

Preventive chemotherapy for neglected infectious diseases:

Manual for the design and use of record sheets



Pan American
Health
Organization



World Health
Organization
REGIONAL OFFICE FOR THE Americas

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Abbreviations

WHA	World Health Assembly (WHA)
NIDs	neglected infectious diseases
PC	preventive chemotherapy
WHO	World Health Organization
PAHO	Pan American Health Organization

Glossary

Mass drug administration (MDA): In public health, an intervention in which drugs are periodically administered to an entire population at risk of a neglected infectious disease in a specific geographical area, regardless of each individual's infection status.

Census: Record of each and every unit of a population.

Coverage: Proportion of individuals in a defined population to whom a drug was administered, out of the total number of people or defined population expected to receive it.

Neglected infectious diseases: Those caused by parasites, viruses, and bacteria (e.g. soil-transmitted helminth infection, lymphatic filariasis, schistosomiasis, onchocerciasis, and trachoma, among others), for which comprehensive intersectoral action has been recommended in order to control and eliminate them. They are neglected because their occurrence and persistence are associated with social and economic conditions in the communities, including poverty, lack of access to basic services, or insufficient services.

Lymphatic filariasis: Parasitic infection caused by worms (nematodes), which can cause alterations in the lymphatic system and eventually trigger chronic lymphedema, abnormal growth of body parts, pain, severe disability, stigma, and social exclusion. In the Americas, *Wuchereria bancrofti* is the only species transmitted by mosquitoes of the genus *Culex*, which is the most common vector.

Soil-transmitted helminth infection (STH): Parasitic infection acquired by contact with contaminated soil. This document specifically refers to infection by hookworm (*Necator americanus* and *Ancylostoma duodenale*), *Ascaris* (*Ascaris lumbricoides*), and whipworm (*Trichuris trichiura*).

Reproductive-age women: Women of childbearing age, i.e., between 15 and 44 years old.¹

School-age children: Children between 5 and 14 years old, regardless of whether or not they attend school.¹

Preschool-age children: Children between 1 and 4 years of age.¹

Eligible population: Group of individuals who qualify or are selected to receive recommended preventive chemotherapy treatment. Eligible populations may encompass high-risk groups or the entire population living in an endemic area.

Target population: Number of people in a group defined by age, sex, or other characteristics included in an intervention. This is quantitative data necessary for planning the supplies and resources required for the intervention.

Ineligible population: Group of individuals who do not qualify to receive treatment in preventive chemotherapy interventions. Exclusion criteria for these groups are usually determined by a drug's iatrogenic effects.

Prevalence of infection: Proportion of individuals in a population who are infected with a specific agent.

Preventive chemotherapy (PC): Administration of anthelmintic or antibacterial drugs, either by themselves or in association, as a public health instrument for the control and elimination of STHs

¹The age range for this population group varies from one country to another.

and certain bacterial diseases. Drugs are administered early and periodically in order to reduce the occurrence, magnitude, severity, and long-term effects of a disease in endemic communities.

Round of deworming: Distribution of antiparasitic drugs to a large group of individuals for a defined time period.

Trachoma: Infection caused by the *Chlamydia trachomatis* bacterium, which is transmitted through contact with secretions from the eyes of infected people (shared use of towels and handkerchiefs, contact with fingers, etc.); flies also transmit it, contributing to its spread. After years of recurrent infections, the scars formed are so serious that the inside of the eyelid turns inwards and the eyelashes rub the eyeball, affecting the cornea (front of the eye). If the disease is not treated, it causes irreversible corneal opacity and blindness.

INTRODUCTION

Neglected infectious diseases (NIDs) affect populations living in less developed socioeconomic conditions, with geographical and cultural barriers that hinder their access to health services. Due to their living conditions, these people are at greater risk of these diseases, disability, and death; therefore, health gaps are widened if access to effective interventions is not guaranteed.

Various infectious agents cause NIDs, most of which can cause chronic illnesses with long-term effects on health. Timely and effective treatment is essential in order to reduce the occurrence, magnitude, severity, and sequelae of NIDs. Access to treatment helps increase the human capital of the most vulnerable and left-behind populations (1).

The availability of cost-effective interventions such as preventive chemotherapy offers the opportunity to help reduce inequities. However, in order to reduce the risk of infection and achieve the expected impact, it is necessary not only to ensure treatment, but also to improve housing and environmental conditions, as well as access to safe water and basic sanitation.

Preventive chemotherapy is beneficial when optimal coverage is achieved and sustained in the populations that receive it. As a result, it is essential to measure preventive chemotherapy coverage to determine whether the target population has access to it and to monitor progress toward the objectives.

To measure coverage, it is essential to have primary records for the population that needs preventive chemotherapy and also of the population that effectively received treatment. These data should be aggregated in order to prepare consolidated reports to be sent to the higher levels of the system through standardized channels. An essential condition of this process is to use instruments and procedures that guarantee data quality and timely reports.

This manual is intended to be used in collaboration with countries to measure preventive chemotherapy coverage. It establishes the steps to design and implement preventive chemotherapy records for the prevention, control, and elimination of NIDs. The concepts and procedures included in this manual can be applied to various NIDs and specific examples are given to design records for programs aimed at STH, lymphatic filariasis, and trachoma. Several countries in the Americas are conducting control and elimination activities for these diseases, an important component of which is preventive chemotherapy.

This manual is backed by technical strategies and recommendations on the design and use of coverage records for public health interventions. It is also supported by analysis of the lessons learned from the use of records to generate coverage indicators for programs on neglected infectious diseases and immunization in the Region of the Americas. As a result, this document will be progressively enriched as countries gain experience.

1. Background

In 2009, the Directing Council of the Pan American Health Organization (PAHO), through Resolution CD49.R19, urged its member countries to “commit themselves to eliminate or reduce neglected diseases and other infections related to poverty for which tools exist, to levels so that these diseases are no longer considered public health problems by 2015” (2).

To accomplish this, it was essential to identify the vulnerable populations, close the gaps in epidemiological information, and implement interventions in at-risk areas in all countries. During the 2013 World Health Assembly, Resolution WHA66.12 was adopted, urging the Member States to expand and implement interventions to reach the targets of the Global Plan to Combat Neglected Tropical Diseases and accelerate work to overcome its global impact by 2020 (3), as established in the roadmap of the World Health Organization (WHO) (4).

In 2016, the Directing Council of PAHO adopted the Plan of Action for the Elimination of Neglected Infectious Diseases and Post-elimination Actions 2016-2022 (Resolution CD55.R9 and Document CD55/15) (5), establishing the importance of improving access to preventive chemotherapy in population groups exposed to the risk of contracting NIDs (lymphatic filariasis, STH, schistosomiasis, trachoma, and onchocerciasis), in accordance with PAHO and WHO recommendations.

