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Microplanning manual to guide implementation of preventive chemotherapy to control and eliminate neglected tropical diseases

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Glossary of key terms and abbreviations

This glossary provides brief definitions of terms and abbreviations used in the manual; they may have different meanings in other contexts.

census
Registration of every unit in a given population.

community drug distributor (CDD)
A person from the community who participates in neglected tropical disease programmes in order to deliver preventive chemotherapy to individuals in his or her community.

Geographic Information System (GIS)
A system that generates and maps all types of data. GIS maps help programme implementers understand geographical context, relationships of distance and resource requirements, and allow programmatic outcomes to be tied to locations.

health facility
Places that provide health care. They include hospitals, clinics, outpatient care centres and specialized care centres, such as birthing centres and psychiatric care centres.

household
A dwelling in which one or more people live and share meals. It may also consist of a single family or another group of people.

implementation unit (IU)
The administrative or geographical unit in a country where preventive chemotherapy is implemented.

intermediate or subnational level
An administrative level below the national level but higher than the implementation unit level, where data on preventive chemotherapy are aggregated. The number of intermediate levels may vary among countries.

local level
The smallest administrative unit in a country's political-administrative structure; for example, a municipality or district.

mass drug administration (MDA)
A modality of preventive chemotherapy in which medicines are administered to the entire population of a disease-endemic region, regardless of individual infection status.

monitoring
Ongoing measurement and systematic analysis of data to track the progress of plans and programmes and collection of data through standardized, systematic techniques and parameters. The objective is to identify achievements and problems, analyse their causes and immediately implement corrective measures to meet programme goals.

mop-up
Localized mass drug administration that is conducted immediately after the original mass administration in areas where the coverage of preventive chemotherapy is found to be inadequate.

neglected tropical disease (NTD)
A diverse set of 20 diseases and disease groups that disproportionately affect populations living in poverty, predominantly in tropical and subtropical areas. They impose a devastating human, social and economic burden on more than 1 billion people worldwide.

preventive chemotherapy
Use of medicines, either alone or in combination, as a public health tool to control and eliminate neglected tropical diseases. Medicines are given regularly to reduce the occurrence, spread and severity of these diseases and their long-term sequelae.

preventive chemotherapy coverage
Proportion of individuals, expressed as a percentage, in a population who swallowed a medicine or combination of medicines. A general term encompassing the various types of coverage (administrative, epidemiological, geographical, national, reported) that programmes may calculate and report.

school-aged children
Children between the ages of 5 and 15 years (usually), regardless of whether they are attending school. The age range may vary among countries.

supervision
Periodic provision of technical assistance at the site of intervention to gather information on the achievements and difficulties that have arisen during the course of work and to analyse the progress of activities and the fulfillment of goals and work plans. It aims to introduce corrective or complementary measures in order to achieve objectives and goals and improve programmatic and service performance.

supervisory area (SA)
An area corresponding to the smallest administrative or geographical unit for which a first-level supervisor is responsible. It varies among countries.

social mobilization
A collaborative process used to raise community awareness, assist in intervention delivery and strengthen community participation. It involves local residents and public and private sector partners from national, district and local government authorities.

target population
People in a group with specific characteristics who are eligible to receive an intervention strategy.

Credit: WHO/Mark Nieuwenhof

1. Introduction

1.1 Background

Neglected tropical diseases (NTDs) affect more than 1 billion people globally, causing serious, long-term health effects *(1)*. Therefore, timely and effective existing interventions reduce morbidity and mortality *(2)*. The new NTD road map advocates preventive chemotherapy as a core intervention to reduce the burden of NTDs *(1)*. Preventive chemotherapy is a rapid impact intervention that involves regular administration of safe, effective medicines to a defined population irrespective of its infection status.

While health ministries and partners have made substantial progress against NTDs, the global community has not yet achieved its goals including for preventive chemotherapy to control or eliminate the following NTDs: lymphatic filariasis, onchocerciasis, schistosomiasis, soil-transmitted helminthiases, trachoma, foodborne trematodiases (fascioliasis, paragonimiasis, clonorchiasis and opisthorchiasis), taeniasis, scabies and other ectoparasitoses, and yaws. To achieve the expected impact of preventive chemotherapy, medicines should be administered to populations who are eligible to receive the intervention *(3–7)*. Annex 1 summarizes the frequency of use of medicines recommended for preventive chemotherapy and the minimum threshold coverage for NTDs amenable to the intervention.

Effective administration of preventive chemotherapy relies largely on operational planning which addresses the need for programmes to reach all eligible people and maximize community demand for the intervention. Local, bottom-up planning ("microplanning") fosters effective implementation and monitoring of public health programmes. Originally, public health implementers developed microplanning for use in vaccination campaigns, but various programmes, including those for control and elimination of NTDs, now use it. This manual is based on these and other country experiences in microplanning of preventive chemotherapy for NTDs *(8)*. It describes the basic concepts of microplanning, steps, and examples of tools to develop and implement a microplan.

1.2 Purpose and audience

Since microplanning originates at the lowest level of implementation, and is a bottom-up process, the main target audience of this manual is individuals who are responsible for oversight of preventive chemotherapy against NTDs. Throughout the manual these individuals are referred to as "first-level supervisors". As first-level supervisors are often trained by national programme managers or regional/district level supervisors, the manual is also intended for this audience, and provides generic tools, forms and processes that can be adapted to different contexts. Elements of the manual will also be relevant to others who are involved in microplanning at the community level, such as community leaders, community drug distributors (CDDs), teachers and health communicators.

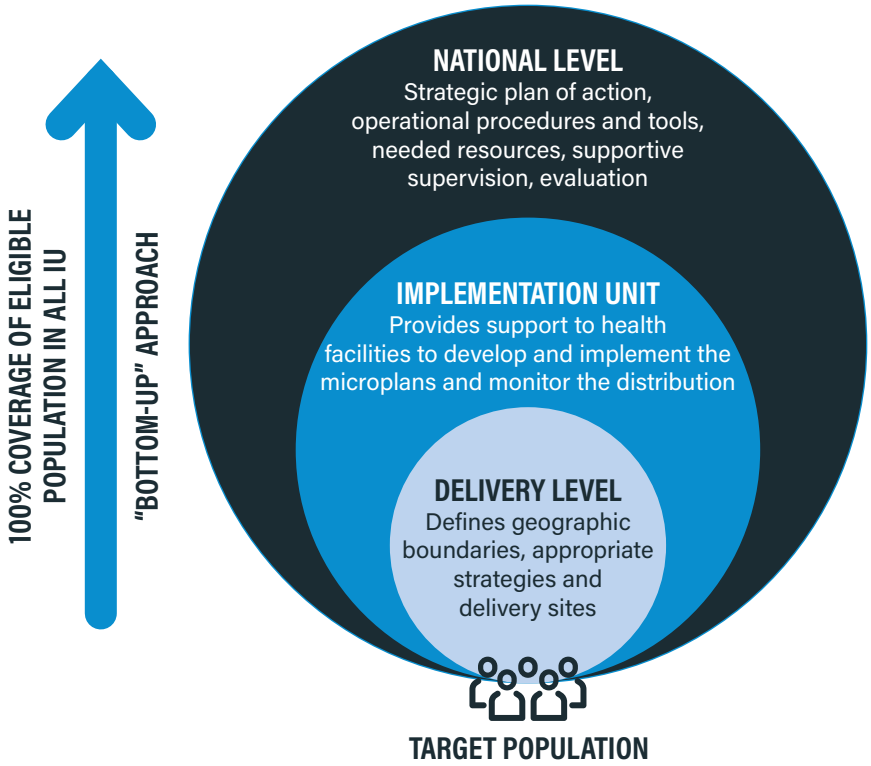
Note: A national programme should consider carefully whether to use this manual to change existing planning. If current planning is working well, there is no need to change that process. Rather, the manual is intended for national programmes with identified planning-related needs.

2. Key questions

2.1 What is microplanning?

Microplanning is an approach that originates at the local level. It is a cyclical process that is used to define the activities, resources, timing, and location of implementation and monitoring of preventive chemotherapy administration (Fig. 1).

Fig. 1. Microplanning uses a "bottom up" approach to reach target populations...but all levels must participate



For the purpose of this manual, the smallest administrative or geographical unit is defined as the "supervisory area" (SA), which is the level for which the first-level supervisor is responsible. The "implementation unit" (IU) is the administrative or geographical unit in a country in which preventive chemotherapy is implemented. The characteristics of SAs and IUs will depend on the administrative organization of the country, the characteristics of the endemic areas and the preventive chemotherapy strategies employed. Generally, multiple SAs fall within an IU.

2.2 Why use microplanning?

The microplanning process will:

- empower programme officers and stakeholders at local levels to promote use of local knowledge and problem solving and drive community demand for interventions;
- define approaches based on the demographic, socioeconomic and epidemiological characteristics of each SA that comprises each IU; and
- facilitates planning based on local context, using the best available data and estimations, for better management of human and financial resources as well as logistics at the point of service.

2.3 Where should microplanning take place?

All levels of the health delivery system support microplanning, but the process mainly occurs in the first-level SA, which is the lowest unit for delivery of programme services. The SA and the IU vary across countries and can be the geographical catchment area of a community health facility. Generally, multiple SAs fall within an IU.

Critically, the IU supports SAs to develop microplans, and collates them to ensure that SAs achieve full geographical coverage without overlapping one another. Microplans form the basis of the preventive chemotherapy distribution plan at IU level.

The national level builds on the microplans and the distribution plans at the implementation unit level to create a national action plan. The national level advocates for resources, coordinates logistics, and develops tools for supportive supervision and monitoring and evaluation.

2.4 When should microplanning occur?

Microplanning should start several months before preventive chemotherapy begins to allow programme levels above the SA to review and build their microplans (Table 1). We suggest that planning starts with national and subnational trainings about 6 months before preventive chemotherapy begins, with training of SA teams approximately 4 months beforehand; SAs should have their microplans ready about 3 months before preventive chemotherapy begins.

Table 1. Illustrative timeline of NTD microplanning steps at IU and SA levels

Preparing for microplanning	Month					
	01	02	03	04	05	06
Step 1. Prepare map of IU and ensure all areas are covered	x	x				
Step 2. Review existing data to identify challenges, priority areas and populations	x	x				
Microplanning process: Supervisory area	**Month**					
	01	02	03	04	05	06
Step 1. Prepare operational map of SA	x	x				
Step 2. Estimate target populations	x	x				
Step 3. Select drug distribution channels		x				
Step 4. Plan activities to reach / treat target populations		x	x			
Step 5. Calculate resources and define logistics		x	x			
Step 6. Monitor coverage / use data for action				x	x	
Microplanning process: Implementation unit	**Month**					
	01	02	03	04	05	06
Step 1. Validate SA maps to ensure that all areas are covered		x	x			
Step 2. Validate estimated number of the target population at SA and IU levels		x	x			
Step 3. Ensure priority groups are targeted and validate approaches to reach them		x	x			
Step 4. Compile microplans to ensure the most effective approaches			x			
Step 5. Mobilize resources and support logistics			x	x		
Step 6. Monitor coverage and make decisions based on progress				x	x	x

2.5 Who should conduct microplanning?

At the SA level, the person responsible for microplanning is often the person who oversees preventive chemotherapy activities or supervises CDDs within that SA. To create microplans, these first-level supervisors should use various sources of information including community leaders, CDDs, teachers, traditional healers, health communicators and representatives of community groups.

At the IU level, NTD focal points, school health personnel and other governmental staff support microplanning and use microplans to develop the distribution plan for preventive chemotherapy at IU-level and guide their supervisory activities.

2.6 How is the national plan linked with the microplans?

The national level coordinates the overall planning process following established national objectives, targets and guidance. Additionally, this level sets standards and guidance, mobilizes resources, coordinates logistics and establishes tools (e.g. for supportive supervision and monitoring and evaluation).

Regarding microplanning processes, the national level should:

- develop the national action plan for administration of preventive chemotherapy;
- define and communicate key goals, objectives and targets for administration of preventive chemotherapy;
- devise integration and coordination strategies and coordinate national (and other levels as relevant) efforts;
- establish and adapt microplanning guidelines and tools;
- ensure training of IU-level teams and support SA-level training; and
- ensure supervision, quality improvement processes and programme monitoring (including feedback of monitoring data to lower programme levels).

2.7 How often should microplanning take place?

Where resources allow, microplans should be developed in all areas implementing preventive chemotherapy, particularly when a programme is beginning, or if there are significant changes in strategies (e.g. moving from dual drug MDA to triple drug MDA for lymphatic filariasis).

In settings with limited resource, national programmes should prioritize microplanning in IUs with consistently low preventive chemotherapy coverage, evidence of systematically excluded populations, or results from a disease-specific assessment above the required threshold.

Generally, the first microplan in a given area requires more time than subsequent efforts. Because microplanning sessions include a review of the previous years' data and feedback from programme implementers, the more frequently microplanning occurs, the better the results.

2.8 The manual

Section 4 of this manual describes the microplanning process and the steps necessary to conduct effective microplanning in SAs (section 4.1) and IUs (section 4.2). The tool used to prioritize areas and populations is provided in Annex 2; the microplanning tools are detailed in Annex 3 (for SAs) and Annex 4 (for IUs).

3. Preparing for microplanning

Proper preparation and planning are critical to ensure that microplanning is an effective and efficient process. While microplanning is a bottom-up process, the IU and the national programme should ensure that SAs receive appropriate training, tools and support to complete the microplanning process effectively.

Two important steps should occur before microplanning is initiated in SAs:

- first, to ensure a consensus of the location of the SA boundaries by SA supervisors; and
- secondly, to reflect on past performance and challenges and use existing data and local wisdom to identify and address challenges to providing equitable access to MDA to all at-risk people in the community.

As part of the pre-microplanning process, the IU unit may consider holding a meeting with representatives of the SA and other stakeholders, either separately or in conjunction with microplanning training and orientation. This is also an opportunity for cross-SA learning to improve implementation of preventive chemotherapy.

Staff both in IUs and SAs bring important skills and knowledge to the pre-microplanning phase. The IU staff may have access to core data, such as administrative coverage, coverage evaluation survey data, or other special surveys or research data. The SA staff and other stakeholders typically have the best knowledge of the local area and key contextual information about site-specific challenges and appropriate solutions to improve programme delivery and community uptake.

Step 1. Prepare a map of the IU and ensure that all areas are covered

- **Purpose:** To define the boundaries of the IU and the boundaries of each SA to ensure full geographical coverage of the IU and no overlap between SAs.
- **Inputs:** Maps from previous MDAs or health campaigns (hard copies or electronic (GIS) files)
- **Responsible:** Implementation unit "supervisor"
- **Individuals involved:** IU-level staff, first-level supervisors, community leaders and statisticians/geographers (as needed)
- **Output(s):** Map of the IU including all SAs and SA boundaries.

Prior to SA-level microplanning, the IU and SA representatives should ensure there is understanding and consensus of the outer boundaries of each SA. If this step is not completed, it is possible that boundaries cannot be identified, are unowned or are disputed (Fig. 2). Alternatively, more than one SA might implement activities with the same population, leading to inefficient use of resources. Any inconsistencies or disagreements about SA boundaries should be resolved before SA-level microplanning begins.

Fig. 2. Ensure that all areas are covered and avoid "no-man's lands" between adjacent SAs

This step creates a map of the IU to ensure that SA and IU boundaries are clearly defined and harmonized. There should be full coverage of all localities and no overlap in coverage across SAs or IUs. The creation of this map is ideally done in collaboration with SA supervisors for simultaneous creation and validation. Creating an IU map includes the following activities.

1.1. The IU confirms whether there are existing IU maps to help create/revise the map.

1.2. The IU and first-level supervisors discuss and confirm the SA boundaries.

1.3. An existing map is updated based on discussion with first-level supervisors or, if needed and with inputs from first-level supervisors, a new IU map is drawn by starting with the boundaries.

