



Outlet Survey Republic of Madagascar 2010 Survey Report



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General Definitions

Term	Definition
Adult Equivalent Treatment Dose (AETD)	An AETD is the number of milligrams (mg) of an antimalarial drug needed to treat a 60 kg adult.
Antimalarial	Any medicine recognized by the WHO for the treatment of malaria. Medicines used solely for the prevention of malaria were excluded from analysis in this report.
Antimalarial combination therapy	The simultaneous use of two or more drugs with different modes of action to treat malaria.
Artemisinin-based Combination Therapy (ACT)	An antimalarial that combines artemisinin or one of its derivatives with an antimalarial or antimalarials of a different class. Refer to Combination Therapy (below).
Artemisinin monotherapy	An antimalarial medicine that has a single active compound, where this active compound is artemisinin or one of its derivatives.
Artemisinin and its derivatives	Artemisinin is a plant extract used in the treatment of malaria. The most common derivatives of artemisinin used to treat malaria are artemether, artesunate, and dihydroartemisinin.
Booster Sample	A booster sample is an extra sample of units (in this case, outlets) of a type not adequately represented in the main survey, but which are of special interest. In this survey, all tertiary care, district/provincial level facilities, pharmacies and drug stores (<i>dépôt de médicament</i>) were included in the administrative district of the sampled commune. For smaller health facilities, simple random sampling informed the selection: in each of the 19 rural communes; 12 smaller health facilities per rural district were selected and in each of the 19 urban communes; 16 smaller health facilities per district were selected.
Censused commune	A commune where field teams conducted a full census of all outlets with the potential to sell antimalarials.
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 Madagascar, they were defined as <i>communes</i> .
Combination therapy	The use of two or more classes of antimalarial drugs/molecules in the treatment of malaria that have independent modes of action.
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.

Enumerated Outlets	Outlets that were visited by a member of one of the field teams and for which, at a minimum, basic descriptive information was collected.
First-line treatment	The government recommended treatment for uncomplicated malaria. Madagascar's first-line treatment for malaria is artesunate - amodiaquine, 50/153mg.
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.
Nationally registered ACTs	ACTs registered with a country's national drug regulatory authority and permitted for sale or distribution in-country. Each country determines its own criteria for placing a drug on its nationally registered listing.
Non-artemisinin therapy	An antimalarial treatment that does not contain artemisinin or any of its derivatives.
Outlet	Any point of sale or provision of a commodity to an individual. Outlets are not restricted to stationary points of sale and may include mobile units or individuals. Refer to Appendix for a description of the outlet types visited for this survey.
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.
Rapid Diagnostic Test (RDT) for malaria	A test used to confirm the presence of malaria parasites in a patient's bloodstream.
Screened	An outlet that was administered the screening questions (S1 to S4) of the outlet survey questionnaire (see Screening criteria).
Screening criteria	The set of requirements that must be satisfied before the full questionnaire is administered. In this survey, an outlet met the screening criteria if (1) they had antimalarials in stock at the time of the survey visit, or (2) they report having stocked them in the past three months.
Second-line treatment	The government recommended second-line treatment for uncomplicated malaria. Madagascar's second-line treatment for malaria is quinine. Second-line treatment includes all dosage forms.
Treatment/dosing regimen	The posology or timing and number of doses of an antimalarial used to treat malaria. This schedule often varies by patient weight.

Classification of ACTs

Term	Definition
Quality assured ACTs [QAACTs]:	<p>For the purpose of the Independent Evaluation, a QAACT is any ACT which appeared on the Global Fund's Indicative List of antimalarials meeting the Global Fund's quality assurance policy as at June 2010 (http://www.theglobalfund.org/en/procurement/quality/pharmaceutical/#General), or which previously had C-status in an earlier Global Fund quality assurance policy and was used in a programme supplying subsidised ACTs.</p> <p>In Madagascar, the following quality assured ACTs were found in outlets:</p> <p>Artefan 20/120, AL, Ajanta Pharma Limited</p> <p>Coartem 20/120, AL, Novartis Pharma</p> <p>Coartem D 20/120, AL, Novartis Pharma</p> <p>Lumartem, AL, 20mg/120mg, Cipla Ltd</p> <p>ACTipal 50/153, ASAQ, Strides Arcolab Ltd.</p> <p>Arsumoon Adultes, ASAQ, 50mg/150mg, Guilin Pharmaceutical Co. Ltd</p> <p>Artesunate + Amodiaquine[generic], ASAQ, 50mg/153mg, Ipca Ltd</p> <p>Larimal (Junior), ASAQ, 50mg/153mg, Guilin Pharmaceutical Co., Ltd</p> <p>Larimal (Enfant), ASAQ, 50mg/153mg, Guilin Pharmaceutical Co., Ltd</p> <p>Larimal (Adult), ASAQ, 50mg/153mg, Guilin Pharmaceutical Co., Ltd</p> <p>Falcimon kit (Adulte), ASAQ, 50mg/153mg, Cipla Ltd</p> <p>Falcimon kit (Enfant 7 à 13 ans), ASAQ, 50mg/153mg, Cipla Ltd</p> <p>Falcimon kit (Enfant de moins de 6ans), ASAQ, 50mg/153mg, Cipla Ltd</p> <p>Coarsucam 25mg/67,5mg, ASAQ, Sanofi-Aventis</p> <p>Coarsucam 50mg/135mg, ASAQ, Sanofi-Aventis</p> <p>Coarsucam 100mg/270mg, ASAQ, Sanofi-Aventis</p> <p>Winthrop Nourrisson, ASAQ, 25mg/67.5mg, Sanofi-Aventis France</p> <p>Winthrop Child, ASAQ, 50mg/135mg, Sanofi-Aventis France</p> <p>Winthrop Adults, ASAQ, 100mg/270mg, Sanofi-Aventis France</p>

First-line, quality assured ACTs [FAACTs]:	Government recommended first-line ACTs (any ASAQ regardless of strength) for uncomplicated malaria meeting the quality assured definition. A complete listing of these antimalarials is provided in the appendices. In Madagascar, the following first-line quality assured ACTs were found in outlets: ACTipal 50/153, ASAQ, Strides Arcolab Ltd. Arsumoon Adultes, ASAQ, 50mg/150mg, Guilin Pharmaceutical Co. Ltd Artesunate + Amodiaquine [generic], ASAQ, 50mg/153mg, Ipca Ltd Larimal (Junior), ASAQ, 50mg/153mg, Guilin Pharmaceutical Co., Ltd Larimal (Enfant), ASAQ, 50mg/153mg, Guilin Pharmaceutical Co., Ltd Larimal (Adult), ASAQ, 50mg/153mg, Guilin Pharmaceutical Co., Ltd Falcimon kit (Adulte), ASAQ, 50mg/153mg, Cipla Ltd Falcimon kit (Enfant 7 à 13 ans), ASAQ, 50mg/153mg, Cipla Ltd Falcimon kit (Enfant de moins de 6ans), ASAQ, 50mg/153mg, Cipla Ltd Coarsucam 25mg/67,5mg, ASAQ, Sanofi-Aventis Coarsucam 50mg/135mg, ASAQ, Sanofi-Aventis Coarsucam 100mg/270mg, ASAQ, Sanofi-Aventis Winthrop Nourrisson, ASAQ, 25mg/67.5mg, Sanofi-Aventis France Winthrop Child, ASAQ, 50mg/135mg, Sanofi-Aventis France Winthrop Adults, ASAQ, 100mg/270mg, Sanofi-Aventis France																									
Non first-line, quality assured ACTs[NAACTs]:	ACTs that are <u>not</u> the government’s recommended first-line treatment for uncomplicated malaria, but which do meet the quality assured definition. A complete listing of these antimalarials is provided in the appendices. In Madagascar, the following non first-line quality assured ACTs were found in outlets: Artefan 20/120, AL, Ajanta Pharma Limited Coartem 20/120, AL, Novartis Pharma Coartem D 20/120, AL, Novartis Pharma Lumartem, AL, 20mg/120mg, Cipla Ltd																									
Non-quality assured ACTs:	ACTs that do not meet with the definition of being quality assured. In Madagascar, the following non-quality assured ACTs were found in outlets: <table><tr><td>Activa Junior</td><td>Aremodi</td></tr><tr><td>Amosunate</td><td>Arunate-Aq</td></tr><tr><td>Amosunate JR</td><td>Asunatedenk 100 plus</td></tr><tr><td>Artefan 40/240</td><td>Asunatedenk 200 plus</td></tr><tr><td>Artrin</td><td>Ertecam</td></tr><tr><td>Co-mether</td><td></td></tr><tr><td>Co-artemax</td><td></td></tr><tr><td>Duo-cotecxin</td><td></td></tr><tr><td>Artecom</td><td></td></tr><tr><td>Artediam</td><td></td></tr><tr><td>Artemether lumefantrine (unbranded generic)</td><td></td></tr><tr><td>Lumartem (suspension)</td><td></td></tr></table>		Activa Junior	Aremodi	Amosunate	Arunate-Aq	Amosunate JR	Asunatedenk 100 plus	Artefan 40/240	Asunatedenk 200 plus	Artrin	Ertecam	Co-mether		Co-artemax		Duo-cotecxin		Artecom		Artediam		Artemether lumefantrine (unbranded generic)		Lumartem (suspension)	
Activa Junior	Aremodi																									
Amosunate	Arunate-Aq																									
Amosunate JR	Asunatedenk 100 plus																									
Artefan 40/240	Asunatedenk 200 plus																									
Artrin	Ertecam																									
Co-mether																										
Co-artemax																										
Duo-cotecxin																										
Artecom																										
Artediam																										
Artemether lumefantrine (unbranded generic)																										
Lumartem (suspension)																										

Other ACT Classifications

Nationally registered ACTs:

ACTs registered with a country's national drug regulatory authority and permitted for sale or distribution in-country. Each country determines its own criteria for placing a drug on its nationally registered listing. A full list of nationally registered antimalarials can be found in the appendices. In Madagascar, the following nationally registered drugs were found in outlets:

Artefan 20/120, AL, Ajanta Pharma Limited
Artefan 40/240, AL, Ajanta Pharma Limited
Coartem 20/120, AL, Novartis Pharma
Coartem D 20/120, AL, Novartis Pharma
ACTipal 50/153, ASAQ, 50mg/153mg, Strides Arcolab Ltd
Amosunate, ASAQ, 200mg/600mg, Adams Pharmaceuticals
Amosunate JR, ASAQ, 100mg/300mg, Adams Pharmaceuticals
Arsuamoon Adultes, ASAQ, 50mg/150mg, Guilin Pharmaceutical Co. Ltd
Coarsucam 25mg/67,5mg, ASAQ, Sanofi-Aventis
Coarsucam 50mg/135mg, ASAQ, Sanofi-Aventis
Coarsucam 100mg/270mg, ASAQ, Sanofi-Aventis
Falcimon kit (Adulte), ASAQ, 50mg/153mg, Cipla Ltd
Falcimon kit (Enfant 7 à 13 ans), ASAQ, 50mg/153mg, Cipla Ltd
Falcimon kit (Enfant de moins de 6ans), ASAQ, 50mg/153mg, Cipla Ltd
Winthrop Nourrisson, ASAQ, 25mg/67.5mg, Sanofi-Aventis
Winthrop Child, ASAQ, 50mg/135mg, Sanofi-Aventis
Winthrop Adults, ASAQ, 100mg/270mg, Sanofi-Aventis
Artecom, DHA-PPQ Trimethoprim, 32/320/90, Toughe Pharmaceuticals

List of Abbreviations

English Abbreviations

--	No data were available
***	Undefined ratio as a non-zero value is being divided by a value of zero
ACT	Artemisinin-based Combination Therapy
ACTipal	Socially marketed ACT, artesunate amodiaquine for children
AETD	Adult Equivalent Treatment Dose
AL	Artemether-Lumefantrine
AMFm	Affordable Medicines Facility – malaria
ASAQ	Artesunate Amodiaquine
CHW	Community Health Worker
CQ	Chloroquine
DC	Data Collection Contractor
FAACT	First line, quality Assured Artemisinin Combination Therapy
FBO	Faith Based Organization
Global Fund	Global Fund to Fight AIDS, Tuberculosis, and Malaria (<i>Le Fonds Mondial</i>)
GPS	Global Positioning System
IE	Independent Evaluation
IQR	Inter-Quartile Range
ITN	Insecticide Treated Net
LLIN	Long Lasting Insecticidal Net
LSHTM	London School of Hygiene and Tropical Medicine
M&E	Monitoring and Evaluation
MOH	Ministry of Health
n/a	Not applicable: Indicates ratios cannot be calculated as the numerator is zero
NAACT	Non-first line, quality Assured Artemisinin Combination Therapy
NGO	Non Governmental Organization
NMCP	National Malaria Control Program
PDA	Personal Digital Assistant
PMI	President’s Malaria Initiative
PPS	Probability Proportional to Size

PSI	Population Services International
QAACT	Quality Assured Artemisinin-based Combination Therapy
RDT	Rapid Diagnostic Test
SP	Sulfadoxine-Pyrimethamine
UN	United Nations
UNICEF	United Nations Children’s Fund
WHO	World Health Organization

French Abbreviations

AC	Agent Communautaire
ASOS	Action Santé Organisation Secours (ONG)
BTS	Base de Transmission Secondaire
CAID	Campagne d’Aspersion Intra Domiciliaire
CSB	Centre de Santé de Base
DAM	Direction de l’Agence des Médicaments
DGILMT	Direction de la Gestion des Intrants de Santé, du Laboratoire et de la Médecine Traditionnelle
DSME	Direction de la Santé de la Mère et de l'Enfant
EDS	Enquête Démographique et de Santé
FANOME	Fonds pour l’approvisionnement Non stop en Médicaments Essentiels
HTC	Haute Terre Centrale
INSTAT	Institut National de la Statistique
MID	Moustiquaires à Imprégnation Durable
NTIC	Nouvelle Technologie de l’Information et de Communication
OMD	Objectif du Millénaire pour le Développement
ONG	Organisation Non Gouvernementale
ONM	Ordre National des Médecins
PAIS	Programme d’intégration de l’approvisionnement et de la logistique des intrants de Santé
PNLP	Plan Stratégique National de Lutte contre le Paludisme
SALFA	Sampan’Asa Loterana ho an’ny Fampandrosoana (Département pour le Développement au sein de l’Eglise Luthérienne)
TIC	Technologie de l’Information et de Communication
TPI	Traitement Préventif Intermittent

Executive Summary

Overview of ACTwatch

The *ACTwatch* Outlet Survey involves quantitative research at the outlet level in *ACTwatch* countries (Cambodia, Uganda, Zambia, Nigeria, Benin, Madagascar and the Democratic Republic of Congo). Other elements of *ACTwatch* research include Household Surveys led by Population Services International (PSI) and Supply Chain Research led by the London School of Hygiene & Tropical Medicine (LSHTM). This report presents the results of a cross-sectional survey of outlets conducted in Madagascar between the end of April and June 2010 and also serves as the baseline for the Affordable Medicines Facility – malaria (AMFm) Phase I Independent Evaluation, for which some additional indicators are presented.

Overview of the AMFm independent evaluation process

The independent evaluation is part of a multi-faceted monitoring and evaluation framework developed for Phase 1 of the Affordable Medicines Facility – malaria (AMFm). It is intended to assess whether, and to what extent, AMFm Phase 1 achieves its objectives. The findings of the independent evaluation will be summarized in a report to be considered by the Global Fund Board at the end of Phase 1. The four main objectives of AMFm are: (i) to increase ACT affordability, (ii) to increase ACT availability, (iii) to increase ACT use, including among vulnerable groups, and (iv) to “crowd out” other oral antimalarials by gaining market share.

Through a competitive bid, the Global Fund contracted ICF Macro and the London School of Hygiene and Tropical Medicine (LSHTM) to carry out the Independent Evaluation (IE) in all of the currently operational Phase 1 countries (Ghana, Kenya, Madagascar, Niger, Nigeria, Tanzania mainland, Uganda, and Zanzibar). The baseline of the AMFm assessment relied on primary data collected from outlet surveys, in-depth interviews with key stakeholders involved in the drug supply chain in the country, and a review of documents. *ACTwatch* provided data for Kenya, Madagascar, Nigeria, Tanzania mainland, Uganda, and Zanzibar.

Baseline outlet surveys were carried out in 8 pilots in 7 countries with the objectives of assessing availability, affordability, and market share of co-paid ACTs in rural and urban areas in each of the seven participating countries. The Independent Evaluation uses outlet survey data from two groups: 1) those in which nationally representative outlet surveys have been conducted under the *ACTwatch* program (Madagascar and Nigeria), and 2) those in which new outlet surveys were conducted under the AMFm Phase 1 IE (Ghana, Kenya, Niger, Tanzania mainland, Uganda and Zanzibar). The surveys were conducted in all the countries between August 2009 and December 2010.

Madagascar Outlet Survey Methods

A nationally representative sample of all outlets that could sell or provide antimalarials to a consumer was taken through a census approach in 38 clusters across two malaria-endemic strata, urban and rural, in Madagascar. A cluster sampling approach was used because there were no reliable lists of all outlets stocking antimalarials. Clusters were communes, with an average of 10,000 to 15,000 inhabitants. Clusters were selected with probability proportional to size (PPS)—a sampling technique in which the probability that a particular commune is selected is proportional to its population size. Oversampling of public health facilities, pharmacies and drug stores (dépôt de médicament) was conducted in administrative districts surrounding the selected clusters. The sample size was powered to detect a change of 20% percentage points in availability of ACTs over time.

Outlet inclusion criteria for this study included outlets which stocked an antimalarial at the time of survey or in the previous three months. An outlet is defined as any point of sale or provision of commodities for individuals. Outlets included in the survey are as follows: 1) public health facilities (government hospitals and health centres); 2) pharmacies (pharmacies licensed by the National Drug Authority and Pharmacists' Council) 3) drug stores (depot de médicament) (licensed by the National Drug Authority and Pharmacists' Council); 4) private health facilities (private clinics, private practices, NGO health centres and dispensaries); 5) grocery stores (épicerie [small groceries], épi bars [small groceries with bars] and épi gargotes [small groceries with food stalls]); 6) Community health workers (Agent de Santé à Base Communautaire and Agent de Vente à Base Communautaire); and 7) other outlets (gargotes [food stalls with sit-down eating areas], bars, and other outlets).

Data were collected using Personal Digital Assessments (PDAs). Three questionnaire modules were administered to participating outlets: 1) Screening Module, 2) Audit sheet and 3) Provider Module. For all outlets, trained interviewers administered the screening module to collect information on the outlet type; location, including the outlet's longitude and latitude; and information on availability of antimalarials. Among those outlets that stocked antimalarials at the time of survey, the audit sheet was administered. For each antimalarial, information was recorded on the brand and generic names, strength, expiry, amount sold in the last week and price to the consumer. Among outlets that stocked antimalarials at the time of interview, or in the past three months, the interviewer collected information on provider demographics, knowledge, and perceptions. Interviewers also observed outlet licensing and storage conditions of medicines using the provider module.

To ensure a high level of data quality, *ACTwatch* performed cleaning using standard *ACTwatch* guidelines. For the analysis, the Independent Evaluators provided a tabulation plan for all tables presented in this report for the IE indicators, and analysis do-files in STATA, which produced all the required indicators and automatically generated the tables. *ACTwatch* adapted these analysis files to the country setting and ran the analysis using STATA version 11, recording results in a log file. Additional analysis for other *ACTwatch* specific indicators was conducted by *ACTwatch* following standard guidelines.

Madagascar Implementation process and context information

One aim of the independent evaluation is to document the contextual factors that may influence the effectiveness of AMFm and the implementation process to be able to assess the degree to which the intervention (price reductions through negotiations with manufacturers, a subsidy in the form of a buyer co-payment, and supporting interventions) has been implemented. At the baseline, *ACTwatch* collected two sets of context data: the first on background information and the second on key events prior to or during data collection. This was done with the review of key documents and interviews with key stakeholders in the implementation of the program.

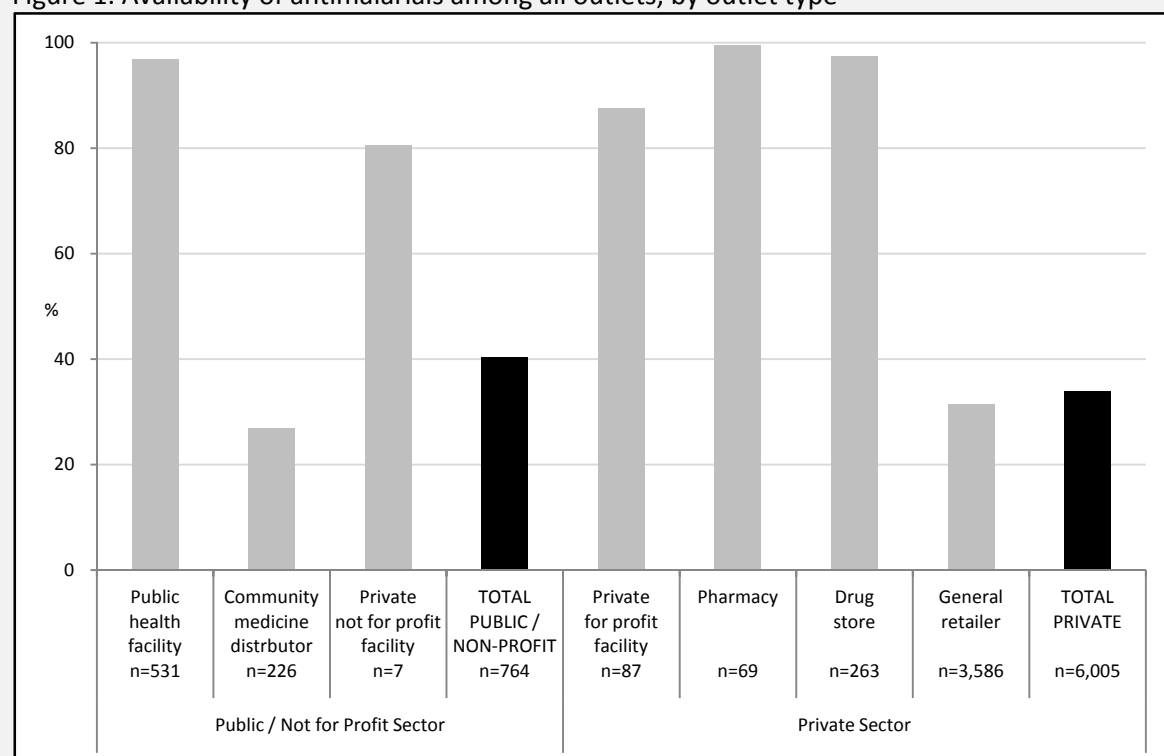
More information on the study design is available at www.ACTwatch.info.

Key findings

Data were collected between 27th April and 21st June 2010. A total of 7,221 outlets were approached. Of these, 452 outlets were not screened for various reasons: 38 providers refused to be interviewed; 103 outlets were closed down permanently; 251 outlets were not open at the time of the survey visit; in 14 outlets, providers were not available for interview at the time of survey visit; 46 providers were unable to be interviewed for other reasons. Overall, 6,769 outlets agreed to participate in the *ACTwatch* outlet survey and were screened. Of these, 2,642 outlets met our screening criteria; however, interviews could not be conducted for 26 outlets. Of the 2,616 interviews conducted, 202 reported having stocked antimalarials at any point in the three months prior to the interview and 2,414 outlets stocked antimalarials at the time of the interview.

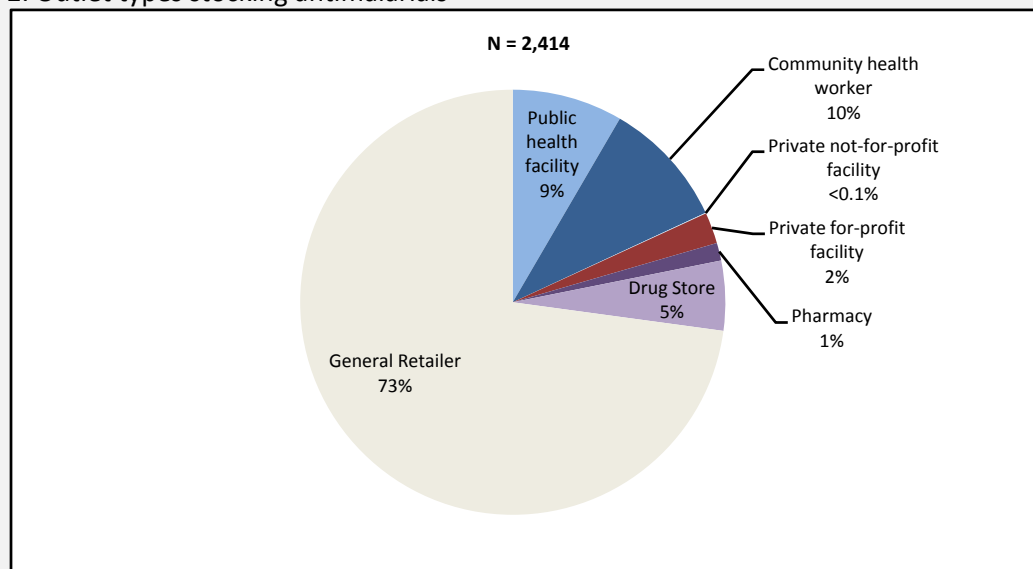
AVAILABILITY OF ANY ANTIMALARIAL: Stocking rates of any antimalarial varied by outlet type. In the public/not-for-profit sector, 97% of public health facilities had at least one antimalarial in stock on the day of interview, whereas the figure was 81% in private not-for-profit facilities. Of community health workers, who according to government policy may treat using antimalarials, 27% stocked an antimalarial. There was substantial variation in the private sector. More than 88% of private-for-profit facilities, and almost 100% of pharmacies and 97% of drugs stores, stocked antimalarials. This is in contrast to 31% of general retailers (Figure 1).

Figure 1. Availability of antimalarials among all outlets, by outlet type



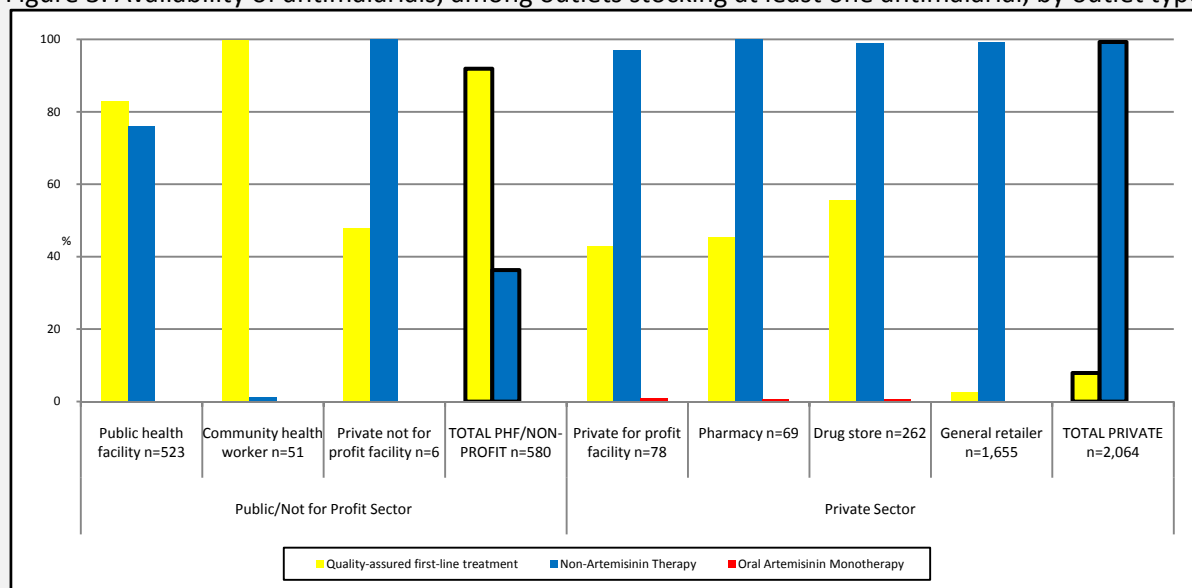
OUTLET TYPES STOCKING ANTIMALARIALS: Figure 2 shows the relative distribution of all outlets that had at least one antimalarial in stock. General retailers were the most common type of outlet stocking antimalarials, followed by community health workers (10%), public health facilities and then drug stores (dépôt de médicament).

Figure 2. Outlet types stocking antimalarials



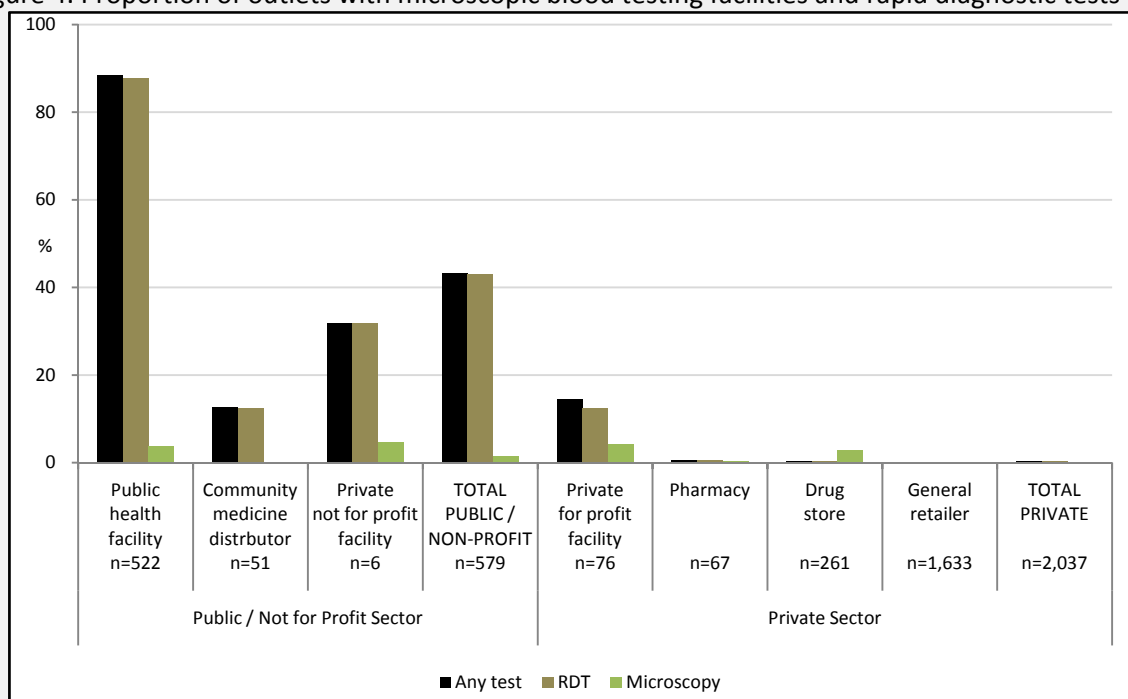
AVAILABILITY OF DIFFERENT CLASSES OF ANTIMALARIALS: First-line quality assured ACTs (FAACTs) were far more readily available in the public/not-for-profit sector compared to the private sector (92% compared to 8%). Availability of FAACTs was less than 60% in all private sector categories, and very low for general retailers (<3%). The private sector had the highest stocking rates of non-artemisinin therapies (mainly chloroquine [CQ]). Non-artemisinin therapies available in the public sector were typically Sulfadoxine-Pyrimethamine (SP) and quinine (data not shown). Artemisinin monotherapies were only observed in private for-profit facilities, and were very rare.

Figure 3. Availability of antimalarials, among outlets stocking at least one antimalarial, by outlet type



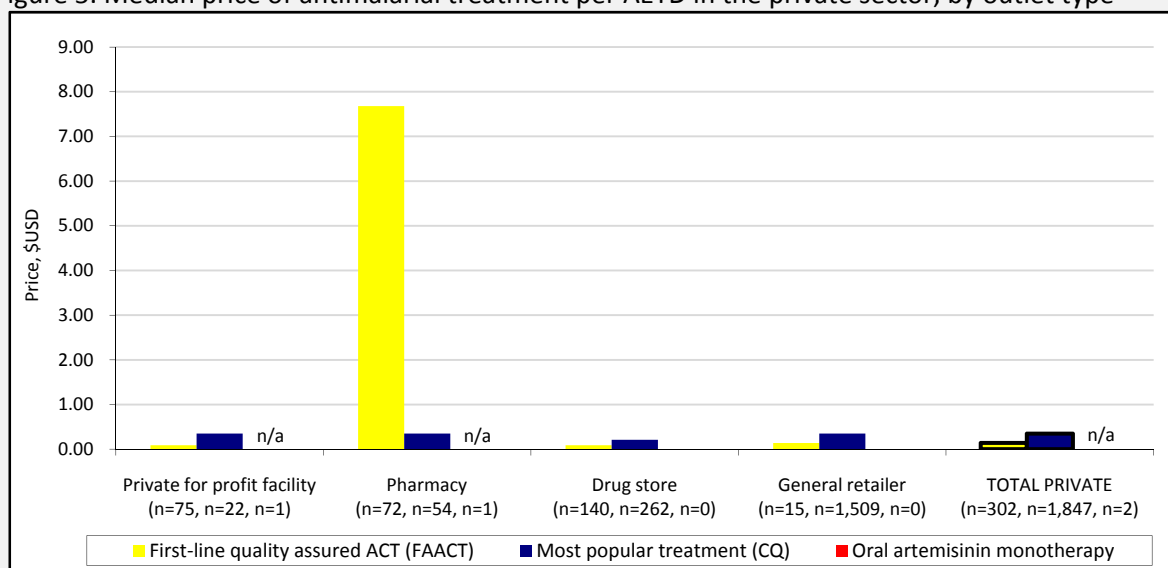
AVAILABILITY OF DIAGNOSTIC BLOOD TESTING: Of outlets stocking antimalarials in the last three months, 88% of public health facilities reported offering any rapid diagnostic testing (RDT) services. While one in three private-not-for-profit facilities offered RDTs, availability of RDT services was less than 15% across all outlet types in the private sector. Few (<5%) facilities outside the public sector provide microscopic testing.

Figure 4. Proportion of outlets with microscopic blood testing facilities and rapid diagnostic tests



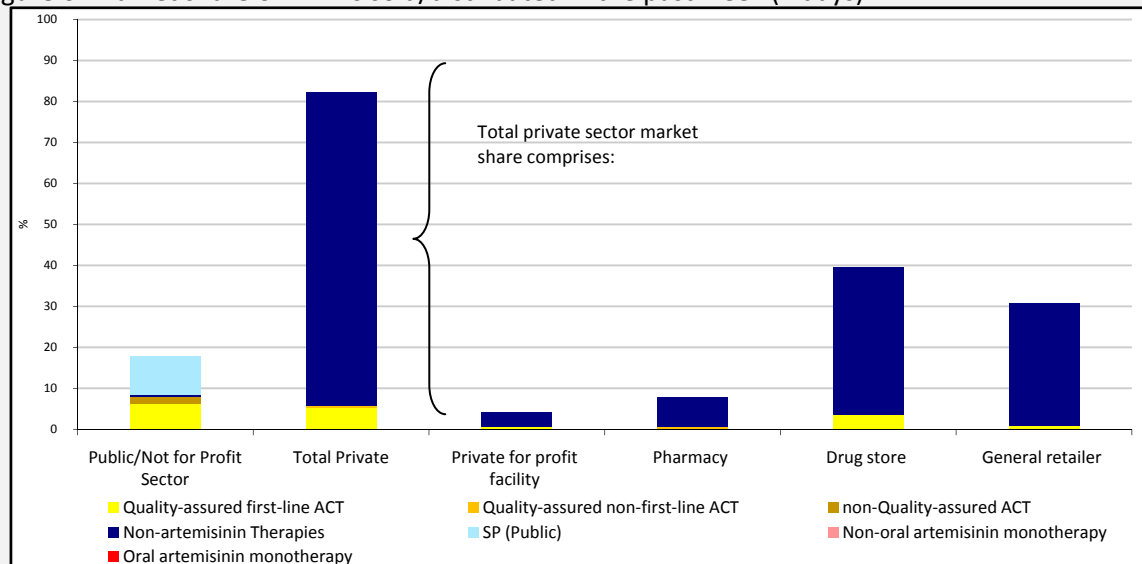
PRICE OF ANTIMALARIALS: Most public health facilities and private-not for profit health facilities distributed antimalarials free of cost (93.3% and 100% respectively [data not shown]). In the private sector, the median price of FAACTs was \$0.14 (IQR, \$0.09-\$0.56) due to the presence of a socially-marketed ACT in the market. Much higher AETD prices were observed in pharmacies (\$7.68, IQR \$0.19-\$32.48). The median price of the most popular antimalarial, (CQ), at private outlets was \$0.35 (IQR, \$0.28-\$0.35).

Figure 5. Median price of antimalarial treatment per AETD in the private sector, by outlet type



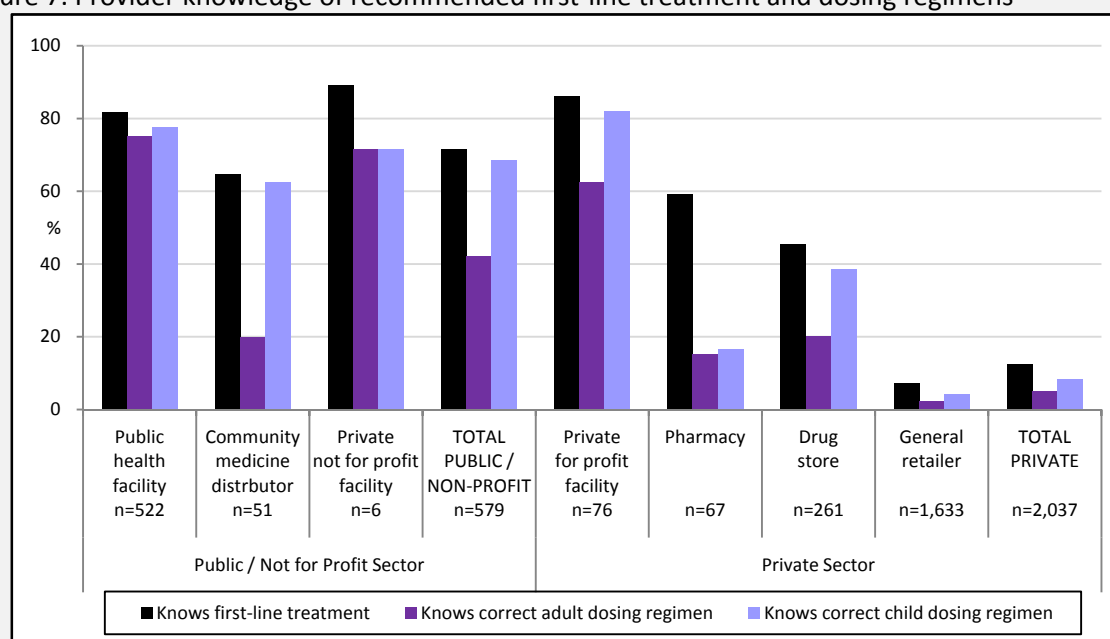
VOLUMES OF ANTIMALARIALS SOLD/DISTRIBUTED: The private sector dominated the antimalarial market, representing 82% of antimalarials distributed. Drug stores (*dépôt de médicament*) and general retailers accounted for 70% of the total volumes sold/distributed, while the public/not-for-profit sector accounted for less than 20% of the total. Most antimalarials distributed in the public sector were ACTs or SP. Over 85% of all treatments distributed were non-artemisinin therapies, mainly CQ (57%) and SP (27%). FAACTs comprised only 12% of all antimalarials distributed.

Figure 6. Market share of AETDs sold/distributed in the past week (7 days)



PROVIDER KNOWLEDGE: Overall, 23% of providers were able to correctly state ASAQ as the recommended first-line treatment for uncomplicated malaria in Madagascar. Knowledge was higher among providers at public/not-for-profit outlets, compared to the private sector (72% vs. 12% respectively). Providers were more likely to be able to correctly state the dosing regimen of ASAQ for a child versus an adult.

Figure 7. Provider knowledge of recommended first-line treatment and dosing regimens



1. Background

Overview of the ACTwatch Research Project

In 2008, Population Services International (PSI) in partnership with the London School of Hygiene and Tropical Medicine (LSHTM) launched a five-year multi-country research project called *ACTwatch*. The project is designed to provide a comprehensive picture of the antimalarial market to inform national and international antimalarial drug policy evolution. The research is designed to detect changes in the availability, price and use of antimalarials over time and between sectors, and to monitor the effects of policy or intervention developments at country level.

ACTwatch addresses both the supply and demand side of the market. The supply side is evaluated by collecting level and trend data on antimalarials and rapid diagnostic tests (RDTs) in public and private sector outlets and wholesalers of antimalarial drugs. To evaluate demand, data are collected at the household level on consumer treatment-seeking behavior and knowledge. In combination, the research components thread together the antimalarial market and consumer behavior. Findings can help determine where and to what extent interventions may positively impact access to and use of quality-assured ACTs and RDTs as well as resistance containment efforts.

The project is being conducted in seven malaria-endemic countries: Benin, Cambodia, Democratic Republic of Congo, Madagascar, Nigeria, Uganda and Zambia between 2008 and 2012. Countries were selected with the aim of studying a diverse range of markets from which comparisons and contrasts could be made. The research in Madagascar is planned as follows: three outlet surveys (2008, 2010 and 2011), supply chain research (2011) and two household surveys (2009 and 2012).

This report presents the results of a cross-sectional survey of outlets conducted in Madagascar between the end of April and June 2010. Indicators to address the research questions were developed in consultation with partners and the *ACTwatch* Advisory Committee. Indicators were selected to provide relevant information for policy makers in relation to price, availability, volumes, mark-ups and treatment seeking behavior, including type of treatment and source. While data were collected prior to the Independent Evaluation of the AMFm Phase 1, data were retrospectively analysed to produce indicators to inform the evaluation. The Independent Evaluator provided technical oversight on the analysis presented in this report, to ensure that results are aligned with the AMFm indicators. The 2010 Madagascar Outlet Survey is being employed as part of the baseline for the Independent Evaluation of the AMFm Phase 1.

Information on other *ACTwatch* studies can be found at www.ACTwatch.info.

Overview of the AMFm Phase 1

The success of malaria control efforts depends on high level of coverage in use of effective antimalarials such as artemisinin-based combination therapies (ACTs). Although these antimalarials have been procured in large amounts by countries, evidence suggests that ACT use still remains far below target levels. Reasons suggested for the low uptake of ACTs include interruptions in public sector supply; limited availability outside major urban centres; the high prices of the drugs, particularly in the private sector; lack of provider adherence to new recommendations; and patient self-treatment with other more common and cheaper antimalarials (Sabot et al., 2009). Lowering the cost of ACTs to the end user through a subsidy mechanism could be an effective way to increase their uptake (Arrow et al., 2004).

In response to this issue, the Affordable Medicines Facility – malaria (AMFm) hosted by The Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund) was set up. As described by Adeyi and Atun (2010), AMFm is a financing mechanism designed to incorporate three elements: (1) price reductions through negotiations with manufacturers of ACTs; (2) a buyer subsidy, via a co-payment at the top of the global supply chain by AMFm on behalf of eligible buyers from the public, private for-profit and private not-for-profit sectors; and (3) support of interventions to promote appropriate use of ACTs. Examples of these “supporting interventions” include training providers and outreach to communities to promote ACT utilization. AMFm is being tested in a first phase that includes 9 pilots in 8 countries: Cambodia, Ghana, Kenya, Madagascar, Niger, Nigeria, Republic of Tanzania (mainland and Zanzibar) and Uganda.

It is expected that in the last quarter of 2012, the Global Fund Board will make a decision regarding the future of the AMFm on the basis of evidence gathered during Phase 1 that the initiative is likely to achieve its four stated objectives: (i) increased ACT affordability, (ii) increased ACT availability, (iii) increased ACT use, including among vulnerable groups, and (iv) “crowding out” oral artemisinin monotherapies, chloroquine and sulfadoxine-pyrimethamine by gaining market share. The AMFm Phase 1 Independent Evaluation has been commissioned to address the need for evidence on which to base the Global Fund Board decision.

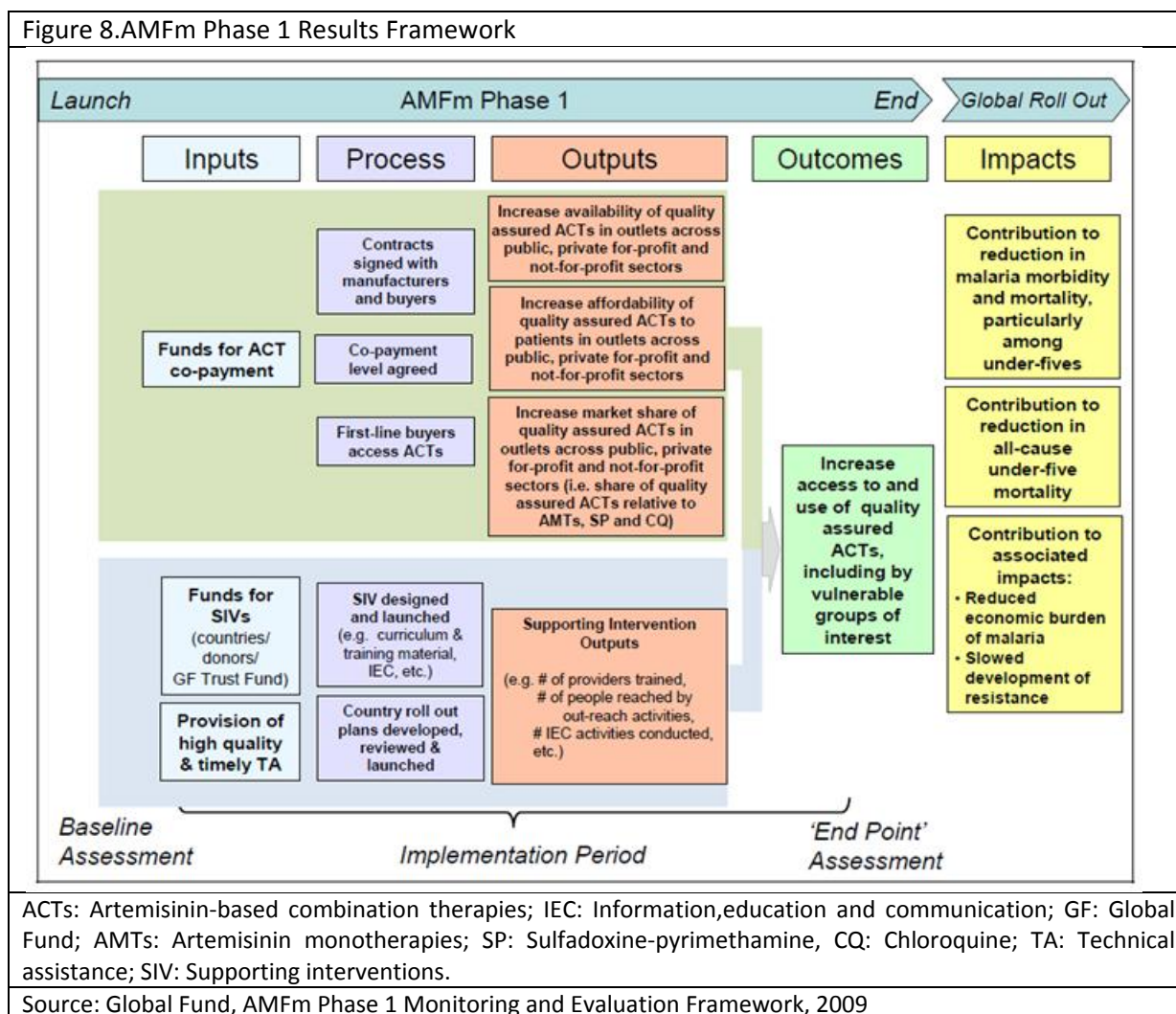
Overview of the AMFm Phase 1 Independent Evaluation (IE)

Through a competitive bid, the Global Fund contracted ICF Macro and the London School of Hygiene and Tropical Medicine (LSHTM) to carry out the Independent Evaluation (IE) in all the Phase 1 countries¹. In addition, the Global Fund contracted three other institutions (Population Services International (PSI), Drugs for Neglected Diseases initiative, and Centre de Recherche pour le Développement Humain) to serve as data collection contractors (DCs) responsible for collecting required data and information within countries. PSI is responsible for data collection in Cambodia, Kenya, Madagascar, Nigeria, Uganda, Tanzania mainland (subcontracted to the Ifakara Health Institute) and Zanzibar. The 2010 Outlet Survey in Madagascar represents the baseline survey for the Independent Evaluation and it was conducted based on the *ACTwatch* questionnaire.

