Data Workshop on Monitoring and Evaluation of PC-NTD Programmes DAY 2

Brazzaville, 12 – 16 August, 2024

World Health Organization
African Region

UHC/UCN
Universal Health Coverage/Communicable and noncommunicable Diseases

Wrap up Day 1

South Sudan team

- Dr Julia Sube
- Dr Thok Chol Machuoch Mum
- Dr Moses Mila Peter

Presentations:

- Presentation of Joint Application Package (JAP) System presented by Honorat M Zoure and mentioned about the join requisition selected PC Medicine:

✓ JRF – Within 3 months after last MDA

✓JRSM – At least 9 months before the first date of MDA planned

✓EPIRF – Submitted as soon as at specific survey was completed

(ESPEN)

Key take away:

❖ Setting up and maintaining effective coordination mechanisms and processes for JAP completion and submission.

Presentation

❑SWOT Analysis on JAP experiences

Key take away:

❖Strong interest in finding ways to be able to automate pushing data from HMIS / DHIS2 / NTD databases to JAP.

❖ To this aim, having standardized lists of priority data elements to be digitized would be useful.

❖strong interest in refining submission and approval process to allow for more transparency and defined user access roles

❖ Discuss further on definition of effective round of MDA (Geographical and treatment coverage)

❖ SCH sub-district analysis to be reviewed per country.

Thank you

Forecasting & Supply Planning Overview

Sarah Andersson
Project Director – Supply Chain Technical Support Mechanism Project

World Health Organization
African Region

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Universal Health Coverage/Communicable and noncommunicable Diseases

Objectives

1. Provide overview of forecasting and supply planning best practices
2. Discuss applicability of these approaches to NTD Programs

Quantification

Quantification is the process of **estimating the quantities** and **costs** of the products required for a specific health program (or service) and **determining when** the products should be delivered to ensure an uninterrupted supply for the program. It comprises two parts:

Quantification = Forecasting + Supply Planning

Forecasting and Supply Planning

Forecasting consumption - **estimating the quantities of products** that will be dispensed / administered to patients or community members, or used by a health program over a specific period of time in the future.

Supply Planning - determine **what quantities** of products need to arrive **by when** to support programmatic plans, taking into account current stock on hand, quantities already on order, supplier lead times and costs.

Quantification = Forecasting + Supply Planning

Forecasting Consumption

Definition of Consumption - quantity of goods actually given to patients or community members for intended purpose.

Types of consumption

- Qty tablets dispensed to patients
- Number of tablets given to community members during an MDA
- Qty of supplies used for treating patients or testing people

Different forecasts for different users

Stakeholders

	Manufacturers	Donors	Procurers	Governments	Global Health community
Short term forecasts (0-18 month)	*Inform production (shifts, final product customization, ordering of inputs)*	*Funding needs and disbursement*	*Tendering, budgeting, freight/distribution planning, coordination*	*Disbursement of funds, campaign and distribution planning*	*Planning, informing activities and related work*
Medium term forecasts (1-5 year)	*Inform management decisions - production planning (staffing, inputs, API, capacity optimization), supplier relations/negotiations, budgeting*	*Investment decisions*	*Contract negotiations, resource planning, budgeting*	*Planning for program needs (and related costs, resource needs), budgeting, resource mobilization*	*Research, advocacy, planning, etc.*
Longer-term forecasts (5-20 year)	*Strategic forecasts to inform resource planning: - capital expenditures - facility/capacity investments - regulatory efforts - R&D investments*	*Planning, budgeting, advocacy*	*Planning, budgeting*	*Planning, budgeting*	*Research, advocacy, planning, etc.*

What is the purpose of forecasts for NTD supplies? Do we need short term, medium term or long term forecasts?

Purpose of country forecasting and supply planning

- Estimating needs for products to support programmatic plans (quantities)
- Budgeting and resource mobilization (funding)
- Planning orders and procurements
- Supply planning (timing, buffer stock to account for demand uncertainty rounding up for distribution, and wastage)
- Preventing or correcting supply imbalances

Short Term Forecasts

Example: JRSM = Short term forecast

- Purpose is for requesting required quantity donation products for the following year

Medium to Long Term Forecasts

Longer-term forecasts at country level could:

- Empower NTD Programs with information to plan and advocate
    - Some NTD donation programs target specific population subgroups (e.g. SAC, WRA, etc.), yet the need extends beyond these subgroups, forecasting the full need allows programs to advocate and plan
    - Non-donated NTD supplies also require advocacy and planning for budget and procurement processes (e.g. tendering), long term forecasts provide the data to support these activities
    - If donor support and funding for NTD commodities decreases, there may be a transition to government-led procurement
- Be shared with global level (pharm partners) to support production planning and enable pharmaceutical companies to better respond to country requests
- Forecast potential changes in commodity needs due to changes in epidemiology and treatment guidelines for PC and case management which could results for large and rapid shifts in future demand

Standard Country Approach to Quantification

Step 1 - Preparation

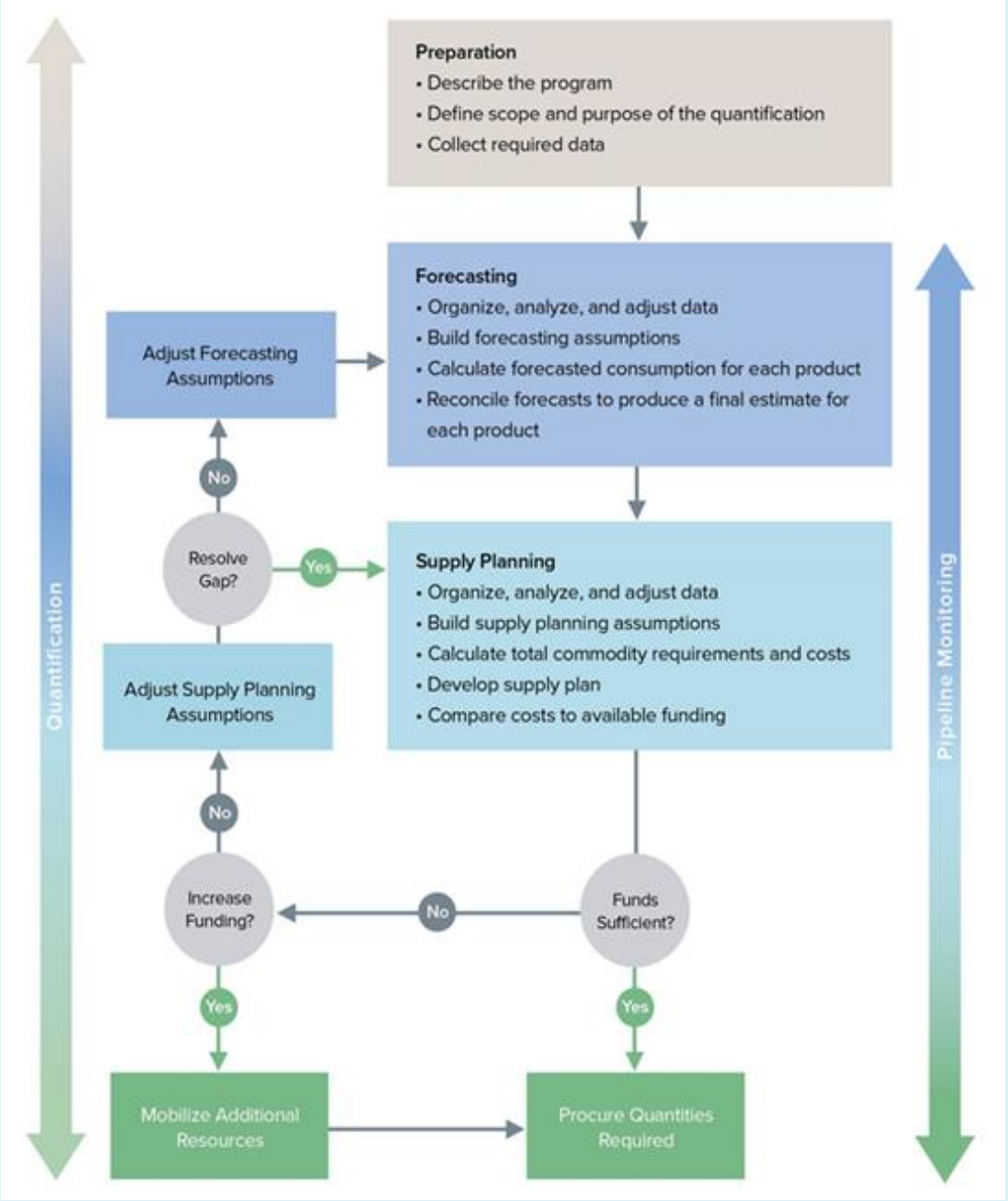
- define the scope, describe the program and collect required data

Step 2 - Forecasting

- estimate the quantity of each product that will be consumed (dispensed or utilized) during each year

Step 3 - Supply Planning

- determine what quantities of products need to arrive by when to support programmatic plans
- consider lead times, inventory levels, buffer stock
- twelve to eighteen months and updated on a rolling basis



Ref: THE SUPPLY CHAIN MANAGER'S HANDBOOK
https://www.jsi.com/resource/the-supply-chain-managers-handbook/

1 Preparation: Describe the program

Current Status

- MDA and survey plans
- Program goals, strategies and priorities
- National policies on standard treatment guidelines, testing algorithms, dispensing protocols
- Expansion plans, planned introduction of new products, changes in service delivery mode

Future outlook

- Changes in any policies that might affect NTD interventions? Changes to disease control or elimination guidelines?
- Planned surveys that might identify changes in endemicity?
- Funding for implementation of interventions or surveys?
- Introduction of new products?
- Training of health providers increasing capacity?
- Changes in government or funding levels for commodities?

Preparation
- Describe the program
- Define scope and purpose of the quantification
- Collect required data

1 Preparation: Define the scope and purpose

Where:

Defined target populations

Geographical regions, IUs

Why:

For JRSM

For longer-term budgeting or advocacy

What:

Specific list of products to be quantified

When:

Timeframe of the quantification, period of time to be covered & to be revised

Who:

Stakeholders –

Disease and programmatic experts

Supply chain experts

Implementing partners supporting activities that use products to be quantified

Preparation

- Describe the program
- Define scope and purpose of the quantification
- Collect required data

1 Preparation: Collect required data

Data for Forecasting

- Demographic/Epidemiological data
- Consumption data (historical)
- Services data

Data for Supply Planning

- Stock on hand / inventory
- Quantities on order
- Expected consumption for current year MDAs
- Procurement and supplier lead times
- Buffer stock
- Storage space available
- Funding available for procurement (if ordering products not supported by donors)

Preparation
- Describe the program
- Define scope and purpose of the quantification
- Collect required data

2 Forecasting Process

1. Organize, analyze, and adjust data
2. Build forecasting assumptions
3. Calculate forecasted consumption for each product
4. Reconcile forecasts to produce a final estimate for each product

2 Types of Forecasting Data & Sources

- Demographic/morbidity data
  - Population characteristics and estimates (census)
  - Epidemiological surveillance studies
- Historical consumption data
  - Consumption reports (number of tablets administered) from past campaigns (LMIS)
- Historical services data
  - MDA summary reports on number of treatments from past campaigns, past coverage (HMIS)
- MDA plans, funding, and targets
  - Number of workers trained to conduct campaigns,
  - projected funding, coverage goals

Forecasting

- Organize, analyze, and adjust data
- Build forecasting assumptions
- Calculate forecasted consumption for each product
- Reconcile forecasts to produce a final estimate for each product

2 Building and Documenting Assumptions

- What is an assumption?

Adjust historical program data when it is of poor quality (incomplete, outdated, unreliable, or unavailable) and also for predicting changes due to future program plans

- How to build assumptions?

The assumption-building exercise should be a consultative process involving program planners, clinical experts, pharmacists, procurement specialists, and warehouse managers. Ideally during a quantification workshop, sufficient time for clarifying, agreeing upon, and documenting assumptions.

- Why we document assumptions?

When building assumptions, the sources of information and inputs should be documented and the quantification should be revised if any of the assumptions change.

Forecasting

- Organize, analyze, and adjust data
- Build forecasting assumptions
- Calculate forecasted consumption for each product
- Reconcile forecasts to produce a final estimate for each product

2 Forecasting Methods

1. Using demographic /morbidity data
   - eligible IU population x dosage
   - incidence x dosage
2. Using consumption data
   - past consumption trends
3. Using services data
   - past cases x dosage

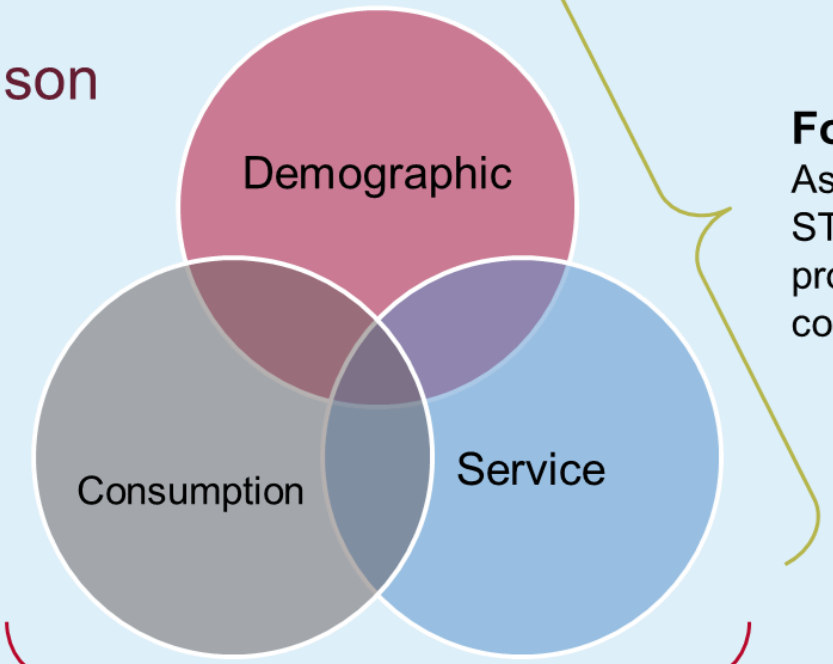
What type of methodology is used in the JRSM?