1.4. The IU adds any geographical features or landmarks that are critical for defining SA boundaries.

1.5. The IU conducts an internal review of the map and reviewers suggest any needed changes.

1.6. The IU validates and shares the final map with first-level supervisors.

When creating the IU map, personnel should consider whether:

- the map is sufficiently detailed to enable supervisors and stakeholders to discern boundaries;
- the SA boundaries align with other administrative boundaries (e.g. health facility catchment boundaries) but in some instances are specific to the preventive chemotherapy programme (in which instance they should be logical and if possible follow infrastructure (roads) and geographical features (rivers)); and
- the IU can create a map using GIS software (from the census office). Often just as effectively as a map using GIS software, the IU can draw the map by hand.

Step 2. Review existing data to identify challenges, priority areas and populations

- **Purpose:**
  - » To review existing data and leverage local knowledge to assess past performance and identify key barriers and possible solutions to improve programme delivery.
  - » To identify areas and subpopulations that should be prioritized for activities during SA-level microplanning.
- **Inputs:** Administrative and surveyed coverage from past MDAs, data from special surveys (quantitative or qualitative)
- **Responsible:** Implementation unit "supervisor"
- **Individuals involved:** Implementation unit staff, first-level supervisors, optional: regional and national-level programme personnel
- **Tools available:** Tool A, Table 2 *Key questions during the IU analysis phase*
- **Outputs:**
  - » Completed Tool A.
  - » List of priority groups that should be targeted for special interventions during the upcoming preventive chemotherapy activity, including any special actions that SAs should consider.
  - » Defined methods to administer and monitor implementation of preventive chemotherapy and conduct social mobilization and supervision for the administration.
  - » List of SAs that may require additional support during SA-microplanning.

In this step the IU team uses its technical expertise to guide planning. Based on technical expertise and past monitoring the IU supervisor works with SA supervisors to identify priority groups and geographical areas. Past challenges are identified and guidance is provided to SAs to ensure that microplans include solutions to those challenges. **This step is a key input into Step 1-SA.** The suggested activities are as follows:

2.1. For the IU, ensure understanding of past coverage challenges and priority groups and areas. These issues may be in one or more SAs. They should be clearly addressed in the relevant SA microplan(s).

2.2. The IU and SA staff might pre-populate data (e.g. target population, number of persons treated, preventive chemotherapy coverage) into Tool A to allow ample time to conduct a problem analysis.

2.3. In order to analyse the probable causes of problems and identify solutions, the IU should review and discuss the questions listed in Table 2.

2.4. The IU should complete Tool A to summarize findings from the problem analysis and discussion. It uses the tool to discuss priorities with first-level supervisors and CDDs so that they may be incorporated into SA-level microplanning.

2.5. The IU should share any existing materials or tools (e.g. information, education or communication materials) that could assist SAs in conducting social mobilization and implementing activities among targeted groups and areas.

Tool A (Annex 2) will support prioritization of problem areas by:

- considering the characteristics of SAs, identifying problems with previous rounds of preventive chemotherapy and discussing how to prevent or solve those problems;
- initiating separate discussion tailored to the specific challenges of hard-to-reach populations; and
- identifying activities that can be conducted by the SAs to solve problems and those that need to be supported by the IU or the national level in order to be implemented.

Tool A. Prioritization of areas and populations to take actions needed to achieve PC threshold coverage

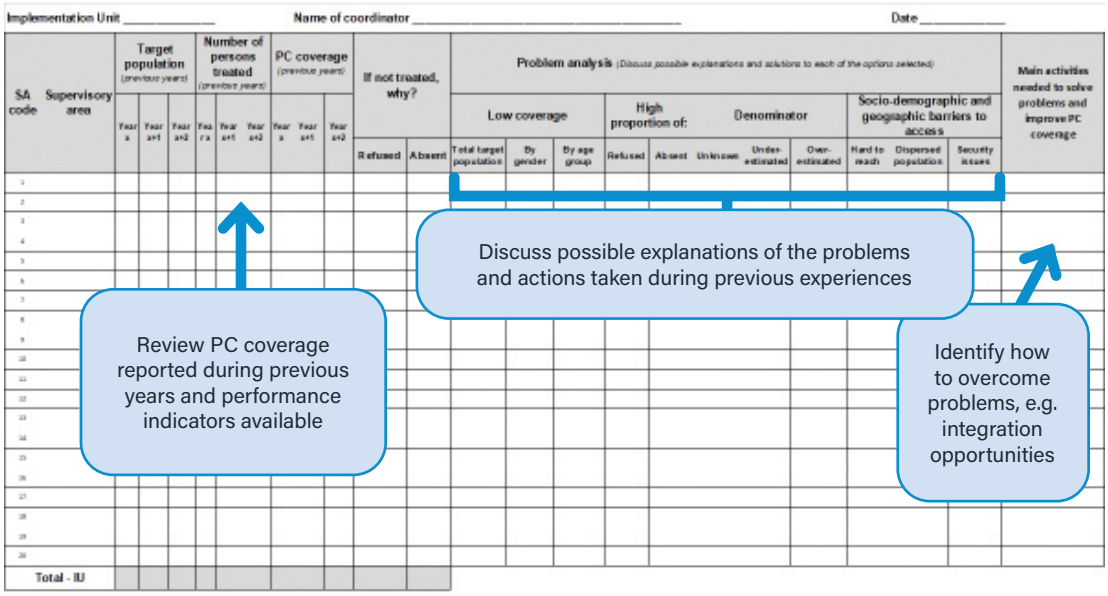


Table 2. Key questions during the IU analysis phase

Questions to ask	Sources of data/ information	Actions for microplanning
In which areas was PC coverage low or unrealistically high during the previous PC campaign(s)?	• Tool A • IU/SA level coverage results	• Identify list of SAs that require additional analysis or planning support. • Identify SAs that need more resources and assistance from the IU and national level, for example, carrying out activities that the SA cannot implement as a result of limited supplies, equipment, access to vehicles necessary to reach hard-to-reach communities; technical support and information.
Which specific population(s) or age-group(s) did not meet coverage targets?	• Tool A • Review of disaggregated data from previous PC round(s)	• Create a list of priority groups that should be targeted for special interventions during the upcoming PC activity
Was low coverage likely due to issues with PC access or high levels of refusals?		
If refusals: What are the reasons for refusals?	*If refusals:* • Tool A • Coverage surveys, SCT surveys, KAP surveys • Focus group discussions with PC volunteers and communities	*If refusals:* • Involve SA supervisors, community leaders, stakeholders, and partners. It is important to request the support of volunteers to implement the work plan and provide information to motivate and have the support of parents of students, families, and communities.
If access-issues: Which groups may have difficulty accessing the PC? Which hard-to-reach populations might exist within the IU?	*If access-issues:* • Focus group discussions with PC volunteers and communities	*If access-issues:* • Identify a list of hard-to-reach populations and their approximate location in the targeted SA(s). • Identify feasible and acceptable strategies that SA(s) can incorporate into their microplan to reach those populations
Other questions?		

KAP: knowledge, attitudes, practice; PC: preventive chemotherapy; SA: supervisory area; SCT: supervisor's coverage tool.

4. Microplanning process

As described in Section 2, microplanning is a collaborative process that begins at the SA. The IU directly supports microplanning and builds on the SA plans to create an IU-level distribution plan for preventive chemotherapy. Table 3 describes the steps in each phase of the process and explains the related work of the SA and the IU.

Table 3. Microplanning steps: Supervisory area and Implementation unit

	Steps	Supervisory area (SA)	Implementation unit (IU)
Analysis	**Step 1.** Prepare operational map	Prepare operational map of SA	Validate SA maps and ensure that all areas are covered
	Step 2. Estimate target populations	Characterize and estimate target populations	Validate estimated number of the target population at SA and IU levels
	Step 3. Define approaches to reach target populations	Select the drug distribution channels	Ensure priority groups are targeted and validate approaches to reach them
Planning	**Step 4.** Plan the activities	Plan the activities to reach and treat target populations including plans for community engagement and social mobilization approaches.	Validate approaches to community engagement and social mobilization. Compile microplans to ensure the most effective approaches
	Step 5. Calculate resources and define logistics	Calculate resources and define logistics	Mobilize resources and support logistics
Implementation	**Step 6.** Monitor coverage and take actions	Monitor coverage and use data for action	Monitor coverage and make decisions based on progress

4.1 Supervisory area

This section outlines the planning process led by first-level supervisors with involvement of local stakeholders. It describes the steps (Fig. 3) and tools (Table 4) of microplanning by phase at the level of the SA (see Section 2.3).

Microplanning requires analysis of the local situation and engagement of key stakeholders to ensure maximum coverage of preventive chemotherapy. The local knowledge and relationships between supervisors and stakeholders make high-quality microplanning possible. The microplan allows the programme to fully leverage those relationships and knowledge. First-level supervisors lead microplanning with support from personnel at higher levels of the NTD programme (i.e. IU). Section 2.5 provides more information on the people involved in microplanning.

The IU microplanning process is described in Section 4.2.

Fig. 3. Steps of microplanning: Supervisory Area

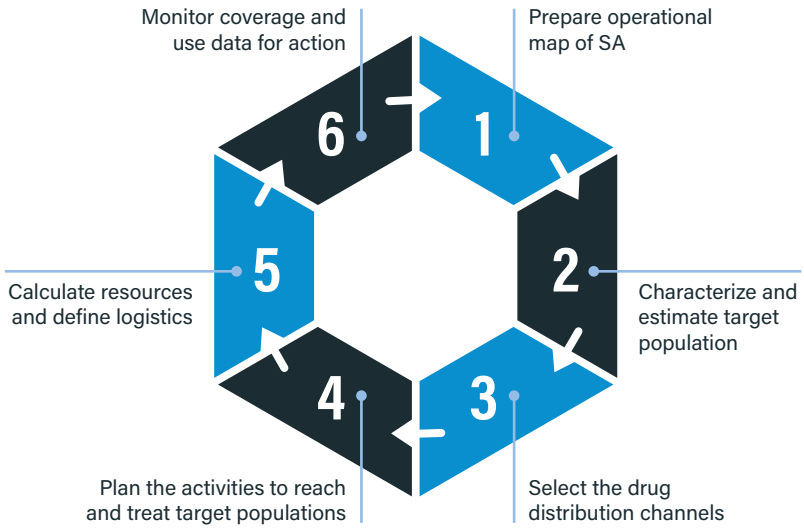


Table 4. Steps and tools of microplanning: Supervisory area

	Steps	Tools
Analysis	**Step 1.** Prepare operational map of SA	Instructions to prepare an operational map of SA are described in Step 1-SA
	Step 2. Characterize and estimate target population	**Tool 1-SA.** Characteristics of target population and distribution channels
	Step 3. Select the drug distribution channels	
Planning	**Step 4.** Plan the activities to reach and treat target populations including plans for community engagement and social mobilization activities.	**Tool 2-SA.** Plan to treat population in schools **Tool 3-SA.** Plan to treat population in fixed points **Tool 4-SA.** Plan to treat target population in households
	Step 5. Calculate resources and define logistics	This step uses **Tool IU-6** and **Tool IU-7** described for the Implementation Unit in Section 4.2
Implementation	**Step 6.** Monitor coverage and use data for action	Coverage monitoring forms and reports; Monitoring tools (charts, tables, maps)

Historically, microplans have been paper-based but the expansion of digital methods has facilitated improved efficiency of the planning process and accuracy of microplan maps, especially in defining SA boundaries. First-level supervisors submit microplans to the next programme level, and that level reviews and compiles them to create an IU-level distribution plan.

Step 1. Prepare an operational map of the supervisory area

- **Purpose:** This step ensures first-level supervisors and stakeholders understand the area that they will supervise during the MDA.
- **Inputs:** IU map including SA boundaries, IU-defined priority areas and populations (Tool A); maps from previous MDAs or health campaigns (hard copies or electronic files)
- **Responsible:** Supervisory area "supervisor"
- **Other individuals involved:** IU-level staff (if needed), CDDs, traditional/administrative authorities, teachers, community members
- **Available tools:** Review instructions described below
- **Output(s):** Operational map of the SA, including boundaries and landmarks.

Critically, the operational map provides information that will help first-level supervisors select the best tactics for administration of preventive chemotherapy (e.g. distribution sites, household visits, **Step 3-SA**).

Creating an operational map includes the following activities.

1.1. The supervisor confirms the SA boundaries in discussion with the IU and references the IU map (pre-microplanning).

1.2. The supervisor confirms any priority areas and populations as set by the IU or national levels (pre-microplanning).

1.3. The supervisor confirms whether maps are available to help create/revise the operational map and may use existing maps from the health ministry, local government or statistical institutions (census office). The supervisor determines also if GIS or digital maps are available (e.g. shape files or OpenStreetMap data; if available, these should be provided to supervisors by an official at the IU level or higher). This geospatial data can help planners to visualize the SA and coordinate with other programmes or integration partners working in the same area.

1.4. Update an existing digital or hand-drawn map (Activity 1.3). Or, if needed and with inputs from key stakeholders, draw a new operational map by starting with the boundaries and noting the location of the boundaries relative to major landmarks. Any adult community member should be able to look at an operational map and know that the map represents his or her community.

1.5. The supervisor adds detail including, but not limited to, communities, infrastructure, geographical features and landmarks. Approximate distance or travel time between features should be included. Consider both where people live and the areas where they work during the time of the MDA. The level of detail will depend on the size of the SA.

1.6. Identify on the map the work location/residences of any high-risk areas or special populations such as migrants, nomadic populations, slums, historically excluded groups or areas at high risk for infection from review of previous data (pre-microplanning).

1.7. At least preliminarily, define the boundaries of the CDD working areas (see Activity 4.2). Each CDD should be able to understand his or her coverage area.

1.8. The supervisor asks at least three key local stakeholders who were not part of steps 1.1–1.6 to review the map and suggest any needed changes. The supervisor checks with neighbouring supervisors to prevent gaps in programme coverage. Remember, the supervisor can always update the map later; it does not have to be perfect.

1.9. The supervisor shares the map with IU-level staff.

1.10. IU-level personnel review that map alongside other operational maps to ensure that the maps conform with the boundaries defined during preparation of microplanning (Tool A-IU).

1.11. IU-level personnel provide feedback to the supervisor about any needed changes to the map.

1.12. The supervisor updates the map based on the feedback received.

Every SA map should have the following elements.

- **Clearly defined borders of the SA.** The border should be defined in collaboration with the IU, before SA-level microplanning starts. The border should be located and indicated in a way that helps someone from outside the area to identify its location (e.g. water features/roads; vector file if using GIS tools).
- **Villages and communities where people live.** This can be as detailed as individual houses or presented at a higher level such as a group of houses and apartment buildings. When using satellite imagery/GIS, the location and footprint of buildings and structures are often visible. These images help supervisors ensure coverage of all inhabitants.
- **Infrastructure and geographical features.** Important infrastructure includes roads, bridges, railways and bus/train stations. Important geographical features include rivers, streams and lakes. Stakeholders should plan for operational challenges related to these features (e.g. areas prone to flooding).
- **Important landmarks within the community.** These include schools, markets, workplaces, places of worship and health centres.