¹ In March 2011 the AMFm Ad Hoc Committee decided to drop Cambodia from the evaluation due to the lack of an eligible ACT for subsidy.

The purpose of the IE is to assess how the AMFm has evolved in each pilot and changes between baseline and endline in the values of key measures (i.e., availability, price, market share and use of quality-assured ACTs²) to inform decisions regarding the future of the AMFm beyond Phase 1. The IE is in line with the AMFm (Phase 1) Monitoring and Evaluation (M&E) Results Framework, but with a focus on Outputs and Outcomes (Figure 8).

Figure 8. AMFm Phase 1 Results Framework



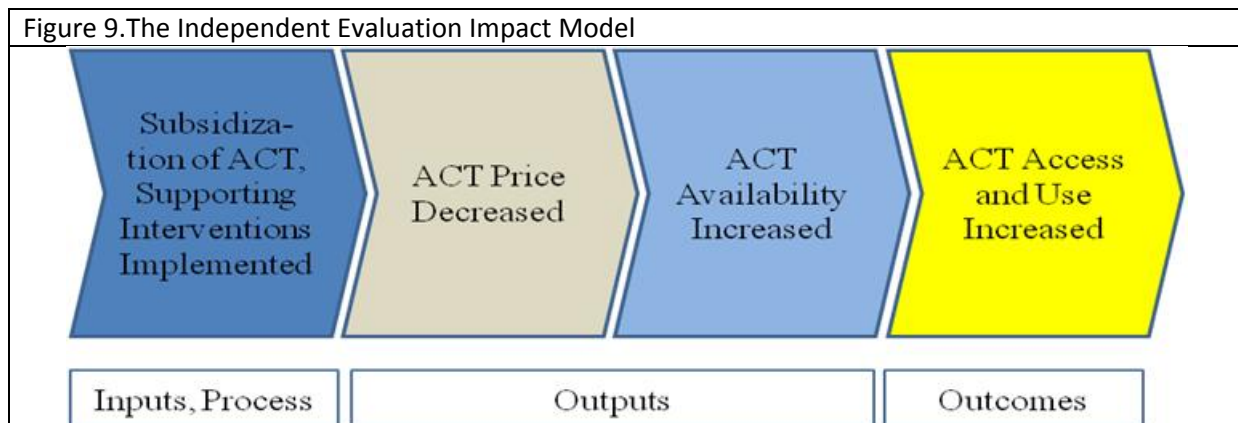
The IE is therefore set to answer four questions related to the availability, affordability, market share and use of ACTs. These questions are formulated as follows:

1. Has the AMFm mechanism helped increase the availability of quality-assured ACTs to patients across public, private for-profit and not-for-profit sectors, in rural/urban areas?
2. Has the AMFm mechanism helped to reduce the cost of quality-assured ACTs to patients at public, private for-profit and not-for-profit outlets in rural/urban areas to a price comparable to the price of most popular antimalarials?
3. Has the AMFm mechanism helped increase use of quality-assured ACTs, including among vulnerable groups, such as poor people, rural residents and children?

²Quality-assured ACTs are defined as those ACTs that meet the Global Fund's quality assurance policy.

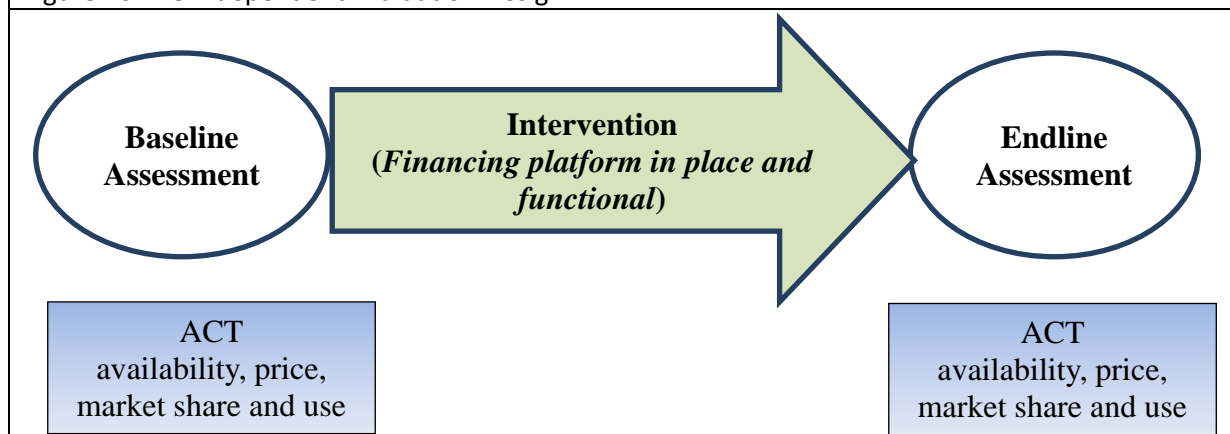
4. Has the AMFm mechanism helped increase the market share of quality-assured ACTs relative to all antimalarial treatments in the public, private for-profit and not-for-profit sectors in rural/urban areas?

To answer these questions, building on the AMFm results framework, the IE impact model (Figure 9) foresees that subsidizing ACTs, accompanied by effective supporting interventions, will lead to a decrease in the ACT price. It is therefore anticipated in the model that if ACT price decreases, more outlets will be willing to stock the product and thereby increase availability. The increase in availability and the substantial decrease in price will potentially lead to an increase in use.



While an evaluation based on experimental design would have provided stronger evidence to attribute any change in primary outcomes to the intervention, it is challenging to execute such a study design for an evaluation of a complex public health program such as the AMFm which is implemented on a national scale with multiple players. The IE therefore uses a pre- and post-test/intervention design (Figure 10) in which each participating country is treated independently as a case study. As the literature suggests (Craig et al., 2008, deSavigny and Adam, 2009, Habicht et al., 1999) for the evaluation of such a complex intervention, in addition to measuring the changes in key indicators pre- and post-intervention, the evaluation should include an assessment of the implementation process to determine whether any lack of impact reflects implementation failure or genuine ineffectiveness and a comprehensive documentation of context both to inform assessments about causality and to aid in generalizability to other contexts.

Figure 10. The Independent Evaluation Design



The evaluation, therefore, includes two major components: (1) a pre- and post-intervention study of key outcomes through outlet surveys and use of secondary household survey data, and (2) documentation of key features of the context at baseline and endpoint, and the implementation process in each pilot. The descriptions of context and implementation process provide the information needed to interpret the changes in outcomes over the implementation period, and to judge whether any observed changes are likely to be due to AMFm. The evaluation is based on primary data collected from outlet surveys conducted at baseline and endline (for questions related to availability, affordability and market share of ACTs); secondary data from national household surveys (for questions related to use of ACT), such as Demographic and Health Surveys (DHS), Malaria Indicators Surveys (MIS) and Multiple Indicator Cluster Surveys (MICS); in-depth interviews with key stakeholders involved in the drug supply chain in the country; and review of documents such as reports from AMFm operations research, malaria treatment guidelines, pharmacy regulations, country-level reports from MOH and donor partners, including national malaria control strategy documents, and results from national surveys, and any other documents relevant to the context data described above.

For each country, relevant indicators will be computed for the baseline and endline from the outlet surveys. For secondary data from existing national household surveys, appropriate indicators will be extracted from existing reports. To assess change, the IE will calculate the percentage point change or the percent change (whichever is relevant for each indicator) between the baseline and the endline. Contextual information will then be processed to help in the interpretation of these results.

Pilot-specific case studies will be produced, making use of the qualitative and quantitative approaches described above, to document and describe how the AMFm has evolved in each country. The evaluation will distinguish two parts: (i) the upstream part, with emphasis on the business model of the AMFm as a financing platform; and (ii) the downstream part, with emphasis on service delivery to increase access to and use of ACTs, including by poor people. In the case studies, findings from nationally representative outlet surveys will be compared before and after the introduction of the AMFm, taking into account relevant contextual information and results from operational research that become available to help learn how and why the new model unfolds in a variety of contexts while drawing lessons that can help future operations.

While this section gives an overview of the IE to provide the reader with the relevant context, this report presents the country context and results of the baseline outlet survey for Madagascar. This is Step 1 of a four step process. These baseline results from Step 1 will be integrated into a “Comprehensive Baseline Report” to be produced by the Independent Evaluation Team (i.e., Step 2). This report is currently available at: http://www.theglobalfund.org/documents/amfm/AMFm_Phase1IndependentEvaluationMultiCountryBaseline_Report_en/. In Step 3, later in 2011, a national level outlet survey will be conducted to produce endline results, resulting in an endline report for Madagascar. These findings will be used to inform Step 4, the development of the full AMFm Phase 1 Independent Evaluation report to be submitted to the Global Fund Board.

Country background

Overview of the country

Madagascar is the world's fourth largest island and is located in Southern Africa, in the Indian Ocean, east of Mozambique (CIA, 2011). In 2010 the population of Madagascar was approximately 20.7 million (UN Population Division, 2010). Results from the 2005 DHS show that approximately 25% of the population resides in urban areas and 75% in rural areas (INSTAT and ICF Macro, 2005), and the average density of the population is 21 habitants/km².

Generally the climate of Madagascar is subtropical, with a hot and rainy season between November and April, and a cooler dry season from May to October. The climate of Madagascar is tropical along the coast, temperate inland and arid in the south. The east coast receives the most rain and is also prone to cyclones between February and March. Temperatures are much cooler in the highlands and can be as low as 4 degrees Celsius. Average temperature ranges in Antananarivo are from 9 to 20 degrees Celsius in July to 16 to 27 degrees Celsius in December.

There are three official languages in Madagascar: Malagasy, French and English. There are a variety of dialects within the nation, but Malagasy is the common spoken language. Malaria is known locally as "tazo" or "tazomoka".

Figure 11. Location of Madagascar



Source: <http://www.hoveraid.co.uk/news2.html>

From the 1970s until the mid-1990s, Gross Domestic Product growth in Madagascar averaged only 0.5 percent while the population grew at about 2.8 percent per annum. Per capita income declined from US\$473 in 1970 to US\$410 in 2008, placing Madagascar among the world's poorest countries (World Bank, 2010). According to the 2005 DHS, more than two-thirds of the population (69%) lives below the poverty line (INSTAT and ICF Macro, 2005). The poverty rate in rural areas is significantly

higher than in urban areas. The 2009 Human Development Index ranked Madagascar 145th out of 182 countries (UNDP, 2009).

Since February 2009, Madagascar has been in the throes of a political crisis which has led to a further decline in economic growth and job losses. A large fraction of official aid, representing 40 percent of Madagascar's budget and 75 percent of the investments, remains on hold (International Monetary Fund, 2010). Economic growth in Madagascar collapsed to just 0.6 percent in 2009, from 7 percent in 2008. This has led to a decline in the delivery of social services including health care and significant cuts in the public investment program.

Administratively, Madagascar is divided into 6 provinces. In turn, each province is subdivided into regions, and each region into districts. In addition to these administrative units, each district is subdivided into communes. Communes are further divided into fokontany, the smallest administrative unit. A commune is a combination of 6 to 20 fokontany.

Description of health care system

The government is in the course of decentralizing to give more decision-making power to communes and fokontany. The health system has four quite distinct functional levels: central, regional, district and community. The public sector is considered a major source of health care in Madagascar, especially in rural areas, where it accounts for more than 70% of primary contacts. In urban areas, it is estimated that fewer than 40% of primary contacts occur in the public health facility (PMI, 2008). Health facilities in the public sector are composed of 138 hospitals; 1,335 level 2 health centres (Centre de Santé de Base 2), which are staffed by doctors; 1,059 level 1 health centres (Centre de Santé de Base 1), which do not have any doctors on staff; and 14,989 community health workers (CHWs). Community-based delivery through CHWs has historically been an important distribution channel for antimalarials in Madagascar. For example, from 2005 and 2008, CHWs distributed an estimated 600,000 treatment doses annually. ACTs have been made widely available via the public health facilities since 2007.

Madagascar also has a significant private sector which forms an integral part of the health system. There are 44 hospitals, 724 private health centres or religiously affiliated health centres and more than 1,500 doctors. There is also a private pharmaceutical sector with a network of 22 pharmaceutical wholesalers, 200 pharmacies and more than 1,000 rural drug stores (dépôt de médicament). The private sector also includes providers that have little or no qualifications (and are not authorized to dispense medicines) such as grocery stores for which data suggest that 30% stock antimalarials (ACTwatch, 2009).

In the public sector, the central medical store, Centrale d'Achats de Médicaments Essentiels et Générique, called SALAMA, is the only wholesaler importing and distributing drugs and medical equipment. Public health facilities are either provided with drugs directly through SALAMA, or through district public sector pharmacies (which receive medicines directly from SALAMA). Public health facilities are supplied twice in a year, with the exception of facilities that are not accessible during the rainy season.

Antimalarials are a notable exception to this system of procurement, as only quinine is available through SALAMA. ACTs do not go through SALAMA and are instead bought and managed by the Principal Recipient of the Global Fund and make their way to health facilities via the National Malaria Service (NMS).

The private, not-for-profit health facilities working with community health workers utilize the same system as the public sector, under a program developed by the MOH which aims to make ACTs continuously available. In the private, for-profit sector, distribution channels for ACTs are different but complementary.

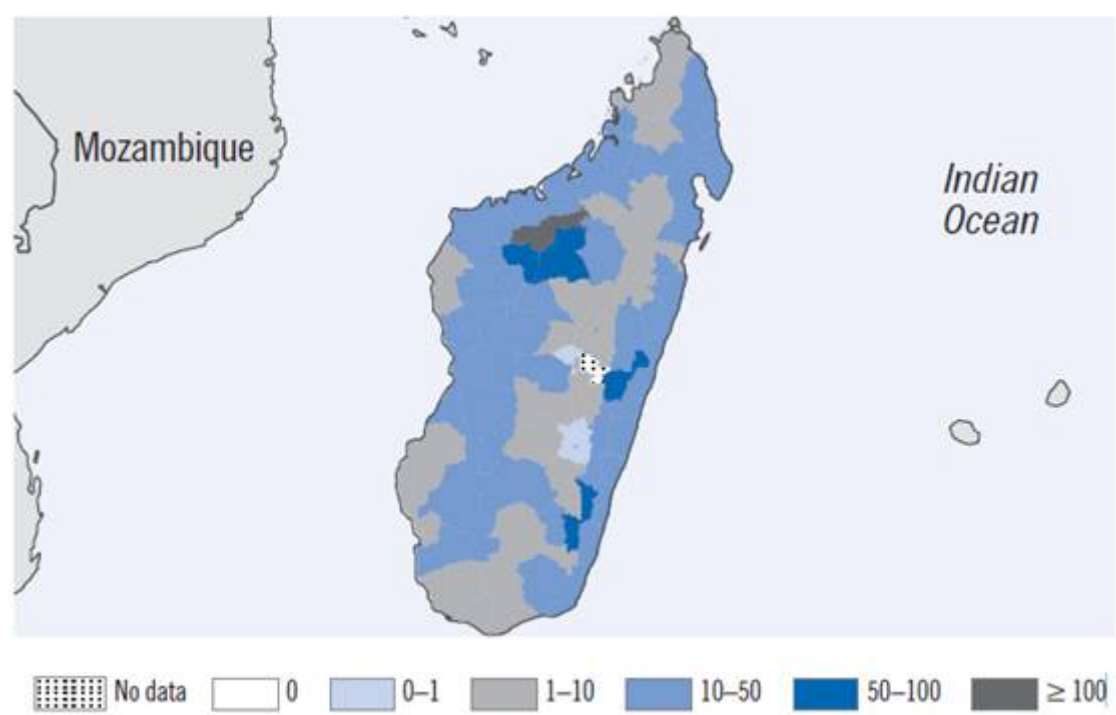
In September 2008, a socially-marketed co-blister pack of artesunate amodiaquine (ASAQ) for children under five was launched under the name ACTipal®. ACTipal® is subsidized nationwide and open to all national-level wholesaler buyers (registered or not) in the country. There are two ACTipal® products on the market: Nourrissons from 2 to 11 months, and Child from 1 to 5 years. The original recommended retail price for both ACTipal products, which was printed on the packing, was 100 Ariary (about \$0.05 USD). ACTipal is not classified as an over-the-counter drug and may not be sold through unregistered outlets. Distribution channels include CHWs, pharmacies and drug stores (Dépôt de Médicament). In November 2010, after the field work for this study was completed, ACTipal® was rebranded, through distinct packaging, as ACTipal artesunate amodiaquine Winthrop® for pharmacies and medical stores and has a recommended retail price at 200 Ariary, while ACTipal® has a recommended retail price of 100 Ariary for the community level. From January to December 2009, 519,808 doses were sold and in 2010, 396,470 doses were sold.

Private health facilities are supplied by 33 wholesalers. Most are concentrated in the capital (22 wholesalers). These wholesalers import pharmaceutical products (including generic and branded products). The source of supply to grocery stores is unknown.

Epidemiology of malaria

Malaria epidemiology varies across the country. Transmission is stable and perennial on the west and east coasts; seasonal and moderately unstable with occasional epidemics in the central highlands; and seasonal and very unstable in the south. Malaria transmission occurs all year round in the north of the country. Three quarters of the population lives in low-transmission areas which are prone to epidemics and 25% live in areas of high risk (WHO, 2010a).

Figure 12: Geographical distribution of confirmed malaria cases (per 1000 population, 2010)



Source: *World Malaria Report, 2010*

Antimalarial Policies and Regulatory Environment

In 2006, the National Malaria Control Program (NMCP) adopted artesunate plus amodiaquine combination therapy (ASAQ) as the first-line treatment for uncomplicated malaria to be made available free of charge in public health facilities. The second-line treatment is artemether-lumefantrine (AL) with oral quinine as the alternative. Quinine is recommended for the treatment of severe malaria.

At the community level, antimalarials require medical prescription and do not have over the counter status. In addition to the public sector and community health workers, antimalarials can also be stocked by pharmacies and drug stores (Dépôt de Médicament) that are legally registered with relevant authorities as per the 1980 Malagasy public health code. These outlets are obliged to prominently display their registration certificates and numbers.

Despite the policy change in 2006 from chloroquine to ASAQ as the national first-line treatment, as of late 2010 the government had still not signed into law a mandate to ban chloroquine from the market.

Malaria control strategy

The National Malaria Control Strategy tailors prevention and treatment interventions to regions of the country according to epidemiological risk. Interventions include indoor residual spraying; long lasting insecticidal net (LLIN) distribution through antenatal care clinics, immunization visits, large-scale campaigns targeting children under five, and social marketing; intermittent preventive treatment for pregnant women; and case management using confirmed diagnoses in health facilities and clinical diagnosis at community-level.

The reported number of outpatient malaria cases decreased from an average of 1.6 million in the period 2000–2004 to 299,094 in 2009, a reduction of 81%. Inpatient malaria cases decreased by 69% and deaths by 75% in the same period (WHO, 2010a). Some of the decline in reported cases and deaths may be due to incompleteness of reporting in 2009: a WHO-sponsored rapid impact assessment in 2010 in district hospitals found a decrease of 34% for inpatient malaria cases and 66% for inpatient malaria deaths in 2009 compared to the 2001–2004 period (figures cited in WHO, 2010a). It may also be due to the introduction of policy to confirm diagnosis in public health facilities.

The national programme distributed nearly 6.2 million LLINs during 2007–2009, covering almost 57% of the population at risk, and applied IRS protecting 6.9 million people at risk (35%) in 2009 (MOH, 2009). The 2008 DHS estimated that 59% of households had an ITN (INSTAT and ICF Macro, 2009).

According to national policy, consultation and treatment of uncomplicated malaria in children is to be provided in public health facilities free of charge. Since mid-2009, the first-line treatment (ASAQ) has been available in a co-blistered form to public health facilities and CHWs. In 2009, the national programme delivered 398,413 treatment courses of ACTs but there have been some reports of challenges in managing stocks to ensure continuous availability at the health facility level.

In May 2010, Madagascar signed a grant agreement with the Global Fund on the Affordable Medicines Facility – malaria (AMFm) which is a pilot subsidy project to increase access to quality-assured ACTs. Orders for 556,000 treatments were placed by the end of 2010 with the first ACTs delivered in October 2010, after the field work was completed for this survey in June 2010. In June 2010, a training of trainers on AMFm was organised and from July onwards, private practitioners were trained on malaria case management as part of AMFm supporting interventions.

Parasitological diagnosis of fever is of increasing importance in Madagascar in the context of scaled prevention efforts. Training by the NMCP on use of rapid diagnostic tests (RDTs) began in 2005, and microscopy capabilities have been strengthened through increased human resources and training in the public and private sectors. At the CHW level, presumptive treatment is generally employed in endemic areas but it is anticipated that RDT use will expand to this level. This follows the launch of RDT pilots at the end of 2009, and a subsequent directive from the MOH in 2010 permitting RDTs at the community level. In 2010 efforts were being made to better coordinate the approach at the community level as there were conflicting messages as to whether CHWs may use RDTs.

Malaria financing

Malaria control financing in Madagascar is almost entirely from external sources (WHO, 2010a). Funding for malaria control has increased every year, from around US\$25 million in 2008 to over US\$104 million in 2010, mainly from the Global Fund, the PMI, United Nations agencies, and other bilateral agencies.

The National Malaria Control Program has received funding from the Global Fund at the level of \$49 million from 2005 to 2009.

As one of 15 recipient countries of the President's Malaria Initiative (PMI), Madagascar received \$16.7 million in 2009; \$33.9 million in 2010, and a further \$28.8 million was allocated for fiscal year 2011. Although direct support to the government of Madagascar was suspended following the coup in 2009, PMI has continued to support malaria control through its international and local partners. PMI funds prevention interventions including the distribution and use of long-lasting insecticidal nets, indoor residual spraying and promoting malaria in pregnancy interventions through awareness raising and education at the community level. As part of integrated community case management of children under 5, PMI funds RDT and ACTs for community health workers.

Between 2007 and 2009 UNITAID donated more than \$5 million to fund ACT procurement. Madagascar is a World Bank Booster Programme country with funding of \$100,000 in 2010 and 2011. These funds were put on hold during the political crisis.

2. Methods

Key *ACTwatch* indicators

The following table shows the primary *ACTwatch* indicators measured through the outlet survey, and presented in this report. Results are presented by urban and rural locations, and nationally. They are also presented by outlet type (though there may not be sufficient power to detect statistical differences between outlet types).

Figure 13. Primary *ACTwatch* indicators

Availability indicators	
	<p>Proportion of censused outlets that have any antimalarials in stock at the time of survey visit.</p> <p>Proportion of outlets that have any ACTs in stock among outlets with any antimalarials in stock at the time of survey, including:</p> <ul style="list-style-type: none"> • Quality-assured ACTs <ul style="list-style-type: none"> ○ First-line quality assured ACTs ○ Non-first line quality assured ACTs • Non-quality assured ACTs • Nationally registered ACTs <p>Proportion of outlets that have any non-artemisinin therapy in stock at the time of survey visit, including:</p> <ul style="list-style-type: none"> • Chloroquine • Sulfadoxine-Pyrimethamine • Quinine <p>Proportion of outlets that have artemisinin monotherapy in stock among outlets with any antimalarials in stock at the time of survey visit, including</p> <ul style="list-style-type: none"> • Oral artemisinin monotherapy • Non-oral artemisinin monotherapy
Stock outs	
	<p>Proportion of outlets that report no disruption in stock of any antimalarial, among outlets with any antimalarial in stock or reported stock outs in the last three months.</p> <p>Proportion of outlets that report no disruption in the first line quality assured ACT, among outlets with any antimalarials in stock or reported stock outs in the last three months.</p>
Pricing indicators	
	<p>Median cost to patients of one adult equivalent treatment dose (AETD) of ACTs, including:</p> <ul style="list-style-type: none"> • Quality-assured ACTs <ul style="list-style-type: none"> ○ First-line quality assured ACTs ○ Non-first line quality assured ACTs • Non-quality assured ACTs • Nationally registered ACTs <p>Median cost to patients of one AETD of any non-artemisinin therapy, including:</p> <ul style="list-style-type: none"> • Chloroquine • Sulfadoxine-Pyrimethamine • Quinine <p>Median cost to patients of one AETD of artemisinin monotherapy, including</p> <ul style="list-style-type: none"> • Oral artemisinin monotherapy • Non-oral artemisinin monotherapy

Affordability	
	<p>Median cost to patients of one adult equivalent treatment dose (AETD) of first-line quality assured ACTs relative to the most popular antimalarial treatment.</p> <p>Median cost to patients of one AETD of first-line quality assured ACTs relative to the minimum legal daily wage.</p> <p>Median cost to patients of one AETD of first-line quality assured ACTs relative to the international reference price.</p>
Market share indicators	
	<p>Total volume of ACTs sold or distributed in the last week, as a proportion of the total volume of all antimalarials sold or distributed in the last week in rural and urban areas.</p>
Provider knowledge	
	<p>Proportion of providers that can correctly state the recommended first-line treatment for uncomplicated malaria, among outlets with any antimalarials in stock or reported stock outs in the last three months.</p> <p>Proportion of providers that can state the dosing regimen of the first-line treatment for an adult among outlets with any antimalarials in stock or reported stock outs in the last three months.</p> <p>Proportion of providers that can state the dosing regimen of the first-line treatment for a two year old, among outlets with any antimalarials in stock or reported stock outs in the last three months.</p>

Key AMFm Phase 1 indicators

The following table shows the indicators that the *ACTwatch* survey was able to measure for the Independent Evaluation of the AMFm Phase 1. Results are presented by urban and rural locations, and nationally. They are also presented by outlet type (though there may not be sufficient power to detect statistical differences between outlet types).

Figure 14. Primary AMFm indicators measured by the *ACTwatch* survey

Availability indicators	
1.1	Proportion of censused outlets that have any antimalarials in stock at the time of survey visit in rural and urban areas.
1.2	Proportion of outlets that have non-artemisinin monotherapy or non-artemisinin combination therapy in stock among outlets with any antimalarials in stock at the time of survey visit in rural and urban areas.
1.3	Proportion of outlets that have any artemisinin monotherapy in stock among outlets with any antimalarials in stock at the time of survey visit in rural and urban areas.
1.4	Proportion of outlets that have non-quality assured ACTs in stock among outlets with any antimalarials in stock at the time of survey visit in rural and urban areas.
1.5	Proportion of outlets that have quality-assured ACTs in stock at the time of survey visit among outlets with any antimalarials in stock at the time of survey visit in rural and urban areas.
1.7	Proportion of the population living in a sub-county where there is at least one outlet that had a quality assured ACT in stock at the time of the survey visit in rural and urban areas.
Pricing indicators	
2.1	Median cost to patients of one adult equivalent treatment dose (AETD) of quality assured ACTs in rural and urban areas.
2.2	Median cost to patients of one AETD of non-quality assured ACTs in rural and urban areas
2.3	Median cost to patients of one AETD of artemisinin monotherapy in rural and urban areas
2.4	Median cost to patients of one AETD of non-artemisinin monotherapy or non-artemisinin combination therapy in rural and urban areas.
2.5	Median percentage mark up between retail purchase and selling price of quality assured ACTs in rural and urban areas.
Market share indicators	
4.1	Total volume of quality assured ACTs sold or distributed in the last week, as a proportion of the total volume of all antimalarials sold or distributed in the last week in rural and urban areas.

Background on ACTwatch and the AMFm Phase 1 Indicators

The methods and procedures used for this survey follow the standard *ACTwatch* approach as data collection took place from April to June 2010, prior to the development of AMFm Independent Evaluation protocols. Specifically, the sample size determination, selection procedure of communes,

questionnaire development, training curriculum, PDA programming, and field implementation were guided by the standard operating procedures used for *ACTwatch*. Where possible, data were analysed retrospectively to inform AMFm Phase 1 indicators, with the Independent Evaluator providing oversight on the analysis plan, key informant interview methods and the reporting template.

While there are many similarities between the AMFm Phase 1 and *ACTwatch* indicators there are notable differences, particularly in terms of the types of antimalarial classifications, denominators for some provider indicators, prices (notably the use of different exchange rates and presentation of median prices for tablet vs. other formulations) and the presentation of indicators in the report. The following subsection explains these differences by providing background on: 1) antimalarial classifications 2) *ACTwatch* primary indicators and 3) AMFm Phase 1 primary indicators.

Classification of antimalarials

Antimalarials are presented within three broad policy-relevant categories:

- non-artemisinin therapy
- artemisinin monotherapy
- artemisinin combination therapy (ACT).

ACTs are further sub-divided as:

- quality assured ACTs (QAACTs), which include:
 - first-line, quality assured ACTs (FAACTs),
 - non first-line quality assured ACTs (NAACTs)
- non quality assured ACTs

For the purpose of the Independent Evaluation and *ACTwatch*, a QAACT is any ACT which appeared on the Global Fund's Indicative List of antimalarials meeting the Global Fund's quality assurance policy as at June 2010³, or which previously had C-status in an earlier Global Fund quality assurance policy and was used in a programme supplying subsidised ACTs. FAACTs and NAACTs are sub-classifications of QAACTs. FAACTs are government recommended first-line ACTs (i.e. ASAQ in Madagascar) for uncomplicated malaria meeting the quality assured definition. NAACTs are ACTs that are not the government's recommended first-line treatment for uncomplicated malaria (for example, AL in Madagascar), but which do meet the quality-assured definition.

For *ACTwatch* only, indicators are also calculated for nationally registered ACTs. Nationally registered ACTs are ACTs registered with a country's national drug regulatory authority and permitted for sale or distribution in-country. Each country determines its own criteria for placing a drug on its nationally registered listing. A list of nationally registered ACTs at the time of data collection is given in the appendix.

³ List available at: <http://www.theglobalfund.org/en/procurement/quality/pharmaceutical/#General>

***ACTwatch* versus AMFm classifications**

Given the objectives of the AMFm Phase 1, indicators focus on the following antimalarial classifications: 1) non-artemisinin therapy, 2) artemisinin monotherapy, 3) QAACTs and 4) non-quality assured ACTs.

In addition to these classifications, *ACTwatch* also presents data on FAACTs, NAACTs, and nationally registered antimalarials, which are relevant for national policy. Artemisinin monotherapy is also further classified as oral and non-oral artemisinin monotherapy as per WHO recommendations that intravenous artesunate should be used as first-line treatment in the management of severe *P. falciparum* malaria in African children and adults (WHO, 2010b). *ACTwatch* further classifies non-artemisinin therapy into chloroquine, sulfadoxine-pyrimethamine and quinine.

***ACTwatch* versus AMFm denominators**

Provider knowledge

The *ACTwatch* indicator on provider knowledge of the first-line antimalarial treatment includes outlets that had an antimalarial at the time of survey or in the previous three months. For the AMFm Evaluation Indicator, only outlets that had an antimalarial in stock at the time of survey are included in the denominator. Therefore there are slight differences in the results for these knowledge indicators.

Rapid diagnostic tests and malaria microscopy

The *ACTwatch* indicator on availability of RDTs and malaria microscopy includes outlets that had an antimalarial at the time of survey or in the previous three months. For the AMFm Evaluation Indicator, only outlets that had an antimalarial in stock at the time of survey are included in the denominator. Therefore there are slight differences in the results for these diagnosis indicators.

***ACTwatch* versus AMFm evaluation exchange rates**

Price

Price data were collected in local currencies and converted to their US\$ equivalent. The US\$ conversion used in this report (for both *ACTwatch* and AMFm indicators) is equivalent to the average interbank rate for the period of data collection. This approach is used to facilitate comparisons over time between other rounds of *ACTwatch* data collection, and between other *ACTwatch* countries. This differs from the AMFm approach, which uses the average 2010 exchange rate over the whole year in which data collection took place. Given these differences, separate tables for price indicators were provided to the Independent Evaluator for AMFm using the 2010 exchange rate. The prices presented in this report are therefore slightly different from those presented in the “Multicountry Baseline Report” produced by the Independent Evaluation Team, which synthesizes results from all pilot AMFm countries.

In addition, another notable difference between the price measures for the AMFm indicators and the *ACTwatch* indicators is the presentation of price for tablets and other formulations. Price measures for *ACTwatch* only include tablet formulations. The price of non-tablet formulations, such

as powders for reconstitution, suspensions, suppositories and syrups, are excluded. In contrast to this, the AMFm indicators present information for both tablet and non-tablet formulations.

Outlet survey

Sampling Approach

The target sampling units were all types of outlets that have the potential to sell or provide antimalarials in Madagascar. The outlets were classified into two main categories:

Category 1: public health facilities (this included national university hospitals, regional and district hospitals, public health centres [levels 1 and 2]), pharmacies and drug stores (Dépôt de Médicament).

Category 2: other antimalarial drug sellers, including private clinics and practices, grocery stores, bars (with and without grocery stores attached), gargotes, NGO clinics and community health workers (NGO and public health facility based).

Sampling procedures were employed to select outlets within each category, as described below.

Sample size determination

The proportion of outlets with any ACT, estimated to be 40%, was the primary outcome measure. A minimum of 290 outlets with antimalarials in stock were needed to provide detectable changes in ACT availability per stratum (urban, rural) and between the public and private sectors. With this number, 19 clusters per stratum provided a representative sample to detect a 20% point increase in availability at 80% power, setting the level of significance at 5% and adjusting for an estimated design effect of 3.

Selection procedure of the communes

The last census was conducted in 1993 and was used as the sample frame for the 2010 outlet survey. The desired cluster size for the outlet survey was approximately 10,000 to 15,000 inhabitants, which corresponded most closely to a commune in Madagascar. The list of communes had population sizes from the 1993 census, and communes were classified as either urban or rural (INSTAT, 1999). In addition, a facility listing was used to confirm the location of public health facilities (Ministère de la Santé Publique, 2007), pharmacies and drug stores (Ordre National des Pharmaciens, 2009).

The sample was selected using a stratified cluster design, with urban and rural areas constituting the two strata. A total of 38 clusters (19 urban and 19 rural) were selected with probability proportional to size from the 1993 census. Areas in which there was no malaria, such as the capital city of Antananarivo, were excluded from the sampling frame.

In each selected commune, a census of all Category 1 and Category 2 outlets was conducted. All outlets that stocked antimalarials at the time of the survey or in the past 3 months were eligible for interview.

Selection procedure of the booster sample

The sample was supplemented by a booster sample of Category 1 outlets (including 'Dépôt de Médicament') operating in the district of the sampled commune. Oversampling ensured adequate representation of relatively rare but important antimalarial outlet types. All public sector tertiary care, district/provincial level facilities, and pharmacies and drug stores (Dépôt de Médicament) located in the corresponding district of the sampled commune were included. For lower-level public health facilities, in each of the 19 rural communes, 12 lower-level health facilities per rural district were selected; and in each of the 19 urban communes 16 lower level health facilities per district were selected. If districts had fewer than 40 public health facilities combined, then all of the facilities

were censused. All Category 1 booster outlets that stocked antimalarials at the time of the survey or in the past 3 months were eligible for interview.

If more than one commune was selected from one district, all the selected communes shared the same booster sample. The booster sample comprised all the public health facilities and registered pharmacies listed in the district, but not in any of the selected communes.

Data Collection

Preparatory phase

The study initially received ethical clearance from Madagascar's ethical approval committee at the Ministry of Health (ref No. 206-SANPEPS). An extension of the 2008 Outlet Survey approval was obtained on the 23rd March 2010 for the follow-up survey.

The questionnaire mirrored the *ACTwatch* questionnaire employed in Madagascar in 2008. Three modules were used in the outlet survey: 1) a screening module identified outlets that were eligible for the audit and provider interview; 2) a provider module collected information on outlet demographics (e.g. health qualifications of staff, number of staff that prescribe or dispense medicines), provider knowledge of the first line treatment, and provider perceptions; and 3) an antimalarial audit module collected data for each antimalarial stocked, including information on brand name, generic name and strengths, package type and size, recall of volumes sold over the week before the survey, recall of last purchase price and selling price. The questionnaire was translated into Malagasy.

Questionnaires were programmed into Personal Digital Assistants (PDAs). PDA programming used Visual Basic running on the Windows Mobile 5.0 operating system. The PDA programming was pretested prior to the main data collection.

56 candidates participated in an eight day outlet survey training between the 10th and 20th April in Antananarivo. Standardised training materials developed by *ACTwatch* were adapted to the national setting, and administered by PSI/Madagascar research staff. Training sessions covered completing the questionnaire, informed consent, conducting the census, and identifying outlet types. Interviewers were trained to identify antimalarial medicines, including the differences between ACTs and non-ACTs, trade names and generics, packaged and loose tablets, and the various formulations. PDAs were introduced to the field staff after the main body of the training had been completed. A field practice session was undertaken to mimic actual data collection. Of the 56 candidates, 22 were selected as interviewers, 7 as supervisors and 7 as quality controllers.

Supervisors and quality controllers received additional training to clarify roles and responsibilities in the field. This training also included a review of logistical procedures to be followed during data collection, trouble-shooting PDAs and backing up data.

Fieldwork

Seven teams carried out data collection, each consisting of one team supervisor, one quality controller and three interviewers. Each team was assigned to 5-6 communes. Three coordinators were responsible for managing the supervisors and ensuring that standardized methods were implemented. Each team received at least eight visits by a coordinator during data collection.

Fieldwork commenced on the 26th April, 2010. Data collection ranged from 39 to 60 days depending on the team, with the South West team taking the longest time to complete data collection; this

team completed data collection on the 22nd June, 2010.

During fieldwork specific outlets were identified in sampled communes using a number of approaches. Official lists of outlets operating in selected communes were obtained from the Ministry of Health prior to fieldwork, and were then used to help verify outlets within each commune. In addition, supervisors identified key informants (such as health officials and other local government officials) and, through discussion with these key informants, obtained a list of potential medicine outlets in their area and worked with them to draw up a rough sketch map of their locations. To estimate the boundaries of each commune, supervisors liaised with commune chiefs and with local guides. The teams were also provided with district and commune maps to further identify boundaries. Road maps were also used where available. Finally, during data collection a snowball technique was used whereby outlets included in the survey were asked to identify other outlets stocking, or with the potential to stock, medicine in the commune.

For each outlet that was identified during the census, the outlet type and location were noted, along with its longitude and latitude coordinates (obtained via hand-held GPS units). The fieldworker then identified the most senior staff member currently present at the outlet, and screening questions were administered. For outlets that were eligible, the interviewer then read the information sheet to the senior staff person and obtained witnessed oral consent to proceed with the full interview. The questionnaire is included in the annex.

At the end of each day, all collected data were synchronized from the PDAs to computers and submitted to a database residing in a directory acting as a central server.

Quality control

During data collection a random selection of approximately 40% of all questionnaires was reviewed by the team supervisor, and spot checks were conducted on at least 20% of all questionnaires by quality controllers. Supervisors observed 10% of interviews, verifying adherence to study procedures.

Teams were visited by supervisors and quality controllers in the field during the survey period. Supervisory and quality control visits included the following: inspection of teams' PDA records and questionnaires; random inspection of some of the outlets by navigating to and visiting surveyed outlets; assessment from the outlet records obtained from the survey; completion of a supervisory/quality control checklist by direct and indirect observation; and observing a team's overall harmony and performance as well as providing feedback and sharing the experience of other teams supervised.

PSI coordinators also provided supervision during the data collection. Coordinators uploaded data from interviewers' PDAs and checked for any inconsistencies, irregular skip patterns or large amounts of missing data. Coordinators also verified the booster sample and documented reasons why certain outlets could not be accessed.

Data Processing

Data recorded on PDAs underwent various cleaning processes before being sent to *ACTwatch*

Central. Data were primarily corrected for any mismatches and wrong coding.

The final raw dataset was sent to *ACTwatch* Central, based in Nairobi, where cleaning was conducted. Any clarifications or errors were documented and sent back to PSI/Madagascar for verification. PSI/Madagascar staff reviewed back-up data and interviewer monitoring sheets. Any changes made to the data were documented, and the original variables (i.e. the unclean data) were kept in the dataset for review and comparison.

Accounting for survey design in data analysis

We accounted for three aspects of the sampling design during the analysis:

- **Sampling weights:** Sample weights were calculated for the outlet survey data to allow for 1) differences in sampling probabilities due to variation in the size of strata; 2) the oversampling of the booster sample; and 3) the sampling strategy which involved a census of outlets in communes of varying size selected with probability proportional to size (PPS). Weights were based on sampling probabilities and were calculated by the IE after data cleaning was complete. Refer to the Appendix for a detailed description of the calculations performed and weights used.
- **Clustering:** The sample was clustered at the level of the district for Category 1 outlets (the booster sample) and the commune for Category 2 outlets. The calculation of standard errors took this clustering into account because outlets in a given cluster are likely to be more similar to each other than to outlets in other clusters. The standard errors did not take into account clustering of products within outlets because a complete list of all relevant products in each outlet was obtained and no sampling was performed.
- **Stratification:** Communes were sampled separately in each stratum and this was also adjusted for in the calculation of the standard error terms during analysis.

To account for these design features in the tabulations, we used the Stata *svy* commands for analyzing complex survey data to weight the data and calculate confidence intervals which account for clustering and stratification. We declared the primary sampling unit (district), the weight variable (*wt*), the strata and the finite population correction (*fpc*) in the *svy* command. The *fpc* equaled the sampling fraction for each stratum (the number of sampled communes in a stratum divided by the total number of communes in the stratum, or 0.5 if the sampling fraction was greater than 50 percent).⁴ This was specified as:

```
svyset district [pweight=wt], strata (strata) fpc (fpc)
```

We calculated a proportion and its 95 percent confidence interval (CI) as:

```
svy: proportion VariableName
```

⁴ For simplicity we used the district as the primary sampling unit for both booster sample and main sample outlets, as it is rare for there to be more than one main sample commune from the same stratum in a district. In Madagascar, there was more than one main sample commune selected in 2 districts in the urban stratum and no district/s in the rural stratum. However, we defined *fpc* on the basis of the number of communes in the stratum to present a true picture of the proportion of clusters selected.

Data Analysis

Calculation of antimalarial volumes, prices and markups

Antimalarial volume and price data are reported in terms of adult equivalent treatment doses (AETDs). An AETD is defined as the number of milligrams (mg) of an antimalarial drug needed to treat a 60kg adult (refer to the Appendix for details). The number of mg/kg used to calculate one AETD was defined as what was recommended for a particular drug in the treatment guidelines for uncomplicated malaria in areas of low drug resistance issued by WHO (as of 5 April 2011). Where WHO treatment guidelines did not exist, AETDs were based on the product manufacturer's treatment guidelines. In the case of ACTs, which have two or more active antimalarial ingredients packaged together (either co-formulated or co-blistered), the strength of the artemisinin-based component was used as the basis for the AETD calculations. Information collected on the medicine strength and unit size, as listed on the product packaging, was then used to calculate the number of AETDs contained in each unit.

Market share was calculated by dividing the number of AETDs of a particular antimalarial category sold by the total number of AETDs of all antimalarials sold. In cases where outlets stocked antimalarials but some or all sales volumes were missing we did not impute for missing values.

Price data were collected in local currencies and converted to their US\$ equivalent using the average interbank rate for the period of data collection (US\$ = 2161.14 Ariary, source: www.oanda.com). This differs from the IE approach, which uses the average 2010 exchange rate for the baseline surveys. Given these differences, separate tables for price indicators were provided to the Independent Evaluator using the annual 2010 exchange rate. Price data are reported using median and inter-quartile range, which are appropriate for describing distributions likely to be skewed.

Retail percentage mark-ups were calculated for each product as the difference between selling price and purchase price, divided by purchase price. In cases where an outlet received an antimalarial for free from its supplier and distributed the product for free, the retail mark-up was set to 0%. In cases where an outlet received an antimalarial for free from its supplier, but did not distribute the product for free, the retail mark-up was set to missing. The tables that present mark-up data indicate the number of observations set to missing for this reason.

Contextual information

The aim of the context component was to describe relevant contextual information at data collection in order to permit appropriate interpretation of quantitative findings. PSI/Madagascar collected 2 sets of context data: the first on background information, and the second on key events prior to or during data collection.

Background information was collected for a number of different topics, including: 1. Country demographics and socio-economic status; 2. Malaria transmission and disease burden; 3. Structure of health system; 4. Private health sector and pharmaceutical sector; 5. Malaria treatment guidelines; 6. Malaria treatment seeking behavior; 7. Coverage of key malaria control interventions; 8. Funding received for malaria control activities; and 9. Drug regulations, taxes and tariffs. These data were used to complete the background section included in this report.

Data were also collected on events prior to or during data collection that may have influenced results, including weather anomalies, such as monthly rainfall for the past two years obtained from the national meteorological bureau; financial crises; political unrest; major changes to malaria control activities e.g. communication campaigns (public/private), insecticide treated nets (ITNs) scale up, introduction of diagnostic services; major changes to funding of malaria control activities; changes to the health system or pharmacy regulation, e.g., removal of user fees, introduction of community health workers (CHWs), clamp down on private outlets; and recent drug availability in public health system.

