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ACTwatch Lite Toolkit  
Manual &  
Impelemntation Guide

Version 2.0

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# Acronyms

|  |  |
| --- | --- |
| ACT | Artemisinin-based combination therapy |
| AETD | Adult equivalent treatment dose |
| AMFm | Affordable Medicines Facility-malaria |
| GPS | Global positioning system |
| HMIS | Health management information system |
| IDI | In-depth interview |
| IRB | Institutional review board |
| LGA  LQAS | Local government area  Lot quality assurance sampling |
| MFT | Multiple first-line therapies |
| MoH | Ministry of Health |
| NGO | Non-governmental organization |
| NMP | National Malaria Program |
| NMSP | National Malaria Strategic Plan |
| PMT | Project management team |
| PPS | Probability proportional to size |
| PI | Principal investigator |
| PSI | Population Services International |
| PSU | Primary sampling unit |
| QA | Quality assurance |
| RDT | Rapid diagnostic test |
| TOR | Terms of reference |
| WHO | World Health Organization |

# Definitions and key concepts

|  |  |
| --- | --- |
| ACT | Artemisinin-based combination therapy |
| Cluster | The main sampling unit for the point-of-sale survey. This is the administrative unit used to carry out the surveys. For market research, administrative units of around 10,000-15,000 inhabitants are accepted. This is the case in countries where the ACTwatch project has been carried out in the past, and where at least one health facility or pharmacy could be found. In Nigeria and Benin, such administrative units correspond to health areas and communes, respectively. |
| Additional or boosted sample | An additional sample or booster is obtained by expanding the primary administrative unit to correspond to a larger administrative unit in order to obtain some additional outlets. In this survey, an additional sample is envisaged to obtain a higher number of pharmacies and pharmaceutical depots. |
| Supply chain levels | This study attempts to map the private sector malaria commodity supply chain and gather information at each level. General supply chain levels have been defined throughout as:   * Retail: outlets that sell directly to consumers (i.e. not for resale) * Wholesale: outlets that sell to other outlets or providers for resale. These may be terminal wholesalers that supply retail outlets or intermediate wholesalers that also or exclusively supply other wholesalers * Importer: entities that import malaria commodities for resale to wholesale or retail outlets |
| Retail outlet types | This study aims to capture information on malaria commodity availability, sales volumes, and price from the private sector. Businesses, facilities, and other entities are referred to as outlets. The types of outlets included in the study are:   * Private not-for-profit (non-governmental (NGO) or mission/faith-based) health facilities including hospitals and clinics. * Private for-profit health facilities including hospitals, clinics, and diagnostic laboratories * Pharmacies including stand-alone retail pharmacies/ community pharmacies and pharmacies linked to health facilities |

# PART A: overview of ACTwatch Lite

## Purpose

This guide is aimed at potential implementers, funders or technical partners who are interested in conducting an ACTwatch Lite study.

ACTwatch Lite is a cross-sectional market survey of private health sector providers and suppliers. The study is designed to capture representative data of malaria commodity markets at the retail and wholesale levels to 1) inform national / subnational decision-making, 2) understand drivers of market performance and target areas and channels for intervention, and 3) give national malaria programs (NMPs) essential (and otherwise unavailable) market data as they develop private sector strategies and funding requests.

Typically, data on malaria commodities in the public sector are more readily available to decision makers, but while the private sector is an important and growing source of care for febrile illness it often remains unmonitored, leaving an information gap for decision-makers involved in the control and elimination of this disease. ACTwatch studies were originally implemented from 2008-2016 to fill this data gap in 13 malaria-endemic countries in sub-Saharan Africa and the Greater Mekong Subregion. During this time, the ACTwatch studies obtained nationally or sub-nationally representative data on the availability, price, and market share of antimalarial medicines and rapid diagnostic tests (RDTs) in the public and private sectors. These data were used by national and international stakeholders to inform and shape policy on antimalarial and diagnostic regulations and private sector interventions including Affordable Medicines for Malaria (AMFm), a Global Fund initiative to subsidize quality-assured artemisinin-based combination therapies (ACTs) through the private sector. From 2023 to 2025, the ACTwatch Lite project used an updated and streamlined approach, based on the original ACTwatch methodology, to collect essential data on malaria commodity availability, price, market share, as well as basic indicators on provider behavior and outlet involvement in surveillance and regulation solely in the private sector while reducing both the time and resources necessary to implement these studies. This was made possible by technological solutions (data collection, product databases and automatic inputting of product information, and streamlined data management and cleaning – all discussed later in this guide).

This ACTwatch Lite toolkit has been developed to allow for the rapid adaptation and implementation of this methodology to fit local contexts and enable the generation of data for adaptive, fit for purpose private sector malaria case management insights, prioritization and recommendations. It allows for a standardized set of indicators to be collected, permitting comparison between countries and over time.

### Practical checklist: When could you use ACTwatch Lite?

NMPs may consider implementing the ACTwatch Lite methodology if *any* of the below-mentioned scenarios occur:

* The private sector health system is an important source of care seeking but little data exists about antimalarial and RDT commodities in the private sector itself
* Policies or regulations impacting the private sector have changed since the last time antimalarial and RDT commodity data was captured
* Concerns exist over supply chain integrity (i.e. the extent to which non-prequalified or non-nationally approved products pervade private sector markets) and data is needed for regulatory authorities to follow up and ensure compliance
* Malaria commodities in the formal private sector are well understood, but less is known about the informal sector, apart from that it is an important source of care seeking
* Word Health Organization (WHO) recommendations on multiple first-line therapies (MFT) and/or confirmatory testing before treatment are being implemented in the public sector, but less is known about these practices for customers seeking care at a private sector outlet
* Evidence is required to influence policy for improved malaria testing, treatment and reporting practices in the private sector, or you are preparing for a mid-term review, national malaria strategic plan (NMSP), or funding request (e.g. Global Fund concept notes)

### When ACTwatch Lite may not be appropriate

This is a market survey, which at its heart, emphasizes antimalarial and RDT product audits. If your country is not explicitly interested in conducting a representative market survey focusing on health commodity audits, this methodology should not be pursued.

ACTwatch contains a brief provider readiness questionnaire, which serves to contextualize audit data. However, if your country’s primary concern is provider behavior, readiness, or demand-side data generation, alternate methodologies, such as mystery clients or client exit interview, should be considered.

### Core applications: What does ACTwatch Lite offer?

#### Advocacy

ACTwatch Lite provides a powerful demonstration of the value of private sector data for local, national, and global stakeholders. Study findings are used as an advocacy tool to help secure resources necessary to enhance malaria commodity markets in the private sector. By providing credible, evidence-based insights, ACTwatch Lite supports the integration of private sector improvement initiatives into NMSP, treatment guidelines, funding proposals and funding requests.

#### Data to action: evidence for co-design

The ACTwatch methodology relies on close collaboration with key in-country stakeholders, including ministries of health (MoHs), NMPs, regulatory bodies, research institutions and implementing partners, particularly during the critical interim data review phase. This collaborative process fosters timely and meaningful discussions around generated data, encouraging honest dialogue in a trusted setting. These discussions can lead to co-creation of evidence-based interventions, directly addressing gaps in private sector malaria commodity markets revealed in the data.

#### Tracking adherence to global guidelines and national policies

Global guidelines and country policies have been laid out for private sector malaria case management or commodity vending. However, few data sources can measure the extent to which policies and guidelines are being adhered to. In lieu of routine monitoring in the private sector, ACTwatch Lite provides representative cross-sectional estimates of antimalarial and RDT price, market share and availability in the private sector. For instance, ACTwatch data demonstrated that antimalarial sales in Benin’s informal sector decreased from 80% in 2016 to just 11% by 2023. Over the same period, private sector ACT availability increased from 45% to 79% and private sector ACT market share increased from 42% to 89%.

#### Mapping and understanding supply chains

ACTwatch Lite allows country governments to better understand private sector supply chains. Supply chain mapping conducted through ACTwatch Lite helps to identify supply chain failures so that they can be properly diagnosed and corrected. For instance, through supply chain mapping in Cameroon, ACTwatch Lite clarified that those who import antimalarials are not the same as those who import RDTs. This finding highlighted the need for supply chain measurement across commodities leading to product data that allows for different and adaptive solutions to be identified.

### Expanding possibilities: What are additional or potential use cases of ACTwatch Lite?

#### More comprehensive: Full market mapping

The ACTwatch Lite design at present includes only private sector markets, as these represent the biggest data gap in the pilot countries. However, conducting ACTwatch Lite in the public and private sector simultaneously allows stakeholders to better understand the scale and interweaving of the public and private sector malaria commodity flows. Additionally, given the precipitous declines in global funding availability, public sector ACTwatch Lite data may partially fill gaps left in the face of decreased availability and quality of supply chain and logistics management information system data.

Inclusion of the public sector in this methodology may also glean insights into the products that are being prescribed in addition to antimalarials. A recent U.S. President’s Malaria Initiative-funded study[[1]](#footnote-2) demonstrated that in addition to the prescription of free ACTs, patients were required to purchase other commodities like paracetamol and vitamins, highlighting the challenges associated with a cost-recovery-oriented public sector system.

#### Faster and less expensive: ACTwatch *Ultra Lite*

In the context of reduced global funding availability, it is critical to explore ways of cutting ACTwatch Lite survey costs while maintaining representativeness at levels required for programmatic decision making. ACTwatch Lite has been designed to be modular, allowing users to tailor study materials to capture a subset of indicators that are relevant to the questions at hand. ACTwatch Lite can be trimmed down to indicators prioritized by a given country, such as only those associated with antimalarial audits. ACTwatch Lite’s modifiable geographic scope can be defined as nationally representative, requiring a larger scale survey, or sub-nationally representative, targeting specific areas that are at-risk, or undergoing an intervention of interest.

Implementors may also consider integrating ACTwatch Lite (or parts of it) into existing data collection activities / systems including: Heath Management Information Systems (HMIS), private sector supervision systems, or combining with other studies (e.g. Malaria Indicator Surveys, therapeutic efficacy studies, lot quality assurance sampling (LQAS), resistance monitoring or quality monitoring surveys).

Another approach to consider is completing a standard ACTwatch Lite study for baseline data, then following up on priority indicators using an LQAS (or similar) methodology. For example, after the completion of a typical ACTwatch Lite baseline data collection round, implementors could consider removing supply chain and provider readiness sections and follow up specifically on antimalarial and RDT audit indicators.

#### Repeat implementations: Longitudinal tracking

Pilot implementations of ACTwatch Lite serve as the baseline against which data from future survey rounds may be compared. When repeated, ACTwatch Lite will allow for the measurement of changes, both nationally and sub-nationally, of key indicators over time. Other indicators, like MFT readiness and market penetration of specific products may also be examined over time. A further benefit of ACTwatch Lite is that key indicators for availability, price and market share are defined the same as the original ACTwatch study, allowing for comparative analysis given geographic and methodological overlap.

#### Expanding with new modules

**Auditing other health commodities:** The conversion of the ACTwatch methodology to capture evidence on family planning commodities[[2]](#footnote-3) has been shown to be feasible. Leveraging the ACTwatch approach in the context of antimicrobial drug resistance and increasing need to monitor antimicrobial product availability and market share, further adaptation efforts could be made for antibiotics. Further, the methodology could be adapted for commodities like tuberculosis medications, antiretrovirals, other diagnostics such as HIV home test kits, or even products used to facilitate improved water, sanitation and hygiene practices.

**Parallel product quality testing:** A product quality testing module could be added to an ACTwatch Lite study, leveraging the outlet level market study methodology to sample products from visited outlets. Implementors may consider introducing a mobile ‘mini-lab’ component to their research to more fully understand the extent to which counterfeit and sub-standard products are an issue in the private sector of their study areas.

**Capturing contemporaneous demand-side data:** ACTwatch Lite generates supply-side data in the private sector. However, it is not currently calibrated to fully contextualize these data with consumer and demand-side drivers. In the family planning space, studies like Consumer’s Market for Family Planning (CMF4P)[[3]](#footnote-4) and Performance Monitoring Action (PMA)[[4]](#footnote-5) and have successfully linked the supply- and demand-sides to create a more complete picture of the market. For a fuller understanding of private sector malaria commodity stocking and vending practices, implementors may consider expanding the ACTwatch Lite methodology to incorporate the client and demand-side modules.