For the control and elimination of STH and certain bacterial diseases, the principal public health intervention is preventive chemotherapy. For example, anthelmintic or antibacterial drugs can be administered early and periodically to reduce the occurrence, magnitude, severity, and long-term consequences of a disease in endemic communities (6).

Drugs can be administered on a large scale to populations at risk of contracting susceptible infections (lymphatic filariasis, STH, schistosomiasis, trachoma, and onchocerciasis), regardless of individual infection status.

Preventive chemotherapy can take different forms (7, 8):

- **Mass drug administration.** The entire population in a geographical area (for example, a state, region, province, district, municipality, or community) receives the drugs periodically.
- **Targeted preventive chemotherapy.** Specific at-risk populations, defined by age (e.g. schoolchildren), sex, or other characteristics, such as occupation (e.g. farmers) receive anthelmintics or antibiotics periodically.
- **Selective preventive chemotherapy.** After routine detection in a population in an endemic area, all individuals who are infected or suspected of being infected receive the drugs.

For diseases such as STH, lymphatic filariasis, and trachoma, preventive chemotherapy coverage is recommended in order to reduce transmission in affected communities. For example, for STH, it is necessary for antiparasitic drugs (albendazole or mebendazole) to be given to at least 75% of the population at risk of infection (children, reproductive-age women, pregnant women in their second or third trimester of pregnancy, agricultural workers, and mine workers, among others) (9-14).

For these diseases, the following populations may be eligible for preventive chemotherapy: a) a target group, such as school-age children; b) the entire population of a specific geographical or administrative region, or communities that are highly endemic for specific diseases; or c) the entire population of a country.

A key indicator for preventive chemotherapy is its coverage of eligible populations, which corresponds to the proportion of individuals in a defined population who received the drug—or a combination of drugs, for example, in the case of preventive chemotherapy.

Estimated coverage is based on the data compiled in the records kept by the programs, as the

drug are distributed in different ways (door-to-door, at established posts, at specific locations, or in community meeting places), generally with an established flow in each country.

2. Purpose of this manual

The purpose of this manual is to provide basic information for the design and use of primary record sheets and the consolidation of reports on preventive chemotherapy activities of the various treatment strategies employed by programs for the control and elimination of neglected infectious diseases.

The manual is organized step-by-step and provides examples to:

- Establish flows for sending reports on preventive chemotherapy activities to combat NIDs, at the different levels of the information system: point of service delivery, intermediate (subnational) levels, and national level.
- Select and calculate indicators and types of reports, and disseminate the results to monitor preventive chemotherapy coverage of NIDs.

3. Who can benefit from this manual

This manual is aimed at managers of national and subnational NID control and elimination programs, especially programs that use preventive chemotherapy. It is also meant for members of technical teams involved in those activities, with a view to facilitating the design and use of records to generate coverage indicators for preventive chemotherapy.

The manual contains useful information on certain aspects of measuring preventive chemotherapy coverage, for example, defining eligible populations and selecting denominators to calculate indicators. It also includes instructions and examples to establish data flow and design records that will be consolidated at the point of service delivery and reported to the national level.

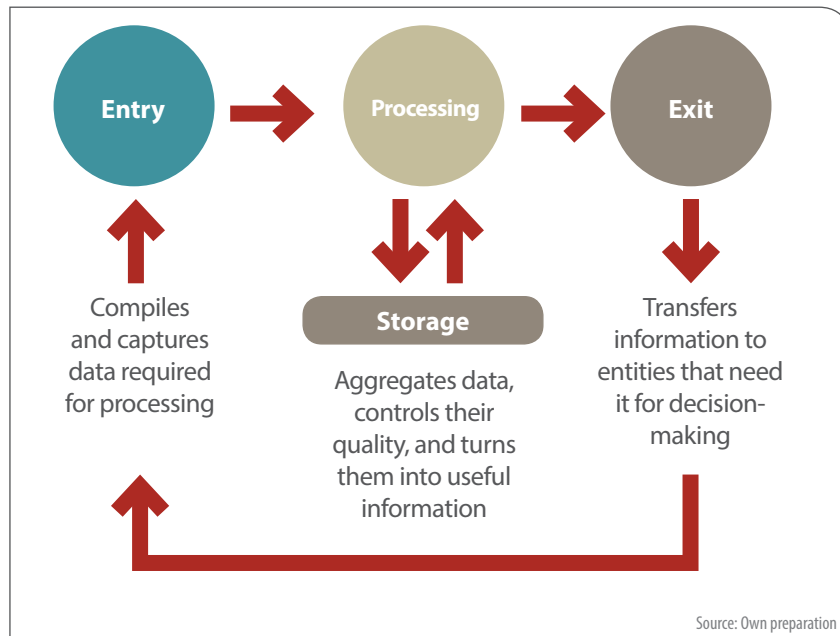
The manual concludes with the preparation of reports on indicators, to be used by various program users and decision-makers.

4. Steps in the design and use of records

The records kept on the number of people who receive preventive chemotherapy are a key part of monitoring coverage, since they constitute the point of entry to the information system for any NID control and elimination program (Figure 1). The appropriate design and use of the data collection and capture tool—whether on paper or in digital format—is essential in order for the system to achieve its purpose and generate the information necessary for decision-making.

Once data are compiled, they need to be processed and stored. This also requires tools for tabulating and aggregating data from the primary records in a consolidated manner in order to then use them to generate reports. According to established data flow, the reports will be sent to higher (subnational and national) levels in compliance with the procedures established in each country with respect to time and form.