Demographic forecast
Eligible Population x Number of Rounds x Dosage

Forecasting
- Organize, analyze, and adjust data
- Build forecasting assumptions
- Calculate forecasted consumption for each product
- Reconcile forecasts to produce a final estimate for each product

2 Compare multiple forecasts

Data Comparison



Forecasts users
Assumption:
STGs/dispensing protocols used to convert to products

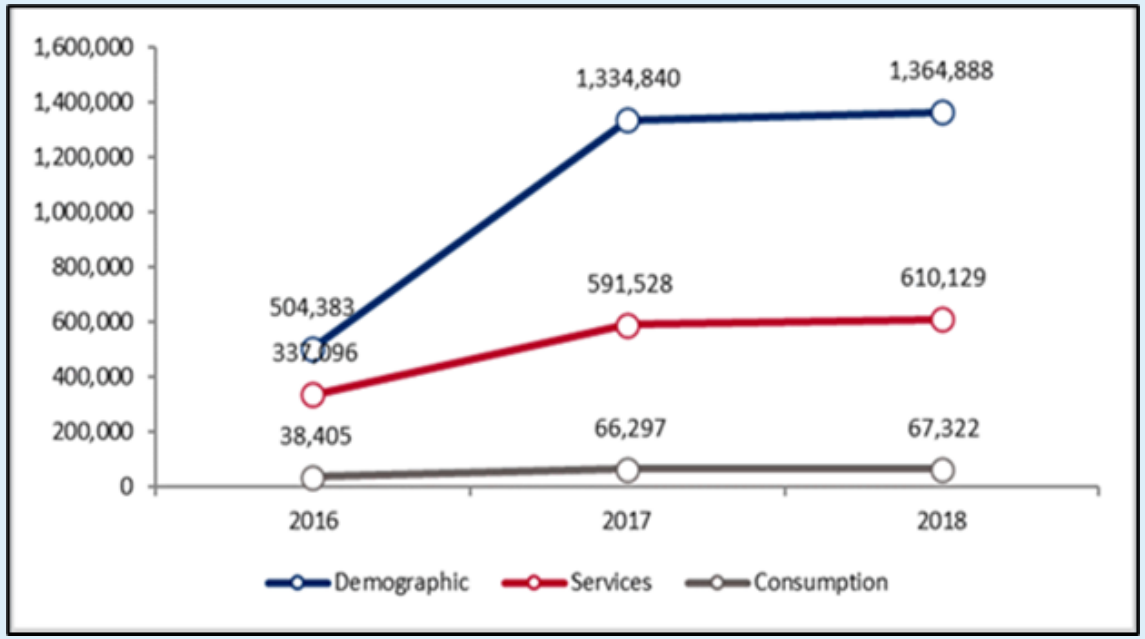
Forecasts products

Service and access capacity is inherently linked

Forecasting
- Organize, analyze, and adjust data
- Build forecasting assumptions
- Calculate forecasted consumption for each product
- Reconcile forecasts to produce a final estimate for each product

2 Steps in Reconciling Forecasts

- Analyze differences between the forecasts
- Analyze strengths and weaknesses of the different forecasts
    - Data completeness – missing data, stock outs
    - Data timelines – how recent is the data
    - Data source methodology quality
- Determine a final forecast using **any one** forecast method or a **combination** of methods
- **Document reasons** to justify your final determination



Forecasting

- Organize, analyze, and adjust data
- Build forecasting assumptions
- Calculate forecasted consumption for each product
- Reconcile forecasts to produce a final estimate for each product

3 Purpose of Supply Planning

- To determine when it is best to receive the shipments/orders
- To ensure that there are adequate stock levels of supplies in the program
- To prevent overstocking or stockouts

Supply Planning
- Organize, analyze, and adjust data
- Build supply planning assumptions
- Calculate total commodity requirements and costs
- Develop supply plan
- Compare costs to available funding

3 Calculate total product requirements

Determine the quantity of each product needed to:

- Meet the forecasted consumption
- Ensure that the in-country supply pipeline has adequate stock levels to maintain continuous supply to SDPs

Estimate of total commodity requirements for forecast period	=	product needed to meet forecasted consumption	+	Additional quantities for • procurement and supplier lead times • buffer stocks • product may expire before it is used	–	Stock on hand and quantity on order

Supply Planning

- Organize, analyze, and adjust data
- Build supply planning assumptions
- Calculate total commodity requirements and costs
- Develop supply plan
- Compare costs to available funding

3 Supply planning tool allows month by month monitoring

Select start date:	1-Jun-2023	1st MDA estimated need:	11,300,000		2nd MDA estimated need:	5,000,000		3rd MDA estimated need:	5,000,000			
		1st MDA date:	1-Oct-2023		2nd MDA date:	1-Nov-2024		3rd MDA date:	1-May-2025			

Month-Year	Begining balance	Shipments (received)	Shipments (ordered)	Shipments (forecasted)	Actual consumption	MDA forecasted consumption	Additional consumption (forecasted)	Expected expiry (based on	Losses and Adjustments	Ending balance	Stocked according to plan (SATP)	Quantity needed to reach 100%
1-Jun-2023	9,854,265									9,854,265	52.42%	1,445,735
1-Jul-2023	9,854,265							300,000		9,554,265	50.82%	9,245,735
1-Aug-2023	9,554,265	2,590,000							500,000	12,644,265	67.26%	6,155,735
1-Sep-2023	12,644,265									12,644,265	67.26%	6,155,735
1-Oct-2023	12,644,265				11,300,000					1,344,265	17.92%	17,455,735
1-Nov-2023	1,344,265									1,344,265	10.75%	6,155,735
1-Dec-2023	1,344,265									1,344,265	10.75%	11,155,735
1-Jan-2024	1,344,265									1,344,265	10.75%	11,155,735
1-Feb-2024	1,344,265									1,344,265	10.75%	11,155,735
1-Mar-2024	1,344,265									1,344,265	10.75%	11,155,735
1-Apr-2024	1,344,265	12,080,000								13,424,265	107.39%	0
1-May-2024	13,424,265									13,424,265	76.71%	0
1-Jun-2024	13,424,265				7,500,000					5,924,265	59.24%	11,575,735
1-Jul-2024	5,924,265									5,924,265	59.24%	4,075,735
1-Aug-2024	5,924,265									5,924,265	59.24%	4,075,735
1-Sep-2024	5,924,265									5,924,265	59.24%	4,075,735
1-Oct-2024	5,924,265									5,924,265	59.24%	4,075,735
1-Nov-2024	5,924,265					5,000,000				924,265	18.49%	9,075,735
1-Dec-2024	924,265									924,265	18.49%	4,075,735
1-Jan-2025	924,265									924,265	18.49%	4,075,735
1-Feb-2025	924,265									924,265	18.49%	4,075,735
1-Mar-2025	924,265			4,500,000						5,424,265	108.49%	0
1-Apr-2025	5,424,265									5,424,265	108.49%	0
1-May-2025	5,424,265					5,000,000				424,265		4,575,735

3 Ability to foresee a stockout with current plan

Select start date:	1-Jun-2023	1st MDA estimated need:	11,300,000	2nd MDA estimated need:	12,000,000
		1st MDA date:	1-Oct-2023	2nd MDA date:	1-Jul-2024

Month-Year	Begining balance	Shipments (received)	Shipments (ordered)	Shipments (forecasted)	Actual consumption	MDA forecasted consumption	Additional consumption (forecasted)	Expected expiry (based on FEFO)	Losses and Adjustments	Ending balance	Stocked according to plan (SATP)	Quantity needed to reach 100% SATP
1-Jun-2023	9,854,265									9,854,265	38.95%	1,445,735
1-Jul-2023	9,854,265							300,000		9,554,265	37.76%	15,745,735
1-Aug-2023	9,554,265	3,915,000								13,469,265	53.24%	11,830,735
1-Sep-2023	13,469,265									13,469,265	53.24%	11,830,735
1-Oct-2023	13,469,265					11,300,000				2,169,265	15.49%	23,130,735
1-Nov-2023	2,169,265									2,169,265	15.49%	11,830,735
1-Dec-2023	3,500,000									3,500,000	25.00%	10,500,000
1-Jan-2024	3,500,000									3,500,000	25.00%	10,500,000
1-Feb-2024	3,500,000									3,500,000	12.50%	10,500,000
1-Mar-2024	3,500,000									3,500,000	12.50%	24,500,000
1-Apr-2024	3,500,000	10,080,000								13,580,000	48.50%	14,420,000
1-May-2024	13,580,000									13,580,000	48.50%	14,420,000
1-Jun-2024	13,580,000					14,000,000				-	0.00%	28,000,000
1-Jul-2024	-									-	0.00%	14,000,000
1-Aug-2024	-									-	0.00%	14,000,000
1-Sep-2024	-		15,200,000							15,200,000	108.57%	0
1-Oct-2024	15,200,000									15,200,000	108.57%	0
1-Nov-2024	15,200,000									15,200,000	108.57%	0
1-Dec-2024	15,200,000									15,200,000	108.57%	0
1-Jan-2025	15,200,000									15,200,000	108.57%	0
1-Feb-2025	15,200,000					14,000,000				1,200,000		12,800,000
1-Mar-2025	1,200,000									1,200,000		0
1-Apr-2025	1,200,000									1,200,000		0
1-May-2025	1,200,000									1,200,000		0

3

Ability to foresee overstocks and adjust plans

Select start date:	1-Jun-2023	1st MDA estimated need:	11,300,000	2nd MDA estimated need:	12,000,000	3rd MDA estimated need:	5,000,000					
		1st MDA date:	1-Oct-2023	2nd MDA date:	1-Jul-2024	3rd MDA date:	1-Feb-2025					

Month-Year	Begining balance	Shipments (received)	Shipments (ordered)	Shipments (forecasted)	Actual consumption	MDA forecasted consumption	Additional consumption (forecasted)	Expected expiry (based on FEFO)	Losses and Adjustments	Ending balance	Stocked according to plan (SATP)	Quantity needed to reach 100% SATP
1-Jun-2023	9,854,265									9,854,265	52.42%	1,445,735
1-Jul-2023	9,854,265							300,000		9,554,265	50.82%	9,245,735
1-Aug-2023	9,554,265	3,915,000							500,000	13,969,265	74.30%	4,830,735
1-Sep-2023	13,969,265									13,969,265	74.30%	4,830,735
1-Oct-2023	13,969,265				11,300,000					2,669,265	35.59%	16,130,735
1-Nov-2023	2,669,265									2,669,265	35.59%	4,830,735
1-Dec-2023	3,500,000									3,500,000	46.67%	4,000,000
1-Jan-2024	3,500,000									3,500,000	46.67%	4,000,000
1-Feb-2024	3,500,000									3,500,000	28.00%	4,000,000
1-Mar-2024	3,500,000									3,500,000	28.00%	9,000,000
1-Apr-2024	3,500,000	10,080,000								13,580,000	108.64%	0
1-May-2024	13,580,000									13,580,000	108.64%	0
1-Jun-2024	13,580,000				7,500,000					6,080,000	121.60%	6,420,000
1-Jul-2024	6,080,000									6,080,000	121.60%	0
1-Aug-2024	6,080,000									6,080,000	121.60%	0
1-Sep-2024	6,080,000									6,080,000	121.60%	0
1-Oct-2024	6,080,000		15,200,000							21,280,000	425.60%	0
1-Nov-2024	21,280,000									21,280,000	425.60%	0
1-Dec-2024	21,280,000									21,280,000	425.60%	0
1-Jan-2025	21,280,000									21,280,000	425.60%	0
1-Feb-2025	21,280,000					5,000,000				16,280,000		0
1-Mar-2025	16,280,000									16,280,000		0
1-Apr-2025	16,280,000									16,280,000		0
1-May-2025	16,280,000									16,280,000		0

forecasted consumption was 12,000,000

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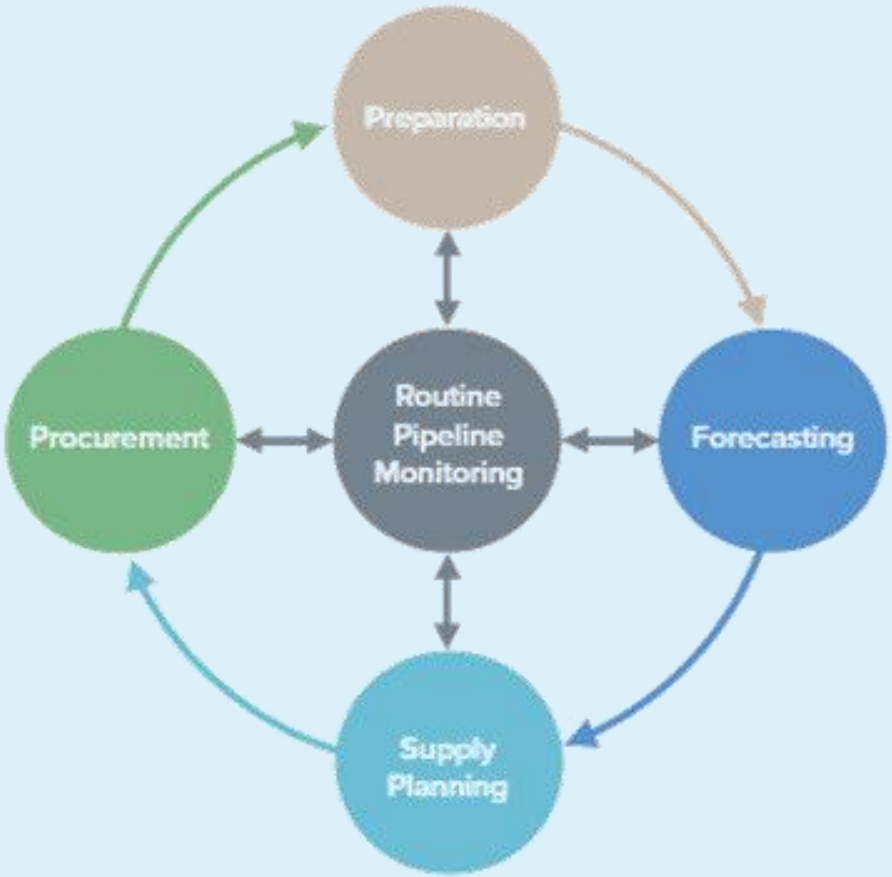
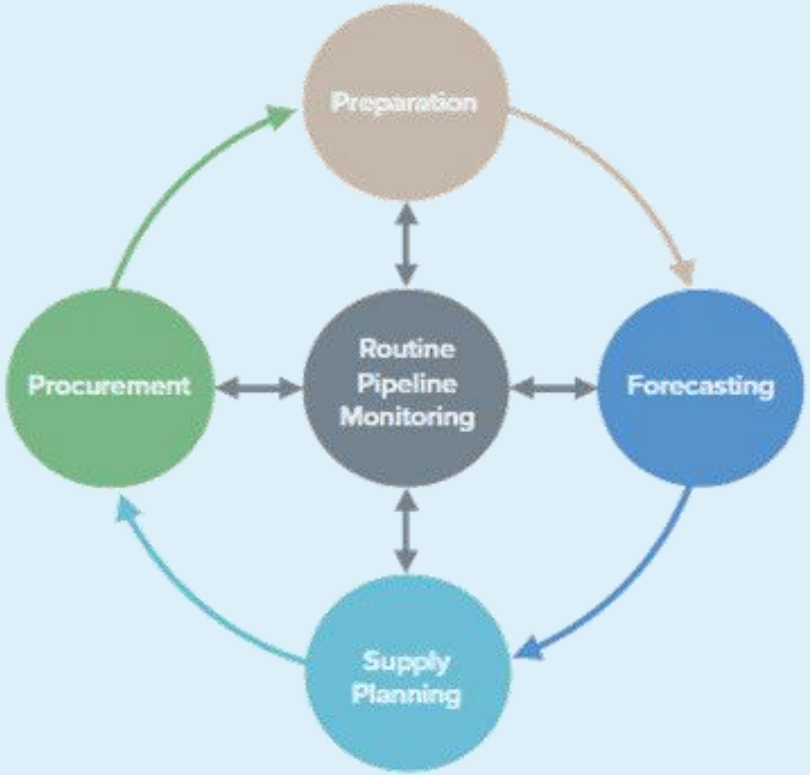
3 Monitoring the Forecast & Supply Plan

Quantification is not a one-time annual exercise but an iterative process which includes reviews and updates required year-round.