### What are National Programs saying?

|  |
| --- |
| **What are National Malaria Programs and partners from ACTwatch Lite-implementing Countries Saying?**  **Paraphrased statements made by NMCP and SANRU representatives, June 2025**  **Nigeria**  The Nigeria National Malaria Elimination Program conducted its thematic text review, an activity that is the precursor to the development of the National Strategic Plan. ACTwatch Lite data was used to guide private sector intervention results measurement.  **Cameroon**  ACTwatch Lite data showed us that there were improvements in the malaria situation. Conducting a follow-up round of ACTwatch Lite through our Global Fund Grant Cycle 8 funding request would allow us to further examine trends in key data points, for example, around RDT availability and the removal of oral artemisinin monotherapies.  **Benin**  The results of ACTwatch Lite allow for the reinforcements of the interventions being tested. It does not mean that once the study is complete, we should cross our fingers and wait for things to be ok. Rather, we should keep improving and monitoring interventions. For example, with Population Services International’s (PSIs) support (through an intervention planned, in part, using ACTwatch data), we’re assuring that people coming for ACTs are getting tested with RDTs.  **DRC**  Early ACTwatch data allowed the government to see the gap in RDT availability. ACTwatch Lite data will feed into quality-of-care improvement in the private sector by providing us with data like – which products are on the market? Are they WHO pre-qualified? Which importers should the government work with to ensure quality products are in the private sector? |

## What IS the ACTwatch Lite toolkit?

The ACTwatch Lite toolkit includes comprehensive guidelines for implementation, as well as a standardized but adaptable package of assessment materials tied to an indicator framework, including questionnaires, templates for a protocol, report, budget, etc. detailed in

**Table 1 ACTwatch Lite Toolkit Content**: These tools can be adapted based on the objectives, scope and context of the ACTwatch Lite implementation. Tools may also be integrated with programmatic activities and routine monitoring of the private sector or as part of a broader health facility assessment or audit. Additionally, the tools may be expanded to capture information on other relevant health commodities.

Table 1 ACTwatch Lite Toolkit Content

|  |  |  |
| --- | --- | --- |
| **1** | [Manual and implementation guide](https://psiorg.sharepoint.com/:f:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/01%20Manual%20and%20implementation%20guide?csf=1&web=1&e=FJhcoo) | Provides comprehensive guidance on study design, planning, data collection, analysis, and dissemination for implementing an ACTwatch Lite study |
| **2** | [Indicator table & qualitative themes](https://psiorg.sharepoint.com/:f:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/02%20Indicator%20table%20%26%20qualitative%20themes?csf=1&web=1&e=uBmJWM) | Lists all core and optional additional quantitative indicators and qualitative analysis themes to guide study objectives and analysis |
| **3** | [Desk review & stakeholder mapping](https://psiorg.sharepoint.com/:f:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/03%20Desk%20review%20%26%20stakeholder%20mapping?csf=1&web=1&e=bGHlfp) | Includes tools for conducting a landscape review of the private sector and mapping key stakeholders to inform study design and engagement |
| **4** | [Protocol template and references](https://psiorg.sharepoint.com/:f:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/04%20Protocol%20template%20and%20references?csf=1&web=1&e=VgmCSF) | A customizable study protocol template with example text and references to support ethics submissions and standardize methodology |
| **5** | [Budget and workplanning tools](https://psiorg.sharepoint.com/:f:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/05%20Budget%20and%20workplanning%20tools?csf=1&web=1&e=waX0oc) | Pre-formatted workbooks for estimating and planning study activities and associated timelines and costs across all phases and resources |
| **6** | [Sampling tool](https://psiorg.sharepoint.com/:f:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/06%20Sampling%20tool?csf=1&web=1&e=NyR4Wy) | A PPS (probability proportional to size) sample size calculator to determine the number of clusters and outlets to include in the study with additional notes for use |
| **7** | [Product masterlists](https://psiorg.sharepoint.com/:f:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/07%20Product%20masterlists?csf=1&web=1&e=LB8gF9) | Reference tables of known antimalarial and mRDT products (by brand, strength, formulation, etc.) used to support data collection and cleaning |
| **8** | [Terms of reference templates](https://psiorg.sharepoint.com/:f:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/08%20Terms%20of%20reference%20templates?csf=1&web=1&e=xknMBX) | Editable template for recruiting research agencies to support implementation |
| **9** | [Training materials](https://psiorg.sharepoint.com/:f:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/09%20Training%20materials?csf=1&web=1&e=8jxUnX) | Slide decks, facilitator notes, quizzes, photo banks, and other resources for training fieldworkers and supervisors on study background, tools, and field procedures |
| **10** | [Qualitative interview guide](https://psiorg.sharepoint.com/:f:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/10%20Qualitative%20interview%20guide?csf=1&web=1&e=N7JYFO) | A semi-structured guide for interviews with importers, distributors, and wholesalers to capture upstream market dynamics |
| **11** | [Quantitative data collection tool](https://psiorg.sharepoint.com/:f:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/11%20Quantitative%20data%20collection%20tool?csf=1&web=1&e=7yXdcB) | An Open Data Kit (ODK)/XLS Form-based data collection tool for outlet and product-level data on availability, price, volumes, and provider behavior |
| **12** | [**Analysis syntax**](https://psiorg.sharepoint.com/:f:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/12%20Analysis%20syntax?csf=1&web=1&e=27AqY1) | Pre-written Stata code for cleaning, management, and analysis of ACTwatch Lite data to generate all core and additional provider indicators |
| **13** | [**Results output**](https://psiorg.sharepoint.com/:f:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/13%20Results%20output?csf=1&web=1&e=MsTJIR) | Pre-formatted workbooks where data tables from Stata are output, formatted, and used to populate visualizations for reviewing and sharing key results for core indicators |
| **14** | **[Report template and references](https://psiorg.sharepoint.com/:f:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/14%20Report%20template%20and%20references?csf=1&web=1&e=JrBfQU)** | A customizable, comprehensive report template with suggested structure, text, and citation guidance to facilitate consistent reporting and dissemination |

## 

## What does ACTwatch Lite assess?

ACTwatch Lite is designed to help NMPs answer practical questions such as:

* What types of malaria commodities are available and affordable across different private sector outlets?
* Are providers aligning with national case management guidelines, including diagnostic testing before treatment?
* What are the strengths and weaknesses of the current regulatory, pricing, and supply systems?
* Where should policy or programmatic efforts focus to improve access to quality-assured diagnostics and treatments?

The ACTwatch Lite study is designed to assess all levels of the private sector market and supply chain for malaria commodities and case management.

At the retail level, information from each outlet with the potential to stock malaria commodities[[5]](#footnote-6) is collected on the outlet characteristics, provider knowledge and case management practices, business practices, participation in surveillance, regulation, and monitoring, and information on the outlet’s main malaria commodity suppliers. Moreover, all malaria commodities available on the day of study at these outlets are audited to capture product information (e.g. brand, type of drug/ test, manufacturer, active ingredients or antigen test type, etc.) as well as the product price, volume sold in the past week, and price paid by the outlet from their supplier. These data are used to calculate core and additional provider indicators, including availability, price, and market share. The complete list of quantitative indicators which can be assessed using this toolkit are detailed in the [**ACTwatch Lite Indicator Table**](https://psiorg.sharepoint.com/:x:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/02%20Indicator%20table%20%26%20qualitative%20themes/ACTwatch%20Lite%20Indicator%20Table.xlsx?d=w853a6a0d380741b990311440da181e38&csf=1&web=1&e=4BpW0i)**.**

For higher levels of the supply chain, a qualitative approach is used to capture information from key players in the importation, distribution, and wholesale of malaria commodities. Information is thematically structured to gather and assess details on product availability, pricing, sales revenues, distribution networks and practices, competition, and regulations. Qualitative themes assessed using this toolkit are detailed in the [**ACTwatch Qualitative Themes Table**](https://psiorg.sharepoint.com/:x:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/02%20Indicator%20table%20%26%20qualitative%20themes/ACTwatch%20Lite%20Indicator%20Table.xlsx?d=w853a6a0d380741b990311440da181e38&csf=1&web=1&e=4BpW0i)**.**

Survey data collection and analysis tools are mapped to these indicators so that standardized outputs can be generated for selected indicators and comparisons can be made over time or between countries. An ACTwatch Lite study can be adapted to assess priority indicators alone or expanded to capture other relevant information from surveyed outlets. Tools can be adapted to suit various scenarios. For example, the toolkit could be adapted for a **rapid assessment[[6]](#footnote-7)** of priority indicators through audits of antimalarials at select outlets visited during programmatic monitoring or supervision.

## 

## What are the expected outcomes from ACTwatch lite?

The ACTwatch Lite toolkit enables the production of ready-to-use results. Each indicator can be summarized by data tables, automatically disaggregated by outlet type, urbanicity, and study strata using standardized Stata analysis syntax and Microsoft Excel templates. **Core indicators[[7]](#footnote-8)** are also presented as automatically formatted figures and tables.

ACTwatch findings are, in and of themselves, an advocacy tool to help secure resources for private sector malaria improvement efforts. Critically, ACTwatch Lite data also equip NMPs and other stakeholders with evidence to inform strategic decisions and co-design responsive interventions. Additionally, results are used to track global guidelines and national policies. Outcomes are also used to map and understand domestic supply chains for improved oversight and subsidy targeting.

## How should the team be structured and who should be involved?

## ACTwatch Lite organigram

A diagram of a company

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|  |  |  |
| --- | --- | --- |
|  | Position Title | Job Responsibilities |
| **1** | **Principal Investigator/Lead Researcher** | The Principal Investigator provides wide-ranging technical guidance and oversight, leading the research team and serving as the main technical focal point for the study. They are expected to provide support and supervision during study design, fieldworker training, fieldwork, analysis, reporting and dissemination.  **The Principal Investigator (PI) assumes full responsibility and is ultimately accountable for the study. This includes oversight of research staff engaged in the study, compliance with the protocol, compliance with governing regulations, and ensuring requirements of the reviewing institutional review board or independent ethics committee are met. The principal investigator is responsible for ensuring that human subjects protections are followed in accordance with the approved protocol. A PI must have the training, experience, and qualifications to conduct the study, including completion of any required training for local regulatory compliance.** |
| **2** | **Research Team: Minimum of 2 full-time research advisors** | The Research Team will lead and support the design, implementation, research quality and ethical compliance of the ACTwatch Lite study. The Research Team will, alongside the Principal Investigator, co-develop the study design and protocol, fieldwork approaches, and data cleaning and analysis plans. The Research Team will also co-lead fieldworker training, oversee fieldwork, support adaptation of the study design, conduct data monitoring, cleaning and analysis, and support the packaging and dissemination of results to the broader public health community. Research advisors should have a minimum of 5 years’ relevant experience conducting large scale quantitative or mixed methods research. For data cleaning and analysis, the research team may include 1 or more suitably qualified quantitative data analysts. Qualitative data analysis and reporting should be conducted by either a member of the overall research team or suitably qualified qualitative researcher. |
| **3** | **Program Management Team** | The designated Program Management Team (PMT) will provide wide-ranging project management to the ACTwatch Lite study. The PMT will work with program partners, government and community stakeholders, technical and service departments, and subcontractors to ensure project objectives are met to high standards of quality and timeliness and are in compliance with organizational and program requirements. Day-to-day tasks may vary, but will span budgetary, contractual, logistical and administrative tasks related to the project. If applicable, the PMT will support country, project, or departmental leadership with donor relations. |
| **4a** | **Field Team Supervisors** | Field team supervisors are responsible for the oversight, development and implementation of deployment plans and strategies, as well as the direct management of data collection teams. They may also be required to troubleshoot data quality and electronic tool issues, as well as perform routine quality checks as data are collected. Field team supervisors should be well-versed in study implementation, particularly in market studies or health research, and in some cases may also be responsible for local advocacy and managing quality assurance (QA) measures. Supervisors will also be expected to take part in fieldwork training, and in some cases may be asked to co-lead portions of it, especially in roleplay scenarios and field tests. |
| **4b** | **Data Collectors**  **(quantitative)** | Quantitative data collectors will be managed directly by Field Team Supervisors (or external research agency if contracted), with technical oversight and management from the Principal Investigator and Research Team. Quantitative data collectors are expected to undergo fieldwork training, be well-versed in study objectives and materials, conduct the quantitative data collection tool, and flag quality assurance issues to supervisors and the research team as needed. Study leadership may choose to identify team leaders during training from among the group of data collectors to support the implementation and fieldwork management. They may be required to troubleshoot basic electronic tool issues, delegate team tasks during data collection, and communicate additional issues within the field to supervisors and the Research Team. |
| **4c** | **Interviewers**  **(qualitative)** | Qualitative interviewers will be managed directly by Field Team Supervisors (or external research agency if contracted), with technical oversight and management from the Principal Investigator and Research Team. Qualitative interviewers are expected to undergo fieldwork training, be well-versed in study objectives and materials, conduct the qualitative interview tool, and flag quality assurance issues to supervisors and the research team as needed. |
| **5** | **External Research Agency (optional)** | In some iterations of the ACTwatch Lite study, the implementing organization may choose to seek the services of an external research agency to conduct data collection. In this instance, a [terms of reference (TOR)](https://psiorg.sharepoint.com/:w:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/08%20Terms%20of%20reference%20templates/ACTwatch%20Data%20collection%20agency%20TOR%20Template.docx?d=wd7ed29dbc5b5445d8f8aa8b6c7725ca0&csf=1&web=1&e=2Y1ivt) is provided in the toolkit outlining the different roles and responsibilities of an external research agency. An external research agency would be able to provide the full range of skills and duties that an in-house field team would. |

