



THE UNITED REPUBLIC OF TANZANIA
MINISTRY OF HEALTH, COMMUNITY DEVELOPMENT,
GENDER, ELDERLY AND CHILDREN



GUIDELINES FOR FRONTLINE HEALTH WORKERS

Supply Chain Management of Medicines for Mass Drug
Administration Campaigns for Neglected Tropical Diseases
in Tanzania Mainland

2016 | FIRST EDITION

Supported by the Government of Japan, the Access and Delivery Partnership (ADP) is a unique collaboration between UNDP, TDR (the Special Programme for Research and Training in Tropical Diseases, which is co-sponsored by UNICEF, UNDP, the World Bank and WHO) and PATH. Led and coordinated by UNDP, the ADP aims at assisting low- and middle-income countries enhance their capacity to access, deliver and introduce new health technologies for tuberculosis, malaria and neglected tropical diseases.

Cover photo: NTDCP

FOREWORD

The Ministry of Health, Community Development, Gender, Elderly and Children (MoHCDGEC), in collaboration with the Access and Delivery Partnership (ADP), for the first time has developed guidelines for frontline health workers (FLHWs) for supply chain management of medicines for neglected tropical diseases (NTDs) for use before, during, and after mass drug administration (MDA) in Tanzania Mainland.

The guidelines are intended to help FLHWs improve their skills in handling, delivering, and managing NTD medicines for MDA. They will also help prepare FLHWs to orient and train community drug distributors and school health teachers in proper administration and management of these medicines.

With the guidelines in place, it is the Ministry's expectation that inventory management, storage practices, and introduction of new health technologies will be improved, and the cost of operations reduced.

PATH, as part of the ADP project in Tanzania, is working with the MoHCDGEC to strengthen supply chain logistics for medicines in Tanzania. Having developed these guidelines, the Neglected Tropical Diseases Control Program is now committed to its successful implementation.

It is my sincere wish that these guidelines will provide guidance to FLHWs in improving NTD medicines supply chain management.

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ROLE OF FRONTLINE HEALTH WORKERS

Health centers and dispensaries are the first level of health care services in contact with the community. For this reason, clinicians, nurses, and other workers in these facilities are referred to as frontline health workers (FLHWs). FLHWs are the ambassadors of the rest of the health care delivery system, presenting the first impression of expertise, care, and efficiency to the community. At the same time, they look and listen on behalf of the rest of the health care team. FLHWs are an important communication channel and instrument of health care implementation.

The Tanzania national Neglected Tropical Diseases Control Program (NTDCP) depends on FLHWs to perform many important functions during mass drug administration (MDA) campaigns for neglected tropical diseases (NTDs):

- Receive and store MDA campaign medicines and work tools.
- Train community drug distributors (CDDs) and school health teachers and provide them with medicines and work tools just prior to MDA campaigns.
- Supervise CDDs during MDA campaigns.
- Manage and report adverse drug reactions.
- Receive MDA registers, dosing poles, and unused medicines after the campaign.
- Work with CDDs and school health teachers to check the registers' data for correctness.
- Complete the summary data form.
- Store the registers and dosing poles.

- Send unused medicines back to the district pharmacy. This is called reverse logistics.
- Send completed summary data forms to the district pharmacy.

Table 1: The role of FLHWs during an MDA campaign.

	BEFORE MDA	DURING MDA	AFTER MDA
Facility Level	<ul style="list-style-type: none"> • Receive and store MDA medicines and tools. • Train CDDs/school health teachers • Calculate amount of medicines to be issued to CDDs/School Health Teachers and provide them with medicines and work tools prior to MDA. 		<ul style="list-style-type: none"> • Receive MDA registers, dosing poles, and unused medicines. • Check the register data for correctness. • Complete the data summary form • Store the registers and dosing poles.
Community Level		<ul style="list-style-type: none"> • Supervise CDDs during MDA. • Manage and report adverse drug reactions. 	
District Level			<ul style="list-style-type: none"> • Send unused medicines back to district pharmacy. • Send the summary data forms to district pharmacy.

Supply Chain for NTD Medicines

FLHWs are key members of the NTDCP team on whose performance the success of an MDA campaign relies. As supervisors and trainers of CDDs and school health teachers during MDA campaigns, FLHWs also need to familiarize themselves with the booklets *Guidelines for Community Drug Distributors for Neglected Tropical Diseases* and *Guidelines for Community Drug Distributors—Supply Chain Management of Medicines for Mass Drug Administration Campaigns for Neglected Tropical Diseases*. Among other instructions, these booklets contain guidance on what advice to provide and how to report adverse drug reactions.