3 Monitoring the Forecast & Supply Plan

- Review and update the quantification **every six months,** more frequently for programs that are scaling up services
- Review **actual consumption data** and update forecasting assumptions as needed
- Recalculate product requirements and costs
- Mobilize additional resources if needed
- Adjust **procurement quantities and shipment delivery schedules** as needed to avoid stock imbalances



Discussion Questions

1. Why do we create forecasts for NTD supplies? What is the purpose?
2. How is quantification different from an MDA plan? Which comes first?
3. Could different forecasting methodologies apply to different categories of NTD commodities?
4. How could the process of quantification presented here support quantification for NTD commodities including the preparation of JRSM?
5. Is there value in creating longer term forecasts (3 to 5 years)?

THANK YOU
MERCI BEAUCOUP
OBRIGADO

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ESPEN
EXPANDED SPECIAL PROJECT FOR ELIMINATION OF NEGLECTED TROPICAL DISEASES

Forecast Accuracy

Sylivia Swai
Senior Advisor – Supply Chain Technical Support Mechanism Project

World Health Organization
African Region

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Calculating Forecast Accuracy

One of the simpler and more common methods is called the **Mean Absolute Percentage Error or MAPE.** It is calculated by taking the absolute different between the forecast and the actual (absolute means without regard to direction) and dividing it by the actual demand or consumption.

$$\frac{|\text{actual} - \text{forecast}|}{\text{actual}} \times 100 = \text{forecast error \%}$$

Example Forecast Accuracy

	forecasted consumption (1 year)	actual consumption (1 year)	MAPE	Accuracy
Mebendazole	4,388,340	3,844,687	14.14%	85.86%
Praziquantel	7,863,900	7,819,280	0.57%	99.43%

MAPE	Interpretation
<10	Highly accurate forecasting
10-20	Good forecasting
20-50	Reasonable forecasting
>50	Inaccurate forecasting

Source: Lewis (1982, p. 40)

Example of data

$$\frac{|\text{actual} - \text{forecast}|}{\text{actual}} \times 100 = \text{forecast error \%}$$

Country	Year	Medicine	Disease	Category	Qty Required or Forecasted Consumption (JRSM)	Number of people treated (JRF)	Calculated Actual Consumption	MAPE	Accuracy
Country X	2022	ALB	LF	ALL	5,699,474	4,325,413	4,325,413		
Country X	2022	ALB	STH	SAC	11,718,982	7855261	7,855,261		
Country X	2022	PZQ	SCH	SAC	38,152,730	3,193,703	6,387,406		

Example of data

$$\frac{|\text{actual} - \text{forecast}|}{\text{actual}} \times 100 = \text{forecast error \%}$$

Country	Year	Medicine	Disease	Category	Qty Required or Forecasted Consumption (JRSM)	Number of people treated (JRF)	Calculated Actual Consumption	MAPE	Accuracy
Country X	2022	ALB	LF	ALL	5,699,474	4,325,413	4,325,413	32%	68%
Country X	2022	ALB	STH	SAC	11,718,982	7855261	7,855,261	49%	51%
Country X	2022	PZQ	SCH	SAC	38,152,730	3,193,703	6,387,406	45%	55%
Country X	2021	ALB	LF	ALL	6,181,915	4,584,943			
Country X	2021	ALB	STH	SAC	11,303,967	11,108,675			
Country X	2021	PZQ	SCH	SAC	22,059,143	7,865,871			

MAPE	Interpretation
<10	Highly accurate forecasting
10-20	Good forecasting
20-50	Reasonable forecasting
>50	Inaccurate forecasting

Source: Lewis (1982, p. 40)

African Region

Example of data

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Country X	2022	PZQ	SCH	SAC	38,152,730	3,193,703			
Country X	2021	ALB	LF	ALL	6,181,915	4,584,943	4,584,943	35%	65%
Country X	2021	ALB	STH	SAC	11,303,967	11,108,675	11,108,675	2%	98%
Country X	2021	PZQ	SCH	SAC	22,059,143	7,865,871	15,731,742	40%	60%

MAPE	Interpretation
<10	Highly accurate forecasting
10-20	Good forecasting
20-50	Reasonable forecasting
>50	Inaccurate forecasting

Source: Lewis (1982, p. 40)

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Small Group Discussions Question: modelling ideal vs. realistic forecasts

- Question 1: What factors cause uncertainty in forecast numbers year to year?
- Question 2: What are other challenges in getting accurate forecasts for NTD commodities especially PC-NTDs?
- Question 3: How can we address challenges in forecast accuracy?

Challenges in getting accurate forecasting for NTD Commodities especially PC-NTDs

- Lack of inventory data from all levels, challenges with collect reverse logistics data
- Funding uncertainty for MDAs and Surveys
- Current forecasting methodology does not account for different coverage levels
- No inclusion of expected wastage or safety stock adjustments
- Lack of motivation
- Conflict, insecurity
- Natural disasters
- More?

Small group discussions on challenges and opportunities for forecasting

Working Group Discussion

World Health Organization
African Region

UHC/UCN
Universal Health Coverage/Communicable and noncommunicable Diseases

Guidelines for Working Groups

Objective Clarification: Give inputs into the challenges of forecasting accurately, challenges in logistics management information systems, and provide inputs for three forecasting methodology

Group Roles: Assign specific roles within each group, such as a facilitator, and a note-taker to ensure a structured discussion and effective reporting. There will **be three separate discussion sessions** during the day. Be sure to only focus on the questions that are in discussion for that session, do not move to discussion questions for the next sessions.

Time Management: Keep track of time for each question. This will help keep the discussion focused and balanced.

Focus Areas:

1. **Forecasting accuracy – challenges and opportunities – slide 3**
2. LMIS - challenges and opportunities – slide 4
3. 3-year forecasting methodology – slide 5, 6 and 7

Reporting Back: Each group should prepare to present their answers to the larger group. Encourage them to highlight the most critical issues and realistic solutions.

Session 1: Discussion Questions: Forecasting Accuracy

Question 1: What factors cause uncertainty in forecast numbers year to year?

Question 2: What are other challenges in getting accurate forecasts for NTD commodities especially PC-NTDs?

Question 3: How can we address challenges in forecast accuracy?

Groups presenting results of Session 1: Forecasting accuracy – challenges and opportunities

Working Group Discussion

World Health Organization
African Region

UHC/UCN
Universal Health Coverage/Communicable and noncommunicable Diseases

Group 1 – Challenges & Opportunities

Working Group Discussion

World Health Organization
African Region

UHC/UCN
Universal Health Coverage/Communicable and noncommunicable Diseases

Session 1: Discussion Questions: Forecasting Accuracy

Question 1: What factors cause uncertainty in forecast numbers year to year?

3 methods for calculation: demographic, consumption, service

Incorrect/inaccurate census/population, due to old data, migration (internal/international)

Quality of historic data: literacy limitations in data collections/collectors, insufficient funding for previous year(s) results in inaccurate proxy of need

Insufficient funding results in incomplete consumption of previous stock (long budget cycles exacerbate)

Cross-border concerns resulting from differing support and activities (donors/implementing partners)

Ensuring proper maintenance (incl cold chain) of meds

Seasonality/weather changes

Insecurity

Availability/supply chain/stock management and inventory

Question 2: What are other challenges in getting accurate forecasts for NTD commodities especially PC-NTDs?

Population data

Endemicity

Lack of funding for prevalence surveys

Question 3: How can we address challenges in forecast accuracy?

Break funding down to indicate timing, more localized

Sufficient, timely, and reliable funding

Accurate population figures, explore usage of alternative sources, e.g. schools

Country-specific feedback loop on previous requests

Improved formulas for forecasting, including more factors, testing for accuracy

Ensure consumption data is complete

Review previous-year forecasts and identify the drivers of inaccuracy (trend analysis)

Cross-border collaboration, e.g. with neighbors that share moving populations

Targeting areas with known population fluctuation

Group 2 – Challenges & Opportunities

Working Group Discussion

World Health Organization
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Question 1: What factors cause uncertainty in forecast numbers year to year?

POPULATION

- Migration
- Redistricting
- Government population predictions can be lower than the reality.
- Partner forecast
- JRF and data sent to partners can have different population
- Government policies
- Donor forecast

INPUT ACCURACY

- Accuracy of previous forecast
- Challenges as you move between methodologies.
- Accuracy/reliability of the inventory (stock balance)
- Different treatment strategies in country to WHO.
- Survey results (e.g. Endemicity status, particularly for sub-districts with SCH.)
- Assumed average dose

CAPACITY

- Central stores managing drugs, rather than programs.
- Capacity of country to do the forecasting

Question 2: What are other challenges in getting accurate forecasts for NTD commodities especially PC-NTDs?

Looking specifically at tactors which effect the timing of MDA:

1. JAP approval timelines
2. Insecurity
3. Obtaining results of MDA
4. Timing decisions, e.g. school closures, avoid Ramadan, etc.
5. Financial arrangements with Partners
6. Shelf-life of available drugs – may have to do MDA sooner.

Question 3: How can we address challenges in forecast accuracy?

POPULATION

1. Review previous forecast
2. Integrate with other stakeholders, bring them together and discuss the population data, micro-planning
3. Ensure the survey results are carried forward into treatment strategy.
4. Stand alone populations, ie refugee camp should be looked at separately.

CAPACITY

1. Involve partners more in the forecasting.
2. Training for in-country forecasters

Group 3 – Challenges & Opportunities

Working Group Discussion

World Health Organization
African Region

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Universal Health Coverage/Communicable and noncommunicable Diseases

Session 1: Discussion Questions: Forecasting Accuracy

Question 1: What factors cause uncertainty in forecast numbers year to year?

- Population movement (eg intra-country) creates problems in being able to forecast accurately

at the IU level; if people are moving from one district to another and we cannot predict how many are moving, that is an issue

- When it comes to Study Planning, unreliable/ unpredictable funding levels can present a challenge in projecting required amounts
- Changing demographics or inaccurate demographics based on older vintage censuses can cause inaccurate forecasts

Question 2: What are other challenges in getting accurate forecasts for NTD commodities especially PC-NTDs?

- Use of outdated epidemiological survey data, not taking into account the fact that prevalences may have shifted in the mean-time
- Weak supply chain management systems that do not have an accurate handle on inventories counts needed in Study Planning
- Redistricting can affect endemicity status for parts of districts (eg, some parts of district may be endemic and require treatment for SCH, while others are not); Overall, this may result in throwing off total amount required if the pre-redistricting geography is erroneously assumed in forecasting
- Limited skills within NTDP in planning and forecasting

Session 1: Discussion Questions: Forecasting Accuracy

Question 3: How can we address challenges in forecast accuracy?

- Better overall coordination and planning. For example, cross-border meetings with a view to reconciling numerators and denominators in cases where there is cross-border movement
- Promote data sharing. For example, if another program has done a high-quality census before the campaign (eg, Malaria), encourage its use
- If funding is available, conduct a pre-MDA (CDD) census
- Advocate for the provision of short, medium, and long-range sub-national funding availability data for MDA distribution to assist with forecasting and planning
- Enact routine monitoring consumption versus forecasting data as a mechanism for improvement of forecasts for following years
- Capacity enhancement / training of NTDP personnel in areas of forecasting and planning (SCM) is essential

Groupe 4 – Défis et Opportunités

Working Group Discussion

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Session 1 : Questions de Discussion : Précision des Prévisions

Question 1: *Quels facteurs provoquent des incertitudes dans les chiffres des prévisions d'une année à l'autre ?*

- Les conflits;
- Les catastrophes naturelles ou provoquées;
- L’insécurité;
- Urgences sanitaires (Les épidémies et les endémies);
- Absence des données démographiques fiables;
- Absence des données d’endémicités ressentes .

Session 1 : Questions de Discussion : Précision des Prévisions

Question 2: *Quels sont les autres défis pour obtenir des prévisions précises pour les produits NTD, en particulier pour les PC-NTD ?*

- Avoir des données fiables en matières de traitement de masse et d'enquêtes;
- Maitrise des endémicités à tous les niveaux;
- Système de logistique inverse performant;
- Absence des données sur la recrudescence de la maladie dans les zones ou le TDM a été arrêté(efficacité du système de surveillance);
- Redécoupage sanitaire;

Session 1 : Questions de Discussion : Précision des Prévisions

Question 3: Comment pouvons-nous relever les défis liés à la précision des prévisions ?

Groupe 5 – Défis et Opportunités

Working Group Discussion

World Health Organization
African Region

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Universal Health Coverage/Communicable and noncommunicable Diseases

Session 1 : Questions de Discussion : Précision des Prévisions

Question 1: Quels facteurs provoquent des incertitudes dans les chiffres des prévisions d'une année à l'autre ?

1. *Dénombrement/chiffres des prévisions;*
2. *Rapportage des stock précédents;*
3. *Mouvement de population*

Question 2: Quels sont les autres défis pour obtenir des prévisions précises pour les produits NTD, en particulier pour les PC-NTD ?

1. *Disponibilité des ressources financières;*
2. *Retards dans les délais de livraison;*
3. *Insuffisance de capacite (ressources humaines, outils);*
4. *Accès limite a des outils de suivi des intrants;*
5. *Insuffisance d'infrastructure adéquate de stockage;*
6. *Circuit parallèle d'approvisionnement pour certains pays;*

Session 1 : Questions de Discussion : Précision des Prévisions

Question 3: Comment pouvons-nous relever les défis liés à la précision des prévisions ?