Document review

A desk review of key documents was completed. From each document, key elements were abstracted and summarized by a data collection agency and reviewed by the *ACTwatch* Country Program Coordinator, using a template that was designed to provide information on the aforementioned topics. Documents reviewed include malaria treatment guidelines, pharmacy regulations, country level reports from the Ministry of Health (MOH) and donor partners, national malaria control strategy documents, Demographic and Health Surveys, Multiple Indicator Cluster Surveys, and PSI TRaC Surveys. Key documents were gathered on an on-going basis.

Key informant interviews

Key informant interviews were conducted after the completion of the outlet survey fieldwork to ensure that respondents could reflect on events that may have affected indicators either prior to or during the survey. Interviews were conducted with twenty-one stakeholders with knowledge of malaria control and/or the general socio-economic development in the country. These included staff from AMFm implementing partners, the national MOH, faith-based organizations (FBO), non-governmental organizations, UN agencies, donors, and business associations for the private pharmaceutical sector.

A non-probability, purposive convenience sample of key informants was recruited from the capital city based on their experience with the topics to be studied. Potential participants were contacted by phone and asked to participate in the study.

All participants were provided with an information sheet, describing the objectives of the study and measures to ensure confidentiality. Witnessed oral informed consent was obtained for all participants. The 21 interviews were held over the course of several weeks in October 2010. All discussions were held in private rooms and detailed notes were taken by the interviewer.

Interview guides with open-ended questions were used to address several key topics related to the malaria control interventions. Questions included the types of interventions that had been implemented and by whom, and whether the country had experienced any disruption to interventions or changes in funding. Interviews also explored whether the country had experienced any changes to the functioning of government, health systems and/or pharmaceutical regulation, and whether stock outs had occurred in the public health system. Finally, interviewers addressed whether or not there were any important weather, economic or political events that could have affected the malaria disease burden.

Preliminary analysis involved reading the detailed notes. These notes were then thematically analyzed and arranged into a smaller set of broader themes which captured the main topics emerging from the data. These themes included a summary of the event, the dates, geographical location and the likely impact on price and market share of antimalarials. Data from these interviews helped to inform the country context and summary of key events presented in this report.

3. Results- Outlet survey

Two sets of results are presented in this sub-section of the report. The first set use the standard *ACTwatch* templates for presentation (prefixed A, pages 26 – 46), and the second set use the standard IE templates (pages 48-82). Although there is considerable overlap in the indicators presented, there are some minor differences in the precise methods of calculation which have been discussed in the section Background on *ACTwatch* and the AMFm Phase 1 Indicators.

Characteristics of the sample

Figure 15: Survey flow diagram, in Madagascar, 2010

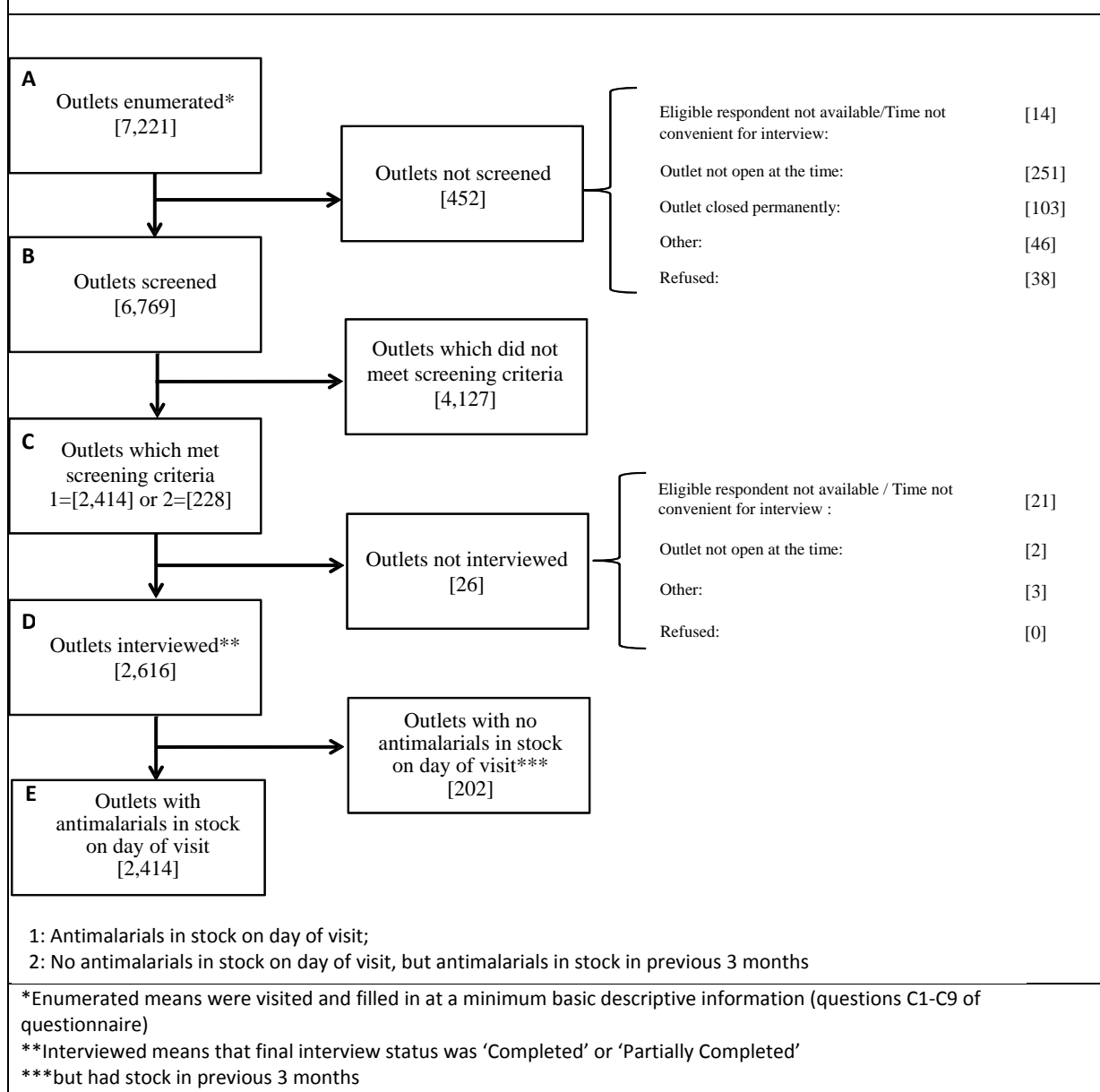


Table 0.1: Outlets enumerated by location, drugs stocked and final interview status			
Final interview status	Urban n	Rural n	Total n
Number of outlets enumerated (Figure 15 Reference A)	5274	1947	7221
Number of outlet stocking drugs at the time of the survey visit*	--	--	--
Number of outlets meeting the screening criteria* (Figure 15 Reference C)	1604	1038	2642
Number of outlets stocking antimalarials at the time of the survey visit (Figure 15 Reference E)	1444	970	2414
Number of outlets without antimalarials in stock at the time of the survey visit, but who had antimalarials in stock at some time in the 3 months previous to the survey	137	65	202
Final interview status			
Outlet Not Screened	294	158	452
Eligible respondent not available	11	3	14
Outlet not open at the time	150	101	251
Outlet closed permanently	78	25	103
Refused	37	1	38
Other	18	28	46
Outlet did not meet screening criteria	3376	751	4127
Outlet met screening criteria, but not interviewed (total)	23	3	26
Interview interrupted	0	0	0
Eligible respondent not available	19	2	21
Outlet not open at the time	1	1	2
Refused	0	0	0
Other	3	0	3
Completed interview	1554	1025	2579
Partially completed interview	27	10	37
Interview interrupted	27	10	37
Eligible respondent not available	0	0	0
Outlet not open at the time	0	0	0
Refused	0	0	0
Other	0	0	0
Response rate (%)	%	%	%
Proportion of outlets enumerated that were screened	94.5	91.7	93.7
Proportion of outlets meeting screening criteria that were interviewed**	98.6	99.7	99.0
* The number of outlets meeting the screening criteria is defined as the sum of the number of outlets stocking antimalarials at the time of the survey and the number of outlets without antimalarials in stock at the time of the survey, but who had antimalarials in stock at some time in the 3 months previous to the survey			
** Response rate was calculated as outlets where final interview status was "Completed interview" or "Partially completed" as a percentage of all outlets meeting the screening criteria (i.e. Figure 15 reference D divided by C).			



***ACTwatch* Indicators**

Table A.1: Availability of antimalarials among all outlets, by outlet type

	Public Health Facility	Community Health Worker	Private not for profit Health Facility	TOTAL Public/Not for profit	Private for profit Health Facility	Pharmacy	Drug Store	General retailer	TOTAL Private	TOTAL Outlets
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Proportion of outlets that had:	N=531	N=226	N=7	N=764	N=87	N=69	N=263	N=5,586	N=6,005	N=6,769
Antimalarials in stock at the time of survey visit	96.8 (94.6, 98.2)	26.8 (10.1, 54.3)	80.6 (43.0, 95.8)	40.4 (22.3, 61.5)	87.6 (77.2, 93.7)	99.6 (97.7, 99.9)	97.4 (93.3, 99.0)	31.4 (24.6, 39.0)	33.9 (27.3, 41.1)	34.9 (28.8, 41.5)
Any ACT	81.2 (75.2, 86.0)	26.7 (10.1, 54.3)	38.6 (14.4, 70.0)	37.3 (20.2, 58.2)	39.9 (19.4, 64.7)	70.2 (61.4, 77.7)	54.6 (49.0, 60.1)	0.8 (0.3, 1.9)	2.9 (1.9, 4.3)	8.3 (5.3, 12.6)
Quality Assured ACT (QAACT)	80.5 (74.6, 85.3)	26.7 (10.1, 54.3)	38.6 (14.4, 70.0)	37.1 (20.1, 58.1)	39.5 (19.1, 64.3)	51.2 (32.9, 69.2)	54.6 (49.0, 60.1)	0.8 (0.3, 1.9)	2.7 (1.8, 4.1)	8.1 (5.2, 12.5)
First-line (FAACT)	80.5 (74.6, 85.3)	26.7 (10.1, 54.3)	38.6 (14.4, 70.0)	37.1 (20.1, 58.1)	38.1 (18.0, 63.4)	45.1 (30.2, 61.0)	54.3 (48.7, 59.9)	0.8 (0.3, 1.9)	2.7 (1.8, 4.0)	8.1 (5.2, 12.4)
Non first-line (NAACT)	0.0 --	0.0 --	0.0 --	0.0 --	2.0 (0.8, 5.0)	49.0 (32.1, 66.2)	3.9 (1.7, 8.9)	0.0 --	0.4 (0.2, 0.7)	0.3 (0.2, 0.6)
Non-quality Assured ACT	26.5 (19.1, 35.5)	0.8 (0.1, 6.4)	17.0 (4.5, 46.7)	5.7 (2.7, 11.9)	2.7 (0.9, 7.8)	50.7 (36.5, 64.7)	0.2 (<0.1, 1.2)	0.0 --	0.3 (0.1, 0.9)	1.2 (0.7, 1.9)
Other ACT Classifications										
Nationally registered ACT	72.1 (65.5, 77.8)	25.2 (9.1, 53.2)	25.4 (6.9, 61.1)	34.3 (18.1, 55.1)	39.1 (18.8, 64.0)	51.2 (32.9, 69.2)	54.4 (48.8, 59.9)	0.8 (0.3, 1.9)	2.7 (1.8, 4.1)	7.7 (4.8, 12.1)
<i>ACTipal</i>	7.7 (3.8, 15.0)	25.2 (9.1, 53.2)	21.6 (4.8, 60.3)	21.9 (8.6, 45.5)	31.7 (12.9, 59.2)	37.8 (24.8, 52.7)	53.8 (48.1, 59.5)	0.8 (0.3, 1.9)	2.6 (1.7, 3.9)	5.6 (2.9, 10.4)
Any non-artemisinin therapy	73.9 (66.0, 80.6)	0.4 (0.1, 2.2)	80.6 (43.0, 95.8)	14.7 (8.3, 24.6)	85.2 (74.3, 92.0)	99.6 (97.7, 99.9)	96.4 (92.5, 98.3)	31.2 (24.5, 38.8)	33.7 (27.1, 40.9)	30.7 (25.0, 37.1)
Chloroquine	2.0 (0.9, 4.7)	0.3 (<0.1, 2.3)	0.0 --	0.7 (0.2, 1.8)	34.7 (15.1, 61.4)	54.5 (33.8, 73.8)	85.1 (80.2, 88.9)	31.0 (24.3, 38.5)	32.4 (25.9, 39.6)	27.4 (21.9, 33.7)
Sulfadoxine-pyrimethamine (SP)	45.7 (39.4, 52.0)	0.0 (<0.1, 0.2)	61.4 (29.3, 86.0)	8.9 (5.1, 15.2)	42.7 (21.7, 66.6)	93.4 (80.9, 97.9)	73.8 (66.4, 80.0)	0.5 (0.2, 1.0)	3.1 (2.1, 4.5)	4.0 (3.0, 5.4)
Second-line treatment (Quinine)	48.5 (40.5, 56.6)	0.0 --	80.6 (43.0, 95.8)	9.4 (5.5, 15.8)	83.0 (70.9, 90.7)	96.4 (89.3, 98.9)	76.5 (63.7, 85.8)	0.3 (0.1, 0.9)	3.4 (2.3, 5.2)	4.4 (3.1, 6.2)

Continued on following page

Table A.1: Availability of antimalarials among all outlets, by outlet type

	Public Health Facility	Community Health Worker	Private not for profit Health Facility	TOTAL Public/Not for profit	Private for profit Health Facility	Pharmacy	Drug Store	General retailer	TOTAL Private	TOTAL Outlets
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Proportion of outlets that had:	N=531	N=226	N=7	N=764	N=87	N=69	N=263	N=5,586	N=6,005	N=6,769
Any artemisinin monotherapy	0.0 --	0.0 --	0.0 --	0.0 --	1.0 (0.3, 3.1)	21.6 (12.3, 35.1)	0.6 (0.1, 2.6)	0.0 --	0.1 (<0.1, 0.4)	0.1 (<0.1, 0.4)
Oral artemisinin monotherapy	0.0 --	0.0 --	0.0 --	0.0 --	0.8 (0.2, 3.1)	0.8 (0.1, 4.3)	0.6 (0.1, 2.6)	0.0 --	<0.1 (<0.1, 0.1)	<0.1 (<0.1, 0.1)
Non oral artemisinin monotherapy	0.0 --	0.0 --	0.0 --	0.0 --	0.2 (<0.1, 0.9)	20.8 (11.3, 35.1)	0.4 (<0.1, 2.9)	0.0 --	0.1 (<0.1, 0.5)	0.1 (<0.1, 0.4)

Table A.2: Availability of antimalarials among outlets stocking at least one antimalarial, by outlet type

	Public Health Facility	Community Health Worker	Private not for profit Health Facility	TOTAL Public/Not for profit	Private for profit Health Facility	Pharmacy	Drug Store	General retailer	TOTAL Private	TOTAL Outlets
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Proportion of outlets that had:	N=531	N=226	N=7	N=764	N=87	N=69	N=263	N=5,586	N=6,005	N=6,769
Antimalarials in stock at the time of survey visit	96.8 (94.6, 98.2)	26.8 (10.1, 54.3)	80.6 (43.0, 95.8)	40.4 (22.3, 61.5)	87.6 (77.2, 93.7)	99.6 (97.7, 99.9)	97.4 (93.3, 99.0)	31.4 (24.6, 39.0)	33.9 (27.3, 41.1)	34.9 (28.8, 41.5)
Among outlets with an antimalarial in stock, proportion of outlets that had:	N=514	N=40	N=6	N=560	N=69	N=66	N=256	N=1,463	N=1,854	N=2,414
Any ACT	83.8 (77.7, 88.5)	99.8 (99.2, 100.0)	47.8 (18.5, 78.8)	92.3 (85.3, 96.1)	45.6 (21.8, 71.7)	70.5 (61.6, 78.1)	56.1 (50.1, 61.9)	2.6 (1.1, 6.4)	8.5 (5.4, 13.1)	23.8 (15.4, 34.7)
Quality Assured ACT (QAACT)	83.2 (77.1, 87.9)	99.8 (99.2, 100.0)	47.8 (18.5, 78.8)	92.0 (84.7, 95.9)	45.1 (21.4, 71.2)	51.4 (32.9, 69.5)	56.1 (50.1, 61.9)	2.6 (1.1, 6.4)	8.1 (5.1, 12.6)	23.4 (15.2, 34.3)
First-line (FAACT)	83.2 (77.1, 87.9)	99.8 (99.2, 100.0)	47.8 (18.5, 78.8)	92.0 (84.7, 95.9)	43.6 (20.2, 70.2)	45.3 (30.3, 61.3)	55.8 (49.7, 61.7)	2.6 (1.1, 6.4)	8.0 (5.0, 12.4)	23.3 (15.0, 34.2)
Non first-line (NAACT)	0.0 --	0.0 --	0.0 --	0.0 --	2.3 (0.9, 5.9)	49.2 (32.1, 66.6)	4.0 (1.7, 9.3)	0.0 --	1.2 (0.6, 2.1)	0.9 (0.5, 1.7)
Non-quality Assured ACT	27.4 (19.7, 36.7)	2.9 (0.3, 23.3)	21.0 (5.6, 54.5)	14.2 (6.7, 27.6)	3.0 (1.0, 8.9)	50.9 (36.8, 64.8)	0.2 (<0.1, 1.2)	0.0 --	0.9 (0.3, 2.7)	3.4 (2.0, 5.6)
Other ACT Classifications										
Nationally registered ACT ⁵	74.4 (67.7, 80.2)	94.2 (76.0, 98.8)	31.5 (8.7, 68.9)	84.9 (73.0, 92.1)	44.7 (21.1, 70.9)	51.4 (32.9, 69.5)	55.9 (49.9, 61.7)	2.6 (1.1, 6.4)	8.1 (5.1, 12.6)	22.1 (13.9, 33.2)
ACTipal	8.0 (4.0, 15.5)	94.2 (76.0, 98.8)	26.8 (6.1, 67.5)	54.2 (29.0, 77.4)	36.2 (14.6, 65.3)	37.9 (24.9, 52.9)	55.3 (49.2, 61.3)	2.6 (1.0, 6.4)	7.6 (4.7, 12.0)	16.1 (8.4, 28.4)

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⁵ Not all QAACTs are nationally registered: artesunate+amodiaquine(Ipca) and Larimal are QAACTs but not nationally registered.

Table A.2: Availability of antimalarials among outlets stocking at least one antimalarial, by outlet type

	Public Health Facility	Community Health Worker	Private not for profit Health Facility	TOTAL Public/Not for profit	Private for profit Health Facility	Pharmacy	Drug Store	General retailer	TOTAL Private	TOTAL Outlets
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Among outlets with an antimalarial in stock, proportion of outlets that had:	N=514	N=40	N=6	N=560	N=69	N=66	N=256	N=1,463	N=1,854	N=2,414
Any non-artemisinin therapy	76.4 (68.1, 83.0)	1.4 (0.2, 10.3)	100.0 --	36.3 (18.7, 58.6)	97.2 (91.3, 99.2)	100.0 --	99.0 (97.3, 99.7)	99.4 (98.2, 99.8)	99.3 (98.4, 99.7)	87.9 (76.5, 94.2)
Chloroquine	2.1 (0.9, 4.8)	1.3 (0.1, 10.7)	0.0 --	1.6 (0.5, 4.9)	39.7 (17.1, 67.8)	54.8 (33.8, 74.2)	87.4 (81.8, 91.4)	98.7 (96.8, 99.4)	95.5 (93.0, 97.2)	78.5 (68.4, 86.1)
Sulfadoxine-pyrimethamine (SP)	47.1 (40.5, 53.9)	0.1 (<0.1, 0.8)	76.2 (35.9, 94.8)	22.1 (11.8, 37.5)	48.7 (24.1, 73.9)	93.8 (81.5, 98.1)	75.8 (68.4, 81.9)	1.5 (0.7, 3.3)	9.2 (6.0, 13.9)	11.6 (8.1, 16.3)
Second-line treatment (Quinine)	50.1 (42.1, 58.1)	0.0 --	100.0 --	23.4 (12.7, 39.0)	94.9 (88.6, 97.8)	96.8 (90.5, 99.0)	78.5 (65.9, 87.4)	0.8 (0.2, 3.0)	10.2 (6.5, 15.6)	12.6 (8.6, 17.9)
Any artemisinin monotherapy	0.0 --	0.0 --	0.0 --	0.0 --	1.1 (0.3, 3.7)	21.7 (12.4, 35.1)	0.6 (0.1, 2.6)	0.0 --	0.4 (0.1, 1.3)	0.4 (0.1, 1.1)
Oral artemisinin monotherapy	0.0 --	0.0 --	0.0 --	0.0 --	0.9 (0.2, 3.6)	0.8 (0.1, 4.3)	0.6 (0.1, 2.6)	0.0 --	0.1 (<0.1, 0.2)	0.1 (<0.1, 0.2)
Non oral artemisinin monotherapy	0.0 --	0.0 --	0.0 --	0.0 --	0.2 (<0.1, 1.1)	20.9 (11.4, 35.2)	0.4 (<0.1, 3.0)	0.0 --	0.4 (0.1, 1.4)	0.3 (0.1, 1.1)

Table A.3: Disruption in stock, expiry and storage conditions of antimalarials, by outlet type

	Public Health Facility	Community Health Worker	Private not for profit Health Facility	TOTAL Public/Not for profit	Private for profit Health Facility	Pharmacy	Drug Store	General retailer	TOTAL Private	TOTAL Outlets
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
	N=522	N=51	N=6	N=579	N=76	N=67	N=261	N=1,633	N=2,037	N=2,616
No disruption in stock of any antimalarial in the past three months ⁶	49.6 (42.9, 56.2)	63.2 (52.3, 72.9)	55.3 (23.9, 83.0)	57.6 (48.6, 66.2)	25.2 (9.6, 51.7)	27.0 (19.1, 36.7)	34.9 (27.3, 43.4)	64.5 (56.3, 71.9)	61.2 (53.2, 68.7)	60.5 (53.3, 67.4)
	N=462	N=38	N=4	N=504	N=46	N=45	N=183	N=21	N=295	N=799
No disruption in stock of first-line quality assured ACT (FAACT) in the past three months	65.6 (57.4, 73.0)	79.9 (59.4, 91.5)	48.2 (14.0, 84.2)	73.8 (60.0, 84.1)	54.9 (23.2, 83.1)	28.2 (7.4, 65.8)	63.1 (54.8, 70.7)	47.3 (18.9, 77.6)	52.7 (37.8, 67.2)	65.9 (51.3, 78.1)
	N=514	N=40	N=6	N=560	N=69	N=66	N=256	N=1463	N=1,854	N=2,414
Expired stock of any antimalarial	22.0 (15.2, 30.6)	65.4 (39.0, 84.9)	26.8 (6.1, 67.5)	45.3 (27.5, 64.3)	33.9 (14.5, 60.8)	4.6 (1.6, 12.8)	22.9 (13.9, 35.4)	6.1 (3.2, 11.4)	8.0 (5.1, 12.3)	14.8 (9.7, 22.0)
	N=451	N=38	N=3	N=492	N=38	N=35	N=139	N=15	N=227	N=719
Expired stock of first-line quality assured ACT (FAACT)	20.4 (14.3, 28.3)	65.6 (38.5, 85.3)	56.0 (14.6, 90.5)	46.6 (28.0, 66.2)	50.0 (15.6, 84.4)	5.5 (1.7, 15.9)	30.0 (17.0, 47.3)	60.4 (15.2, 92.8)	39.7 (24.5, 57.1)	44.7 (31.5, 58.6)
	N=522	N=51	N=6	N=579	N=76	N=67	N=261	N=1,633	N=2,037	N=2,616
Acceptable storage conditions for medicines ⁷	97.3 (94.7, 98.6)	100.0	100.0	98.8 (97.1, 99.5)	98.4 (95.1, 99.5)	99.0 (95.7, 99.8)	95.9 (91.5, 98.0)	94.7 (91.9, 96.5)	94.9 (92.5, 96.6)	95.6 (93.6, 97.0)

⁶Indicators of expired stock are based upon the expiry information from one sample of each drug audited in an outlet; a full examination of all packages in stock was not conducted. Information on stock disruption is missing for 1% of outlets (n=2,591).

⁷An outlet is considered to have acceptable storage conditions for medicines if it is in compliance with all the following three standards: (1) medicines are stored in a dry area; (2) medicines are protected from direct sunlight; and (3) medicines are not kept on the floor. Information on acceptable storage condition was missing for 16.0% of Community health workers. 5.2% of data was missing for this indicator [n=2,480].

	Public Health Facility	Community Health Worker	Private not for profit Health Facility	TOTAL Public/Not for profit	Private for profit Health Facility	Pharmacy	Drug Store	General retailer	TOTAL Private	TOTAL Outlets
	%	%	%	%	%	%	%	%	%	%
Proportion of first-line quality assured ACT (FAACT) distributed free of cost, by volume	93.3	19.0	100.0	56.3	19.7	0.0	0.0	0.0	1.7	32.0
Median price of a tablet AETD⁸:	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)	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)
Any ACT	\$0.00 [0.00-0.00] ^(1,499)	\$0.09 [0.09-0.09] ⁽⁴⁰⁾	\$0.00 [0.00-0.00] ⁽⁷⁾	\$0.00 [0.00-0.09] ^(1,446)	\$0.00 [0.00-0.09] ⁽⁸⁹⁾	\$8.33 [1.53-12.13] ⁽¹⁵⁵⁾	\$0.14 [0.09-0.56] ⁽¹⁵¹⁾	\$0.14 [0.09-0.28] ⁽¹⁵⁾	\$0.19 [0.09-3.24] ⁽⁴¹⁰⁾	\$0.00 [0.00-0.09] ^(1,956)
Quality Assured ACT (QAACT)	\$0.00 [0.00-0.00] ^(1,353)	\$0.09 [0.09-0.09] ⁽³⁹⁾	\$0.00 [0.00-0.00] ⁽⁵⁾	\$0.00 [0.00-0.09] ^(1,397)	\$0.09 [0.00-0.09] ⁽⁸¹⁾	\$9.49 [1.53-19.80] ⁽¹³⁴⁾	\$0.14 [0.09-0.56] ⁽¹⁵⁰⁾	\$0.14 [0.09-0.28] ⁽¹⁵⁾	\$0.14 [0.09-1.53] ⁽³⁸⁰⁾	\$0.00 [0.00-0.09] ^(1,777)
First-line (FAACT)	\$0.00 [0.00-0.00] ^(1,353)	\$0.09 [0.09-0.09] ⁽³⁹⁾	\$0.00 [0.00-0.00] ⁽⁵⁾	\$0.00 [0.00-0.09] ^(1,397)	\$0.09 [0.00-0.09] ⁽⁷⁵⁾	\$7.68 [0.19-32.58] ⁽⁷²⁾	\$0.09 [0.09-0.56] ⁽¹⁴⁰⁾	\$0.14 [0.09-0.28] ⁽¹⁵⁾	\$0.14 [0.09-0.56] ⁽³⁰²⁾	\$0.00 [0.00-0.09] ^(1,699)
Non first-line (NAACT)	\$-- ⁽⁰⁾	\$-- ⁽⁰⁾	\$-- ⁽⁰⁾	\$-- ⁽⁰⁾	\$0.00 [0.00-9.55] ⁽⁶⁾	\$10.00 [9.16-11.11] ⁽⁶²⁾	\$9.72 [6.48-11.11] ⁽¹⁰⁾	\$-- ⁽⁰⁾	\$9.72 [8.79-11.11] ⁽⁷⁸⁾	\$9.72 [8.79-11.11] ⁽⁷⁸⁾
Non-quality Assured ACT	\$0.00 [0.00-0.00] ⁽¹⁴⁶⁾	\$2.78 [n/a] ⁽¹⁾	\$0.00 [n/a] ⁽²⁾	\$0.00 [0.00-0.00] ⁽¹⁴⁹⁾	\$0.00 [0.00-0.00] ⁽⁸⁾	\$4.72 [4.72-4.72] ⁽²¹⁾	\$4.44 [n/a] ⁽¹⁾	\$-- ⁽⁰⁾	\$4.72 [4.44-4.72] ⁽³⁰⁾	\$0.00 [0.00-0.00] ⁽¹⁷⁹⁾
Other ACT Classifications										
Nationally registered ACT	\$0.00 [0.00-0.00] ⁽⁹⁵²⁾	\$0.09 [0.09-0.09] ⁽³⁵⁾	\$0.00 [n/a] ⁽²⁾	\$0.00 [0.09-0.00] ⁽⁹⁸⁹⁾	\$0.00 [0.09-0.09] ⁽⁶⁵⁾	\$1.53 [9.49-19.80] ⁽¹³⁹⁾	\$0.14 [0.09-0.56] ⁽¹⁴⁶⁾	\$0.14 [0.09-0.28] ⁽¹⁵⁾	\$0.14 [0.09-1.53] ⁽³⁶⁵⁾	\$0.09 [0.00-0.09] ^(1,354)
<i>ACTipal</i>	\$0.00 [0.00-0.09] ⁽⁵⁸⁾	\$0.09 [0.09-0.09] ⁽³⁵⁾	\$0.00 [n/a] ⁽¹⁾	\$0.09 [0.09-0.09] ⁽⁹⁴⁾	\$0.09 [0.09-0.09] ⁽²²⁾	\$0.09 [0.09-0.09] ⁽¹¹⁾	\$0.09 [0.09-0.56] ⁽¹³⁷⁾	\$0.14 [0.09-0.28] ⁽¹⁴⁾	\$0.09 [0.09-0.28] ⁽¹⁸⁴⁾	\$0.09 [0.09-0.14] ⁽²⁷⁸⁾

Continued on following page

⁸ A total of 5,572 antimalarials were audited in 2,414 outlets (this value excludes products used solely for prophylaxis). Of these, 4,780 antimalarials are included in the pricing analysis. Free antimalarials were found in 21.9% of outlets with antimalarials, and 1,997 of the total 5,516 antimalarials for which price information was recorded were available for free.

	Public Health Facility	Community Health Worker	Private not for profit Health Facility	TOTAL Public/Not for profit	Private for profit Health Facility	Pharmacy	Drug Store	General retailer	TOTAL Private	TOTAL Outlets
Any non-artemisinin therapy	\$0.00 [0.00-1.19] ⁽⁴¹³⁾	\$0.69 [0.69-0.69] ⁽³⁾	\$1.10 [0.28-1.57] ⁽⁷⁾	\$0.00 [0.00-1.19] ⁽⁴²³⁾	\$0.35 [0.28-0.35] ⁽⁷¹⁾	\$0.37 [0.32-2.59] ⁽²⁵⁶⁾	\$0.35 [0.28-0.46] ⁽⁵⁴¹⁾	\$0.35 [0.35-0.35] ^(1,531)	\$0.35 [0.28-0.35] ^(2,399)	\$0.35 [0.35-0.35] ^(2,822)
Chloroquine, the <i>most popular</i> antimalarial ⁹	\$0.00 [0.00-0.00] ⁽⁸⁾	\$0.69 [0.69-0.69] ⁽²⁾	\$-- ⁽⁰⁾	\$0.00 [0.00-0.69] ⁽¹⁰⁾	\$0.35 [0.35-0.35] ⁽²²⁾	\$0.35 [0.21-0.97] ⁽⁵⁴⁾	\$0.21 [0.28-0.35] ⁽²⁶²⁾	\$0.35 [0.35-0.35] ^(1,509)	\$0.35 [0.28-0.35] ^(1,847)	\$0.35 [0.35-0.35] ^(1,857)
Sulfadoxine-pyrimethamine (SP)	\$0.00 [0.00-0.00] ⁽²⁸⁰⁾	\$0.00 [n/a] ⁽¹⁾	\$0.42 [0.00-1.10] ⁽⁶⁾	\$0.00 [0.00-0.00] ⁽²⁸⁷⁾	\$0.28 [0.28-0.37] ⁽³⁸⁾	\$0.32 [0.32-1.20] ⁽¹⁶⁶⁾	\$0.37 [0.28-0.56] ⁽²⁵⁸⁾	\$0.37 [0.32-0.46] ⁽¹⁵⁾	\$0.37 [0.28-0.46] ⁽⁴⁷⁷⁾	\$0.30 [0.00-0.42] ⁽⁷⁶⁴⁾
Second-line treatment (Quinine)	\$2.37 [1.19-2.37] ⁽¹²⁵⁾	\$-- ⁽⁰⁾	\$2.37 [n/a] ⁽¹⁾	\$2.37 [1.19-2.37] ⁽¹²⁶⁾	\$2.37 [0.00-4.86] ⁽¹¹⁾	\$2.24 [5.05-7.31] ⁽¹⁷⁾	\$5.25 [5.25-7.77] ⁽¹⁹⁾	\$2.92 [2.91-2.92] ⁽⁷⁾	\$2.92 [2.91-5.83] ⁽⁵⁴⁾	\$2.43 [2.33-4.66] ⁽¹⁸⁰⁾
Artemisinin monotherapy										
Oral artemisinin monotherapy	\$-- ⁽⁰⁾	\$-- ⁽⁰⁾	\$-- ⁽⁰⁾	\$-- ⁽⁰⁾	\$0.00 [n/a] ⁽¹⁾	\$7.10 [n/a] ⁽¹⁾	\$-- ⁽⁰⁾	\$-- ⁽⁰⁾	\$7.10 [n/a] ⁽²⁾	\$0.00 [n/a] ⁽²⁾

⁹Chloroquine was the most popular antimalarial by volumes sold/distributed in the past week.

Table A.5: Affordability of antimalarials, by outlet type

	Public Health Facility	Community Health Worker	Private not for profit Health Facility	TOTAL Public/Not for profit	Private for profit Health Facility	Pharmacy	Drug Store	General retailer	TOTAL Private	TOTAL Outlets
Median price of a tablet AETD relative to chloroquine, the ‘most popular’ antimalarial treatment in Madagascar:	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio
Any ACT	***	0.1	n/a	n/a	n/a	23.8	0.7	0.4	0.5	n/a
First-line quality assured ACT (FAACT)	***	0.1	n/a	n/a	0.3	21.9	0.4	0.4	0.4	n/a
Median price of a tablet AETD relative to the minimum legal daily wage (\$1.11)¹⁰:	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio
Any ACT	n/a	0.1	n/a	n/a	n/a	7.5	0.1	0.1	0.2	n/a
First-line quality assured ACT (FAACT)	n/a	0.1	n/a	n/a	0.1	6.9	0.1	0.1	0.1	n/a
	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio
Median price of an AETD of FAACT relative to the international reference price for ASAQ (\$1.00) ¹¹	n/a	0.1	n/a	n/a	0.1	8.3	7.7	0.1	0.1	n/a
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Proportion of for profit outlets that:	--	N=51	N=6	N=57	N=76	N=67	N=261	N=1,633	N=2,037	N=2,094
Offer credit to consumers for antimalarials ¹²	--	26.9 (8.6, 58.9)	0.0	26.8 (8.6, 58.6)	63.5 (38.3, 82.9)	64.7 (55.0, 73.3)	55.0 (48.5, 61.3)	42.3 (34.8, 50.2)	43.9 (37.3, 50.9)	42.1 (35.3, 49.2)

¹⁰Minimum daily wage information taken from United States Department of State, 2010. *Country Reports on Human Rights Practices*. Available at: <http://www.state.gov/g/drl/rls/hrrpt/2010/index.htm>

¹¹International reference price taken from Management Sciences for Health, 2009. *International drug price indicator guide*. Available at: <http://www.erc.msh.org/priceguide>. \$1.00 is the median listed supplier price for 24 co-blistered tablets of ASAQ 50mg/153mg.

¹²This question was not asked in public health facilities. Information on proportion of outlets that offer credit to consumers for antimalarials was missing for 1.9% of cases [n=2,048].

Table A.6: Availability of diagnostic tests & cost to patients, by outlet type

	Public Health Facility	Community Health Worker	Private not for profit Health Facility	TOTAL Public/Not for profit	Private for profit Health Facility	Pharmacy	Drug Store	General retailer	TOTAL Private	TOTAL Outlets
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Proportion of outlets that had:	N=522	N=51	N=6	N=579	N=76	N=67	N=261	N=1,633	N=2,037	N=2,616
Any diagnostic test ¹³	88.5 (82.3, 92.7)	12.6 (2.3, 47.0)	31.9 (10.9, 64.3)	43.3 (20.0, 69.9)	14.4 (7.9, 24.8)	0.5 (0.1, 1.9)	0.3 (<0.1, 1.5)	0.0	0.4 (0.3, 0.7)	8.3 (5.9, 11.6)
Microscopic blood tests	3.7 (2.1, 6.3)	0.0	4.7 (0.9, 21.5)	1.5 (0.7, 3.4)	4.2 (2.1, 8.3)	0.3 (<0.1, 1.6)	0.0	0.0	0.1 (<0.1, 0.2)	0.4 (0.2, 0.6)
Rapid diagnostic tests	87.7 (81.5, 92.0)	12.5 (2.3, 47.0)	31.9 (10.9, 64.3)	43.0 (19.9, 69.5)	12.4 (6.4, 22.6)	0.5 (0.1, 1.9)	0.3 (<0.1, 1.5)	0.0	0.4 (0.2, 0.6)	8.2 (5.8, 11.5)
Proportion of outlets that provided diagnostic tests for free, among outlets providing diagnostic tests	N=483	N=6	N=3	N=492	N=29	N=3	N=0	N=0	N=32	N=524
Any diagnostic test	99.6 (99.0, 99.8)	89.9 (37.7, 99.2)	100.0	97.9 (89.6, 99.6)	75.0 (63.0, 84.1)	57.8 (13.0, 92.6)	--	--	74.7 (62.9, 83.7)	97.1 (90.9, 99.1)
	N=16	N=0	N=1	N=17	N=8	N=2	N=0	N=0	N=10	N=27
Microscopic blood tests	69.9 (44.0, 87.3)	--	0.0	69.2 (43.5, 86.8)	10.9 (2.1, 40.9)	100.0	--	--	15.3 (4.4, 41.2)	56.1 (31.7, 78.0)
	N=480	N=6	N=3	N=489	N=26	N=3	N=0	N=0	N=29	N=518
Rapid diagnostic tests	99.9 (99.3, 100.0)	89.9 (37.7, 99.2)	100.0	98.1 (88.8, 99.7)	80.3 (67.9, 88.7)	57.8 (13.0, 92.6)	--	--	79.8 (67.7, 88.2)	97.5 (90.6, 99.4)
Median price of:	Median [IQR] (N)	Median [IQR] (N)	Median [IQR] (N)	Median [IQR] (N)	Median [IQR] (N)	Median [IQR] (N)	Median [IQR] (N)	Median [IQR] (N)	Median [IQR] (N)	Median [IQR] (N)
Microscopic blood tests	\$0.00 [0.00-0.46] ⁽¹⁶⁾	\$-- ⁽⁰⁾	\$4.63 [n/a] ⁽¹⁾	\$0.00 [0.00-0.46] ⁽¹⁷⁾	\$2.32 [0.83-2.78] ⁽⁸⁾	\$0.00 [n/a] ⁽²⁾	\$-- ⁽⁰⁾	\$-- ⁽⁰⁾	\$0.93 [0.83-2.78] ⁽¹⁰⁾	\$0.00 [0.00-0.83] ⁽²⁷⁾
Rapid diagnostic tests	\$0.00 [0.00-0.00] ⁽⁴⁸⁰⁾	\$0.00 [0.00-0.00] ⁽⁶⁾	\$0.00 [0.00-0.00] ⁽³⁾	\$0.00 [0.00-0.00] ⁽⁴⁸⁹⁾	\$0.00 [0.00-0.00] ⁽²⁶⁾	\$0.00 [0.00-0.56] ⁽³⁾	\$-- ⁽⁰⁾	\$-- ⁽⁰⁾	\$0.00 [0.00-0.00] ⁽²⁹⁾	\$0.00 [0.00-0.00] ⁽⁵¹⁸⁾

¹³Information on proportion of outlets that had diagnostic tests was missing for 0.8% of cases [n=2,593].

Table A.7: Market Share, by outlet type

	Public Health Facility	Community Health Worker	Private not for profit Health Facility	TOTAL Public/Not for profit	Private for profit Health Facility	Pharmacy	Drug Store	General retailer	TOTAL Private	TOTAL Outlets
Each antimalarial category as a proportion of the total volume of all AETDs sold or distributed in the past week ¹⁴ :	%	%	%	%	%	%	%	%	%	%
Any ACT	4.7	3.2	<0.1	7.9	0.5	0.8	3.5	1.0	5.8	13.7
Quality Assured ACT (QAAC)	4.0	2.5	<0.1	6.4	0.5	0.6	3.5	1.0	5.6	12.1
First-line (FAACT)	4.0	2.5	<0.1	6.4	0.5	0.3	3.5	1.0	5.2	11.7
Non first-line (NAACT)	0	0	0	0	<0.1	0.3	<0.1	0	0.4	0.4
Non-quality Assured ACT	0.8	0.7	0	1.5	<0.1	0.2	0	0	0.2	1.7
Other ACT Classifications										
Nationally registered ACT	1.7	2.1	<0.1	3.8	0.5	0.8	3.5	1.0	5.7	9.5
<i>ACTipal</i>	0.2	2.1	<0.1	2.3	0.4	0.2	3.5	1.0	5.1	7.4
Any non-artemisinin therapy	9.8	<0.1	<0.1	9.8	3.6	7.1	36.1	29.8	76.5	86.3
Chloroquine	0	<0.1	0	<0.1	1.5	1.3	24.8	29.5	57.0	57.0
Sulfadoxine-pyrimethamine (SP)	9.2	0	<0.1	9.3	1.4	5.6	10.7	0.2	17.9	27.1
Second-line treatment (Quinine)	0.5	0	<0.1	0.5	0.8	0.2	0.6	<0.1	1.6	2.1
Any artemisinin monotherapy	0	0	0	0	0	<0.1	0	0	<0.1	<0.1
Oral artemisinin monotherapy	0	0	0	0	0	0	0	0	0	0
Non oral artemisinin monotherapy	0	0	0	0	0	<0.1	0	0	<0.1	<0.1

¹⁴There were a total of 88,568 AETDs(unweighted) sold or distributed in the past one week; this value was the denominator used to calculate the market share in each cell. Any ACT subgroups are not mutually exclusive: Any ACT subdivides fully into QAACs and Non-quality Assured ACT; QAACs decompose fully into FAACTs and NAACTs; nationally registered ACTs are either QAACs or non-QAACs. Row and column totals exhibit minor rounding errors.

Table A.8: Provider knowledge, by outlet type

	Public Health Facility	Community Health Worker	Private not for profit Health Facility	TOTAL Public/Not for profit	Private for profit Health Facility	Pharmacy	Drug Store	General retailer	TOTAL Private	TOTAL Outlets
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Proportion of providers that:	N=522	N=51	N=6	N=579	N=76	N=67	N=261	N=1,633	N=2,037	N=2,616
Correctly state the recommended first-line treatment for uncomplicated malaria ¹⁵	81.7 (76.2, 86.1)	64.8 (43.1, 81.8)	89.1 (59.1, 97.9)	71.7 (59.8, 81.2)	86.1 (66.4, 95.1)	59.2 (51.0, 66.8)	45.4 (36.6, 54.6)	7.3 (4.2, 12.4)	12.4 (8.7, 17.3)	23.3 (15.4, 33.7)
Correctly state the dosing regimen of the first-line treatment for an adult	75.2 (68.9, 80.7)	19.8 (10.1, 35.1)	71.7 (37.9, 91.3)	42.3 (29.9, 55.8)	62.5 (36.0, 83.1)	15.3 (5.2, 37.5)	20.3 (12.6, 31.0)	2.3 (0.5, 9.7)	5.2 (2.5, 10.1)	12.0 (7.6, 18.3)
Correctly state the dosing regimen of the first-line treatment for a two year old	77.7 (71.6, 82.8)	62.6 (37.3, 82.5)	71.7 (37.9, 91.3)	68.7 (54.1, 80.4)	82.1 (63.1, 92.5)	16.6 (5.7, 39.6)	38.7 (28.8, 49.5)	4.2 (1.7, 10.4)	8.5 (5.1, 13.8)	19.6 (11.6, 31.2)
	--	N=51	N=6	N=57	N=76	N=67	N=261	N=1,633	N=2,037	N=2,094
Can list at least one health danger sign in a child that requires referral to a public health facility ¹⁶ :	--	90.4 (67.0, 97.8)	72.8 (39.3, 91.7)	90.3 (67.1, 97.7)	69.9 (43.2, 87.6)	52.2 (33.4, 70.5)	71.4 (56.4, 82.7)	69.0 (59.2, 77.3)	68.9 (60.0, 76.6)	71.4 (61.9, 79.4)
• Convulsions	--	69.9 (42.8, 87.8)	31.5 (8.7, 68.9)	69.7 (42.6, 87.7)	36.5 (16.5, 62.6)	13.3 (4.3, 34.5)	53.2 (33.3, 72.1)	38.3 (29.7, 47.9)	38.8 (30.6, 47.7)	42.5 (31.8, 53.8)
• Vomiting	--	53.2 (38.4, 67.4)	41.3 (14.4, 74.6)	53.1 (38.4, 67.3)	17.6 (8.7, 32.6)	46.3 (30.9, 62.4)	53.4 (41.4, 65.1)	41.4 (33.5, 49.7)	41.5 (34.1, 49.3)	42.9 (35.8, 50.3)
• Unable to drink/breastfeed	--	28.6 (8.0, 64.9)	4.7 (0.9, 21.5)	28.6 (8.0, 64.6)	40.8 (18.4, 67.9)	25.5 (17.4, 35.6)	28.9 (21.9, 37.1)	18.7 (11.9, 28.1)	20.0 (13.6, 28.3)	21.0 (14.3, 29.7)
• Excessive sleep/difficult to wake up	--	1.4 (0.2, 11.2)	0.0	1.4 (0.2, 11.1)	1.7 (0.8, 3.9)	1.3 (0.2, 6.2)	3.7 (1.5, 8.7)	3.6 (1.7, 7.5)	3.6 (1.8, 7.0)	3.3 (1.7, 6.2)
• Unconscious/coma	--	23.1 (15.8, 32.4)	4.7 (0.9, 21.5)	23.0 (15.7, 32.4)	33.5 (12.4, 64.1)	3.0 (0.9, 9.1)	7.1 (3.6, 13.4)	11.5 (5.5, 22.5)	11.7 (6.0, 21.4)	13.0 (6.9, 23.1)

¹⁵Information on proportion of providers that correctly state the recommended first-line treatment for uncomplicated malaria was missing for 1.0% of cases [n=2,591].

¹⁶This question was not asked in public health facilities. Information on proportion of providers that correctly state at least one health danger sign was missing for 1.1% of cases [n=2,071].