As an adjunct to *Guidelines for Frontline Health Workers for Neglected Tropical Diseases*, this booklet contains instructions on FLHW activities specifically related to the supply chain for medicines. The instructions are divided into three sets of activities: those that take place before, during and after an MDA campaign.



Photos: PATH/ Doune Porter

ACTIVITIES THAT TAKE PLACE BEFORE AN MDA CAMPAIGN

How to Manage Inventory

AIM

To ensure that medicines and other supplies required for the MDA campaign are received and stored in the correct quantities and in good condition.

PROCEDURE

The health facility in-charge is responsible for all medicines and supplies received at the health facility, their safety and condition during storage, and maintenance of correct records. The health facility in-charge can delegate some or all of these functions to an assistant, but shall remain accountable for whatever happens to the medicines and supplies when they are at the health facility.

Supply requirements for an MDA campaign:

- Each health facility will need the following supplies for the MDA campaign: stores ledger, MDA registers for CDDs and school health teachers, and dosing poles.

Receiving medicines and supplies:

- The district medical office/Council Health Management Team will deliver medicines for NTDs to every health facility involved in the MDA campaign. They may also deliver a number of dosing poles as well as registers for CDDs and school health teachers if requested by the health facility, although most of these will remain at the health facilities from prior campaigns. The district pharmacist will have prepared a local requisition and issue note in triplicate copies. Sign the documents and retain one copy.

Immediately enter the quantity of medicines received into the dispensary or health facility stores ledger on pages used specifically for NTD medicines.

Figure 1: Example of a health facility stores ledger.

MAELEZO YA MALI Albendazole 400 mg tablets		NAMBA YA MSD
KIPIMO CHA UGAVI Tin of 200	KIPIMO CHA KUGAWA Tablet	KIASI CHA JUU CHA SHEHENA
		KIASI CHA CHINI CHA SHEHENA

Tarehe	Kumb Na.	Kutoka/ Kwenda	Kiasi kilicho- pokelewa	Kiasi kilicho- tolewa	Marekebisho	Salio	Maelezo	Jina/ Sahihi
12/6/2014	13452	Mvomero	200,000			200,000		FGV

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- Enter the quantities of medicines received from the district pharmacy into the health facility stores ledger as follows:
 - » Record each type of NTD medicine on a separate page of the stores ledger. Do not combine NTD medicines and routine care medicines on the same page.
 - » Enter the name and dosage of the medicines (for example, “Albendazole 400 mg tablets”) on the top of the page under *Maelezo ya Mali*.
 - » Enter the unit size (for example, “Tin of 200”) under *Kipimo cha Ugavi*.
 - » Enter the unit of issue (for example, “Tablet”) under *Kipimo cha Kugawa*.
 - » Enter the date of receiving the consignment in the column labeled *Tarehe*. On the same row, enter the name of the facility that the goods are being received from under *Kutoka/Kwenda* and the quantity received under the column labeled *Kiasi kilichopokelewa*.
 - » Remember to enter the quantity of tablets and not tins (or bottles, when applicable) at this stage. If there is no stock of the medicine at the health facility when the new consignment is received, enter the same quantity under the column labeled *Salio* on the same row. If there is stock of the medicine already in the health facility and recorded in the stores ledger, add the quantity received to the quantity in the stores ledger and enter the total in the column labeled *Salio* on the same row. Confirm the entry with your initials under *Jina/Sahihi*.
 - » All receipts must be entered in red pen.

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- Safety and quality of the medicines while in the health facility
 - » Store the medicines in a clean and secure location, and store them separately from medicines for routine use. Regularly conduct a physical inventory. Promptly and carefully record all medicines received and issued. Follow the general pharmaceutical storage guidelines provided by the district office.
 - Issuing medicines
 - » MDA campaign medicines are issued against census data. Issue medicines only to campaign staff (i.e., CDDs and school health teachers) identified during the pre-MDA training and calculated against the census data they present. (See procedure on “How to calculate the amount of medicines to issue to CDDs and school health teachers.”)
 - » When issuing NTD medicines to CDDs and school health teachers, complete the stores ledger as follows:
 - Under *Tarehe*, enter the date of issue.
 - Under *Kutoka/Kwenda*, enter the name of the person receiving the medicines (the CDD or school health teacher).
 - Under *Kiasi kilichotolewa*, enter the quantity issued.
 - Under *Salio*, subtract the quantity issued from the quantity previously remaining and enter the balance.
 - Confirm the issue by initialing under *Jina/Sahihi*.
 - » All issues must be entered in blue or black pen.

Figure 2: Example of a health facility stores ledger with quantity issued and balance.