1. *Securiser les ressources financieres necessaires a l'approvisionnement;*
2. *Soumettre les JRSM a temps avec des donnees completes et renforcer le suivi de la production et de la livraison des medicaments;*
3. *Renforcer les capacite en ressources humaines et impliquer tous les acteurs de la chaine d'approvisionnement;*
4. *Developper des outils de suivi de intrants (Commande – livraison - utilisation);*
5. *Ameliorer les capacities de stockage et la gestion des stocks;*
6. *Integrer les produits des MTNs sur le circuit national;*
7. *Renforcer le suivi de l'utilisation des medicaments et la logistique inverse;*
8. *Documenter les sources de variation des donnees de population;*

Coffee Break

Logistics data needed for forecasting

Matiko Machagge
Senior Advisor – Supply Chain Technical Support Mechanism Project

World Health Organization
African Region

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Universal Health Coverage/Communicable and noncommunicable Diseases

Logistics Data for Forecasting and Supply Planning

Data Item	Definition
Consumption data (historical)	Quantity of stock dispensed to users or used during a particular time period (treatments)
Issues Data (ideally should not be used in forecasting)	*Quantity of stock shipped from one level of the system to another, e.g. stores to facility*
Stock on hand / inventory	Quantity of usable stock available (with expiry dates) *Note: Items that are expired or damaged are not considered part of stock on hand; they are considered losses to the system.*
Quantities on order (in pipeline)	Quantity of stock on order and expected delivery date
Expected consumption for current year MDAs	Quantity of stock expected to be used or consumed before the forecasted quantity will be received
Losses	Quantity of stock that expired or was damaged during a particular time

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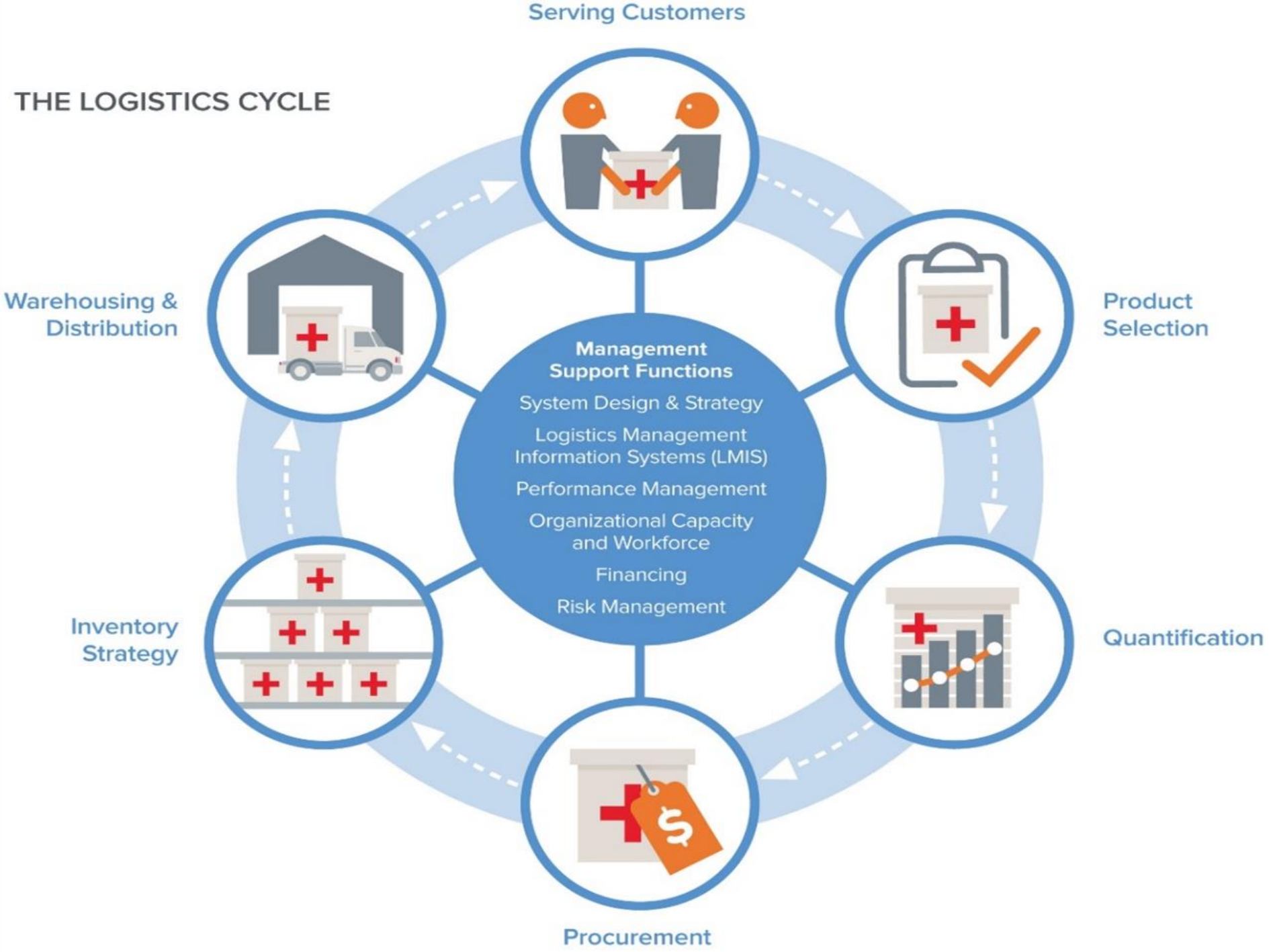
Other data needed for forecasting?

- Population data - census, microplanning
- Case data - HMIS
- Prevalence and incidence of disease - surveillance, surveys
- Funding available
- Program plans
- Others?



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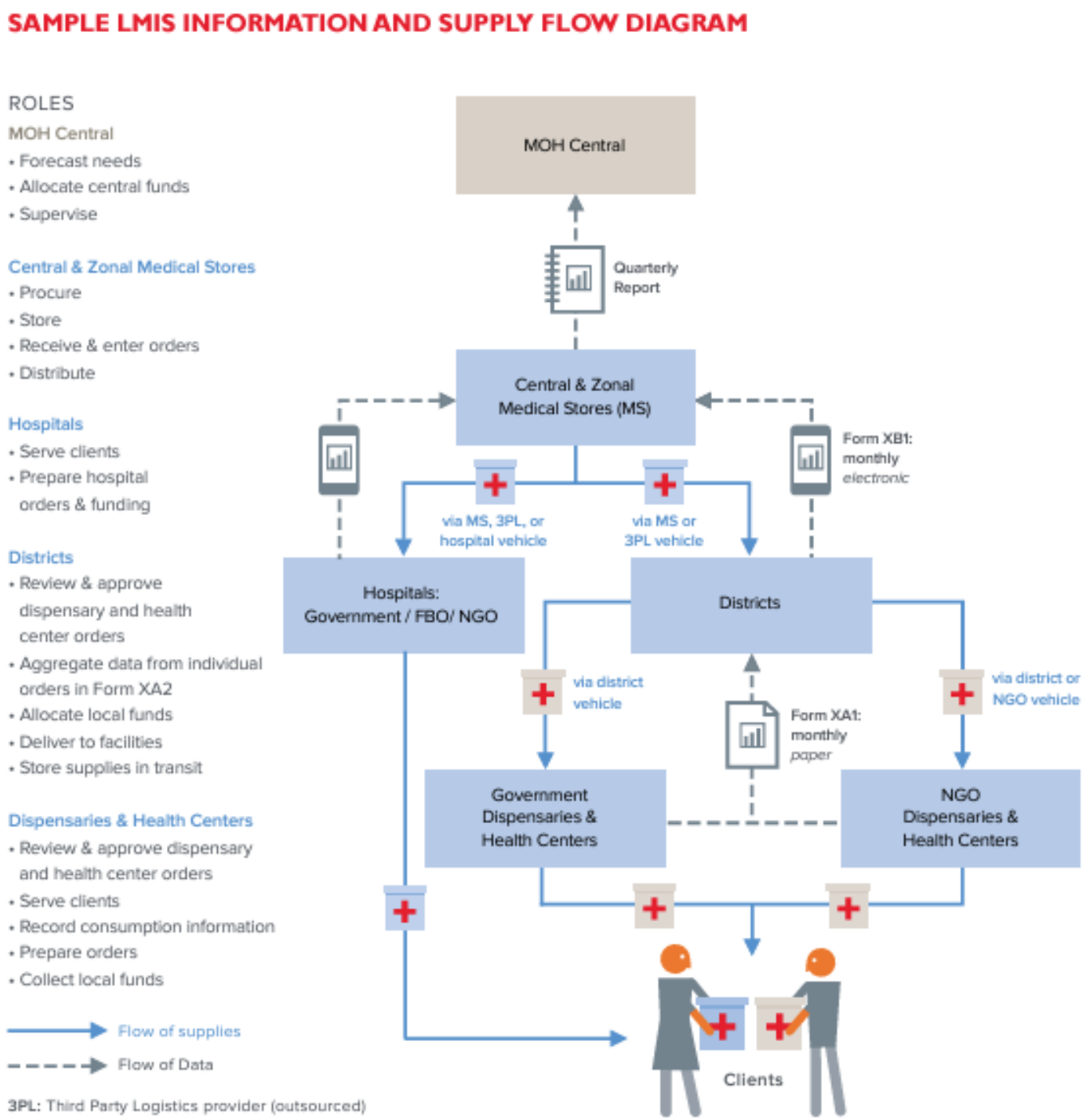
LMIS

An LMIS can be a system of **paper-based and technology-based** records and reports that supply chain workers and managers use to collect, organize, present and use logistics data collected at all levels of the system.



Standard LMIS Forms

Records

- Stock keeping records
  - Inventory Control Cards
  - Stock cards
- Transaction records
  - Receipts, invoices
- Consumption records
  - Registers, tally sheets

Reports

- Summary Report
  - Submitted routinely to account for what has been used, lost or damaged and sometimes to request more medicines

Stock keeping Records

INVENTORY CONTROL CARD								
Product Name:								
Unit:				**Product Code :**				
Date	Transaction Reference	Received from/Issued to	Quantity Received	Quantity Issued	Losses	Adjustments	Quantity on Hand	Initials

Transaction Records

ISSUE AND RECEIPT VOUCHER

Issue Voucher No.: _____

Date: _____ Ship to: _____

_____

_____

	ARTICLE	Quantity		REMARKS
		Issued	Received	
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

Approved by: _____ Date: _____

Shipped by: _____ Date: _____

Received by: _____ Date: _____

Consumption Records

MONTH: _____ YEAR: _____

Name of this Dispensing area: (e.g. Pharmacy) _____

| | | |

Summary Report

Facility Name:										Facility (MFL) code:				
County:										Sub-County:				
Period of Reporting:		Beginning:								Ending:				
		(Day/Month/Year)											(Day/Month/Year)	
HPT Name	Unit of Issue	Beginning Balance	Total Quantity Received this month	Total Quantity Dispensed this month	Losses (Threshold should be 0%)			Positive Adjustments	Negative Adjustments	End Month Stock on Hand	Commodities expiring in less than 6 months		Days out of stock this Month	Quantity Requested for RE-SUPPLY
					Expired	Damaged	Missing				Quantity	Earliest Expiry date dd/mm/yyyy		
Adult Preparations														
Case Management NTDs														
Anti-rabies vaccine	Vial													0
Antisnake venom	Vial													0
Itraconazole 100mg	Capsule													
Liposomal amphotericin B powder for injection, 50mg	Vial													0
Malarsoprol	Vial													0
Paromomycin 375mg/ml, 2ml	Ampoule													0
Sodium stibogluconate (100mg/ml), 30ml	Vial													0
Suramin	Vial													
Others (Specify)														0
Preventive Chemotherapy NTDs														
Azithromycin 250mg	Tablet													0
Diethylcarbamazine 100mg	Tablet													0

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Electronic LMIS (eLMIS)

dhis2

OpenLMIS

Practical examples: Country presentations on eLMIS integration

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eLMIS in the Context of NTDs Program: Mozambique experience

Dr Norinha Chitimela Banze
Mozambique NTD Programme

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Experience with eLMIS

- The eLMIS used by CMAM, both MACS and SIMAM, dates back to 2009, before then paper based and EXCEL based system were in use
- Since then several updated versions of both system have been launched
- SIGLUS has been adopted around 2014-2015 mostly for health centres, and is in the process of being phased out and replaced by M-SIMAM the latest SIMAM version
- CMAM system are used throughout the year to drive routine medicine logistics operations
- The main uses of eLMIS for NTD program is for applying for DTN drugs, and initiating and tracking information regarding MDA distribution processes, and facilitating information sharing between the DTN program, WHO, ITI and Central Medical store, and assist in decision making
- Applications under medical store are connected to a central database and facilitate connectivity and visibility within CMAM
- There in no connectivity with applications used for quantification/forecasting and applying for NTD-drugs

Summary of tools available as part of LMIS

		Purpose of tool		Utilization rate
Health facility catchment areas	Stock cards Excel based Balanced stock cards	Record received, used, and returned leftover medicines daily during the campaign	Number of tablets received, used, and returned leftover	Used in all facility catchment areas during MDA
Health Facility, District Depots, Provincial Depots	SIGLUS / M-SIMAM – Application Linked to Central Database	Receiving; Cycle-Count Inventory Control Issuing, receiving left over stock from reverse logistics	Opening balance, qty received, qty used, adjustment, Physical Count	Used in all health centres, District Depots, Provincial Depots
Central Medical Store (CMAM)	MACS –Warehouse Management System/ Interface for requisitions/ Interface for Procurement –Linked to Central Database	Manage order fulfillment process, facility processes, and replenishment processes for routine medicines (Via Classica)	Data include Supplier information, product, inventory status information, transactional data, customer information,	Used in central warehouse
TND program	ESPEN –OMS Email of EXCEL based form for Zithromax application, Trachoma Elimination Monitoring Form (TEMF)	Quantification & forecasting and applying for (IVM, ALB, PZQ); Zithromax	JAP inputs including PC-NTD drugs including istock levels	DTN-Program

SWOT analysis

Strengths

- Assigned specific SKU-Code for DTN drugs
- Inventory visibility within CMAM
- Communication between CMAM and DTN program

Weaknesses

- Manual system used for inventory control during MDA campaign
- Inaccurate recording of data on open bottles in the process of physical count for reverse logistics
- Limited accuracy of stock balance after MDA campaign

Opportunities

- Improve connectivity between CMAM and DTN program
- Expanding inventory visibility from CMAM to DTN program
- Improving inventory accountability to WHO/donors

Challenges

- Standardize MDA processes
- Automate MDA campaign processes
- Improve inventory accuracy by reconciling number of treatments and SkU

THANK YOU

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Tanzania e-Logistics Management Information System (eLMIS)

Matiko Machagge
Senior Advisor – Supply Chain Technical Support Mechanism Project

World Health Organization
African Region

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Universal Health Coverage/Communicable and noncommunicable Diseases

About this template….