Table A.9: Provider perceptions, by outlet type

	Public Health Facility	Community Health Worker	Private not for profit Health Facility	TOTAL Public/Not for profit	Private for profit Health Facility	Pharmacy	Drug Store	General retailer	TOTAL Private	TOTAL Outlets
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Proportion of providers that:	N=522	N=51	N=6	N=579	N=76	N=67	N=261	N=1,633	N=2,037	N=2,616
Agree with the statement, “Most customers request an antimalarial by brand name or generic name.” ¹⁷	9.6 (6.2, 14.4)	15.9 (10.8, 22.8)	0.0	13.3 (9.1, 19.0)	15.2 (3.4, 47.7)	17.5 (6.0, 41.3)	42.3 (30.5, 55.0)	46.6 (35.8, 57.8)	45.1 (35.4, 55.1)	38.9 (30.4, 48.2)
Agree with the statement, “I decide which antimalarial medicine most customers receive.”	72.5 (62.5, 80.6)	69.8 (58.0, 79.5)	44.3 (16.0, 76.8)	70.9 (62.6, 77.9)	83.5 (66.3, 92.9)	13.0 (4.2, 34.2)	26.4 (19.5, 34.8)	16.6 (6.3, 37.0)	18.9 (9.0, 35.5)	28.4 (19.3, 38.6)
Report that an ACT is the most effective antimalarial medicine	62.5 (55.8, 68.8)	86.6 (67.1, 95.3)	38.5 (13.7, 71.1)	76.7 (60.8, 87.6)	24.5 (9.1, 51.3)	74.4 (45.4, 91.1)	23.6 (19.8, 28.1)	3.9 (2.2, 6.8)	6.6 (4.3, 10.1)	19.6 (11.5, 31.3)
Proportion of providers than state the following reasons for stocking antimalarials: ¹⁸	N=522	N=51	N=6	N=578	N=76	N=67	N=261	N=1,633	N=2,037	N=2,616
• Most profitable	0.0	0.0	0.0	0.0	7.5 (1.1, 36.4)	29.4 (23.2, 36.4)	11.5 (6.6, 19.2)	10.1 (4.9, 19.6)	10.4 (5.5, 18.7)	8.5 (4.9, 14.3)
• Recommended by government	70.9 (62.1, 78.4)	27.7 (19.1, 38.3)	4.7 (0.9, 21.5)	45.1 (30.4, 60.7)	9.9 (3.5, 25.0)	0.8 (0.2, 3.3)	3.7 (1.6, 8.0)	1.8 (0.7, 5.1)	2.1 (0.9, 4.8)	10.1 (7.1, 14.0)
• Lowest priced	2.2 (1.0, 4.8)	0.0	0.0	0.9 (0.3, 2.4)	2.3 (0.7, 7.5)	11.6 (3.5, 32.1)	18.2 (10.6, 29.6)	29.0 (22.1, 37.0)	27.4 (21.0, 34.9)	22.5 (17.2, 28.8)
• Consumer demand	5.6 (3.3, 9.3)	13.4 (5.4, 29.6)	0.0	10.2 (5.4, 18.5)	21.4 (6.4, 52.0)	49.4 (32.2, 66.8)	47.9 (34.7, 61.4)	63.6 (54.5, 71.8)	61.4 (53.2, 68.9)	51.9 (41.9, 61.8)
• Easily available	6.3 (2.9, 13.3)	0.0	0.0	2.6 (0.9, 7.2)	0.6 (0.1, 2.6)	30.1 (24.5, 36.3)	9.7 (4.7, 18.8)	25.1 (13.8, 41.0)	23.6 (13.3, 38.2)	19.7 (11.1, 32.6)
• Drug company	0.1 (<0.1, 0.8)	1.4 (0.2, 11.1)	0.0	0.9 (0.1, 5.6)	1.2 (0.5, 3.0)	12.1 (3.7, 33.3)	2.5 (0.9, 6.6)	8.0 (3.7, 16.5)	7.6 (3.6, 15.2)	6.3 (3.0, 12.7)
• Brand reputation	4.7 (2.7, 7.9)	17.2 (5.4, 42.9)	10.9 (2.1, 40.9)	12.1 (3.7, 32.9)	5.6 (2.7, 11.4)	22.3 (13.2, 35.2)	5.2 (2.4, 11.0)	7.2 (2.1, 22.0)	7.3 (2.4, 20.1)	8.2 (3.5, 18.0)

Continued on following page

¹⁷3.7% of cases [n=2,520] were missing for the indicator “Most customers request an antimalarial by brand name or generic name.” 1.2% of cases [N=2,585], were missing for the indicator, “I decide which antimalarial medicine most customers receive”, and 1.1% of cases [2,588] were missing for the indicator on the belief that ACTs are the most effective antimalarials medicine.

¹⁸0.9% of cases [n=2,593] were missing for reasons why providers stock antimalarials.

Table A.9: Provider perceptions, by outlet type

	Public Health Facility	Community Health Worker	Private not for profit Health Facility	TOTAL Public/Not for profit	Private for profit Health Facility	Pharmacy	Drug Store	General retailer	TOTAL Private	TOTAL Outlets
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
• Dosage form	3.0 (1.5, 5.9)	2.3 (0.4, 12.1)	0.0	2.6 (0.9, 7.1)	2.8 (1.1, 6.6)	1.2 (0.3, 4.7)	3.1 (1.4, 6.9)	4.5 (2.3, 8.8)	4.4 (2.3, 8.0)	4.0 (2.3, 7.0)
• Frequently prescribed	7.5 (4.8, 11.6)	17.2 (4.3, 49.1)	27.2 (8.3, 60.7)	13.3 (5.4, 29.4)	8.4 (4.8, 14.4)	37.2 (31.5, 43.4)	19.8 (16.0, 24.2)	4.4 (2.1, 8.9)	5.9 (3.5, 9.6)	7.2 (5.0, 10.4)
• Other reasons	4.5 (2.5, 8.0)	34.0 (16.0, 58.3)	72.8 (39.3, 91.7)	22.2 (8.6, 46.5)	14.7 (5.2, 35.1)	3.9 (0.9, 15.3)	19.4 (7.6, 41.6)	3.3 (1.6, 6.7)	4.5 (2.4, 8.2)	7.8 (3.8, 15.2)

Table A.10: Availability of antimalarials, by urban and rural strata

	Urban	Rural	TOTAL ¹⁹
	% (95%CI)	% (95%CI)	% (95%CI)
Proportion of outlets that had:	N=4,983	N=1,786	N=6,769
Antimalarials in stock at the time of survey visit	32.9 (27.3, 39.1)	35.4 (27.7, 44.0)	34.9 (28.8, 41.5)
Among outlets with an antimalarial in stock, proportion of outlets that had:	N=1,447	N=967	N=2,414
ACT	21.3 (12.2, 34.5)	24.4 (14.3, 38.4)	23.8 (15.4, 34.7)
Quality Assured ACT (QAACT)	19.9 (11.4, 32.5)	24.3 (14.3, 38.3)	23.4 (15.2, 34.3)
First-line (FAACT)	19.4 (10.8, 32.2)	24.3 (14.2, 38.3)	23.3 (15.0, 34.2)
Non first-line (NAACT)	4.1 (2.2, 7.4)	0.1 (<0.1, 0.5)	0.9 (0.5, 1.7)
Non-quality assured ACT	5.9 (2.8, 12.1)	2.7 (1.4, 5.3)	3.4 (2.0, 5.6)
Other ACT Classifications			
Nationally registered ACT	19.1 (10.8, 31.7)	22.9 (12.9, 37.2)	22.1 (13.9, 33.2)
<i>ACTipal</i>	10.5 (5.6, 18.8)	17.5 (8.2, 33.6)	16.1 (8.4, 28.4)
Any non-artemisinin therapy	97.1 (94.1, 98.7)	85.5 (71.2, 93.4)	87.9 (76.5, 94.2)
Chloroquine	81.4 (70.2, 89.1)	77.8 (64.7, 87.0)	78.5 (68.4, 86.1)
Sulfadoxine-pyrimethamine (SP)	19.7 (11.1, 32.5)	9.5 (6.3, 14.0)	11.6 (8.1, 16.3)
Second-line treatment (Quinine)	25.7 (13.7, 42.9)	9.1 (6.2, 13.2)	12.6 (8.6, 17.9)
Any artemisinin monotherapy	1.6 (0.5, 5.3)	<0.1 (<0.1, 0.2)	0.4 (0.1, 1.1)
Oral artemisinin monotherapy	0.2 (0.1, 0.6)	<0.1 (<0.1, 0.2)	0.1 (<0.1, 0.2)
Non oral artemisinin monotherapy	1.4 (0.3, 5.5)	<0.1 (<0.1, 0.2)	0.3 (0.1, 1.1)

¹⁹ Rural outlets are highly weighted as compared to urban outlets.

Table A.11: Disruption in stock, expiry and storage conditions of antimalarials, by urban and rural strata

	Urban	Rural	TOTAL
	% (95% CI)	% (95% CI)	% (95% CI)
	N=1,584	N=1,032	N=2,616
No disruption in stock of any antimalarial in the past three months	54.4 (48.7, 60.1)	62.0 (53.0, 70.3)	60.5 (53.3, 67.4)
	N=169	N=630	N=799
No disruption in stock of first-line quality assured ACT (FAACT) in the past three months	58.9 (50.1, 67.2)	67.5 (49.5, 81.4)	65.9 (51.3, 78.1)
	N=1,447	N=967	N=2,414
Expired stock of any antimalarial	7.8 (5.1, 11.8)	16.6 (10.2, 25.8)	14.8 (9.7, 22.0)
	N=145	N=574	N=719
Expired stock of first-line quality assured ACT (FAACT)	15.5 (7.7, 28.8)	50.7 (36.7, 64.6)	44.7 (31.5, 58.6)
	N=1,584	N=1,032	N=2,616
Acceptable storage conditions for medicines	96.2 (94.0, 97.6)	95.4 (92.8, 97.1)	95.6 (93.6, 97.0)

Table A.12: Price of antimalarials, by urban and rural strata

	Urban	Rural	TOTAL
	%	%	%
Proportion of first-line quality assured ACT distributed free of cost (by volumes of AETDs)	41.7	31.0	32.0
Median price of a tablet AETD:	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)	Median [IQR] (N of Antimalarials)
ACT	\$0.00 [0.00-0.56] ⁽⁴⁴⁵⁾	\$0.00 [0.00-0.09] ^(1,511)	\$0.00 [0.00-0.09] ^(1,956)
Quality Assured ACT (QAACT)	\$0.00 [0.00-0.56] ⁽³⁹⁸⁾	\$0.00 [0.00-0.09] ^(1,379)	\$0.00 [0.00-0.09] ^(1,777)
First-line (FAACT)	\$0.00 [0.00-0.19] ⁽³²⁵⁾	\$0.00 [0.00-0.09] ^(1,374)	\$0.00 [0.00-0.09] ^(1,699)
Non first-line (NAACT)	\$9.63 [8.79-11.11] ⁽⁷³⁾	\$9.72 [9.25-11.11] ⁽⁵⁾	\$9.72 [8.79-11.11] ⁽⁷⁸⁾
Non-quality Assured ACT	\$0.00 [0.0-4.72] ⁽⁴⁷⁾	\$0.00 [0.00-0.00] ⁽¹³²⁾	\$0.00 [0.00-0.00] ⁽¹⁷⁹⁾
Other ACT Classifications			
Nationally registered ACT	\$0.09 [0.00-1.53] ⁽³²⁵⁾	\$0.09 [0.00-0.09] ^(1,029)	\$0.09 [0.00-0.09] ^(1,354)
<i>ACTipal</i>	\$0.09 [0.09-0.56] ⁽⁶¹⁾	\$0.09 [0.09-0.09] ⁽²¹⁷⁾	\$0.09 [0.09-0.14] ⁽²⁷⁸⁾
Any non-artemisinin therapy	\$0.35 [0.32-0.37] ^(1,734)	\$0.35 [0.35-0.35] ^(1,088)	\$0.35 [0.35-0.35] ^(2,822)
Chloroquine, most popular antimalarial	\$0.35 [0.35-0.35] ^(1,370)	\$0.35 [0.35-0.35] ⁽⁴⁸⁷⁾	\$0.35 [0.35-0.35] ^(1,857)
Sulfadoxine-pyrimethamine (SP)	\$0.32 [0.28-1.16] ⁽²⁷⁹⁾	\$0.23 [0.00-0.37] ⁽⁴⁸⁵⁾	\$0.30 [0.00-0.42] ⁽⁷⁶⁴⁾
Second-line treatment (Quinine)	\$2.92 [1.19-5.83] ⁽⁶⁴⁾	\$2.43 [2.37-2.92] ⁽¹¹⁶⁾	\$2.43 [2.33-4.66] ⁽¹⁸⁰⁾
Artemisinin monotherapy			
Oral artemisinin monotherapy	\$0.00 [n/a] ⁽²⁾	\$-- ⁽⁰⁾	\$0.00 [n/a] ⁽²⁾

Table A.13: Affordability of antimalarials, by urban and rural strata			
	Urban	Rural	TOTAL
Median price of a tablet AETD relative to chloroquine, the 'most popular' antimalarial treatment in Madagascar:	Ratio	Ratio	Ratio
Any ACT	n/a	n/a	n/a
First-line quality assured ACT (FAACT)	n/a	n/a	n/a
Median price of a tablet AETD relative to the minimum legal daily wage (\$1.11):	Ratio	Ratio	Ratio
Any ACT	n/a	n/a	n/a
First-line quality assured ACT (FAACT)	n/a	n/a	n/a
	Ratio	Ratio	Ratio
Median price of an AETD of FAACT relative to the international reference price for ASAQ (\$1.00)	n/a	n/a	n/a
	% (95%CI)	% (95%CI)	% (95%CI)
Proportion of outlets that:	N=1,516	N=578	N=2,094
Offer credit to consumers for antimalarials	24.9 (18.5,32.6)	46.1 (37.9,54.5)	42.1 (35.3,49.2)

Table A.14: Availability of Diagnostic Tests & Cost to Patients, by urban and rural strata

	Urban	Rural	TOTAL
	% (95%CI)	% (95%CI)	% (95%CI)
Proportion of outlets that had:	N=1,584	N=1,032	N=2,616
Any diagnostic test	9.7 (5.9, 15.5)	8.0 (5.2, 12.1)	8.3 (5.9, 11.6)
Microscopic blood tests	1.4 (0.8, 2.3)	0.1 (<0.1, 0.3)	0.4 (0.2, 0.6)
Rapid diagnostic tests	9.4 (5.5, 15.4)	7.9 (5.2, 12.0)	8.2 (5.8, 11.5)
	% (95% CI)	% (95% CI)	% (95% CI)
Proportion of outlets that provided diagnostic tests for free, among outlets providing diagnostic tests	N=88	N=436	N=524
Any diagnostic test	94.4 (88.4, 97.4)	97.8 (85.1, 99.7)	97.1 (90.9, 99.1)
	N=23	N=4	N=27
Microscopic blood tests	47.8 (21.5, 75.3)	86.6 (34.0, 98.8)	56.1 (31.7, 78.0)
	N=83	N=435	N=518
Rapid diagnostic tests	96.4 (91.8, 98.5)	97.8 (85.0, 99.7)	97.5 (90.6, 99.4)
Median price of:	Median [IQR] (N)	Median [IQR] (N)	Median [IQR] (N)
Microscopic blood tests	\$0.28 [0.00-0.93] ⁽²³⁾	\$0.00 [0.00-0.00] ⁽⁴⁾	\$0.00 [0.00-0.83] ⁽²⁷⁾
Rapid diagnostic tests	\$0.00 [0.00-0.00] ⁽⁸³⁾	\$0.00 [0.00-0.00] ⁽⁴³⁵⁾	\$0.00 [0.00-0.00] ⁽⁵¹⁸⁾

Table A.15: Market share, by urban and rural strata

	Urban	Rural	TOTAL
Each antimalarial category as a proportion of the total volume of all antimalarial AETDs sold or distributed in the past week:	%	%	%
ACT	9.0	15.0	13.7
Quality Assured ACT (QAACT)	7.8	13.2	12.1
First-line (FAACT)	6.0	13.2	11.7
Non first-line (NAACT)	1.9	0	0.4
Non-quality assured ACT	1.1	1.8	1.7
Other ACT Classifications			
Nationally registered ACT	6.7	10.2	9.5
<i>ACTipal</i>	3.0	8.5	7.4
Any non-artemisinin therapy	91.0	85.0	86.3
Chloroquine	45.2	60.2	57.0
Sulfadoxine-pyrimethamine (SP)	42.4	23.1	27.1
Second-line treatment (Quinine)	3.5	1.8	2.1
Any artemisinin monotherapy	<0.1	0	<0.1
Oral artemisinin monotherapy	0	0	0
Non oral artemisinin monotherapy	<0.1	0	<0.1

Table A.16: Provider knowledge, by urban and rural strata

	Urban	Rural	TOTAL
	% (95%CI)	% (95%CI)	% (95%CI)
Proportion of providers that:	N=1,584	N=1,032	N=2,616
Correctly state the recommended first-line treatment for uncomplicated malaria	22.0 (13.6, 33.5)	23.7 (14.1, 36.9)	23.3 (15.4, 33.7)
Correctly state the dosing regimen of the first-line treatment for an adult	14.5 (8.4, 24.1)	11.4 (6.4, 19.5)	12.0 (7.6, 18.3)
Correctly state the dosing regimen of the first-line treatment for a two year old	16.9 (9.4, 28.5)	20.2 (10.6, 35.2)	19.6 (11.6, 31.2)
	N=1,516	N=578	N=2,094
Can list at least one health danger sign in a child that requires referral to a public health facility: ²⁰	51.1 (42.9, 59.4)	76.2 (64.6, 84.8)	71.4 (61.9, 79.4)
• Convulsions	26.0 (16.5, 38.5)	46.3 (33.4, 59.7)	42.5 (31.8, 53.8)
• Vomiting	28.8 (20.9, 38.3)	46.2 (37.4, 55.2)	42.9 (35.8, 50.3)
• Unable to drink / breastfeed	21.1 (17.7, 25.0)	21.0 (12.9, 32.3)	21.0 (14.3, 29.7)
• Excessive sleep/difficult to wake up	1.9 (1.1, 3.3)	3.6 (1.7, 7.4)	3.3 (1.7, 6.2)
• Unconscious/coma	4.2 (3.0, 5.8)	15.1 (7.6, 27.7)	13.0 (6.9, 23.1)

²⁰This question was not asked in public health facilities.

Table A.17: Provider perceptions, by urban and rural strata

	Urban	Rural	TOTAL
	% (95%CI)	% (95%CI)	% (95%CI)
Proportion of providers that:	N=1,584	N=1,032	N=2,616
Agree with the statement, "Most customers request an antimalarial by brand name or generic name."	44.7 (33.6, 56.4)	37.5 (27.5, 48.7)	38.9 (30.4, 48.2)
Agree with the statement, "I decide which antimalarial medicine most customers receive."	19.3 (11.3, 31.1)	30.6 (19.6, 44.2)	28.4 (19.3, 38.6)
Report that an ACT is the most effective antimalarial medicine	15.5 (8.7, 26.2)	20.5 (10.8, 35.5)	19.6 (11.5, 31.3)
Proportion of providers than state the following reasons for stocking antimalarials:	N=1,584	N=1,032	N=2,616
• Most profitable	4.3 (2.4, 7.6)	9.5 (5.2, 16.8)	8.5 (4.9, 14.3)
• Recommended by government	6.6 (3.9, 10.9)	10.9 (7.3, 16.0)	10.1 (7.1, 14.0)
• Lowest priced	14.7 (8.9, 23.3)	24.4 (18.1, 32.1)	22.5 (17.2, 28.8)
• Consumer demand	53.0 (40.9, 64.8)	51.7 (39.3, 63.8)	51.9 (41.9, 61.8)
• Easily available	20.5 (14.3, 28.5)	19.5 (9.3, 36.5)	19.7 (11.1, 32.6)
• Drug company	11.4 (6.0, 20.6)	5.1 (1.7, 14.2)	6.3 (3.0, 12.7)
• Brand reputation	3.4 (1.8, 6.2)	9.4 (3.7, 21.7)	8.2 (3.5, 18.0)
• Dosage form	3.3 (1.8, 6.0)	4.2 (2.1, 8.1)	4.0 (2.3, 7.0)
• Frequently prescribed	7.4 (5.2, 10.4)	7.2 (4.5, 11.3)	7.2 (5.0, 10.4)
• Other reasons	10.2 (5.6, 17.6)	7.2 (2.8, 17.5)	7.8 (3.8, 15.2)



AMFm Phase 1 Indicators

Table 3.1.2: Outlets enumerated*in Madagascar, 2010

Number of outlets enumerated, by location and type of outlet

Type of outlet	Urban			Rural			Total		
	Censused clusters	Booster sample	Total	Censused clusters	Booster sample	Total	Censused clusters	Booster sample	Total
Public health facility	47	32	79	45	476	521	92	508	600
Private not for profit health facility	8	0	8	0	0	0	8	0	8
Private for profit outlet									
<i>Private for profit health facility</i>	106	0	106	10	0	10	116	0	116
<i>Pharmacy</i>	55	18	73	0	2	2	55	20	75
<i>Drug store (Dépôt de Médicament)</i>	16	14	30	25	241	266	41	255	296
<i>General retailer</i>	4,919	0	4,919	973	0	973	5,892	0	5,892
<i>Itinerant drug vendor</i>	--	--	--	--	--	--	--	--	--
<i>Total</i>	5,096	32	5,128	1,008	243	1,251	6,104	275	6,379
Community health worker	59	0	59	175	0	175	234	0	234
Total	5,210	64	5,274	1,228	719	1,947	6,438	783	7,221

* Figure 15, reference A

Table 3.1.3: Outlets with antimalarials in stock*in Madagascar, 2010**

Number of outlets with antimalarials in stock at the time of the survey where an interview was conducted, by location and type of outlet

Type of outlet	Urban			Rural			Total		
	Censused clusters	Booster sample	Total	Censused clusters	Booster sample	Total	Censused clusters	Booster sample	Total
Public health facility	38	30	68	31	415	446	69	445	514
Private not for profit health facility	6	0	6	0	0	0	6	0	6
Private for profit outlet									
<i>Private for profit health facility</i>	62	0	62	7	0	7	69	0	69
<i>Pharmacy</i>	48	16	64	0	2	2	48	18	66
<i>Drug store (Dépôt de Médicament)</i>	14	14	28	24	204	228	38	218	256
<i>General retailer</i>	1,217	0	1,217	246	0	246	1,463	0	1,463
<i>Itinerant drug vendor</i>	--	--	--	--	--	--	--	--	--
<i>Total</i>	1,341	30	1,371	277	206	483	1,618	236	1,854
Community health worker	2	0	2	38	0	38	40	0	40
Total	1,387	60	1,447	346	621	967	1,733	681	2,414

* Figure 15, reference E. An interview was conducted if final interview status for an outlet was "Completed interview" or "Partially completed".

** These numbers form the denominator for all subsequent tables, unless specified otherwise. Any variation in the stated denominator in subsequent tables is due to missing data on specific variables.

Table 3.1.4: Number of products audited in Madagascar, 2010			
Number of products audited by outlet type, product type, and location			
	Urban	Rural	Total
	Number of products audited	Number of products audited	Number of products audited
<i>Quality assured ACTs</i>			
Public health facility	150	1,210	1,360
Private not for profit health facility	5	--	5
Private for profit outlet	249	137	386
Community health worker	0	39	39
Total	404	1,386	1,790
<i>Non-quality assured ACTs</i>			
Public health facility	16	130	146
Private not for profit health facility	2	--	2
Private for profit outlet	34	1	35
Community health worker	0	1	1
Total	52	132	184
<i>Artemisinin monotherapy</i>			
Public health facility	0	0	0
Private not for profit health facility	0	--	0
Private for profit outlet	11	2	13
Community health worker	0	0	0
Total	11	2	13
<i>Non-Artemisinin therapy</i>			
Public health facility	88	562	650
Private not for profit health facility	17	--	17
Private for profit outlet	1,958	957	2,915
Community health worker	2	1	3
Total	2,065	1,520	3,585
<i>All antimalarials</i>			
Public health facility	254	1,902	2,156
Private not for profit health facility	24	--	24
Private for profit outlet	2,252	1,097	3,349
Community health worker	2	41	43
Total	2,532	3,040	5,572

Table 3.1.5: Outlets with at least one staff member who completed secondary school or primary school* in Madagascar, 2010						
Outlets with at least one staff member who completed secondary school or primary school (n) as a percentage of all outlets with any antimalarials in stock at the time of the survey visit (N), by location and type of outlet.						
Type of outlet	Urban		Rural		Total	
	Percentage (95% CI)	N	Percentage (95% CI)	N	Percentage (95% CI)	N
At least one staff member completed primary school						
Public health facility	98.3(92.0,99.7)	67	100.0	444	99.5(98.0,99.9)	511
Private not for profit health facility	100.0	6	--	--	100.0	6
Private for profit outlet						
<i>Private for profit health facility</i>	100.0	59	100.0	7	100.0	66
<i>Pharmacy</i>	97.1(84.2,99.5)	63	100.0	2	97.1(85.3,99.5)	65
<i>Drug store (Dépôt de Médicament)</i>	85.4(77.0,91.1)	28	98.6(93.7,99.7)	227	93.6(84.7,97.5)	255
<i>General retailer</i>	92.9(90.8,94.5)	1,209	76.3(66.4,83.9)	243	79.5(71.2,85.9)	1,452
<i>Itinerant drug vendor</i>	--	--	--	--	--	--
<i>Total</i>	92.6(90.1,94.6)	1,359	78.0(68.6,85.3)	479	81.3(73.6,87.1)	1,838
Community health worker	100.0	2	85.1(68.5,93.7)	38	85.1(69.0,93.6)	40
Total	93.3(91.2,95.0)	1,434	80.6(72.7,86.6)	961	83.2(76.9,88.1)	2,395
At least one staff member completed secondary school						
Public health facility	93.2(83.6,97.3)	67	91.7 (87.2,94.8)	442	92.1 (88.4,94.8)	509
Private not for profit health facility	100.0	6	--	--	100.0	6
Private for profit outlet						
<i>Private for profit health facility</i>	93.2(85.9,96.9)	59	100.0	7	97.8(94.4,99.2)	66
<i>Pharmacy</i>	97.0 (84.4,99.5)	63	51.4(5.3,95.2)	2	96.3(84.8,99.2)	65
<i>Drug store (Dépôt de Médicament)</i>	74.7(64.8,82.5)	28	51.3(42.3,60.2)	227	60.3(50.1,69.6)	255
<i>General retailer</i>	39.5(33.6,45.8)	1,208	9.1(4.4,18.0)	242	15.0(9.5,22.9)	1,450
<i>Itinerant drug vendor</i>	--	--	--	--	--	--
<i>Total</i>	49.9(43.1,56.7)	1,358	13.6(8.1,22.1)	478	21.7(15.3,29.9)	1,836
Community health worker	70.1(20.6,95.5)	2	7.3(2.1,22.3)	38	7.4(2.3,21.6)	40
Total	55.0(46.5,63.2)	1,433	18.8(13.1,26.2)	958	26.3(19.9,33.8)	2,391
* The two groups are not mutually exclusive. Providers noted as having completed primary school include those who have completed secondary school and those who have not completed secondary school but who have completed primary school.						

Table 3.1.6: Outlets with a staff member with a health-related qualification*in Madagascar, 2010						
Outlets with at least one staff member with a health-related qualification (n) as a percentage of all outlets with any antimalarials in stock at the time of the survey visit(N), by location and type of outlet.						
Type of outlet	Urban		Rural		Total	
	Percentage (95% CI)	N	Percentage (95% CI)	N	Percentage (95% CI)	N
Public health facility	90.4(80.5,95.6)	67	95.1(91.9,97.1)	444	93.8(90.9,95.8)	511
Private not for profit health facility	76.2(35.9,94.8)	6	--	--	76.2(35.9,94.8)	6
Private for profit outlet						
<i>Private for profit health facility</i>	89.1(80.7,94.2)	59	100.0	7	96.5(92.6,98.4)	66
<i>Pharmacy</i>	71.2(61.8,79.1)	63	51.4(5.3,95.2)	2	70.9(62.0,78.5)	65
<i>Drug store (Dépôt de Médicament)</i>	30.6(19.6,44.3)	28	8.1(4.6,14.1)	226	16.7(8.8,29.6)	254
<i>General retailer</i>	1.5(0.8,2.9)	1,208	0.9(0.3,2.7)	243	1.0(0.5,2.3)	1,451
<i>Itinerant drug vendor</i>	--	--	--	--	--	--
<i>Total</i>	13.6(8.4,21.1)	1,358	3.8(2.0,7.2)	478	5.9(3.8,9.2)	1,836
Community health worker	70.1(20.6,95.5)	2	3.2(0.3,24.5)	38	3.4(0.4,23.1)	40
Total	22.5(13.5,35.1)	1,433	10.7(7.2,15.6)	960	13.1(9.3,18.2)	2,393
* A health-related qualification was defined as pharmacy, nurse or medical doctor related training. Pharmacy related training includes pharmacy studied to a certificate or diploma level; nurse related training includes studying nursing to a certificate level (nurse aid) and diploma level; medical doctor training includes clinical officers who studied medicine to a diploma level and fully qualified physicians.						

Availability of antimalarial drugs

Antimalarials in stock

Table 3.2.1: Outlets with antimalarials in stock in Madagascar, 2010						
Indicator 1.1 Outlets that had any antimalarials in stock at the time of the survey visit* (n) as a percentage of all outlets where screening questions were completed** (N), by location and type of outlet						
Type of outlet	Urban		Rural		Total	
	Percentage (95% CI)	N	Percentage (95% CI)	N	Percentage (95% CI)	N
Public health facility	99.1(96.8,99.8)	71	96.0(93.1, 97.7)	460	96.8(94.6, 98.2)	531
Private not for profit health facility	80.6(43.0,95.8)	7	--	0	80.6(43.0,95.8)	7
Private for profit outlet						
<i>Private for profit health facility</i>	74.4 (65.0,82.0)	79	96.2(72.9,99.6)	8	87.6(77.2,93.7)	87
<i>Pharmacy</i>	99.6(97.5,99.9)	67	100.0	2	99.6(97.7,99.9)	69
<i>Drug store (Dépôt de Médicament)</i>	96.3(81.0,99.4)	30	98.0(95.0,99.2)	233	97.4(93.3,99.0)	263
<i>General retailer</i>	25.6(21.4,30.4)	4,671	33.2(24.3,43.4)	915	31.4(24.6,39.0)	5,586
<i>Itinerant drug vendor</i>	--	--	--	--	--	--
<i>Total</i>	30.6(26.0,35.8)	4,847	34.9(26.3,44.7)	1,158	33.9(27.3,41.1)	6,005
Community health worker	2.5(0.5,11.1)	58	27.3(10.0,55.9)	168	26.8(10.1,54.3)	226
Total	32.9(27.3,39.1)	4,983	35.4(27.8,44.0)	1,786	34.9(28.8,41.5)	6,769
* Figure 15 reference E						
** Figure 15reference B. Screening questions asked whether outlets had any medicines in stock that day, or any antimalarials in stock that day, and if not whether they had had any medicines, or any antimalarials, in stock in the previous 3 months.						

Antimalarials in stock by type

Table 3.2.2: Outlets with non-artemisinin therapy in stock in Madagascar, 2010						
Indicator 1.2 Outlets that had non-artemisinin monotherapy or non-artemisinin combination therapy in stock (n) as a percentage of outlets with any antimalarials in stock at the time of the survey visit* (N), by location and type of outlet.						
Type of outlet	Urban		Rural		Total	
	Percentage (95% CI)	N	Percentage (95% CI)	N	Percentage (95% CI)	N
Public health facility	78.9(53.0,92.5)	67	75.4(67.8,81.7)	446	76.4(68.1,83.0)	513
Private not for profit health facility	100.0	6	--	0	100.0	6
Private for profit outlet						
<i>Private for profit health facility</i>	91.7(77.7,97.2)	61	100.0	7	97.3 (91.3,99.2)	68
<i>Pharmacy</i>	100.0	64	100.0	2	100.0	66
<i>Drug store (Dépôt de Médicament)</i>	99.5 (96.6,99.9)	28	98.8 (96.2,99.6)	228	99.0 (97.3,99.7)	256
<i>General retailer</i>	99.8 (99.5,100.0)	1,217	99.3 (97.7,99.8)	246	99.4 (98.3,99.8)	1,463
<i>Itinerant drug vendor</i>	--	--	--	--	--	--
<i>Total</i>	99.5 (98.7,99.8)	1,370	99.3 (97.9,99.8)	483	99.3 (98.4,99.7)	1,853
Community health worker	100.0	2	1.2 (0.1,11.6)	38	1.4 (0.2,10.3)	40
Total	97.2(94.1,98.7)	1,445	85.5 (71.2,93.4)	967	87.9 (76.5,94.2)	2,412
* Figure 15 reference E						

Table 3.2.3: Outlets with artemisinin monotherapy in stock in Madagascar, 2010						
Indicator 1.3 Outlets that had artemisinin monotherapy in stock (n) as a percentage of outlets with any antimalarials in stock at the time of the survey visit* (N), by location and type of outlet.						
Type of outlet	Urban		Rural		Total	
	Percentage (95% CI)	N	Percentage (95% CI)	N	Percentage (95% CI)	N
Public health facility	0.0	67	0.0	444	0.0	511
Private not for profit health facility	0.0	6	--	0	0.0	6
Private for profit outlet						
<i>Private for profit health facility</i>	3.5(1.0,11.2)	59	0.0	7	1.1 (0.3,3.7)	66
<i>Pharmacy</i>	22.0 (12.5,35.8)	63	0.0	2	21.7(12.4,35.1)	65
<i>Drug store (Dépôt de Médicament)</i>	0.5 (0.1,3.4)	28	0.6 (0.1,5.0)	228	0.6 (0.1,2.6)	256
<i>General retailer</i>	0.0	1,213	0.0	244	0.0	1,457
<i>Itinerant drug vendor</i>	--	--	--	--	--	--
<i>Total</i>	1.8 (0.5,6.1)	1,363	0.0	480	0.4 (0.1,1.3)	1,843
Community health worker	0.0	2	0.0	38	0.0	40
Total	1.6 (0.5,5.3)	1,438	0.0	962	0.4 (0.1,1.1)	2,400
* Figure 15 reference E						

Table3.2.4: Outlets with non-quality-assured ACTs in stock in Madagascar, 2010						
Indicator 1.4 Outlets that had non-quality-assured ACTs in stock (n)as a percentage of outlets with any antimalarials in stock at the time of the survey visit* (N), by location and type of outlet.						
Type of outlet	Urban		Rural		Total	
	Percentage (95% CI)	N	Percentage (95% CI)	N	Percentage (95% CI)	N
Public health facility	19.2 (11.5,30.7)	67	30.5(20.1,43.4)	444	27.4 (19.7,36.7)	511
Private not for profit health facility	21.0 (5.6,54.5)	6	--	0	21.0 (5.6,54.5)	6
Private for profit outlet						
<i>Private for profit health facility</i>	9.3 (3.4, 23.1)	60	0.0	7	3.0 (1.0, 8.9)	67
<i>Pharmacy</i>	51.6 (37.4, 65.5)	64	0.0	2	50.9 (36.8, 64.8)	66
<i>Drug store (Dépôt de Médicament)</i>	0.0	28	0.3 (<0.1, 1.9)	227	0.2 (<0.1,1.2)	255
<i>General retailer</i>	0.0	1,213	0.0	244	0.0	1,457
<i>Itinerant drug vendor</i>	--	--	--	--	--	--
<i>Total</i>	4.2 (1.4,12.0)	1,365	<0.1(<0.1,0.1)	480	0.9 (0.3,2.7)	1,845
Community health worker	0.0	2	2.9 (0.3,24.4)	38	2.9 (0.3,23.4)	40
Total	5.9 (2.8,12.1)	1,440	2.7 (1.4,5.3)	962	3.4(2.0,5.6)	2,402
*Figure 15 reference E						

Table 3.2.5: Outlets with quality assured ACTs in stock in Madagascar, 2010						
Indicator 1.5 Outlets that had quality assured ACTs (QAACT) in stock (n) as a percentage of outlets with any antimalarials in stock at the time of the survey visit* (N), by location and type of outlet.						
Type of outlet	Urban		Rural		Total	
	Percentage (95% CI)	N	Percentage (95% CI)	N	Percentage (95% CI)	N
Public health facility	66.1 (54.7,75.9)	68	89.8(85.1,93.1)	445	83.2(77.1,87.9)	513
Private not for profit health facility	47.8 (18.5,78.8)	6	--	0	47.8 (18.5,78.8)	6
Private for profit outlet						
<i>Private for profit health Facility</i>	61.0 (49.9,71.1)	61	37.4 (9.2,77.9)	7	45.1 (21.4,71.2)	68
<i>Pharmacy</i>	51.4 (32.1,70.4)	64	48.6 (4.8,94.7)	2	51.4 (32.9,69.5)	66
<i>Drug store (Dépôt de Médicament)</i>	64.2 (56.6,71.1)	28	51.0(42.3,59.6)	227	56.1(50.1,61.9)	255
<i>General retailer</i>	0.5 (0.2,1.3)	1,213	3.1 (1.2,8.1)	244	2.6 (1.1,6.4)	1,457
<i>Itinerant drug vendor</i>	--	--	--	--	--	--
<i>Total</i>	13.9(7.7,23.9)	1,366	6.5(3.5,11.6)	480	8.1 (5.1,12.6)	1,846
Community health worker	0.0	2	100.0	38	99.8 (99.2,100.0)	40
Total	19.9(11.4,32.5)	1,442	24.3(14.3,38.3)	963	23.4(15.2,34.4)	2,405
* Figure 15 reference E						

Stock-outs of quality assured ACTs

Table 3.2.6: Outlets with stock-outs of quality assured ACTs (QAACTs) in Madagascar, 2010

Indicator 1.6 Outlets that were out of stock of all QAACTs for at least 1 day in the last 7 days (n) as a percentage of outlets with any QAACT in stock at the time of the survey visitor in the 4 weeks preceding the survey visit (N), by location and type of outlet.*

Indicator not available

This is an indicator of the Independent Evaluation of the AMFm which was determined only after the fieldwork for this study was launched. This survey round was not designed to collect data needed to calculate this indicator and therefore this indicator cannot be calculated given the data set.

Population coverage of outlets with quality assured ACTs

Table 3.2.7: Percentage of the population living in censused communes with outlets with quality assured ACTs (QAACTs) in stock at the time of survey in Madagascar, 2010

Indicator 1.7: Population* living in a censused communes where there was at least one of a given type of outlet with a QAACT in stock at the time of the survey visit (n) as a percentage of the total population living in all the censused communes (N), by location.

	Urban		Rural		Total	
	Percentage (95% CI)	N	Percentage (95% CI)	N	Percentage (95% CI)	N
At least one public health facility stocking quality assured ACTs	68.4 (50.3, 82.3)	838,897	89.5 (63.3, 97.7)	339,277	87.3 (67.6, 95.8)	1,178,174
At least one private not for profit health facility stocking quality assured ACTs	15.8 (7.4, 30.5)		0.0		1.6 (0.7, 3.5)	
At least one private for profit outlet stocking quality assured ACTs	94.7 (77.1, 99.0)		57.9 (33.8, 78.8)		61.7 (39.8, 79.7)	
At least one community health worker stocking quality assured ACTs	0.0		52.6 (29.4, 74.8)		47.3 (27.6, 67.8)	
At least one outlet of any type stocking quality assured ACTs	94.7 (77.1, 99.0)		89.5 (63.3, 97.7)		90.0 (67.7, 97.5)	
* INSTAT (Institut National de la Statistique), 1999. Sampling frame of communes and fokontany [from the 1993 population census].						

Pricing of antimalarials (Affordability)

Cost to patients of antimalarials

Table 3.3.1: Cost to patients of non-artemisinin therapy, in US dollars* in Madagascar, 2010						
Indicator 2.4: Median cost to patients of one adult equivalent treatment dose (AETD)** of non-artemisinin monotherapy or non-artemisinin combination therapy, by location, type of outlet and dosage form.						
Type of outlet	Urban		Rural		Total	
	Median cost [IQR]	Number of products	Median cost [IQR]	Number of products	Median cost [IQR]	Number of products
All dosage forms						
Public health facility	2.43[0.00,10.13]	88	0.12 [0.00,2.02]	554	1.73 [0.00,5.02]	642
Private not for profit health facility	2.37[0.00,7.29]	17	--	--	2.37 [0.00,7.29]	17
Private for profit outlet	0.35[0.35,6.80]	1,932	0.35 [0.35,0.35]	954	0.35 [0.35,0.46]	2,886
Community health workers	0.00[0.00,0.21]	2	0.69 [n/a]	1	0.69 [0.69,0.69]	3
Total	0.35[0.35,6.80]	2,039	0.35 [0.35,0.42]	1,509	0.35 [0.35,0.56]	3,548
Tablets						
Public health facility	0.58[0.00,1.19]	50	0.00 [0.00,0.12]	363	0.00 [0.00,1.19]	413
Private not for profit health facility	1.10[0.28,1.57]	7	--	--	1.10 [0.28,1.57]	7
Private for profit outlet	0.35[0.32,0.35]	1,676	0.35 [0.35,0.35]	724	0.35 [0.35,0.35]	2,400
Community health workers	0.00[0.00,0.21]	2	0.69 [n/a]	1	0.69 [0.69,0.69]	3
Total	0.35[0.32,0.37]	1,735	0.35 [0.35,0.35]	1,088	0.35 [0.35,0.35]	2,823
Oral liquids						
Public health facility	n/a	0	n/a	0	n/a	0
Private not for profit health facility	n/a	0	--	--	n/a	0
Private for profit outlet	7.03[3.70,7.31]	34	2.89 [2.08,6.48]	14	6.48 [3.47,7.31]	48
Community health workers	n/a	0	n/a	0	n/a	0
Total	7.03[3.70,7.31]	34	2.89 [2.08,6.48]	14	6.48 [3.47,7.31]	48

<i>Injectables</i>						
Public health facility	10.03[5.02,28.16]	38	5.02 [5.02,5.05]	191	5.05 [5.02,10.05]	229
Private not for profit health facility	5.05[0.00,17.49]	10	--	--	5.05 [0.00,17.49]	10
Private for profit outlet	10.20[7.29,14.58]	222	8.75 [6.80,11.66]	216	8.75 [6.80,13.12]	438
Community health workers	n/a	0	n/a	0	n/a	0
Total	10.05 [6.80,14.58]	270	7.29 [5.05,10.20]	407	8.75 [5.83,11.66]	677
<i>Other</i>						
Public health facility	n/a	0	n/a	0	n/a	0
Private not for profit health facility	n/a	0	--	--	n/a	0
Private for profit outlet	n/a	0	n/a	0	n/a	0
Community health workers	n/a	0	n/a	0	n/a	0
Total	n/a	0	n/a	0	n/a	0
<p>* 1 USD = 2161.14 Ariary</p> <p>**An AETD is the number of milligrams (mg) of a given drug that is required to treat a 60 kg adult. AETDs were calculated for every audited antimalarial.</p>						

Table 3.3.2: Cost to patients of artemisinin monotherapy, in US dollars* in Madagascar, 2010						
Indicator 2.3 Median cost to patients of one adult equivalent treatment dose (AETD)** of artemisinin monotherapy, by location, type of outlet and dosage form.						
Type of outlet	Urban		Rural		Total	
	Median cost [IQR]	Number of products	Median cost [IQR]	Number of products	Median cost [IQR]	Number of products
All dosage forms						
Public health facility	n/a	0	n/a	0	n/a	0
Private not for profit health facility	n/a	0	--	--	n/a	0
Private for profit outlet	22.21[22.21,22.21]	8	25.54 [n/a]	1	22.21[22.21,22.21]	9
Community health workers	n/a	0	n/a	0	n/a	0
Total	22.21[22.21,22.21]	8	25.54 [n/a]	1	22.21[22.21,22.21]	9
Tablets						
Public health facility	n/a	0	n/a	0	n/a	0
Private not for profit health facility	n/a	0	--	--	n/a	0
Private for profit outlet	0.00 [0.00,7.11]	2	n/a	0	0.00 [0.00,7.11]	2
Community health workers	n/a	0	n/a	0	n/a	0
Total	0.00 [0.00,7.11]	2	n/a	0	0.00 [0.00,7.11]	2
Oral liquids						
Public health facility	n/a	0	n/a	0	n/a	0
Private not for profit health facility	n/a	0	--	--	n/a	0
Private for profit outlet	n/a	0	n/a	0	n/a	0
Community health workers	n/a	0	n/a	0	n/a	0
Total	n/a	0	n/a	0	n/a	0
Injectables						
Public health facility	n/a	0	n/a	0	n/a	0
Private not for profit health facility	n/a	0	--	--	n/a	0
Private for profit outlet	22.21[22.21,22.21]	5	25.54 [n/a]	1	22.21[22.21,22.21]	6
Community health workers	n/a	0	n/a	0	n/a	0
Total	22.21[22.21,22.21]	5	25.54 [n/a]	1	22.21[22.21,22.21]	6
Other						
Public health facility	n/a	0	n/a	0	n/a	0
Private not for profit health facility	n/a	0	--	--	n/a	0
Private for profit outlet	3.70 [n/a]	1	n/a	0	3.70 [n/a]	1
Community health workers	n/a	0	n/a	0	n/a	0
Total	3.70 [n/a]	1	n/a	0	3.70 [n/a]	1
* 1 USD = 2161.14 Ariary **An AETD is the number of milligrams (mg) of a given drug that is required to treat a 60 kg adult. AETDs were calculated for every audited antimalarial.						

Table 3.3.3: Cost to patients of non-quality-assured ACTs, in US dollars* in Madagascar, 2010**Indicator 2.2:** Median cost to patients of one adult equivalent treatment dose (AETD)** of non-quality-assured ACTs by location, type of outlet and dosage form.