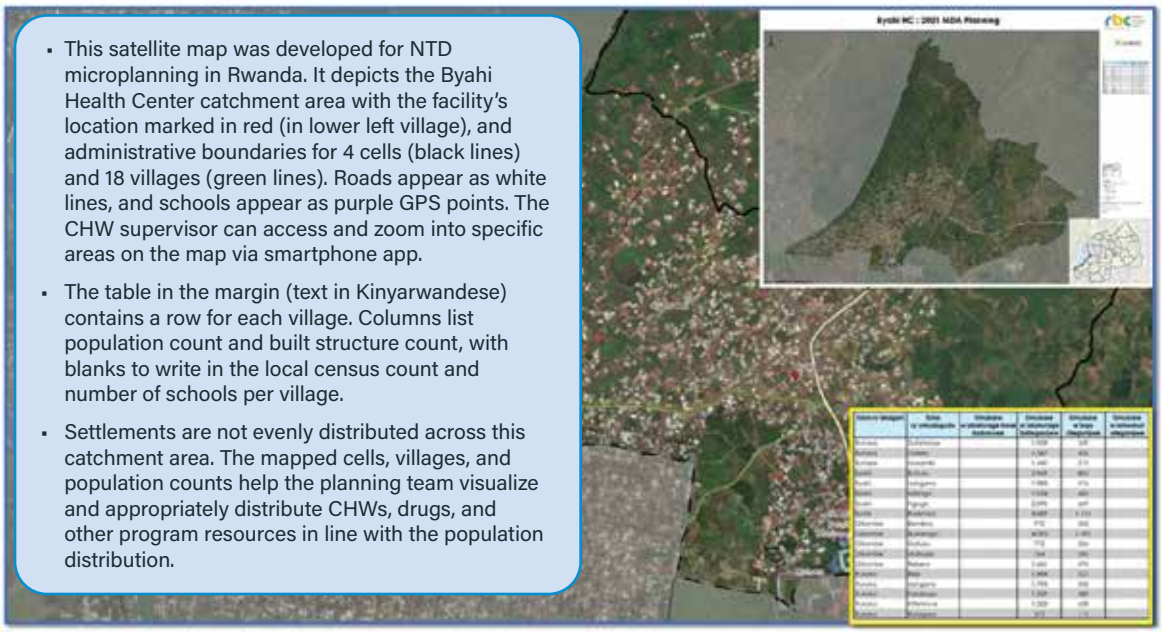
The map will be the frame for the rest of the microplanning exercise. The supervisor will add more information to the map in the steps described below.

When creating the operational map, the supervisor and team should take the following points into consideration.

- Creating an operational map is a participatory process. The first-level supervisor involves key community stakeholders in the process. As important as the map itself is the mapping process, which engages the community, allows local knowledge to improve planning quality and helps stakeholders understand and guide administration of preventive chemotherapy. Once completed, the supervisor should share the final operational map with key stakeholders.
- The map should have enough detail to inform the location of fixed-point distribution sites and/or the routes that CDDs use to move from house to house. It is likely impractical to include every single home or building.
- Where possible, a supervisor may create a map using GIS software (from the census office or GIS laboratory). Using GIS can reduce human error, especially in areas that may include hard-to-reach settlement groups (see Fig. 4 for an example). However, satellite images or GIS shape files may be unavailable.
- Often just as effectively as generating a map using GIS software, a supervisor can draw the map by hand (Fig. 5).

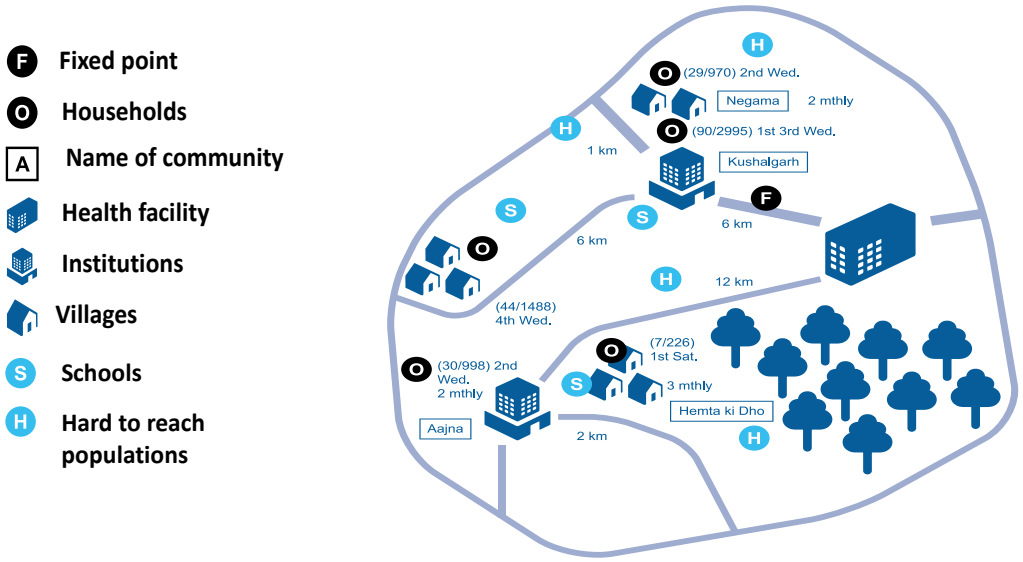
Fig. 4. Digital tools for microplanning

- This satellite map was developed for NTD microplanning in Rwanda. It depicts the Byahi Health Center catchment area with the facility's location marked in red (in lower left village), and administrative boundaries for 4 cells (black lines) and 18 villages (green lines). Roads appear as white lines, and schools appear as purple GPS points. The CHW supervisor can access and zoom into specific areas on the map via smartphone app.
- The table in the margin (text in Kinyarwandese) contains a row for each village. Columns list population count and built structure count, with blanks to write in the local census count and number of schools per village.
- Settlements are not evenly distributed across this catchment area. The mapped cells, villages, and population counts help the planning team visualize and appropriately distribute CHWs, drugs, and other program resources in line with the population distribution.



Source: Rwanda Biomedical Center/NTD control programme

Fig. 5. Example of an operational map of Supervisory Area



Step 2. Characterize and estimate the target populations

- **Purpose:** To collect and compile demographic information about the target population in the SA. This information will help the supervisor select the appropriate tactics to reach the target population, identify hard-to-reach groups/areas, and identify possible operational challenges and related solutions before starting implementation of preventive chemotherapy.

- **Inputs:** Operational map created in Step 1, national census data or alternative data sources (see Table 5)
- **Responsible:** Supervisory area "supervisor"
- **Other individuals involved:** IU-level staff, local administration staff, teachers, CDDs
- **Available tools:** Tool 2-SA, Checklist of data to estimate target population and resources (Table 5)
- **Output(s):**
  - » Tool 1-SA (partially completed)
  - » Number of people targeted for MDA in the SA by possible location of preventive chemotherapy delivery (indicated on map of SA)
  - » List of key stakeholders.

Characterizing the supervisory area may include the following activities.

2.1. Gather data on the population size (Table 5). The supervisor can get this information from a physical count of people by the NTD programme, the local education office (for information on students), local government offices (census data, primary health care centres and businesses (about their workforce).

2.2. Calculate the number of people targeted for preventive chemotherapy in the SA. Generally, it helps to start with the people in the most basic unit of the SA and build up from there. For example, if the most detailed information that a supervisor can get is for the household, then combine the population of all households in each CDD area, and finally add the population in each CDD area for all areas in the SA.

2.3. Calculate the distribution specific population groups (i.e. preschool or school-aged children, women of reproductive age among others). This breakdown will inform the selection of the appropriate tactics to reach the population (Step 3).

2.4. Separate from the map, list all key stakeholders including, but not limited to, traditional/government/religious/business leaders, traditional healers, and women and youth groups. Meet with the stakeholders and get their support for and assistance with the upcoming preventive chemotherapy administration. Also, the supervisor identifies (if needed) and engages CDDs for the upcoming campaign.

2.5. The supervisor documents the important characteristics of the SA (Tool 1-SA). Such characteristics include the urban/rural make-up of the SA.

Regarding activity 2.1, the supervisor may start to estimate the population by collecting data from the previous census, if those data cover the same area as the SA. If so, the supervisor should adjust the population based on population growth rates as provided by the census bureau. The supervisor should also consider the possible large-scale movement of people into the SA (e.g. new economic activity, natural disaster).

The health ministry may determine that census data should not be used. If so, supervisors can use reliable records from other sources such as national immunization days or other public health campaigns covering the same target population. If the programme decides not to use census data or data from other public health efforts, the programme may conduct its own count of the population. Alternatively, the health ministry may consider triangulating census figures with population estimates generated by satellite data (Box 1).

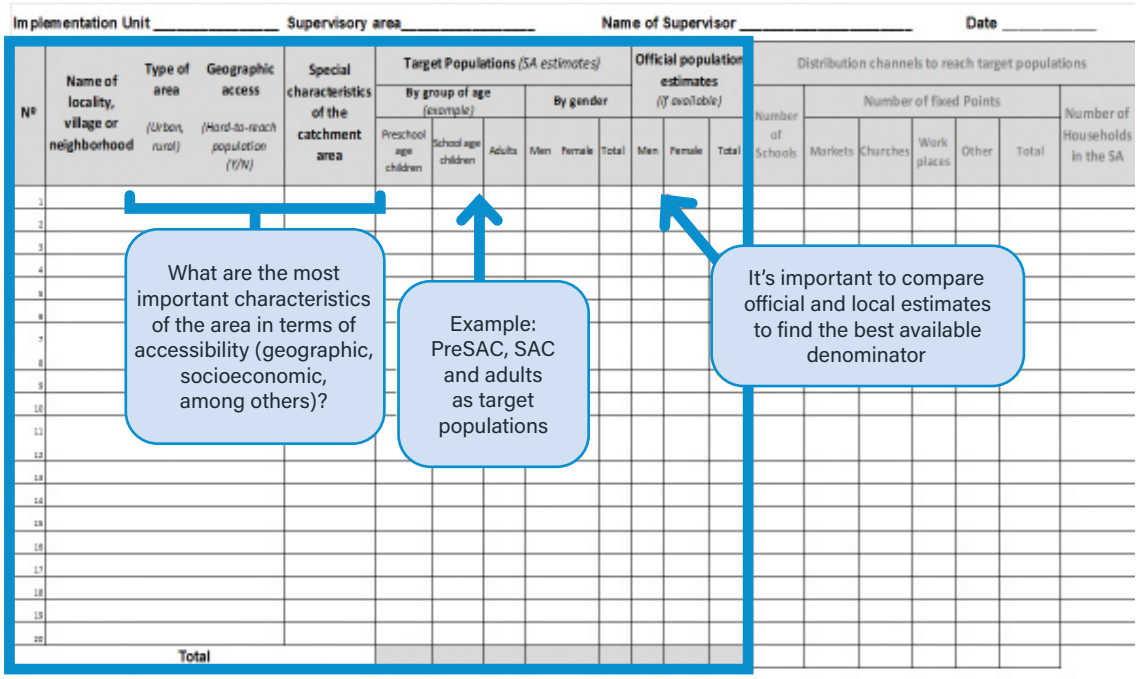
Box 1. Considering triangulation with satellite-generated population estimates

The health ministry may opt to triangulate census figures with one or more alternative sources to give a more robust view of programme targets and, ultimately, coverage achievements. Depending on what options are readily available from other public health programmes or community initiatives, reliable alternative sources may include open source satellite-generated estimates from GRID3 maps, WorldPop, population density maps available from Facebook Data for Good and others. These sources are able to produce statistical models that mix and match satellite data with verified population counts from small samples across a country in order to produce detailed, gridded population estimates (see descriptions of "top down" and "bottom up" approaches at worldpop.org/methods/populations). Officials can then compare and analyse the variation among census projections, estimates from other programmes and statistical models. In some cases, similarity between multiple recent sources can build confidence in using a particular dataset.

Table 5. Checklist of data to estimate target population and resources

Data or information needed (source)	Available	
	Yes	No
Population estimates by age group and locality. The age group(s) to target depend on the recommendations for NTDs of the health ministry (census data)		
Number of people who received preventive chemotherapy during previous years **and** people who refused or were absent during previous rounds of preventive chemotherapy (programme records)		
Preventive chemotherapy coverage by group of age, sex and area during previous years (programme records)		
Updated NTD programme SA map including SA boundaries, total population and target population (see Step 1).		
List of all (public, private, religious) schools, their locations, administrator contact information and number of students (local education office)		
List of major workplaces, their locations, administrator contact information and number of workers (labour office)		
List of points of interest where fixed points can be located, e.g. churches, markets, bus stations, health facilities (local health/government office)		
Operational resources available locally, e.g. personnel, transportation (local health/government office)		

Tool 1-SA. Characteristics of target population of the Supervisory area



Step 3. Select the drug distribution channels

- **Purpose:** To determine the appropriate drug distribution approaches for each SA.
- **Inputs:** Tool 1-SA (partially completed in Step 2), previous coverage data, identified priority approaches from IU and national level
- **Responsible:** Supervisory area "supervisor"
- **Other individuals involved:** Key stakeholders, optional: district and national-level programme personnel
- **Available tools:** Tool 1-SA
- **Output(s):** Completed Tool 1-SA; defined methods to administer preventive chemotherapy.

This step determines the distribution methods used during administration of preventive chemotherapy. Because the SA supervisor and stakeholders best know the area and its resources, their inputs are important to determining the most effective approaches or channels to administer preventive chemotherapy. With stakeholders, the supervisor identifies the channels for administering preventive chemotherapy according to the characteristics of the SA. District and national-level programme personnel may also provide guidance. **The selected approaches should aim to maximize preventive chemotherapy coverage.**

Common drug distribution approaches include:

- **Fixed points,** which are accessible distribution sites where the population presents to receive preventive chemotherapy medication. These sites are typically placed in high-traffic locations (e.g. markets, bus station, health facilities). The location of fixed points may move during the campaign. This approach may be used to target nomadic pastoralists or seasonal migrants who consistently miss out drugs because they are either in search of pastures or working on farms. Programme staff may create temporary posts at the location of theses populations at the time of the distribution.

- **House-to-house,** which are distributions whereby teams of two or more CDDs visit each house in a defined geographical area to administer the drug and record information on treatment. These mobile teams may revisit households in which one or more targeted people were missed during the initial visit. Communities often prefer household distributions, but they are resource intensive. Therefore, programmes generally use house-to-house distributions to reach people who were not previously treated using other approaches.

- **Schools,** which in many settings are a cost-effective platform to reach children for treatment (e.g. for soil-transmitted helminthiases and schistosomiasis).

Selecting drug distribution channels may include the following activities.

3.1. The supervisor reviews past data on preventive chemotherapy coverage to identify populations and areas that were missed and how previously used approaches performed.

3.2. With IU-level personnel, stakeholders and CDDs, the team explores and documents the main hindrances in previous rounds of preventive chemotherapy administration and potential solutions to such barriers.

3.3. As needed in consultation with IU-level and national NTD programme direction, the SA supervisor reviews possible distribution approaches and selects one or more.

The team should take the following into consideration.

- Preventive chemotherapy coverage from previous rounds

- Differences in preventive chemotherapy coverage in specific areas or groups.

- Existence of identified groups who were not treated during previous rounds of preventive chemotherapy.

- Existence of hard-to-reach population(s) in the SA (see activity 1.4). Certain populations may be hard-to-reach while others may have access to preventive chemotherapy but are hard-to-treat. Special distribution channels should be devised to reach both hard-to-reach and hard-to-treat populations. Examples of such populations might include:

  » **Hard-to-reach:** Certain populations may have limited access to preventive chemotherapy due to geography, socioeconomic status, or other characteristics. These populations may include people who are not easily reached due to long distance or difficult terrain (e.g. rural populations), populations who are mobile or nomadic, and populations experiencing conflict or insecurity. Even people living in urban settings may have difficulty accessing health services, including slum dwellers, squatter settlements and high-rise buildings. Persons with disabilities or limited mobility might have difficulty reaching points of preventive chemotherapy distribution.

  » **Hard-to-treat:** Populations defined as those who live in places that can be more easily reached by the distribution but who are difficult to treat due to reluctance, religious or cultural, or other reasons. Reluctance may result from religious or traditional beliefs, as well as historical disenfranchisement.

Wealthy populations may also be hard-to-treat because they may not use public health services, they may live in private communities or they may not consider themselves at risk of the disease. Persons experiencing poverty or low-income status, persons with limited time to access preventive chemotherapy services (e.g. daily wage earners), or people experiencing discrimination due to gender, sexual-orientation, race/ethnicity, or country of origin may also have challenges accessing services.