Please use this template when creating your presentation for the last mile virtual stakeholder meeting.

Keep your presentation to less than 10 minutes and no more than the three slides made available, unless you have a diagram, which can go on a 4th slide.

Introduce your presentation with a **short,** high level summary of the LMIS in your country and how it works. If eLMIS is in use, please provide some example of it.

Summary of tools available as part of LMIS

Levels	Tools	Purpose of tool	Data Collected	Utilization rate
e.g. CMS, regional, district, health facility, CDD	*e.g. paper based tools, OpenLMIS, DHIS2, eLMIS, eCHIS etc.*	*e.g. ordering, issuing, receiving, reporting data, displaying KPIs*	*e.g. opening balance, qty received, qty used, losses/adjustment, physical count*	*e.g. 100% in use, only partially used in some areas etc.*
CMS/Medical Stores Department	ERP – Epicor 10	Receiving from upstream SC,issuing to HF,W/House Mngmt	Quantity ordered	100%
Regional, District, HF	eLMIS	Reporting data, ordering, displaying some KPIs	Opening balance, qty received, qty used,losses/adjustments and end balance	100%
CDD	Paper based tools	Reporting medicines dispensed	# of tablets dispensed, # of clients, end balance	100%

Experience with eLMIS

- Tanzania has been using eLMIS since 2014, it is an OpenLMIS platform and it is version 3. It has integrated all health supply chains except vaccines.
- NTD commodities have been integrated into the eLMIS and currently for MDAs, districts order through eLMIS and report back balances (although there are still challenges we are working to address)
- Currently, eLMIS is not integrated with HMIS, but it is linked with MSD-EPICOR 10 for order visibility and processing.
- The challenge for integrating NTD data into HMIS is the lack of digitization of data collection at the lowest level. The paper-based data is eventually entered into the system at the district level.

SWOT analysis

- Include a few bullet points on the strengths of the LMIS tool/s
  - eLMIS rolled countrywide and used by all HF
  - Has integrated all commodities including NTD commodities
  - There are standard paper-based tools for NTD to capture data during MDAs

- Include a few bullet points on the **weakness** of the LMIS tool/s
  - There are different tools for each disease making it tiresome for users
  - The eLMIS system wasn't designed to capture nuances of NTD commodity management during and after MDAs

- What **opportunities** does using this LMIS tool/s provide (that have, or have not, been utilized)
  - Simplification and digitization of data collection and tools that could be integrated with eLMIS

- What **challenges (*threats*)** are there to the utilization and scale up of the LMIS tool/s?
  - Constant training to CDD due to high turnover
  - Funding to print tools, training and supervision, and CDD retention to create experts

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MINISTRY OF HEALTH
REPUBLIC OF GHANA

Ghana Integrated Logistics Management Information System(GhiLMIS)- NTD MEDICINES

Ghana Health Services
Your Health Our Concern

Introduction

MINISTRY OF HEALTH
REPUBLIC OF GHANA

- NTD drugs has been integrated into the Ghana Integrated Logistics Management Information System(GhiLMIS) which is implemented at the central, regional and districts tiers of Ghana's public health

- NTDs are diagnose in health care system across all level and are recorded in the consulting room register, which are reported on the monthly reporting form through the District health management information system(DHIMS 2)

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Overview of MDA Data Process

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REPUBLIC OF GHANA

Community Level 01
CDDs conduct community Censes(updating) and record number of people treated in the community registers during MDAs .

feedback

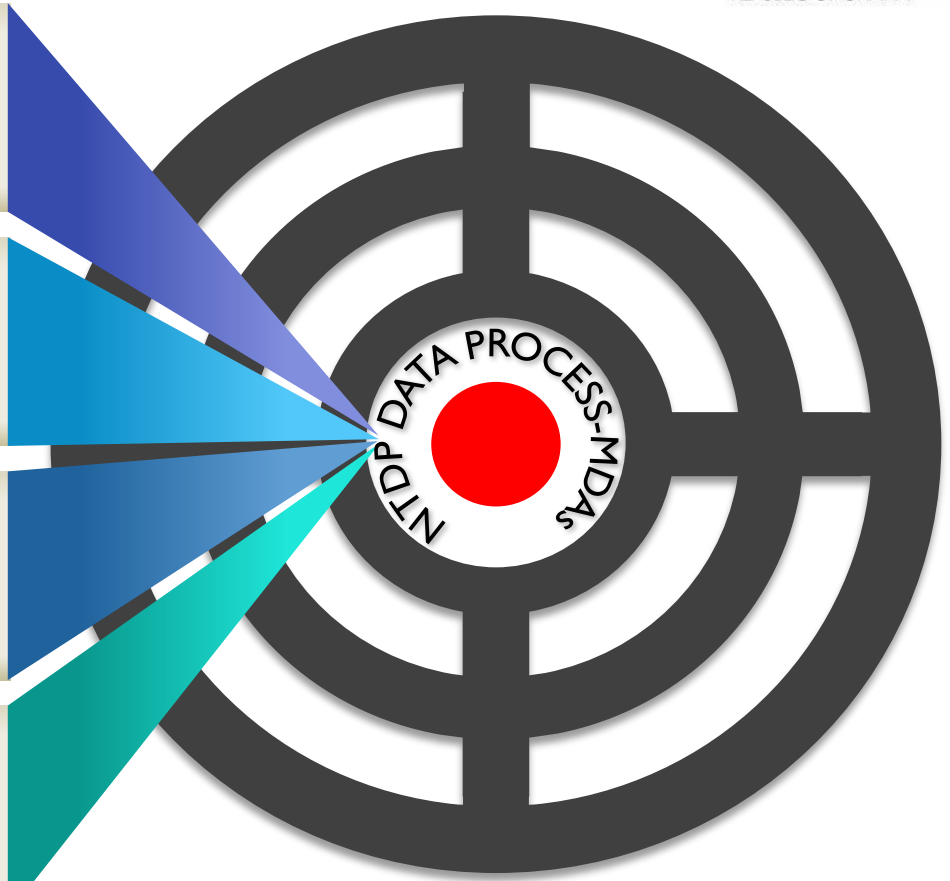
Sub-District Level 02
- Collate treatment report from the community register onto the sub-district MDA reporting forms and validate treatment data before submitting to the districts level

feedback

District Level 03
Validate and enter it onto the District MDA Data Management Tool before submitting to region

Regional Level 04
Are expected to Validate all reports from district and send feedback on errors back to districts before submitting to National Level

feedback



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Your Health Our Concern

Summary of tools available as part of LMIS

Tracking Tools	Level of use	Process
SIRV	National, Regional and District	Use for recording quantities of drugs issued and/or received from one level to the other along the supply chain e.g. district
Waybill	Central	To cover movement of commodities from issue level to the receiving level
Inventory control cards / Bin cards / Tally cards	Central, Districts, PPS, DPs	To track receipts and issues of commodities along the supply chain at the respective levels
Tally sheets	Urban	To record individual drugs issued to clients during distribution

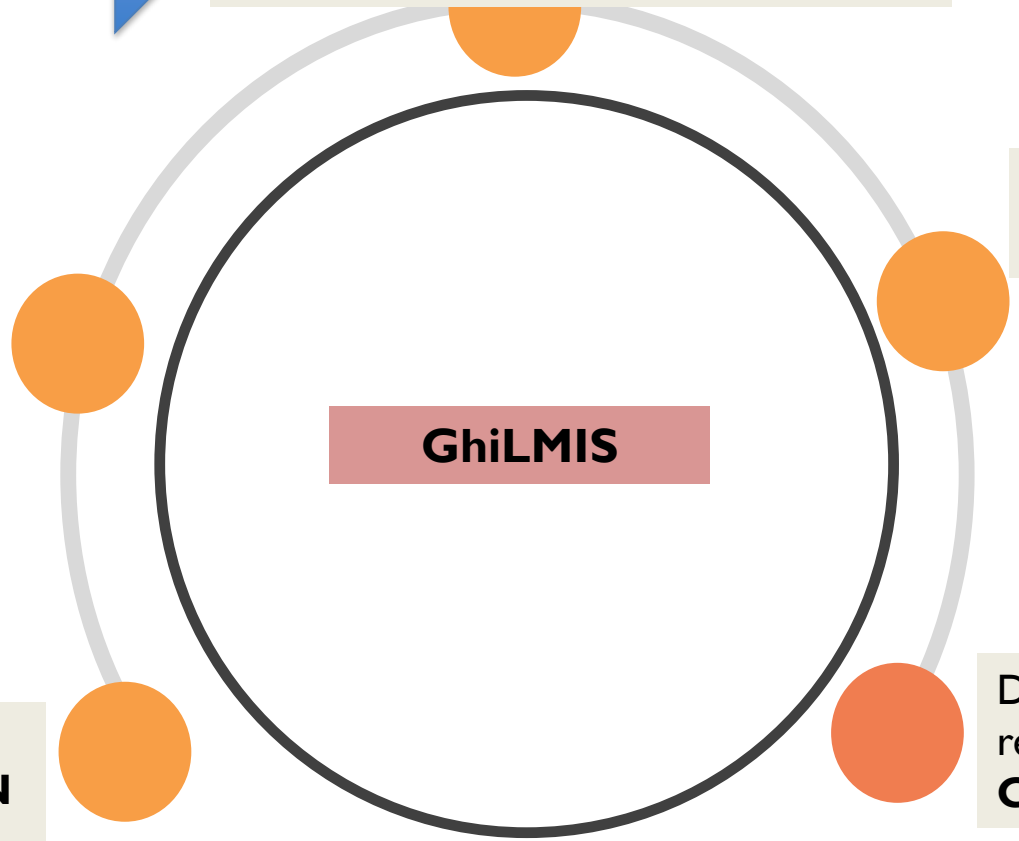
Ghana Integrated Logistics Management Information System(GhiLMIS)

MINISTRY OF HEALTH
REPUBLIC OF GHANA

NTDP
Complete the JAP in collaboration with partners and CMS

Medicine goes to CMS

CMS (Received, Store and distribute MDA Medicine to Regions)



RMS (request, Received, store and Distribute MDA Medicine to Districts)

CDD Receive and Distribute Medicine to eligible population endemic communities

Sub-district receiver medicine distribute to CDDs by the use of **BIN Card**

DMS or District Hospital (Request and redistribute to the sub districts) **BIN Card are use for Management**

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Reverse Logistics and Waste Management

MINISTRY OF HEALTH
REPUBLIC OF GHANA

- Reverse logistics: supply chain process of returning NTD medicines from volunteers and health workers to the district, regional and national level

- In waste management NTD medicines are received from the lower levels quarantined for appropriate investigation to be conducted by the Stores Manager or Pharmacist and dispose off appropriately

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Reverse Logistics and Waste Management 1/3

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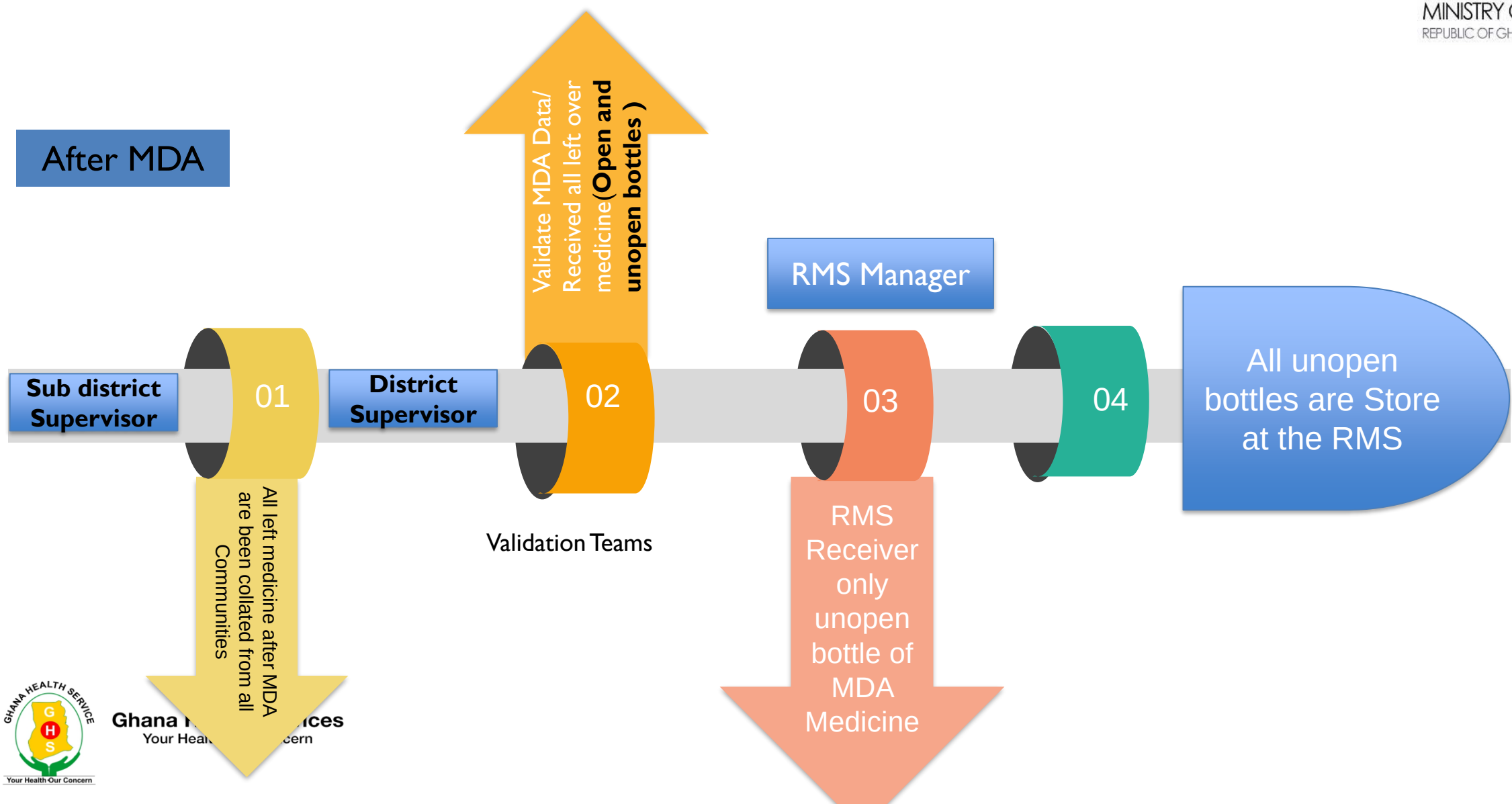

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Reverse Logistics and Waste Management

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REPUBLIC OF GHANA

Challenges

- Lack of logisticians at the health centers and CHPS compounds to coordinate in the retrieval of medicines
- Poor supervision at the sub regional levels on logistics
- Adherence to last mile distribution
- Poor road network, transport arrangement and budgetary support for reverse logistics and waste management

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Reverse Logistics and Waste Management

MINISTRY OF HEALTH
REPUBLIC OF GHANA

Solution

- Provision of budget support for effective reverse logistics and waste management

- Adequate supervision from the regional and district level on reverse logistics and waste management

- Enforce adherence to last mile distribution

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Small group discussions on challenges and opportunities for integrating SCM logistics into LMIS

Working Group Discussion

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World Health Organization
African Region

Guidelines for Working Groups

ESPEN EXPANDED SPECIAL PROJECT FOR ELIMINATION OF NEGLECTED TROPICAL DISEASES

Objective Clarification: Give inputs into the challenges of forecasting accurately, challenges in logistics management information systems, and provide inputs for three forecasting methodology

Group Roles: Assign specific roles within each group, such as a facilitator, and a note-taker to ensure a structured discussion and effective reporting. There will **be three separate discussion sessions** during the day. Be sure to only focus on the questions that are in discussion for that session, do not move to discussion questions for the next sessions.