Type of outlet	Urban		Rural		Total	
	Median cost [IQR]	Number of products	Median cost [IQR]	Number of products	Median cost [IQR]	Number of products
All dosage forms						
Public health facility	0.00 [0.00,0.00]	16	0.00[0.00,0.00]	130	0.00[0.00,0.00]	146
Private not for profit health facility	0.00[0.00,0.00]	2	--	--	0.00[0.00,0.00]	2
Private for profit outlet	5.76[4.72,11.11]	33	4.44[n/a]	1	5.50[4.72,11.11]	34
Community health workers	n/a	0	2.78[n/a]	1	2.78[n/a]	1
Total	4.72[0.00,7.16]	51	0.00[0.00,0.00]	132	0.00[0.00,2.78]	183
Tablets						
Public health facility	0.00[0.00,0.00]	16	0.00[0.00,0.00]	130	0.00[0.00,0.00]	146
Private not for profit health facility	0.00[0.00,0.00]	2	--	--	0.00[0.00,0.00]	2
Private for profit outlet	4.72[4.72,4.72]	29	4.44[n/a]	1	4.72[4.44,4.72]	30
Community health workers	n/a	0	2.78[n/a]	1	2.78[n/a]	1
Total	0.00[0.00,4.72]	47	0.00[0.00,0.00]	132	0.00[0.00,0.00]	179
Oral liquids						
Public health facility	n/a	0	n/a	0	n/a	0
Private not for profit health facility	n/a	0	--	--	n/a	0
Private for profit outlet	7.16[7.16,7.16]	2	n/a	0	7.16[7.16,7.16]	2
Community health workers	n/a	0	n/a	0	n/a	0
Total	7.16[7.16,7.16]	2	n/a	0	7.16[7.16,7.16]	2
Injectables						
Public health facility	n/a	0	n/a	0	n/a	0
Private not for profit health facility	n/a	0	--	--	n/a	0
Private for profit outlet	n/a	0	n/a	0	n/a	0
Community health workers	n/a	0	n/a	0	n/a	0
Total	n/a	0	n/a	0	n/a	0
Other						
Public health facility	n/a	0	n/a	0	n/a	0
Private not for profit health facility	n/a	0	--	--	n/a	0
Private for profit outlet	11.11[11.11,11.11]	2	n/a	0	11.11[11.11,11.11]	2
Community health workers	n/a	0	n/a	0	n/a	0
Total	11.11[11.11,11.11]	2	n/a	0	11.11[11.11,11.11]	2

* 1 USD = 2161.14 Ariary

**An AETD is the number of milligrams (mg) of a given drug that is required to treat a 60 kg adult. AETDs were calculated for every audited antimalarial.

Table 3.3.4: Cost to patients of quality assured ACTs in US dollars* in Madagascar, 2010						
Indicator 2.1: Median cost to patients of one treatment dose of QAACTs by location and type of outlet						
Type of outlet	Urban		Rural		Total	
	Median cost [IQR]	Number of products	Median cost [IQR]	Number of products	Median cost [IQR]	Number of products
Adult equivalent treatment dose (AETD)**						
Public health facility	0.00[0.00,0.00]	150	0.00[0.00,0.00]	1,203	0.00[0.00,0.00]	1,353
Private not for profit health facility	0.00[0.00,0.00]	5	--	--	0.00[0.00,0.00]	5
Private for profit outlet	0.56[0.09,9.55]	243	0.09[0.09,0.28]	137	0.14[0.09,1.53]	380
Community health workers	n/a	0	0.09[0.09,0.09]	39	0.09[0.09,0.09]	39
Total	0.00[0.00,0.56]	398	0.00[0.00,0.09]	1,379	0.00[0.00,0.09]	1,777
Pediatric formulation -Pack for a two-year old child (10kg)***						
Public health facility	0.00[0.00,0.00]	39	0.00[0.00,0.00]	366	0.00[0.00,0.00]	405
Private not for profit health facility	0.00[n/a]	2	--	0	0.00[n/a]	2
Private for profit outlet	0.05[0.05,2.81]	96	0.05[0.05,0.09]	134	0.05[0.05,0.14]	230
Community health workers	--	0	0.05[0.05,0.05]	35	0.05[0.05,0.05]	35
Total	0.05[0.00,0.19]	137	0.05[0.00,0.05]	535	0.05[0.00,0.05]	672
<p>* 1 USD = 2161.14 Ariary</p> <p>** An AETD is the number of milligrams (mg) of a given drug that is required to treat a 60 kg adult. AETDs were calculated for every audited antimalarial.</p> <p>***Pediatric formulations (PFs) are packages intended for children. In the calculation of median cost we include only packages whose age (weight) range includes a 2 year old (10kg) child.</p>						

Gross markup between purchase price and retail selling price

Table 3.3.5: Gross markup between purchase price and retail selling price of non-artemisinin therapy in Madagascar, 2010						
Median percentage markup between purchase price and retail selling price of non-artemisinin monotherapy or non-artemisinin combination therapy by location and type of outlet*						
Type of outlet	Urban		Rural		Total	
	Median markup [IQR]	Number of products	Median markup [IQR]	Number of products	Median markup [IQR]	Number of products
Public health facility	33.2[0.0, 35.0]	82	0.0[0.0, 35.3]	491	7.7[0.0, 35.1]	573
Private not for profit health facility	34.1[20.0, 35.0]	8	--	0	34.1[20.0, 35.0]	8
Private for profit outlet						
<i>Private for profit health facility</i>	16.7[0.0, 42.9]	93	66.7[50.0, 100.0]	14	66.7[28.8, 100.0]	107
<i>Pharmacy</i>	38.2[19.0, 66.7]	275	107.1[14.3, 200.0]	2	38.2[19.0, 66.7]	277
<i>Drug store (Dépôt de Médicament)</i>	81.8[53.8, 150.0]	111	50.0[33.3, 77.8]	595	66.7[42.9, 112.1]	706
<i>General retailer</i>	66.7[66.7, 100.0]	1,194	66.7[42.9, 100.0]	247	66.7[50.0, 100.0]	1,441
<i>Itinerant drug vendor</i>	--	--	--	--	--	--
<i>Total</i>	66.7[50.0, 100.0]	1,673	66.7[42.9, 100.0]	858	66.7[42.9, 100.0]	2,531
Community health worker	0.0	1	66.7	1	66.7[66.7, 66.7]	2
Total	66.7[37.9, 100.0]	1,764	66.7[35.0, 78.6]	1,350	66.7[35.4, 100.0]	3,114
*17 markups were treated as missing because the purchase price was zero and the retail selling price was non-zero.						

Table 3.3.6: Gross markup between purchase price and retail selling price of artemisinin monotherapy in Madagascar, 2010						
Median percentage markup between purchase price and retail selling price of artemisinin monotherapy by location and type of outlet						
Type of outlet	Urban		Rural		Total	
	Median markup [IQR]	Number of products	Median markup [IQR]	Number of products	Median markup [IQR]	Number of products
Public health facility	--	0	--	0	--	0
Private not for profit health facility	--	0	--	0	--	0
Private for profit outlet						
<i>Private for profit health facility</i>	0.0[0.0, 0.0]	2	--	0	0.0[0.0, 0.0]	2
<i>Pharmacy</i>	38.9[38.9,38.9]	4	--	0	38.9[38.9,38.9]	4
<i>Drug store (Dépôt de Médicament)</i>	--	0	31.4	1	31.4	1
<i>General retailer</i>	--	0	--	0	--	0
<i>Itinerant drug vendor</i>	--	--	--	--	--	--
<i>Total</i>	38.9[38.9, 38.9]	6	31.4	1	38.9[38.9, 38.9]	7
Community health worker	--	0	--	0	--	0
Total	38.9[38.9, 38.9]	6	31.4	1	38.9[38.9, 38.9]	7

Table 3.3.7: Gross markup between purchase price and retail selling price of non-quality-assured ACTs in Madagascar, 2010						
Median percentage markup between purchase price and retail selling price of non-quality-assured ACTs by location and type of outlet						
Type of outlet	Urban		Rural		Total	
	Median markup [IQR]	Number of products	Median markup [IQR]	Number of products	Median markup [IQR]	Number of products
Public health facility	0.0[0.0,0.0]	16	0.0[0.0,0.0]	130	0.0[0.0,0.0]	146
Private not for profit health facility	0.0[0.0,0.0]	2	--	0	0.0[0.0,0.0]	2
Private for profit outlet						
<i>Private for profit health facility</i>	0.0[0.0,0.0]	7	--	0	0.0[0.0,0.0]	7
<i>Pharmacy</i>	38.8[38.1, 38.8]	17	--	0	38.8[38.1, 38.8]	17
<i>Drug store (Dépôt de Médicament)</i>	--	0	60.0	1	60.0	1
<i>General retailer</i>	--	0	--	0	--	0
<i>Itinerant drug vendor</i>	--	--	--	--	--	--
<i>Total</i>	38.8[38.1, 38.8]	24	60.0	1	38.8[38.1, 38.8]	25
Community health worker	--	0	0.0	1	0.0	1
Total	0.0 [0, 38.8]	42	0.0 [0.0, 0.0]	132	0.0[0.0, 0.0]	174

Table 3.3.8: Gross markup between purchase price and retail selling price of quality assured ACTs in Madagascar, 2010						
Indicator 2.5: Median percentage markup between purchase price and retail selling price of quality assured ACTs by location and type of outlet*						
Type of outlet	Urban		Rural		Total	
	Median markup [IQR]	Number of products	Median markup [IQR]	Number of products	Median markup [IQR]	Number of products
Public health facility	0.0[0.0, 0.0]	145	0.0[0.0, 0.0]	1,187	0.0[0.0, 0.0]	1,332
Private not for profit health facility	0.0[0.0, 0.0]	4	--	0	0.0[0.0, 0.0]	4
Private for profit outlet						
<i>Private for profit health facility</i>	0.0[0.0, 0.0]	67	0.0[0.0, 66.7]	2	0.0[0.0, 0.0]	69
<i>Pharmacy</i>	38.1[7.9, 38.6]	91	--	0	38.1[7.9, 38.6]	91
<i>Drug store (Dépôt de Médicament)</i>	38.9[25.0, 38.9]	20	38.9[25.0, 87.5]	103	38.9[25.0, 42.9]	123
<i>General retailer</i>	100.0 [11.1, 200.0]	6	50.0[33.3, 50.0]	8	50.0[33.3, 50.0]	14
<i>Itinerant drug vendor</i>	--	--	--	--	--	--
<i>Total</i>	25.0[0.0, 38.9]	184	50.0[25.0, 66.7]	113	38.1[12.9, 50.0]	297
Community health worker	--	0	50.0[0.0, 100.0]	29	50.0[0.0, 100.0]	29
Total	0.0[0.0, 15.7]	333	0.0[0.0, 25.0]	1,329	0.0[0.0, 25.0]	1,662
*26 markups were treated as missing because the purchase price was zero and the retail selling price was non-zero.						

Availability and cost to patients of diagnostic tests (RDT/microscopy)

Malaria microscopy

Table 3.3.9: Availability of malaria microscopy, in Madagascar, 2010						
Outlets where malaria microscopic tests were available*(n) as a percentage of outlets with any antimalarials in stock at the time of the survey visit** (N), by location and type of outlet						
Type of outlet	Urban		Rural		Total	
	Percentage (95% CI)	N	Percentage (95% CI)	N	Percentage (95% CI)	N
Public health facility	8.4 (3.1,20.6)	67	1.9 (0.8,4.2)	444	3.7 (2.1,6.4)	511
Private not for profit health facility	4.7 (0.9,21.5)	6	--	--	4.7 (0.9,21.5)	6
Private for profit outlet						
<i>Private for profit health facility</i>	13.8 (8.5,21.6)	59	0.0	7	4.4 (2.1,8.9)	66
<i>Pharmacy</i>	0.3 (<0.1,1.7)	63	0.0	2	0.3 (<0.1,1.6)	65
<i>Drug store (Dépôt de Médicament)</i>	0.0	28	0.0	227	0.0	255
<i>General retailer</i>	0.0	1,212	0.0	244	0.0	1,456
<i>Itinerant drug vendor</i>	--	--	--	--	--	--
<i>Total</i>	0.6 (0.4,1.0)	1,362	0.0	480	0.1 (<0.1,0.3)	1,842
Community health worker	0.0	2	0.0	38	0.0	40
Total	1.5 (0.9,2.5)	1,437	0.1 (<0.1,0.4)	962	0.4 (0.3,0.7)	2,399
* Malaria microscopic testing is considered to be available if the respondent reported that the service is available in the outlet on the day of the survey visit						
**Figure 15 reference E						

Table 3.3.10: Cost to patients of malaria microscopy in US dollars in Madagascar, 2010						
Median cost to patients of one malaria diagnostic test with microscopy, by outlet type**						
Type of outlet	Urban		Rural		Total	
	Median cost [IQR]	Number of outlets reporting price of malaria microscopy	Median cost [IQR]	Number of outlets reporting price of malaria microscopy	Median cost [IQR]	Number of outlets reporting price of malaria microscopy
Public health facility	0.00 [0.00, 0.47]	12	0.00 [0.00, 0.00]	4	0.00 [0.00, 0.47]	16
Private, not-for-profit health facility	4.68 [n/a]	1	--	0	4.68 [n/a]	1
Private-for-profit outlet						
<i>Private-for-profit health facility</i>	2.34 [0.84, 2.81]	8	--	0	2.34 [0.84, 2.81]	8
<i>Pharmacy</i>	0.00 [0.00, 0.00]	2	--	0	0.00 [0.00, 0.00]	2
<i>Drug store (Dépôt de Médicament)</i>	--	0	--	0	--	0
<i>General retailer</i>	--	0	--	0	--	0
<i>Itinerant drug vendor</i>	--	0	--	0	--	0
<i>Total</i>	0.94 [0.84, 2.81]	10	--	0	0.94 [0.84, 2.81]	10
Community health workers	--	0	--	0	--	0
Total	0.28 [0.00, 0.94]	23	0.00 [0.00, 0.00]	4	0.00 [0.00, 0.84]	27
* 1 USD = 2161.14 Ariary						
** Cost of a malaria microscopic test for a child, which is included in the standard IE template, is not included here given this information was not collected in the <i>ACTwatch</i> questionnaire.						

Diagnostic test with rapid diagnostic tests

Table 3.3.11: Availability of rapid diagnostic tests for malaria, in Madagascar, 2010						
Outlets where rapid diagnostic tests were available (n) as a percentage of outlets with any antimalarials in stock at the time of the survey visit* (N), by location and type of outlet.						
Type of outlet	Urban		Rural		Total	
	Percentage (95% CI)	N	Percentage (95% CI)	N	Percentage (95% CI)	N
Public health facility	74.2 (64.4,82.1)	67	93.3(87.3,96.7)	444	88.0 (82.0,92.2)	511
Private not for profit health facility	31.9 (10.9,64.3)	6	--	--	31.9(10.9,64.3)	6
Private for profit outlet						
<i>Private for profit health facility</i>	38.1(23.5,55.2)	59	0.0	7	12.3(6.2,22.8)	66
<i>Pharmacy</i>	0.5(0.1,2.1)	63	0.0	2	0.5(0.1,1.9)	65
<i>Drug store (Dépôt de Médicament)</i>	0.8(0.1,5.3)	28	0.0	227	0.3(<0.1,1.5)	255
<i>General retailer</i>	0.0	1,212	0.0	244	0.0	1,456
<i>Itinerant drug vendor</i>	--	--	--	--	--	--
<i>Total</i>	1.7(1.0,2.8)	1,362	n/a	480	0.4(0.2,0.7)	1,842
Community health worker	0.0	2	16.0(3.1,53.3)	38	15.9(3.2,52.2)	40
Total	10.0(6.0,16.3)	1,437	9.1(6.0,13.5)	962	9.3(6.6,12.8)	2,399
* Figure 15 reference E						

Table 3.3.12: Cost to patients of rapid diagnostic tests (RDTs) for malaria in US dollars in Madagascar, 2010						
Median cost to patients of one rapid diagnostic test for malaria, by outlet type**						
Type of outlet	Urban		Rural		Total	
	Median cost [IQR]	Number of RDT products	Median cost [IQR]	Number of RDT products	Median cost [IQR]	Number of RDT products
Public health facility	0.00[0.00, 0.00]	51	0.00[0.00, 0.00]	424	0.00[0.00, 0.00]	475
Private, not-for-profit health facility	0.00[0.00, 0.00]	3	0.00[0.00, 0.00]	0	0.00[0.00, 0.00]	3
Private-for-profit outlet						
<i>Private-for-profit health facility</i>	0.00[0.00, 0.00]	24	--	0	0.00[0.00, 0.00]	24
<i>Pharmacy</i>	0.00[0.00, 0.56]	3	--	0	0.00[0.00, 0.56]	3
<i>Drug store (Dépôt de Médicament)</i>	--	0	--	0		0
<i>General retailer</i>	--	0	--	0		0
<i>Itinerant drug vendor</i>	--	0	--	0		0
<i>Total</i>	0.00[0.00, 0.00]	27	--	0	0.00[0.00, 0.00]	27
Community health workers	--	0	0.00[0.00, 0.00]	6	0.00[0.00, 0.00]	6
Total	0.00[0.00, 0.00]	81	0.00[0.00, 0.00]	430	0.00[0.00, 0.00]	511
* 1 USD = 2161.14 Ariary						
** Cost of an RDT for a child, which is included in the standard IE template, is not included here given this information was not collected in the ACTwatch questionnaire.						

Quality assured ACTs market share

Table 3.4.1: Percentage breakdown of antimalarial sales volumes in Madagascar, 2010						
Total number of antimalarial AETDs sold or distributed in the week preceding the survey visit (n), as a percentage of all antimalarial AETDs sold or distributed in the week preceding the survey visit (N), by antimalarial category, location and type of outlet.						
	Urban		Rural		Total	
	Percentage	N	Percentage	N	Percentage	N
<i>Public health facility</i>						
Quality assured ACTs	20.7		28.6		27.4	
Non-quality-assured ACTs	2.0		5.8		5.2	
Artemisinin monotherapy	--		--		--	
Non-artemisinin therapy	77.3		65.6		67.4	
Total	100.0	781.6	100	216.0	100.0	997.6
<i>Private not for profit health facility</i>						
Quality assured ACTs	15.8		--		15.8	
Non-quality-assured ACTs	0.0		--		0.0	
Artemisinin monotherapy	--		--		--	
Non-artemisinin therapy	84.2		--		84.2	
Total	100.0	19.3	100.0	0.0	100.0	19.3
<i>Private for profit outlet</i>						
Quality assured ACTs	6.3		7.0		6.8	
Non-quality-assured ACTs	1.0		0.0		0.2	
Artemisinin monotherapy	<0.1		0.0		<0.1	
Non-artemisinin therapy	92.7		93.0		92.9	
Total	100.0	9,266.4	100.0	1,408.4	100.0	10,674.8
<i>Community health worker</i>						
Quality assured ACTs	--		77.3		77.3	
Non-quality-assured ACTs	--		22.7		22.6	
Artemisinin monotherapy	--		--		--	
Non-artemisinin therapy	100.0		0.0		<0.1	
Total	100.0	2.0	100.0	60.0	100.0	62.0

Table 3.4.1: Percentage breakdown of antimalarial sales volumes in Madagascar, 2010						
Total number of antimalarial AETDs sold or distributed in the week preceding the survey visit (n), as a percentage of all antimalarial AETDs sold or distributed in the week preceding the survey visit (N), by antimalarial category, location and type of outlet.						
	Urban		Rural		Total	
	Percentage	N	Percentage	N	Percentage	N
All outlets						
Quality assured ACTs	7.8		13.2		12.1	
Non-quality-assured ACTs	1.1		1.8		1.7	
Artemisinin monotherapy	<0.1		0.0		<0.1	
Non-artemisinin therapy	91.0		85.0		86.3	
Total	100.0	10,069.3	100.0	1,684.5	100.0	11,753.7
* The most popular antimalarial drug in Madagascar is chloroquine in urban areas, chloroquine in rural areas, and chloroquine overall. The most popular drug is defined as the highest number AETDs sold in the week preceding the survey.						

Provider knowledge of first line antimalarial treatment and ACT regimen

Table 3.5.1: Provider knowledge of first line antimalarial treatment in Madagascar, 2010						
Providers able to correctly identify the antimalarial for first line treatment (n) as a percentage of outlets with antimalarials in stock at the time of the survey visit* (N), by location and type of outlet						
Type of outlet	Urban		Rural		Total	
	Percentage (95% CI)	N	Percentage (95% CI)	N	Percentage (95% CI)	N
Public health facility	70.3(62.4,77.1)	67	86.3(80.1,90.8)	444	81.8(76.3,86.3)	511
Private not for profit health facility	89.1(59.1,97.9)	6	--	0	89.1(59.1,97.9)	6
Private for profit outlet						
<i>Private for profit health Facility</i>	83.9(73.0,90.9)	59	90.1(48.7,98.9)	7	88.1(66.4,96.5)	66
<i>Pharmacy</i>	59.3(50.9,67.2)	63	51.4(5.3,95.2)	2	59.2(51.0,66.8)	65
<i>Drug store (Dépôt de Médicament)</i>	58.1(50.8,65.0)	28	37.6(28.1,48.2)	227	45.4(36.7,54.5)	255
<i>General retailer</i>	3.3(2.4,4.5)	1,209	7.7(3.8,14.8)	244	6.8(3.7,12.3)	1,453
<i>Itinerant drug vendor</i>	--	--	--	--	--	--
<i>Total</i>	16.9(10.3,26.4)	1,359	11.3(7.0,17.8)	480	12.5(8.7,17.7)	1,839
Community health worker	70.1(20.6,95.5)	2	60.9(36.5,80.9)	38	60.9(37.1,80.5)	40
Total	23.2(14.4,35.3)	1,434	23.1(14.4,35.0)	962	23.1(15.9,32.4)	2,396
* Figure 15 reference E						

Table 3.5.2: Provider knowledge of dosing regimen for quality assured ACTs (QAACTs) for an adult in Madagascar, 2010
Providers able to describe correctly the dosing regimen for quality assured ACTs for an adult (n) as a percentage of the number of outlets with QAACTs in stock at the time of the survey visit (N), by location and type of outlet*

Indicator not available

This is an indicator of the Independent Evaluation of the AMFm which was determined only after the fieldwork for this study was launched. This survey round was not designed to collect data needed to calculate this indicator and therefore this indicator cannot be calculated given the data set.

Table3.5.3: Provider knowledge of dosing regimen for quality assured ACTs(QAACTs) for a child in Madagascar, 2010
Providers able to describe correctly the dosing regimen for quality assured ACT for a child (n) as a percentage of the number of outlets with QAACTs in stock at the time of the survey visit (N), by location and type of outlet*

Indicator not available

This is an indicator of the Independent Evaluation of the AMFm which was determined only after the fieldwork for this study was launched. This survey round was not designed to collect data needed to calculate this indicator and therefore this indicator cannot be calculated given the data set.

Table 3.5.4: Reasons for not stocking quality assured ACTs (QAACTs) by private providers in Madagascar, 2010

Providers stating a specific reason for why they were not stocking QAACTs (n) as a percentage of all outlets not stocking QAACTs at the time of the survey visit (N),* by location

Indicator not available

This is an indicator of the Independent Evaluation of the AMFm which was determined only after the fieldwork for this study was launched. This survey round was not designed to collect data needed to calculate this indicator and therefore this indicator cannot be calculated given the data set.

AMFm logo

Table 3.6.1: Provider recognition of AMFm logo in Madagascar, 2010
Providers able to recognize the AMFm logo*(n) as a percentage of the number of outlets with antimalarials in stock at the time of the survey visit** (N), by location and type of outlet.

Indicator not available

This is an indicator of the Independent Evaluation of the AMFm which was determined only after the fieldwork for this study was launched. This survey round was not designed to collect data needed to calculate this indicator and therefore this indicator cannot be calculated given the data set.

Table 3.6.2: Provider knowledge of the AMFm Logo in Madagascar, 2010
Providers stating a specific meaning of the AMFm Logo (n) as a percentage of outlets with any antimalarials in stock at the time of the survey visit* (N),* by location

Indicator not available

This is an indicator of the Independent Evaluation of the AMFm which was determined only after the fieldwork for this study was launched. This survey round was not designed to collect data needed to calculate this indicator and therefore this indicator cannot be calculated given the data set.

Table 3.6.3: Sources from which providers have seen or heard of the AMFm Logo in Madagascar, 2010
Providers stating a specific source where they have seen or heard of the AMFm Logo (n) as a percentage of outlets with any antimalarials in stock at the time of the survey visit* (N),* by location

Indicator not available

This is an indicator of the Independent Evaluation of the AMFm which was determined only after the fieldwork for this study was launched. This survey round was not designed to collect data needed to calculate this indicator and therefore this indicator cannot be calculated given the data set.

Table 3.6.4: Percentage of antimalarials bearing the AMFm logo, in Madagascar, 2010
Antimalarials bearing the AMFm logo (n) as a percentage of all antimalarials audited (N), by location and antimalarial type.

Indicator not available

This is an indicator of the Independent Evaluation of the AMFm which was determined only after the fieldwork for this study was launched. This survey round was not designed to collect data needed to calculate this indicator and therefore this indicator cannot be calculated given the data set.

4. Results- key informant interview with stakeholders

Implementation process of AMFm in the country

Table 4.1.1: Implementation process-key milestones, up until the last day of outlet survey data collection, June 2010, in Madagascar, 2010	
1. Date grant amendment with Global Fund signed	11th May 2010
2. Number of first line buyer agreements signed with Global Fund before the start and end date of baseline, by sector - public/private for-profit/private Not for profit	There were no first line buyer agreements signed with the Global Fund before the start and end date of baseline data collection.
3. Orders placed with manufacturers (number of orders; size of orders;)	There were no orders placed with manufacturers before the last day of baseline outlet survey data collection.
4. Date first medicines arrived in country	The first co-paid medicines arrived in country on 14 October 2010 which was after the last day of baseline data collection
5. Date first medicines cleared customs	n/a
6. Date medicines first left warehouse and began to be distributed;	n/a
Source: Global Fund monitoring system and key informant interviews	

Table 4.1.2: Summary of implementation of supporting interventions up until the last day of OS data collection, June 2010, in Madagascar, 2010

Supporting Interventions may be funded by the Global Fund or other sources, e.g. PMI

Key activity	What	Where	When	How many?
National launch activities	-	Antananarivo	14th February 2010	1 launch
KAP or other studies	-	-	-	-
Training activities (2)	Trained community educators on ACTs	District trainings in 93 Districts	April to June 2010	1800
Marketing / promotional activities	-	-	-	-
Source: AMFm Phase 1 Independent Evaluation –Key informant interview and documents review (Baseline)				

5. Summary of key findings

Summary of key events

In January 2009 a coup d'état threw Madagascar into political turmoil. The coup led to a cut in direct government assistance by many donors – including the World Bank and PMI. As well as affecting external relations, the unrest impacted internal malaria control operations, such as the 2009 LLIN distribution campaign in the east of the country. After delays, phase one of the universal coverage campaign began in 19 districts (of the 116 districts in the country) in November 2009, distributing 1.7 million nets. Phase two began after fieldwork for this study ended.

Since the coup, 186 health centers have closed as staff have left for economic or safety reasons. Posts remain unfilled due to poor budgeting within the MOH and a lack of funds for recruitment. This situation is replicated in the private sector, where existing surgeries have closed, and the political and economic climate has dissuaded new providers from opening businesses. There has also been increased attrition among CHWs which threatens to stall progress on scaling-up community-level case management of malaria with ACTs.

Despite the unrest, malaria control interventions continued in the period leading up to data collection for the baseline survey. A small number of CHW trainings, under the auspices of the Integrated Case Management of ARIs, Diarrhea and Malaria (PCIMEC) program, began in 6 districts in September 2009. Under PCIMEC, community-level diagnosis of malaria using RDTs will be rolled-out across the country. Following some early coordination problems regarding the official authorization allowing CHWs to conduct RDTs, a meeting of the Home-based Case Management of Malaria group was held in January 2010 to harmonize the national strategy for malaria case management at the community level. Official confirmation allowing CHWs to conduct RDTs followed in November 2010, after fieldwork for this study ended.

Madagascar successfully transitioned from using co-blistered ASAQ to co-formulated tablets in the public sector in June 2009. However, a lack of training in stock management among staff at public health facilities led to some initial problems with both over- and under-ordering of ACTs. Overstocking of ACT is not a new problem in Madagascar. The 2006/2007 integrated net campaign and the change in policy from presumptive treatment to RDT diagnosis both led to a reduction in the number of malaria cases presenting at health facilities. On both occasions, districts reported ACT stocks reaching their expiry dates due to this reduction in demand. Similar stocking issues were also reported following a 2009 IRS campaign across 33 districts.

Since 2009 a number of NGOs have run mass communication campaigns to raise awareness of RDTs and ACTs, under programs supported by a Global Fund Round 7 grant. These programs have the potential to improve case management of malaria at the community-level, provided that supplies of commodities to CHWs can match the increased demand.

Within government, an official list of 22 regional medicine agents was drawn up by the MOH in 2009. The government is encouraging the opening of officially-recognized medicine depots, in an

attempt to undermine the informal market for antimalarials. Around 50 applications were received during 2009, and a similar number received in the first half of 2010. A bill to outlaw unregulated medicine sellers is currently being drafted. Although, at the time of data collection, the government was yet to sign into law a bill banning the importation and sale of chloroquine, progress has been made in regulating the use of SP. In 2009 the government put forward a ministerial note reserving the use of SP for pregnant women only.

The AMFm grant was signed in May 2010. As part of the supporting interventions to the AMFm a training program on case management of malaria and pharmacovigilance, covering 1000 private sector providers, began in late June 2010, as data collection for the baseline was ending.

Quality of data collected

No major issues were found during data cleaning and data appeared to be logical.

Efforts were made during data collection and planning to ensure data quality. As this was the second outlet survey conducted in Madagascar, GPS coordinates were reviewed from the previous survey to observe the quality of the census (i.e. supervisors checked that outlets were well distributed in the sub-district). The presence of *ACTwatch* Central researchers during training and the first weeks of field work along with regular communication with *ACTWatch* Central ensured that problems could be resolved quickly when issues arose in the field. Building on lessons learnt from the first outlet survey (conducted in 2008) additional field monitoring tools were used to help keep track of the number of outlets sampled and number of antimalarials audited. Also, quality controllers were added to the team in order to review the data as it was collected.

Availability of quality assured ACTs

Public and not for profit sector

Among all public sector facilities that stocked antimalarials at any time in the three months preceding the survey, 96.8% stocked any antimalarial at the time of the survey. Among public health facilities stocking at least one antimalarial on the day of survey, 83.0% stocked a quality assured ACT (QAACT), and all of these were the recommended first line treatment (FAACT). Among NGO and community health workers (CHWs) that stocked antimalarials at any time in the three months preceding the survey, 26.8% stocked any antimalarial at the time of the survey and of those that did, they almost exclusively stocked QAACTs/FAACTs (99.8%). While the number of private not for profit outlets were few (n=8), among the facilities that stocked antimalarials at any time in the three months preceding the survey, 81% stocked antimalarials at the time of the survey and of these stocking at least one antimalarial on the day of survey, 48% stocked QAACTs.

Rural public health facilities were significantly more likely to stock QAACTs (89.6% versus 66.1%).

Private for profit sector

Among private for profit sector facilities that stocked antimalarials at any time in the three months preceding the survey, 33.9% of private for profit sector outlets stocked any antimalarial at the time

of survey. Of those private sector outlets stocking at least one antimalarial on the day of survey, 8.1% stocked QAACTs (7.9% FAACTs). Among private for profit outlet types stocking at least one antimalarial on the day of survey around half of health facilities, pharmacies and drugs stores stocked QAACTs (45.1%, 51.4% and 56.1% respectively) compared to 2.6% of general retailers. Non-quality assured ACTs were available in 50.9% of pharmacies stocking antimalarials on the day of survey, but few were found in other outlet types (3% of health facilities, 0.2% of drug stores [Dépôt de Médicament] and none in general retailers).

Non-artemisinin therapy was widely available in the private for profit sector. Among outlets with antimalarials in stock on the day of survey, 99.3% stocked non-artemisinin therapy. Chloroquine was readily available in private for profit sector outlets stocking any antimalarial on the day of survey: 98.7% of general retailers, 87.2% of drug stores, 54.7% of pharmacies and 39.1% of private health facilities stocked chloroquine. Among outlets stocking at least one antimalarial on the day of survey, SP was available in pharmacies (93.8%), drug stores (75.8%) and private health facilities (48.6%), but rarely stocked in general retailers (1.5%).

No significant differences were observed between rural and urban private sector outlets in terms of QAACT availability.

Pricing/affordability of quality assured ACTs

Quality assured ACTs were generally available free of charge in the public sector as most public health facilities and not-for-profit facilities provided the drug for free. Community health workers charged a median of \$0.09 for a full adult course treatment. In the private sector, the median price of QAACTs (and of FAACTs) was \$0.14; driven by the presence of a socially-marketed ACT in the market. An exception to this was found in pharmacies (\$7.68).

No significant differences were observed between rural and urban areas.

Market share of quality assured ACTs

The private sector dominated the antimalarial market, representing 82% of antimalarials distributed. Drug stores and retailers accounted for 70% of the total volumes sold or distributed over the previous week. The public/not for profit sector comprised less than one-fifth (18%) of market share.

ACTs made up only 13.7% of the total market share and QAACTs, only 12.1%. Despite the private sector playing a more significant role in the overall distribution of antimalarials, more QAACTs moved through the public sector than the private sector. Over 85% of antimalarials that moved through the market were non-artemisinin therapies.

There were few apparent differences between urban and rural areas.

6. Conclusion and Recommendations

There are a few recommendations for future studies. First, future studies should ensure that PDA planning and testing is conducted far enough in advance of the survey. It is estimated that a 2 month preparation time is desirable and should be supported by multiple pilot tests, including importing of dummy data to ensure all aspects of the data program are functioning. Second, training for future studies should stress the importance of field monitoring and completion of relevant field materials. This will help to ensure that routine monitoring data is being received by PSI coordinators and *ACTWatch* Central. The booster sample should continue to be emphasized during training, and booster areas should be clearly demarcated with maps and supported by pre-determined codes. Finally, captured GPS coordinates should be plotted during fieldwork to review the adequacy of the census. This would enable feedback to be provided on the quality of the census conducted as part of this survey.

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8. Acknowledgements

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9. Appendices

9.1 Country profile-Fact sheet

Country Name:		MADAGASCAR				
		National	Urban	Rural	Source	Year
Demography						
	Total population	20,741,079	3,349,724	17,617,206	Cartographie censitaire de la population de l'année 2009. Institut National de Statistique (INSTAT) - (1)	2010
	Under five population	3,516,227	561,760	2,954,467		
Heath facilities (Public)						
	Number of National Referral Hospitals	2	n/a	n/a	Annuaire Statistiques du secteur Santé de Madagascar 2009 (2)	2009
	Number of Regional Hospitals	20	19	1		
	Number of District Hospitals	88	n/a	n/a		
	Number of Health Centres	2,506	29	2,477		
	Number of Dispensaries	n/a	n/a	n/a		
Heath facilities (FBO and NGO)						
	Number of National Referral Hospitals	n/a				
	Number of Regional Hospitals	n/a				
	Number of District Hospitals	n/a				
	Number of Health Centres	n/a				
	Number of Dispensaries	n/a				
Heath facilities (Private for profit)						
	Number of National Referral Hospitals	0	n/a	n/a	Annuaire Statistiques du secteur Santé de Madagascar 2009 (2)	2009
	Number of Regional Hospitals	0	n/a	n/a		
	Number of District Hospitals	44	n/a	n/a		
	Number of Health Centres	734	n/a	n/a		
	Number of Dispensaries	n/a				
	Cabinets medical liberal	349	n/a	n/a	Ordre National des médecins (3)	2010
	Cabinets privés	578	n/a	n/a		
Retail Medicine Outlets						
	Number of Registerd retail pharmacies	201	N/A	N/A	Direction des Agences de médicaments (4)	2009-2010
	Number of registered drug stores	38	N/A	N/A		

		National	Urban	Rural	Source	Year
Malaria Endemicity (Mark approx % of area)						
	Holoendemic (Transmission occurs all year)	32%			Plan Stratégique de lutte contre le paludisme : Du contrôle vers l'élimination du paludisme à Madagascar 2007-2012. (5)	2007
	Hyperendemic (Intense, but with periods of no transmission during dry season)	34%				
	Mesoendemic (Regular seasonal transmission)	14%				
	Hypoendemic (Very intermittent transmission)	5%				
	Epidemic	14%				
	No transmission	0%				
Coverage of Major Interventions						
IRS						
	Has IRS program (Yes/No)	Yes	Yes	Yes	Ministère de la Santé Publique (6)	2009
	Number of households sprayed, last 12 months	1,417,474	n/a	n/a	Rapport préliminaire du Ministère de la Santé Publique sur la campagne d'aspersion intra domiciliaire 2009-2010 (7)	
	% of targeted-households sprayed	97.5%	n/a	n/a		
Nets, availability, possession and use						
	Number of ITNs distributed or sold in last 12 months	7,410,320			Service de Lutte Anti-Vectoriels (SLAV) au sein du Programme National de Lutte contre le Paludisme (PNLP) (8)	2009/2010
	% of households with at least one mosquito net	61.7%	n/a	n/a	Enquête Démographique et de la Santé 4e édition (EDS IV) (9)	2008-2009
	% of households with at least one ITN	57.9%	n/a	n/a		
	% of children <5 sleeping under ITN last night	46.5%	n/a	n/a		

		National	Urban	Rural	Source	Year
Malaria Diagnosis and Treatment						
	When was ACT adopted as first-line (Year)?	2005			Programme National de Lutte contre la Paludisme PNLP (10)	2005
	When was ACT rolled out in public sector (Year) ?	2006				
	Total ACT purchased by the government in 2009	N/A				
	Total ACT distributed by the government in 2009	N/A				
	Name of the country's recommended ACT	1 ^{ère} ligne : Artesunte-Amodiaquine et forme Combo			Document de Politique National de Traitement du paludisme à Madagascar par le Ministère de la Santé Publique (11)	2005
	Names of other ACTs registered	2 ^{ème} ligne : Artrhemeter-Lumefantrine				
	Parasite confirmation for U5s official policy in public sector(Yes/No)	Yes				
	Parasite confirmation for over 5s official policy in public sector (Yes/No)	Yes				
	% of pregnant women receiving IPTp (2 doses)	6.4	n/a	n/a	Enquête Démographique et de la Santé 4e édition (EDS IV) (9)	2008 - 2009
	% of children <5 with fever in last 2 weeks receiving any antimalarial medicine	41.4	n/a	n/a		
	% of children <5 with fever in last 2 weeks receiving an ACT	1%	n/a	n/a		
Malaria burden						
	Annual number of reported malaria cases	299,160			Annuaire des Statistiques du secteur Santé de Madagascar 2009 (2)	2010
	All cause under five mortality (per 1000)	72			Enquête Démographique et de la Santé 4e édition (EDS IV) (9)	2008-2009
	Parasite prevalence among children <5	6.6%	n/a	n/a	Annuaire des Statistiques du secteur Santé de Madagascar 2009 (2)	2010
	Prevalence of severe anaemia (<8 g/dl) among children <5	1%	n/a	n/a	Enquête Démographique et de la Santé 4e édition (EDS IV) (9)	2008-2009
Other major health interventions						
	Community case management of malaria with ACT through CHWs (Yes/No)	Yes	n/a	n/a	Prise en Charge Intégrée des maladies des Enfants Communautaires (PCIMEC) (12)	2009

9.2 Country document logbook

Table 9.1: List of documents reviewed, Madagascar, 2010				
Title	Year of publication	Availability	Issues addressed	
			Points saillants	Impact sur utilisation des médicaments ACT
Nouvelle politique de traitement du paludisme	2005	Programme National de Lutte contre le Paludisme	Les stratégies ont un impact sur l'utilisation des ACT (Artemisinine based Combination Therapies) à savoir la Prise en charge des cas de paludisme simple avec l'ACT et utilisation du RDT pour dépister les cas de paludisme. Le plan stratégique préconise aussi le développement du partenariat, le développement de la prise en charge à domicile avec les blisters pour les 4 tranches d'âges, le développement de l'approche communautaire, le développement de la PCIMEC (Prise en Charge Intégrée des Maladies de la Mère et de l'Enfant).	Avec la stratégie d'approcher la population partout où elle se trouve et avec une si large gamme de manières de l'approcher, celle-ci peut choisir ce qui correspond à ses besoins, ses capacités et ses attentes. La proportion de la population atteinte sera tout de suite assez large et devrait augmenter rapidement
Plan stratégique d'élimination du paludisme à Madagascar	2009	Programme National de Lutte contre le Paludisme et Service	Lutte contre la vente illicite : il n'y a pas de sanction majeure pour les contrevenants. La nouvelle version du document de politique n'est pas encore validée par le gouvernement.	Avec cette insuffisance de la rigueur du gouvernement, la vente illicite va continuer et l'utilisation de l'ACT bien que atteinte dans les meilleurs délais souffrira de l'absence d'un contrôle qualité adéquat.
Politique de santé	1962	Service de la Législation au sein du Ministère de la Santé Publique	Lutte contre la vente illicite : il n'y a pas de sanction majeure pour les contrevenants. La nouvelle version du document de politique n'est pas encore validée par le gouvernement.	Avec cette insuffisance de la rigueur du gouvernement, la vente illicite va continuer et l'utilisation de l'ACT bien que atteinte dans les meilleurs délais souffrira de l'absence d'un contrôle qualité adéquat.
Madagascar: Vers un agenda de relance économique juin 2010	2010	Banque Mondiale	1- Les TIC (Technologie de l'Information et de Communication) créent une perspective dynamique comme la possibilité de nouvelle application dans les secteurs tels que la santé. L'accès à un réseau de communication performant est essentiel. En 2000 on a 12 localités couvertes avec 36 BTS (Base de Transmission Secondaire) en 2006 on a 189 localités couvertes avec 240 BTS et en 2009 on a 400 localités couvertes avec 840 BTS, dans le pays. 2- Le taux de mortalité des enfants de moins de 5 ans a diminué de plus de la moitié de 1997 à 2008/2009 passant de 163 à 72 pour 1000 naissances vivantes, objectif de l'OMD étant de réduire le taux de mortalité de cette tranche d'âge à 47 pour mille d'ici 2015. 3- Des défaillances entravent l'amélioration des indicateurs de santé: L'accès médiocre et inégal à des services de santé de qualité; la mauvaise gestion du secteur santé ; une maigre allocation et mauvaise gestion des ressources humaines; l'inefficience dans l'allocation de ressources du secteur santé. 4- Il y a une disparité en termes de revenu des ménages et d'accessibilité physique aux services de santé: des enquêtes récentes estiment que 23 % ou 1 personne sur 4 ayant souffert d'une maladie n'a pas cherché à se	Le développement des NTIC (Nouvelle Technologie de l'Information et de Communication) et leur extension à un rythme exponentiel sur tout le territoire national faciliteront le travail de communication devant conduire la population vers l'adoption de l'utilisation de l'ACT. Sur le plan de l'offre de services, ce développement améliorera l'accessibilité et la qualité. Par exemple, la remontée des informations sera plus rapide et les ruptures de stock à cause du manque de communication seront réduites.