## What is the ACTwatch lite methodology?

ACTwatch Lite is a market survey of malaria commodities across the supply chain. ACTwatch Lite implementation will vary based on objective and scope, but core indicators – such as availability, price, and market share – should remain standardized.

To assess malaria commodities at all levels of the supply chain, the study is conducted in two components:

|  |
| --- |
| Component 1: Quantitative market survey At the retail level, a quantitative questionnaire is administered through a census approach (visiting all outlets in the sampling frame with the potential to sell malaria commodities, such as health facilities, hospitals, pharmacies, shops, labs, etc.). The main suppliers from each outlet are captured and used to inform a list of wholesalers (either terminal or intermediate) who are also interviewed using the quantitative questionnaire if in the sampled area Component 2: Qualitative supply chain interviews For higher levels of the supply chain, including importers, local manufacturers, distributors, and wholesalers, a qualitative interview guide is available to capture a subset of business practices indicators. |

Sampling of study areas for an ACTwatch Lite study implementation should be adapted to suit the needs of the program and decision makers. Key considerations for sample design include: 1) required level of representativeness (for example, are nationally representative results required, or would a selection of sub-national regions, or a focus on only urban areas be sufficient for NMP decision making? 2) Precision: What level of precision is needed for key indicators being measured? 3) Budgetary realities: What is the budget available to conduct fieldwork? 4) Scope: Do you want to study the full private sector, or only certain outlet types? Note that exclusion of certain outlet types will limit the conclusions that can be drawn about the total private sector, including market share and sales volumes. A tool for calculating a market survey sample (nationally or sub-nationally representative) is available in the toolkit and requires country-specific data inputs including required precision of estimates ([**[Sampling Tool](https://psiorg.sharepoint.com/:x:/r/sites/ACTWatchLite/Shared Documents/2. Technical/0. Toolkit/ACTwatch Lite Toolkit v1/05 Sampling tool/ACTwatch Lite Sample Size Tool.xlsx?d=wfd59e1cf58de482da6b5c8b5ebc71323&csf=1&web=1&e=HgSHAi)**](https://psiorg.sharepoint.com/:x:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/06%20Sampling%20tool/ACTwatch%20Lite%20Sampling%20Tool.xlsx?d=wd9f83705494e4f54b849aaa48a9693e9&csf=1&web=1&e=tlUd7L)). The study design allows for representative estimates of key indicators to be produced. The data are representative at whichever level is determined by the implementers (and maybe at national, regional, or some other level). The sampling approach taken will determine the level of representativeness. Further considerations to increase sample efficiency include the use of multistage cluster sampling, which should be designed on a case-by-case basis with the support of a methodologist/ statistician. We provide [**budget guidance**](https://psiorg.sharepoint.com/:f:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/05%20Budget%20and%20workplanning%20tools?csf=1&web=1&e=2CdXaf) to help implementers estimate the costs of an ACTwatch Lite study under different scenarios, and encourage discussion of study objectives, scope and sample design with key stakeholders at an early stage.

Ethical review and approval of an ACTwatch Lite study will depend on which elements of the ACTwatch Lite study are included/excluded, local laws and regulations, as well as future intent to publish findings. A research determination and if needed, submission to an institutional review board (IRB) or other regulatory approvals should be conducted by a suitably qualified person according to local regulations. General guidance is provided in the Implementation Guide but must be tailored to country context.

**This Implementation Guide further details the methodology, tools, and steps for an ACTwatch Lite study organized into five phases (and color-coded as shown):**

|  |  |
| --- | --- |
| **1 PROJECT INITIATION** | including stakeholder mapping, setting the study scope and objectives, and initial workplan and budget development |
| **2 PROTOCOL AND TOOL DEVELOPMENT** | including refinement of the protocol template, quantitative questionnaire, and qualitative interview guide based on objectives, scope and data availability, and submission to IRB for ethical clearance (as required) |
| **3 DATA COLLECTION** | including fieldworker training, pre-tests, set-up, field implementation of the outlet census and qualitative interviews, mop-up, and quality control measures. |
| **4 ANALYSIS AND RESULTS GENERATION** | including data management, cleaning, and analysis using standardized analysis syntax and template results workbooks with shell tables and figures |
| **5 DISSEMINATION AND DATA USE** | including initial presentation of results to stakeholders, and data use/action workshops. |

*The implementation guidance in this document is presented for a comprehensive cross-sectional study focused on malaria commodities in the private sector; however, notes are included on where and how these tools and processes may be tailored to other scenarios or further streamlined.*

## What’s Next?

In summary, the ACTwatch Lite toolkit is a standardized package of tools which can be used in a variety of contexts to implement a market study or monitor malaria commodities in the private sector. The core aims of an ACTwatch Lite implementation are to assess availability, price, and market share of malaria commodities. To get started on your own ACTwatch Lite implementation, continue reading this implementation guide below. The subsequent sections of this guide detail each phase of a comprehensive ACTwatch study and describe the available tools and steps for contextualizing and implementing each.

**Additional resources and reading are provided in the toolkit including materials from previous ACTwatch Lite studies for reference.**

# PART B: ACTwatch Lite Implementation guide

## How to use this guide:

This section is organized by study phase, and color-coded as shown below:

|  |
| --- |
| **1 PROJECT INITIATION** |
| **2 PROTOCOL AND TOOL DEVELOPMENT** |
| **3 DATA COLLECTION** |
| **4 ANALYSIS AND RESULTS GENERATION** |
| **5 DISSEMINATION AND DATA USE** |

Within each phase, key steps are highlighted and guidance provided. Toolkit tools and notes on adaptation or contextualization are included alongside these steps. As with any study implementation, phases and activities are non-linear and may occur simultaneously or iteratively. The guidance below provides a workflow that should be adapted to your specific implementation. For this, the toolkit includes a general [**Workplan Tool**](https://psiorg.sharepoint.com/:x:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/05%20Budget%20and%20workplanning%20tools/ACTwatch%20Lite%20Workplan%20Tool.xlsx?d=wbb3800af708747df9bff62cc4a3c4d7d&csf=1&web=1&e=lezhim) which is organized by phase and includes each of the steps detailed below

## Phase 1: Project initiation

Key activities and associated tools or guidance for Phase 1 included in this toolkit are:

|  |  |
| --- | --- |
| Key Activities | Tool/ Guidance |
| Conduct stakeholder mapping and engagement | [**Stakeholder Mapping Guide**](https://psiorg.sharepoint.com/:w:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/03%20Desk%20review%20%26%20stakeholder%20mapping/ACTwatch%20Lite%20Stakeholder%20Mapping%20Guidance.docx?d=w9227fa5c36b147cfa8d19a6fc232460d&csf=1&web=1&e=eRqx80) |
| Define the objectives, scope, and methods for the study; select tools and methodologies that align with the study’s objectives | [**Indicator table**](https://psiorg.sharepoint.com/:x:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/02%20Indicator%20table%20%26%20qualitative%20themes/ACTwatch%20Lite%20Indicator%20Table.xlsx?d=w853a6a0d380741b990311440da181e38&csf=1&web=1&e=c3y7zy)[**Qualitative themes**](https://psiorg.sharepoint.com/:x:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/02%20Indicator%20table%20%26%20qualitative%20themes/ACTwatch%20Lite%20Qualitative%20Themes.xlsx?d=w214f53ab99f046ee9a4d1f36a4065fb4&csf=1&web=1&e=vPGE8A) |
| **Develop a budget and workplan** | [**Workplan Tool**](https://psiorg.sharepoint.com/:x:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/05%20Budget%20and%20workplanning%20tools/ACTwatch%20Lite%20Workplan%20Tool.xlsx?d=wbb3800af708747df9bff62cc4a3c4d7d&csf=1&web=1&e=Bxq0jl)  [**Budget tool**](https://psiorg.sharepoint.com/:x:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/05%20Budget%20and%20workplanning%20tools/ACTwatch%20Lite%20Budget%20Tool.xlsx?d=w78f58e90d3f14750b51cc261962d75b9&csf=1&web=1&e=hGddmx)  [**Budget notes**](https://psiorg.sharepoint.com/:w:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/05%20Budget%20and%20workplanning%20tools/ACTwatch%20Lite%20Budget%20Notes.docx?d=w95657811d89c410283f0f1db5333f17c&csf=1&web=1&e=XmXupk) |
| **Identify and recruit key research personnel**  **Refine a Request for Proposals to identify and hire a research agency to support data collection where needed** | **See Organigram, above**  [**Research Agency and Consultant Terms of Reference Templates (Optional)**](https://psiorg.sharepoint.com/:f:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/08%20Terms%20of%20reference%20templates?csf=1&web=1&e=R0GR0h) |
| Complete desk review of the current private health sector malaria market and supply chain | [**Desk Review Guide**](https://psiorg.sharepoint.com/:w:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/03%20Desk%20review%20%26%20stakeholder%20mapping/ACTwatch%20Lite%20Desk%20Review%20Guidance.docx?d=wbe7414bec5f14371863db42c9dd6f0c7&csf=1&web=1&e=B8bfy3) |

### Conduct stakeholder mapping and engagement

The first phase of the ACTwatch Lite study is to define the purpose, objectives, and methods. This should be a consultative process involving the study team, the NMP / MoH and other in-country decision makers, partners, and other key stakeholders, so these partners and stakeholders must be identified at the initiation of the project. It is suggested that a stakeholder mapping is conducted to (1) identify key stakeholders and decision makers, (2) analyze their potential influence and gauge interest in the study, (3) determine how study results will be used, (4) map relationships and engagement pathways, and (5) prioritize partnership and roles. The WHO’s stakeholder mapping guide for family planning projects can be adapted for this exercise.[[8]](#footnote-9) Additional guidance specific to an ACTwatch market study is provided in the [**Stakeholder Mapping Guide**](https://psiorg.sharepoint.com/:w:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/03%20Desk%20review%20%26%20stakeholder%20mapping/ACTwatch%20Lite%20Stakeholder%20Mapping%20Guidance.docx?d=w9227fa5c36b147cfa8d19a6fc232460d&csf=1&web=1&e=eRqx80)**.**

Once stakeholders are identified, a kick-off meeting with relevant stakeholders is recommended to define the scope of the study and establish available resources and essential roles and responsibilities. The outcome of this phase should be to comprehensively map relevant stakeholders to then be included in preliminary discussions on the scope, objectives, and implementation methods. Outcomes from this mapping and engagement will feed into the study protocol (Phase 2). Relevant stakeholders should then continually be engaged throughout the study process to set objectives, finalize tools, conduct sensitization at local levels, support trainings, data collection supervision, dissemination, interpretation, and actionizing results.