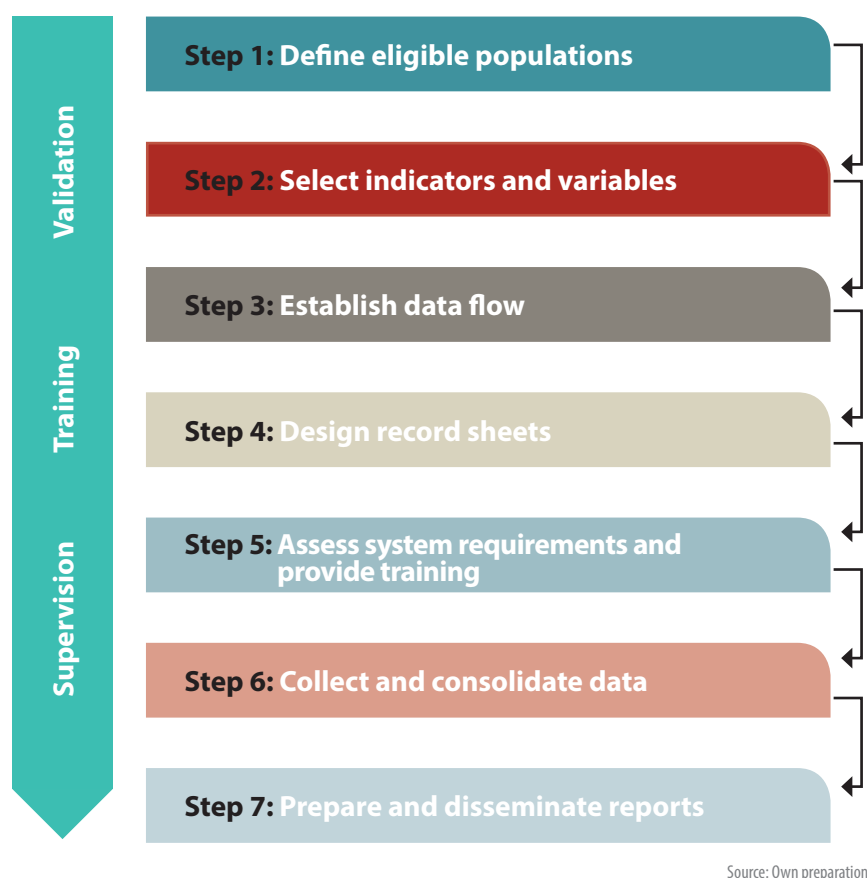
Figure 1. Information system processes



The purpose of collecting this data is to transfer it to decision-making entities. When designing a records system, it is necessary to determine what indicators will be used (based on the collected data) and what kind of strategy will be used to disseminate and use the information.

In short, the design and implementation of an information system constitutes a cycle, because data entry is defined bearing in mind the information that will have to be produced and because the exiting products feed back into the system's point of entry. As a result, the design and use of coverage records should follow a predetermined sequence (Figure 2) in order to respond to the information requirements and to meet quality criteria. It is necessary to validate the design before implementing it; it is also necessary to train and supervise personnel and ensure that data undergo quality control.

Figure 2. Steps in the design and use of coverage records



Each step of figure 2 is analyzed and explained, with specific examples of preventive chemotherapy records.

Step 1. Defining eligible populations

Preventive chemotherapy, as defined earlier, is a public health intervention used to administer drugs early and periodically to reduce the occurrence, magnitude, severity, and long-term effects of morbidity associated with NIDs. The objective is to treat infected people and to prevent new infections in the healthy population and reinfection in the previously treated population.

Defining the eligible populations is the starting point in designing a system for coverage records. Eligible groups can be selected by age (for example, preschool children, schoolchildren, or reproductive-age women), by risk of becoming infected (e.g. pregnant women in their second or third trimester of pregnancy, or agricultural or mining workers), or because they live in areas with endemic diseases for which there are preventive chemotherapy strategies aimed at elimination (e.g. STH, trachoma, and filariasis).

Once the eligible populations are determined, it is necessary to define the denominators that will be used to calculate preventive chemotherapy coverage in the endemic areas. The degree of geographical disaggregation of endemic areas varies with local epidemiological and ecological features and each country's political-administrative structure. A geographical unit can be a

municipality, district, or commune (i.e. a territory with a local government and clearly defined borders); it can also be a subnational area (i.e. a region, state, department or province, depending on the country). In this document, we will use the terms “municipality” for the local level and “region” for the subnational level.

Records should also be designed to take into account the strategy that will be implemented to administer the drug, namely (15):

- **Door-to-door distribution (mobile teams).** The person in charge of giving the drug collects it from a center and provides it door to door. This ensures that the entire target population is covered. However, this is intense, expensive work, especially in low-density population areas. Also, a house’s inhabitants may be away when the drug is distributed.
- **Distribution posts (fixed-location teams).** These are distribution sites accessible to the population. The person in charge of administering the drug gives it to people who arrive at the health facility. This is practical in urban areas, but coverage depends on a motivated population, and on the capacity of the fixed posts to attract the population.
- **Distribution in specific places.** The drug is provided at places where certain at-risk population groups concentrate, such as schools (for students), day-care centers or kindergartens (for young children), centers for refugees or displaced persons, and workplaces, among others.
- **Distribution in community meeting places.** Markets, bus and train stations, fairs and festivals, and parks are also places where the community can be reached.

How the drugs will be administered should be defined locally, according to the characteristics of each endemic area and the places where the eligible population concentrates. Based on that information, the number of people who should receive the drug in each area needs to be established, i.e. the denominator of the coverage ratio. These population data will also be used to monitor progress in the administration of the drugs during campaigns, and for timely decision-making to help reach the coverage levels required to achieve the impact expected of preventive chemotherapy.

To establish the denominator, i.e., the total population that requires treatment (target), several data sources can be used. It is necessary to obtain official demographic information (population projections, fertility rates, and number of births, among other indicators provided by the country’s statistics institute or census). However, depending on the specific eligible population, it is recommended to use other official data sources, such as school enrollment or number of workers in high-risk occupations, among others.

Table 1 shows an example of eligible populations, strategies, and possible data sources that could be used to establish the target population for preventive chemotherapy.

Step 2. Selecting indicators and variables

A coverage indicator is defined as the proportion of the population that receives the intervention out of the total population that needs it. It consists of

- **Numerator:** the number of people who received treatment
- **Denominator:** the total of people who should have received treatment

There are several kinds of indicators with different purposes, depending on what is being measured: process, performance, or program impact. Coverage indicators measure program performance, as Figure 3 shows.

Table 1. Example of eligible populations, strategies to reach them, and target population for preventive chemotherapy

Eligible population	Strategy				Data source to establish population targets
	Distribution posts	Specific places	Door to door	Community meeting places	
Preschool children (1 to 4 years old)	✓	✓	✓	✓	<ul style="list-style-type: none"> • Official population estimates • Enrollment in preschool education and child day-care centers
Schoolchildren (5 to 14 years old)	✓	✓	✓	✓	<ul style="list-style-type: none"> • Official population estimates • School enrollment
Reproductive-age women	✓		✓		<ul style="list-style-type: none"> • Official population estimates of reproductive-age women
Pregnant women in their 2nd and 3rd trimester of pregnancy	✓		✓		<ul style="list-style-type: none"> • Estimate of pregnant women based on fertility rates or number of births • Health records from pregnancy monitoring consultations
Workers (according to risk)	✓	✓	✓	✓	<ul style="list-style-type: none"> • List of company employees
Endemic area population	✓	✓	✓	✓	<ul style="list-style-type: none"> • Local census data • Number of risk areas

Figure 3. Program monitoring and evaluation indicators

	Process indicators	Performance indicators	Impact indicators
Type of indicator	<ul style="list-style-type: none"> • Policy • Financing • Logistics and inputs • Manuals • Training • Other 	<ul style="list-style-type: none"> • Coverage 	<ul style="list-style-type: none"> • Prevalence of the infectious agent • Morbidity • Mortality • Disability
Uses	<ul style="list-style-type: none"> • Determines whether the program has and uses the organizational components required for it to function properly 	<ul style="list-style-type: none"> • Determines whether the population target was reached (number of people who received the intervention) 	<ul style="list-style-type: none"> • Evaluates whether the interventions had the expected impact on the health of the population
Frequency	<ul style="list-style-type: none"> • Each round of preventive chemotherapy 	<ul style="list-style-type: none"> • Each round of preventive chemotherapy 	<ul style="list-style-type: none"> • Baseline, then every 2 to 3 years

Source: Adapted from World Health Organization. *Monitoring drug coverage for preventive chemotherapy*. Geneva; 2010.