- Community perceptions of distribution approaches and past efforts to get community buy-in for those approaches. This information can come from one-on-one discussions, focus group discussions or coverage evaluation surveys.
- Physical distance between households. Coverage at fixed points may decrease if people need to travel long distances from their house by foot.
- Resource availability. House-to-house distribution requires more resources (e.g. CDDs) than fixed point or schools-based preventive chemotherapy, for example.
- The extent to which the available approaches can improve social mobilization for the administration of preventive chemotherapy. For example, while house-to-house distributions require more resources than for fixed-point distributions, they can more effectively engage community members and build demand for preventive chemotherapy.

Per Activity 3.3, programmes often combine multiple distribution approaches in order to reach different people in the same SA. Once the supervisor selects the channel(s), they are registered on Tool 1-SA: *Characteristics of target populations and distribution channels*.

The participation of key stakeholders is essential. They can provide useful recommendations to select the most effective and acceptable drug administration approaches. Supervisors should also engage stakeholders to help implement the distribution approaches such as during mop-up and motivate community members to participate.

Tool 1-SA. Characteristics of target population and distribution channels

Implementation Unit _____ Supervisory area_____ Name of Supervisor _____ Date _____

Nº	Name of locality, village or neighborhood	Type of area (Urban, rural)	Geographic access (Hard-to-reach population (Y/N)	Special characteristics of the catchment area	Target Populations (SA estimates)						Official population estimates (if available)			Distribution channels to reach target populations						
					By group of age (example)			By gender						Number of Schools	Number of fixed Points					Number of Households in the SA
					Preschool age children	School age children	Adults	Men	Female	Total	Men	Female	Total		Markets	Churches	Work places	Other	Total	
1																				
2																				
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Distribution channels will be selected based on the characteristics of target populations and Supervision area

Step 4. Plan the activities required to reach and treat target populations including plans for community engagement and social mobilization

- **Purpose:** To plan the appropriate number of distribution sites and/or teams, timing and type of delivery approach needed to treat eligible individuals, as well as the appropriate activities to engage the community and sensitize the populations about MDA.
- **Inputs:** Tool 1-SA
- **Responsible:** Supervisory area "supervisor"
- **Other individuals involved:** Community stakeholders, IU-level staff/supervisor
- **Available tools:** Tools 2-SA, 3-SA, 4-SA
- **Output(s):** Documented plan to administer preventive chemotherapy (Tools 2-SA, 3-SA and 4-SA) including specific fixed-point sites (if applicable); social mobilization plan at the community level.

This step includes defining the activities required to reach and treat all targeted people and their appropriate quantity and timing. This step documents who will do what actions where and when. It is crucial to realistically calculate the workload and resources needed to administer preventive chemotherapy (Step 5).

Planning to reach and treat target populations may require the following activities.

4.1. Select the specific sites for fixed-point preventive chemotherapy administration, if relevant (see Step 3). Fig. 5 provides an example of a strategy to distribute fixed-point posts and Fig. 6 of how to organize "mop-up" approaches to reach target populations in their households.

» List the schools (Tool 2-SA), fixed points (Tool 3-SA) and localities where distribution will occur from door to door (Tool 4-SA) and the estimated target population for each delivery approach (i.e. the number of people treated house-to-house).

» Record the contact information for fixed-point coordinators; coordinate and schedule the days and hours of preventive chemotherapy administration considering the specific target population. Be sure to include appropriate information for hard-to-reach populations. This is critical for targeting mobile populations who may change locations frequently.

4.2. Estimate the number of CDDs needed to administer preventive chemotherapy (see Step 1.5). For house-to-house and fixed points, at least two CDDs is preferable, one to provide the drug and one to keep treatment records. The number of needed CDDs depends on:

» the travel distance for CDD teams, for example between the (fixed distribution) points or from home to fixed distribution points. Use the operational map to estimate distances and organize the sequence of activities.

» For household visits, the number of visits for and people requiring treatment by each CDD team. Using the map, the supervisor maps all households for each CDD team and divides the SA into reasonable coverage areas for the CDD teams (Activity 1.5). This will enable the supervisor to estimate the number of CDDs and days needed to cover the SA. Fig. 6 is an example of organizing a CDD catchment area to ensure the CDD can visit all households.

4.3. Field visits to physically validate the hard-to-reach mobile/migrant and high-risk populations such as nomad camps sites including pastoral/agricultural nomads, slums (including homeless living in temporary shelters urban areas), construction sites and brick field workers. This activity should be done by supervisors with local community support.

4.4. For fixed-point distributions, the number of people requiring treatment at each fixed point (or school). The supervisor defines the time needed for the defined number of CDDs to reach all targeted people. Often, the national NTD programme provides the allowable duration of preventive chemotherapy administration in the IU. Difficult-to-access areas may target a lower number of people to treat daily (e.g. 30-50 households per day or 100 people/day) than easy-to-access areas (e.g. 50-80 households or 200 people/day)

4.5. Supervisors should also create a plan to conduct social mobilization among the targeted population(s). This may involve creating a variety of messages targeted at specific risk groups and identifying communication channels or methods that are likely to reach the targeted population (e.g. informative sessions with the primary leaders in each village). As part of the creation of a social mobilization plan, supervisors and stakeholders should discuss strategies for disseminating messages using appropriate communication channels; identify and train community health workers to carry out sensitization in the community; and organize the best delivery methods. It is beyond the scope of this document to provide detailed information on creating a social mobilization strategy. For more information on designing a social mobilization plan, refer to the IEC & Social Mobilization NTD Tool Kit for a detailed guide used to develop and/or strategically review social mobilization and communication strategies *(9)*.

4.6. The supervisor shares a summary of the plan with key stakeholders including CDDs and uses this engagement to encourage their support and inputs into the plan. Engagement can be done in-person, one-on-one or in groups (e.g. during CDD training).

Fig. 5. Example of potential locations of fixed points

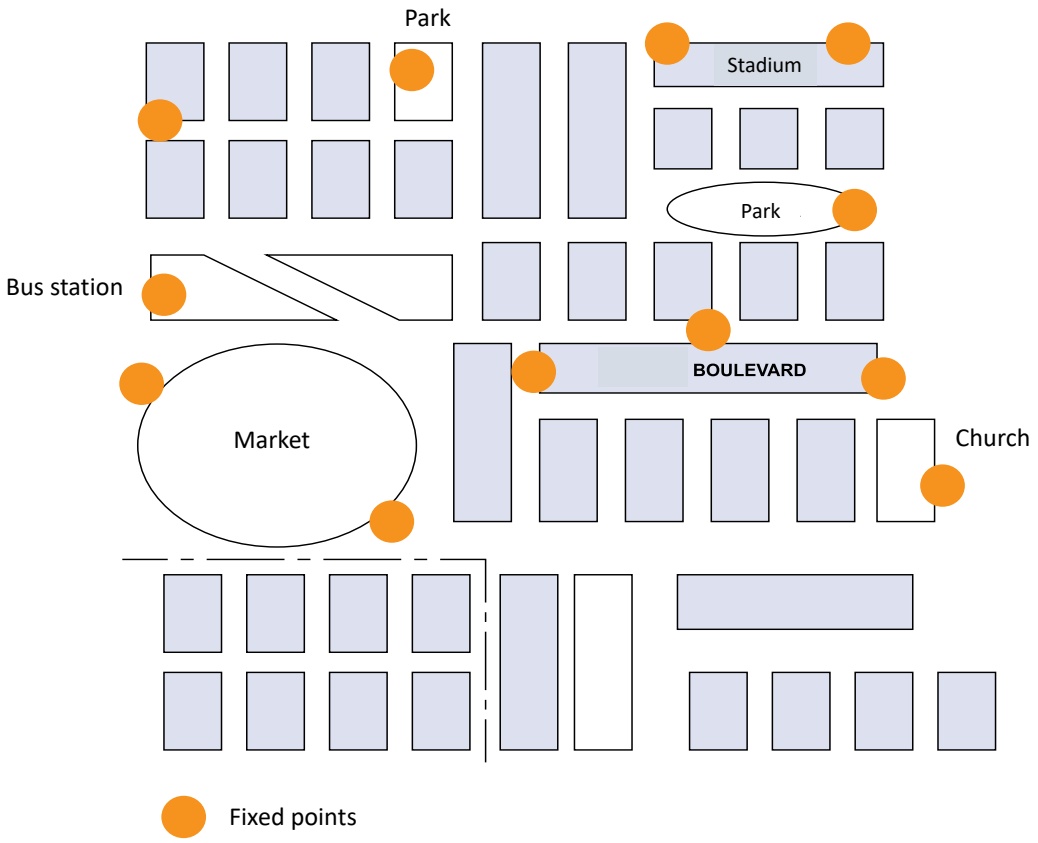
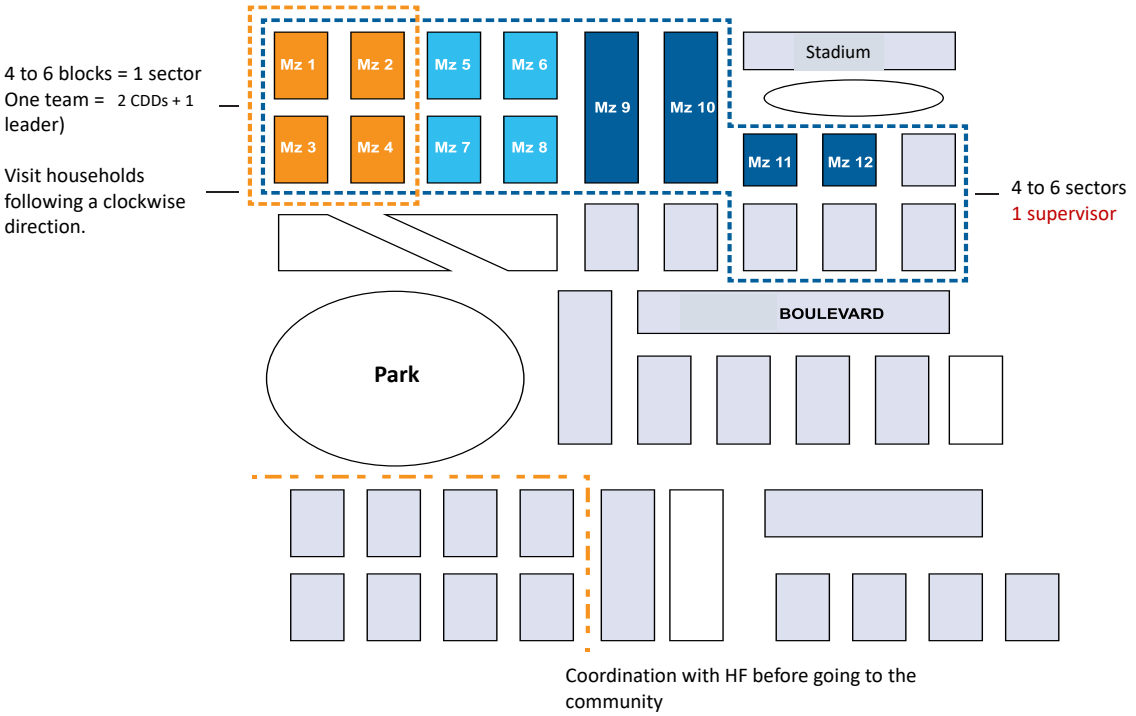


Fig. 6. Example of "Mop up" organization to reach target populations



Tool 2-SA. Plan to treat school population

Total target population to treat in Schools	
Nº pairs Community Drug Distributors	

Implementation Unit _____ **Supervisory area** _____ **Name of Supervisor** _____ **Date** _____

Nº	Name of school	Public or private	Levels/ grades	School contact			Contacted	Estimated target population	Week _____ (Please indicate number of Pairs CDD and expected coverage per Day/ Location) - e.g. School A - under Day 1: 2prs-250							Week _____						
				Location	Name of head teacher	Phone	(Yes /No)		Days							Days						
									1	2	3	4	5	6	7	8	9	10	11	12	13	14
									Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___
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Tool 3-SA. Plan to treat population in Fixed Points

Total target population to treat in Fixed Points	
Nº pairs Community Drug Distributors	

Implementation Unit _____ Supervisory area _____ Name of supervisor _____ Date _____

Nº	Name of Fixed Point	Location	Estimated target population	Contact person? (Yes /No) If yes, indicate name of person	Contact person		Week _____ (Please indicate number of Pairs CDD and expected coverage per Day/ Location) - e.g. Fixed Point A - under Day 1: 2prs-250							Week _____						
					Name	Phone	Days							Days						
							1	2	3	4	5	6	7	8	9	10	11	12	13	14
							Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___
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Tool 4-SA. Plan to treat population in Households

Total target population to treat in Households	
Nº pairs Community Drug Distributors	

Implementation Unit _____ Supervisory area _____ Name of Supervisor _____ Date _____

Nº	Name of community	Contact information of community leader			Contacted	Estimated target population	Estimated number of households	Week _____ (Please indicate number of Pairs CDD and expected coverage per Day/ Location) - e.g. Community A - under Day 1: 2prs-250							Week _____						
		Location	Name	Phone	(Yes /No)			Days							Days						
								1	2	3	4	5	6	7	8	9	10	11	12	13	14
								Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___
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Regarding Activity 4.3, the team should identify the best day and time to reach the target population. Administration of preventive chemotherapy should be scheduled during the time of day and year that maximizes the number of accessible people (e.g. school attendance may vary seasonally; people may be farming during the day and thus more accessible outside of work hours). This is particularly important when targeting nomadic pastoralists and seasonal migrant populations. It is important to communicate with local stakeholders to ensure that the fixed post is deployed at the appropriate time and location.

Supervisors who plan to use fixed points and schools should take the following into consideration.

- Supervisors need to maintain communications with the coordinator at the fixed points. Throughout administration of preventive chemotherapy, personnel should be able to share any challenges and provide feedback with the supervisor.
- As possible, locate places with independent entrances and exits, to allow the continuous and easy flow of people. Entrances/exits should be clearly marked.
- Fixed points should be located in visible, clearly identified places, easily accessible to people who come to the location.
- Efficiency is important during the distribution. Targeted people have busy schedules and deserve professional, efficient services. Communicating via loudspeaker can be useful in informing the population about the location of fixed points.
- The location and operating hours of the fixed point must be included in social mobilization messaging.
- During administration of preventive chemotherapy, the supervisor should assess the demand at each fixed point to identify operational issues. Supervisors can change or close fixed points if people are not using them. If changes are made, clear messaging to the community should immediately follow.

Step 5. Calculate resource and define logistics

- **Purpose:** To determine the need for human, material, and financial resources to successfully administer preventive chemotherapy in the SA.
- **Inputs:** Tools 1-4-SA
- **Responsible:** Supervisory area "supervisor"
- **Other individuals involved:** IU-level staff
- **Available tools:** Tool 6-IU and Tool 7-IU
- **Output(s):** Comprehensive list of resources needed to administer preventive chemotherapy and indication of where, when and who will use those resources.

This step allows the supervisor to request the human, material and financial resources to administer preventive chemotherapy successfully. The supervisor should review the available resources and planned timeframe and allocate available staff, supplies and funding to meet priorities as identified in Step 1-4.

It is beyond the scope of this document to provide detailed guidance on programme budgeting. In some countries, the IU level (or above) handles budgeting. The national level can also budget and request resources needed to administer preventive chemotherapy. The IU estimates the requirements of each SA based on the characteristics and resources needed in each SA. Tool 6-IU shows an example of a form used to estimate required resources and supplies at the IU level to implement MDA using triple therapy for lymphatic filariasis. Tool 7-IU provides a form that can be used to define a transportation schedule outlining the type of transportation, purpose, dates and areas to be visited.

Calculating resource requirements may require the following activities.

5.1. Review resource needs from previous rounds of preventive chemotherapy, then list the activities and related timelines to plan, implement and monitor its administration.

5.2. Consider the types of resources needed including:

- » preventive chemotherapy medicines (doses),
- » human resources,
- » funding including per diem (if applicable),
- » supplies and materials (e.g. T-shirts, stationery), and
- » transportation (e.g. motorcycle and motorcycle fuel, bicycle).