### Define the study scope, methods, and resources in collaboration with stakeholders

The scope[[9]](#footnote-10) of the study should be refined or tailored to the context and specific questions of the country or area of interest. The toolkit includes a table of key indicators that can be assessed using the rest of the tools in the toolkit. Consider desired outcomes or key objectives of your implementation and use the [Indicator Table](https://psiorg.sharepoint.com/:x:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/02%20Indicator%20table%20%26%20qualitative%20themes/ACTwatch%20Lite%20Indicator%20Table.xlsx?d=w853a6a0d380741b990311440da181e38&csf=1&web=1&e=c3y7zy) to define the study scope and identify which tools and methodologies will be used. This should be done in close collaboration with key project stakeholders to ensure alignment with their needs and expectations for the study.

Once the scope is established, the relevant tools can be selected and tailored to indicators of interest. The tools within the toolkit are designed to be modular and tied to this indicator table so that content can be easily added or removed based on the study scope. For example, the provider interview questions on digital infrastructure and use may not be relevant in assessing the informal sector and removed for this group or from a study implementation entirely. Conversely, the provider interview could be expanded with additional questions capturing information about the outlet (for a more comprehensive health facility assessment) or the respondent. ACTwatch tools could be expanded to include other disease areas. The audit tools could be adapted to capture other types of health commodities. More on refining tools is detailed in Phase 3.

### Develop a budget and workplan

Alongside these discussions with stakeholders on the study scope, a workplan and budget should be finalized. Templates and guidance for developing a workplan and corresponding budget are provided in the [**Workplan Tool**](https://psiorg.sharepoint.com/:x:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/05%20Budget%20and%20workplanning%20tools/ACTwatch%20Lite%20Workplan%20Tool.xlsx?d=wbb3800af708747df9bff62cc4a3c4d7d&csf=1&web=1&e=4gg1ve) and [**Budget Tool**](https://psiorg.sharepoint.com/:x:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/05%20Budget%20and%20workplanning%20tools/ACTwatch%20Lite%20Budget%20Tool.xlsx?d=w78f58e90d3f14750b51cc261962d75b9&csf=1&web=1&e=JhV0N5).

### Recruit research personnel

In the ACTwatch Lite Organigram (above)**Error! Reference source not found.**, key personnel for the study have been outlined and described. Where applicable, In some iterations of the ACTwatch Lite study, the implementing organization may choose to seek the services of an external research agency to conduct data collection. In this instance, a terms of reference (TOR) is provided in the toolkit outlining the different roles and responsibilities of an external research agency. An external research agency would be able to provide the full range of skills and duties that an in-house field team would.the [**Consultant TOR Template**](https://psiorg.sharepoint.com/:w:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/08%20Terms%20of%20reference%20templates/ACTwatch%20Consultant%20TOR%20Template.docx?d=w197dcf30c12e48ce966cbda063b99389&csf=1&web=1&e=iVOMwv) contains editable outlines for the qualifications and profile of research consultants that may be recruited externally if not already on staff. Further, a[**Research Agency TOR Template**](https://psiorg.sharepoint.com/:w:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/08%20Terms%20of%20reference%20templates/ACTwatch%20Data%20collection%20agency%20TOR%20Template.docx?d=wd7ed29dbc5b5445d8f8aa8b6c7725ca0&csf=1&web=1&e=eIE9AN) has been developed to facilitate the contracting process with a local research agency (if applicable). This document will assist in the development of a research agency scope of work, ensure that the research agency meets required qualifications and submits necessary financial and proposal documentation, and establishes timelines, deliverables, and other responsibilities. If an implementing organization does not require a research agency to conduct data collection, the template may still be useful for planning and task delegation purposes.

It may be helpful to develop a concept note, terms of reference, or memorandum of understanding between the study team/implementer and other stakeholders highlighting the key components of the implementation, roles and responsibilities, deliverables, etc. and seek sign-off from all parties.

Publishing findings for external audiences is a time-intensive, and therefore costly, step. It is advisable to consider how your team wishes to disseminate study findings during this phase, to ensure that sufficient time and finances are budgeted. Considerations may include copy editing services, attendance at conferences and manuscript publications fees.

### Complete a desk review of existing information on the private sector supply chain

A desk review should be completed at the start of the study during project initiation to inform study design, scope, and stakeholder engagement. This review compiles existing information on the health system structure, with a focus on the private sector and malaria commodity supply chains (or as relevant for your study). Key outputs should include: (1) a list of registered antimalarials and RDTs, (2) categories and types of private sector providers and outlet types, (3) key supply chain actors at each level (e.g., importers, wholesalers, distributors), and (4) relevant policies, regulations, or initiatives related to private sector malaria case management. This information is used to inform stakeholder mapping and background sections of the protocol and to better refine and contextualize the ACTwatch implementation. A guide for a desk review to compile this information is included in the [Desk Review Guide](https://psiorg.sharepoint.com/:w:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/03%20Desk%20review%20%26%20stakeholder%20mapping/ACTwatch%20Lite%20Desk%20Review%20Guidance.docx?d=wbe7414bec5f14371863db42c9dd6f0c7&csf=1&web=1&e=PI8Edh).

## Phase 2: Protocol and tool development

|  |  |
| --- | --- |
| Key Activities | Tool/ Guidance |
| Draft the study protocol | [**Protocol templa****te**](https://psiorg.sharepoint.com/:w:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/04%20Protocol%20template%20and%20references/ACTwatch%20Lite%20Protocol%20Template.docx?d=w3fa027020cfc473abf50a42006259524&csf=1&web=1&e=sKfvd9) |
| Tailor and contextualize data collection tools | **[Qualitative interview guide](https://psiorg.sharepoint.com/:x:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/10%20Qualitative%20interview%20guide/ACTwatch%20Lite%20Qualitative%20Interview%20Guide.xlsx?d=w2145895a92ba4b178e45fa560f38589f&csf=1&web=1&e=O1oHYn)**  [**Quantitative data collection tool**](https://psiorg.sharepoint.com/:f:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/11%20Quantitative%20data%20collection%20tool?csf=1&web=1&e=52gmys) |
| Confirm Eligibility criteria | [**Protocol template**](https://psiorg.sharepoint.com/:w:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/04%20Protocol%20template%20and%20references/ACTwatch%20Lite%20Protocol%20Template.docx?d=w3fa027020cfc473abf50a42006259524&csf=1&web=1&e=sKfvd9)  [**Stakeholder mapping guide**](https://psiorg.sharepoint.com/:w:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/03%20Desk%20review%20%26%20stakeholder%20mapping/ACTwatch%20Lite%20Stakeholder%20Mapping%20Guide.docx?d=w9227fa5c36b147cfa8d19a6fc232460d&csf=1&web=1&e=8mrPvK) |
| Define the sampling strategy | [**Sampling tool**](https://psiorg.sharepoint.com/:x:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/06%20Sampling%20tool/ACTwatch%20Lite%20Sampling%20Tool.xlsx?d=wd9f83705494e4f54b849aaa48a9693e9&csf=1&web=1&e=TfR0sg) |
| Submit for ethical approval | **Ethics approval should be researched and documented during the** [**desk review**](https://psiorg.sharepoint.com/:w:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/03%20Desk%20review%20%26%20stakeholder%20mapping/ACTwatch%20Lite%20Desk%20Review%20Guide.docx?d=wbe7414bec5f14371863db42c9dd6f0c7&csf=1&web=1&e=Xftycy) |

### Draft the study protocol

|  |  |
| --- | --- |
| The toolkit includes a [**protocol template**](https://psiorg.sharepoint.com/:w:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/04%20Protocol%20template%20and%20references/ACTwatch%20Lite%20Protocol%20Template.docx?d=w3fa027020cfc473abf50a42006259524&csf=1&web=1&e=sKfvd9)  that can be used as the starting point for drafting a protocol for your implementation.  Within the template, some content has been retained where it may be useful and other TEXT IN RED CAPS indicates where country, and/or study-specific content is needed. All parts of the protocol should be reviewed and modified for local conditions and regulations. Local IRB or regulatory approvals may require specific a format, layout or include protocol sections that are not in this document. Please ensure the final study protocol complies with local regulations.  The sections of the protocol and associated tools/guidance are summarized to the right.  As detailed in Phase 1, use information compiled in the Desk review for detailing the country context and background and the Indicator Table to clarify the scope and methods. | **Protocol outline:** |
| 1. Introduction 2. Background 3. Study rationale 4. Research objectives 5. Methods    1. Component 1: Qualitative supply chain interviews    2. Component 2: Quantitative market survey    3. Scope & strata    4. Sample size, approach, and boosters    5. Conducting an outlet census 6. Data collection    1. Roles and responsibilities    2. Training    3. Field procedures and data quality monitoring 7. Data management and analysis    1. Storage and confidentiality    2. Analysis 8. Dissemination and data use 9. Ethical considerations 10. Consent 11. Annex     1. Timeline     2. Study information sheets     3. Consent forms     4. Qualitative questionnaire     5. Quantitative questionnaire |

Once key stakeholders are identified and informed and the overall objectives and scope of the implementation, general workplan and budget are clear, the next step is to draft a protocol[[10]](#footnote-11). The protocol should articulate the objectives, scope, and methods (including sampling strategy) of the implementation, as well as the tools to be utilized, and ethical considerations.

### Tailor and contextualize data collection tools

Once the background, objectives, scope, and methods are established, the relevant data collection tools can be selected and tailored to indicators of interest. This toolkit is designed primarily for a study to be implemented with all elements included. However, should certain study elements not be required or be out of scope, the protocol and tools should reflect that selection.

A standard ACTwatch Lite implementation includes both quantitative and qualitative data collection designed to capture information at all levels of the supply chain. These tools and associated methods are summarized in the table below

|  |  |  |  |
| --- | --- | --- | --- |
| Method | Approach | Tool | Target population |
| Quantitative | Full census market survey | ODK-based quantitative data collection tool programmed for SurveyCTO, but could be generalized or translated for any ODK platform (e.g. Kobo) | All outlets within sampled areas with the potential to sell malaria commodities and their suppliers |
| Qualitative | In-depth key informant interviews | Microsoft Excel-based qualitative interview guide | Actors in higher levels of the supply chain, such as drug importers, distributors, local manufacturers, or wholesale business owners. |

To tailor tools for your implementation, select data collection tools based on your study method and approach, then refine tools based on the objectives and scope. Remove, edit, or add sections/ elements as needed based on indicators of interest.

Next, identify sections or elements within tools that require country specific information such as license and registration, list of outlet types, first-line treatment, surveillance process. These have been indicated with TEXT IN RED CAPS.

For the quantitative data collection tool, you will need to compile a list of known outlets where possible (such as lists of registered hospitals, health facilities, and pharmacies) as well as a list of nationally registered malaria commodities (antimalarials and RDTs)[[11]](#footnote-12). This list should be added to the existing ACTwatch Lite dataset of known antimalarials and RDTs which has been compiled from the WHO prequalified list as well as from products found during previous ACTwatch Lite studies. The quantitative data collection tool is designed to pull information from these datasets so that users of the questionnaire can search for products and pre-populate fields when the product is in the dataset versus manually entering all details for all products found. More on these product master lists in the box below:

|  |
| --- |
| Antimalarial and RDT Master Lists |
| ACTwatch Lite has developed [Masterlists of known antimalarial and malaria RDT products](https://psiorg.sharepoint.com/:f:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/07%20Product%20masterlists?csf=1&web=1&e=kmHncP) from published sources (WHO and Global Fund prequalification lists, pilot country national registration lists) supplemented by products found and validated during ACTwatch Lite pilot studies in Benin, Cameroon and Nigeria.   * The [Antimalarial Masterlist](https://psiorg.sharepoint.com/:x:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/07%20Product%20masterlists/ACTwatch%20Lite%20Antimalarial%20Masterlist%20-%20last%20updated%2020250403.xlsx?d=wc8bf214385cf416a8bef64b9fb8a8e80&csf=1&web=1&e=hjRiJj) consists of approximately 1,900 products in all formulations (drops, granules, injections, suppositories, suspensions, syrups and tablets), manufactured across 38 countries. * The [mRDT Masterlist](https://psiorg.sharepoint.com/:x:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/07%20Product%20masterlists/ACTwatch%20Lite%20RDT%20Masterlist%20-%20last%20updated%2020250403.xlsx?d=wb853d551438844b48d5ff797830d4757&csf=1&web=1&e=WcszfF) consists of 68 RDT products capable of detecting some combination of *Pf, Pv, Pan,* or VOM, with antigen tests for some combination of HRP2, pLDH or aldolase.   During the desk review or otherwise, determine if your country/ context has a list of registered products[[12]](#footnote-13) that can be added to the existing master list. |

For the qualitative tool, you will need to compile a list of key informants to be interviewed. Ideally during the desk review you will diagram the private sector supply chain. This may be a useful reference to ensure you are targeting actors for interview at all levels of the supply chain.