Several indicators are used to monitor the coverage of preventive chemotherapy for NIDs (16-17):

- **Program coverage:** Used to determine achievement of the target when the program or project in question is aimed only at a subgroup of individuals in a given endemic area, for example, a deworming program for schoolchildren. For some preventive chemotherapy interventions, certain population groups may not be eligible for treatment, either because

they are under a certain age or do not qualify due to weight or pregnancy. In such situations, program coverage is an indicator of the efficacy of the specific intervention in the target population. The formula for calculating this coverage is:

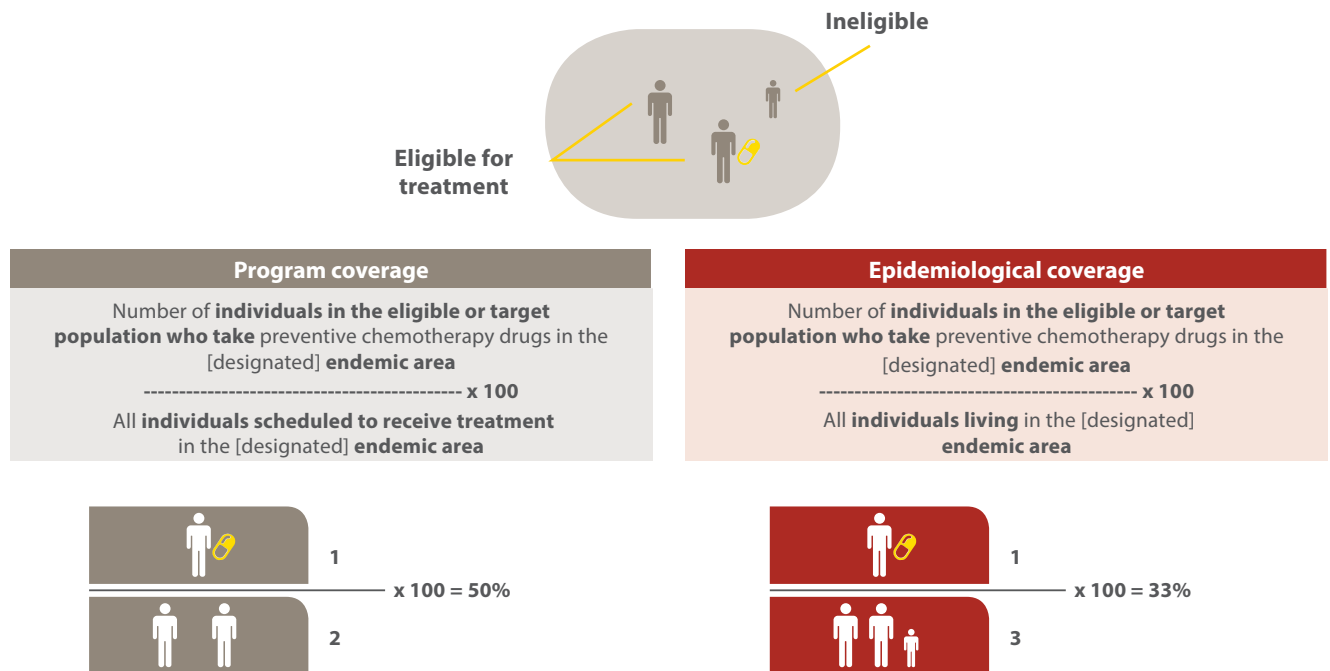
$$\frac{\text{Number of individuals in the eligible or target population who take preventive chemotherapy drugs in the [designated] endemic area}}{\text{All individuals scheduled to receive treatment in the [designated] endemic area}} \times 100$$

- **Epidemiological coverage:** Similar to program coverage, but here the denominator includes the entire population of the endemic areas, while program coverage only includes the eligible population. As a result, the formula for calculating this coverage is:

$$\frac{\text{Number of individuals in the eligible or target population who take preventive chemotherapy drugs in the [designated] endemic area}}{\text{All individuals living in the [designated] endemic area}} \times 100$$

Figure 4 shows the difference between the formulas for calculating program coverage and epidemiological coverage.

Figure 4. Differences in the formulas for calculating program coverage and epidemiological coverage



Source: Based on a presentation on management of preventive chemotherapy data; RTI International, ENVISION project. Zoerhoff K. 2016

Lymphatic filariasis elimination programs normally use program coverage as well as epidemiological coverage indicators, with different achievement targets. Program coverage should be at least 80%, while epidemiological coverage should be 65%.

- **Geographical coverage:** This indicator reflects the proportion of political-administrative units (districts, municipalities, etc.) that are providing preventive chemotherapy out of the total number of units that should be covered with a specific preventive chemotherapy package. While the formulas described above measure drug coverage in terms of a population, geographical coverage is an indicator of the expansion of a preventive chemotherapy program in a country. The goal of all programs is to reach 100% geographical coverage in the shortest possible time. The formula to calculate geographical coverage is:

$$\frac{\text{Number of **endemic** administrative units where **preventive chemotherapy is provided**}}{\text{Total number of **endemic** administrative units that **require preventive chemotherapy**}} \times 100$$

- **National coverage:** This is the proportion of individuals who require preventive chemotherapy for a specific disease in an endemic country, who have taken the appropriate drugs as part of a preventive chemotherapy package. This indicator is calculated after administering each round of a preventive chemotherapy package. The indicator is synonymous with “treatment coverage” in an onchocerciasis control program or “drug coverage” in a lymphatic filariasis elimination program. The formula to calculate it is:

$$\frac{\text{Number of **individuals who take drugs** as preventive chemotherapy for a specific disease in an endemic country}}{\text{Number of **individuals at the national level who require** preventive chemotherapy for a specific disease in an endemic country}} \times 100$$

National programs need to report drug coverage using these indicators.