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2. **LMIS - challenges and opportunities – slide 4**
3. 3-year forecasting methodology – slide 5, 6 and 7

Reporting Back: Each group should prepare to present their answers to the larger group. Encourage them to highlight the most critical issues and realistic solutions.

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African Region

Session 2: Discussion Questions: LMIS

ESPEN EXPANDED SPECIAL PROJECT FOR ELIMINATION OF NEGLECTED TROPICAL DISEASES

Question 1: What are challenges with collecting logistics data at country level?

Question 2: What are the opportunities for strengthening LMIS and integrating LMIS?

Plenary discussion: Challenges & Opportunities for LMIS integration

Working Group Discussion

World Health Organization
African Region

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Lunch break

Long Term forecasting for PC-NTDs

Matiko Machagge
Senior Advisor – Supply Chain Technical Support Mechanism Project

World Health Organization
African Region

UHC/UCN
Universal Health Coverage/Communicable and noncommunicable Diseases

Long Term Forecasts for Donated PC Medicines

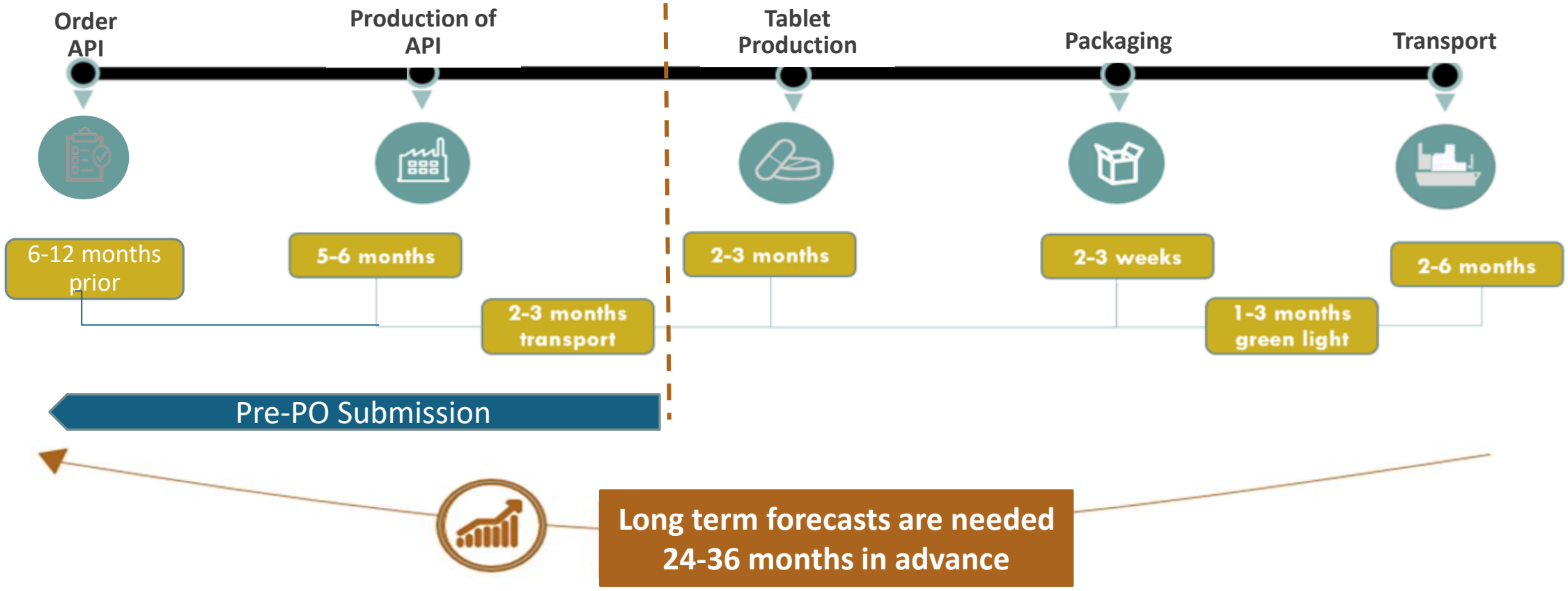
Longer-term forecasts at country level could:

- Be shared with global level (pharm partners) to support production planning and enable pharmaceutical companies to better respond to country requests

- Empower NTD Programs with information to plan and advocate
    - Some NTD donation programs target specific population subgroups (e.g. SAC, WRA, etc.), yet the need extends beyond these subgroups, forecasting the full need allows programs to advocate and plan
    - If donor support and funding for NTD commodities decreases, there may be a transition to government-led procurement

- Forecast potential changes in commodity needs due to changes in epidemiology and treatment guidelines for PC and case management which could results for large and rapid shifts in future demand

Pharmaceutical Manufacturing Process & Time-lines



Pharma Partners

Johnson & Johnson	Mebendazole	200 000 000 tablets annually	Soil-transmitted helminthiases (SAC)[2]	Until 2025	WHO
GlaxoSmithKline	Albendazole	600 000 000 tablets annually	Lymphatic filariasis	Until elimination	WHO
		400 000 000 tablets annually	Soil-transmitted helminthiases (SAC)[2]	Until elimination	WHO
Merck & Co.	Praziquantel	250 000 000 tablets annually	Schistosomiasis (SAC)[2]	Unlimited	WHO
MSD	Ivermectin	Unlimited	Onchocerciasis	Until elimination	Mectizan Donation Program
		Unlimited	Lymphatic filariasis in co-endemic countries	Until elimination[3]	Mectizan Donation Program
		100 000 000 treatments annually	Lymphatic filariasis for triple-therapy MDA	Until 2025	Mectizan Donation Program

Five Year Forecast

Nigeria				Some columns have been hidden (the ones I thought were not necessary								Add the same questions we have in the Country forecast sheet following each year as columns to answer; By program								
				Only include the rows for the country sharing the sheet with.																
Keep	Keep	Keep	Keep	Keep	Keep	Keep	Keep	Keep	Keep	Keep	Keep	Keep	Keep	Keep	Keep	Keep	Questions for 2026 here.			
ADM0	Year	ADM1	ADM2	IU_NAME	IU_ID	PopTot	PopPreS	PopSAC	PopAdul	PopReqPCLF	PopReqPCOnch	PopReqPCSTH	PopReqPCSCH	PZQ_SAC	PZQ_ADT	IVM_LF_ONC	1. Will you have funding for MDA?	2. Do you have plans for surveys/impact assessments this year that are funded?	3. What is the result predicted to be?	4. Will the MDA frequency change (based on question 2)?	What will the MDA frequency change be?	5. Will the targeted population likely change?	6. How will the target population change?	Select the population to add or remove from targetted MDA (based on question 6):	2
Ethiopia	2025	Addis Ab	Akaki Ka	Akaki Ka	18488	281661	29856	83738	162478	0	0	0	0	0	0	0									
Ethiopia	2025	Addis Ab	Arada Su	Arada Su	18489	325981	34555	96914	188045	0	0	0	0	0	0	0									
Ethiopia	2025	Addis Ab	Bolle Sut	Bolle Sut	18490	241246	25572	71722	139165	0	0	0	0	0	0	0									
Ethiopia	2025	Addis Ab	Gulelie S	Gulelie S	18491	410887	43554	122157	237023	0	0	0	0	0	0	0									
Ethiopia	2025	Addis Ab	Kirkose S	Kirkose S	18492	339598	35998	100962	195900	0	0	0	0	0	0	0									
Ethiopia	2025	Addis Ab	Kolfie Ker	Kolfie Ker	18493	658048	69754	195637	379599	0	0	0	0	0	0	0									
Ethiopia	2025	Addis Ab	Lemmi	Lemmi	19591	376534	39913	111943	217207	0	0	0	0	0	0	0									
Ethiopia	2025	Addis Ab	Lideta Su	Lideta Su	18494	309820	32842	92109	178722	0	0	0	0	0	0	0									
Ethiopia	2025	Addis Ab	Nifase Sil	Nifase Sil	18495	484270	51333	143974	279355	0	0	0	0	0	0	0									
Ethiopia	2025	Addis Ab	Yeka Sut	Yeka Sut	18496	388027	41132	115361	223836	0	0	0	0	0	0	0									
Ethiopia	2025	Afar Awsa	Abala	Abala	18497	52145	5527	15503	30080	0	0	0	0	0	0	0									
Ethiopia	2025	Afar Awsa	Adar	Adar	18498	73937	7838	21982	42652	0	0	0	9783	6402	17142	0									
Ethiopia	2025	Afar Awsa	Afambo	Afambo	18499	33160	3515	9858	19128	0	0	0	13620	8912	23868	0									

World Health Organization
African Region

Small group discussions on challenges and opportunities for integrating SCM logistics into LMIS

Working Group Discussion

World Health Organization
African Region

UHC/UCN
Universal Health Coverage/Communicable and noncommunicable Diseases

Guidelines for Working Groups

Objective Clarification: Give inputs into the challenges of forecasting accurately, challenges in logistics management information systems, and provide inputs for three forecasting methodology

Group Roles: Assign specific roles within each group, such as a facilitator, and a note-taker to ensure a structured discussion and effective reporting. There will **be three separate discussion sessions** during the day. Be sure to only focus on the questions that are in discussion for that session, do not move to discussion questions for the next sessions.

Time Management: Keep track of time for each question. This will help keep the discussion focused and balanced.

Focus Areas:

1. Forecasting accuracy – challenges and opportunities – slide 3
2. LMIS - challenges and opportunities – slide 4
3. **3-year forecasting methodology – slide 5, 6 and 7**

Reporting Back: Each group should prepare to present their answers to the larger group. Encourage them to highlight the most critical issues and realistic solutions.

Session 3: 3-Year Forecast Methodology PC-NTDs

The proposed methodology for 3-year forecasting is to use the data from 2025 JRSM and determine what will be change in 2026 and 2027. The questions on the next page are proposed to help calculate forecasts for 2026 and 2027.

Group Work Directions:

1.Review the questions on the following page.

2.Answer the following questions:

a) Are these the right questions?

b) Are there other questions to add? Would you change the order or wording of the current questions?

c) Are these questions feasible for countries to answer?

3. Add edits to the following page.

3 Year Forecast Methodology PC-NTD

Questions to answer by Implementation Unit by disease for each year - 2026/ 2027

1.Do you expect to have full funding for MDA?
    1. yes, maybe, no
2.Do you expect any changes to the population requiring MDA due to recent surveys?
    1. yes, no
    2. If yes, what is the expected change - stop MDA, decrease frequency twice to once a year
3.Do you expect to target new population groups?
    1. yes, no
    2. if yes, what will be the targeted populations (select groups)?
        1.Preschool age children, School age children, Women of reproductive age, Adults
4.For schisto, are you changing to a focal sub-IU? (Are there other diseases where this also applies?)
    1. yes, no
    2. if yes, enter new population targeted for this IU

Additional Comments / Conclusions

Conclusions:

Innovation Lab: CrossRoads tool and Country Health Information Platform

Andy Tate & Alex Pavluck
Sightsavers

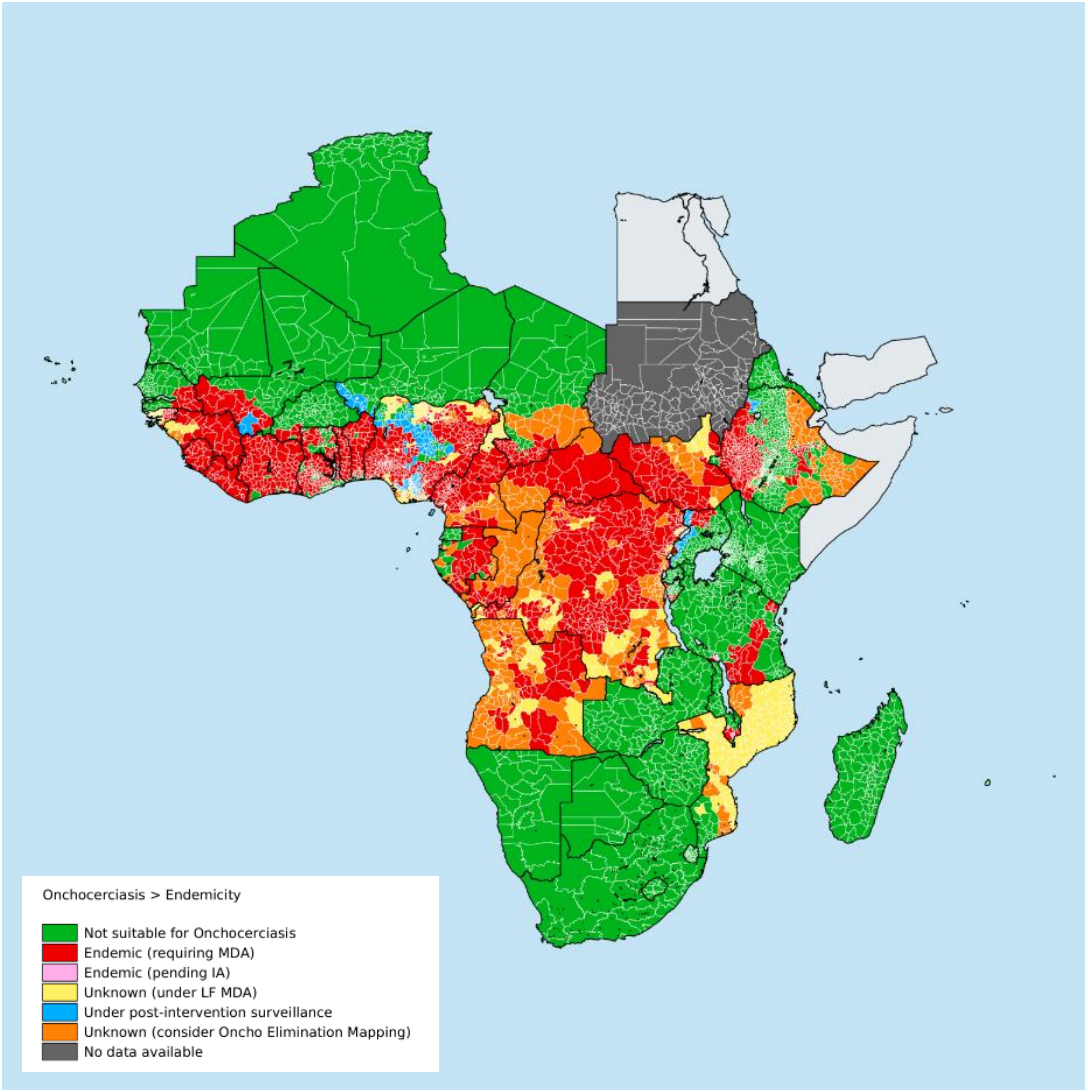
World Health Organization
African Region

UHC/UCN
Universal Health Coverage/Communicable and noncommunicable Diseases

The cross-border data challenge

Diseases do not respect borders

National programmes recognize the need to collaborate to ensure no one is left behind. However, the effectiveness of these initiatives can be hindered by a lack of capacity to use geographic information systems to visualize data on communities and disease prevalence.