Template [**quantitative information sheets and consent forms**](https://psiorg.sharepoint.com/:w:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/11%20Quantitative%20data%20collection%20tool/ACTwatch%20Lite%20Quantitative%20Info%20Sheets%20%26%20Consent%20Form%20Templates.docx?d=w7269839f2f57405a820975bb389ec012&csf=1&web=1&e=vvad5C) and [**qualitative information sheets and consent forms**](https://psiorg.sharepoint.com/:w:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/10%20Qualitative%20interview%20guide/ACTwatch%20Lite%20Qualitative%20Interview%20Info%20Sheet%20%26%20Consent%20Form%20Template.docx?d=w0a650bc71b434d78b0f569a1ce9603ed&csf=1&web=1&e=D5dVC4) are provided within the toolkit. Again, all TEXT IN RED CAPS will require country-specific inputs. There may be alternative/ preferred templates or guidelines for these documents in your particular geography and we recommend that users confirm this with their local IRB as needed.

Finally, where required, tools and forms will need to be translated into local languages[[13]](#footnote-14).

The final protocol should include all forms and data collection tools in the annex.

Additional suggestions for transcription and analysis of these surveys and interviews are provided in Phase 4 of this guide.

### Confirm eligibility criteria

Eligibility criteria (i.e. inclusion/exclusion criteria) for both retail outlets and wholesalers/importers should be established at this point, as it will inform some of your sampling assumptions in the next step. ACTwatch Lite has developed a set of eligibility criteria at each level of the study that are outlined in the draft protocol. However, it is important to adjust these criteria, as required, to fit the local context.

### Define the sampling strategy

For the purposes of estimating a sample size, ACTwatch Lite's primary sampling unit (PSU) is a geographic area with a population between 10,000 and 15,000. The study may use stratification (for example, urban/rural, geopolitical zones, or some other criteria) in order to ensure appropriate study coverage for the country context. PSU type will vary between country, but are typically called "wards", "aires de santé", or "communes". Cross-sectional surveys will require probability sampling of areas where the team will then conduct a full census of outlets with the potential to sell malaria commodities. In most contexts, complete lists of these outlets are not available. Informal outlets, when included in the study design, tend likewise to not be comprehensively mapped/ listed.

To capture the full private sector for antimalarial drugs/ testing the ACTwatch Lite methodology therefore consists of a full census of all eligible outlets within sampled geographic units. These geographic units are the PSU in an ACTwatch Lite study. Note that this differs from many other cross-sectional market or household surveys in which the PSU is likely to be an outlet, or a household.

To conduct the census, field teams must visit every eligible outlet within a selected geographical area. The specific sampling design will vary depending on the study or country size, data availability, resource constraints, and the objectives of the implementation, but typically uses a probability proportional to size (PPS) approach to selecting PSUs (based on population size of the administrative units to be selected), and may include a single or multiple cluster design, and/ or stratification (by urbanicity, region, etc.).

It is recommended that a statistician is consulted alongside the [**Sampling Tool**](https://psiorg.sharepoint.com/:x:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/06%20Sampling%20tool/ACTwatch%20Lite%20Sampling%20Tool.xlsx?d=wd9f83705494e4f54b849aaa48a9693e9&csf=1&web=1&e=yyxmfc) provided in the toolkit to generate a sample that matches the needs of the specific implementation plan and scope.

The box below also details the sampling strategy used in a pilot implementation of ACTwatch:

|  |
| --- |
| Information Box 1: Example sampling strategy from ACTwatch Lite Nigeria 2024 |
| The study adapted the geographic cluster sampling approach used by ACTwatch and other market surveys. The main sampling approach adopted for market surveys is to sample a set of administrative units (geographical clusters) with a corresponding population of around 10,000 to 15,000 inhabitants.  The appropriate administrative unit in Nigeria corresponding to this desired population size is the locality. Localities are an administrative unit grouped together within local government areas (LGAs) – the next highest administrative unit, themselves grouped by state.  There are 774 LGAs across all 36 states in Nigeria. There are 17, 44 and 20 LGAs in Abia, Kano, and Lagos states, respectively. These are subdivided into 267, 484 and 377 localities in Abia, Kano, and Lagos states, respectively.  The sampling approach followed a two-stage cluster PPS design, stratified by urban and rural, with the following steps:   * Within each of the three states included in the study, all LGAs were listed, with population size and urban/rural designation. * Using a PPS approach, the predetermined number of urban and rural LGAs were selected within each state * For selected LGAs all localities were listed with population size and urban/rural designation. * Using a PPS approach 5 localities per urban and per rural LGA were selected (where localities are the primary sampling unit, as they represent the areas for which censuses were conducted; the number of primary sampling units taken under PPS is fixed, 5 is an arbitrary, but realistic number given the expected number of localities per LGA and the need for a pragmatic and logistically feasible sampling strategy). |

For the qualitative study component, ACTwatch Lite employs a purposive sample to maximize the variability of responses and experiences reflected among interviewees. This is aligned with standard approaches to qualitative data collection, whereby the insights gathered aim to map the overall phenomena being investigated, rather than assign quantitative values to their relative frequency. For interviews among importers/ wholesalers/ manufacturers, we suggest aiming to achieve maximum variability in terms of geographic range or location, business type and business size. In general, a sample of around 15 interviews (IDIs) per group (i.e. importers, wholesalers, or manufacturers) can be considered sufficient to achieve theoretical saturation in this type of interview focused on a single key theme. [[14]](#footnote-15)

### Submit for ethical approval

Once the protocol has been developed and reviewed by stakeholders and finalized, it will be necessary to conduct a research determination (depending on local regulations). If the study is determined to be human subjects research, then it should be submitted for IRB review and approval prior to any field activities. Please note that all three initial ACTwatch Lite studies (Benin, Cameroon, Nigeria) were determined to be human subject research, and underwent IRB review.

Depending on context, national and subnational IRB and other regulatory approvals may be required. Field activities, including data collection, cannot begin until the necessary approvals have been obtained, and therefore we recommend establishing necessary processes early.

### Risk and mitigation

Effective implementation of the ACTwatch Lite private sector outlet survey requires careful anticipation of risks that may affect timelines, data quality, or stakeholder engagement. The information box below outlines key risks commonly encountered during similar studies and the strategies that will be employed to mitigate them:

| Information Box 2: Risks and mitigation strategies | |
| --- | --- |
| Risk | Mitigation strategies |
| Refusal or non-participation from informal outlets: Informal or unlicensed providers may fear exposure or regulation and refuse to participate in the study. | * Emphasize anonymity and non-regulatory nature of the study during consent process. * Use sensitively worded, translated information sheets and verbal consent. * Schedule interviews during quiet business hours or return at agreed times. * Do not collect identifying data (e.g., Global positioning system [GPS]) from informal outlets, as per protocol. |
| Delays in government approvals or IRB clearance: Ethical approvals or government endorsements may be delayed due to administrative bottlenecks. | * Initiate IRB and MoH engagement early in protocol development. * Share draft protocols and tools for informal pre-review * Use a dedicated focal point to follow up on submissions and clarify expectations. * Engage the national Steering Committee to accelerate endorsement. |
| Security or access challenges in selected areas: Insecurity, political unrest, or road inaccessibility may hinder field operations. | * Conduct risk assessments for each region in collaboration with local authorities. * Maintain flexible sampling lists to allow replacement of inaccessible clusters. * Train field teams on basic safety protocols and reporting. * Use local guides or community health workers for safer navigation if needed. |
| Data quality issues or field protocol deviations: Field teams may misinterpret eligibility rules or skip data collection steps under pressure. | * Conduct rigorous training including field practice and competency testing. * Deploy experienced supervisors and conduct daily data checks. * Set up remote data monitoring to detect inconsistencies or missing data in real time. * Use automatic validation and skip logic in electronic tools. |
| Low response rates from wholesalers or importers: Large businesses may decline interviews due to confidentiality concerns or time constraints. | * Initiate early engagement with industry associations and regulators. * Send formal letters of introduction from recognized national authorities. * Offer flexible scheduling and clarify that no commercial identifiers will be published. |

These mitigation measures are embedded throughout the protocol implementation timeline and monitored continuously by the research coordination team and national partners. A risk monitoring log will be maintained and updated during fieldwork to track new challenges and adapt mitigation strategies as needed.

## Phase 3: Field activities and Data collection

|  |  |
| --- | --- |
| Key Activities | Tool/ Guidance |
| Conduct quantitative market survey training | [**Quantitative training package**](https://psiorg.sharepoint.com/:f:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/09%20Training%20materials/Quant%20Training%20Package?csf=1&web=1&e=kG0kv4) |
| Conduct quantitative market survey | [**Quantitative data collection tool**](https://psiorg.sharepoint.com/:f:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/11%20Quantitative%20data%20collection%20tool?csf=1&web=1&e=glRsIZ) |
| Conduct qualitative interview training | [**Qualitative training package**](https://psiorg.sharepoint.com/:f:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/09%20Training%20materials/Qual%20Training%20Package?csf=1&web=1&e=RKMzCS) |
| Conduct qualitative interviews | [**Qualitative interview guide**](https://psiorg.sharepoint.com/:f:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/10%20Qualitative%20interview%20guide?csf=1&web=1&e=Kl45C9) |

Primary data collection for an ACTwatch Lite study may include two components (1) a quantitative market survey at the retail level where a quantitative questionnaire is administered to all outlets with the potential to sell malaria commodities in sampled areas; and (2) qualitative supply chain interviews conducted at higher levels of the supply chain (e.g. importers, local manufacturers, distributors, and wholesalers) using a semi-structured qualitative interview guide.

Phase 3 details the training, field activities and implementation, and recommended quality control for both components.

#### Component 1: Quantitative market survey

Quantitative field team training

Due to the technical nature of ACTwatch market survey tools and protocols, the training phase for data collectors is quite intensive. Fieldwork training participants are expected to learn how to capture accurate data on pharmaceutical/ RDT products, alongside conducting a provider interview and ensuring a full census is conducted. As such, the ACTwatch Lite toolkit includes a comprehensive training package for fieldworkers to ensure quality and standardization.