MAELEZO YA MALI Albendazole 400 mg tablets					NAMBA YA MSD			
KIPIMO CHA UGAVI Tin of 200		KIPIMO CHA KUGAWA Tablet			KIASI CHA JUU CHA SHEHENA			
					KIASI CHA CHINI CHA SHEHENA			
Tarehe	Kumb Na.	Kutoka/ Kwenda	Kiasi kilicho- pokewa	Kiasi kilicho- tolewa	Marekebisho	Salio	Maelezo	Jina/ Sahihi
12/6/2014	13452	Mvomero	200,000			200,000		FGV
15/8/2014	1223	Msowero		12,000		188,000		FGV

- When issuing supplies other than medicines to CDDs, school health teachers, or another health facility, complete an issue note and ask the person receiving the items to acknowledge receipt by signing the issue note. Keep a copy for health facility records.

REMINDER: NTD MDA medicines are not for routine care. Do not issue or dispense NTD MDA campaign medicines for any purpose other than administration during an MDA campaign.

How to Calculate the Amount of Medicines to Issue to CDDs and School Health Teachers

AIM

To calculate the amount of medicines to issue to CDDs and school health teachers using population statistics.

PROCEDURE

The health facility in-charge is responsible for calculating the amount of medicines to be issued to each CDD and school health teacher using the population statistics presented by them. The health facility in-charge can delegate this function to an assistant, but must check the calculations to ensure they are correct, hence ensuring correct distribution.

Calculate the amount of medicines to be issued to CDDs and school health teachers using the following formulas:

Table 2: Formulas for calculating quantities of medicines.

For community MDA:

Albendazole tabs	Population x 0.8 x 1.1
Ivermectin tabs	Population x 0.8 x 2.7
Zithromax tabs	Population x 0.8 x 3
Zithromax powder for oral suspension	Population x 0.18 / 4

For school MDA:

Praziquantel tabs	Total number of school-age children x 2.5
Albendazole tabs	Total number of school-age children x 1.1

NOTE THAT:

0.8 = 80 percent (i.e., targeted population required to achieve MDA)

0.18 = 18 percent (i.e., the percentage of the population that are children required to achieve MDA)

ACTIVITIES THAT TAKE PLACE DURING AN MDA CAMPAIGN

Frontline health workers are responsible for supervising CDDs during an MDA campaign. They are also responsible for managing and reporting adverse drug reactions. Information on side effects and what to do in the case of a serious side effect/adverse drug reaction can be found in the booklet *Guidelines for Community Drug Distributors for Neglected Tropical Diseases* along with other detailed information on NTDs and medicine administration.



Photo: NTDCP

ACTIVITIES THAT TAKE PLACE AFTER AN MDA CAMPAIGN

How to Manage Returned Medicines (Reverse Logistics)

AIM

To ensure that medicines returned from MDA campaigns are correctly accounted for, stored, and returned to the district pharmacy.

PROCEDURE

The health facility in-charge is responsible for checking and receiving returned medicines and supplies and for sorting, storing, packing, and returning the medicines to the district pharmacy. The health facility in-charge can delegate some or all of these functions to an assistant, but shall remain accountable for whatever happens to the medicines and supplies when they are at the facility.

- **Return of unused medicines and other supplies**

- » CDDs and school health teachers must return unused medicines along with MDA registers and other MDA supplies to the health facility from which they were issued within 48 hours of completion of the campaign. The health facility in-charge is responsible for following up with CDDs and school health teachers to ensure that registers, medicines, and other supplies are returned on time.

- **Receiving unused medicines from CDDs and school health teachers**

When receiving medicines after an MDA campaign:

- » Check their condition visually.
- » Separate medicines in good condition from those in damaged or poor condition.

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- » Acknowledge receiving the medicines by checking (and correcting where necessary) the number of tablets or bottles completed in section 4.4 (*Jedwali 4.4*) on the front page of the NTD community register or the first page of the school register in the section titled *Muhtasari Kuhusu Dawa ya Praziquantel*. The quantities must correspond with the actual amount returned to the health facility. The CDD or school health teacher must agree with the final quantity recorded.

- **Counting and recording medicines**

- » DO NOT open unopened tins. Calculate the number of tablets by multiplying the number of tablets written on the tin by the number of tins.
- » For opened tins, estimate the number of tablets remaining to the nearest quarter of a tin. For example, an opened tin of 500 tablets will be counted as follows: One quarter of a tin = 125 tablets, one half of a tin = 250 tablets, three-quarters of a tin = 375 tablets. DO NOT physically count or touch the tablets. DO NOT mix tablets from one tin with another.
- » For suspension bottles, count only full, unopened bottles. (Opened bottles must be counted as damaged even if there is medicine remaining.)
- » Enter the quantities of good medicines as “received” in the health facility stores ledger using a separate line for each CDD and school health teacher.