5.3. List all needed resources to undertake each activity and determine whether they will be in-kind or financial. The supervisor requests human, in-kind (material) and funding separately. Supervisors may determine that in-kind support (e.g. a room used as a fixed point distribution site) is requested locally whereas they must request other resources (e.g. funding) from the IU level.

5.4. For budget requests, address only resources that the supervisor needs finances to purchase. Estimate the cost of conducting each step by listing all inputs, the quantity of needed inputs, and the unit and total cost. For example, a supervisor may need to use a locally available motorcycle to conduct supervision in her SA. Therefore, fuel for the motorcycle should be included in the budget indicating the number of litres of fuel, the cost of fuel per litre and the total cost.

5.5. Submit resource request(s) to the appropriate programme level.

5.6. Edit resource requests based on feedback.

5.7. Obtain needed resources.

5.8. Account for the use of all resources in a timely, accurate and complete manner. Return any unused resources to the appropriate level.

Human resources

Related to Activity 5.2, in estimating needed human resources, the supervisor should consider:

- the type and number of people needed to plan, implement, monitor and evaluate activities, including community engagement activities: and
- relevant training based on role.

Material resources and transportation

The supervisor should consider the following:

- programme rules related to the source of needed resources and the local procurement of resources;
- availability of reasonably priced materials and transportation from the private sector (e.g. for procurement of materials, use of commercial buses);
- availability of in-kind, local resources (e.g. use of health facility transport);

- materials for delivery of preventive chemotherapy: medicines, water, spoons, stationery, drug distribution reporting forms/mobile phones, dosing poles or dose schedules, CDD support materials, social mobilization materials, reporting forms;
- quantity and type(s) of preventive chemotherapy medicines; and
- transportation for distribution of logistics and for preventive chemotherapy administration teams and supervisors: hiring vehicles, boats/canoes, two-, three- or four-wheelers, animal transportation, drivers, fuel, transportation allowances.

Step 6. Monitor coverage and use data for action

- **Purpose:** To monitor and supervise the activities in the microplan, specifically preventive chemotherapy administration, and use data to take timely corrective action.
- **Inputs:** Data collected using registers or electronic data capture from CDDs; various microplan tools to track progress of implementation according to the microplan:
  - » Operational map of supervisory area
  - » Tool 1-SA – target populations sheet for preventive chemotherapy denominator
  - » Tool 2-SA – plan for treating the population at schools (if applicable)
  - » Tool 3-SA – plan for treating the population at fixed points (if applicable)
  - » Tool 4-SA – plan for treating the population at households (if applicable)
  - » Tool 6-IU – estimation of resources and supplies for tracking stocks and supplies
  - » Tool 7-IU – transportation schedule for tracking team movements
- **Responsible:** Supervisory area staff and supervisory area "supervisor"
- **Individuals involved:** Drug delivery teams (CDDs), monitors
- **Tools available:** Monitoring charts, tables and maps or electronic dashboards, data entry and compilation tool
- **Output(s):** Monitoring the implementation of the microplan and using data for action.

This step enables the supervisor to monitor and supervise the planned work. It describes how she or he will conduct monitoring and defines related priorities and processes. The national and IU levels play a key role in planning and conducting supervision. IU and national personnel may directly supervise personnel in the SA including first-level supervisors. All supervisors, regardless of level, are there to support those under them. Their key function is to ensure that those under them have the (material, technical) resources and skills to do their jobs effectively. First-level supervisors are there to enable the implementation of the microplan. By defining implementation expectations, the microplan forms the basis of monitoring.

Monitoring requires the regular collection and analysis of data to verify that CDDs and supervisors are implementing the activities in the microplan effectively and efficiently and are achieving the desired results.

Planning effective monitoring may require the following activities.

Before administration of preventive chemotherapy

6.1. If not already defined by the national or IU level, the supervisor and the IU team identify monitoring indicators to track SA-level activities as described in the microplan (see Table 6). If already defined by the national or IU level, the supervisor reviews the indicators and clarifies with the IU level, as needed, to ensure understanding of meaning, purpose and means of calculating the indicators.

6.2. The supervisor and the IU-level personnel define (or review) the SA monitoring including:

- process for data collection, validation and reporting,
- monitoring tools and forms,
- roles and responsibilities,
- data analysis and feedback of data analyses and
- programmatic responses to issues detected through review of monitoring data (e.g. conducting a mop-up administration of preventive chemotherapy).

During administration of preventive chemotherapy

6.3. The supervisor reviews the data on monitoring (e.g. preventive chemotherapy coverage by CDD area) daily and provides regular updates to the IU level.

6.4. The supervisor visits as many CDDs as possible as frequently as possible to ensure that CDDs:

- use a daily distribution plan/schedule,
- accurately record treatment and other performance data,
- submit reports on time,
- engage the community through social mobilization,
- proactively facilitate community access to preventive chemotherapy and
- address reasons for community hesitancy to receive preventive chemotherapy.

6.5. The supervisor regularly compares the status of activities (e.g. timeline) to the microplan. If planning and implementation are not aligned, the supervisor should work with CDDs to define and address the challenges.

6.6. The supervisor corrects, in a timely manner, any issues and adjusts approaches (e.g. changes from fixed point to house-to-house distribution).

To monitor drug coverage and use data for action, the supervisor should take the following into consideration.

- Programme data can be collected using paper forms, electronic forms (e.g. tablets or smartphones) or a combination of the two. The format of the forms is less important than the accuracy of the data and the quality and timeliness of the programme's responses to issues detected using the data.
- Ideally, there should be some pre-set triggers for action, such as low coverage figures in some areas.

- CDDs should be proactive in addressing issues. The supervisor provides the CDD with the resources (including training) needed to be effective. Supervisors should quickly replace CDDs who are not working effectively.
- In addition to indicators defined by the IU or national levels, the supervisor may track other indicators to ensure that the SA meets its defined goals. Some key indicators include tracking the progress of preventive chemotherapy, including administrative and surveyed coverage.

  $$\text{Administrative coverage} = \frac{\textit{number of persons who consumed the preventative chemotherapy medicines in the SA x 100}}{\textit{total target population in the SA}}$$

- The SA or IU level may wish to validate administrative coverage at the SA level using the Supervisor's Coverage Tool, which enables first-level supervisors to identify and address low preventive chemotherapy coverage within a treatment round. The results of this survey can be used to direct mop-up activities to areas where surveyed coverage is inadequate. For more information on various indicators used for preventive chemotherapy, please refer to: *Preventive chemotherapy: tools for improving the quality of reported data and information. A field manual for implementation (10).*

Analyse and interpret the data

It is critical that programmes use the data collected to track progress towards achieving the goals for preventive chemotherapy and take mid-course corrections when the SA is not on track to achieving its objectives.

In addition to submitting reports to the IU level, the SA can use several tools to track the progress of preventive chemotherapy activity.

- Tables and graphs should be used to monitor the progress of drug administration in order to make timely decisions that achieve effective coverage in all localities and age groups (Fig. 7).
- Maps can be used to mark the localities based on progress, using "traffic light" colours to highlight where coverage was reached, or to indicate which communities are partially treated or have not yet been visited (Fig. 8).
- Dashboards can be developed before the activity, especially if using electronic data collection, to help the supervisor and other officials to view data, detect potential problems and quickly remediate any issues .

Fig. 7. Example of chart for monitoring drug coverage by day

Implementation Unit: _____

Supervisory Area: _____

Total target population: 1023

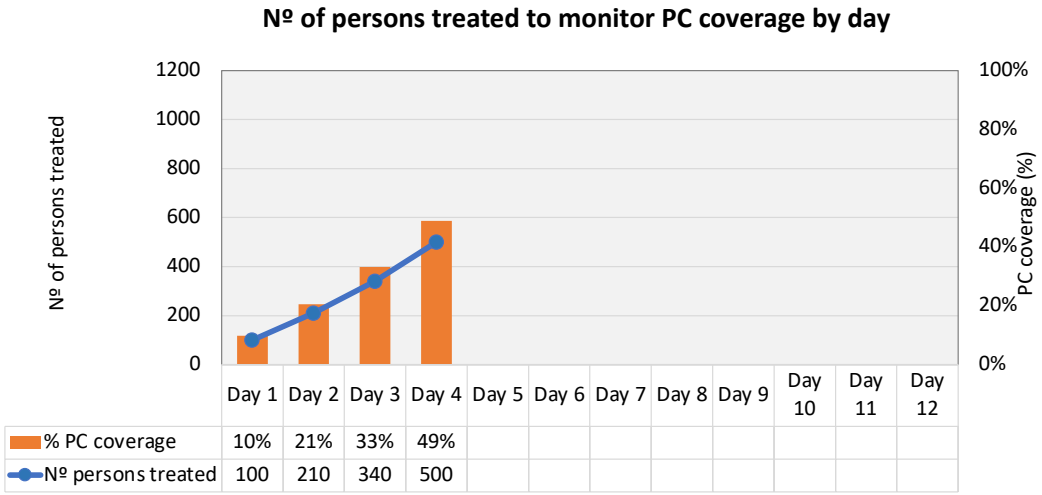


Fig. 8. Mapping and using signs and colors for monitoring PC coverage in the Supervisory Area

The tools (Tools 1SA–4SA) completed during microplanning will be used to monitor the implementation of MDA activities.

Table 6. Examples of supervisory area indicators

Component	Illustrative indicators
Planning and resource management	• Number and type of stakeholders included in the planning process • Number of people expected to be covered by each CDD team and in each SA • Number of trained vs needed CDD teams • Number of teams per first-level supervisor • Number of supervisors required
Community engagement	• Number of social mobilization sessions held in the SA • Number and percentage of communities/villages reached with ≥ 1 social mobilization session
Supportive supervision	• Percentage of CDDs/CDD teams that receive ≥ 1 supportive supervision visit • Key actions taken to address identified issues • Number of CDD meetings (see data dissemination meetings below)
Preventive chemotherapy delivery	• Number and percentage of targeted communities/villages and SAs reached • Number and percentage of all persons treated using each distribution approach • Percentage preventive chemotherapy coverage by CDD team • Percentage preventive chemotherapy coverage by community/village and SA • Percentage preventive chemotherapy coverage by age group and sex
Action planning	• Number of data dissemination meetings held with stakeholders

4.2 Implementation unit

Supervisory area microplans should be part of the overall microplan at the IU as shown in Fig. 9 and Table 7.

Fig. 9. Steps of microplanning: Implementation Unit

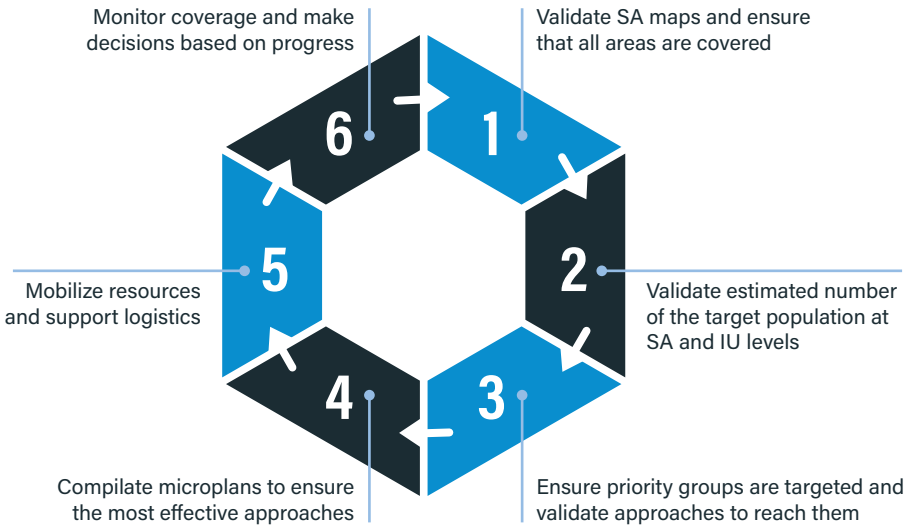


Table 7. Microplanning steps and tools: Implementation unit

	Steps	Tools
Analysis	**Step 1.** Validate SA operational maps to ensure that all areas are covered	Operational map of the implementation unit
	Step 2. Validate estimated number of the target population at SA and IU levels	**Tool 1-IU.** Characteristics of target populations and distribution channels
Planning	**Step 3.** Ensure priority groups are targeted and validate approaches to reach them	**Tool A.** Prioritization of areas and populations to take actions needed to achieve preventive chemotherapy coverage threshold (from Section 3. Preparing for microplanning)
	Step 4. Compile microplans to ensure the most effective approaches and validate approaches to community engagement and social mobilization	**Tool 2-IU.** Plan to treat population in schools **Tool 3-IU.** Plan to treat population in fixed points **Tool 4-IU.** Plan to treat population in households **Tool 5-IU.** Summary sheet
Implementation	**Step 5.** Mobilize resources and support logistics	**Tool 6-IU.** Estimation resources and supplies **Tool 7-IU.** Transportation schedule
	Step 6. Monitor overage and make decisions based on progress	**Tool 8-IU.** Supervisory checklist before implementation **Tool 9-IU.** Supervisory checklist during implementation Monitoring charts, tables and maps using data collected in registers and reports sent by SA

IU personnel will review all SA microplans and ensure that there is full coverage of the IU population and all communities and no overlap in SA catchment areas across supervisory areas.

There may not be enough resources for microplanning in all of the IUs in a given country, or all SAs within an IU. In these situations, prioritization is another step that each IU may need to undergo, given that resources are limited. Allocation of resources for microplanning could be prioritized based on prior knowledge of high disease prevalence or drug coverage challenges, among other factors. Programmes should gather any data collected during monitoring and evaluation activities to use during prioritization.

Step 1. Validate the SA maps to ensure that all areas are covered

- **Purpose:** To ensure that SA operational maps match the boundaries outlined in the IU maps (pre-microplanning), full coverage of the IU and no overlap between SAs.
- **Inputs:** Completed maps created by each SA, IU map (created and validated in pre-microplanning), maps from previous MDAs or health campaigns (hard copies or electronic (GIS) files) to validate IU boundaries.
- **Responsible:** Implementation unit "supervisor"
- **Individuals involved:** IU-level staff, first-level supervisors (as needed)
- **Tools available:** Instruction to create an operational map (Section 4.1. Step 1)
- **Output(s):** Map of the IU including all SAs and SA boundaries.

This step validates that the individual SA operational maps align with the overall IU map that was created during the pre-microplanning phase. It ensures that SA and IU boundaries are clearly defined and harmonized. There should be full coverage of all localities and no overlap in coverage across SAs or IUs. Validating an IU map includes the following activities:

1.1. gathering the paper or digital map that was created during pre-microplanning.

1.2. confirming that the boundaries from the SA operational maps align with the SA boundaries on the IU map (Fig. 10).

1.3. confirming that the map is understandable and legible, such that it could be understood by an adult member of the community.

1.4. confirming that the necessary elements are included in the SA maps, such as communities, major infrastructure, geographical features and landmarks.