The outcome of quantitative data collection training is that all data collectors are (1) well-versed in the objectives of the ACTwatch Lite implementation; (2) can conduct an effective provider interview, and (3) have mastered basic background knowledge on malaria and malaria testing and treatments to complete accurate and comprehensive audits of all relevant products in each outlet. The [**quantitative data collection training package**](https://psiorg.sharepoint.com/:f:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/09%20Training%20materials/Quant%20Training%20Package?csf=1&web=1&e=OaUpUN) includes:

|  |  |
| --- | --- |
| Quantitative  Data Collection Training Package | Content |
| 1. Trainer manual and agenda 2. Slide templates    1. Module 1: Introduction to ACTwatch Lite    2. Module 2: Auditing antimalarials    3. Module 3: Auditing RDTs    4. Module 4: Conducting a census    5. Module 5: Questionnaire deep dive    6. Module 6: Introduction to SurveyCTO    7. Module 7: Pilot (outline only)    8. Module 8: Additional sessions for team leaders (outline only)       1. Team structure and roles       2. Team deployment strategy and roadmap       3. Conducting a paper census       4. Frequent data collection problems       5. Troubleshooting SurveyCTO/data collection applications       6. Supervision plan       7. Techniques for approaching informal depots 3. Exercises and tests 4. Survey tools 5. Additional materials   README\_Quant training package overview |

The [**suggested agenda**](https://psiorg.sharepoint.com/:x:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/09%20Training%20materials/Quant%20Training%20Package/01%20Trainer%20manual%20and%20agenda/Quant%20Sample%20Agendas.xlsx?d=w053fd717e63a47d1bbdb9ffe30aa5ac9&csf=1&web=1&e=FQwdBL) for data collection training is provided in the [**quantitative training package**](https://psiorg.sharepoint.com/:f:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/09%20Training%20materials/Quant%20Training%20Package?csf=1&web=1&e=OaUpUN). Training and piloting should be conducted over a 10 to 12-day period. The training includes classroom instruction, for which the toolkit has standardized PowerPoint slide decks, quizzes, and activities that will be used to train and test data collectors on administering surveys and conducting product audits. This is followed by hands-on field practice via a pilot exercise to be conducted for 1-2 days[[15]](#footnote-16). Additional guidance for logistics and recommended best practices for training are also included in the [**Training Manual**.](https://psiorg.sharepoint.com/:w:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/09%20Training%20materials/Quant%20Training%20Package/01%20Trainer%20manual%20and%20agenda/Quant%20Trainer%20Manual.docx?d=we8baaf1df9724e9781f7bdbca1935754&csf=1&web=1&e=IfmlED)

Training may be conducted once with all data collectors or using a Training-of-Trainers (ToT) approach. Particularly if the ToT approach is taken, the use of standardized materials and exercises is essential to ensure quality training and comprehension during subsequent step-down training activities.

It is suggested that more fieldworkers are trained than are needed for the planned study data collection, and that only the best performing during training are retained. Fieldworkers should be made aware of this at the start of training. All training participants should be compensated for their time during training, whether they are retained. As an indication of expected retention rates, previous ACTwatch Lite studies have trained around 5-10% more fieldworkers than were ultimately needed.

#### Implementation

Data collection team composition

Quantitative data collection teams will be composed of data collectors and field supervisors. The number of data collectors will be determined based on study size/ scope, budget, and timelines. It is recommended that data collectors work in the field in pairs. Each team of data collectors will have a supervisor to ensure adherence to study protocols and quality standards. The suggested ratio of supervisors to data collectors is 1:4 to 1:6. Field supervisors should be trained alongside the fieldworkers and must be competent and fully familiar with all elements of the field activities. They may either be pre-identified prior to training or may be selected from the fieldworker cohort. Field supervisors should be well versed in study implementation, particularly in market studies or health research. They are also responsible for local advocacy and managing QA measures. [**Person specifications and TORs**](https://psiorg.sharepoint.com/:f:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/08%20Terms%20of%20reference%20templates?csf=1&web=1&e=vozgG3) are provided in the toolkit to indicate the level of experience and background needed for different roles in the study.

Quantitative data collection tool

Quantitative data is collected using tablets or phones that are compatible with the ODK-based data collection app selected for the study, able to collect accurate GPS, and connect to a mobile network for sending real-time data throughout the study period and study areas.

To date, ACTwatch Lite has used a tool called SurveyCTO for electronic data collection of quantitative data that is based on ODK. The ACTwatch Lite tool has also been converted into normal ODK (for greater compatibility, but more limited functionality) – both are available in the toolkit. The quantitative tool can be edited in a spreadsheet format. This is particularly useful when alternative languages need to be added. Note that the ODK form is currently available in English with French translations within the workbook. The quantitative tool contains instructions for areas where modifications are required to fit with local context and/ or specifics of the study design. Please refer to the tool and associated readme for more information. The main questionnaire is structured into the following sections:



After the tool has been configured, upload and access a blank version of your ACTwatch Lite questionnaire form in your chosen data collection software. Software configuration and form access details for SurveyCTO are provided in the relevant training slides.

Fieldwork

Careful logistical planning is required to ensure effective execution of data collection. If data collection is carried out by a contracted research agency, it is critical to ensure that all fieldwork considerations are included in the TOR.

Logistical details include arranging transportation, accommodation, communication, per diem payments, and safety measures for all staff involved. The data collection team should be responsible for adequate transportation to and around study sites, airtime for team communications, reliable internet connection for data uploads and pocket batteries to charge tablets in the absence of reliable electricity. Prior to data collection, field teams should also be equipped with information sheets and consent forms. Depending on study location and time of year, rain boots and/or rain jackets may also be provided.

A data collection plan is recommended that maps out which study sites will be visited by teams daily and is revised based on progress throughout fieldwork. Where possible, maps of selected study areas should be provided to field teams, either on their tablets (using mapping software, such as Google Maps, or QGIS), or on paper. Maps are essential to identify the boundaries around study sites so that the census process can be implemented accurately.

Field team supervisors, who are identified during training, play a critical role during data collection. In addition to developing supervision plans and deployment strategies, supervisors must also troubleshoot data quality and electronic tool issues, as well as perform routine quality checks as data are collected.

Depending on context, fieldworkers and supervisors should be issued with identification and hard copies of the necessary permissions/ regulatory approvals. Fieldworkers should be issued with paper copies of product catalogues, back-up paper questionnaires and field manuals. They should also receive printed [**study information sheets**](https://psiorg.sharepoint.com/:w:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/11%20Quantitative%20data%20collection%20tool/ACTwatch%20Lite%20Quantitative%20Info%20Sheets%20%26%20Consent%20Form%20Templates.docx?d=w7269839f2f57405a820975bb389ec012&csf=1&web=1&e=HqiwVg) to provide to prospective participants that they can retain. These information sheets should include study details, an outline of the risks associated with participation, information about the IRB approvals received, and contact details for the principal investigator and IRB ([**see protocol annexes for examples**](https://psiorg.sharepoint.com/:w:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/04%20Protocol%20template%20and%20references/ACTwatch%20Lite%20Protocol%20Template.docx?d=w3fa027020cfc473abf50a42006259524&csf=1&web=1&e=XA6io7)).

Outlet-specific considerations

In very large outlets (such as large pharmacies): If there are many products requiring a considerable amount of time to audit, research leads may choose to allow data collectors to use a paper form or other method to record product information from packaging and on price and volumes sold concurrently while another data collector conducts the primary interview and other product audits. Once the primary interviewer has completed their share of the work, the information from the supplementary auditor can be inputted to the tablet. It is suggested that supervisors spot-check paper records before and after digitalization to ensure quality control during this process. Note that if you plan to collect product photos during the audit, these will be missing for products recorded in the paper forms.

In informal settings (market stalls, itinerant vendors): The use of electronic tablets may not be appropriate or safe in all areas, where they would either draw attention, or present a security risk to the fieldworker. Where digital tools cannot be used, it is suggested that paper forms are made available, and these data are inputted to the tablet forms as soon as possible following collection, and at the latest at the end of each day. Again, supervisors should have a system of quality checks and control to ensure data integrity is not impacted by this approach. Note that informal outlet interviews use a reduced version of the data collection tool and are much faster to conduct – focusing primarily on the product audit parts of the tool and skipping provider interviews and several other sections. Refer to the [**quantitative tool**](https://psiorg.sharepoint.com/:f:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/11%20Quantitative%20data%20collection%20tool?csf=1&web=1&e=Q3SoBn) for more information.

Data submission, storage, and retention

All data from quantitative interviews are submitted electronically using tablets configured with SurveyCTO or another ODK-based application. Fieldworkers/ supervisors should upload data at least daily to secure servers to minimize the risk of data loss. Supervisors should review and validate data daily by downloading and conducting quality checks.

Where electronic data collection is not feasible, securely managed paper forms should be used and subsequently digitized. Paper forms should be retained for quality checks against their electronic records by the central study team before being destroyed.

Data should be stored on a secure, password protected server and/or computer and should be accessible only to study team members. Potentially sensitive data, including data permitting the identification of informal outlets, and/or GPS coordinates must not be made available outside the study team, and should either be removed from datasets once quality assurance processes have been completed, or in the case of GPS coordinates, jittered/ randomized/ replaced with a mean value for the study site to protect individual outlets. Data should be retained according to national/ funder regulations. The retention policy and any plan to disguise locations or share data externally should be clearly stated in the consent form.

Quality control

Quality control measures are essential for data accuracy. Some logic checks are built into the structured questionnaire to help ensure no missing data is recorded and that values are within expected ranges. Additionally, supervisors should conduct daily data quality reviews for completeness and discrepancies. A system for data quality checks should be determined and deployed before data collection starts. ACTwatch Lite pilots to date have used SurveyCTO dashboards, as well as a simple Excel-based dashboard for checking progress by outlet type and sample area. Individual implementations should outline and design the most effective QA structures and tools based on their study scope, design, and resources.

Stakeholder engagement during data collection

Coordination with local authorities and partners is essential for smooth data collection. The data collection team should be responsible for identifying local stakeholders (e.g. pharmacist associations, health-area managers, etc.). These stakeholders should be informed about the survey aims and schedule ahead of arrival in a given site. They may also notify their teams/ organization members (e.g. the pharmacy association would notify pharmacists in the study area) to allow them to participate in the study with confidence. Effective collaboration with local stakeholders will minimize refusals during outlet surveys and interviews.

#### Component 2: Qualitative supply chain interviews

Qualitative field team training

Training for qualitative data collection (or conducting IDIs with importers, local manufacturers, distributors, wholesalers, or any other entities included in higher levels of the supply chain) aims to ensure qualified interviewers are well-prepared to conduct insightful, ethically sound interviews.

Training is suggested to take place over a period of 3-5 days. Similar to the quantitative training, it is recommended that qualitative training include both classroom instruction and a field pilot[[16]](#footnote-17). Classroom training will include review of the qualitative interview guide, consent forms, and ethical and best practices for IDIs. This will be followed by roleplay of the consent process, and of the data collection. This will be followed by hands-on field practice with interviews conducted at a pilot businesses who have consented to participate in the training pilot.

The full [**qualitative training package**](https://psiorg.sharepoint.com/:f:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/09%20Training%20materials/Qual%20Training%20Package?csf=1&web=1&e=Ciu1df) includes:

|  |  |
| --- | --- |
| Qualitative  Data Collection Training Package | Content |
| 1. Agenda and facilitator notes 2. Slide templates    1. Module 1: Introduction to ACTwatch Lite    2. Module 2: Qualitative data collection overview    3. Module 3: IDI overview    4. Module 4: Practice interviews    5. Module 5: IDI transcription and data management 3. Survey tools 4. Additional materials 5. README\_Qual training package overview |

#### Implementation

Composition of field teams

The qualitative field team includes interviewers and supervisors. Team members should be selected for their experience in qualitative research, and supervisors should ensure data quality and adherence to protocols. The qualitative and quantitative research teams may have overlapping members with the requisite skills. Each interview team can switch between the role of interviewer and notetaker. Field supervisors are responsible for QA, logistical coordination, and advocacy with interviewees and local regulatory bodies.

Interview approach

A semi-structured interview approach is used to gather detailed perspectives from manufacturers, importers, wholesalers and other entities working at all levels of the supply chain. Aim to conduct up to 15 interviews per respondent group, or as many as needed to reach saturation and represent major types of actors. Interviewees should be identified through a combination of stakeholder mapping, recommendations from local partners (e.g., NMPs, pharmacy associations), and review of existing supplier and wholesaler networks. Priority should be given to actors with large market share, broad distribution networks, or regulatory influence. Efforts should also be made to capture geographic and structural diversity (e.g., formal vs. informal, regional vs. national distributors). A [**qualitative interview guide**](https://psiorg.sharepoint.com/:x:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/10%20Qualitative%20interview%20guide/ACTwatch%20Lite%20Qualitative%20Interview%20Guide.xlsx?d=w2145895a92ba4b178e45fa560f38589f&csf=1&web=1&e=Cl72DJ), included as an Excel-based tool, is available within the toolkit. It is recommended that this tool is used during the interview to guide the discussion and take notes. All interviews should be recorded where interviewees consent. The interview guide tool may also be used after transcription to summarize responses and aid in qualitative analysis.

