188.1)	150319.6 (89258.7, 211380.5)	157444.4 (94330.1, 220558.7)
QA ACT with the 'green leaf' logo	109027.7 (63646.0, 154409.4)	6183.1 (0.0, 12844.7)	115210.8 (68923.6, 161498.0)	6955.4 (0.0, 14086.6)	4273.7 -	30087.2 (9554.2, 50620.3)	18124.7 (2435.3, 33814.1)	3489.6 (0.0, 15421.2)	62930.5 (36226.9, 89634.2)	178141.3 (116951.5, 239331.1)
Non-quality-assured ACT (non-QA ACT)	785.6 (0.0, 2234.8)	742.3 (0.0, 7763.4)	1527.9 (0.0, 3303.8)	3880.1 (0.0, 7837.6)	9847.0 (0.0, 39245.8)	6956.3 (299.7, 13612.9)	5547.5 (0.0, 15412.7)	413.6 -	26644.5 (2003.0, 51286.0)	28172.4 (3686.2, 52658.6)
2. Any non-artemisinin therapy	75732.7 (12785.2, 138680.2)	24798.6 (0.0, 51626.4)	100531.3 (35762.6, 165300.1)	15491.5 (5214.3, 25768.6)	18367.4 (0.0, 51375.9)	174787.8 (93458.4, 256117.1)	89805.4 (27769.5, 151841.2)	5271.3 (341.7, 10201.0)	303723.3 (187425.2, 420021.4)	404254.6 (276392.4, 532116.9)
Sulfadoxine-Pyrimethamine	47969.9 (1.0, 95938.8)	2254.1 (594.2, 3914.0)	50224.0 (2560.6, 97887.4)	12339.7 (3382.9, 21296.5)	18096.4 (0.0, 51035.5)	158319.7 (80647.7, 235991.8)	83728.2 (24242.6, 143213.9)	4889.9 (0.0, 9908.4)	277373.9 (165560.8, 389187.1)	327597.9 (210066.0, 445129.9)

Table X9: Antimalarial volumes, by outlet type

AETDs sold or distributed in the previous week by outlet type and antimalarial type:*	Public Health Facility	Private Not For-Profit Facility	**ALL Public / Not For-Profit**	Private For-Profit Facility	Pharmacy	ADDO	DLDB	General retailer	**TOTAL Private**	**ALL Outlets**
	# AETD (95% CI)	# AETD (95% CI)	# AETD (95% CI)	# AETD (95% CI)	# AETD (95% CI)	# AETD (95% CI)	# AETD (95% CI)	# AETD (95% CI)	# AETD (95% CI)	# AETD (95% CI)
Oral Quinine	26389.5 (0.0, 60414.5)	21710.4 (0.0, 48300.3)	48099.9 (7762.1, 88437.6)	1683.2 (0.0, 3381.3)	133.0 (0.0, 319.1)	9837.7 (3144.7, 16530.7)	1659.4 (287.7, 3031.1)	38.8 (0.0, 152.3)	13352.0 (6062.9, 20641.2)	61451.9 (19707.6, 103196.2)
Quinine IV/IM	1194.9 (40.3, 2349.5)	717.8 (0.0, 2076.2)	1912.7 (304.5, 3520.8)	1043.4 (0.0, 2221.6)	0.0 -	276.3 (77.0, 475.7)	57.0 (0.0, 150.9)	29.2 (0.0, 91.5)	1406.0 (250.0, 2562.0)	3318.6 (1262.6, 5374.6)
3. Oral artemisinin monotherapy	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -
4. Non-oral artemisini monotherapy	142.5 (0.0, 321.8)	133.0 (0.0, 685.5)	275.5 (0.0, 598.9)	1015.0 (0.0, 2941.3)	44.3 (0.0, 203.7)	8.5 (0.0, 35.2)	0.0 -	0.0 -	1067.9 (0.0, 2860.5)	1343.4 (0.0, 2991.2)
Injectable artesunate	121.0 (0.0, 281.5)	0.0 -	121.0 (0.0, 280.2)	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	121.0 (0.0, 279.0)
Injectable artemether	21.5 (0.0, 79.2)	133.0 (0.0, 685.4)	154.5 (0.0, 479.2)	1015.0 (0.0, 2941.2)	44.3 (0.0, 203.7)	8.5 (0.0, 44.6)	0.0 -	0.0 -	1067.9 (0.0, 2860.5)	1222.3 (0.0, 2910.2)
Injectable artemotil	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -	0.0 -
5. Any treatment for severe malaria	1337.4 (146.4, 2528.3)	850.8 (0.0, 2514.4)	2188.2 (360.0, 4016.3)	2058.5 (0.0, 4848.8)	44.3 (0.0, 203.7)	284.8 (84.9, 484.8)	57.0 (0.0, 150.9)	29.2 (0.0, 91.5)	2473.8 (0.0, 5196.5)	4662.0 (1413.9, 7910.0)
OUTLET TYPE TOTAL* **	191005.5 (99305.5, 282705.5)	33664.89 (3615.8, 63714)	224670.3 (128691.8, 320648.9)	36930.47 (13034.0, 60827)	35728.19 (-34343.1, 105799.5)	317000.7 (188317, 445684.4)	145038.6 (51671, 238406.3	10526.18 (1970.8, 19081.6)	545224.1 (362379.2, 728069.1)	769894.5 (554596.1, 985192.9)

* A total of 18216 AETDs were reportedly sold or distributed in the previous seven days. See Annex 11 for a description of AETD calculation.

Ψ At the time of the 2014 ACTwatch outlet survey artemether lumefantrine was Tanzania's first line treatment for uncomplicated malaria.

A total of 3551 antimalarials were audited in the census clusters. Of these, 240 audited antimalarials were not included in market share calculations due to incomplete or inconsistent information.

Source: ACTwatch Outlet Survey, Tanzania, 2014.