In addition to the coverage indicators, preventive chemotherapy records provide certain variables that are used to calculate the process indicators, namely:

- percentage of administrative units that achieved treatment coverage above the established coverage target;
- percentage of educational centers that participated in the administration of preventive chemotherapy;
- percentage of drugs used and percentage lost during the round of preventive chemotherapy.

As a result, once the eligible populations are selected and the indicators to monitor and evaluate the preventive chemotherapy strategy are defined, it is necessary to determine which variables need to be compiled in order to prepare the coverage indicators to measure whether the target population was indeed treated and whether the coverage necessary to reduce the incidence of infection was achieved (18).

To construct the coverage indicators, the record sheet should register at least these variables:

- Person: age and sex of the treated person. It is also important to record information on people who did not receive the drug and the reasons for this.
- Place: region, municipality, and unit that provided the service.
- Time: date of administration of the treatment.

The following questions can guide the selection of variables to be included in the record sheet:

- **Is it necessary to obtain data on specific age (years old) or is it sufficient to record the age group (for example, 5-14 years old in the case of schoolchildren)?**

It is not necessary to record age in years, since the coverage indicator is calculated by age groups, i.e. population 1-4 years old (preschool children), 5-14 years old (schoolchildren), or women of reproductive age (15-44 years old). This simplifies record-keeping and reduces the time it takes to consolidate the data.

- **Can only the school grade level be recorded, assuming that each grade has children of a specific age?**

No. It is not appropriate to record only the grade, since each grade can contain children who are older or younger than the expected age.

- **Is it useful to calculate coverage by sex in each target population?**

Yes. It is important to analyze differences by sex; the sheet should record individuals by age and sex group.

- **Is it useful to include information on administered and lost drugs, and the balance?**

Accountability in the use of resources is very important; this information is easy to include in the record and it can be used to calculate process indicators. It should be included in the primary record in order to calculate the indicator for each area of management.

Step 3. Establishing data flow

The strategy for mass drug administration is implemented through intensive or national-level campaigns scheduled over a 1-4-week period. Data flow should be adapted to the implementation strategy for each campaign. The dates for delivery of data from one level to another need to be feasible in order to reduce delays in the availability of coverage indicators or omissions in data aggregation, which cause errors and affect the accuracy of the information.

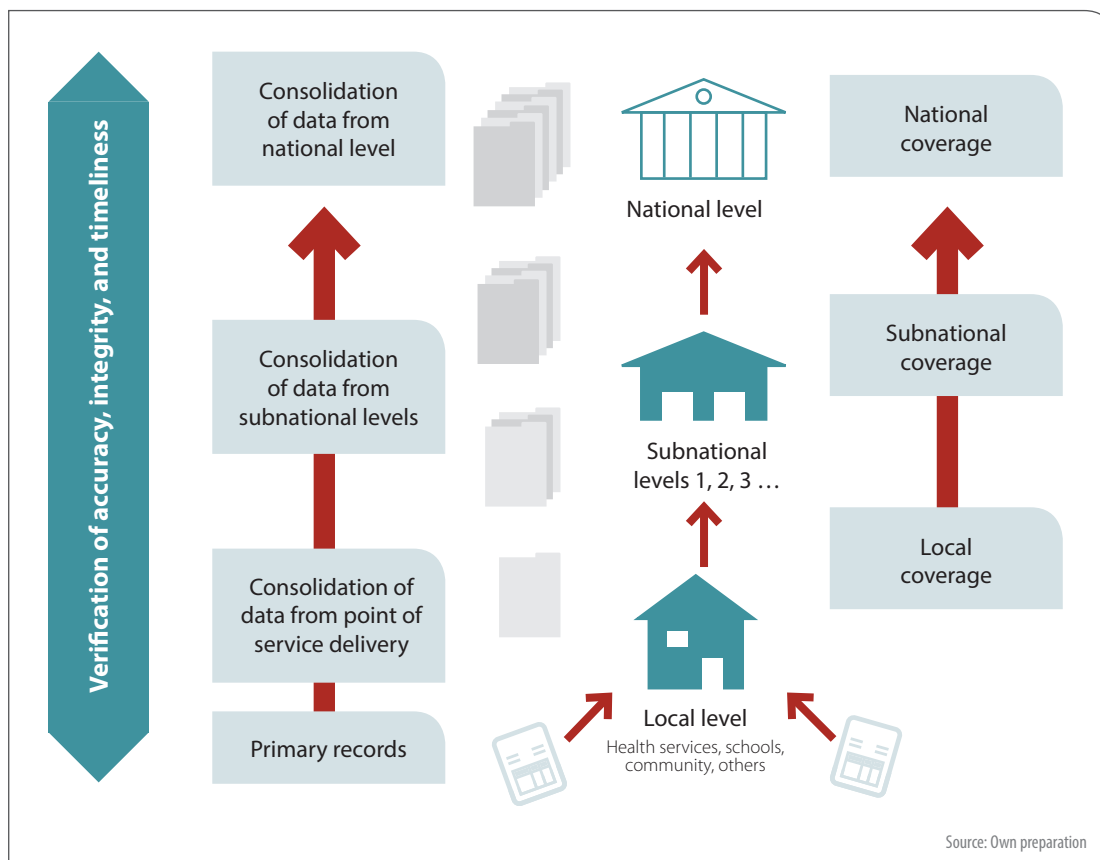
When the drug is administered in school settings, the data flow will depend on how the health or education services are organized. It is necessary to select the locations where the drugs will be delivered to the population (i.e. school, health unit, door-to-door, or at meeting places) (Figure 5).

The form used at the point of service delivery constitutes the primary record in the information system. It can be nominal (if it contains the name of each individual) or it may be a sheet that records the number of doses administered. Based on the primary record, the local service should prepare a report with aggregate data on the administered doses, to be sent to the subnational level on the established date.

The number of subnational points of data aggregation depends on the country, but it is recommended that there be no more than two, in order to avoid overly complex data flow. Finally, the aggregate data from all subnational points are consolidated at the national level on pre-established dates.

It is recommended that information on each round of treatment be available as soon as possible after the activity is completed. Data transfer dates should be feasible, so that the data are complete and each level of the information system has enough time to prepare the reports. It is necessary to confirm that data are correct, as a quality control mechanism. This information will make it possible to quickly take action to expand coverage if the proposed objectives have not been met.

Figure 5. Data flow in the coverage record system



Step 4. Designing records

Records can be of two kinds: consolidated and nominal. In consolidated records, data are grouped by variables such as sex or age group, i.e. the names of the people who received the drug are not included. This kind of record is commonly used for mass intervention strategies because it is quicker, with simpler tabulation: it is simply a tally of the people treated.