			<p>faire soigner dans un centre de santé parce qu'elle ne pouvait pas payer les dépenses et ceci sans grande variation entre milieu urbain et rural. 1 Une personne sur 10 du milieu rural ne cherche pas à aller au centre de santé pour raison d'éloignement d'où l'importance de mise en place de service de proximité (médicament et soins).</p> <p>5- La performance des prestataires de service dans la conformité aux procédures de diagnostic. L'insuffisance de la disponibilité, la gestion et le suivi des médicaments (enquête de l'INSTAT en 2005).</p>	
		Banque Mondiale	<p>Au cours des 4 dernières années, le département des ressources humaines du ministère de la santé a œuvré pour élaborer un système d'information, ceci a permis par exemple de monter que l'inefficacité de l'allocation, de l'organisation et de la planification des ressources humaines a un impact sur la prestation de services de santé de qualité auprès de la population rurale, et contribue à accentuer les écarts en matière de résultats de santé entre les milieux rural et urbain</p>	<p>Le personnel de santé est dans l'ensemble apprécié dans l'île et avec une amélioration de la qualité de service grâce aux formations, le résultat serait meilleur dans l'amélioration de l'accessibilité aux médicaments et par conséquent de l'utilisation de l'ACT.</p>
		Banque Mondiale	<p>L'introduction du projet PAIS (Programme d'intégration de l'approvisionnement et de la logistique des intrants de santé) en 2008, présuppose de renforcer le système d'approvisionnement /distribution de SALAMA et d'éliminer le goulot d'étranglement (faible gestion et suivi du stock pharmaceutique et de la logistique de distribution depuis la centrale d'achat jusqu'au centre de santé).</p>	<p>Effectivement, l'accessibilité de la population aux ACT sera améliorée et par conséquent son utilisation.</p>
		Banque Mondiale	<p>La technologie de la téléphonie mobile est recommandée pour se substituer à la lenteur du système postal, permettant ainsi l'envoi électronique des commandes des pharmacies de gros des districts à SALAMA</p>	<p>A cause de cette rapidité et de cette disponibilité en permanence de la communication par téléphone, effectivement les échanges relatifs aux commandes seront améliorés et les ruptures de stock à cause du manque de communication seront réduites.</p>
		Banque Mondiale	<p>Le paiement par chèque qui est identifié comme goulot d'étranglement dans l'Etude de Prestation de Services pourrait être remplacé par le recours au service des institutions de micro finance ou aux banques locales pour effectuer les paiements nécessaires.</p>	<p>Avec une meilleure fluidité de l'argent il y aura aussi celle des médicaments. Et les autres secteurs peuvent ainsi contribuer à une adoption rapide de l'utilisation de l'ACT.</p>
		Banque Mondiale	<p>Le programme du secteur santé doit aussi s'articuler avec ceux d'autres secteurs pour une meilleure synergie tels que l'éducation...</p>	<p>Par exemple, la majorité des projets/programmes de développement ayant des objectifs de communication utilisent l'école ou plus précisément les élèves comme canaux de communication vers les ménages surtout vers les parents, en plus du fait qu'ils touchent ceux qui seront les futurs adultes et parents de demain. Il en est de même des agents de terrain, notamment les vulgarisateurs agricoles du secteur de l'Agriculture qui pourraient transmettre facilement les messages de santé.</p>

		Banque Mondiale	<p>Selon la tendance actuelle la population de Madagascar peut atteindre 42,3 millions d'habitants d'ici 2050, on doit mettre en place un programme de planification familiale accessible à tous, ainsi depuis 2008 la planification familiale est et doit rester gratuite.</p>	<p>Dans le long terme avec une réduction de la taille de ménage, le revenu du ménage augmentera et l'achat de médicaments ne restera plus un grand problème. Les subventions peuvent alors être supprimées.</p>
		Banque Mondiale	<p>en 2009 le gouvernement a adopté la Politique Nationale de la Santé Communautaire qui cherche à impliquer la communauté dans la prestation des services de santé et harmoniser les interventions liées à la santé au niveau communautaire compris la PCIMEC et le marketing social. Il y a l'initiative de la commune Mendrika de l'USAID qui a réduit l'incidence du paludisme. Il comprend aussi les activités novatrices comme la Prise en charge des cas et utilisations des RDT.</p>	<p>En exploitant cette approche communautaire qui a prouvé son efficacité pour d'autres problèmes de santé telle la tuberculose, l'adoption de l'utilisation par la population sera plus rapide.</p>
Document de la Banque Mondiale sur le secteur privé dans le domaine de la santé	2010	Banque Mondiale	<p>Contrat avec des prestataires privés et la société civile pour fournir des services de santé de base aux communautés rurales éloignées (plus de 5km). C'est le cas du programme Santé sud depuis 2003</p>	<p>Avec l'apport de l'action des prestataires privés et de la société civile, l'adoption de l'utilisation par la population sera plus rapide et la couverture en ACT sera améliorée.</p>
Projets de loi sur le retrait de la CQ	2010	Direction de la Gestion des Intrants de Santé, du Laboratoire et de la Médecine Traditionnelle	<p>Le projet de loi est élaboré mais non encore signé</p>	<p>Cette loi couvrira devant la justice toutes les actions de retrait.</p>
Projet de loi sur la prescription des ACT par les agents communautaires	2010	Direction de la Gestion des Intrants de Santé, du Laboratoire et de la Médecine Traditionnelle	<p>En cours d'élaboration Seule une note technique sur les conditions d'utilisation de RDT avant la prescription d'ACT est sortie</p>	<p>Amélioration des conditions de travail des AC (Agent Communautaire) qui possèdent un début de cadre réglementaire.</p>
Arrêté contre la vente illicite des médicaments	2009	Direction de l'Agence des Médicaments	<p>Seuls les dépôts et les pharmacies peuvent vendre le médicament combiné à base d'ACT</p>	<p>Un impact positif : un traitement de qualité car les ventes illicites seront réduites Un impact négatif : problème pour les localités sans dépôts de médicament et pharmacies.</p>
Documents de l'Ordre des Médecins sur la fonction médicale et prescription	1991	Ordre des médecins	<p>L'ordre des médecins n'accepte que les seuls prescripteurs soient les médecins inscrits dans l'ordre.</p>	<p>Un impact positif : un traitement suivi par un médecin Un impact négatif : problème pour les localités sans médecin.</p>

Listes des dépôts de médicaments de 2009	2009	Direction de la Gestion des Intrants de Santé, du Laboratoire et de la Médecine Traditionnelle	Ce document nous montre la répartition et le nombre de dépôts de médicament à Madagascar.	La coordination de l'implantation des dépôts sera améliorée et par conséquent celle de l'utilisation par la population. Ainsi l'accès des populations vivant en zone rurale à des médicaments de qualité sera amélioré
Rapports des ONG ASOS et SALFA	2009	ONG ASOS	Enumère les activités réalisées par les ONG partenaires dans le cadre de la mise en œuvre de la sensibilisation et la mobilisation de la population sur la prise en charge communautaire et la mise en œuvre de l'AMFm ainsi que leur zone d'action.	Cette source d'information permettra de mieux coordonner les activités des ONG et par conséquent d'obtenir une rapide extension de l'utilisation de l'ACT.
Document de projet de l'AMFm	2009		Donne tous les détails, objectifs, indicateurs, stratégies, plan d'action et aspect financier du projet AMFm (Facilité de Médicaments Antipaludéens à des prix abordables)	Le but ultime du projet est de créer toutes les conditions réglementaires, organisationnelles et sociales pour rendre les ACTs disponibles et accessibles à toutes les couches de la population
1. Scand J Infect Dis. 2010; 42(1):22-32. History and current status of Plasmodium falciparum antimalarial drug resistance in Madagascar.	2010	Institut Pasteur de Madagascar	Recent clinical and in vitro data support the complete efficacy of the combination artesunate-amodiaquine in Madagascar. As such, this artemisinin combination therapy should play a central role in the control and possible elimination of P. falciparum malaria in Madagascar	Vu l'efficacité démontrée des ACT à Madagascar, toutes les activités de promotion et d'éducation des prescripteurs et des consommateurs sont à renforcer pour protéger les molécules contre l'apparition de résistance Secondaire de de mauvaise prescription ou à des mauvaises observances aux traitements
2. Antimicrobial Agents Chemotherapy. 2009 Nov; 53(11):4588-97. Epub 2009 Aug 24. Plasmodium falciparum drug resistance in Madagascar: facing the spread of unusual pfdhfr and pfmdr-1 haplotypes and the decrease of dihydroartemisinin susceptibility.	2009	Institut Pasteur de Madagascar	In the context of the implementation of the new national policy for the fight against malaria, continued surveillance for the detection of P. falciparum resistance in the future is required.	Un monitoring de la résistance des parasites aux ACT permettra de détecter à temps les premiers cas et leur évolution spatiale et temporelle et permettra ainsi d'ajuster la politique de lutte contre le paludisme et surtout celle relative à la prise en charge.
5. Trans R Soc Trop Med Hyg. 2008 Apr;102(4):346-51. Epub 2008 Mar 5. Performance and reliability of the SYBR Green I based assay for the routine monitoring of susceptibility of Plasmodium falciparum clinical isolates.	2008	Institut Pasteur de Madagascar	a once-a-day intake of this new combination clearly appears as an effective and safe therapy in the treatment of uncomplicated P. falciparum malaria both in adults and children	

6. Malar J. 2007 Sep 15;6:125. Ensuring sustained ACT production and reliable Artemisinin supply.	2007	Institut Pasteur de Madagascar	A shift from CQ (Chloroquine) to Artemisinin-based combination therapy has been advocated by a new policy since December 2005.	Début de la généralisation de l'utilisation de l'ACT à Madagascar et commencement de son expansion
7. Malar J. 2007 May 22; 6:65. Randomized clinical trial of Artemisinin versus non-Artemisinin combination therapy for uncomplicated falciparum malaria in Madagascar.	2007	Institut Pasteur de Madagascar	Increased dramatically in 2004, from \$350 per kg to more than \$1000. Second, there was a parallel increase in the number of companies extracting Artemisinin from 10 to 80 between 2003 and 2005 in China, and from 3 to 20 in Vietnam. Commercial cultivation began also in East Africa and Madagascar	
9. Malar J. 2006 Sep 14; 5:79. Use of pre-packaged chloroquine for the home management of presumed malaria in Malagasy children.	2006	Institut Pasteur de Madagascar	Home malaria management should be improved in Madagascar. Efforts should focus on communication, the training of community-based service providers, access to pre-packaged drugs and the gradual withdrawal of pre-packaged chloroquine and its replacement by pre-packaged Artemisinin-based combination therapies.	Amélioration de la conservation de ces médicaments pré emballés et amélioration également de l'observance thérapeutique.
10. Ann Trop Med Parasitol. 2001 Apr; 95(3):237-43. Madagascar isolates of Plasmodium falciparum showing low sensitivity to artemether in vitro.	2001	Institut Pasteur de Madagascar	The present results indicate that P. falciparum in Madagascar is generally becoming less sensitive to CQ and ART.	Apparition et évolution de la résistance du parasite aux anti-paludéens. Risqué de rendre ces derniers inefficaces à terme.
Document sur l'évolution des CSB de Madagascar	2010	Direction du Développement des Districts Sanitaires	Depuis la crise de 2009 le nombre des CSB (Centre de Santé de Base) fermés a atteint le nombre de 186.	L'amélioration de l'accessibilité de la population aux ACT sera ralentie et par conséquent celle de l'adoption de l'utilisation de l'ACT par une large couche de la population.
Dossier de constitution de dépôt de médicament	1971	Direction de la Gestion des Intrants de Santé, du Laboratoire et de la Médecine Traditionnelle	Les démarches et les étapes pour l'ouverture d'un dépôt de médicament	Une large diffusion de ce texte permettra de multiplier les dépôts de médicaments et d'améliorer l'accessibilité de la population aux ACT
Liste des médicaments disponibles chez les grossistes au mois d'octobre 2010	2010	Ordre des pharmaciens	La chloroquine figure encore dans la liste hebdomadaire des médicaments disponibles chez les grossistes. La population a tendance à en acheter car c'est moins cher.	Cette persistance des grossistes d'utiliser les anciens médicaments qui sont moins chers fera encore durer leur utilisation et retardera celle de l'ACT par tous les malades.

Rapport de l'étude de l'impact des crises socio politique sur la santé	2010	Banque Mondiale	La crise socio politique de 2009 a un impact négatif sur le pouvoir d'achat de la population y compris la détérioration du pouvoir d'achat pour se prendre en charge contre les maladies. Il ya aussi la détérioration du fonctionnement des systèmes de santé public.	L'adoption de l'utilisation de l'ACT par une large couche de la population sera ralentie.
Politique et stratégie de la santé communautaire: janvier 2009	2009	Ministère de la Santé	Plus de 40% de la population malagasy ont un accès difficile aux soins de santé car résident au-delà de 5 km d'une formation sanitaire. Le recours aux membres de la communauté. Le niveau communautaire devient ainsi un prolongement du système de santé. Il fait appel à des personnes ressources issues de la communauté, communément appelées «agents communautaires» (AC). A Madagascar, depuis plus d'une décennie, l'approche communautaire a été mise en œuvre à travers plusieurs programmes de santé tels que la nutrition à assise communautaire, la mobilisation communautaire pour la génération de la demande, les initiatives « communautés championnes et Kaominina Mendrika», ainsi que la prise en charge intégrée des maladies de l'enfant au niveau communautaire et l'élimination des principales maladies transmissibles	Ce document montre l'importance et le rôle des agents communautaires pour compléter le système de santé sur la prise en charge des malades en particulier les enfants de moins de 5ans pour le traitement des maladies transmissibles comme le paludisme.
			Le pays lance le défi d'associer des agents communautaires dans la prise en charge proprement dite des principales maladies touchant les enfants de moins de 5 ans.	Appuie le système de santé à prendre en charge des malades en particulier les enfants de moins de 5ans pour le traitement des maladies transmissibles dont le paludisme.
			L'accès aux soins de cette population cible, se trouvant éloignée des formations sanitaires, pourra s'accroître grâce au renforcement de ces agents communautaires dans la prise en charge des maladies de l'enfant dont le principal résultat attendu est d'assurer la prise en charge précoce.	Amélioration de la couverture de la population en soins de qualité pour prendre en charge les différentes maladies de l'enfance dont le paludisme.
Document sur PCIMEC : Août 2009	2009	Ministère de la Santé Publique	Le Gouvernement Malagasy par le biais du Ministère de la Santé et du Planning Familial a adopté de mettre en œuvre l'introduction du programme intitulé PRISE EN CHARGE COMMUNAUTAIRE DES INFECTIONS RESPIRATOIRES AIGÜES DE LA DIARRHÉE ET DU PALUDISME CHEZ LES ENFANTS DE MOINS DE 5 ANS.	La prise en charge du paludisme avec les ACT constitue une des activités de cette stratégie
			60% de la population totale vivent dans un rayon de 5 km et peuvent accéder aux soins dispensés au niveau des formations sanitaires tandis que les 40% habitent dans des zones éloignées ou dans les zones enclavées	La prise en charge de 40% des enfants en zone enclavées sur les cas de paludisme sont les cibles de cette activité

			Les différentes étapes de la mise en œuvre de la prise en charge des IRA, de la Diarrhée et du Paludisme au niveau communautaire comprennent : "Dotation des sites en petits matériels et premier lot de médicaments	La dotation d'ACT sous blister pour les enfants de moins de 5 ans en fait partie
Arrêté interministériel numéro 5228/2004	2004	Ministère de la Santé Publique	<u>Article 20</u> : Le Fanome (Fonds pour l'Approvisionnement Non stop en Médicaments Essentiels) est un mécanisme d'entraide pour la sante, qui prévoit la prise en charge des démunis	Au niveau des formations sanitaires publiques les soins sont gratuits pour les démunis y compris le traitement des cas de paludisme compliqué.
Carte des interventions des ONG ASOS, SALFA dans le cadre de l'AMFM	2010	ONG SALFA	Les ONG couvrent actuellement dans le cadre de la sensibilisation et de la mise en œuvre de l'Act presque toutes les districts (56 pour SALFA et ASOS et 48 pour SAF)	L'utilisation de l'ACT couvrira rapidement une grande partie de la population.
Donnée sur la fréquence des d'épidémie à Madagascar	2010	PNLP/SUR EPI	Le nombre d'épidémie de paludisme a diminué dans les HTC et les zones subdésertiques depuis la mise en œuvre des préventions du paludisme par le CAID (Campagne d'Aspersions Intra Domiciliaire) et les MID (Moustiquaires à Imprégnation Durable).	Les populations concernées risquent de ne pas utiliser l'ACT car CAID et MID marchent bien pour elles.
Enquête Démographique et de Santé	2009	Institut National de la Statistique	La majorité des ménages (61,7 %) ont au moins une moustiquaire dont la quasi-totalité (93,8 %) est imprégnée. Très peu de femmes enceintes (seulement 6,4 %) ont reçu un TPI. La majorité des enfants de moins de 5 ans n'ont reçu aucun traitement antipaludéen (soit 59,6 %) parmi ceux ayant eu de la fièvre et n'ont dormi sous une MID (soit 53,5 %).	Ce niveau assez élevée d'utilisation des moustiquaires pourra rendre difficile la mobilisation de la population pour l'utilisation de l'ACT car les gens vont dire qu'ils ont déjà une moustiquaire. Par contre, l'extrême faiblesse de la proportion de femmes enceintes recevant un TPI permettra de mobiliser ces femmes pour l'utilisation de l'ACT.
Décret Numéro 2009 portant institution de la mise à contribution des utilisateurs dans la prise en charge des cas de paludisme au niveau des formations sanitaires et au niveau communautaire	2009	Ministère de la Santé Publique	<u>Article 2</u> - D'ores et déjà, l'approche prioritaire des cas de paludisme réside dans la prise en charge à domicile (PECADOM) laquelle sera complétée par la prise en charge au niveau des Formations Sanitaires suivant, dans les deux cas de prise en charge, les principes de la mise en œuvre de Fonds pour l'Approvisionnement Non Stop des Médicaments ou l'ANOME. <u>Article 3</u> - La prise en charge des cas de paludisme à domicile est soutenue par un système de dispensateurs avec le FANOME et un système de distribution à base communautaire. Dans le sens du présent décret, on entend par un système de dispensateurs avec le Fonds pour l'Approvisionnement Non Stop des Médicaments, celui qui prévoit une participation du malade aux coûts des médicaments dans les formations sanitaires où le patient est traité. Tandis que la prise en charge à base communautaire prévoit aussi une participation des populations aux coûts des médicaments mais, ces derniers sont vendus directement jusqu'au niveau le plus bas des localités même en l'absence des Formations Sanitaires. <u>Article 5</u> - Ce système est basé sur la participation et la responsabilisation de la Communauté et des Collectivités dans le financement et la gestion des fonds des Formations Sanitaires destinés à lutter contre le paludisme.	Ce document parle de la gratuité des ACT dans les formations sanitaires publiques

9.3 Questionnaire

Interviewer Code-District-Commune-Outlet ID: []-[]-[]-[]-[]-[]-[]-[]-[]-[]

MADAGASCAR

Section I: Census Information
[Interviewer completes this section for all outlets.]

C1. Today's date (DD/MM/YYYY)	[][]-[][]-[][]-[2][0][1][0]	
C2. Interviewer's Name []	Interviewer Info	C2a. Interviewer's Code [][]
C3. District Name []	District	C3a. District Code [][][]
C4. COMMUNE Name []	COMMUNE	C4a. COMMUNE Code [][][]
C4b. Fokontany Name []		
C5. Name of outlet (<i>if no name, record "no name" or owners name</i>) []	ID	C5a. Outlet Code [][][]
C6. Is the outlet in an urban or rural area (<i>Circle only one answer</i>): 0 = Urban 1 = Rural		
C7. Type of Outlet (<i>Circle only one answer</i>)		
1) Public Health facility (<i>circle type</i>) a. National University Hospital (Centre Hospitalier Universitaire) aa. Regional Hospital (Centre hospitalier regional) b. District Hospital (Centre hospitalier de district) c. Community health center level 1 (Without Doctor) (Centre de santé de base niveau 1) d. Community health center level 2 (With Doctor) (Centre de santé de base niveau 2)		
2) Pharmacy (Pharmacie de médicament) 3) Rural Pharmacy (depot de médicament) 4) Private clinic (clinic privé) 5) Private practice (medecin libre) 6) Grocery store (Epicerie) 7) Bar without grocery store (Bar)		
8) Bar with grocery store (Epi-Bar) 9) Gargote 9a) Grocery Store with gargote 10) NGO (ONG) 11) Community agent from NGO (Agent communautaire des ONG) 12) Community agent from government (Agent communautaire du gouvernement ou public) 96) Other (describe) []		
C7b. Is the outlet part of the booster sample? (<i>Circle only one answer</i>): 1 = Yes 0 = No		
GPS Readings:		
C8. South: Latitude reading [S]-[][]-[][][][][]		
C9. East: Longitude reading [E]-[][]-[][][][][]		

C10. Number of Visits

Date dd/mm/yy	Visit 1 [][]-[][][][]-[1][0]	Visit 2 [][]-[][][][]-[1][0]	Visit 3 [][]-[][][][]-[1][0]
Result: 1 = Completed interview 2 = Outlet not eligible 3 = Interview interrupted 4 = Eligible provider not available 5 = Outlet not open at the time 6 = Outlet closed down permanently 88 = Refused –[go to C11] 96 = Other: []	[]	[]	[]
Time Started	[][]:[][]	[][]:[][]	[][]:[][]
Time Completed	[][]:[][]	[][]:[][]	[][]:[][]
	Enter using 24 hour clock	Enter using 24 hour clock	Enter using 24 hour clock

REFUSAL:

C11. If the provider refused, why? (Circle one answer and end interview. If provider is busy with heavy client load, ask for a time he would prefer to be interviewed, note in C12, and return at this time).

- 1 = Client load
 2 = Thinks it's an inspection / nervous about license
 3 = Not interested
 88 = Refuses to give reason
 96 = Other (describe) []

C12. Any other comments:

Section II. Screening Section & Consent*Interviewer enters outlet.*

S1. Observe the main items for sale in the outlet. *(Do not ask. Observe. Multiple Response. Interviewer to circle a response for each category)*



	Yes	No
1. Medicine	1	0
2. Food	1	0
3. Toiletries	1	0
4. Household goods	1	0
5. Mobile air time	1	0
6. Cigarettes	1	0
7. Produit de Premiere Necessite/PPN (Essential Goods Store)	1	0
8. Non-alcoholic drinks	1	0
9. Alcoholic drinks	1	0
96. Other (describe): []	1	0

Screening Questions:

S2. Do you have any antimalarial medicines in stock today?

(Circle one answer. If necessary, prompt with common antimalarial names.)

1 = Yes If yes, provide information on study & gain consent. Start audit sheet: **Go to Q1**

0 = No If no, go to **question S3**

S3. Are there any antimalarial medicines that are out of stock today, but that you stocked in the past **3 months**?
(Circle one answer).

1 = Yes If yes, provide information on study & gain consent. **Go to Q13a**

0 = No **END INTERVIEW** (Return to complete *Question C10*)

99 = Don't know **END INTERVIEW** (Return to complete *Question C10*)

Section III. Audit Sheet

Proceed to the drug audit. Different Drug Audit Sheets will be used to record the antimalarial information based on the dosage form of the medicine. Look at the top of each sheet to see what type it is.

If the antimalarial is in the form of tablets or suppositories, use the *"Tablets & Suppositories Drug Audit Sheet."*

If the antimalarial is in any form other than tablets or suppositories, use the *"Non-Tablet Drug Audit Sheet."*

Interviewer Code-District-Commune-Outlet ID: [][]-[][][]-[][][]-[][][][]							
Tablets & Suppositories Drug Audit Sheet							
1a. Generic name	2a. Strength [][][]-[][] mg.	3a. Dosage form 1 = Tablet 2 = Suppository 3 = Granule pack	4a. Brand name	5a. Manufacturer Saa. Country of manufacture	6a. Is this antimalarial expired? 1 = Yes 0 = No 99 = Don't Know	7a. Package size (fill in # AND Circle type) There are a total of [][][][][] tablets, granule packs, or suppositories in each (circle package type): 4 = Tin 5 = Package 3 = Granule pack	
8a. Quantity in stock (Record total # of packages, tins, or granule packs described in Question 7a) These are [][][][][] packages / tins / granule packs of this antimalarial in stock at this outlet	9a. Amount sold / distributed in last 2 days (Record # of packages, tins, or granule packs described in Q7a OR record the total # of tablets sold) This outlet sold [][][] packages or tins in the last 2 days OR This outlet sold [][][][] tablets/granule packs in the last 2 days (if don't know enter 999)		10a. Has this antimalarial been stocked out in the past 3 months? 1 = Yes 0 = No 99 = Don't know	11a. Retail price [][][] tablets, granule packs or suppositories cost [][][][][] Ar (if free, enter 00000) (if don't know enter 99999)	N1a. Wholesale purchase price (for the outlet's most recent wholesale purchase) This outlet bought a total of [][][][][] tablets, suppositories or granule packs cost [][][][][][] Ar (if free, enter 00000) (if don't know enter 99999)	N1aa. Wholesale purchase quantity (for the outlet's most recent wholesale purchase) [][][][][] packages/tins (as described in Q7a) were purchased OR [][][][][] tablets/granule packs	12a. Comments

Interviewer Code—District—Commune—Outlet ID: [][][]-[][][][]-[][][][][]-[][][][][]							
Non-Tablet Drug Audit Sheet							
1 a. Generic name 	2a. Strength [][][][][] [][][][][] mg/[][][][][] [][][][][] mL [][][][][] [][][][][] mg/[][][][][] [][][][][] mL [][][][][] [][][][][] mg/[][][][][] [][][][][] mL	3a. Dosage form 3 = Syrup 4 = Suspension 5 = Liquid injectable 6 = Powder injectable 96 = Other (describe) _____	4a. Brand name 	5a. Manufacturer 5aa. Country of manufacture	6a. Is this antimalarial expired? 1 = Yes 0 = No 99 = Don't know	7a. Package size (fill in # AND circle type) There are a total of [][][][][][][][] mL. (circle package type): 1 = Bottle 2 = Ampoule	
8a. Quantity in stock <i>(Record total # of bottles or ampoules described in Q7a)</i> There are [][][][][] bottles or ampoules in stock	9a. Amount sold/distributed in last 7 days <i>(Record # bottles or ampoules described in Q7a)</i> This outlet sold [][][][][] bottles or ampoules in the last 7 days <i>(If don't know enter 999)</i>	10a. Has this antimalarial been stocked out in the past 3 months? 1 = Yes 0 = No 99 = Don't know	11a. Retail price [][][] bottles or ampoules cost [][][][][][][][] Ar <i>(If free, enter 00000)</i> <i>(If don't know enter 999999)</i>	11a. Wholesale purchase price <i>(For the outlet's most recent wholesale purchase)</i> [][][][][][][][] bottles/ampoules cost [][][][][][][][] Ar <i>(If free, enter 00000)</i> <i>(If don't know enter 999999)</i>	11aa. Wholesale purchase quantity <i>(For the outlet's most recent wholesale purchase)</i> [][][][][][][][] bottles/ampoules (as described in Q7a) were purchased	12a. Comments	

IV. Provider Questionnaire

P1. What is your job at this outlet? *(Do not read list. Multiple response. Interviewer to circle a response for each category.)*

	Yes	No
1. Pharmacist	1	0
2. Medical doctor	1	0
3. Midwife	1	0
4. Nurse	1	0
5. Lab technician	1	0
6. Owner	1	0
7. Shop assistant	1	0
8. Relative of the owner	1	0
9. Medical assistant (AIDE SOIGNANT)	1	0
96. Other (describe): []	1	0

P2. How long have you worked in this outlet? (if less than 1yr, enter 01)..... [][]

N3. Apart from antimalarials, what other drug categories are in stock? *(Read list. Multiple response. Interviewer to circle a response for each category.)*

	Yes	No
1. Painkillers/antipyretics	1	0
2. Anti-helminthics (worms)	1	0
3. Antibiotics	1	0
4. Oral anti-fungals	1	0
5. Cardiovascular (angina, arrhythmia, hypertension)	1	0
6. Ointments and creams (anti-fungal, acne)	1	0
7. Gastro-Intestinal (stomach) conditions (antacid, laxative, diarrhea)	1	0
8. Vitamins	1	0
9. Cough medicines	1	0
10. None. Antimalarials only	1	0
96. Other (describe): []	1	0

Interviewer Code-District-Commune-Outlet ID: []-[]-[]-[]

P3. Is the antimalarial treatment that you have sold or dispensed most frequently in the past month in stock?

1 = Yes in stock

Ask to physically see the medicine and use packaging to fill in *questions P3a-f*

0 = Not in stock

Ask provider to recall as much of the information in *questions P3a-f* as possible

Interviewer to complete the table using information from the drug packaging or the provider's responses.

P3a. Generic name of the drug sold the most of in the <u>past month</u>	P3b. Strength <i>(Must enter strength and correct units. Note: no mL recorded for Tablet, Suppositories, Powders and Granule packs)</i>	P3c. Dosage form	P3d. Brand name 99 = Don't know	P3f. Retail price 99 = Don't know <i>(If free, enter 00000, if "don't know", enter 99999)</i>
99 = Don't know	99 = Don't know			
	<div> <div>[][][][] . []</div> <div>mg/</div> </div> <div> <div>[][][][] . []</div> <div>mL</div> </div> <div> <div>[][][][] . []</div> <div>mg/</div> </div> <div> <div>[][][][] . []</div> <div>mL</div> </div> <div> <div>[][][][] . []</div> <div>mg/</div> </div> <div> <div>[][][][] . []</div> <div>mL</div> </div>	1 = Tablet 2 = Suppository 3 = Syrup 4 = Suspension 5 = Liquid injectable 6 = Powder injectable 7 = Granule packs 96 = Other (<i>describe</i>) <div>[]</div> 99 = Don't know	P3e. Manufacturer 99 = Don't know	<div> <div>[][]</div> <div>tablets, granule packs or suppositories cost</div> <div>[][][][][]</div> <div>Ar</div> </div> <div> OR <div> <div>[][]</div> <div>bottles or ampoules cost</div> <div>[][][][][]</div> <div>Ar</div> </div> </div>

N4. In the past month, how often did you restock the antimalarial treatment that you have sold or dispensed most frequently?[] [] times

99 = Don't know

P4. In your opinion, what is the most effective antimalarial medicine? (*Looking for either Generic name or Brand name. Ask provider to show you the medicine if it is in stock.*)

Write response [

99 = Don't know (If don't know, go to question P5)

P4a. Is the antimalarial medicine in stock?

1 = Yes

0 = No

P5. What antimalarial medicine do you most often recommend to customers? (Looking for Generic name or Brand name. Ask provider to show you the medicine if in stock.)

Write response

0 = Don't recommend

P5a. Is the antimalarial medicine in stock?

1 = Yes

0 = No

Interviewer Code–District–Commune–Outlet ID: []-[]-[]-[]

P6. How do you typically decide which antimalarials to stock? (*Prompted. Multiple response. Interviewer to circle a response for each category.*)

	Yes	No
1. Most profitable	1	0
2. Recommended by government	1	0
3. Lowest priced	1	0
4. Drug company/sales rep influence	1	0
5. Consumer demand	1	0
6. Brand reputation	1	0
7. Dosage form (e.g. provider prefers to stick tablets or injections)	1	0
8. Easily available	1	0
9. Prescribed most often by doctors	1	0
10. Efficacy; works the best	1	0
11. Seasonality	1	0
96. Other (<i>describe</i>) []	1	0
99. Don't know	1	0

P7. Do your customers usually ask for a specific antimalarial medicine by name? (*Prompted. One response only*)

0 = No, they ask for a recommendation

1 = Yes (*describe name of most commonly asked for antimalarial*) []

2 = No, they have a prescription

99 = Don't know

P8. Do you normally decide which antimalarial medicines customers receive? (*Prompted. One response only*)

0 = No

1 = Yes (*describe name of most commonly recommended antimalarial*) []

2 = No, they have a prescription

99 = Don't know

P9. Approximately how many people bought or were dispensed an antimalarial here in the last week?

[] [] [] 999 = Don't know

P10. In the last month, have customers bought antimalarials on credit? (*Only ask of providers in private facilities. If outlet is a Public Health Facility, select "82=Not applicable" and go to question P11.*)

1 = Yes go to question P10a

0 = No go to question P11

99 = Don't know go to question P11

82 = Not applicable, PHF go to question P11

P10a. In the past month, how many customers have bought antimalarials on credit?..... [] [] []

999 = Don't know

Interviewer Code–District–Commune–Outlet ID: []-[]-[]-[]-[]-[]-[]-[]-[]-[]

P10b. Which customers have bought antimalarial medicines with credit? *(Do not read list. Multiple response. Interviewer to circle a response for each category.)*

	Yes	No
1. Regular customers	1	0
2. Outlet staff	1	0
3. Clients who can't afford	1	0
4. Clients with sick children	1	0
5. Clients who are known to provider	1	0
96. Other (describe) []	1	0
99. Don't know	1	0

P11. In the past **month**, did you ever cut blister packs or sell partial packs of antimalarials for customers who cannot afford to buy the entire full course treatment?

1 = Yes

0 = No

99 = Don't know

P12. Please name the first-line medicine recommended by the government to treat uncomplicated malaria fever. *(Do not read list. Single response. Circle one response only.)*

1. Artesunate Amodiaquine (ASAQ)
2. Larimal
3. Arsucam
4. Coarsucam
5. Winthrop
6. Amosunate
7. Artediam
8. Arsuamoon
9. Actipal
10. Falcimon
96. Other answer (describe)[]
99. Don't know [If respondent does not know, circle 99 and SKIP to question P13]

P12a. Please explain the government recommended treatment regimen for this drug for an **adult**. *(Can prompt by saying "How many tablets a day, for how many days." It is ok if they get the answer from reading the package, but do not prompt provider to do this.)*

0 = Incorrect answer (describe)[]

1 = 4 Artesunate tablets and 4 Amodiaquine tablets per day, for 3 days

2 = 2 tablets per day, for 3 days (for combo)

99 = Don't know

P12b. Please explain the government recommended treatment regimen for this drug for a **2 year old child**. *(Can prompt by saying "How many tablets a day for how many days." It is ok if they get the answer from reading the package, but do not prompt provider to do this.)*

0 = Incorrect answer (describe)[]

1 = 1 Artesunate tablet and 1 Amodiaquine tablet per day, for 3 days

2 = 1 tablet per day, for 3 days (for combo)

99 = Don't know

P13. What are health danger signs for a child under 5? (*Inform provider that this question is not specific to malaria. Do not read list. Multiple response. Interviewer to circle a response for each category.*)

	Yes	No
1. Convulsions	1	0
2. Vomiting	1	0
3. Unable to drink / breastfeed	1	0
4. Abnormal breathing	1	0
5. Excessive sleep / difficult to wake	1	0
6. Floppy / unable to sit	1	0
7. Unconscious / coma	1	0
8. Fever / high temperature / hot body	1	0
9. Diarrhea	1	0
10. Anemia	1	0
11. Jaundice	1	0
12. Stiff neck	1	0
13. Provider does not believe in health danger signs	1	0
14. Shivering	1	0
15. Weakness	1	0
96. Other (<i>describe</i>) []	1	0
99. Don't know	1	0

P14. What health danger signs in a child under 5 that require immediate referral of the child to a health facility? (*Inform provider that this question is not specific to malaria. Do not read list. Multiple response. Interviewer to circle a response for each category.*)

	Yes	No
1. Convulsions	1	0
2. Vomiting	1	0
3. Unable to drink / breastfeed	1	0
4. Abnormal breathing	1	0
5. Excessive sleep / difficult to wake	1	0
6. Floppy / unable to sit	1	0
7. Unconscious / coma	1	0
8. Fever / high temperature / hot body	1	0
9. Diarrhea	1	0
10. Anemia	1	0
11. Jaundice	1	0
12. Stiff neck	1	0
13. Provider does not believe in health danger signs	1	0
14. Shivering	1	0
15. Weakness	1	0
96. Other (<i>describe</i>) []	1	0
99. Don't know	1	0

Interviewer Code–District–Commune–Outlet ID: [][]-[][][][]-[][][][]-[][][][]

P15. Has the staff that work here participated in any type of health trainings put on by NGOs or the government in the past **2 years**? (*Exclude any school training*)

1 = Yes

0 = No

99 = Don't know

P16. Including the owner and yourself, how many people work here? (*If outlet has multiple dispensaries, record number of workers at the dispensary only.*)[][]

P17. Of all the people who work here, how many prescribe or dispense medicines?[][]

P18. Has anybody working in this outlet completed primary school? (*Circle one answer*)

1 = Yes

go to question P19

0 = No

go to question P20

99 = Don't know

go to question P20

P19. Has anybody working in this outlet completed secondary school? (*Circle one answer*)

1 = Yes

0 = No

99 = Don't know

P20. Does anyone working in this outlet have any health related qualifications? (*Circle one answer*)

1 = Yes

go to question N5

0 = No

go to question N6

99 = Don't know

go to question N6

N5. How many people working in this business [including the owner] have the following types of health qualifications? (*Read list. Enter 00 if the answer is none.*)

Type of Health Qualification

Number

1 = Medical Doctor

[][]

2 = Nurse

[][]

3 = Midwife

[][]

4 = Community Health Worker

[][]

5 = Laboratory Technician

[][]

6 = Pharmacist

[][]

7 = Pharmacy Technician

[][]

96 = Other (Describe): []

[][]

SOURCE OF SUPPLY OF ANTIMALARIALS

N6. In the last **3 months**, from how many suppliers have you purchased antimalarials?

(If 1 or more suppliers, enter number of suppliers, then go to question P21) [][]

00 = No suppliers in past 3 months go to question P22 - Registration Status

88 = Refuses go to question P22 - Registration Status

99 = Don't know go to question P22 - Registration Status

P21. In the last **3 months**, from whom did you obtain or purchase antimalarials? (Please list the two places where this outlet most frequently buys antimalarial drugs)

First source:

P21a. Type of supplier (Read list. Single response. Circle one response only.):

1. General wholesaler
2. Drug wholesaler
3. Pharmacy (registered)
4. PPMV / Chemist
5. Wholesale drug distributor
6. Drug factory
96. Other (describe) []
7. Government medical store
8. Non-governmental providers (NGO [e.g. PSI] or faith-based organisation)
88. Refuses
99. Don't know

P21b. Name of business: []

88 = Refuses

99 = Don't know

P21c. Town: []

88 = Refuses

99 = Don't know

P21d. Physical address or location identifiers:

[]

88 = Refuses

99 = Don't know

P21e. Telephone number: []

88 = Refuses

99 = Don't know

P21f. How do you receive your antimalarials from this provider (Prompt. One response only)

1 = Supplier delivers to you

2 = You collect from supplier

3 = Both

88 = Refuses

99 = Don't know

P21g. Is this a supplier of malaria test kits? (Do not ask if provider answered "No" to Question 15. Select "82 = Not applicable.")

1 = Yes

0 = No

82 = Not applicable

99 = Don't know

Interviewer Code–District–Commune–Outlet ID: [][]-[][][][]-[][][][]-[][][][]

Second source:

P21h. Type of supplier (*Read list. Single response. Circle one response only.*):

1. General wholesaler
2. Drug wholesaler
3. Pharmacy (registered)
4. PPMV / Chemist
5. Wholesale drug distributor
6. Drug factory
96. Other (<i>describe</i>) []
7. Government medical store
8. Non-governmental providers (NGO [e.g. PSI] or faith-based organisation)
88. Refuses
99. Don't know

P21i. Name of business: []
88 = Refuses 99 = Don't know

P21j. Town/District: []
88 = Refuses 99 = Don't know

P21k. Physical address or location identifiers:
[]
88 = Refuses 99 = Don't know

P21l. Telephone number: []
88 = Refuses 99 = Don't know

P21m. How do you receive your antimalarials from this provider? (*Prompt, one response only*)

- 1 = Supplier delivers to you
- 2 = You collect from supplier
- 3 = Both
- 88 = Refuses
- 99 = Don't know

P21n. Is this a supplier of malaria test kits? (*Do not ask if provider answered "No" to Question 15. Select "82 = Not applicable."*)

- 1 = Yes
- 0 = No
- 82 = Not applicable
- 99 = Don't know

REGISTRATION STATUS

P22. Do you have a pharmacy or clinic license? *(Do not ask if in a Public Health Facility, select "82 = Not applicable.")*

- 1 = Yes go to question P23
0 = No go to question P23
82 = Not applicable go to question P24

P23. Do you have any other types of license or registration?

- 1 = Yes go to question P23a
0 = No go to question P24

P23a. What type/class of license? *(Multiple response. Interviewer to circle a response for each category.)*

	Yes	No
1. Patent/business	1	0
2. Laboratory	1	0
96. Other (describe): []	1	0

OBSERVATION RECORD

P24. Pharmacy or clinic license observed?

(If in a Public Health Facility, select "82 = Not applicable.")

- 1 = Confirm certificate observed
0 = Certificate not observed
82 = Not applicable



P25. Are medicines stored in a dry area?

- 1 = Yes, stored in a dry area
0 = No, not stored in a dry area
99 = Did not observe medicines

P26. Are medicines protected from direct sunlight?

- 1 = Yes, protected from direct sunlight
0 = No protections from direct sunlight
99 = Did not observe medicines

P27. Are medicines kept on the floor?

- 1 = Yes, they are kept on the floor
0 = No, not kept on the floor
99 = Did not observe medicines

Interviewer Code–District–Commune–Outlet ID: [][]-[][][][]-[][][][]-[][][][]

X2. Final comments

END OF INTERVIEW. Thank the provider for their participation in the audit. INTERVIEWER: Return to question C10 to record final status of interview and time of completion.

9.4 ACTs classified as quality assured

Key indicators for the Independent Evaluation of AMFm measure the price, availability and market share of quality assured ACTs (QAACT). A QAACT is defined as any ACT that meets the Global Fund to Fight AIDS, Tuberculosis and Malaria's quality-assurance policy. According to this policy, a quality-assured product must be either WHO pre-qualified and/or authorized for marketing by a Stringent Drug Regulatory Authority. Products that have not yet been WHO pre-qualified or approved by a Stringent Drug Regulatory Authority must be evaluated and recommended for use by an independent panel of technical experts hosted by World Health Organization's Department for Essential Medicines and Pharmaceutical Policies (Global Fund, 2010).

The list of antimalarials that complies with the quality-assurance policy varies over time. Consequently, an operational definition that would establish a fixed list of QAACTs was adopted for the purpose of the baseline outlet survey. For the purpose of the Independent Evaluation, a QAACT is any ACT which appeared on the Global Fund's Indicative List of antimalarials meeting the Global Fund's quality assurance policy as at June 2010²¹, or which previously had C-status in an earlier Global Fund quality assurance policy and was used in a programme supplying subsidised ACTs.

In June 2010, the Global Fund provided the Independent Evaluator with the indicative list of antimalarials that met the quality-assurance policy. Since brand names are not pre-qualified by the WHO or registered when recommended by the Expert Review Panel, the Independent Evaluator contacted each manufacturer on the list to get details on all of the brand names used for each product appearing on the list and produced at the approved manufacturing site. In addition, quality-assured products are also often re-packaged and re-branded for the use in domestic social marketing or subsidy programmes. Details on the brand names used in in-country marketing programmes were compiled by contacting national authorities, or the organization involved in the marketing campaign (e.g. PSI and MENTOR).

For the availability, price, mark-up and market-share indicators, products were classified as quality-assured ACTs if the brand name, generic name, strength, manufacturer and country of manufacturer matched one of the entries in Table 9.3 (below).

For the stock-out indicator, a prompt card showing photographs of the ACTs classified as quality-assured was used so the interviewer and respondent could identify QAACTs in stock during the survey visit or in stock in the previous 4 weeks. Photographs of QAACTs used for social marketing/subsidy programme were not included in the prompt card, unless the country in which data collection took place had a social marketing or subsidy programme which used a QAACT. In addition, two QAACTs appearing on the list in Table 9.3 (Artecospes and Artequin 600/1500) were not included in the prompt card, because the Independent Evaluator was not notified about the existence of these QAACT in time for data collection.

²¹ Refer to <http://www.theglobalfund.org/en/procurement/quality/pharmaceutical/#General> for the most up to date list.

Table 9.4: List of Quality Assured ACTs for availability, price and market share indicators

Brand Name	Generic Name	Strength	Manufacturer	Country of manufacture	Package Size (tablets per pack)	FDC	Notes
ACT WITH A LEAF 4 MONTHS TO <3 YEARS	ARTEMETHER + LUMEFANTRINE	20mg + 120mg	NOVARTIS PHARMA AG	China or USA	6 or 30	Yes	Repackaged by PSI for distribution in Uganda
ACT WITH A LEAF 3 YEARS TO <7 YEARS	ARTEMETHER + LUMEFANTRINE	20mg + 120mg	NOVARTIS PHARMA AG	China or USA	12 or 60	Yes	Repackaged by PSI for distribution in Uganda
ACT WITH A LEAF 7 YEARS TO <12 YEARS	ARTEMETHER + LUMEFANTRINE	20mg + 120mg	NOVARTIS PHARMA AG	China or USA	18 or 90	Yes	Repackaged by PSI for distribution in Uganda
ACT WITH A LEAF 12 YEARS AND ABOVE	ARTEMETHER + LUMEFANTRINE	20mg + 120mg	NOVARTIS PHARMA AG	China or USA	24 or 120	Yes	Repackaged by PSI for distribution in Uganda
ACTIPAL	ARTESUNATE + AMODIAQUINE	25mg + 67.5mg	SANOFI AVENTIS or MAPHAR	Morocco	3	Yes	C-status product. Repackaged by PSI for distribution in Madagascar
ACTIPAL	ARTESUNATE + AMODIAQUINE	50mg + 135mg	SANOFI AVENTIS or MAPHAR	Morocco	3	Yes	C-status product. Repackaged by PSI for distribution in Madagascar
ACTIPAL	ARTESUNATE + AMODIAQUINE	50mg + 153mg	STRIDES ARCO LABS	India	6	No	C-status product. Repackaged by PSI for distribution in Madagascar
ARTEQUIN 600/1500	ARTESUNATE + MEFLOQUINE	200mg + 250mg	MEPHA	Switzerland	9	No	Not included on the prompt card used for the stock-out indicator
ARSUAMOON 1-6 YEARS	ARTESUNATE + AMODIAQUINE	50mg + 150mg	GUILIN PHARMACEUTICAL CO. LTD	China	6 or 150	No	
ARSUAMOON 7-13 YEARS	ARTESUNATE + AMODIAQUINE	50mg + 150mg	GUILIN PHARMACEUTICAL CO. LTD	China	12 or 300	No	
ARSUAMOON ADULTS	ARTESUNATE + AMODIAQUINE	50mg + 150mg	GUILIN PHARMACEUTICAL CO. LTD	China	24 or 600	No	
ARTEFAN 20/120 5-14KG	ARTEMETHER + LUMEFANTRINE	20mg + 120mg	AJANTA PHARMA LTD	India	6 or 180	Yes	
ARTEFAN 20/120 15-24KG	ARTEMETHER + LUMEFANTRINE	20mg + 120mg	AJANTA PHARMA LTD	India	12 or 360	Yes	
ARTEFAN 20/120 25-34KG	ARTEMETHER + LUMEFANTRINE	20mg + 120mg	AJANTA PHARMA LTD	India	18 or 540	Yes	

ARTEFAN 20/120 35+ KG ADULTS	ARTEMETHER + LUMEFANTRINE	20mg + 120mg	AJANTA PHARMA LTD	India	24 or 720	Yes	
ARTEMETHER + LUMEFANTRINE <3 YEARS	ARTEMETHER + LUMEFANTRINE	20mg + 120mg	IPCA LABORATORIES LTD	India	6, 60 or 180	Yes	
ARTEMETHER + LUMEFANTRINE 3-8 YEARS	ARTEMETHER + LUMEFANTRINE	20mg + 120mg	IPCA LABORATORIES LTD	India	12,120, or 360	Yes	
ARTEMETHER + LUMEFANTRINE 9-14 YEARS	ARTEMETHER + LUMEFANTRINE	20mg + 120mg	IPCA LABORATORIES LTD	India	18, 180, or 540	Yes	
ARTEMETHER + LUMEFANTRINE >14 YEARS	ARTEMETHER + LUMEFANTRINE	20mg + 120mg	IPCA LABORATORIES LTD	India	24, 240, or 720	Yes	
ARTESUNATE + AMODIAQUINE CHILD 1-6 YEARS	ARTESUNATE + AMODIAQUINE	50mg + 153mg	IPCA LABORATORIES LTD	India	6 or 60	No	
ARTESUNATE + AMODIAQUINE JUNIOR 7-13 YEARS	ARTESUNATE + AMODIAQUINE	50mg + 153mg	IPCA LABORATORIES LTD	India	12 or 120	No	
ARTESUNATE + AMODIAQUINE ADULT	ARTESUNATE + AMODIAQUINE	50mg + 153mg	IPCA LABORATORIES LTD	India	24 or 240	No	
ARTECOSPE	ARTESUNATE + SULFADOXINE + PYRIMETHAMINE	50mg + 500mg + 25mg	GUILIN PHARMACEUTICAL CO. LTD	China	8	No	Not included on the prompt card used for the stock-out indicator
COARSUCAM INFANT 2-11 MONTHS	ARTESUNATE + AMODIAQUINE	25mg + 67.5mg	SANOFI AVENTIS or MAPHAR	Morocco	3 or 75	Yes	
COARSUCAM TODDLER 1-5 YEARS	ARTESUNATE + AMODIAQUINE	50mg + 135mg	SANOFI AVENTIS or MAPHAR	Morocco	3 or 75	Yes	
COARSUCAM CHILD 6-13 YEARS	ARTESUNATE + AMODIAQUINE	100mg + 270mg	SANOFI AVENTI or MAPHAR	Morocco	3 or 75	Yes	
COARSUCAM ADULT +14 YEARS	ARTESUNATE + AMODIAQUINE	100mg + 270mg	SANOFI AVENTI or MAPHAR	Morocco	6 or 150	Yes	
COARTEM 20/120 5-15 KG	ARTEMETHER + LUMEFANTRINE	20mg + 120mg	NOVARTIS PHARMA AG	China or USA	6, 30 or 180	Yes	