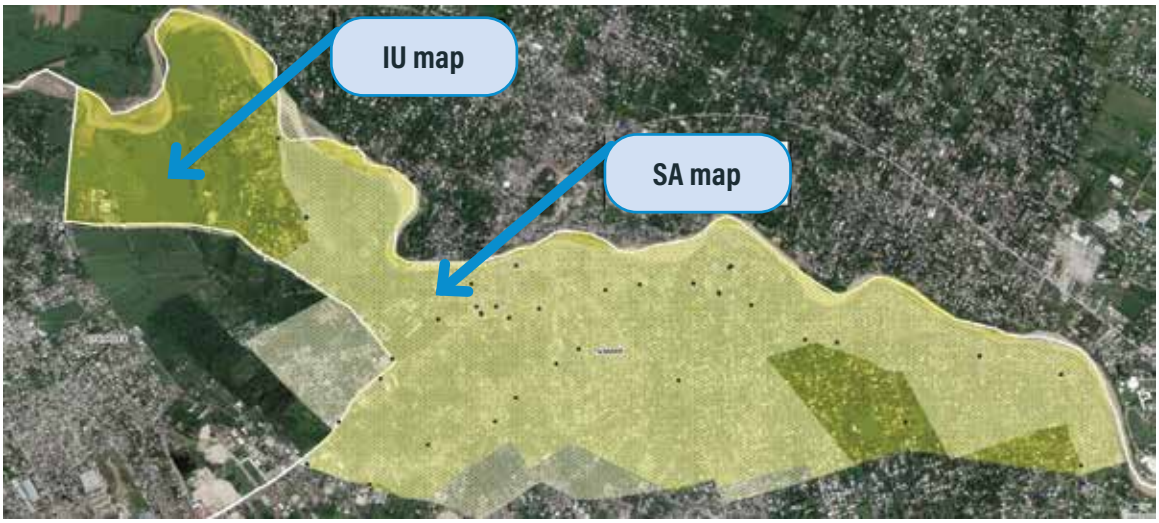
1.5. communicating any issues and needed changes identified by the IU supervisor to the SA supervisor.

When reviewing the individual SA maps, personnel should consider the following points.

- Maps should be sufficiently detailed to enable CDDs and stakeholders to discern boundaries and understand their work area.
- Internal SA boundaries, such as CDD work zones, should be logical and if possible follow infrastructure (roads) and geographical features (rivers).
- Geographical areas assigned to each CDD should be reasonable and take into account population density, terrain and other relevant factors.
- If using GIS to generate maps, the IU supervisor may consolidate the various shape files and points of interest from the SAs to create a detailed map of the IU. This might not be practical if using a hand-drawn map.

Fig. 10. Ensure that the SA boundaries from the IU map match the SA boundaries on the operational map. This map shows an example of how IU and SA boundaries may not align. The area in dark green represents the SA area according to the IU's map, while the area in light green represents the operational map prepared by the SA. In such circumstances, the IU should work with the SA to ensure their maps are harmonized with the IU map.

Fig. 10. Ensure that the SA boundaries from the IU map match the SA boundaries on the operational map



Source: Haitian Ministry of Public Health and Population and IMA World Health

Step 2. Validate the estimated number of the target population at SA and IU levels

- **Purpose:** To compile, summarize and validate demographic data about the target population in the IU. This information will help the IU supervisor ensure that the SA data aligns with other sources of population as well as identify hard-to-reach groups/areas that may require special tactics or resources during implementation of preventive chemotherapy.
- **Inputs:** Operational map of IU created in Step 1; Tool 1-SA from respective SAs; national census data or alternative data sources (see Table 5)
- **Responsible:** Implementation unit "supervisor"
- **Individuals involved:** IU-level staff, data informatician or statistician; optional: regional and national-level programme personnel.
- **Tools available:** Tool 1-IU (Summary sheet), Tool 2-IU (characteristics of target population summary sheet).
- **Output(s):**
  - » Number of people targeted for MDA in the IU by possible location of preventive chemotherapy delivery (indicated on map of IU) (Tool 1-IU)
  - » Characteristics of key target populations and distribution channels (Tool 2-IU)
  - » Population figures to guide logistical resources from component SAs.

This step provides the IU-level estimate of the population size. That estimate helps IU personnel to ensure the availability of the appropriate quantity of medicines and other resources. Additionally, this step helps to ensure coverage of hard-to-reach populations. These subpopulations may need targeted MDA microplanning activities (see SA Step 3).

Validating the size of the target population includes the following activities.

2.1. Collect and review all SA microplans.

2.2. For the IU, ensure identification and coverage of hard-to-reach populations (e.g. nomads, migrants, seasonal workers). These populations may be in a single or multiple SAs. They should be clearly addressed in the relevant SA microplan(s).

2.3. Ensure that the SA has correctly summed the population overall and for each target age group from each sector of the SA (Tool 1-SA). Additionally, the IU should confirm how the SA estimated its population including the data source of the lowest program unit (e.g. village).

2.4. Ensure consistency across the SA tools submitted from each SA. The IU follows up with the SA supervisor regarding any errors or questions. The IU checks that:

- » the schools listed on Tool 2-SA match the total number of schools registered on Tool 1-SA, the fixed points listed on Tool 3-SA match the total number of fixed points registered on Tool 1-SA; and
- » the communities listed in households (from Tool 4-SA) match the localities, villages or neighbourhoods for that sector listed in Tool 1-SA.

2.5. Review subdistrict-level preventive chemotherapy coverage reported during previous rounds to identify outliers (e.g. coverage > 100%. Identify possible reasons for those extreme values (e.g. migration, new settlements) and adjust population estimates accordingly. Additionally, if coverage evaluation survey data exist, the surveyed coverage and reported coverage can be compared to determine if the microplan population estimate is accurate.

2.6. Create a summary sheet (Tool 1-IU) to combine data in a single form. This facilitates data review to help verify that the distribution approaches in the microplan are appropriate. Complete Tool 1-IU with one row for each SA. The IU ensures that the number of planned days for implementation is realistic (resources, timeline) to cover the population and align with the IU timeline.

When validating population estimates, personnel should consider the following points.

- SA population estimates may differ from official census records. This could result from out-of-date census estimates or population movements (e.g. due to natural disasters or insecurity).
- Compare IU population estimates to other data sources to identify potential over/under counts. Potential data sources are official or MDA censuses, population estimates from health programmes (e.g. vaccination), existing MDA registers and school enrolment (for school-based MDAs).

Tool 1-1U. Summary sheet

Implementation Unit _____ Name of Coordinator: _____ Date _____

SA code	Supervisory area	Name of villages/communities	Target Population *(Estimate based on SA microplan)*			Census Population *(Estimate based on official data)*			Nº of implementation days	Target population by distribution channels		
			Men	Female	Total	Men	Female	Total		School	Fixed Point	Household
Total												

Check consistency between data sources of denominators by comparing local estimations of target populations and official estimates

Compare number of implementations days and resources assigned to see if it's feasible to achieve PC coverage

Review if the scheduled approaches are appropriate to reach target populations considering the characteristics of each SA

Tool 2-IU is similar to Tool 2-SA, but in this case, each line will correspond to the microplan information submitted by the SA as shown in the red box.

Tool 2-IU. Characteristics of target population and distribution channels

Implementation Unit _____ Name of coordinator _____ Date _____

SA code	Supervisory area *(Name of SA)*	Type of area *(Urban, rural)*	Geographic access *(Hard-to-reach population (Y/N))*	Special characteristics of SA	Target Populations *(SA estimates)*						Official population estimates			Distribution channels to reach target populations						
					By groups of age *(example)*			By gender						Number of Schools	Number of fixed Points					Number of Households in the catchment area
					Preschool age children	School age children	Adults	Men	Female	Total	Men	Female	Total		Markets	Churches	Work places	Other	Total	
1																				
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				
16																				
17																				
18																				
19																				
20																				
		Total																		

Step 3. Ensure that priority groups and areas are targeted and validate approaches to reach them

- **Purpose:**
  - » To validate that the SA has implemented strategies to target priority populations and areas identified during pre-microplanning
  - » To ensure that approaches proposed by the SAs are appropriate to reach the targeted subpopulation, and that they are feasible to implement
- **Inputs:** Tool 2-SA
- **Responsible:** Implementation unit "supervisor"
- **Individuals involved:** Implementation unit staff, first-level supervisors, optional: regional and national programme personnel
- **Tools available:** Completed Tool A (from pre-microplanning)

Output(s): Validated plan to reach targeted populations and areas. As part of the pre-microplanning process, several priority groups and areas were identified as requiring special consideration during the microplanning process. In this step the IU uses its technical expertise to ensure that the SA plans include activities designed to target all eligible members of the population, with emphasis on priority groups and areas. It takes into consideration past challenges and ensures that microplans include solutions to those challenges.

The suggested activities are as follows:

3.1. For the IU, ensure that priority groups and areas have been targeted as part of the microplan. The priority groups may be in one or more SAs. They should be clearly addressed in the relevant SA microplan(s).

3.2. The IU should compare priority groups and areas that were identified during pre-microplanning to check if those groups are reflected in the SA microplans.

3.3. The IU will identify any areas or populations that may need additional support by the IU or national level to be implemented.

Step 4. Compile microplans to ensure use of the most effective approaches, and validate approaches to community engagement and social mobilization

- **Purpose:** To ensure that the SA teams are using the most appropriate and feasible approaches to reach the target population in their SA, including the appropriate number of distribution sites and teams, and the frequency and type of tactics needed to treat eligible individuals. Also, to ensure that the SA teams have used all appropriate messages and channels in the community for their engagement and sensitization taking into account their social structure and cultural specificities.
- **Inputs:** Tools 2-SA (schools), 3-SA (fixed points), 4-SA (households); list of schools; lists of important fixed points (e.g. health facilities, market places, major businesses and transit centres); national social mobilization plan
- **Responsible:** Implementation unit "supervisor"
- **Individuals involved:** Implementation unit staff, key community stakeholders
- **Tools available:** Tools 3-IU (school), 4-IU (fixed points), 5-IU (households)

- **Output(s):** Documented plan to administer preventive chemotherapy within the IU (Tools 3-IU–5-IU) including a description of the timeframe and location of distribution approaches in schools, fixed points and households (as applicable); IU social mobilization and community engagement plan.

The IU team should verify that SAs scheduled the best possible approach to administer preventive chemotherapy and that all target populations were included in the microplans (e.g. to treat populations at schools, fixed points and/or households). To do that, SA microplans (Tools 3-SA, 4-SA and 5-SA) must be reviewed by the IU to check key aspects such as:

- Do the number of schools listed in the SAs match the data on schools from the IU level? Are the number of CDDs and the number of distribution days appropriate to reach the targeted number of students enrolled in each school?
- How realistic and feasible are the scheduled days and the number of drug distributors when compared to the number of students enrolled in each school?
- Are the locations of fixed points the most appropriate to reach target populations? Are these locations based on data from previous rounds of preventive chemotherapy?
- did the SAs plan household visits to prioritized communities identified in Tool A: *Prioritization of areas and populations to take actions needed to achieve preventive chemotherapy threshold coverage*?

The IU team should verify that SA community engagement and social mobilization plans are tailored to the social structures and cultural specificities of the community. The social mobilization and community engagement plan for the IU should include:

- the number of sessions that should be held in each SA to engage the community;
- engagement with appropriate stakeholders (e.g. women's and youth groups);
- effective approaches that will be used such as music, art or other cultural activities;
- channels selected are appropriate for reaching targeted populations; and
- key messages and communication materials that should be printed.

Tool 3-1U. Plan to treat school population

Total target population to treat in Schools	
Nº pairs Community Drug Distributors	

Implementation Unit _____ Name of coordinator _____ Date _____

Supervisory area	Name of school	Estimated target population	Week _____ (Please indicate number of Pairs CDD and expected coverage per Day/ Location) - e.g. School A - under Day 1: 2prs-250							Week _____						
			Days							Days						
			1	2	3	4	5	6	7	8	9	10	11	12	13	14
			Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___
SA 1																
SA 2																
SA																
Total																

Check if all schools of IU were included in the SA microplan

Check consistency between target populations, number of days scheduled to visit schools and available resources

Tool 4-1U. Plan to treat population in Fixed Points

Total target population to treat in Fixed points	
Nº pairs Community Drug Distributors	

Implementation Unit _____ Name of coordinator _____ Date _____

Supervisory area	Name of Fixed Point	Location	Estimated target population	Week _____ (Please indicate number of Pairs CDD and expected coverage per Day/ Location) - e.g. Fixed Point A - under Day 1: 2prs-250							Week _____						
				Days							Days						
				1	2	3	4	5	6	7	8	9	10	11	12	13	14
				Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___
SA 1																	
SA 2																	
SA																	
Total																	

Check location and number of Fixed Points

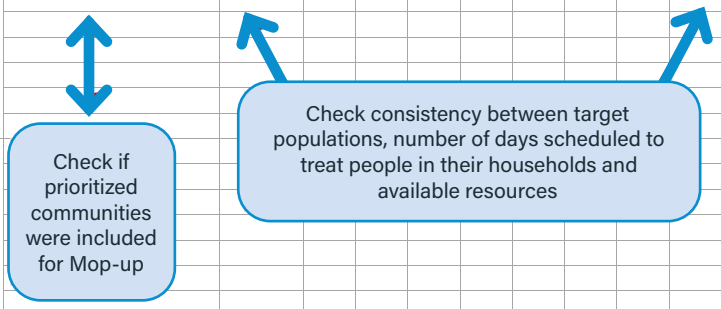
Check consistency between target populations, number of days scheduled to keep the Fixed Points and available resources

Tool 5-1U. Plan to treat population in Households

Total target population to treat in Households	
Nº pairs Community Drug Distributors	

Implementation Unit _____ Name of coordinator _____ Date _____

Supervisory area	Name of community	Estimated target population	Week _____ (Please indicate number of Pairs CDD and expected coverage per Day/ Location) - e.g. Community A - under Day 1: 2prs-250							Week _____						
			Days							Days						
			1	2	3	4	5	6	7	8	9	10	11	12	13	14
			Date__	Date__	Date__	Date__	Date__	Date__	Date__	Date__	Date__	Date__	Date__	Date__	Date__	Date__
SA 1																
SA 2																
SA																
Total																



If the IU supervisor identifies any challenges when reviewing the effectiveness of the SA microplan(s), he or she should contact the SA supervisor to clarify any outstanding questions or concerns. If concerns remain after the discussion, the IU should support the SA in revising its microplan to address any concerns at the IU level.

Step 5. Mobilize resources and support logistics

- **Purpose:** To determine the need for human, material and financial resources to administer preventive chemotherapy successfully in the IU in order to assist with budgeting and medicine requests from the national level.
- **Inputs:** Tools 6-IU and 7-IU
- **Responsible:** Implementation unit "supervisor"
- **Individuals involved:** IU level staff, accountants, supply chain managers, pharmacists, warehouse or stores supervisors,
- **Tools available:** Tool 6-IU (Estimation of resources and logistics example), Tool 7-IU (Transportation schedule)
- **Output(s):** Comprehensive list of resources needed and accompanying budget to administer preventive chemotherapy and indication of where, when and who will use those resources.

Estimation of resources must include information about:

- **Financial**
  - » Costs associated with conducting all drug distribution activities;
  - » Costs to implement activities such as training, social mobilization and communication, supervision, meetings to review MDA data.
- **Human resources or personnel**
  - » Number of distributors needed per population
  - » Number of supervisors needed
- **Supplies and transport**
  - » Medicines, dose poles, printed materials, information, education, and communication materials, etc.
  - » Transportation: mode, number of vehicles, drivers, fuel, etc.

The IU should calculate the requirements based on the resources needed in the SAs and the IU. **Tool 6-IU** provides an example that can be adjusted..