Nominal records include the specific data of each person. In addition to the name of the individual, his or her age or date of birth may be recorded (in electronic records), as well as sex and risk conditions such as pregnancy or occupation. With this kind of record it is possible to monitor each individual, making it useful in preventive chemotherapy strategies at schools, since it facilitates the capture of children who absent the day the drug is administered.

Nominal record systems can be too complex for interventions involving mass drug administration and they create a great deal of work during data consolidation, especially if this is done manually, i.e. without computer support; and the same is true for data tabulation. Each country should, therefore, assess the desirability of using nominal records during mass drug administration campaigns.

When deciding what kind of consolidated record system to use, the following questions can help:

- **Is an information system being used for other interventions (for example, vaccination)? If so, could NIDs be included?**

If this is the case, the records will have to be adjusted to the format used in the official information system. In countries where deworming is carried out in integrated health campaigns along

with, for example, vaccination or vitamin A supplementation, the record sheet includes the various interventions. If there is a computer system, data are keyed into the system following the same data flow for all interventions.

- **What are the available resources and time frames for the intervention?**

Consolidated records that facilitate data collection and tabulation can be used, or else nominal records, which require greater investment of time and resources. *In a mass campaign, where different capture strategies will be applied intensively, tally sheets facilitate data collection and reduce the possibility of errors; they also facilitate the preparation of the consolidated report.*

The design of the record sheet will depend on the characteristics of the eligible populations and the variables required for the indicators, but in general, a record sheet has the following parts:

1. **Heading:** includes the basic data on geographical location (region, municipality, village), dates, uptake strategy, and name of drug, among others.
2. **Body:** includes the variables that needed to be compiled, such as name (for nominal records), age, sex, and risk conditions; and, if necessary, the reasons given by individuals who refuse treatment, and other comments.
3. **Boxes** to add up the variables that will be aggregated and tabulated to calculate the coverage indicators, and information on the administration of the drugs and remaining quantities.
4. **Information** identifying the person in charge of filling out the sheet and the date on which the report was sent.
5. **Every record** should be accompanied by instructions on how to use it, with each variable defined and instructions provided on how to compile and tabulate the data.

Every record sheet, whether nominal or consolidated, should be validated by a pilot study before being used in the program. A location should be selected to gain experience; then the necessary adjustments can be made. The pilot study should also include validation of the instruments used to consolidate data and produce reports. The time taken to record the data should be calculated.

Another very important type of record is the card provided to children or their families when the treatment is administered. This document promotes the uptake of the health interventions the individual should receive throughout his or her life, such as vaccines, nutritional supplementation (e.g. iron and vitamin A), deworming, monitoring of child growth and development, and oral health. In some countries where anthelmintic deworming has been included in Vaccination Week in the Americas or other vaccination campaigns, antiparasitic treatments have been included in the vaccination card of children under age 5.

Tally sheet for people treated

Examples 1, 2, 3, and 4, below, show the sheets used to tally the number of treated people, as well as nominal record sheets. These are not necessarily mutually exclusive, since the tally sheet can be used in extramural activities in areas with highly concentrated populations, while the nominal sheet can be useful to monitor drug administration in schools and day-care centers.

The tally sheet is used to count treated people by age group and sex, as Example 1 shows; however, it can also be used to record at-risk populations such as reproductive age women, pregnant women, or workers in high-risk occupations (Example 2).

The heading of these example sheets include a variable that captures the method used to reach the population to be treated, since this information is useful in determining the efficacy of each specific form of drug administration.

Example 1. Tally sheet for people treated with preventive chemotherapy, by sex and age

		Region		Municipality		Locality		Health unit (or school)		Date		Administered treatment			
		Health unit		Door to door		Fixed distribution posts		Distribution in specific places				If NOT treated, indicate why not			
Age group		1 to 4 years old		5 to 14 years old		15 years and older						Contraindicated		Rejected	
Sex		♂		♀		♂		♀		♂		♀			
1		□□□□	□□□□	□□□□	□□□□	□□□□	□□□□	□□□□	□□□□	□□□□	□□□□	□□□□	□□□□		
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Total															
Total by age group												UNTREATED Total			
Total by sex		♂		♀						Total dewormed					
		A) Number of tablets received				B) Number of tablets used				C) Remaining balance (A-B)					
Name of responsible staff member:				Signature				Date							

Totals

Data on use of the drug

Example 2. Tally sheet for people treated with preventive chemotherapy, by risk group

Region		Municipality		Locality		Health unit	
TACTIC	Health unit	Door to door	Fixed distribution posts	Distribution in specific places	Date	Administered treatment	
Risk population	Reproductive-age women	Pregnant woman (2nd and 3rd trimester)	High-risk occupation (e.g. mining, agriculture, etc.)	If NOT treated, indicate why not		Contraindicated	Rejected
1	□□□□□	□□□□□	□□□□□	□□□□□	□□□□□	□□□□□	□□□□□
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Total							
TREATED Total					UNTREATED Total		
A) Number of tablets received			B) Number of tablets used			C) Remaining balance (A-B)	
Name of responsible staff member:		Date		Signature			

Nominal record sheet

The nominal record sheet in examples 3 and 4 can be used where there is a list of individuals in the target population (provided by official entities, companies, etc.). This makes it possible, for example, to follow up with people who were absent the day the treatment was given.

Nominal records can include each treated person's risk conditions (for example, pregnancy or occupation, as in Example 4), coherent with the strategy implemented in the country.

Since schools include children who are 15 years old or over (outside the 5-14 age group that most countries consider to be schoolchildren), the country can decide to treat these children so that they benefit from the intervention; teachers could also be treated. However, when calculating coverage of the eligible age group (for example, school-age children), the numerator and denominator will only include children 5-14 years old (treated and eligible for treatment, respectively). The sheet in Example 5 is useful for nominal records in schools.

Data tabulation sheet

The data collected in the tally sheets and in the nominal records should be tabulated and reported to the next corresponding administrative level, according to the established data flow and reporting dates in each country's information system.

Examples 6 and 7 present sheets for a consolidated report on each classroom at each school, and for each health unit in each municipality.