COARTEM 20/120 15-25 KG	ARTEMETHER + LUMEFANTRINE	20mg + 120mg	NOVARTIS PHARMA AG	China or USA	12, 60 or 360	Yes	
COARTEM 20/120 25-35 KG	ARTEMETHER + LUMEFANTRINE	20mg + 120mg	NOVARTIS PHARMA AG	China or USA	18, 90 or 540	Yes	
COARTEM 20/120	ARTEMETHER + LUMEFANTRINE	20mg + 120mg	NOVARTIS PHARMA AG	China or USA	6, 24, 216, 720	Yes	
COARTEM DISPERSIBLE 5-15KG	ARTEMETHER + LUMEFANTRINE	20mg + 120mg	NOVARTIS PHARMA AG	USA	6 or 180	Yes	
COARTEM DISPERSIBLE 15-25KG	ARTEMETHER + LUMEFANTRINE	20mg + 120mg	NOVARTIS PHARMA AG	USA	12 or 360	Yes	
COARTEM DISPERSIBLE 25-35KG	ARTEMETHER + LUMEFANTRINE	20mg + 120mg	NOVARTIS PHARMA AG	USA	18 or 540	Yes	
COARTEM DISPERSIBLE	ARTEMETHER + LUMEFANTRINE	20mg + 120mg	NOVARTIS PHARMA AG	USA	6 or 216	Yes	
COARTEM E FIXE 5-15KG	ARTEMETHER + LUMEFANTRINE	20mg + 120mg	NOVARTIS PHARMA AG	China or USA	6	Yes	Distributed by MENTOR in Angola
COARTEM E FIXE 15-25KG	ARTEMETHER + LUMEFANTRINE	20mg + 120mg	NOVARTIS PHARMA AG	China or USA	12	Yes	Distributed by MENTOR in Angola
COARTEM E FIXE DISPERSIBLE 5-15KG	ARTEMETHER + LUMEFANTRINE	20mg + 120mg	NOVARTIS PHARMA AG	China or USA	6	Yes	Distributed by MENTOR in Angola
COARTEM E FIXE DISPERSIBLE 15-25KG	ARTEMETHER + LUMEFANTRINE	20mg + 120mg	NOVARTIS PHARMA AG	China or USA	12	Yes	Distributed by MENTOR in Angola
DAWA MSETO YA MALARIA ALU	ARTEMETHER + LUMEFANTRINE	20mg + 120mg	NOVARTIS PHARMA AG	China or USA	6, 12, 18, 24	Yes	Repackaged by PSI for distribution in TZ
FALCIMON KIT YOUNG CHILDREN UP TO 6 YEARS	ARTESUNATE + AMODIAQUINE	50mg + 153mg	CIPLA PHARMA LTD	India	6	No	
FALCIMON KIT CHILDREN 7-13 YEARS	ARTESUNATE + AMODIAQUINE	50mg + 153mg	CIPLA PHARMA LTD	India	12	No	
FALCIMON KIT ADULTS	ARTESUNATE + AMODIAQUINE	50mg + 153mg	CIPLA PHARMA LTD	India	24	No	
LA COARTEM	ARTEMETHER + LUMEFANTRINE	20mg + 120mg	NOVARTIS PHARMA AG	China or USA	6, 12	Yes	Repackaged by PSI for distribution in Malawi
LARIMAL CHILD 1-6 YEARS	ARTESUNATE + AMODIAQUINE	50mg + 153mg	IPCA LABORATORIES LTD	India	6	No	
LARIMAL JUNIOR 7-13 YEARS	ARTESUNATE + AMODIAQUINE	50mg + 153mg	IPCA LABORATORIES LTD	India	12	No	

LARIMAL ADULT 14+ YEARS	ARTESUNATE + AMODIAQUINE	50mg + 153mg	IPCA LABORATORIES LTD	India	24	No	
LUMERAX	ARTEMETHER + LUMEFANTRINE	20mg + 120mg	IPCA LABORATORIES LTD	India	24	Yes	
LUMARTEM 5KG TO <15KG	ARTEMETHER + LUMEFANTRINE	20mg + 120mg	CIPLA PHARMA LTD	India	6 or 180	Yes	
LUMARTEM 15 TO <25KG	ARTEMETHER + LUMEFANTRINE	20mg + 120mg	CIPLA PHARMA LTD	India	12 or 360	Yes	
LUMARTEM 25 TO <35KG	ARTEMETHER + LUMEFANTRINE	20mg + 120mg	CIPLA PHARMA LTD	India	18 or 540	Yes	
LUMARTEM 35KG AND ABOVE	ARTEMETHER + LUMEFANTRINE	20mg + 120mg	CIPLA PHARMA LTD	India	24 or 720	Yes	
LUMARTEM FORTE	ARTEMETHER + LUMEFANTRINE	40mg + 240mg	CIPLA PHARMA LTD	India	6 or 12	Yes	
LUMET FORTE	ARTEMETHER + LUMEFANTRINE	40mg + 240mg	CIPLA PHARMA LTD	India	3 or 6	Yes	
MALARIAKIT	ARTESUNATE + AMODIAQUINE	50mg + 153mg	IPCA LABORATORIES LTD	India	6	No	Repackaged by PSI for distribution in Sudan
MALARPACK COARTEM	ARTEMETHER + LUMEFANTRINE	20mg + 120mg	NOVARTIS PHARMA AG	China or USA	6, 12	Yes	Repackaged by PSI for distribution in Myanmar
PRIMO	ARTEMETHER + LUMEFANTRINE	20mg + 120mg	NOVARTIS PHARMA AG	China or USA	6 or 12	Yes	Repackaged by PSI for distribution in Rwanda
SERENA DOSE ENFANTS 1-5 YEARS	ARTESUNATE + AMODIAQUINE	50mg + 153mg	CIPLA PHARMA LTD	India	6	Yes	Repackaged by PSI/Manufacturer for distribution in DRC
TIBAMAL	ARTEMETHER + LUMEFANTRINE	20mg + 120mg	NOVARTIS PHARMA AG	China or USA	6 or 12	Yes	Repackaged by manufacturer for distribution in Kenya
WINTHROP INFANT 2-11 MONTHS	ARTESUNATE + AMODIAQUINE	25mg + 67.5mg	SANOFI AVENTIS or MAPHAR	Morocco	3 or 75	Yes	
WINTHROP TODDLER 1-5 YEARS	ARTESUNATE + AMODIAQUINE	50mg + 135mg	SANOFI AVENTIS or MAPHAR	Morocco	3 or 75	Yes	
WINTHROP CHILD 6-13 YEARS	ARTESUNATE + AMODIAQUINE	100mg + 270mg	SANOFI AVENTI or MAPHAR	Morocco	3 or 75	Yes	
WINTHROP ADULT +14 YEARS	ARTESUNATE + AMODIAQUINE	100mg + 270mg	SANOFI AVENTI or MAPHAR	Morocco	6 or 150	Yes	

9.5 Final sample

Table 9.5: List of clusters/sub-districts sampled and their population, Madagascar, 2010

Region	District	Sub-district	Population	Location (urban/rural)	Censused commune (C) or Booster sample (B)?
BONGOLAVA	TSIROANOMANDIDY	Tsiroanomandidy	26,959	Urban	C
BONGOLAVA	TSIROANOMANDIDY	Ambararatabe	11,758	Rural	C
VATOVAVY FITOVINANY	MANANJARY	Mananjary	31,525	Urban	C
ATSIMO ATSINANANA	FARAFANGANA	Farafangana	28,232	Urban	C
ATSIMO ATSINANANA	FARAFANGANA	Fenoarivo	3,851	Rural	C
ALAOTRA MANGORO	AMBATONDRAZAKA	Ambatondrazaka	43,398	Urban	C
ALAOTRA MANGORO	MORAMANGA	Beforona	19,404	Rural	C
ALAOTRA MANGORO	MORAMANGA	Moramanga	29,615	Urban	C
BOENY	MAROVOAY	Marovoay	31,741	Urban	C
BOENY	MAMPIKONY	Mampikony	8,663	Urban	C
MENABE	MORONDAVA CENTRE	Morondava	37,410	Urban	C
ANOSY	FORT DAUPHIN	Ifarahantsa	20,820	Rural	C
ANOSY	FORT DAUPHIN	Fort Dauphin	45,667	Urban	C
SAVA	SAMBAVA	Sambava	30,460	Urban	C
DIANA	AMBILOBE	Ambilobe	15,090	Urban	C
DIANA	ANTSIRANANA I	Antsiranana Andrefana	69,534	Urban	C
ANALANJIROFO	SAINTE MARIE	Sainte Marie	19,736	Urban	C
ATSINANANA	TOAMASINA I	Ambodimanga Toamasina	28,120	Urban	C
ATSINANANA	TOAMASINA I	Morarano	49,971	Urban	C
ATSINANANA	TOAMASINA I	Tanambao V	46,284	Urban	C
ATSIMO ANDREFANA	TOLIARA I	Besakoa	28066	Urban	C
ANALAMANGA	ANJOZOROBE	Tsarasaotra	6,100	Rural	C
SAVA	ANTALAHA	Sarahandrano	6,101	Rural	C
SAVA	VOHEMAR	Bobakindro	8,541	Rural	C
VATOVAVY-FITOVINANY	IFANADIANA	Androrangavola	27,458	Rural	C
HAUTE MATSIATRA	IKALAMAVONY	Ikalamavony	17,726	Rural	C
VATOVAVY-FITOVINANY	MANAKARA SUD	Sahasinaka	9,194	Rural	C
SOFIA	BEFANDRIANA NORD	Morafeno	20,641	Rural	C
BOENY	MITSinJO	Mitsinjo	11,480	Rural	C
SOFIA	PORT BERGER	Tsarahasina	10,205	Rural	C
ALAOTRA - MANGORO	AMPARAFARAVOLA	Amparafaravola	52,003	Rural	C
ANALANJIROFO	FENERIVE EST	Mahambo	33,773	Rural	C
ATSINANANA	MAHANORO	Tsaravinany	17,543	Rural	C
ATSIMO ANDREFANA	AMPANIHY	Fotadrevo	31,786	Rural	C
ANDROY	BEKILY	Belindo Mahasoa	11,990	Rural	C
ATSIMO ANDREFANA	BEROROHA	Beroroha	18,903	Rural	C
BOENY	MAHAJANGA I	Mahajanga	162,084	Urban	C
BOENY	MAHAJANGA I	Mahabibo	13,824	Urban	C
BOENY	MITSinJO	Katsepy	7,491	Rural	B
BOENY	MITSinJO	Matsakabanja	18,935	Rural	B
SOFIA	PORT BERGER	Ambanjabe	17,873	Rural	B
SOFIA	PORT BERGER	Ambodisakoana	20,698	Rural	B
SOFIA	PORT BERGER	Amparihy	15,947	Rural	B
SOFIA	PORT BERGER	Andranomeva	15,928	Rural	B
SOFIA	PORT BERGER	Leanja	20,672	Rural	B
SOFIA	PORT BERGER	Maevaranohely	20,698	Rural	B
SOFIA	PORT BERGER	Tsaratanana	20,698	Rural	B
SOFIA	PORT BERGER	Tsiningia	14,535	Rural	B
SOFIA	PORT BERGER	Port-Bergé I	9,937	Urban	B
ALAOTRA - MANGORO	AMPARAFARAVOLA	Ambatomainy	30,878	Rural	B

ALAOTRA - MANGORO	AMPARAFARAVOLA	Amboavory	26,951	Rural	B
ALAOTRA - MANGORO	AMPARAFARAVOLA	Vohitsara	36,682	Rural	B
ALAOTRA - MANGORO	AMPARAFARAVOLA	Ambohijanahary	17,726	Rural	B
ALAOTRA - MANGORO	AMPARAFARAVOLA	Ambohitrarivo	32,440	Rural	B
ALAOTRA - MANGORO	AMPARAFARAVOLA	Andrebakely	19,698	Rural	B
ALAOTRA - MANGORO	AMPARAFARAVOLA	Beanana	36,682	Rural	B
ALAOTRA - MANGORO	AMPARAFARAVOLA	Morarano-Chrome	41,188	Rural	B
ALAOTRA - MANGORO	AMPARAFARAVOLA	Ranomainty	41,311	Rural	B
ALAOTRA - MANGORO	AMPARAFARAVOLA	Tanambe	36,573	Rural	B
ALAOTRA - MANGORO	AMPARAFARAVOLA	SAHAMAMY	52,158	Rural	B
ALAOTRA - MANGORO	AMPARAFARAVOLA	Anororo	32,538	Rural	B
ALAOTRA - MANGORO	AMPARAFARAVOLA	Ampasikely	30,972	Rural	B
ANALANJIROFO	FENERIVE-EST	Ambatoharanana	34597	Rural	B
ANALANJIROFO	FENERIVE-EST	Tsaratampona/Ambatoharanana	11,895	Rural	B
ANALANJIROFO	FENERIVE-EST	Ambodimanga II	31,028	Rural	B
ANALANJIROFO	FENERIVE-EST	Ampasimbe-Manantsatrana	30,198	Rural	B
ANALANJIROFO	FENERIVE-EST	Ampasina-Maningory	33,024	Rural	B
ANALANJIROFO	FENERIVE-EST	Fénérive-Est	21,193	Urban	B
ANALANJIROFO	FENERIVE-EST	Miorimivalana	11,028	Rural	B
ANALANJIROFO	FENERIVE-EST	Saranambana	17,293	Rural	B
ANALANJIROFO	FENERIVE-EST	Vohilengo	34,495	Rural	B
ANALANJIROFO	FENERIVE-EST	Mahanoro		Rural	B
ATSIANANANA	MAHANORO	Ambinanidilana	26,181	Rural	B
ATSIANANANA	MAHANORO	Ambinanindrano	32,322	Rural	B
ATSIANANANA	MAHANORO	Ambodibonara	24,331	Rural	B
ATSIANANANA	MAHANORO	Ambodiharina	30,311	Rural	B
ATSIANANANA	MAHANORO	Ankazotsifantatra	15,593	Rural	B
ATSIANANANA	MAHANORO	Befotaka	19,948	Rural	B
ATSIANANANA	MAHANORO	Betsizaraina	40,415	Rural	B
ATSIANANANA	MAHANORO	Mahanoro	40,293	Rural	B
ATSIANANANA	MAHANORO	Manjakandriana	15,548	Rural	B
ATSIANANANA	MAHANORO	Masomeloka	34,263	Rural	B
ATSIMO ANDREFANA	AMPANIHY	AMBOROPOTSY	12,366	Rural	B
ATSIMO ANDREFANA	AMPANIHY	AMPANIHY-OUEST	25,939	Rural	B
ATSIMO ANDREFANA	AMPANIHY	ANKILIABO	6,880	Rural	B
ATSIMO ANDREFANA	AMPANIHY	ANKILIMIVORY	8,034	Rural	B
ATSIMO ANDREFANA	AMPANIHY	ANTALY	11,620	Rural	B
ATSIMO ANDREFANA	AMPANIHY	BEAHITSE	14,462	Rural	B
ATSIMO ANDREFANA	AMPANIHY	BELAFIKA-HAUT	7,234	Rural	B
ATSIMO ANDREFANA	AMPANIHY	BEROY-SUD	8,130	Rural	B
ATSIMO ANDREFANA	AMPANIHY	EJEDA	28,395	Rural	B
ATSIMO ANDREFANA	AMPANIHY	GOGOGOGO	12,452	Rural	B
ATSIMO ANDREFANA	AMPANIHY	ITAMPOLO	26,866	Rural	B
ATSIMO ANDREFANA	AMPANIHY	MANIRY	6,679	Rural	B
ATSIMO ANDREFANA	AMPANIHY	VOHITANY	8,161	Rural	B
ANDROY	BEKILY	AMBAHITA (AMBANITANA)	25,252	Rural	B
ANDROY	BEKILY	AMBATOSOLA	7,747	Rural	B
ANDROY	BEKILY	ANIVORANO M	2,890	Rural	B
ANDROY	BEKILY	ANJA NORD	2,047	Rural	B
ANDROY	BEKILY	ANKARANABO NORD	5,457	Rural	B
ANDROY	BEKILY	ANTSAKOAMARO	3,101	Rural	B
ANDROY	BEKILY	BEKILY	10,339	Rural	B
ANDROY	BEKILY	BEKITRO	18,064	Rural	B
ANDROY	BEKILY	BERAKETA	26,995	Rural	B
ANDROY	BEKILY	BETEZA	7,952	Rural	B
ANDROY	BEKILY	BEVITIKY	4,559	Rural	B
ANDROY	BEKILY	MANAKOMPY	6,507	Rural	B
ANDROY	BEKILY	MAROVIRO	25,255	Rural	B
ANDROY	BEKILY	TANANDAVA	11,321	Rural	B
ATSIMO ANDREFANA	BEROROHA	Behisatsy	6,718	Rural	B

ATSIMO ANDREFANA	BEROROHA	Tanandava/Behisatsy	6,718	Rural	B
ATSIMO ANDREFANA	BEROROHA	Fanjakana	5,081	Rural	B
ATSIMO ANDREFANA	BEROROHA	Mandronarivo	6,472	Rural	B
ATSIMO ANDREFANA	BEROROHA	Marerano	9,381	Rural	B
BONGOLAVA	TSIROANOMANDIDY	Ambohimiarina	7690	Rural	B
BONGOLAVA	TSIROANOMANDIDY	Ankadinondry Sakay	26,465	Rural	B
BONGOLAVA	TSIROANOMANDIDY	Belobaka	18,764	Rural	B
BONGOLAVA	TSIROANOMANDIDY	Fierenana	14,720	Rural	B
BONGOLAVA	TSIROANOMANDIDY	Mahasolo	27,623	Rural	B
BONGOLAVA	TSIROANOMANDIDY	Miandrarivo	10,558	Rural	B
BONGOLAVA	TSIROANOMANDIDY	Ambalanirana	15,709	Rural	B
BONGOLAVA	TSIROANOMANDIDY	Ambatolampy	12,674	Rural	B
BONGOLAVA	TSIROANOMANDIDY	Anosy	19,817	Rural	B
BONGOLAVA	TSIROANOMANDIDY	Bevato	11,438	Rural	B
BONGOLAVA	TSIROANOMANDIDY	Maritampona	13,034	Rural	B
BONGOLAVA	TSIROANOMANDIDY	Soanierana	6,693	Rural	B
BONGOLAVA	TSIROANOMANDIDY	Tsinjoarivo	12,636	Rural	B
BONGOLAVA	TSIROANOMANDIDY	Tsi/didy Fihaonana	29,435	Rural	B
VATOVAVY FITOVINANY	MANANJARY	Ambalahosy	4,469	Rural	B
VATOVAVY FITOVINANY	MANANJARY	Andranambolava	6,429	Rural	B
VATOVAVY FITOVINANY	MANANJARY	Anosimparihy	9,979	Rural	B
VATOVAVY FITOVINANY	MANANJARY	Marokarima	11,671	Rural	B
VATOVAVY FITOVINANY	MANANJARY	Tsiatosika	19,846	Rural	B
VATOVAVY FITOVINANY	MANANJARY	Ambohimiarina	3,479	Rural	B
VATOVAVY FITOVINANY	MANANJARY	Andonabe	9,133	Rural	B
VATOVAVY FITOVINANY	MANANJARY	Antsenavolo	11,303	Rural	B
VATOVAVY FITOVINANY	MANANJARY	Kianjavato	6,637	Rural	B
VATOVAVY FITOVINANY	MANANJARY	Manakana Nord	4,890	Rural	B
VATOVAVY FITOVINANY	MANANJARY	Marosangy	5,636	Rural	B
VATOVAVY FITOVINANY	MANANJARY	Morafeno	9,615	Rural	B
VATOVAVY FITOVINANY	MANANJARY	Sandrohy		Rural	B
VATOVAVY FITOVINANY	MANANJARY	Tsaravary	15,752	Rural	B
VATOVAVY FITOVINANY	MANANJARY	Vatohandrina	4,516	Rural	B
VATOVAVY FITOVINANY	MANANJARY	Vohilava	19,102	Rural	B
ATSIMO ATSINANANA	FARAFANGANA	Ambalatany	9,506	Rural	B
ATSIMO ATSINANANA	FARAFANGANA	Ambohigogo	8,109	Rural	B
ATSIMO ATSINANANA	FARAFANGANA	Amporofo	7,895	Rural	B
ATSIMO ATSINANANA	FARAFANGANA	Anosivelo	10,978	Rural	B
ATSIMO ATSINANANA	FARAFANGANA	Antseranambe	4,099	Rural	B
ATSIMO ATSINANANA	FARAFANGANA	EfatsyAnandroza	6,230	Rural	B
ATSIMO ATSINANANA	FARAFANGANA	Iabohazo	7,770	Rural	B
ATSIMO ATSINANANA	FARAFANGANA	Ivandrika	6,442	Rural	B
ATSIMO ATSINANANA	FARAFANGANA	Mahafasa	8,319	Rural	B
ATSIMO ATSINANANA	FARAFANGANA	Manambotra sud	5,546	Rural	B
ATSIMO ATSINANANA	FARAFANGANA	Sahamadio	4,674	Rural	B
ATSIMO ATSINANANA	FARAFANGANA	Vohitromby	8,518	Rural	B
ATSIMO ATSINANANA	FARAFANGANA	Ambalavato S	8,978	Rural	B
ATSIMO ATSINANANA	FARAFANGANA	Ahi/ndroso	7,058	Rural	B
ATSIMO ATSINANANA	FARAFANGANA	Ankarana	8,177	Rural	B
ATSIMO ATSINANANA	FARAFANGANA	Anosy/tsararafa	3,856	Rural	B
ATSIMO ATSINANANA	FARAFANGANA	Bevoay/beretra	4,538	Rural	B
ATSIMO ATSINANANA	FARAFANGANA	Etrotroka	18,099	Rural	B
ATSIMO ATSINANANA	FARAFANGANA	Evato	12,969	Rural	B
ATSIMO ATSINANANA	FARAFANGANA	Ihorombe	7,401	Rural	B
ATSIMO ATSINANANA	FARAFANGANA	Mahabo Mananivo	7,725	Rural	B
ATSIMO ATSINANANA	FARAFANGANA	Mahavelo	4,032	Rural	B
ATSIMO ATSINANANA	FARAFANGANA	Maheriraty	5,085	Rural	B
ATSIMO ATSINANANA	FARAFANGANA	Marovandrika	4,926	Rural	B
ATSIMO ATSINANANA	FARAFANGANA	Tangainony	15,791	Rural	B
ATSIMO ATSINANANA	FARAFANGANA	Vohilengo	8,104	Rural	B
ATSIMO ATSINANANA	FARAFANGANA	Vohimasy	3,847	Rural	B

ATSIMO ATSIANANANA	FARAFANGANA	laborano Nam	9,552	Rural	B
ALAOTRA MANGORO	AMBATONDRAZAKA	Ambandrika	28,924	Rural	B
ALAOTRA MANGORO	AMBATONDRAZAKA	Ambatosoratra	25,312	Rural	B
ALAOTRA MANGORO	AMBATONDRAZAKA	Ambohitsilaozana	20,403	Rural	B
ALAOTRA MANGORO	AMBATONDRAZAKA	Antsangasanga	34,053	Rural	B
ALAOTRA MANGORO	AMBATONDRAZAKA	Bejofo	37,137	Rural	B
ALAOTRA MANGORO	AMBATONDRAZAKA	Didy	11,231	Rural	B
ALAOTRA MANGORO	AMBATONDRAZAKA	Ilafy	16,333	Rural	B
ALAOTRA MANGORO	AMBATONDRAZAKA	Imerimandroso	35,396	Rural	B
ALAOTRA MANGORO	AMBATONDRAZAKA	Manakambahiny-Est	9,144	Rural	B
ALAOTRA MANGORO	AMBATONDRAZAKA	Tanambao Besakay	13,367	Rural	B
ALAOTRA MANGORO	AMBATONDRAZAKA	Azaka Sub Urbain		Rural	B
ALAOTRA MANGORO	AMBATONDRAZAKA	Ampitatsimo	15,915	Rural	B
ALAOTRA MANGORO	AMBATONDRAZAKA	Andilanatoby	37,024	Rural	B
ALAOTRA MANGORO	AMBATONDRAZAKA	Antanandava	35,504	Rural	B
ALAOTRA MANGORO	AMBATONDRAZAKA	Manakambahiny-Ouest	33,951	Rural	B
ALAOTRA MANGORO	AMBATONDRAZAKA	Soalazaina	13,326	Rural	B
ALAOTRA MANGORO	MORAMANGA	Amboasary	13,336	Rural	B
ALAOTRA MANGORO	MORAMANGA	Ambohibary	22,519	Rural	B
ALAOTRA MANGORO	MORAMANGA	AmpasimpotsyMandia	7,487	Rural	B
ALAOTRA MANGORO	MORAMANGA	Andaingo	18,059	Rural	B
ALAOTRA MANGORO	MORAMANGA	Anosibe Ifody	12,249	Rural	B
ALAOTRA MANGORO	MORAMANGA	Antaniditra	33,511	Rural	B
ALAOTRA MANGORO	MORAMANGA	Beparasy	11,782	Rural	B
ALAOTRA MANGORO	MORAMANGA	Fierenana	9,996	Rural	B
ALAOTRA MANGORO	MORAMANGA	Lakato	19,929	Rural	B
ALAOTRA MANGORO	MORAMANGA	Mandialaza	25,023	Rural	B
ALAOTRA MANGORO	MORAMANGA	Ampasimpotsy Gara	7,487	Rural	B
ALAOTRA MANGORO	MORAMANGA	Ambohidronono	9,342	Rural	B
ALAOTRA MANGORO	MORAMANGA	Andasibe	11,078	Rural	B
ALAOTRA MANGORO	MORAMANGA	Antanandava	8,177	Rural	B
ALAOTRA MANGORO	MORAMANGA	Belavabary	9,177	Rural	B
ALAOTRA MANGORO	MORAMANGA	Morarano Gara	13,995	Rural	B
ALAOTRA MANGORO	MORAMANGA	Sabotsy Anjiro	15,683	Rural	B
ALAOTRA MANGORO	MORAMANGA	Vodiriana	12,285	Rural	B
BOENY	MAROVOAY	Ambolomoty	18,707	Rural	B
BOENY	MAROVOAY	Ankazomborona	24,987	Rural	B
BOENY	MAROVOAY	Anosinalainolona	21,899	Rural	B
BOENY	MAROVOAY	Antanambao Andranolava (com)	21,899	Rural	B
BOENY	MAROVOAY	Antanimasaka	29,447	Rural	B
BOENY	MAROVOAY	Bemaharivo	11,707	Rural	B
BOENY	MAROVOAY	Manaratsandry	24,408	Rural	B
BOENY	MAROVOAY	Marosakoa	18,731	Rural	B
BOENY	MAROVOAY	Marovoay Banlieue		Rural	B
BOENY	MAROVOAY	Tsararano	10,635	Rural	B
BOENY	MITSINJO	Ankaraobato	15,244	Rural	B
BOENY	MAMPIKONY	Mampikony II	16,649	Rural	B
BOENY	MAMPIKONY	Bekoratsaka	32,011	Rural	B
BOENY	MAMPIKONY	Malakialina/Bekoratsaka	32056	Rural	B
BOENY	MAMPIKONY	Ambohitoaka	21,891	Rural	B
BOENY	MAMPIKONY	Ambodihazambo/Ampasimat era	16,843	Rural	B
BOENY	MAMPIKONY	Ampasimatera	16,818	Rural	B
BOENY	MAMPIKONY	Komajia	4,782	Rural	B
MENABE	MORONDAVA CENTRE	ANALAIVA	12,029	Rural	B
MENABE	MORONDAVA CENTRE	BEFASY	6,366	Rural	B
MENABE	MORONDAVA CENTRE	BELO/MER	4,408	Rural	B
MENABE	MORONDAVA CENTRE	BEMANONGA	11,232	Rural	B
MENABE	MORONDAVA CENTRE	MAROFANDILIA/BEMANONG A	4,090	Rural	B
ANOSY	FORT DAUPHIN	AMPASIMENA	14,398	Rural	B

ANOSY	FORT DAUPHIN	ANALAPATSY	33044	Rural	B
ANOSY	FORT DAUPHIN	ANKARAMENA	11,269	Rural	B
ANOSY	FORT DAUPHIN	ENAKARA	6,513	Rural	B
ANOSY	FORT DAUPHIN	FENOEVO EFITA	6,505	Rural	B
ANOSY	FORT DAUPHIN	IABOAKOHO	25,786	Rural	B
ANOSY	FORT DAUPHIN	MAHATALAKY	25,783	Rural	B
ANOSY	FORT DAUPHIN	MANANTENINA	19,621	Rural	B
ANOSY	FORT DAUPHIN	MANDROMODROMOTRA	18,644	Rural	B
ANOSY	FORT DAUPHIN	RANOMAFANA	17,491	Rural	B
ANOSY	FORT DAUPHIN	RANOPIISO	33,041	Rural	B
ANOSY	FORT DAUPHIN	SOANIERANA	18,644	Rural	B
ANOSY	FORT DAUPHIN	ANDRANOBOBY	33,044	Rural	B
ANOSY	FORT DAUPHIN	SOAVARY	19,624	Rural	B
ANOSY	FORT DAUPHIN	AMPASY NAHAMPOANA	16,642	Rural	B
ANOSY	FORT DAUPHIN	ANALAMARY	19,624	Rural	B
ANOSY	FORT DAUPHIN	BEVOAY	8,937	Rural	B
ANOSY	FORT DAUPHIN	ENANILIHA	6,504	Rural	B
ANOSY	FORT DAUPHIN	ISAKA IVONDRO	20,824	Rural	B
ANOSY	FORT DAUPHIN	MANAMBARO	24,314	Rural	B
ANOSY	FORT DAUPHIN	MANDISO	20,824	Rural	B
ANOSY	FORT DAUPHIN	SARISAMBO	11,323	Rural	B
ANOSY	FORT DAUPHIN	AMBATOABO	33,044	Rural	B
SAVA	SAMBAVA	Ambodiampana	11,285	Rural	B
SAVA	SAMBAVA	Ambohimalaza	7,720	Rural	B
SAVA	SAMBAVA	Ambohimitsinjo	5,972	Rural	B
SAVA	SAMBAVA	Andratamarina	13,414	Rural	B
SAVA	SAMBAVA	Andrahanjo	8,209	Rural	B
SAVA	SAMBAVA	Antindra	15,464	Rural	B
SAVA	SAMBAVA	Antsambaharo	3,058	Rural	B
SAVA	SAMBAVA	Farahalana	11,956	Rural	B
SAVA	SAMBAVA	Maroambihy	11,588	Rural	B
SAVA	SAMBAVA	Morafeno	6,395	Rural	B
SAVA	SAMBAVA	Nosiarina	9,916	Rural	B
SAVA	SAMBAVA	Ambariotelo	2,627	Rural	B
SAVA	SAMBAVA	Amboangibe	18,288	Rural	B
SAVA	SAMBAVA	Ambodivoara	9,976	Rural	B
SAVA	SAMBAVA	Analamaho	5,450	Rural	B
SAVA	SAMBAVA	Anjijaomby	6,580	Rural	B
SAVA	SAMBAVA	Bemanevika	7,958	Rural	B
SAVA	SAMBAVA	Marojala	11,745	Rural	B
SAVA	SAMBAVA	Anjangoveratra	14,575	Rural	B
DIANA	AMBILOBE	Ambakirano	11,770	Rural	B
DIANA	AMBILOBE	Ambarakarakara	22,125	Rural	B
DIANA	AMBILOBE	Anjiabe	7,990	Rural	B
DIANA	AMBILOBE	Antsohimbondrona	29,260	Rural	B
DIANA	AMBILOBE	ampondralava	8,475	Rural	B
DIANA	AMBILOBE	Beramanja	13,456	Rural	B
DIANA	AMBILOBE	Betsiaka	7,064	Rural	B
DIANA	AMBILOBE	Manambato	22,105	Rural	B
DIANA	AMBILOBE	Marivorahona	11,751	Rural	B
DIANA	AMBILOBE	Ambodibonara	9,782	Rural	B
DIANA	AMBILOBE	Antsaravibe	14,413	Rural	B
DIANA	AMBILOBE	Anaborano-lfasy	22,105	Rural	B
DIANA	AMBILOBE	Mantaly	17,578	Rural	B
DIANA	ANTSIRANANA	ANTSIRANANA	69,534	Urban	B
ANALANJIROFO	SAINTE MARIE	Loukinty	7384	Urban	B
ATSINANANA	TOAMASINA	ANJOMA	32,337	Urban	B
ATSINANANA	TOAMASINA	ANKIRIHIRY	59,579	Urban	B
ATSIMO ANDREFANA	TOLIARA	BETANIA	19872	Urban	B
ATSIMO ANDREFANA	TOLIARA	MAHAVATSE II	20644	Urban	B
ATSIMO ANDREFANA	TOLIARA	MAHAVATSY I	14817	Urban	B

ATSIMO ANDREFANA	TOLIARA	TANAMBAO I	13598	Urban	B
ATSIMO ANDREFANA	TOLIARA	TANAMBAO II	23598	Urban	B
ANALAMANGA	ANJOZOROBÉ	Anjozorobe	18,995	Rural	B
ANALAMANGA	ANJOZOROBÉ	Ambatomanoina	17,095	Rural	B
ANALAMANGA	ANJOZOROBÉ	Ambohibary	17,037	Rural	B
ANALAMANGA	ANJOZOROBÉ	Antanetibe	17,458	Rural	B
ANALAMANGA	ANJOZOROBÉ	Analaoa	7,063	Rural	B
ANALAMANGA	ANJOZOROBÉ	Mangamila	14,427	Rural	B
ANALAMANGA	ANJOZOROBÉ	Alakamisy	3,457	Rural	B
ANALAMANGA	ANJOZOROBÉ	Betatao	10,118	Rural	B
ANALAMANGA	ANJOZOROBÉ	Beronono	9,875	Rural	B
ANALAMANGA	ANJOZOROBÉ	Ambogamarina	6,018	Rural	B
ANALAMANGA	ANJOZOROBÉ	Amboasary Nord	6,544	Rural	B
SAVA	ANTALAHA	Antalaha	31,245	Urban	B
SAVA	ANTALAHA	Ambalabe	14,427	Rural	B
SAVA	ANTALAHA	Ambinanifahô	7,970	Rural	B
SAVA	ANTALAHA	Antananambo	18,583	Rural	B
SAVA	ANTALAHA	Lanjarivo	10,627	Rural	B
SAVA	ANTALAHA	Ampahana	16,881	Rural	B
SAVA	ANTALAHA	Andrapengy/Ampahana	16,865	Rural	B
SAVA	ANTALAHA	Antsahanoro	13,101	Rural	B
SAVA	ANTALAHA	Antsambalahy	11,216	Rural	B
SAVA	ANTALAHA	Antombana	20,541	Rural	B
SAVA	ANTALAHA	Marofinaitra	11,369	Rural	B
SAVA	ANTALAHA	Ampohibe	22,989	Rural	B
SAVA	ANTALAHA	Ambohitralanana	11,039	Rural	B
SAVA	ANTALAHA	Vinanivao	16,677	Rural	B
SAVA	VOHEMAR	Vohémar	9,187	Urban	B
SAVA	VOHEMAR	Ambinanin'Andravory	9,238	Rural	B
SAVA	VOHEMAR	Ampanefena	27,045	Rural	B
SAVA	VOHEMAR	Ampisikinana	4,314	Rural	B
SAVA	VOHEMAR	Ampondra	12,589	Rural	B
SAVA	VOHEMAR	Andrafainkona	5,729	Rural	B
SAVA	VOHEMAR	Antsahavaribe	27,022	Rural	B
SAVA	VOHEMAR	Antsirabe Nord	27,407	Rural	B
SAVA	VOHEMAR	Belambo	7,685	Rural	B
SAVA	VOHEMAR	Daraina	11,658	Rural	B
SAVA	VOHEMAR	Fanambana	15,268	Rural	B
SAVA	VOHEMAR	Milanoa	14,070	Rural	B
SAVA	VOHEMAR	Nosibe	7,785	Rural	B
SAVA	VOHEMAR	Tsarabaria	17,887	Rural	B
VATOVAVY-FITOVINANY	IFANADIANA	Ambohimanga du sud	15,847	Rural	B
VATOVAVY-FITOVINANY	IFANADIANA	Ambohimiera	16,591	Rural	B
VATOVAVY-FITOVINANY	IFANADIANA	Antaretra	20094	Rural	B
VATOVAVY-FITOVINANY	IFANADIANA	Antsindra	6,698	Rural	B
VATOVAVY-FITOVINANY	IFANADIANA	Ifanadiana	19,996	Rural	B
VATOVAVY-FITOVINANY	IFANADIANA	Kelilalina	19,266	Rural	B
VATOVAVY-FITOVINANY	IFANADIANA	Maroharatra	12,985	Rural	B
VATOVAVY-FITOVINANY	IFANADIANA	Marotoko	27,593	Rural	B
VATOVAVY-FITOVINANY	IFANADIANA	Ranomafana	19,171	Rural	B
VATOVAVY-FITOVINANY	IFANADIANA	Tsaratanana	23,280	Rural	B
HAUTE MATSIATRA	IKALAMAVONY	Ambatomainity	5,841	Rural	B
HAUTE MATSIATRA	IKALAMAVONY	Fitampito	3,096	Rural	B
HAUTE MATSIATRA	IKALAMAVONY	Mangidy	15,739	Rural	B
HAUTE MATSIATRA	IKALAMAVONY	Solila	12,328	Rural	B
HAUTE MATSIATRA	IKALAMAVONY	Tanamarina	3,542	Rural	B
HAUTE MATSIATRA	IKALAMAVONY	Tsitondroina	4,503	Rural	B
HAUTE MATSIATRA	IKALAMAVONY	Sakay	5,894	Rural	B
VATOVAVY-FITOVINANY	MANAKARA SUD	Manakara Tanambe	40,196	Urban	B
VATOVAVY-FITOVINANY	MANAKARA SUD	Saharefo	6,706	Rural	B
VATOVAVY-FITOVINANY	MANAKARA SUD	Sorombo	13,408	Rural	B

VATOVAVY-FITOVINANY	MANAKARA SUD	Tatao	11,124	Rural	B
VATOVAVY-FITOVINANY	MANAKARA SUD	Vinanitelo	10,542	Rural	B
VATOVAVY-FITOVINANY	MANAKARA SUD	Vohilava	4,926	Rural	B
VATOVAVY-FITOVINANY	MANAKARA SUD	Vohimasina	18,656	Rural	B
VATOVAVY-FITOVINANY	MANAKARA SUD	Vohimasina Sud	18,748	Rural	B
VATOVAVY-FITOVINANY	MANAKARA SUD	Vohimasy	5,106	Rural	B
VATOVAVY-FITOVINANY	MANAKARA SUD	Vohimanitra	3,502	Rural	B
SOFIA	BEFANDRIANA NORD	Ambararata	10,248	Rural	B
SOFIA	BEFANDRIANA NORD	Ambodimotso Sud	13,945	Rural	B
SOFIA	BEFANDRIANA NORD	Ambolidibe Est	17,009	Rural	B
SOFIA	BEFANDRIANA NORD	Ankarongana	20,913	Rural	B
SOFIA	BEFANDRIANA NORD	Antsakanalabe	11,919	Rural	B
SOFIA	BEFANDRIANA NORD	Befandriana	10,460	Urban	B
SOFIA	BEFANDRIANA NORD	Morafeno	20,641	Rural	B
SOFIA	BEFANDRIANA NORD	Tsiamalao	17,559	Rural	B
BOENY	MITSINJO	Ambarimanginga	15,244	Rural	B
BOENY	MITSINJO	Antongomena Bevary	10,668	Rural	B
BOENY	MITSINJO	Antseza	11,496	Rural	B
BOENY	MITSINJO	Bekipay	15,222	Rural	B




9.6 Survey team




Table 9.6: List of staff members involved in the survey, in Madagascar, 2010




Name	Responsibility/role
Andrianarivony hery lantonandrianina	Supervisor
Rabotovao solo andriamanjakony elmard	Supervisor
Rakotoarivony haingonirina	Supervisor
Rakotondramasy josoa	Supervisor
Randriatsimihata hery lazavonjy	Supervisor
Rasamoelina nadia	Supervisor
Rasamoelina niaina	Supervisor
Andrianarintsalama romy sehero	Quality Controller
Rakotoarisoa menja	Quality Controller
Rakotobe sitrakamampianina	Quality Controller
Rakotondrasoa rinarijaona fenohery	Quality Controller
Ramaheninjohary mika	Quality Controller
Ramangarison haingotina ida	Quality Controller
Tsaratany velo christian	Quality Controller
Ndrianamalaza tsirimahatafa charles hubert	Interviewer
Njara narindra rasolo	Interviewer
Nofiarilala volatiana marie alisoa	Interviewer
Rabodoarimalala mireille	Interviewer
Rakotoarimanana sahobimalala divanirina	Interviewer
Rakotoarimanana tiana andrisoa	Interviewer
Rakotoarisoa heriniaina eric	Interviewer
Rakotondramala nirina jaquelin	Interviewer
Rakotovahoaka hanitriniaina clara	Interviewer
Rakotovao andriamanatsoa emilien	Interviewer
Ramaherison tojonirina yvon patrick	Interviewer
Ranaivoson fanja patrick	Interviewer
Randriamanantena tojonirina	Interviewer
Randrianasolo manitra sabrina	Interviewer
Rasehero harimanana haingonirina	Interviewer
Rasoamampionona claire olivia	Interviewer
Rasolofomanana syla patricia	Interviewer
Ravahison fidele rindra albert	Interviewer
Razafimiandry honore	Interviewer
Razanamapahatelo andriatahina	Interviewer
Rodera claudia fenohasina	Interviewer
Tatafasa tolonjanahary edith	Interviewer




9.7 Description of outlet types visited for this survey



Public Health Facilities	531	Description
National university hospital centre Regional hospital District hospital Community health centre, with doctor [centre de santé de base (CSB) niveau 2] Community health centre, without doctor [centre de santé de base (CSB) niveau 1]	32 344 155	Public health facilities provide prescription medicine and medical consultations and/or malaria diagnosis. They are manned by qualified health practitioners. The health delivery system consists of a four-step pyramidal system. The lowest level health centres are CBS1 (manned by a nurse or health worker) and CBS2 (manned by a doctor). District hospitals form the next level and offer emergency surgery and comprehensive obstetrical care. Regional hospitals offer secondary referral services and university hospitals offer comprehensive national referral services.
		
Centre Hospitalier de District	Centre de Sante de Base niveau 2 (CSB 2)	Centre de Sante de Base niveau 1 (CSB 1)
Private, not for profit facilities	7	Description
Non-Governmental Organization (NGO) Health Centre	7	Non-governmental organizations that provide medical consultations, diagnoses, and prescription medicines at a nominal cost.
		
Faith Based Organization Health Centre	Non-Governmental Organization (NGO) Health Centre	Non-Governmental Organization (NGO) Health Centre

Community health workers		226	Description
NGO		78	A network of volunteers that provide health education and promotion to families in their villages. They are supervised by NGOs.
Non-NGO		148	A network of volunteers that provide health education and promotion to families in their villages. They are supervised by the government.
			
NGO Community agent		NGO Community agent	Governmental Community agent

Pharmacy		69	Description
Registered pharmacy		69	Registered pharmacies are licensed by the National Drug Authority (NDA) and sell prescription medicines at a commercial rate. These pharmacies are typically located in urban areas and sell all classes of medicines (A, B and C). Oversight is provided by a pharmacist. These outlets are highly regulated by the National Drug Authority and the Pharmacists' Council.
			
Registered Pharmacy		Registered Pharmacy	Registered Pharmacy

Drug Store	263	Description
Rural pharmacy [dépôt de médicament]	263	Typically located in rural areas, these are small pharmacies that are licensed by the NDA and sell only over the counter medicines at a commercial rate. These outlets are manned by qualified health dispensers/practitioners.
		
Dépôt de médicament	Dépôt de médicament	Dépôt de médicament

Private for Profit	87	Description
Private clinic	35	Private clinics are smaller than hospitals and include a consultation and/or an examination room. These facilities provide medicines at commercial rates and only sell class B and C medicines. These outlets are manned by qualified health dispensers/practitioners (doctors, nurses, clinical officers) and are registered by the Ministry of Health.
Private practice [médecin libre]	52	These are qualified and trained doctors with their own practice, who provide medical consultation services. These are registered with the Ministry of Health, though it is recognized that an unknown proportion of 'médecins libre' are not registered. These doctors provide consultations, prescribe medicines, and may sell products provided by NGOs at a subsidized price.
		
Private clinic	Private practice	Private practice

General retailer	5,586	Description
Grocery store [<i>epicerie</i>]	4,161	Small businesses which sell food, beverages, and household products. Grocery stores may also sell medicines, usually antipyretics. They are unlicensed.
Grocery store with bar [<i>epi bar</i>]	649	A grocery store that includes a bar providing alcoholic beverages.
Grocery store with <i>gargote</i> [<i>epi-gargote</i>]	243	A grocery store that includes a <i>gargote</i> , selling food for customers to eat at the outlet.
Bar	191	Bars are outlets that sell alcoholic beverages. In Madagascar, some bars are known to sell medicines.
<i>Gargote</i>	333	<i>Gargotes</i> are wooden stalls which sell food/fast-moving consumer goods. There is a small area for customers to sit and eat; this is what distinguishes <i>gargotes</i> from other informal outlets such as kiosks.
Other	9	Includes market sellers.
  		
Grocery store with bar Grocery store Grocery store with gargote		

9.8 Sampling weights

Sampling weights are needed to analyze the survey data if PPS cluster sampling is applied. Otherwise, bias may be introduced in the calculated statistics if the sub-districts/communes are very different in size. If a complete sampling frame is available for applying PPS sampling, with the measure of size being the population, sampling weights are easy to calculate. Assuming that the distribution of the outlets is proportional to the population within each sampling stratum and that a Booster Sample is applied, then for all the outlets enumerated in the selected sub-district not including the public health facilities and the Part One pharmacies (there is a separate weighting procedure for these weights shown later), sampling weight is the inverse of the selection probability of the selected sub-district, calculated as:

$$W_{hi} = \frac{\sum M_{hi}}{n_h M_{hi}}$$

where

W_{hi} = the sampling weight for the i th selected sub-district/commune of stratum h ,

$\sum M_{hi}$ = the total number of population (or total number of households) in the stratum h

n_h = the number of sub-districts/communes selected in stratum h , and

M_{hi} = the number of population (or number of households) in the i th selected sub-district/commune of stratum h

If no explicit stratification is used in the sample selection, then $h=1$.

The sampling weight for all the public health facilities and Part One pharmacies, which are included in the sample from the entire district including the ones in the selected sub-district, is calculated similarly but with the above parameters replaced by district level characteristics:

$$W_{hj}^* = \frac{\sum M_{hj}^*}{n_h^* M_{hj}^*}$$

where

W_{hj}^* = the sampling weight for the j th selected district (a district is selected if one or more of its sub-districts are selected in the sample) of stratum h ,

$\sum M_{hj}^*$ = the total number of population (or total number of households) in stratum h

n_h^* = the number of districts selected in stratum h , and

M_{hj}^* = the number of population (or number of households) in the j th selected district of stratum h

With the above calculated district level weights (posterior weights because there is no direct selection of districts in the sampling procedure), a Booster Sample outlet should be counted only once in the data analysis even if two or more sub-districts/communes are selected from the same district.

The above calculated sampling weights are cluster-wide weights. This means that all the outlets interviewed in the same sub-district/commune share the same sampling weight, for both public health facilities and Part One pharmacies and all other facilities.

9.9 Assumptions for calculating Adult-Equivalent Treatment Doses (AETDs)

Introduction

Antimalarial medicines are manufactured in a variety of active pharmaceutical ingredients, dosage forms, strengths and package sizes. To analyze prices and volumes across products with different characteristics, they are standardized using the AETD. Indicators based on price and volume data, namely market share and antimalarial prices, are presented in terms of AETDs.