Tool 6-1U. Estimation of resources and logistics (example)

Implementation Unit _____ **Name of Supervisor** _____ **Date** _____

Nº	Items	Description		# Persons to be Served	Number of Days	Quantity Requested
DRUGS						
1	Diethylcarbamazine	100mg (formal request needed - CRIV)	# Persons to be served X 3.2	107503		344.010
2	Albendazole	400mg	# Persons to be served X 1.1	107503		118.253
3	Ivermectin	3 mg	# Persons to be served X 3.2	107503		344.010
	SUPPLIES					
	MDA Implementation					
6	Pens	one per person	(No. PDS +No. FOs) + ½ No. PDs	240+23+120		383
7	Jobaids	one per pair	# pairs*1	120*1		120
8	Bags	one per pair		120		120
9	Tent	for open air fixed points only	(size, quantity, location/time, date/No. days, chairs/tables)	Place same in the Tab 'Tent Schedule'		
10	Water bottles	1.5 Litres -10 cups (7 oz. per person)	Number of Bottles - Max. No. Btls water required /day			
11	Cups (for fixed points and schools)	(Expected Coverage@ Fixed points/schools)	Estimated school coverage + fixed point coverage	17,102 + 9111		26.213
12	Garbage bags	1 bag per pair every 2 days	# pairs* 7	840	7	5880
13	Gloves	1 pair per 6 people served	Target pop./6 = total no. pairs	107503/6		17.918
			Indicate Size/quantity			
14	Spoons	9 spoons per day/pair	(9 x No. PD pairs x No. of days)	9*120*14		15.120
15	Zip lock bags	To put spoons(1 bag/1 spoon/day)	9 bags (small)*14*(# of pairs)	9*14*120	14	15.120
16	Brown envelopes	To summit completed reports	1 per HC **(# of Health Centres)**	21		21
17	Pill crushers			21		21
	MDA Implementation					
18	Form 1.1	Fixed Point (600 per sheet)	(200 slot/age group) – Exp. Coverage/200 + 10% buffer OR			
			5 x No. HC x 14 = Total Sheets	5*21*14		1.470
19	Form 1.2	Fixed Point (14 days per sheet)	(1 sheet/HC)	21		21
20	Form 2.1	School Form (40 students per sheet)	(1 sheet/class) ; 6 forms/school 5 x 6 x No. Schools = Total No. sheets	5*6*67		2.010
21	Form 2.2	School Form (20 classrooms per sheet)	2 sheet/school; No. sch. X 2 = Total no. sheets	67*2		134
22	Form 2.3	School Form (16 schools per sheet)	(1 sheet/ per HC)	21		21
23	Form 3.1	Household Forms (10 households per sheet)	(Total No. households/5)	79261/5		15, 852
24	Form 3.2	Household Forms (16 days per sheet)	(1 per HC)	21		21
25	Poster #1	About Filaria				
26	Poster #2	About MDA/IDA				
28	Brochure #1	Refusal form	Total = Target pop. of schools			17.102
29	Brochure #2	FAQ	1 per CDD			
30	Letters to meet with Regional Officials	REO, RHO, REdO				
31	Letters to Organizations	attach policy brief	**(summit list of organizations)**			
32	Letters to Schools	attach school fliers				
33	Drug Consolidated Form	one per person	(No. PDS +No. FOs)	240 + 23		263
34	Filaria (MMDP)Referral card		Target population*0.1	10750		1075
	UNIFORM					
35	Polo shirts	for FOs/RCs (each FO/RC gets 2)	(# RC+ #Fos)*2	(3 + 23)*2		52
36	Round neck t-shirts	for CDDs	# Pds*2	240*2		480
37	Caps		one per person	265		265
38	Badges –Supervisors			26		26
39	Badges – PDs			240		240
40	Lanyards			266		266
41	Badge holders			266		266

Before preventive chemotherapy administration starts, the IU must ensure that all components of the microplans and required resources are in place. One important component of logistics management includes designing systems for the receipt and appropriate storage of MDA medicines. Further, to ensure efficient use of resources, medicines should be issued following the first expiry, first out policy and plans should be devised to ensure the transfer of medicines from the warehouse to points of distribution. Appropriate documentation of the receipt and distribution of medicines is critical for accounting for unused medicines and other reverse logistics procedures.

Tool 7-1U. Transportation schedule

Implementation Unit _____ Name of supervisor _____ Date _____

Nº	Locality	Transportation mode	No. of vehicles	No. of drivers	Dates	Time (Daily)	No. of daily trips	Frequency of trips	Area/s to serve	Requirements (if fuel, state quantity)
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
Total										

Ensuring adequate provision of resources for transportation of MDA staff and supplies is another critical component. **Tool 7-IU** can be used to schedule transportation. The number of supervisory visits required should be determined and communicated with supervisors and noted in each microplan.

Step 6. Monitor coverage and make decisions based on progress

- **Purpose:** To use the various tools developed during the microplanning process to monitor and supervise the preventive chemotherapy implementation activities. This includes determining if its delivery is proceeding according to the proposed plan, and using the data collected to make any necessary corrective actions or adjust strategies in a timely manner.
- **Inputs:** Data collected using registers or electronic data capture from CDDs or SA teams; various microplan tools to track progress of preventive chemotherapy implementation according to the microplan:
  - » Tool 1-IU – summary sheet (for preventive chemotherapy denominator)
  - » Tool 3-IU – plan to treat population in schools (if applicable)
  - » Tool 4-IU – plan to treat population in fixed points (if applicable)
  - » Tool 5-IU – plan to treat population in households (if applicable)

  - » Tool 6-IU – estimation of resources and supplies (for tracking stocks and supplies)
  - » Tool 7-IU – transportation schedule (example for tracking team movements)
- **Responsible:** Implementation unit "supervisor", IU monitoring and evaluation officers
- **Individuals involved:** supervisory area "supervisor", CDDs, key community stakeholders (e.g. mayors, religious leaders), optional: district and national-level programme personnel
- **Tools available:** Monitoring charts, tables and maps or electronic dashboards; Tool 8-IU (supervisory checklist before implementation); Tool 9-IU (supervisory checklist during implementation)
- **Output(s):** Supervision and monitoring planning, action plan for addressing areas of low coverage, a report detailing improvements.

Monitoring requires regular collection and analysis of data to verify that activities are being implemented as planned and results are being achieved. Coverage indicators are used to monitor the progress of preventive chemotherapy, such as the number of persons treated in schools, fixed points and households by day, and number of persons treated by age group and localities. Prior to MDA, it is important that MDA coverage targets are defined and clearly communicated to all MDA staff, as well as situations under which mop-up activities will be triggered It is very important to tabulate and monitor data on a daily basis and compare these figures to previously established targets. Fig. 7 shows an example of a chart that can be used to monitor MDA coverage.

The IU must conduct regular monitoring and review of progress by using:

- supportive supervisory visits, and
- daily and weekly tables and charts.

During implementation of preventive chemotherapy, supervisory visits to the SA must be conducted to quickly detect situations that may affect service quality, safety of drug administration and progress of preventive chemotherapy to achieve the required threshold coverage (Tools 8-IU and 9-IU). Supervisors should resolve any immediate issues identified during their visit, and report back any commonly identified problems to inform future programme planning. Annex 4 includes examples of supervisory checklists that can be used to identify any programmatic gaps or logistical constraints before (Tool 8-IU) and during (Tool 9-IU) implementation of preventive chemotherapy.

The IU should also monitor progress towards the targets for preventive chemotherapy coverage. Some questions can be useful to monitor preventive chemotherapy coverage:

- Are the reported data, that is the numerators used to calculate preventive chemotherapy coverage, consistent?:
  - » Check if the data at the SA and IU levels are the same for a given village/area. Consistent data should be the same at the SA and IU levels.
  - » Have all doses of drugs been reported? Check if all SA reports were included in the IU-level combined report.
  - » Have the number of "tally marks" been correctly transferred to the summary form? Check the tally sheets randomly. Have all tally marks been counted and correctly noted in the summary?
  - » Are the calculations correct? Always double-check the sums, divisions and other arithmetical functions to eliminate any errors.

  - » Is the number of drugs distributed to the SA consistent with the number of reported persons treated? (e.g. if an SA was allotted 1000 tablets of albendazole, does it make sense if the SA reported treating 3000 people?)
  - » Cross-check the aggregated data of persons treated and the final balance of tablets. Does the number of persons treated match the number of tablets administered?
- It is important to ensure 100% completeness of reporting, i.e. all forms were returned by all SAs. A simple list of SAs in the left-hand column and the days in the top row will help to keep track of this.
- Are SAs using an accurate estimate of the target population calculated in Step 1? In the absence of accurate population estimates for the SA, the coverage and other "rates" are likely to be over or underestimated.
- Rapid coverage monitoring can also be conducted as a complementary tool *(11)*, or the Supervisor's Coverage Tool *(12)* can be used to assess coverage towards the end of or immediately after MDA to determine if mop-up is needed.
- It is helpful to determine, prior to MDA implementation, in which circumstances mop-up activities will be triggered. Mop-up may be triggered by poor reported coverage or when coverage monitoring services indicate that surveyed coverage falls below pre-set targets.
- A data quality assessment for NTDs *(13)* or coverage evaluation survey *(10)* can be used at the IU level to validate reported coverage after MDA and identify reasons for low coverage to improve future MDA.

It is also important to learn from previous experiences with preventive chemotherapy. The first microplan will take more time, but subsequent microplans must take advantage of the one that was developed before. Some examples of questions that can help you think of problems and ways to improve the microplan are, during the previous round of preventive chemotherapy:

- Did you find important differences between the official denominator and the denominator used to implement preventive chemotherapy? What was done to reconcile the difference?
- Did you have problems conducting outreach sessions in some communities? What was done to address hesitancy in the target communities?
- Were the communities you serve involved in planning and delivering services?
- Were there rumours and concerns about the safety of medicines used in preventive chemotherapy?
- Did you receive the resources needed on time?
- Did you have stock-outs of medications?
- Did you supervise the SAs and receive supervision from the national team?
- Did the supervisors take time to provide needed information and help solve problems?
- What were important supervisory findings? Were the findings from the supervisory visits there followed up?
- Were you able to provide complete and timely reports of preventive chemotherapy coverage?
- Do you receive feedback on the final reports on preventive chemotherapy?

5. References

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Annexes

Annex 1. Recommended medicines, frequency and minimum threshold coverage of preventive chemotherapy for neglected tropical diseases

Disease (reference)	Medicine and combinations	Frequency	Minimum threshold coverage	Target population
Lymphatic filariasis (*1*)	• Diethylcarbamazine citrate plus albendazole plus ivermectin (in non-endemic countries for onchocerciasis) **or** • Diethylcarbamazine plus albendazole **or** • Ivermectin plus albendazole **or** • Albendazole twice a year	• Once a year Albendazole twice a year in *Loa loa* endemic areas	65%	Entire population at risk
Onchocerciasis (*2*)	• Ivermectin	• Once a year	85%	Entire population at risk
Schistosomiasis (*3*)	• Praziquantel	• Once or twice a year, depending on prevalence level and risk of infection in the endemic zone	75%	PreSAC, SAC, WRA and adults at risk
Soil-transmitted helminthiases: ascariasis, trichuriasis, ancylostomiasis (*4*)	• Albendazole or mebendazole	• Once or twice a year, depending on prevalence level and risk of infection in the endemic zone	75%	PreSAC, SAC, WRA
Trachoma (*5*)	• Azithromycin and tetracycline eye ointment	• Once a year	80%	Entire population at risk
Fascioliasis (*6*)	• Triclabendazole	• Once a year	75%	Entire population at risk
Paragonimiasis, clonorchiasis and opisthorchiasis (*6*)	• Praziquantel	• Once a year	75%	Entire population at risk

Disease (reference)	Medicine and combinations	Frequency	Minimum threshold coverage	Target population
Taeniasis/ cysticercosis (*6,7*)	• To control taeniasis caused be *Taenia solium*, niclosamide, praziquantel or albendazole can be used.	• Once or twice a year depending on prevalence level and risk of infection in the endemic zone	75%	Entire population at risk
Scabies (*8*)	• Ivermectin • Topical scabicides	• Once a year		Entire community at risk
Yaws (*9*)	• Azithromycin	• Single dose	90%	Entire community at risk

PreSAC: preschool-aged children; SAC: school-aged children; WRA: women of reproductive age.

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Annex 2. Tool A. Prioritization of areas and populations

Implementation Unit _____ Name of coordinator _____ Date _____

SA code	Supervisory area	Target population (previous years)			Number of persons treated (previous years)			PC coverage (previous years)			If not treated, why?		Problem analysis (Discuss possible explanations and solutions to each of the options selected)										Main activities needed to solve problems and improve PC coverage
													Low coverage			High proportion of:		Denominator			Socio-demographic and geographic barriers to access			
		Year x	Year x+1	Year x+2	Year x	Year x+1	Year x+2	Year x	Year x+1	Year x+2	Refused	Absent	Total target population	By gender	By age group	Refused	Absent	Unknown	Under-estimated	Over-estimated	Hard to reach	Dispersed population	Security issues	
1																								
2																								
3																								
4																								
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								
13																								
14																								
15																								
16																								
17																								
18																								
19																								
20																								
Total - IU																								

Annex 3. Microplanning tools used at the supervisory area

Tool 1-SA. Characteristics of target populations and distribution channels

Implementation Unit _____ Supervisory area_____ Name of Supervisor _____ Date _____

Nº	Name of locality, village or neighborhood	Type of area (Urban, rural)	Geographic access (Hard-to-reach population (Y/N)	Special characteristics of the catchment area	Target Populations (SA estimates)						Official population estimates (if available)			Distribution channels to reach target populations						
					By group of age (example)			By gender						Number of Schools	Number of fixed Points					Number of Households in the SA
					Preschool age children	School age children	Adults	Men	Female	Total	Men	Female	Total		Markets	Churches	Work places	Other	Total	
1																				
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				
16																				
17																				
18																				
19																				
20																				
Total																				

Tool 2-SA. Plan to treat population in schools

Total target population to treat in schools	
Nº pairs Community Drug Distributors	

Implementation Unit _____ Supervisory area _____ Name of Supervisor _____ Date _____

Nº	Name of school	Public or private	Levels/ grades	School contact			Contacted	Estimated target population	Week _____							Week _____						
									(Please indicate number of Pairs CDD and expected coverage per Day/ Location) - e.g. School A - under Day 1: 2prs-250												
									Days							Days						
				Location	Name of head teacher	Phone	(Yes /No)		1	2	3	4	5	6	7	8	9	10	11	12	13	14
									Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___
1																						
2																						
3																						
4																						
5																						
6																						
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8																						
9																						
11																						
12																						
13																						
14																						
15																						
Total																						

Tool 3-SA. Plan to treat population in fixed points

Total target population to treat in FP	
Nº pairs Community Drug Distributors	

Implementation Unit _____ Supervisory area _____ Name of supervisor _____ Date _____

Nº	Name of Fixed Point	Location	Estimated target population	Contact person?	Contact person		Week _____							Week _____						
				(Yes /No)			(Please indicate number of Pairs CDD and expected coverage per Day/ Location) - e.g. Fixed Point A - under Day 1: 2prs-250														
				If yes, indicate name of person	Name	Phone	Days							Days						
							1	2	3	4	5	6	7	8	9	10	11	12	13	14
							Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___
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2																				
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8																				
9																				
11																				
12																				
13																				
14																				
15																				
Total																				

Tool 4-SA. Plan to treat population in households

Total target population to treat in HH	
Nº pairs Community Drug Distributors	

Implementation Unit _____ Supervisory area _____ Name of Supervisor_____ Date _____

Nº	Name of community	Contact information of community leader			Contacted	Estimated target population	Estimated number of households	Week _____ (Please indicate number of Pairs CDD and expected coverage per Day/ Location) - e.g. Community A - under Day 1: 2prs-250							Week _____						
		Location	Name	Phone	(Yes /No)			Days							Days					
								1	2	3	4	5	6	7	8	9	10	11	12	13	14
								Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___
1																					
2																					
3																					
4																					
5																					
6																					
7																					
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9																					
11																					
12																					
13																					
14																					
15																					
Total																					

Annex 4. Microplanning tools used at the implementation unit

Tool 1-IU. Summary sheet

Implementation Unit _____ Name of Coordinator:_____ Date _____

SA code	Supervisory area	Name of villages/communities	Target Population *(Estimate based on SA microplan)*			Census Population *(Estimate based on official data)*			Nº of implementation days	Target population by distribution channels		
			Men	Female	Total	Men	Female	Total		School	Fixed Point	Household
Total												

Tool 2-IU. Characteristics of target populations and distribution channels

Implementation Unit _____ Supervisory area_____ Name of Supervisor _____ Date _____

Nº	Name of locality, village or neighborhood	Type of area (Urban, rural)	Geographic access (Hard-to-reach population (Y/N)	Special characteristics of the catchment area	Target Populations (SA estimates)						Official population estimates (if available)			Distribution channels to reach target populations						
					By group of age (example)			By gender						Number of Schools	Number of fixed Points					Number of Households in the SA
					Preschool age children	School age children	Adults	Men	Female	Total	Men	Female	Total		Markets	Churches	Work places	Other	Total	
1																				
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16																				
17																				
18																				
19																				
20																				
Total																				