Example 6. Tabulated report on people treated with preventive chemotherapy at schools, by sex and age

Region		Municipality		Locality		School		Age and sex group (Mark with a X only if the student was treated, otherwise leaves blank)		If NOT treated, indicate why not			
N°	Classroom	Report date	1 to 4 years old		5 to 14 years old		15 years and over		Total	Total	Contraindicated	Rejected	Absent
			♂	♀	♂	♀	♂	♀	♂				
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
Total													
A) Number of tablets received			B) Number of tablets used						B) Remaining balance (A-B)				

Name of person in charge Signature Date

Example 7. Tabulated report on people treated with preventive chemotherapy, by municipality, age, and sex

Region		Municipality		Name of person responsible		Date		Age and sex group		If NOT treated, indicate why not			Remaining balance of tablets			
N°	Name of reporting health unit	Report date	1 to 4 years old		5 to 14 years old		15 years and over		Total by sex	Total	Contraindicated	Absent	Rejected	(A) Received	(B) Used	Balance (A-B)
			♂	♀	♂	♀	♂	♀	♂							
Total																
Total by age group																

Name of person in charge Signature Date

Examples of record sheets adapted for soil-transmitted helminth infections, lymphatic filariasis, and trachoma are found in Annexes 1 and 2.

Regardless of the strategy used to reach the target population with preventive chemotherapy, the health services are responsible for the management and safekeeping of the drugs. As a result, the information on the number of tablets provided to the field teams, health teams, or schools—as well as the number of tablets administered in the campaigns and the remaining balance at the end of the campaign—should be provided to the program managers in each administrative area of the country and should be analyzed by them. The dosages received, administered, and remaining should be recorded and included in the reports sent from the point of service delivery to the next corresponding level (subnational or national).

Step 5. System requirements

An information system on coverage requires human, logistical, and technological resources in order to function and it is necessary to define the essential aspects of its proper operation; for example, the responsibilities that correspond to personnel at each level, as well as the type, number, and training of workers who participate in the recording, consolidation, and analysis of coverage data. It is also necessary to define what technology will be used in the case of manual coding, or whether a computer program will be used record and/or tabulate data.

It is essential to train all staff who take part in all components of the preventive chemotherapy strategy and to clearly define their functions, both in data collection and processing and in supervisory tasks. These workers should be very familiar with the data flow and the time frames for sending reports. Through training, personnel should understand the importance of their duties and avoid errors and biases, with a view to ensuring data quality and the intervention's impact in terms of improving the health of the affected populations.

Each level of the health system has key functions to perform in the correct design and use of records:

- **National level** (*monitoring and evaluation unit in charge of preventive chemotherapy*): responsible for establishing national guidelines and directives; defining the information flow and data recording tools; ensuring that personnel is trained and that the necessary human and technological resources and supplies are available for the proper operation of the information system.
- **Subnational (intermediate) level** (*region, department, state, province*): responsible for ensuring that local levels have the capacity and conditions to implement the standards and directives of the coverage monitoring system; facilitating the process through training, supervision, and support to solve any problems that may occur, and mobilize the resources, supplies, and logistics required to implement the monitoring system with a focus on quality.
- **Local level** (*district, municipality, commune*): responsible for confirming that all points of service delivery have the necessary capacity and resources to implement processes to record and consolidate data and prepare reports that comply with the country's established standards.

Step 6. Collecting and consolidating data

The data collection and consolidation process should guarantee the production of quality data that can be used to calculate useful indicators. To do so, data should meet the following criteria (19):

- **Accuracy or validity**: the data measure what it is meant to be measured, with minimal errors and controlled biases.

- **Comprehensiveness:** data should contain the complete list of people or units, not just a partial list.
- **Integrity:** data should be free from biases and deliberate manipulations throughout the process of collection, analysis, and reporting.
- **Timeliness:** the data should be available in time, i.e., before the deadline set for the report.
- **Reliability:** data are handled following protocols and procedures that do not change depending on who uses them or when or how often there are used; data are reliable because they were measured and compiled systematically.
- **Confidentiality:** guarantees that data will be kept securely, in accordance with national and international standards, preventing inappropriate release of personal information.

To control data quality, it is necessary to ensure that:

- Personnel working at the locations where the drugs are administered are trained and have a sufficient supply of the official sheets to record the people who receive treatment.
- Personnel in charge of receiving the forms are able to confirm that all the recorded data are correct and that all the completed sheets were received. They should check the tally and apply simple controls such as comparing the number of people treated with the amount of drug used and the remaining balance.
- The sheets should be sent from the point of service delivery to the intermediate (subnational) level (e.g. municipality or region) and then to the national level, according to the defined data flow and by the established deadline.

Since it is important to reduce errors to a minimum, the following should be avoided:

- In the numerator, do not include treated people who are not part of the target population, either because they are too young or too old for the treatment, or because they do not reside in the municipality or region where the intervention is carried out.
- Do not enter duplicate data or omit records of treated individuals by adding data when preparing the consolidated report.
- Every denominator has limitations, so to minimize errors insofar as possible, it is recommended to use the population figure that best reflects the number of people who should be treated (target population).

Step 7. Preparing and disseminating reports

The report on preventive chemotherapy coverage is a product of the information system, as was indicated in Figure 1. Reporting is essential for decision-making; it is also used to evaluate data quality and implementation of the information system.

To evaluate the quality of the coverage data for mass drug administration for NIDs, methods such as data quality audits² are used (20) to analyze data accuracy and comprehensiveness, and the capacity of data management systems to compile, transmit, document, and report quality data.

When preparing a report, it is necessary to analyze the coverage data according to the variables of person, place, and time. This will determine whether the necessary proportion was obtained in order for the intervention to be effective. In addition to percentages of coverage, absolute numbers should be analyzed, i.e. both the numerator and the denominator: a sharp drop or rise in the numerator or denominator should lead to a review of the data that compose it.

²Also known as DQA.

If the data indicates gaps in coverage, it will be necessary to repeat the interventions to maintain high and uniform coverage, with quality data.

The results of measuring coverage should be illustrated in tables, figures, and maps, and included in a report that interprets these results, draws conclusions, and offers recommendations to improve both coverage and data quality. When analyzing coverage data and preparing the report, it is recommended to consult PAHO/WHO's tools for monitoring the coverage of integrated public health interventions (21).

The analysis of coverage should be consistent with the reality and context of each place where the intervention is implemented. This means that the outcomes of preventive chemotherapy should be analyzed jointly with the health team at each level of the system. In addition to sharing the reports with the technical teams of the NIDs program, the results should be disseminated to various users, including:

- health and education authorities, among other relevant sectors
- international organizations (PAHO/WHO, UNICEF, etc.) and nongovernmental organizations
- community leaders where interventions are implemented
- communications media

The involvement and inclusion of actors outside the health sector (education, indigenous health, local leaders, etc.) is very important, since they can help interpret the results, propose recommendations, and identify opportunities for coordination, joint action, and commitment to the program.