Assumptions for calculating AETDs

One AETD is defined as the number of milligrams (mg) of an antimalarial drug required to treat a 60 kilogram (kg) adult. For each antimalarial medicine category, the number of mg in one AETD is set to what was recommended in the treatment guidelines for uncomplicated malarial in areas of low drug resistance issued by the WHO. Where WHO treatment guidelines did not exist, AETDs were based on peer reviewed research, or the product manufacturer's recommended treatment course for a 60kg adult. A list of AETDs by antimalarial category prepared by PSI for the *ACTwatch* project was reviewed and updated by the Independent Evaluator in April 2010. Refer to Table 9.9.1 for the list used for the baseline report.

Additional assumptions

- 1) For combination therapies, which have two or more active antimalarial ingredient packaged together (either co-formulated or co-blistered) the AETD is based on the total amount of one of the active ingredients. For ACTs, the artemisinin derivative was used as the basis of the AETD.
- 2) Co-blistered combinations are assumed to be in a 1:1 ratio of tablets, with the following exceptions:
 - Amodiaquine + Sulfadoxine + Pyrimethamine manufactured under the brand name Dualkin;
 - Artesunate + Amodiaquine manufactured under the brand names Amonate Junior and Amonate Adult;
 - Artesunate + Mefloquine manufactured under the brand names Artequin 600/1500, Artequn 300/750, A + M1, A + M2, A + M3, A + M4, A + M5, Malarine for Adults, Malarine for Teenagers, and Malarine for Children;
 - Artesunate + Sulfadoxine + Pyrimethamine manufactured under the brand names SulamonPlus 500, Malosunat, Amalar, Artescope, Farenax, Artidox, Artedar, Asunatedenk 100, Asunatedenk 200, Co-arinate, Arte-Plus.
- 3) Sulfamethoxy-pyrazine-pyrimethamine is assumed to have the same full adult treatment dose as Sulfadoxine-pyrimethamine.
- 4) Artequick lacking strength information is assumed to contain Artemisinin 62.4mg and Piperaquine phosphate 375mg.

Methods for calculating price and market share indicators

Information collected on the medicine's 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. Next, the number of AETDs in a unit was calculated.²² For monotherapies, the number of AETDs in the unit was calculated by dividing the total amount of the active ingredient contained in the unit, by the AETD (ie. by the total number of mg required to treat a 60kg adult). For combination therapies, the number of AETDS in the unit was calculated by dividing the total amount of the active ingredient that was used as the basis for the AETD by the AETD.

Calculating price indicators

Pricing indicators (Indicators 2.1-2.4) are presented in terms of the cost to patients for one AETD. For each antimalarial audited, the cost to patients for one unit was computed based on the retail selling price reported by the respondent for that product. This was then divided by the number of AETDs in the unit to get the cost to patients for one AETD. (An exception is the pediatric price indicator for quality assured ACT (Indicator 2.1) where AETDs were not used. Rather the price for a 2 year old child was calculated including only pediatric formulations whose age (weight) range includes a 2 year old (10kg) child.)

Calculating market share


For each antimalarial audited, the number of AETDs sold over the past 7 days was calculated by multiplying the number of units sold as reported by the respondent by the number of AETDs in the unit.

Market share was then calculated by summing this for all antimalarials audited belonging to a particular category, which was then divided by the sum of AETDs of all antimalarials sold.

Market share was calculated by dividing the number of AETDs of a particular antimalarial category sold by the total number of AETDs of all antimalarials sold. In cases where outlets stocked antimalarials, but some or all sales volumes were missing, we did not impute for missing values.


²²The unit depends on the antimalarial medicine's dosage form. For antimalarials in tablet, suppository or granule dosage form, the unit is the package. For antimalarials in injectable dosage form, the unit is the ampoule. For antimalarials in syrup or suspension dosage form, the unit is the bottle.

9.10 Nationally Registered ACTs


REPUBLIKAN'I MADAGASIKARA
Tanindrazana - Fanjakantany - Fandriana

Vice-Primature chargée
 de la Santé Publique

 Secrétariat Général


**AGENCE DU MEDICAMENT
 DE MADAGASCAR**

N°: 058 -Agmed/Dir.

Antananarivo, le **12 MARS 2010**

Le Directeur

à

Monsieur le Directeur du Département
 Communication Recherche Suivi Evaluation
 PSI Madagascar
 - ANTANANARIVO -

BORDEREAU D'ENVOI
00000000000

DESIGNATION DES PIECES	NOMBRE	OBSERVATIONS
- Liste des médicaments antipaludiques à Madagascar	01	« Satisfaction à votre lettre n° DCRSE-IR/03/03-10 en date du 09/03/10 »


Dr RAKOTOBE Yvette
Pharmacien-Inspecteur

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 Secrétariat Général

Antananarivo le **12 MARS 2010**



AGENCE DU MÉDICAMENT
DE MADAGASCAR

_____ Agmed/Enr

Liste des médicaments anti – paludique enregistrés à Madagascar

SPECIALITES	Noms Génériques	Présentaton	Laboratoire fabricant
Actipal	Artesunate 50mg/Amodiaquine153mg	Comprimé (3+3)	Strides Acrolab Ltd
Falcimon Kit Adulte	Artesunate 50mg/Amodiaquine153mg	Comprimé (12+12)	Cipla Ltd
Falcimon Kit Enfant	Artesunate 50mg/Amodiaquine153mg	Comprimé (6+6)	Cipla Ltd
Falcimon Kit Nourrisson	Artesunate 50mg/Amodiaquine153mg	Comprimé (3+3)	Cipla Ltd
Maladar Kit Adulte	Artesunate 50mg/Amodiaquine153mg	Comprimé (12+12)	Shelys Pharmaceuticals Ltd
Maladar Kit Enfant	Artesunate 50mg/Amodiaquine153mg	Comprimé (6+6)	Shelys Pharmaceuticals Ltd
Artesunate Amodiaquine Winthrop nourrisson	Artesunate 25mg/amodiaquine 67,5mg	Comprimé(3+3)	Sanofi –Aventis France (Aventis Pharma)

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SPECIALITES	Noms Génériques	Présentation	Laboratoire Fabriquiant
Artesunate Amodiaquine Winthrop enfant	Artesunate 50mg /Amodiaquine 135mg	Comprimé (3+3)	Sanofi – Aventis France (Aventis Pharma)
Artesunate Amodiaquine Winthrop Adulte	Artesunate 100mg /amodiaquine 270mg	Comprimé (3+3) Comprimé (6+6)	Sanofi – Aventis France (Aventis Pharma)
Arsucam avant 7ans	Artesunate 50mg/ Amodiaquine Chlorhydrate 200mg	Comprimé de 3	Sanofi Synthelabo
Arsucam 7 à13 ans	Artesunate 50mg /Amodiaquine Chlorhydrate 200mg	Comprimé de 6	Sanofi Synthelabo
Arsucam après 13 ans	Artesunate 50mg /Amodiaquine Chlorhydrate 200mg	Comprimé de 12	Sanofi Synthelabo
Amosunate JR	Artesunate 100mg /Amodiaquine 300mg	Comprimé (3+3)	Adams Pharmaceuticals
Amosunate	Artesunate 200mg /Amodiaquine 600mg	Comprimé (3+3)	Adams Pharmaceuticals
Arsuamoon 1- 6 years	Artesunate 50mg/Amodiaquine 150mg	Comprimé(3+3)	Guilin Pharmaceutical Co .Ltd
Arsuamoon 7- 13 years	Artesunate 50mg/Amodiaquine 150mg	Comprimé (6+6)	Guilin Pharmaceutical Co .Ltd
Arsuamoon adult	Artesunate 50mg/Amodiaquine 150mg	Comprimé (12+12)	Guilin Pharmaceutical Co .Ltd
Artemiam ® children	Artesunate 25mg/5ml Amodiaquine 75mg/5ml	Flacon de 30ml Flacon de 30ml	Adams Pharmaceuticals
Coarsucam 25mg/67.5mg	Artesunate 25mg/Amodiaquine 67.5mg	Comprimé de 3	Aventis Sénégal
Coarsucam 50mg/130mg	Artesunate 50mg/Amodiaquine 130mg	Comprimé de 3	Aventis Sénégal
Coarsucam 100mg/270mg	Artesunate 100mg/Amodiaquine 270mg	Comprimé de 3	Aventis Sénégal
Coarsucam 100mg/270mg	Artesunate 100mg/Amodiaquine 270mg	Comprimé de 6	Aventis Sénégal
Co-Paluk	Artesunate 50mg /Amodiaquine 200mg	Comprimé (12)	B&OPHARM
Artecom	Dihydroartémésinine 32mg Piperaquine phosphate 320mg Trimethoprim 90mg	Comprimé enrobé de 8	Tonghe Pharmaceuticals Ltd
Artefan 20/120	Artesunate 20mg/Luméfántrine 120mg	Comprimé (2x8)	Ajanta Pharma Limited
Artefan 40/240	Artesunate 40mg/Luméfántrine 240mg	Comprimé (2x8)	Ajanta Pharma Limited
Artemether Luméfántrine (6&1)	Artemether 20mg/ Luméfántrine 120mg	Comprimé (6+1)	IPCA Laboratoire Ltd
Artemether Luméfántrine (6&2)	Artemether 20mg/ Luméfántrine 120mg	Comprimé (6+2)	IPCA Laboratoire Ltd
Artemether Luméfántrine (6&2)	Artemether 20mg/ Luméfántrine 120mg	Comprimé (6+3)	IPCA Laboratoire Ltd
Coartem comprimé	Artesunate 20mg/Luméfántrine 120mg	Comprimé de 6	Novartis Pharma
Coartem comprimé dispersible	Artesunate 20mg/ Luméfántrine 120mg	Comprimé dispersible 6	Novartis Pharma
Sulfadoxine 500mg /Pyriméthamine 25mg		Comprimé de 3	Shijiang Pharmaceuticals Group
Sulfadoxine 500mg /Pyriméthamine 25mg		Comprimé,B/1000	LDI International

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SPECIALITES	Noms Génériques	Présentation	Laboratoire fabricant
Paludoxine	Sulfadoxine 500mg /Pyrimethamine 25mg	Comprimé de 3	Shanghai Pharmaceutical Co Ltd
Fansidar comprimé	Sulfadoxine 500mg/Pyrimethamine 25mg	Comprimé de 3	Roche
Fansidar injectable	Sulfadoxine 500mg/Pyrimethamine 25mg	Ampoule injectable (3)	Roche
Falcidox 525mg	Sulfadoxine 500mg/Pyrimethamine 25mg	Comprimé de 3	Nabros Pharma Pvt Ltd
Fastidar 525mg	Sulfadoxine 500mg/Pyrimethamine 25mg	Comprimé de 3	Shreechem Pharmaceuticals Pvt Ltd
Chloroquine 100mg		Comprimé (1000)	Bailly Creat
Chloroquine 100mg		Comprimé (1000)	S Kant Healthcare LTD
Chloroquine 100mg		Comprimé (1000)	China Meheco Pharmaceutical Ltd
Chloroquine Phosphate 150mg		Comprimé (1000)	Sinochem Mingbo Ltd
Chloroquine Phosphate 150mg		Comprimé (1000)	North China Pharmagroup Corporation
Chloroquine Phosphate 150mg			
Chloroquine Phosphate 25mg/5ml		Sirop (60ml)	Exphar SA
Chloroquine Phosphate 300mg		Comprimé (50x5)	Exphar SA
Chloroquine Phosphate 100mg		Comprimé (1000)	Umedica Ltd
Chloroquine Phosphate 150mg		Comprimé (1000)	Umedica Ltd
Quine 150mg, 300mg	Chloroquine Phosphate	Comprimé	Niphar
Quine Pédiatrique	Chloroquine Phosphate	Suspension buvable	Niphar
Quinimax 500mg	Quinine Resorcine Bi-Chlorhydrate	Comprimé (9)	Sanofi Synthelabo
Quinimax 125mg	Quinine Resorcine Bi-Chlorhydrate	Comprimé (18)	Sanofi Synthelabo
Quinimax 125mg/ml	Quinine Resorcine Bi-Chlorhydrate	Injectable (3 ;25)	Sanofi Synthelabo
Quinimax 250mg/2ml	Quinine Resorcine Bi-Chlorhydrate	Injectable (3 ;25)	Sanofi Synthelabo
Quinimax 500mg/4ml	Quinine Resorcine Bi-Chlorhydrate	Injectable (3 ;25)	Sanofi Synthelabo
Quinine 300mg		Comprimé (1000)	Maneesh Pharmaceutical Pvt Ltd
Quinine Bi - Chlorhydrate 300mg/2ml		Injectable (1000)	Renaudin
Quinine Chlorhydrate 250mg		Comprimé (20)	Lafran
Quinine Chlorhydrate 500mg		Comprimé (20)	Lafran
Quinine dichlorhydrate 300mg/ml (2ml)		Injectable (100)	Mission Pharma
Quinine dichlorhydrate 300mg/ml (2ml)		Injectable (10)	Gland Pharma Limited
Quinine dichlorhydrate 400mg/2ml		Injectable (100)	North China Pharmagroup Corporation
Quinine dichlorhydrate 300mg/ml (2ml)		Injectable (100)	Umedica Ltd
Quinine Resorcine 100mg/ml (4ml)		Injectable (100)	Mission Pharma

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SPECIALITES	Noms Génériques	Présentaton	Laboratoire fabricant
Quinine Résorcine 100mg/ml (4ml)		Injectable (100)	Renaudin
Quininject 600mg/2ml	Quinine Dihydrochloride	Injectable (100)	Medreich Limited
Quinog 600mg/2ml	Quinine Dihydrochloride	Injectable (20)	Shreechem Pharmaceutical Pvt Ltd
Quinoral 300mg	Quinine Sulfate	Comprimé (1000)	Medreich
Arcom TM	Artemesinine 125mg/ Naphtoquine 50mg	Comprimé (8)	Kunming Pharmaceutical Corp.- Chine
Artem 80mg/ml	Artemether	Injectable (6)	Kunming Pharmaceutical Corp.- Chine
Artesiane 80mg/ml	Artemether	Injectable (5)	Dafra Pharma NV/ SA



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9.11 Additional Tables

	Public Health Facility	Community Health Worker	Private not for profit Health facility	TOTAL Public / Not for profit	Private for profit Health facility	Pharmacy	Drug Store	General retailer	TOTAL Private	TOTAL Outlets
Each antimalarial category as a proportion of the total volume of AETDs sold or distributed within that outlet category in the past week: ²³	%	%	%	%	%	%	%	%	%	%
Any ACT	32.6	99.9	15.8	44.7	12.4	10.4	8.8	3.3	7.1	13.7
Quality Assured ACT (QAACT)	27.4	77.3	15.8	36.4	12.1	8.1	8.8	3.3	6.8	12.1
First-line (FAACT)	27.4	77.3	15.8	36.4	11.0	4.4	8.7	3.3	6.4	11.7
Non first-line (NAACT)	0	0	0	0	1.1	3.8	0.1	0	0.5	0.4
Non-quality Assured ACT	5.2	22.7	0	8.3	0.3	2.3	0	0	0.2	1.7
Other ACT Classifications										
Nationally registered ACT	12.0	64.2	14.1	21.4	11.8	9.5	8.7	3.3	6.9	9.5
<i>ACTipal</i>	1.6	64.2	14.1	12.9	10.2	2.6	8.7	3.2	6.2	7.4
Any non-artemisinin therapy	67.4	0.1	84.3	55.3	87.6	89.6	91.2	96.8	92.9	86.3
Chloroquine	0	0.1	0	0.0	35.7	16.5	62.6	96.0	69.3	57.0
Sulfadoxine-pyrimethamine (SP)	63.8	0	53.2	52.3	33.6	70.6	27.0	0.7	21.7	27.1
Second-line treatment (Quinine)	3.6	0	31.0	3.0	18.3	2.4	1.6	0.1	1.9	2.1
Any artemisinin monotherapy	0	0	0	0	0	<0.1	0	0	<0.1	<0.1
Oral artemisinin monotherapy	0	0	0	0	0	0	0	0	0	0
Non oral artemisinin monotherapy	0	0	0	0	0	<0.1	0	0	<0.1	<0.1

²³Any ACT subgroups are not mutually exclusive: Any ACT subdivides fully into QAACTs and Non-quality Assured ACT; QAACTs decompose fully into FAACTs and NAACTs; nationally registered ACTs are either QAACTs or non-QAACTs. Row and column totals exhibit minor rounding errors.

9.12 Summary of key events

Provide a summary of key contextual events which could affect the AMFm indicators

Table 9.12: Summary of key events in the past one year which could affect AMFm indicators, in Madagascar, 2010				
Key Contextual Events	Description of event(s)	Dates	Geographical location (national/smaller scale)	Likely impact on ACT availability, price, market share & use
Changes in delivery of malaria control interventions (introduction/expansion, slowdown/stopping of existing interventions)	<p>a) La mise à l'échelle de la prévention individuelle du paludisme par la campagne de distribution universelle de MID a été réalisée par phase</p> <p>Elle a commencé en Novembre et Décembre 2009 au niveau des 19 districts de la cote est de Madagascar. Cette distribution a pour objectif de couvrir toute la population à raison de 2 MID par ménages si on estime que les ménages malgaches ont 5 personnes. Un peu moins de 1 700 000 MID ont été distribuée dans ces districts pour protéger la population. Une étude post campagne menée par CDC Atlanta a montré que la possession est de 73% et comme utilisation l'enquête a révélée une utilisation de 84%.</p>	2009 (1ère phase)	19 districts de la cote Est de Madagascar	Cette campagne aura probablement un impact majeur sur la réduction de la morbidité et de la mortalité contre le paludisme en se référant aux études faites sur les impacts de la campagne de distribution de MID. Une diminution de la morbidité entrainera une diminution des besoins en ACT
	<p>La phase suivante est réalisée cette année 2010 pour une couverture universelle de MID selon la recommandation internationale, et la stratégie de distribution est de 1 MID pour trois personnes. Cette campagne est réalisée au niveau de 18 régions et 72 districts de Madagascar (Régions Sava, Diana, Sofia, Analanjirofo, Menabe, Boeny, Analamanga, Bongolava, Melaky, Atsimo Andrefana, Androy, Anosy, Amoron'i Mania, Haute Matsiatra, Betsiboka, Vakinankaratra) pour une mise à l'échelle de cette strategie. Ainsi 5 700 000 MID sont à distribuer pour couvrir tout le pays par la stratégie de prévention individuelle avec les MID. L'objectif fixé est d'atteindre un taux de possession de 95 % et un taux d'utilisation de 85%.</p>	Novembre 2010 (2e phase)	72 districts de Madagascar (Régions Sava, Diana, Sofia, Analanjirofo, Menabe, Boeny, Analamanga, Bongolava, Melaky, Atsimo Andrefana, Androy, Anosy, Amoron'i Mania, Haute Matsiatra, Betsiboka, Vakinankaratra)	Cette activité aura probablement un impact sur la diminution des cas de paludisme.

	<p>On a ainsi mobilisé des prestataires de formation et des prestataires logistiques cette année comme particularité dans l'organisation.</p> <p>b) La prévention du paludisme par la Campagne d'Aspersion Intra Domiciliaire (CAID)</p> <p>Elle a été réalisée en 2009. Huit (08) régions sont couvertes avec ses 33 districts, 524 communes, 5 642 Fokontany et 7 589 533 habitants. L'objectif de la CAID est que 100% des districts et communes doivent être traités. 95% des structures doivent aussi être traités et 95% de la population seront protégées. En effet la CAID prévient les épidémies de paludisme et réduit la mortalité et la morbidité dues à cette maladie.</p> <p>Cette année 2010 il y aura une extension de la campagne CAID dans 15 régions avec 54 districts. Ces régions sont :</p> <ul style="list-style-type: none"> • Melaky, Atsimo Andrefana, Sofia, Anosy, Androy protégeant 1 119 163 habitants ; • Itasy, Bongolava, Alaotra Mangoro, Ihorombe avec 2 616 930 habitants ; • Vakinankaratra, Analamanga, Haute Matsiatra, Amoron'i Mania avec 3 697 958 habitants. <p>Des partenaires sont impliqués avec le Ministère de la santé Publique pour la réalisation de ces activités, à savoir le RTI et le PMI.</p>	2009	08 régions dont 33 districts	On a constaté que dans les zones avec une intervention de la CAID, il y a un surstock et tendance à la péremption des ACT car la consommation en ACT est minime.
		2010	15 régions avec 54 districts dont les régions de Melaky, Atsimo Andrefana, Sofia, Anosy, Androy protégeant Itasy, Bongolava, Alaotra Mangoro, Ihorombe Vakinankaratra, Analamanga, Haute Matsiatra, Amoron'i Mania	Toutes ces interventions avec la CAID aura un impact majeur sur la diminution des cas de paludisme dans ces 55 districts engendrant ainsi une diminution de l'utilisation des ACT et RDT.

	<p>c) Formation des médecins privés</p> <p>Dans le cadre de l'AMFm une formation des médecins privés est programmée pour cette année 2010. 1000 agents médicaux du secteur privés sont à former et ceci est réalisé avec un partenariat entre le Programme National de Lutte contre le Paludisme, le CROM (ordre des médecins), la Direction des Agences des Médicaments et les Directions Régionales de la Santé Publique. La dite formation concerne la Prise en charge des cas de paludisme et la pharmacovigilance des antipaludiques. Cette formation a permis une prise de conscience des médecins privés sur le cas de paludisme car avant ils traitent les gens sur la base des signes cliniques, ce qui fait que le rapport des médecins privés sur les cas de paludisme sont toujours élevés par rapport à la réalité et il y a une discordance entre le nombre de RDT positifs et les doses d'ACT utilisées.</p> <p>La formation des formateurs au niveau des 6 ex provinces ont été faites en juin et juillet 2010. Pour la région Analamanga 280 médecins du secteur privés sont prévus à être formés, et actuellement 90 médecins ont reçu ce renforcement de capacité actuellement. Un informateur tient à souligner que à Analamanga il y a plus de médecins et centre privés que de centre de santé de base publique. Pour ces derniers le rapport sur les cas de paludisme est correct car ils utilisent les RDT.</p> <p>d) Formation des formateurs sur la Prise en Charge Intégrée des Maladies Enfants par la Communauté</p> <p>A été réalisée une formation des formateurs sur la</p>	Juillet 2010	National	<p>Le rapport sur les cas de paludisme des médecins privés est toujours élevé, car ils n'utilisent pas de RDT. Ceci fausse les données sur les cas de paludisme car le besoin et utilisation de dose d'ACT est augmentée par rapport à la réalité.</p>
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	<p>Prise en Charge des Infections respiratoires aiguës, de la diarrhée et du Paludisme chez les enfants de moins de 5 ans (PCIMEC). Cette stratégie permet d'assurer de façon précoce la prise en charge des cas de Paludisme chez les enfants de moins de 5 ans tôt avec la participation des agents communautaires. Ceci entre dans le cadre de la mise à l'échelle de la mise en œuvre de la PCIMEC à Madagascar qui est adopté en 2009. Dans le cadre de cette activité, une introduction progressive du diagnostic par TDR au niveau communautaire a commencé depuis novembre 2009, d'où la nécessité de former les Agents communautaires sur leur utilisation depuis septembre 2009 dans les Districts de Melaky (Antsalova, Maintirano, Besalampy) et Manja. Une formation des agents communautaires dans les 2 districts de Moramanga et Ambovombe Androy a été réalisée. Il est prévu que les CSB supervisent cette activité. Différentes Directions du Ministère de la santé publique sont impliquées sur cette activité ainsi que des partenaires comme Sante net et d'autres ONG. On a un problème de coordination, car <i>Santeneta</i> déjà commencé à faire des activités sur le terrain car il dispose déjà de RDT alors que la Direction de la Santé de la Mère et de l'Enfant n'est pas d'accord de commencer l'activité sans la note officielle autorisant les agents communautaires d'exécuter ces tests. Car ceci va à l'encontre de la législation malgache sur ce genre d'exercice. La bonne marche de cette activité et sa mise à l'échelle joue un rôle primordial sur la sensibilisation, la prise en charge effective et précoce des enfants de moins de 5 ans atteints du paludisme au niveau de la communauté.</p> <p>Pour pallier à ces problèmes, des réunions d'harmonisation sur la mise en œuvre des ACT communautaire a eu lieu en octobre 2008 et une</p>	Septembre 2009	Districts de Melaky (Antsalova, Maintirano, Besalampy) et Manja et aussi les districts de Moramanga et Ambovombe Androy	Avec une bonne coordination, on aura une amélioration et augmentation de l'utilisation correcte et rationnelle des ACT chez les enfants atteints du paludisme.
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	<p>autre réunion d'harmonisation de la Prise en charge à domicile en janvier 2010 sont organisées pour établir la stratégie nationale d'harmonisation.</p> <p>e) Arrivée des médicaments ACT pour la prise en charge au niveau des formations sanitaires publiques</p> <p>Depuis juin 2009 des médicaments ACT (AS-AQ) de forme combo sont arrivés pour la prise en charge au niveau des formations sanitaires publiques. Les coblisters d'ACT (AS-AQ) sont présentés avant avec 3 dosages : dosage pour enfant 0 à 7 ans, dosage pour adolescent 7 à 13 ans et dosage pour les plus de 13 ans. La forme combo a 4 dosages : dosage pour petits enfants de 0 à 11 mois, dosage pour enfants de 0 à 7ans, dosage pour ceux de 7 à 13 ans et dosage pour les plus de 13 ans sous forme de blister et une cure de 3 jours.</p> <p>f) Signature du Grant du projet AMFm</p> <p>En Mai 2010 on a signé le Grant du projet AMFm ou Facilité de médicament à des prix abordables qui va assurer l'introduction de l'ACT dans la chaîne de distribution pharmaceutique privée et les dépôts de médicament. Les médicaments sont prévus arrivés en novembre 2010. Ce projet va assurer la disponibilité et la promotion des ACT à travers le secteur privé. Le PR est SALAMA.</p>	<p>Depuis juin 2009</p> <p>Mai 2010</p>	<p>National</p> <p>National</p>	<p>On a constaté un problème d'estimation des besoins chez les agents de santé du secteur public en 2009/2010 car soient ils ne sont pas formés sur la gestion de stock de médicament ACT soit ils n'y font pas attention. Le programme a du mal à suivre ainsi le stock et la situation des ACT. Ceci risque d'aboutir à une mauvaise gestion des ACT, comme rupture ou surstock d'ACT. L'autre problème de coordination vient du fait que les ONG font des actions de sensibilisation, mais il n'y a pas de rapport vers les Service de District de Santé Publique et le Programme National de Lutte contre le Paludisme.</p> <p>Disponibilité à des prix abordables des ACT pour tous les âges.</p>
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	<p>g) Une sensibilisation de masse sur l'utilisation des TDR et des ACT</p> <p>Depuis 2009 une sensibilisation de masse sur l'utilisation des TDR et des ACT est mise en œuvre dans le cadre du projet GF7 avec la participation des ONG partenaires (ASOS, SALFA, SAF). D'après les informateurs cette activité a prouvé son efficacité et son importance pour la sensibilisation et l'éducation de la population. Les problèmes soulevés sont que les ONG ne disposent pas avec le système du marketing social assez de MID et de doses d'ACT (<i>ACTipal</i>), car la demande est élevée de la part de la population ceci risque de démotiver les agents communautaires car ils ne disposent que très peu de produits et la population n'est pas satisfaite non plus car elle ne dispose pas assez de MID ni d'<i>ACTipal</i>. Un autre problème aussi est soulevé par ces ONG, c'est que le montant du fond pour le suivi des activités dans le cadre du GF7 est très limité par rapport au fond de suivi du projet GF3.</p>	Depuis 2009	National	Cette activité permet d'augmenter la demande en ACT et d'améliorer la prise en charge des cas de paludisme et la mise à disposition des doses d'ACT au niveau de la communauté.
Changes in funding levels (national or international sources) for malaria control activities	<p>Le financement Banque Mondiale a été coupé pour cause de crise (non reconnaissance du pouvoir de transition) - Timide reprise dans les domaines dits humanitaires dont la Santé</p> <p>Pour cause de crise, certaines opérations n'ont pas pu être réalisées ou retardées comme la disponibilité de MID pour la campagne de 2009</p> <p>Du temps de la stratégie de lutte classique (PEC du Palu), les financements se faisaient par rapport aux activités qui intéressaient les partenaires. Depuis 2010, c'est le PSN (NSA) en entier qui est</p>	<p>2009</p> <p>2009</p> <p>Depuis 2008 pour NSA et GF7 puis à partir de 2010</p>	<p>National</p> <p>Dans quelques Régions de l'est de Madagascar : Sava, Analanjirofo, Anosy</p> <p>National (Extension à Atsimo Andrefana, Melaky, menabe, Sofia, Betsiboka, Androy,</p>	<p>Impact négatif sur le programme d'élimination du paludisme comme la recrudescence des cas de paludisme dans certains districts comme Taolagnaro d'où une utilisation accrue des ACT pour maîtriser la recrudescence des cas de paludisme.</p> <p>Un retard sur le changement des MID distribuées en 2006 pour ces districts a fait augmenter des cas de paludisme à certains endroits d'où une augmentation de besoin en ACT pour certains districts comme Taolaganaro.</p> <p>Le nombre de cas de paludisme diminue d'où diminution des besoins en ACT.</p>

	<p>financé. Il ya une augmentation des financements comme les fonds pour CAID avec PMI et NSA d'où extension de la population protégée contre le paludisme.</p> <p>Interruption des activités de surveillance épidémiologique du paludisme à la fin du GF3</p> <p>Acquisition du financement de l'AMFm du Fond Mondial</p>	<p>pour NSA</p> <p>2009</p> <p>Mai 2010</p>	<p>Anosy)</p> <p>36 districts dont 27 de HTC et 12 du sud subdésertique</p> <p>Dans tous les districts d'intervention de l'AMFm</p>	<p>Risque de relâchement de système de surveillance des épidémies de paludisme dans ces zones, et risque d'éclosion d'épidémie non contrôlée à temps, d'où besoin de plus de doses d'ACT pour maîtriser ces flambées éventuelles d'épidémies de paludisme.</p> <p>L'acquisition du projet AMFm permet de mettre à la disposition de la population les ACTm par le biais du secteur privé</p>
Malaria related issues reported in the media	Radio France Internationale a évoqué l'existence de médicaments non qualifiés dans les hôpitaux, les pharmacies et les dépôts de médicaments, lors d'un contrôle- qualité effectué par USAID.	2009	National	Il pourrait y avoir une réticence des utilisateurs des antipaludiques pour la fréquentation des hôpitaux, des pharmacies et des dépôts de médicaments qui sont pourtant formels. Car entre un point de vente formel qui est réputé ne pas avoir de médicaments non qualifiés et un point de vente informel, les utilisateurs pourraient choisir une solution de facilité qui est la proximité d'où l'avantage de celui informel.
Changes in public sector availability of antimalarial drugs	<p>Suite au changement de politique de traitement du paludisme, l'utilisation systématique des RDT avant le traitement des cas confirmés avec les ACT montre que il y a moins de cas confirmés par rapport aux cas présumés. Ainsi on constate souvent une diminution de l'utilisation des ACT au niveau des formations sanitaires publiques jusqu'à la situation de surstock et de péremption des ACT en 2009.</p> <p>Depuis 2009, les ACT sont acheminés par l'Unité de Gestion des Produits au niveau de chaque Service de District de Santé Publique de façon régulière. Ainsi on a une disponibilité des ACT et RDT dans ces formations sanitaires.</p>	<p>2009</p> <p>2009</p>	<p>National</p> <p>National</p>	La disponibilité régulière des ACT au niveau des centres de santé publique met en confiance la population mais ces centres sont de ce fait confrontés à une meilleure gestion de stock pour éviter le gaspillage dû aux surstocks et des antipaludiques périmés.

	<p>En 2009 le Programme National de Lutte contre le paludisme a décidé d'adopter la forme combo. Ce changement de forme de médication permet d'avoir une meilleure acceptation et une meilleure observance du traitement des cas de paludisme, ainsi il y aura une meilleure utilisation des ACT sous forme combo.</p>	2009	National	
Important changes in public health system	<p>a) La fermeture de centre de santé</p> <p>A cause de la crise, le personnel part ailleurs pour trouver mieux. 186 centres de santé sont actuellement fermés à cause de cet abandon de poste et de l'insuffisance du recrutement par manque de budget du Ministère.</p> <p>Le nombre de centres privés ou cabinets privés a diminué aussi depuis la crise de 2009 à cause de la fermeture d'anciens centres et cabinets, d'une part, et de l'insuffisance de nouvelles initiatives pour en créer, d'autre part. Les problèmes socio-économiques, l'insécurité des investissements et la baisse de la demande sont les principales causes de cette situation.</p>	Depuis 2009	National	Les ACT ne sont plus disponibles dans les centres de santé fermés.
	<p>b) La détérioration du système d'information</p> <p>Un des effets négatifs de la crise aussi est la détérioration du système d'information, notamment du fonctionnement du circuit des données.</p> <p>Dans le même ordre d'idée, comme la lutte contre le paludisme est une des actions qui sont encore financées correctement et que même l'Etat est obligé de se serrer la ceinture, on profite de ce financement pour réaliser en même temps les</p>	Depuis 2009	National	

	<p>activités non financées. Par exemple, on profite des activités de supervision de la lutte contre le paludisme pour faire d'autres activités, et cela réduit le nombre d'heures consacrer au paludisme, voir même la non réalisation de certaines activités. Par conséquent, la qualité et la quantité des réalisations sont réduites, en particulier celles des données.</p> <p>Mais le retour à la normale s'effectue progressivement.</p> <p>c) Un phénomène de démobilisation des agents communautaires.</p> <p>Dans le cadre de la mise en œuvre de la Politique Nationale Communautaire, notamment des Comités de Santé (COSAN) au sein de la communauté de base (Fokontany), il existe trois types d'activités des agents communautaires (AC) : la prise en charge médicamenteuse, le suivi de la prise de médicaments, la sensibilisation. Mais surtout à cause de la crise, la motivation des AC n'est pas bien assurée par le COSAN si bien qu'on assiste parfois à un phénomène de démobilisation des AC dans nombreux districts.</p> <p>d) Le ralentissement du développement du partenariat Public-Privé</p> <p>Le partenariat Public-Privé est encore très faible à Madagascar d'après le rapport de 2007 du Service de la Médecine Libérale du Ministère. Des efforts en vue de son développement ont été entamés dans le pays avant la crise mais un ralentissement a été entraîné par les problèmes politiques, institutionnels et socio-économiques que celle-ci a occasionnés.</p>	Depuis 2009	National	Régression de l'effectivité de la distribution de l'ACT au niveau communautaire qui est assurée par les AC.
		Depuis 2009	National	L'absence de motivation des médecins privés dans le partenariat Public-Privé (telle l'assistance à une formation) malgré l'article de l'accord de siège pourrait ralentir le développement du projet AMFm.

	<p>Le fait suivant illustre cette situation. Un article de l'accord de siège dit que le privé doit répondre à tout appel de l'Etat en cas de nécessité. Les médecins privés doivent alors venir assister à la formation sur la PEC et pharmacovigilance organisée par le Programme dans le cadre de l'AMFm, mais certains médecins privés ne sont pas motivés pour assister à la formation.</p> <p>e) Les efforts menés dans les secteurs public et privé</p> <p>Du côté de l'Ordre des Pharmaciens, il y a une forte contribution. En effet, l'Ordre participe à la lutte contre la vente illicite de médicament: depuis 4 ans il y a une célébration de la journée nationale de lutte contre les marchés illicites de médicament et cette année ce sera octobre ou novembre 2010 à Itaosy. L'Ordre a donné des suggestions comme l'accélération du retrait du CQ, la proposition d'utiliser le combo pour AMFm, de faire le RDT avant traitement. Le prix de 1000 Ariary a été proposé en concertation avec l'ordre des pharmaciens lors de la réunion à l'hôtel Motel d'Anosy.</p> <p>Du côté du Ministère, une liste des dépositaires de médicaments des 22 régions a été établie en 2009. La Direction Générale des Intrants et de la Lutte contre les Maladies Transmissibles (DGILMT) encourage l'ouverture des Dépôts de médicaments pour lutter contre la vente illicite: la commission reçoit habituellement 50 dossiers de création et pour la présente période (Septembre 2010) ceux ci montent à 70.</p> <p>Le décret d'application du texte qui sanctionne les points de vente illégaux est en cours de préparation. En effet, les points de vente illégaux risquent de concurrencer la vente des ACT de</p>	Depuis 2009	National	<p>La mobilisation à la lutte contre la vente illicite de médicament va limiter la distribution des ACT au marché noir qui concurrence la vente dans les pharmacies et dans les dépôts de médicaments. Ceci diminuerait ainsi l'exposition de la population à l'achat de médicament ACT de mauvaise qualité voire sans principe actif.</p> <p>Les efforts en faveur de la multiplicité des dépôts de médicaments par le ministère de la santé favoriseraient la disponibilité et l'écoulement des médicaments ACT.</p>
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	<p>qualité.</p> <p>Pour le domaine spécifique à la mère et à l'enfant, diverses actions entreprises contribuent à la lutte contre le paludisme et plus particulièrement à la mise en œuvre de la réforme comme :</p> <p>l'organisation de la Semaine de la Mère et de l'Enfant (SSME) deux fois par an en Avril et en Octobre ;</p> <p>la mise à l'échelle de l'approche Prise en charge intégrée des maladies des enfants en milieu communautaire (PCIMEC) et son introduction dans les Districts : cette approche vise à ce que des AC assurent la prise en charge (PEC) des cas de paludismes chez les enfants de moins de 5 ans dans les communautés avec les ACT et ceci va augmenter le besoin et l'utilisation des ACT pour enfant ;</p> <p>la mise à l'échelle de l'approche intégrée Mère Enfant au niveau communautaire: promotion, prévention, PEC de tous les programmes selon le cycle de vie de l'individu. Ce projet inclut la PEC des cas de paludisme chez les mères avec l'ACT d'où un impact positif sur le besoin et l'utilisation des ACT ;</p> <p>la participation de Madagascar à la dernière Assemblée Mondiale de la PCIME qui a encouragé les pays à développer la PCIME qui inclut le traitement du paludisme chez les enfants. Cet événement aura sûrement un impact positif sur l'utilisation des ACT ;</p> <p>la collaboration DSME avec le secteur privé: quand la DSME forme des responsables, elle implique toujours le secteur privé. Ceci entraînera un renforcement de capacité du secteur privé sur les activités du DSME dont la prise en charge des cas de paludisme chez les enfants et les mères. Ceci va faire augmenter l'utilisation des ACT.</p>			<p>La SSME augmenterait le besoin et l'utilisation de l'ACT par la mère et l'enfant au niveau communautaire ainsi qu'une meilleure prise en charge des cas de paludisme.</p>
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<p>Important changes in implementation of pharmaceutical regulation</p>	<p>Comme autre changement, la note ministérielle de 2009 réservant désormais la prescription du SP (paludar) aux seules femmes enceintes oblige la population à utiliser les ACTm au lieu d'acheter le SP pour traiter les cas de paludisme.</p> <p>La sortie officielle, le 15 novembre 2010, de la note N° 536-MSANP/SG/DGS/PNLP/SPCP, autorisant la pratique du TDR avant la prescription des ACT au niveau communautaire (par les agents communautaires) a fait naître une controverse au sein des acteurs de la lutte contre le paludisme. D'un côté, certaines ONG dont à la tête SantéNet, à titre d'exemple, qui affichent leur enthousiasme sur cette initiative. De l'autre, il y a: l'Ordre des Médecins, plus catégorique, pour qui il n'appartient pas aux Agents Communautaires de prescrire des médicaments, y compris les antipaludique, parce qu'ils n'y sont pas habilités et que, par conséquent, c'est l'éthique même de la profession qui en prendrait un coup.</p>	<p>Depuis 2009</p> <p>2010</p>	<p>National</p> <p>National</p>	<p>Possibilité d'une adoption rapide de l'ACTm par la population dès que les gens assimilent l'information que le SP (antipaludique le plus populaire chez les adultes) ne seront destinés que pour les femmes enceintes.</p> <p>La mésentente dans la décision sur la prescription des ACT par les AC pourrait démotiver l'un (certaines ONG dont SantéNet) ou l'autre (l'ordre des médecins) dans l'atteinte de l'objectif de l'accessibilité des ACT par tous.</p>
<p>Important weather events affecting malaria disease burden or treatment</p>	<p>Vers la fin de Mars 2010, il y a eu une épidémie dans le District de Fort-Dauphin. Cette épidémie pourrait être imputée à la variation climatique mais aussi autrement d'où le questionnement qui s'est posé : « Est-ce qu'elle est due à un événement climatique ou au retard De la campagne MID ? »</p> <p>Il y a eu une campagne MID en 2007. Pour l'épidémie de Mars 2010, (30 enfants décédés et des adultes dans le coma), si même les adultes ont été touchés, c'est que la prémunition a donc</p>	<p>Mars 2010</p>	<p>District de Fort-Dauphin</p>	<p>Cette épidémie aurait pu influencer la demande en ACT dans cette région de Madagascar. Il se peut que certains centres de santé étaient en rupture de stock à cause de cette épidémie car les stock habituels n'étaient pas prévus pour une telle situation.</p>

	<p>diminué, c'est la preuve que les MID sont efficaces. Or avec les conditions d'habitat et les problèmes de conservation, les MID peuvent facilement être abimés ou perdre leur efficacité (la durée de 5 ans est alors remise en cause). De par cette situation la prémonition aurait bien diminué.</p> <p>Toutefois, le faciès défini aurait changé aussi avec le changement climatique : la pluie qui ne vient plus, les changements de la température.</p> <p>A été relevé aussi le fait qu'après un cyclone, il y a plus de points d'eau et de flaques d'eau, surtout dans les zones côtières, alors les moustiques se multiplient et les cas de paludisme augmentent.</p> <p>D'autres cas illustrent aussi l'influence des événements climatiques. L'île de Sainte-Marie a été dotée en MID par la principauté de Monaco, alors on n'a difficilement trouvé des cas de paludisme lors de l'étude faite avec l'Institut Pasteur pendant 2 mois. Mais dès que le cyclone est venu, le nombre de cas enregistrés a fortement augmenté.</p> <p>En Mars 2010, le cyclone Hubert a entraîné une destruction et une disparition des MID, surtout dans la partie Sud Est de l'île, et a aussi occasionné des problèmes psychologiques et socio-économiques, des inondations, tous ceux ci sont des facteurs de recrudescence des cas de paludisme.</p> <p>En Mars 2009, une augmentation des précipitations et une hausse de température ont augmenté le nombre de cas de paludisme à Betafo et par conséquent un besoin de plus de doses d'ACT pour la PEC des cas en vue de maîtriser ces cas.</p>	<p>2010</p> <p>Mars 2010</p> <p>2009</p>	<p>L'île de Sainte-Marie</p> <p>Partie Sud-Est de Madagascar</p> <p>Betafo</p>	<p>Une recrudescence des cas augmenterait les besoins en ACT.</p>
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	<p>En Mai 2010, suite au cyclone Joël, une augmentation des cas de paludisme a été enregistrée dans les CSB II de Bemoka et de Mahavelona des Districts de Betioky et Toliara II.</p> <p>En Mars 2009, à Maevatanana, une étude a montré la corrélation entre l'augmentation des cas de paludisme avec le changement du climat.</p>	<p>Mai 2010</p> <p>Mars 2009</p>	<p>Bemoka (dans le District de Betioky) et Mahavelona (dans le District de Toliara II)</p> <p>Maevatanana</p>	
Important economic changes affecting malaria disease burden or treatment	<p>Les changements évoqués sont les effets de la crise sociopolitique et socio-économique de 2009-2010.</p> <p>Toutes les crises affectent la vie de la population et son développement socio-économique surtout pour une population qui est déjà avec un déficit plus grande comme celle de Madagascar.</p> <p>Par exemple : il faut travailler pour manger plutôt que de traiter la santé de l'enfant. C'est un effet indirect.</p> <p>A cause de la baisse du pouvoir d'achat des ménages, la fréquence du recours à l'automédication a augmenté. Certains opérateurs du secteur privé ne sont pas enclins à l'utilisation du TDR, alors il y a des retombées négatives sur l'acquisition de médicaments.</p> <p>Il a été relevé aussi qu'à cause de la crise, il a été enregistrée une hausse globale des coûts de médicaments de spécialité de l'ordre de 25%. On n'a pas toutefois pu établir un lien direct et clair avec le paludisme, du point de vue de la charge de la maladie.</p> <p>Des études seraient les bienvenues pour établir les relations de cause à effet entre la crise, la charge du paludisme et son traitement.</p>	2009-2010	National	<p>L'aggravation de la pauvreté ainsi que la hausse des prix de médicament de spécialité due à la crise socio-économique constituent une barrière à la fréquentation par la population des centres de santé d'où leur recours à l'automédication entraînant ainsi un risque de désintéressement de la population sur le traitement du paludisme par les ACT car cette population est déjà familiarisée avec la chloroquine dont ils connaissent mieux l'utilisation.</p>

Important political events affecting malaria disease burden or treatment	<p>Concernant les changements politiques, la non reconnaissance du pouvoir de transition par la communauté internationale a eu des effets néfastes :</p> <p>Des projets d'arrêtés ne sont pas signés.</p> <ul style="list-style-type: none"> • Le mauvais fonctionnement du CCM à cause du retrait de partenaires ou des membres du gouvernement, • Le retard d'une année pour la réalisation du MID, surtout à cause de problèmes politiques et de sécurité • La fermeture de centre de santé à cause d'abandon de poste du personnel. • L'arrêt de certaines activités à cause de la coupure de certains financements. <p>En plus de la diminution de l'accès de la population au traitement du paludisme, et par conséquent de celle de la prescription d'ACT en cas de paludisme, ces effets de la non reconnaissance du pouvoir de transition bouleversent voire même bloquent la mise en œuvre de la feuille de route sur les réformes planifiées. La vraie ampleur des impacts de la crise sur la mise en œuvre de la réforme reste à déterminer clairement par des enquêtes fouillées.</p> <p>Il a été toutefois souligné que les activités d'IEC sont très importantes et qu'actuellement des efforts sont entrepris dans ce sens. Plus particulièrement, il y a l'augmentation des projets</p>	2009-2010	National	Le changement politique en 2009 a ralenti ou même régressé certaines activités liées à la lutte contre le paludisme, y compris celles relatives au traitement par ACT.

	au niveau communautaire. Ceci comblerait en partie les lacunes causées par ces effets néfastes.			
Other important health interventions with the potential to affect AMFm indicators	Aucun			
Any other events that could affect malaria disease burden or treatment seeking behavior	Aucun			
Source: AMFm Phase 1 Independent Evaluation KIIs and document review (Baseline)				

Evidence for Malaria Medicines Policy