CrossRoads Data Model

National programmes

- Community locations

ESPEN

- Administrative geography (with historic treatment data)

Other

- Modelled settlement extents (GRID3)
- River network (HydroSheds)
- Health facilities (HDX)

Data processing in ESRI ArcGIS

App configuration in ESRI Experience Builder

CrossRoads. Accessible via link or Sightsavers Open Data Hub

ESRI

Basemaps

What can I do with CrossRoads?

Standard capabilities

Use in desktop, tablet or mobile format

Review ten data layers, supported by six basemaps

Access additional data through attribute tables and pop-ups

Measure distance and area

Identify coordinates

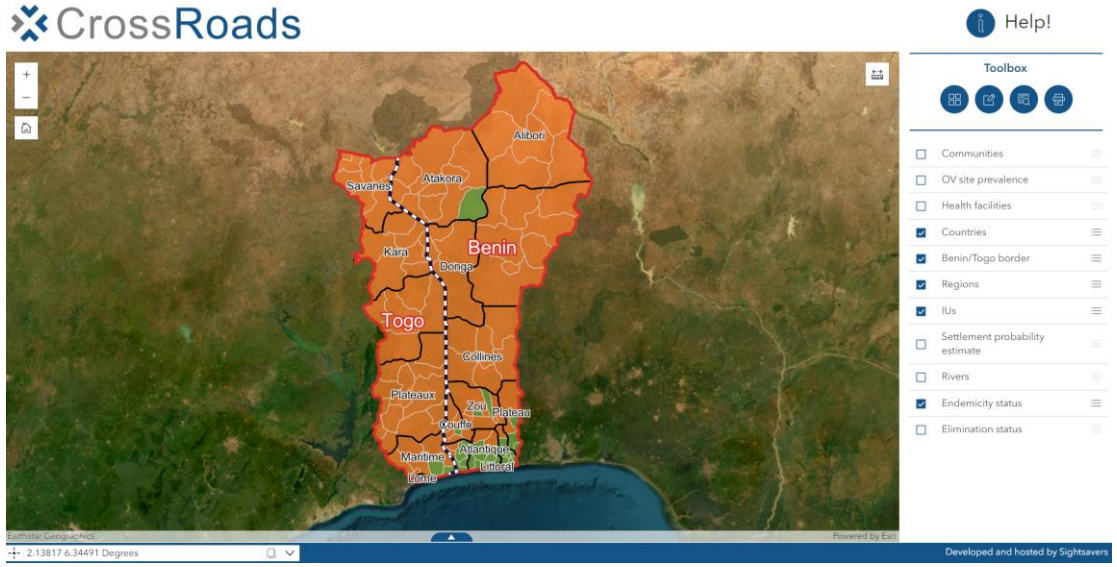
Run data queries and export results to Excel

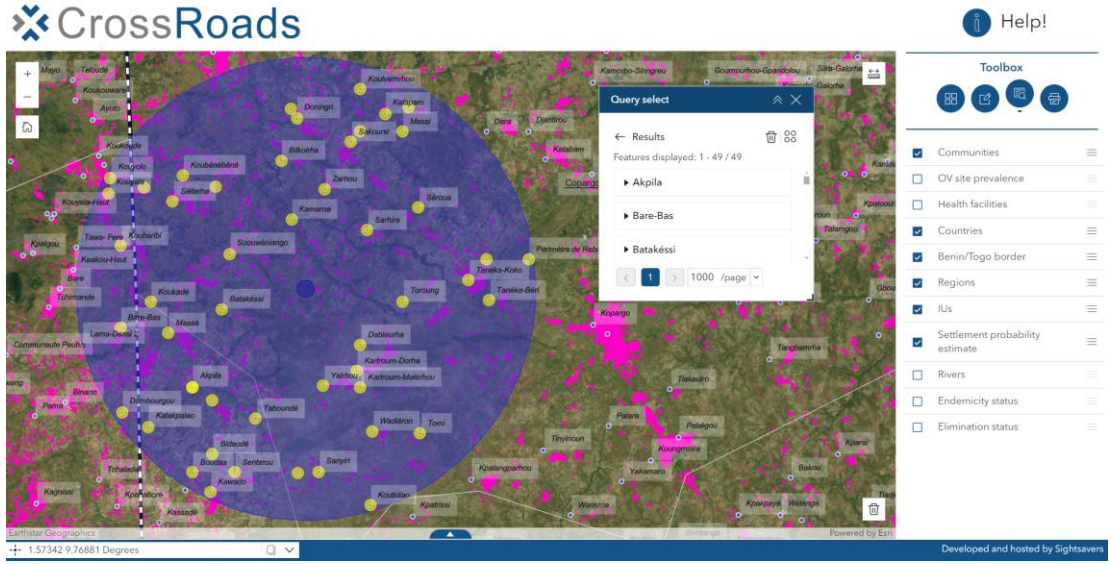
Print maps to .jpeg or .pdf template

Enterprise capabilities

Edit community data directly

Interested?





Please register your interest in CrossRoads at…

NTDtools@sightsavers.org

Country Health Information Platform (CHIP)

An interactive national NTD dashboard to visually review data submitted on annual NTD reporting forms for treatments, morbidity management, and epidemiological surveys

CHIP

Country health information platform

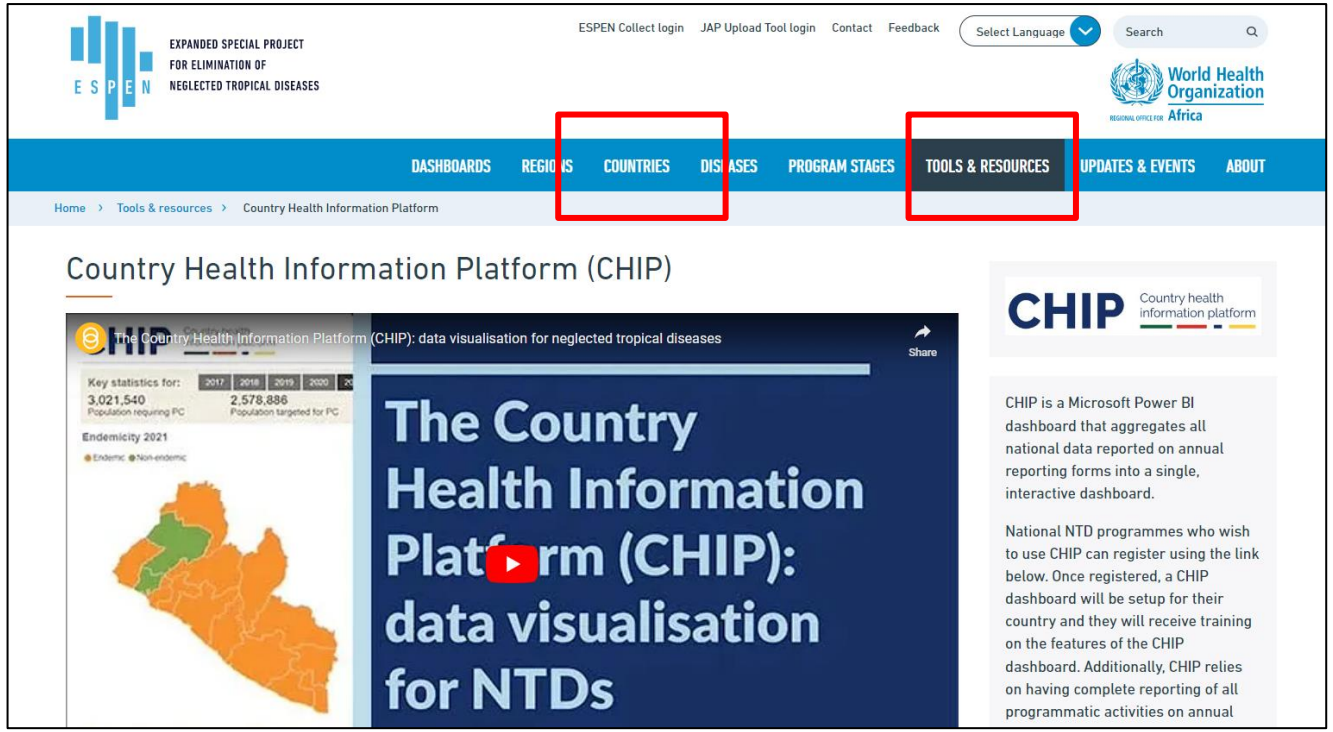
ESPEN

What is CHIP

- CHIP is a publicly-accessible online business intelligence dashboard built using Microsoft Power BI
- All countries in the WHO AFRO region endemic for at least one of the PC NTDs have access to a CHIP dashboard

CHIP dashboards can be accessed via the ESPEN Portal either through the individual country page or through the CHIP page under Tools & Resources

https://espen.afro.who.int/tools-resources/chip

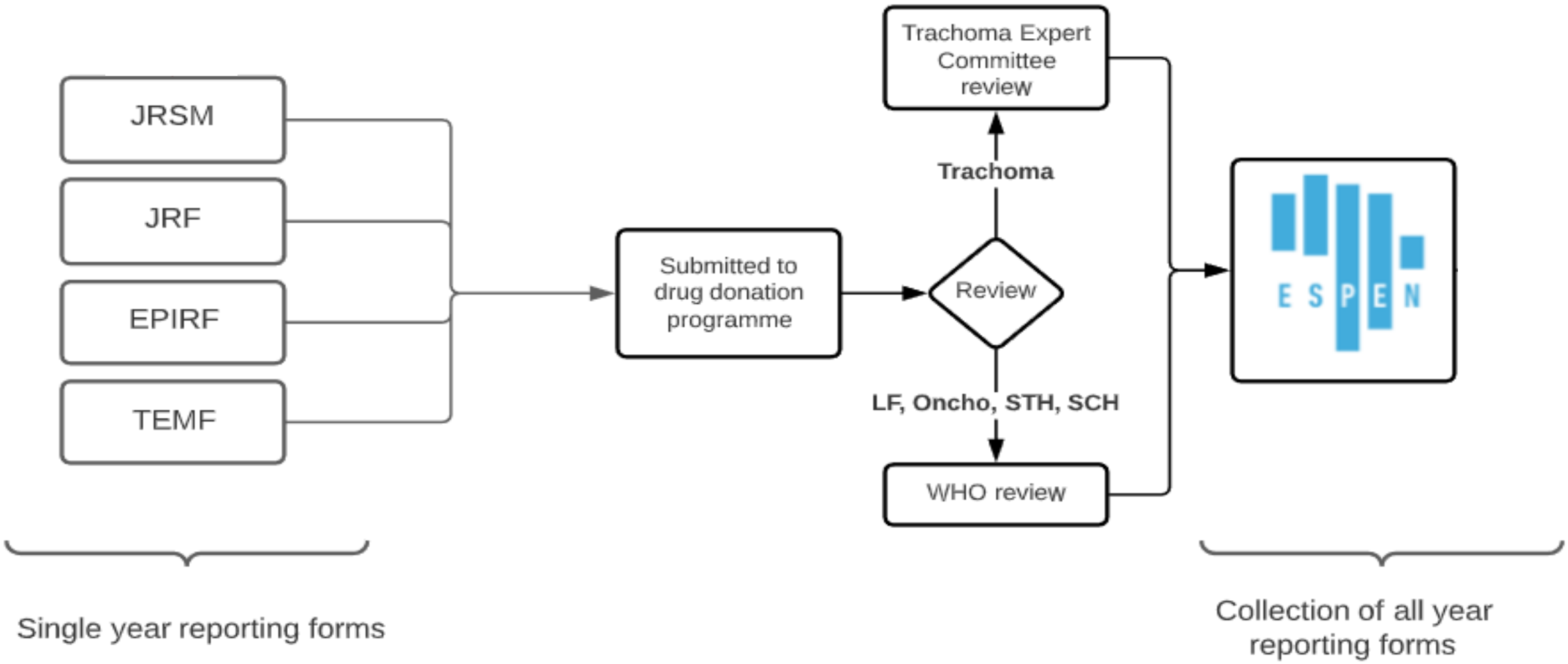


Why is a tool like CHIP needed?