Tool 3-IU. Plan to treat population in schools

Total target population to treat in schools	
Nº pairs Community Drug Distributors	

Implementation Unit _____ Name of coordinator _____ Date _____

Supervisory area	Name of school	Estimated target population	Week _____							Week _____						
			(Please indicate number of Pairs CDD and expected coverage per Day/ Location) - e.g. School A - under Day 1: 2prs-250													
			Days							Days						
			1	2	3	4	5	6	7	8	9	10	11	12	13	14
			Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___
SA 1																
SA 2																
SA ….																
Total																

Tool 4-IU. Plan to treat population in fixed points

Total target population to treat in FP	
Nº pairs Community Drug Distributors	

Implementation Unit _____ Name of coordinator _____ Date _____

Supervisory area	Name of Fixed Point	Location	Estimated target population	Week _____ (Please indicate number of Pairs CDD and expected coverage per Day/ Location) - e.g. Fixed Point A - under Day 1: 2prs-250							Week _____						
				Days							Days						
				1	2	3	4	5	6	7	8	9	10	11	12	13	14
				Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___
SA 1																	
SA 2																	
SA …..																	
Total																	

Tool 5-IU. Plan to treat population in households

Total target population to treat in HH	
Nº pairs Community Drug Distributors	

Implementation Unit _____ Name of coordinator _____ Date _____

Supervisory area	Name of community	Estimated target population	Week _____ (Please indicate number of Pairs CDD and expected coverage per Day/ Location) - e.g. Community A - under Day 1: 2prs-250							Week _____						
			Days							Days						
			1	2	3	4	5	6	7	8	9	10	11	12	13	14
			Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___	Date___
SA 1																
SA 2																
SA ……																
Total																

Tool 6-IU. Estimation of resources and supplies (example)

Implementation Unit _____ Name of Supervisor _____ Date _____

Nº	Items	Description		# Persons to be Served	Number of Days	Quantity Requested
DRUGS						
1	Diethylcarbamazine	100mg (formal request needed - CRIV)	# Persons to be served ≥ 3.2	107503		344.010
2	Albendazole	400mg	# Persons to be served ≥ 1.1	107503		118.253
3	Ivermectin	3 mg	# Persons to be served ≥ 3.2	107503		344.010
	SUPPLIES					
	MDA implementation					
6	Pens	one per person	(No. PDS + No. FDs) + 7i No. FDs	240+23+120		383
7	Jobaids	one per pair	# pairs * 1	120*1		120
8	Bags	one per pair		120		120
9	Tent	for open air fixed points only	(size, quantity, location/time, date/No. days, chairs/tables)	Place same in the Tab 'Tent Schedule'		
10	Water bottles	1.5 Litres -10 cups (7 oz. per person)	Number of bottles - Max. No. 8th water required /day			
11	Cups (for fixed points and schools)	(Expected Coverage@ Fixed points/schools)	Estimated school coverage + fixed point coverage	17,102 + 9111		26.213
12	Garbage bags	1 bag per pair every 2 days	# pairs * 7	840	7	5880
13	Gloves	1 pair per 6 people served	Target pop./6 = total no. pairs	107503/6		17.918
			Indicate Size/quantity			
14	Spoons	9 spoons per day/pair	(# 1 No. PD pairs + No. of days)	9*120*14		15.120
15	Zip lock bags	To put spoons(1 bag/1 spoon/day)	# bags (small) *14*(# of pairs)	9*14*120	14	15.120
16	Brown envelopes	To summit completed reports	1 per HC (# of Health Centres)	21		21
17	Pill crushers			21		21
	MDA implementation					
18	Form 1.1	Fixed Point (600 per sheet)	(200 slot/age group) – Exp. Coverage/200 + 10% buffer OR			
19	Form 1.2	Fixed Point (14 days per sheet)	5 × No. HC × 14 = Total Sheets (1 sheet/HC)	5*21*14		1.470
20	Form 2.1	School Form (40 students per sheet)	(1 sheet/class) ; 6forms/school 5 × 6 × No. Schools = Total No. sheets	5*6*67		2.010
21	Form 2.2	School Form (20 classrooms per sheet)	2 sheet/school; no. sch. x 2 = Total no. sheets	67*2		134
22	Form 2.3	School Form (16 schools per sheet)	(1 sheet/ per HC)	21		21
23	Form 3.1	Household Forms (10 households per sheet)	(Total No. households/5)	79261/5		15,852
24	Form 3.2	Household Forms (16 days per sheet)	(1 per HC)	21		21
25	Poster #1	About Filaria				
26	Poster #2	About MDA/IDA				
28	Brochure #1	Refusal form	Total = Target pop. of schools			17.102
29	Brochure #2	FAQ	1 per CDD			
30	Letters to meet with Regional Officials	RHO, RHO, RHO				
31	Letters to Organizations	attach policy brief	(summit list of organizations)			
32	Letters to Schools	attach school fliers				
33	Drug Consolidated Form	one per person	(No. PDS + No. FDs)	240 + 23		263
34	Filaria (MMDP) Referral card		Target population*FD1	10750		1075
	UNIFORM					
35	Polo shirts	for FDs/PCs (each FD/PC gets 2)	(# PC+ #Fds)*2	(3+ 23)*2		52
36	Round neck shirts	for CDDs	# PCs*2	240*2		480
37	Caps		one per person	265		265
38	Badges –Supervisors			26		26
39	Badges – PCs			240		240
40	Lanyards			266		266
41	Badge holders			266		266

Tool 7-IU. Transportation schedule (example)

Implementation Unit _____ Name of supervisor _____ Date _____

Nº	Locality	Transportation mode	No. of vehicles	No. of drivers	Dates	Time (Daily)	No. of daily trips	Frequency of trips	Area/s to serve	Requirements (if fuel, state quantity)
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
Total										

Tool 8-IU. Supervisory checklist before implementation

Implementation Unit: _____ Name of supervisor: _____
Supervisory area: _____ Signature: _____
Name of Field Officer: _____ Date: _____

N°	Question	Status *(Mark 1 point if Yes or 0 if No)*		Verification criteria	Remarks
		Yes (1)	No (0)		
A)	**Planning activities to reach the target population**			*← In this cell, sum all points marked "Yes" from Question 1 to 8*	
1	PC target population was estimated by group of age?			Review the estimated SA target population and then cross check the data with registers	
2	Map of the HF catchment area showing the boundaries and sites to reach target population			Check that SA map is available and updated	
3	List of schools, locality, contact information and number of children is available?				
4	List of workplaces, locality, contact information and number of workers is available?			Check that all schools, fixed points and locations of HF catchment are included in *the plan to reach target population*	
5	List of sites to implement Fixed Point approaches (churches, markets, bus stations, etc.) is available?				
6	Number of pills needed to treat the targeted population using the different approaches was calculated?			Review the number of pills planned to verify if that number is consistent with strategies to reach MDA target population	
7	Plan scheduling the visits to schools, fixed points and locations by day is available?			Review the SA Plan to verify that it includes all strategies and sites to visit by day	
8	Mop up activities to reach the unreached eligible population are scheduled in SA workplan?			Check that mop up activities are included in *Tool 8-HC. workplan*	
B)	**Estimating and managing resources and supplies**			*← In this cell, sum all points marked "Yes" from Question 9 to 14*	
9	Requisition of necessary supplies for PC (T-shirts, badges, bags, spoons, gloves, caps, wallet, pens, clipboards, registration forms, communication materials) was done?			Check documents to verify that requisition of supplies is based on SA needs	
10	Requisition of PC drugs required is consistent with total target population?			Verify that the drugs requested is based on MDA target population	
11	Number of pills distributors and supervisors needed to treat the target population was calculated based on PC implementation?			Check that number of pills distributors and supervisors is based on PC target population and strategies	
12	Pills distributors are allocated to the areas and boundaries according to criteria are clearly defined?			Check that allocation of pills distributors is consistent with catchment area boundaries and target population	
13	Nursing staffs allocated to the schools for distribution of drugs is defined?			Check that the allocation of nurses is consistent with list of schools	
14	Operational resources are available at the HF (personnel, transportation and logistics) according to PC workplan?			Review *resources requirements* and check if it includes all operational resources needed	
C)	**Information system and coverage monitoring**			*← In this cell, sum all points marked "Yes" from Question 15 to 18*	
15	Staff in charge of managing PC data was designated and trained?			Review list of trained staff assigned to PC data management	
16	Registries of registers (daily sheets, school and community forms) to monitor PC coverage is based on real needs?			Check availability of registers and, based on total target population and PC strategies, verify that quantity is realistic and sufficient	
17	A space to display the PC monitoring and coverage monitoring tool (charts, maps, tables, etc.) is identified and created?			Look for the display space and tool to be used at HF	
18	SA Coverage Monitoring to verify PC coverage at local level is scheduled in the workplan?			Check that RCM is included in *HF plan of activities*	
D)	**Training and supervision**			*← In this cell, sum all points marked "Yes" from Question 19 to 23*	
19	Algorithms for: Microplanning, Implementation of Information system, Responsible, SA Coverage Monitoring, Pills distributors manual, others, are available?			Check that all PC guidelines are available at HF	
20	List of personnel to be trained as Pills distributors and contact information is available?			Check list of Pills Distributors and verify that it is consistent with HC needs	
21	Pills distributors were all trained?			Check list of trained Pills distributors	
22	SA staff was trained on guidelines to implement PC?			Check list of trained staff	
23	Supervision activities were programmed?			Check the calendar of supervisory visits	
E)	**Communication and social mobilization**			*← In this cell, sum all points marked "Yes" from Question 24 to 28*	
24	List of community leaders, stakeholders, partners and contact information is available?			Review list of *Stakeholders and Partners*	
25	Meeting with stakeholders such as religious bodies, governmental organizations, private companies were conducted or are scheduled?			Ask for the names of stakeholders already met and those who are scheduled to meet	
26	Meetings with school head teachers and distribution of circulations were conducted?			Ask for the school head teachers already met and the number of circulations distributed	
27	Information, education and communication (IEC) material were received and distributed at local level?			Check documents to verify that IEC material were received and distributed	
28	Launching event of PC is planned at local level?			Check that launching event is planned	
	Total — **Sum of all points =**	0		‹ **Absolute total score** *(Question 1 to 28)*	
	% =	0%		‹ **Percentage =** (Total points / 28) x 100	

Tool 9-IU. Supervisory checklist during implementation

Implementation Unit: _____ Name of supervisor: _____

Supervisory area: Signature:

Name of Field Officer: Date:

Nº	Question	Status *(Mark 1 point if Yes or 0 if No)*		Verification criteria	Remarks
		Yes (1)	No (0)		
A)	**Approaches to reach the target population**			*→ In this cell, sum all points marked "Yes" from Questions 1 to 7*	
1	The SA is using a map of the catchment area and knows the boundaries and aims to reach the target population?			Check that the SA has a map available and displayed in catchment area	
2	All schools included in the plan of SA have been visited according to the schedule?			Ask for the list of schools and check if they were visited according to the schedule	
3	All children living in the Classrooms *Annex* of the schools have been treated and if not treated, there are valid reasons for not treating those children?			Ask for registers of children treated in schools, check if all children were treated or if not, check the reasons for not been treated	
4	The SA scheduled as coordinator(s) to the schools to treat the children who did not take the pills during the first visit?			Check if the SA has a follow-up schedule to visit to the schools	
5	All the pupils not enrolled in the plan of HF have been visited according to the schedule?			Ask for the list of localities and check if they have been visited according to the schedule	
6	All localities not enrolled in the plan of HF have been visited according to the schedule?			Ask for the list of Fixed Points and check if they have been visited according to the schedule	
7	Mop up activities to reach the non-reached eligible population have been implemented according to the SA planning?			Check that mop up activities were included in *HF planning* and if it has been conducted according to the schedule	
B)	**Data register and drug coverage monitoring**			*→ In this cell, sum all points marked "Yes" from Questions 8 to 14*	
8	The denominator (target population) used to calculate the PC coverage matches the official data?			Check if the denominators used in the HF match the official target population data	
9	Have all "tally marks" entered in the *Fixed Post Tally Sheets* been consolidated correctly noted at the bottom of the form?			Check some tally sheets randomly and recalculate the total or persons treated by group of age and sex	
10	Have the total number of treated persons registered in the Tally Sheets correctly transferred to the *Fixed Post Reports*?			Double-check the additions to detect errors in the *Fix Post Tally Sheets* and compare those numbers with the *Fixed Post Report*	
11	All children treated in each school have been reported in the consolidated report?			Randomly select some schools to recount the number of children treated and check if it matches the data reported in the *School Consolidated Report*	
12	Have the total number of persons treated during house-to-house visits correctly transferred to the *Household Report*?			Double-check the additions to detect errors in the *Household Form* and compare those numbers with the *Household Report*	
13	The number of persons treated is counted, recorded and reported to the IU coordinator at the end of the day?			Check if the SA tabulates the data at the end of the day and the reports are sent daily to the regional coordinator.	
14	SA Coverage Monitoring to verify PC coverage at household is scheduled in the plan?			Check that SA was scheduled to verify the MDA coverages	
C)	**Drug safety**			*→ In this cell, sum all points marked "Yes" from Questions 15 to 17*	
15	SA staff is clear how to proceed if they detect an adverse reaction to PC drugs?			Ask if the HF detected any adverse event. If the answer is YES, ask if any of them were serious, how the person was treated. If the adverse event was reported	
16	Community Drug Distributors know the PC eligible population and exclusion criteria?			Ask the CDDs about the exclusion criteria. They must answer: *"only very sick people, pregnant women or children under five years old should not take the pills"*	
17	Community Drug Distributors know the possible adverse effects to PC drugs?			Ask the CDDs what are the adverse events. They must answer: *"In very few cases persons may experience some minor problems like headache or stomach ache, body aches, dizziness, dizziness, diarrhoea or cough"*	
D)	**Communication and social mobilization**			*→ In this cell, sum all points marked "Yes" from Questions 18 to 20*	
18	The SA is coordinating with community leaders, partners, stakeholders such as religious bodies, government organizations, private companies and they are supporting the PC?			Ask for the names of the leaders and their support	
19	Meetings with school head teachers and distribution of dissent forms were conducted?			Ask for the school head teachers already met and the number of dissent forms distributed and received	
20	Information, Education and Communication (IEC) materials were received and distributed at each level?			Check documents to verify that IEC materials were received and distributed	
E)	**Logistics and resources**			*→ In this cell, sum all points marked "Yes" from Questions 21 to 25*	
21	The SA received the necessary supplies for PC (e.g. badges, bags, spoons, gloves, caps, water, pens, clip boards, registration forms, communication materials)?			Check documents to verify that the supplies received in each of the HF needs	
22	Requisition of PC drugs reported is consistent with total target population?			Verify that HF drugs requested is based on PC target population and check the drug balance	
23	Community Drug distributors are allocated to the areas and boundaries for drug distribution are clearly delimited?			Check that allocation of pills distribution is consistent with catchment area boundaries and target population	
24	Number of HF allocated to the schools for distribution of drugs is adequate?			Check that the allocation of names is consistent with list of schools	
25	Operational resources are available at the HF (personnel, transportation and logistics) according to PC planning?			Check that the available operational resources meet the PC needs	
F)	**Training and supervision**			*→ In this cell, sum all points marked "Yes" from Questions 26 to 28*	
26	Health in charge of managing PC data were adequately trained?			Review list of trained staff assigned to PC data management	
27	Presentations were achieved?			Check the list of trained community drug distributors	
28	Supervision activities programmed at the HF were executed?			Check the calendar of supervisory visits (programmed and executed)	
	Total Sum of all points = % =			• **Absolute total score** *(Questions 1 to 28)* • **Percentage** = [Total points / 28] x 100	

Credit: WHO/ Lindsay Mackenzie

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