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Annexes 1

Annex 1.1. Tally sheet for people treated with antiparasitic drugs for soil-transmitted helminth infections, by sex and age

Annex 1.2. Nominal record of people treated with antiparasitic drugs for soil-transmitted helminth infections and lymphatic filariasis at schools, by sex and age

Annex 1.3. Data sheet for reporting on people treated with antiparasitic drugs for soil-transmitted helminth infections and lymphatic filariasis at schools, by sex and age

Annex 1.4. Data sheet for health units to report on people treated with antiparasitic drugs for soil-transmitted helminth infections and lymphatic filariasis at schools, by sex and age

Annex 1.5. Consolidated data sheet to report on people treated with antiparasitic drugs for soil-transmitted helminths, by municipality, age and sex

Annex 1.1. Tally sheet for people treated with antiparasitic drugs for soil-transmitted helminth infections, by sex and age

Region: _____ Municipality: _____ Locality: _____ Health unit: _____

TACTIC: _____ Health unit: _____ Door to door: _____ Fixed distribution posts: _____ Distribution in specific places: _____ Name of person responsible: _____ Administered treatment: Albendazole Mebendazole

Age group	1 to 4 years old		5 to 14 years old		15 years and over		If NOT dewormed, indicate why not	
	♂	♀	♂	♀	♂	♀	Contraindicated	Rejected
1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total	<input type="text"/>		<input type="text"/>		<input type="text"/>		<input type="text"/>	
Total by age group	<input type="text"/>		<input type="text"/>		<input type="text"/>		<input type="text"/>	
Total by sex	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
A) Antiparasitic drugs received (no. of doses)		B) Antiparasitic drugs used (no. of doses)		C) Remaining balance of antiparasitic doses (A-B)		Total NOT dewormed		

Name of responsible staff member: _____ Signature: _____ Date: _____

Annex 1.2. Nominal record of people treated with antiparasitic drugs for soil-transmitted helminth infections and lymphatic filariasis at schools, by sex and age











Region	Municipality			Locality				School		Classroom		
	Nº	Name of student	Age and sex group <i>(Mark with a X only if the student was treaty, otherwise leaves blank)</i>				Number of tablets administered		If NOT treated, indicate why not			
2 to 4 years old			5 to 14 years old	15 years and over	Diethylcarbamazine (DEC)	Albendazole (ALB)	Ineligible Pregnant Woman	Rejected	Absent			
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
		Total										
		Total treated in the Classroom										Total UNTREATED in the Classroom

Name of responsible staff member:

Signature

Date

Annex 1.3. Data sheet for reporting on people treated with antiparasitic drugs for soil-transmitted helminth infections and lymphatic filariasis at schools, by sex and age

Region	Municipality		Locality					School					
	Classroom	Report date	Number of people treated with diethylcarbamazine+ albendazole					If not treated, indicate why not					
Nº			2 to 4 years old	5 to 14 years old	15 years and over	Total	Total	Ineligible	Pregnant Woman	Rejected	Absent		
			 	 	 	 	 						
												Total	

Name of responsible staff member:

Signature

Date

Annex 1.4. Data sheet for health units to report on people treated with antiparasitic drugs for soil-transmitted helminth infections and lymphatic filariasis at schools, by sex and age

Region	Municipality										Health unit										
	N°	Name of school	Report date	Number of people treated with diethylcarbamazine+ albendazole					Total	If not treated, indicate why not			Remaining balance of tablets								
				2 to 4 years old	5 to 14 years old	15 years and over	Total	Ineligible		Rejected	Absent	DEC	ALB	DEC	ALB	DEC	ALB				
	1																				
	2																				
	3																				
	4																				
	5																				
	6																				
	7																				
	8																				
	9																				
	10																				
	11																				
	12																				
	13																				
	14																				
	15																				
				Total																	

DEC: diethylcarbamazine; ALB: albendazole

Name of responsible staff member: Signature Date







Annexes 2

Annex 2.1. Tally sheet for people treated with antibiotics for trachoma, by sex and age

Annex 2.2. Nominal record sheet for people treated with antibiotics for trachoma



Annex 2.3. Consolidated data sheet to report on people treated with antibiotics for trachoma

Annex 2.1. Tally sheet for people treated with antibiotics for trachoma, by sex and age

Region		Municipality		Locality		Health unit	
TACTIC	Health unit	Door to door	Fixed distribution posts	Distribution in specific places	Date		
Age group	< 6 months old (tetracycline eye ointment, collyrium, or ophthalmic drops)		6 months to < 5 years old (Zithromax® oral suspension)		5 years and over (Zithromax® tablets)		
Sex							If NOT treated, indicate why not
1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Contraindicated
2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Rejected
3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
14	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
15	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
16	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
17	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Total	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Total by age group	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	UNTREATED Total
Total by sex	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	Total treated
A) Antibiotics received (No. of doses)		Tetracycline eye ointment, collyrium, or ophthalmic drops		Zithromax® oral suspension		Zithromax® tablets	
B) Antibiotics used (No. of doses)							
C) Remaining balance of antibiotic doses (A-B)							

Name of responsible staff member: Signature Date

Annex 2.2. Nominal record sheet for people treated with antibiotics for trachoma

Region	Municipality		Locality				Health unit			
	Name	Sexo  	Age	Age group and type of antibiotic			If NOT treated, indicate why not			
Nº				< 6 months old <small>(tetracycline eye ointment, collyrium, or ophthalmic drops)</small>	6 months to < 5 years old <small>(Zithromax® oral suspension)</small>	5 years and over <small>(Zithromax® tablets)</small>	Contraindicated	Absent	Rejected	Comments
			Total							
				Total treated						
				UNTREATED Total						

Tetracycline eye ointment, collyrium, or ophthalmic drop	Zithromax® oral suspension	Zithromax® tablets
A) Antibiotics received (No. of doses)		
B) Antibiotics used (No. of doses)		
C) Remaining balance of antibiotic doses (A-B)		

Name of responsible staff member: Signature Date

Annex 2.3. Consolidated data sheet to report on people treated with antibiotics for trachoma

Region			Municipality													
No	Name of reporting unit	< 6 months old (tetracycline eye ointment, collyrium, or ophthalmic drops)		6 months to < 5 years old (Zithromax® oral suspension)		5 years and over (Zithromax® tablets)		Sex			Reasons for NOT receiving treatment			UNTREATED Total		
		M	F	M	F	M	F	M	F	Total	Contraindicated	Absent	Rejected			
Total																
Total by age groups																
		Tetracycline eye ointment, collyrium, or ophthalmic drops			Zithromax® oral suspension			Zithromax® tablets								
A) Antibiotics received (No. of doses)																
B) Antibiotics used (No. of doses)																
C) Remaining balance of antibiotic doses (A-B)																

Name of responsible staff member: Signature Date







Pan American
Health
Organization



World Health
Organization

REGIONAL OFFICE FOR THE Americas