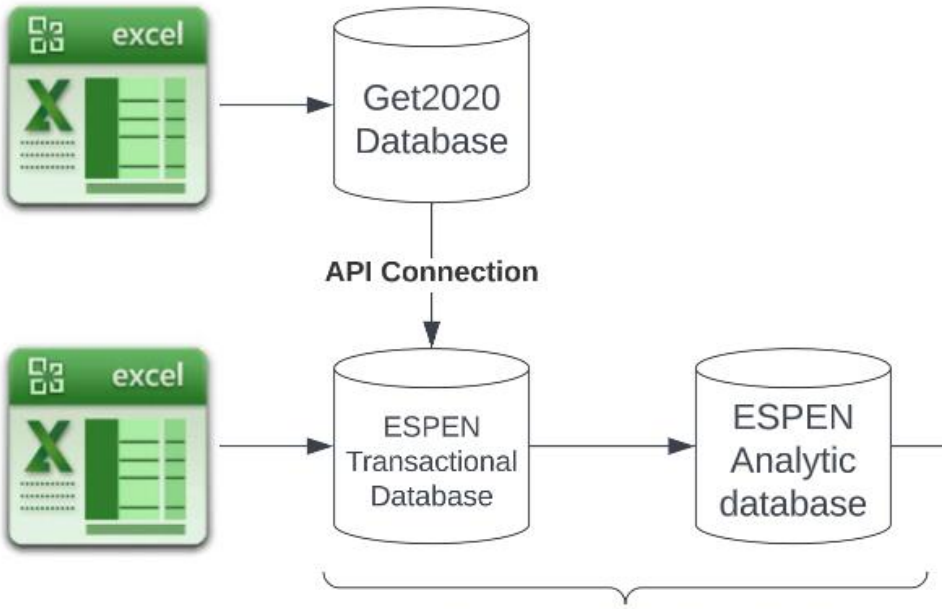
NTD programmes tend to **operate outside of health management information systems** for a variety of reasons.

- Because of this, NTD programmes need to **develop their own databases to store programmatic data** coming from surveys, morbidity management, inventory management, and mass drug administration treatments. *This can be difficult for NTD teams, often comprised of disease subject matter experts with limited experience in implementing and maintaining data systems.*
- However, **each year national NTD programmes submit a wealth of programmatic data** to WHO and the International Trachoma Initiative (ITI) to report on endemicity status, treatments delivered, surveys conducted, morbidity, and medicines required and remaining for the current reporting period. *Taken in aggregate, these single year reporting forms provide a wholistic view of programmatic activities which need to be implemented over multiple years to interrupt disease transmission.*

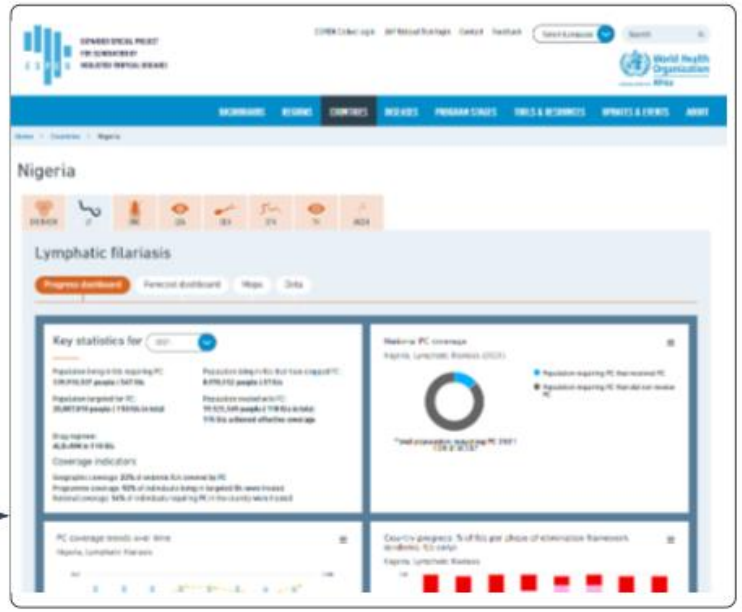
CHIP data model 1: Country > ESPEN



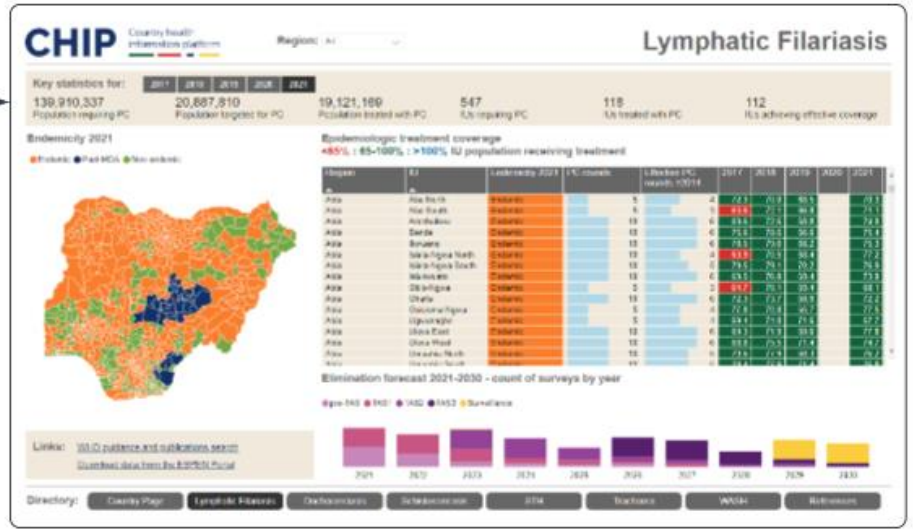
CHIP data model 2: ESPEN > Country



ESPEN Portal



CHIP Dashboards



CHIP Country health information platform

ESPEN

Thank you

Designed and developed by Sightsavers with technical and financial support from:

Sightsavers

GLOBAL INSTITUTE FOR DISEASE ELIMINATION

Manta Ray media

STANDARD CO

Groups presenting results of Session 3: 3-year forecasting of medicine needs

Working Group Discussion

World Health Organization
African Region

UHC/UCN
Universal Health Coverage/Communicable and noncommunicable Diseases

Group 1 – 3-year forecasting of medicine needs

Working Group Discussion

World Health Organization
African Region

UHC/UCN
Universal Health Coverage/Communicable and noncommunicable Diseases

3 Year Forecast Methodology PC-NTD

Questions to answer by Implementation Unit <u>by disease</u> for each year - 2026/2027

1. For ~~schisto~~ the disease, are you changing to a focal sub-IU?
    1. yes, no
    2. if yes, what is the new population targeted for this.

Remove reference to schisto as this is applicable cross-disease (group discussed from an LF perspective)

2. Is a survey required, and if so which survey type?
    1. Survey type
    2. Expected survey outcome (e.g. stop MDA, increase or decrease frequency or maintain)

Replace this question to better understand the IU survey plan by year - can the JAP template ultimately be extended to better capture this data for forthcoming years?

3. Which are the targeted population groups? (Note this will need to be aligned per disease)
    1. Preschool age children, School age children, Women of reproductive age, Adults

    Responses above to be adjusted per disease as applicable

4. Do you expect to have full funding for MDA?
    1. yes, no, unconfirmed

Could link this in due course to IU planner for ease of completion/reference. Suggest to revise possible answers to Yes, No and 'unconfirmed' with these definitions outlined in far more detail to reduce ambiguity.

Group 2 – 3-year forecasting of medicine needs

Working Group Discussion

World Health Organization
African Region

UHC/UCN
Universal Health Coverage/Communicable and noncommunicable Diseases

Session 3: 3-Year Forecast Methodology PC-NTDs

a) Are these the right questions?
    a) Yes, but they should be asked stratified by drug package instead of by disease to account for integrated delivery
b) Are there other questions to add? Would you change the order or wording of the current questions?
    a) Number of effective rounds to date? Number of expected additional rounds? That is often prioritized by funders
    b) General remarks around anything else that may be relevant
    c) Confidence rating related to every response
c) Are these questions feasible for countries to answer?
    a) There will be a number of assumptions behind each of these responses, so these need to be clear

3 Year Forecast Methodology PC-NTD

Questions to answer by Implementation Unit by disease for each year - 2026/ 2027

1. Do you expect to have full funding for MDA?
    1. yes, maybe, no
        1. Responses will depend on many factors such as the number of effective rounds to date – these could be added as columns
        2. Some level of certainty will be particularly important for this question; OR
        3. Is more nuance in the response options needed? E.g. funding status: funding in discussion, pending, approved?
2. Do you expect any changes to the population requiring MDA due to recent surveys?
    1. yes, no
    2. If yes, what is the expected change - stop MDA, decrease frequency twice to once a year
        1. Dependent on survey results and again there are a lot of assumptions here (likelihood of passing, % pass, etc)
        2. What do donors/pharma want? Worst case scenario or best case scenario? Based on survey type (e.g. LF/ONC stop and pre-stop surveys) there can be more or less certainty
        3. Add “Maybe” response
        4. Stratified by disease/drug package will be important here
        5. Make sure that the “if yes” responses should allow for intensification of treatment strategy as well
        6. Rewording to not specify “due to surveys” but to expand to all factors

3 Year Forecast Methodology PC-NTD

Questions to answer by Implementation Unit by disease for each year - 2026/ 2027

1.Do you expect to target new population groups?

1. yes, no
2. if yes, what will be the targeted populations (select groups)?
    1. Preschool age children, School age children, Women of reproductive age, Adults
        1. Add “other groups” to the targeted population groups e.g. refugee camps
        2. Add maybe option, or some other column that indicates the certainty of the response

2.For schisto, are you changing to a focal sub-IU? (Are there other diseases where this also applies?)

1. yes, no
2. if yes, enter new population targeted for this IU
    1. Should be stratified by disease where applicable and it should include endemicity
    2. Look at number of rounds and co-endemicity
    3. Treating with STH? Then ALB/MEB (info page / assumptions)

Group 3 – 3-year forecasting of medicine needs

Working Group Discussion

World Health Organization
African Region

UHC/UCN
Universal Health Coverage/Communicable and noncommunicable Diseases

Additional Comments / Conclusions

Conclusions:

- We believe that there may be a need to tailoring some of these questions to be disease specific. For example, SCH has its own set of considerations.
- There is a need to introduce information on endemicity which can be auto=populated from the JRSM. Endemicity is required because it often dictates number of rounds, treatment frequency and target populations for SCH, for example.
- There should be a preliminary question on the number of effective rounds of MDA that have Been conducted in the past, which could be auto-populated from the JRF. Is an additional round of MDA required in the coming year? Is the IU due fo assessment in the coming year?
- The first question should also ask how many rounds of MDA are envisioned and if full funding is secured for all rounds planned in the IU? (Sometimes different rounds of MDA are funded by different partners) The answer could be yes, no, or partial (i.e., one round funded but not the other)

Groupe 4 – Prévisions sur 3 ans des besoins en médicaments

Working Group Discussion

World Health Organization
African Region

UHC/UCN
Universal Health Coverage/Communicable and noncommunicable Diseases

Session 3 : Méthodologie de Prévision sur 3 Ans pour les PC-NTD

La méthodologie proposée pour les prévisions sur 3 ans consiste à utiliser les données du JRSM 2025 et à déterminer ce qui changera en 2026 et 2027. Les questions à la page suivante sont proposées pour aider à calculer les prévisions pour 2026 et 2027

Directives pour le travail en groupe :

1.Passez en revue les questions à la page suivante.

2.Répondez aux questions suivantes :

- S'agit-il des bonnes questions ? Oui, clarifier ce qui est attendu par financement complet pour la question 1(disposer d'un financement de toutes les activités en lien avec les MDAs)
- Y a-t-il d'autres questions à ajouter ? Changeriez-vous l'ordre ou la formulation des questions actuelles ? Oui, nous avons ajoute 2 nouvelles questions,
- Ces questions sont-elles réalisables pour les pays ? Oui

1.Apportez des modifications à la page suivante.

3 Year Forecast Methodology PC-NTDs

World Health Organization
African Region

ESPEN EXPANDED SPECIAL PROJECT FOR ELIMINATION OF NEGLECTED TROPICAL DISEASES

Questions à répondre par l'Unité de Mise en Œuvre par maladie pour chaque année - 2026/2027

1.Attendez-vous à disposer d'un financement complet pour la MDA ? Bonne question.

1. oui, peut-être, non

2.Attendez-vous des changements dans la population nécessitant la MDA en raison des enquêtes récentes/ Données récentes? Bonne question.

1. oui, non
   Si oui, quel est le changement attendu ?
2. arrêter la MDA, réduire la fréquence de deux fois à une fois par an, augmenter la fréquence, maintenir la fréquence, reprise du MDA

3.Attendez-vous à cibler de nouveaux groupes de population ? Bonne question.

1. oui, non
   Si oui, quelles seront les populations ciblées (sélectionnez les groupes) ?
2. Enfants d'âge préscolaire, Enfants d'âge scolaire, Femmes en âge de procréer, Adultes, groupes spécifiques

3 Year Forecast Methodology PC-NTDs

Questions à répondre par l'Unité de Mise en Œuvre par maladie pour chaque année - 2026/2027

4.Pour la schistosomiase, passez-vous à une sous-UMI focale ? (Cela s'applique-t-il également à d'autres maladies ?)
Bonne question.

1. oui, non
   Si oui, entrez la nouvelle population ciblée pour cette UMI

Avez-vous prévu de faire des enquêtes dans cette zone sur les 3 prochaines annees? (Cela s'applique-t-il également à d'autres maladies ?).

1. oui, non, peut-être

Prévoyez- vous un changement dans les objectifs programmatique du pays sur les 3 prochaines années? (Cela s'applique-t-il également à d'autres maladies ?).

1. oui, non, peut-être

Prévoyez- vous un conflit ou des déplacements de population en masse dans ce districts sur les 3 prochaines années? (Cela s'applique-t-il également à d'autres maladies ?).

1. oui, non, peut-être (réfléchir a une strategie pour majorer la population a traiter dans cette zone)

Groupe 5 – Prévisions sur 3 ans des besoins en médicaments

Working Group Discussion

World Health Organization
African Region

UHC/UCN
Universal Health Coverage/Communicable and noncommunicable Diseases

3 Year Forecast Methodology PC-NTDs

Questions à répondre par l'Unité de Mise en Œuvre par maladie pour chaque année - 2026/2027

1.Attendez-vous à disposer d'un financement complet pour la MDA ?

Question bien formulée

2.Attendez-vous des changements dans la population nécessitant la MDA en raison des enquêtes récentes ?

Question bien formulée , mais il faudra ajouter la réponse 3 et 4

1. oui

Si oui, quel est le changement attendu ?

1. réduire la fréquence de deux fois à une fois par an
2. Arrêter le MDA
3. Augmentation le nombre de tour
4. Reprendre le MDA

3. Attendez-vous à cibler de nouveaux groupes de population ?

Question bien formulée

1. oui

Si oui, quelles seront les populations ciblées (sélectionnez les groupes) ?

1. Enfants d'âge préscolaire, Enfants d'âge scolaire, Femmes en âge de procréer, Adultes

3 Year Forecast Methodology PC-NTDs

4. Pour la schistosomiase, passez-vous à une sous-UMI focale ? (Cela s'applique-t-il également à d'autres maladies ?)
question bien formulée,

Si oui, entrez la nouvelle population ciblée pour cette UMI

Coffee break

End of the day

Thank you
Merci beaucoup
Muito obrigado

World Health Organization
African Region

UHC/UCN
Universal Health Coverage/Communicable and Noncommunicable Diseases