Transcription

Again, all interviews should be audio recorded with the prior consent of interviewees. If the participant refuses recording but consents to be interviewed, the interview must not be recorded, and careful notes should be taken. It is recommended that each interview is transcribed within 24 hours by either the fieldworker who conducted the interview (or trained transcribers in collaboration with the interviewer who conducted the interview). AI software is available to support transcription but should only be used if there is a comprehensive quality assurance plan in place to confirm the match between recording and transcript by a researcher. All data (notes, transcription, etc.) should be compiled in text-editor and/or spreadsheet programs and saved on password protected computers accessible only to the study team.

Quality control

Supervisors should review the first 1–2 interviews from each interviewer to ensure quality and provide early feedback. Throughout data collection, they should routinely spot-check transcripts against recordings for quality, accuracy, and completeness. Regular feedback on interviewing and note-taking should be provided . If translations are used, bilingual checks are recommended. A simple checklist or review form can help standardize these quality control steps and ensure reliable, usable data.

**Stakeholder engagement during interviews**

Effective engagement with identified supply chain actors is essential for successful qualitative data collection. The study team should identify and contact relevant business and trade representatives in advance to introduce the study objectives and interview scope and set interview times. Notifying industry associations or coordinating bodies early in the process can also support outreach to members who may otherwise be difficult to reach. Proactive coordination reduces refusals and ensures timely scheduling of interviews with high-priority supply chain actors.

## Phase 4: Analysis and results generation

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| --- | --- |
| Key Activities | Tool/ Guidance |
| Conduct data management, cleaning, and results generation by following standardized STATA code for assessing indicators from Indicator Table | [**Quantitative analysis syntax**](https://psiorg.sharepoint.com/:f:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/12%20Analysis%20syntax?csf=1&web=1&e=3Flswa) **(currently only available for STATA)**  [**Data Analysis User Guide**](https://psiorg.sharepoint.com/:f:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/12%20Analysis%20syntax/_ACTwatch%20Lite%20Analysis%20Guide?csf=1&web=1&e=AWj4MA) |
| Produce standardized tables and figures for indicators from Indicator Table | [**Quantitative results workbooks**](https://psiorg.sharepoint.com/:f:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/13%20Results%20output/workbooks?csf=1&web=1&e=HWHaLt). |
| Conduct qualitative analysis | **See text below (Component 2), and Readme in** [**qualitative interview guide**](https://psiorg.sharepoint.com/:x:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/10%20Qualitative%20interview%20guide/ACTwatch%20Lite%20Qualitative%20Interview%20Guide.xlsx?d=w2145895a92ba4b178e45fa560f38589f&csf=1&web=1&e=uCp0Xh) |
| Compile results into standardized report template | [**Report template**](https://psiorg.sharepoint.com/:w:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/14%20Report%20template%20and%20references/ACTwatch%20Lite%20Report%20Template.docx?d=wb5c068fab24f41d6a1c54ddac681d325&csf=1&web=1&e=9TsDpT) |

Phase 4 is crucial for transforming collected data into meaningful insights that can inform strategic decisions for private sector malaria case management. This phase includes data management and cleaning, analysis of core and additional indicators, generating results, and report writing. Tools are available within the toolkit for each component, and the processes are described below separately for qualitative and quantitative data.

This phase can be expected to take a considerable amount of time and effort and requires dedicated analyst support. For the quantitative component, the analyst(s) must be experienced Stata users or be comfortable reading Stata syntax and converting to their preferred statistical analysis software. The toolkit includes structured data cleaning and analysis .do files, but considerable attention and input by a suitably qualified analyst are required to complete this stage.

#### Component 1: Quantitative market survey

To facilitate the process of data management, cleaning, and analysis of quantitative data collected during the market survey, the toolkit includes [Analysis Syntax](https://psiorg.sharepoint.com/:f:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/12%20Analysis%20syntax?csf=1&web=1&e=YkG6W1) and a step-by-step [Analysis User Guide](https://psiorg.sharepoint.com/:w:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/12%20Analysis%20syntax/_ACTwatch%20Lite%20Analysis%20Guide/ACTwatch%20Lite%20Analysis%20User%20Guide.docx?d=w24cff0af8f9a47b6a56188a048d84627&csf=1&web=1&e=3KhjOS) to accompany the Stata do files. The user guide includes information on sample weights, calculation of key variables, denominators, and other elements such as adult equivalent treatment doses (AETDs)[[17]](#footnote-18), exchange rates if needed, etc.

Data management and cleaning

The first step of quantitative analysis is managing and cleaning the data collected from the field. All data are imported from the tablets into a centralized database, either SurveyCTO or another ODK-based data collection platform. Some data management and cleaning may be required for the QA process established for a given implementation, such as addressing inconsistencies, outliers, and missing values (though these should be limited due to internal logic checks in the form).

The toolkit includes [**Analysis Syntax**](https://psiorg.sharepoint.com/:f:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/12%20Analysis%20syntax?csf=1&web=1&e=NGUV3L) that is heavily commented to provide users with step-by-step instructions to execute automated data management and cleaning, as well as indicate where manual checks and cleaning are required. Note that in studies where products are audited that do not appear in the product databases, individual product-level cleaning is required.

The outcome of this stage is a validated dataset, free of errors, that provides a reliable foundation for further analysis.

Analysis of key indicators

Once data are cleaned, toolkit analysis syntax can be adapted to assess all relevant indicators in the[**Indicator Table**](https://psiorg.sharepoint.com/:x:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/02%20Indicator%20table%20%26%20qualitative%20themes/ACTwatch%20Lite%20Indicator%20Table.xlsx?d=w853a6a0d380741b990311440da181e38&csf=1&web=1&e=40cfdC). These indicators are adapted from the original ACTwatch project through which standardized metrics were developed from national surveys conducted across diverse malaria contexts from 2008-2017

Where previous ACTwatch studies have been conducted, select indicators can be assessed over time (market share, price, availability). Note that sample weights and other analytical variables will need to be created for analysis. Information and step by step guidance is provided in the [**Analysis User Guide**](https://psiorg.sharepoint.com/:f:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/12%20Analysis%20syntax/_ACTwatch%20Lite%20Analysis%20Guide?csf=1&web=1&e=g30mAn).

The analysis focuses on metrics including antimalarial and RDT availability, price, and market share within the private sector, and include key results from the provider interview as context. Data are disaggregated by outlet type (e.g. pharmacy, clinics, drug stores, etc.) and can also be disaggregated by geographic area (e.g. urban and rural). Descriptive statistics are used to summarize each indicator.

The outcome of this stage is a set of standardized, actionable indicators that provide insight into the landscape of antimalarials and malaria blood testing in the private sector.

Results generation

To compile findings into visual formats (tables, charts and figures), the results syntax automates the production of data tables which are input into the [**Results Workbooks**](https://psiorg.sharepoint.com/:f:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/13%20Results%20output/workbooks?csf=1&web=1&e=eX5ZaF). Within these workbooks, tables are auto-formatted and charts and graphs are produced for all core indicators. Note that the toolkit also includes Stata syntax to output data tables for the additional provider-level indicators, which should be reviewed and used as needed by the study team. Existing workbooks for the core indicators may be useful to create tables and figures for these indicators, depending on study priorities and context.

The outcome of this stage is a set of standardized and organized visual outputs for all relevant indicators that will be used to communicate findings to stakeholders.

Report writing

The final step in the data consolidation process is report writing. The toolkit includes a [**Report Template**](https://psiorg.sharepoint.com/:w:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/14%20Report%20template%20and%20references/ACTwatch%20Lite%20Report%20Template.docx?d=wb5c068fab24f41d6a1c54ddac681d325&csf=1&web=1&e=SO8m3o), which is structured to include an executive summary, description of the context and methodology, standardized findings from all relevant indicators, and actionable recommendations.

The template can be completed by the study team by adding background on the implementation setting and context, detailing the specific study methods, and inserting all tables and charts from the Results Workbooks.

As the report aims not only to present the data but also interpret its significance to decision-makers in malaria control, each table and figure should include additional detail and explanation of results. The outcome of this step is a comprehensive report that conveys study findings and supports evidence-based decision making.

#### Component 2: Qualitative supply chain interviews

Data management and cleaning

The qualitative data analysis process begins with a review and transcription, detailed in Phase 3 above.

The [**Qualitative Interview Guide**](https://psiorg.sharepoint.com/:x:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/10%20Qualitative%20interview%20guide/ACTwatch%20Lite%20Qualitative%20Interview%20Guide.xlsx?d=w2145895a92ba4b178e45fa560f38589f&csf=1&web=1&e=cgAT6T) within the toolkit can be used as a framework to summarize each response, using the transcriptions.

Analysis of key indicators

Once transcriptions are finalized, the content is analyzed using thematic analysis. This involves coding the interviews to identify key themes. The ACTwatch Lite pilots used the Dedoose, a subscription-based software package to code the qualitative data, but and high-quality qualitative data analysis software programs such as Nvivo, Atlas.ti, or Tanguette (free/ open-source) would also be suitable. The outcome is a set of thematic insights that provide an understanding of market dynamics, business practices, and regulations from all levels of the supply chain.

Results generation

Next, key themes are summarized in narrative format. Qualitative analysis software can support the development of visualizations, including word clouds, and code frequency frames. These may be useful to help present key insights. In addition, selected quotations from interviews can be used to provide texture and depth to the presentation of key themes.

Report writing

Results from the previous stage should be formatted and incorporated into the Report Template.

Qualitative results are included as a chapter in the report alongside quantitative results. The chapter should include recommendations drawn from qualitative findings.

Qualitative results may also be used throughout the quantitative chapters to provide explanation and context for these results or provide perspectives from market participants.

## Phase 5: Dissemination and actioning results

|  |  |
| --- | --- |
| Key Activities | Tool/ Guidance |
| Preliminary results review | [**Results Workbooks**](https://psiorg.sharepoint.com/:f:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/13%20Results%20output/workbooks?csf=1&web=1&e=F7hBor)from Phase 4 |
| Dissemination & action planning | [**Report Template**](https://psiorg.sharepoint.com/:w:/r/sites/ACTWatchLite/Shared%20Documents/2.%20Technical/0.%20Toolkit/ACTwatch%20Lite%20Toolkit%20v4/14%20Report%20template%20and%20references/ACTwatch%20Lite%20Report%20Template.docx?d=wb5c068fab24f41d6a1c54ddac681d325&csf=1&web=1&e=rypacw)  **Table 2 Action Planning Template** |

Dissemination and actioning results are crucial for ensuring that the findings from ACTwatch Lite are effectively communicated and utilized to inform policy and interventions in the fight against malaria.

Phase 5 is focused on ensuring that the findings from the ACTwatch Lite study are effectively communicated to stakeholders and translated into actionable strategies to strengthen malaria case management in the private sector.

### Preliminary results review

Preliminary results should be reviewed by, and presented to, all relevant stakeholders. In this step, core stakeholders in the ACTwatch Lite project—including representatives from the NMP, local implementing partners, and relevant government officials—come together to achieve several objectives

1. **Review the initial findings**: Your team should prepare and present initial study findings to relevant stakeholders. It is important to budget enough time to cover all study findings, which may be extensive.
2. **Contextualize the data:** The data will require interpretation and contextualization so that they are placed within the broader malaria/private sector contexts of the study country. You may wish to compare findings to those of similar studies from the region. If applicable, prior ACTwatch findings should be examined to determine how the private sector malaria product landscape has changed over time.
3. **Validate the results:** It is critical that stakeholders feel comfortable co-signing study findings. This step gives space for participants to ground-truth study results and ensure that interpretations are accurate.
4. **Raise follow-up questions:** Questions may also be raised during this process that inform future analyses. Follow-up questions and lessons learned should be documented to guide further exploration and ensure that all key aspects are covered before moving forward with a wider dissemination and publication.

Stakeholders may identify some immediate actions that can be taken from preliminary results, such as supply chain gaps or removal and/or regulation of certain inadvisable or ineffective drugs on the market. These discussions are essential for ensuring that the findings reflect the local realities and are interpreted accurately within the context.

The outcome of this step is a validated and contextually grounded set of findings, with additional insights that may shape the final analysis.