- **Recording medicines in poor condition**

- » Record the damaged and/or expired medicines separately from the good medicines and enter them into the health facility suspension ledger.

- **Returning medicines to the district pharmacy**

- » Pack all medicines in labeled cartons and store them ready to return to the district pharmacy. Labels must include the name of the medicines, the wording “NTD returned medicines,” and the health facility name.
 - » When returning the medicines to the district pharmacy, mark the entries as “issued” on separate lines of the health facility stores ledger and the health facility suspension ledger, showing the name of the district pharmacy and the date the medicines were returned. Medicines should be returned to the district pharmacy within one month of the end of the MDA campaign.
- Store dosing poles, registers, and other supplies returned by CDDs and school health teachers at the facility for the next MDA round.
 - Deface and dispose of empty tins and containers according to government guidelines/recommendations.

REMINDER: NTD medicines are not for routine care. Do not issue or dispense NTD medicines for any purpose other than administration during an MDA campaign.

How to Complete the Health Facility Summary Data Form

AIM

To ensure that the Health Facility Summary Data Form is correctly filled out and sent to the district pharmacy.

PROCEDURE

The health facility in-charge is responsible for completing the Health Facility Summary Data Form and sending it to the district pharmacy. The health facility in-charge can delegate some or all of these functions to an assistant, but shall remain accountable for the proper completion and sending of the form.

- Once all of the medicines and NTD MDA registers have been returned, complete and send the Health Facility Summary Data Form to the district pharmacy. **This must be done within two weeks after completion of the MDA campaign.** A copy of the report must be maintained at the health facility.
- Transfer the total quantity of good tablets to the “Number of tablets received” section of the summary data form. Write the number of tablets that were already in the health facility in the “Opening balance” column. Add the two columns together and enter the amount in the “Total number of tablets” column.
- For medicines returned as damaged or expired, add the number of tablets returned in unopened tins to the number of tablets returned in opened tins and write this as the number of tablets damaged in the respective column for that medicine on the row labeled “Number of damaged/lost drugs.”

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- Add the “Number of tablets used” and the “Number of damaged/lost drugs” (“remaining and damaged”) and check the number of tablets that were issued to the CDD or school health teacher before the MDA campaign. **If the two figures do not match, you must recheck the addition in the entire register and recheck the calculations on the summary data form.**
 - For suspension bottles, count only full, unopened bottles. Opened bottles must be counted as damaged even if there is medicine remaining.
 - To finalize the summary data form, take the “Total number of tablets” and subtract the “Number of tablets used” and the “Number of damaged/lost drugs” and record the total in the “Number of drugs remaining.” This number should correspond with the number of good NTD medicines that will be returned to the district pharmacy.
 - Record the batch number(s) of the good, remaining medicines and expiration dates on the summary data form.
 - Complete the “Coverage” section of the summary data form, noting the number of people treated, the percentage of people treated during the campaign, the number of serious adverse events (SAEs), and the percentage of people with SAEs. The percentage is calculated as follows:

$(\text{number of SAE} \times 100) / \text{number of people treated} = \% \text{ with SAE}$

Figure 3: Example of the medicines section of the Health Facility Summary Data Form.

IDADI YA DAWA					
	IVM	PZQ	ALB	ZITH.tab	ZITH.POS
Idadi ya dawa zilizokuwepo mwanzo (F)	0	0	0	0	0
Idadi ya dawa zilizopokelewa (G)	6,500	2,500	2,800	7,500	135
Jumla ya Dawa (Vidonge/Chupa) (F + G)	6,500	2,500	2,800	7,500	135
Vidonge/Chupa vilivyotumika	5,670	1,575	2,300	6,300	113
Dawa zilizoharibika/ Potea (Vidonge/Chupa)	20	15	40	60	4
Idadi ya dawa zilizobakia (Vidonge/chupa)	5,650	910	460	1,140	18
"Batch" Namba ya Dawa zilizobaki (Vidonge/Chupa)	0000123257 / 2053830	PRH 2,345	335,939	V111,453	V3,807
Tarehe ya kuisha muda wa kutumika kwa dawa zilizobaki	05 / 2017	12 / 2015	8 / 2016	7 / 2018	6 / 2016

Maelekezo: IVM = Ivermectin, PZQ = Praziquantel, ALB = Albendazole, ZITH = Zithromax
Zithromax ya maji: Hesabu idadi ya CHUPA

REMINDER: Keep a copy of the summary data form at the health facility.



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