### Dissemination

Once the preliminary results have been reviewed, contextualized, and validated by core stakeholders, the next step is finalization of the report for dissemination to a wider audience, including donors, private sector partners, NGOs, and others relevant in decision making. These presentations should be derived from the report but tailored to suit different audiences, ensuring that each group receives information that is most relevant to them. For example, donors may be interested in how findings align with their priorities, while private sector partners may focus on supply chain efficiencies or areas of market growth. In past ACTwatch Lite studies, results dissemination meetings were followed by a “lessons learned meeting”, in a 2-day format. Results were presented to a wider audience during Day 1 and elaborated on for further interpretation and action planning in Day 2 with a smaller, specialized group of stakeholders, usually including NMP, regulatory bodies, ministry officials, and other local stakeholders.

During dissemination meetings, discussion about the implications of these results and how findings can inform policies and processes should be encouraged.

The outcome of this step should be a well-informed and engaged group of broader stakeholders prepared to act on the study findings.

### Action planning

As a part of stakeholder dissemination or in a dedicated workshop, action planning should be conducted to ensure study findings are translated into actionable steps for concrete improvements in malaria case management in the private sector.

These discussions should bring together representatives from national and subnational malaria programs, relevant government ministries, private sector regulatory bodies, implementing partners, donor organizations, and any other private sector actors.

The main goal of the workshop or discussions is to move from evidence to implementation. This is achieved through the following steps or objectives:

* Prioritize 3-5 impactful, actionable findings based on the study results. Focus on those that are feasible, fundable, and measurable.
* Articulate clear, evidence-informed actions or next steps and/ or key questions that require further discussion or follow up to refine proposed actions.
* Build consensus among stakeholders to ensure buy-in by agreeing on roles and responsibilities, timelines, and monitoring mechanisms
* Assign a focal point to each action item.
* Align proposed actions with current or planned NMSPs, investment priorities and funding cycles (e.g. Global Fund grants) and WHO guidance.
* Plan a follow-up session (e.g. 1-3 months later) to refine the road map and/ or review progress.

The output from this step is a well-defined action plan, endorsed by stakeholders, which outlines specific steps, clear ownership, and a monitoring framework to ensure follow-through on improving private sector malaria case management.

To support structured action planning, **Table 2 Action Planning Template** can be adapted. For each key finding or priority area, participants should work through the following elements:

Table 2 Action Planning Template

|  |  |
| --- | --- |
| Elements | Description |
| Current Data or Evidence | *State the relevant ACTwatch Lite finding that highlights a gap, challenge, or opportunity (e.g., low reporting rates in private sector).* |
| Key Question(s) | *Define the questions stakeholders need to answer to move forward. These can be operational, technical, or strategic (e.g., What systems are already in place? What are barriers to private sector reporting?).* |
| Proposed Action(s) / Next Steps | *Outline the practical steps to be taken (e.g., revise SOPs, pilot reporting in a subset of outlets, conduct trainings, initiate policy review).* |
| Lead | *Identify the lead agency or department responsible for action coordination.* |
| Key Stakeholders | *List the entities that should be engaged or consulted (e.g., HMIS team, primary care network, donor representatives).* |
| Resources / Inputs Needed | *Specify what’s needed to implement the action (e.g., funding, technical assistance, training materials, software).* |
| Timeline | *Suggest a feasible timeframe (e.g., Q1–Q3 2026).* |
| Monitoring Indicator(s) | *Define one or more indicators to measure progress (e.g., % of outlets submitting monthly reports).* |

### Publications

Another optional step in sharing ACTwatch Lite findings is through publications, including peer-review journal articles, policy briefs, technical reports, webinars, blogs, and other platforms to share findings with researchers, health professionals, policymakers, and advocacy groups. External communication of study findings should be tailored to target audiences, both in message and publication type.

To maximize buy-in, the peer-reviewed journal article development process should have clearly defined, pre-established roles and timelines. All relevant stakeholders, from the donor to local partners and NMPs, should be engaged as early as possible, preferably at the conception and ideation phase. Co-authorship criteria and authorship order should be established in advance of article drafting. Note that IRB approvals, and appropriate language in consent documents may be required in order to publish results from an ACTwatch Lite study, and the team should confirm in advance what their expectations are around public dissemination of research findings.

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Open-access journal articles are recommended; however, results may also be presented at conferences and other international forums to foster discussions around effective malaria case management and surveillance in the private sector.

The outcome of this stage is to expand the audience and reach of study findings to contribute to improved policies and practices for malaria case management on a global scale.

# Conclusion

The ACTwatch Lite Toolkit offers a comprehensive and streamlined approach for conducting malaria market surveys within the private sector. It builds on the established methodologies from previous ACTwatch initiatives, providing step-by-step guidance for each phase—from project initiation to data dissemination and action planning.

The toolkit equips users with the resources needed for both quantitative and qualitative data collection and analysis, enabling a holistic understanding of antimalarial market dynamics. By standardizing processes, it ensures the generation of accurate, reliable, and actionable insights that can inform policy and drive effective interventions.

Stakeholder engagement is emphasized throughout the toolkit, ensuring that data collection, validation, and dissemination are aligned with local needs and national health priorities. This collaborative approach is critical for contextualizing findings and driving stakeholder buy-in, ultimately leading to meaningful outcomes.

The toolkit is both scalable and adaptable, making it suitable for use across various contexts and enabling consistency in malaria surveillance efforts on a global scale.

Overall, the hope is that the ACTwatch Lite Toolkit serves as a valuable resource for generating evidence, engaging stakeholders, and informing strategic decisions to strengthen malaria control and elimination efforts.

# Additional references and further reading

**Global Resources**

WHO (2024), WHO Guidelines for malaria. World Health Organisation: Geneva. <https://app.magicapp.org/#/guideline/LwRMXj/section/L0v9rE>

WHO (2024), Multiple first-line therapies as part of the response to antimalarial drug resistance: an implementation guide. World Health Organisation: Geneva. <https://www.who.int/publications/i/item/9789240103603>

WHO Prequalified lists – Medicines

<https://extranet.who.int/prequal/medicines/prequalified-lists-medicines>

The Global Fund to end TB AIDS and Malaria pharmaceutical products subject to the Global Fund Quality Assurance Policy

<https://www.theglobalfund.org/media/11151/psm_productsmalaria_list_en.pdf>

**ACTwatch Lite**

Project website and resources

<https://www.psi.org/actwatch-lite/>

Reports

Nigeria 2024

<https://www.psi.org/publication/actwatch-lite-nigeria-2024-report/>

Cameroon 2024

<https://www.psi.org/publication/actwatch-lite-cameroon-report/>

Benin 2023

<https://www.psi.org/publication/actwatch-lite-benin-2023-report/>

**ACTwatch (2009-2016), selected publications**

Hanson, K. and Goodman, C., 2017. Testing times: trends in availability, price, and market share of malaria diagnostics in the public and private healthcare sector across eight sub-Saharan African countries from 2009 to 2015. Malaria journal, 16, pp.1-16.

Littrell, M., Sudoi, R., Archer, J., Ngigi, J., Ujuju, C., Mpanya, G., Vasireddy, V., Poyer, S. and Bilak, H., 2014. Antimalarial market composition and performance in Nigeria and the Democratic Republic of Congo: results from 2013 ACTwatch outlet surveys. Malaria Journal, 13(1), pp.1-2.

Phok, S., Phanalasy, S., Thein, S.T. and Likhitsup, A., 2017. Private sector opportunities and threats to achieving malaria elimination in the Greater Mekong Subregion: results from malaria outlet surveys in Cambodia, the Lao PDR, Myanmar, and Thailand. Malaria journal, 16, pp.1-22.

Shewchuk, T., O'Connell, K.A., Goodman, C., Hanson, K., Chapman, S. and Chavasse, D., 2011. The ACTwatch project: methods to describe anti-malarial markets in seven countries. Malaria Journal, 10, pp.1-9.

Tougher, S., Hanson, K. and Goodman, C., 2017. What happened to anti-malarial markets after the Affordable Medicines Facility-malaria pilot? Trends in ACT availability, price and market share from five African countries under continuation of the private sector co-payment mechanism. Malaria journal, 16, pp.1-18.

Ujuju, C., Anyanti, J., Newton, P.N. and Ntadom, G., 2017. When it just won’t go away: oral artemisinin monotherapy in Nigeria, threatening lives, threatening progress. Malaria journal, 16, pp.1-11.

Zinsou, C. and Cherifath, A.B., 2017. The malaria testing and treatment landscape in Benin. Malaria journal, 16, pp.1-15.

1. *Fomba, S., Koné, D., Doumbia, B., Diallo, D., Druetz, T., Florey, L., Eisele, T. P., Eckert, E., Mihigo, J., & Ashton, R. A. (2020).*

   *Management of uncomplicated malaria among children under five years at public and private sector facilities in Mali. BMC Public Health, 20(1), 1888.* [*https://doi.org/10.1186/s12889-020-09873-1*](https://doi.org/10.1186/s12889-020-09873-1) [↑](#footnote-ref-2)
2. *Babazadeh, S., Thanel, K., Garfinkel, D., Riley, C., Bertrand, J., & Shaw, B. (2018). FPwatch: Facility‐based Survey Data for Family Planning Market Analysis in Five FP2020‐focus Countries. Studies in Family Planning, 49(4), 385–395.* [*https://doi.org/10.1111/sifp.12077*](https://doi.org/10.1111/sifp.12077) [↑](#footnote-ref-3)
3. *Population Services International. (2022). Consumer’s Market for Family Planning.* [*https://cm4fp.org*](https://cm4fp.org) [↑](#footnote-ref-4)
4. *John Hopkins University, John Hopkins Bloomberg School of Public Health (2025). Performance Monitoring Action.* [*www.pmadata.org*](http://www.pmadata.org) [↑](#footnote-ref-5)
5. *Inclusion and exclusion criteria are outlined in section 2 of this guide* [↑](#footnote-ref-6)
6. *Add information on what this might look like and how one can tailor toolkit material for varied methodologies*  [↑](#footnote-ref-7)
7. *Core indicators are identified in the Indicator Table. These include market composition, commodity availability, price, and market share, and stock outs* [↑](#footnote-ref-8)
8. *World Health Organization. (n.d.). Stakeholder mapping guide: Mapping potential key stakeholders in reproductive health and family planning service delivery, in preparation for implementing WHO MEC/SPR guidance. World Health Organization. Retrieved from* [*https://cdn.who.int/media/docs/default-source/reproductive-health/contraception-family-planning/stakeholder-mapping-tool.pdf*](https://cdn.who.int/media/docs/default-source/reproductive-health/contraception-family-planning/stakeholder-mapping-tool.pdf)*​*  [↑](#footnote-ref-9)
9. *An ACTwatch implementation may be a more rapid assessment paired with existing programmatic and routine monitoring in select facilities, or it may be a nationally representative cross-sectional survey. Depending on the needs and resources available, tools can be tailored to objectives and scope* [↑](#footnote-ref-10)
10. *Or a concept note for routine or programmatic implementations that do not require ethical review* [↑](#footnote-ref-11)
11. *Note his information would have been compiled previously during the Desk Review in Phase 1, and can be updated as needed* [↑](#footnote-ref-12)
12. *Registered products refers to those that have been formally reviewed and approved for importation, distribution, and/or sale by the relevant national regulatory authority. Registration typically indicates that a product meets national standards for quality, safety, and efficacy.* [↑](#footnote-ref-13)
13. *Tools are currently available in English and French in the toolkit.* [↑](#footnote-ref-14)
14. *Hennink, M., & Kaiser, B. N. (2022). Sample sizes for saturation in qualitative research: A systematic review of empirical tests. Social Science & Medicine, 292, 114523.* [*https://doi.org/10.1016/j.socscimed.2021.114523*](https://doi.org/10.1016/j.socscimed.2021.114523) [↑](#footnote-ref-15)
15. *Field pilot data should not be retained in the final dataset, and should be collected from non-study areas. Consent forms for the field pilot should clearly state that it is a pilot and that the data will not be used.* [↑](#footnote-ref-16)
16. *Field pilot data should not be retained in the final dataset, and should be collected from non-study areas. Consent forms for the field pilot should clearly state that it is a pilot and that the data will not be used.*  [↑](#footnote-ref-17)
17. *AETD: Adult Equivalent Treatment Dose – a standardized unit of measurement for an active ingredient to treat a 60kg adult with malaria.* [↑](#footnote-ref-18)