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The Global Fund
To Fight AIDS, Tuberculosis and Malaria

Finance and Procurement Workshop

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Cape Town, SOUTH AFRICA

SESSION 7:

Quantification of Health Commodities

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Workshop Objectives - Procurement Workstream

- To improve understanding of Global Fund Guidelines and Policies on Procurement and Supply Management in order to enhance practical implementation of PSM and program delivery

Expected Outcomes

- Increase participants' knowledge of procurement planning, management information systems, and forecasting and quantification

Session Goal

Participants will understand the role and importance of quantification in improving supply chain management of health commodities, increase their knowledge of the quantification process, and be able to identify key challenges and approaches for improving quantification capacity in their programs.

Session Objectives

At the end of the session participants will be able to:

- Describe the quantification process and the data required at each step
- Discuss challenges in forecasting as the first step in the quantification process and identify approaches to address these challenges
- Apply forecasting principles and the quantification process to a quantification of ARV drugs
- List recommendations for strengthening capacity in quantification

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Session Outline

- Overview of Quantification
  - Role of quantification in supply chain management; the Six Rights; the Quantification Process
- Forecasting (first step in Quantification)
  - Forecasting methodologies
  - Types of data, sources of data
  - Case Study: Challenges in Forecasting
- Quantification of ARV Drugs
  - What's different about quantification of ARV drugs?
  - Small Group Work/Exercises
- Recommendations
  - Large Group Discussion

Purpose of the Supply Chain

To ensure the Six Rights

- the ***Right Products***
- in the ***Right Quantities***
- in the ***Right Condition***
- delivered to the ***Right Place***
- at the ***Right Time***
- for the ***Right Cost***.

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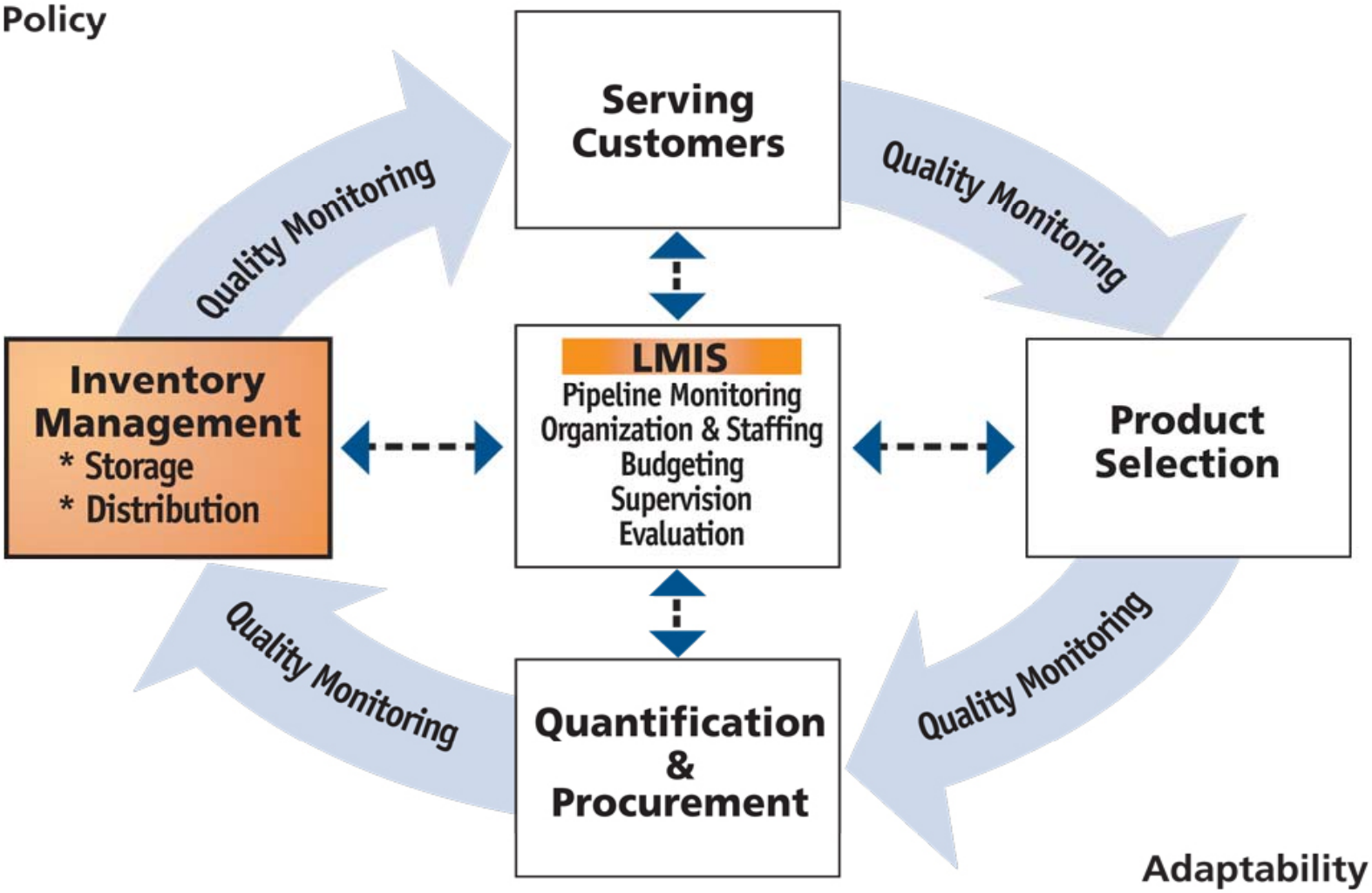
THE LOGISTICS CYCLE



- Quantification is a key function in the supply chain that links central level supply chain functions (financing and procurement) with facility level functions (inventory management, storage, distribution, and service delivery)

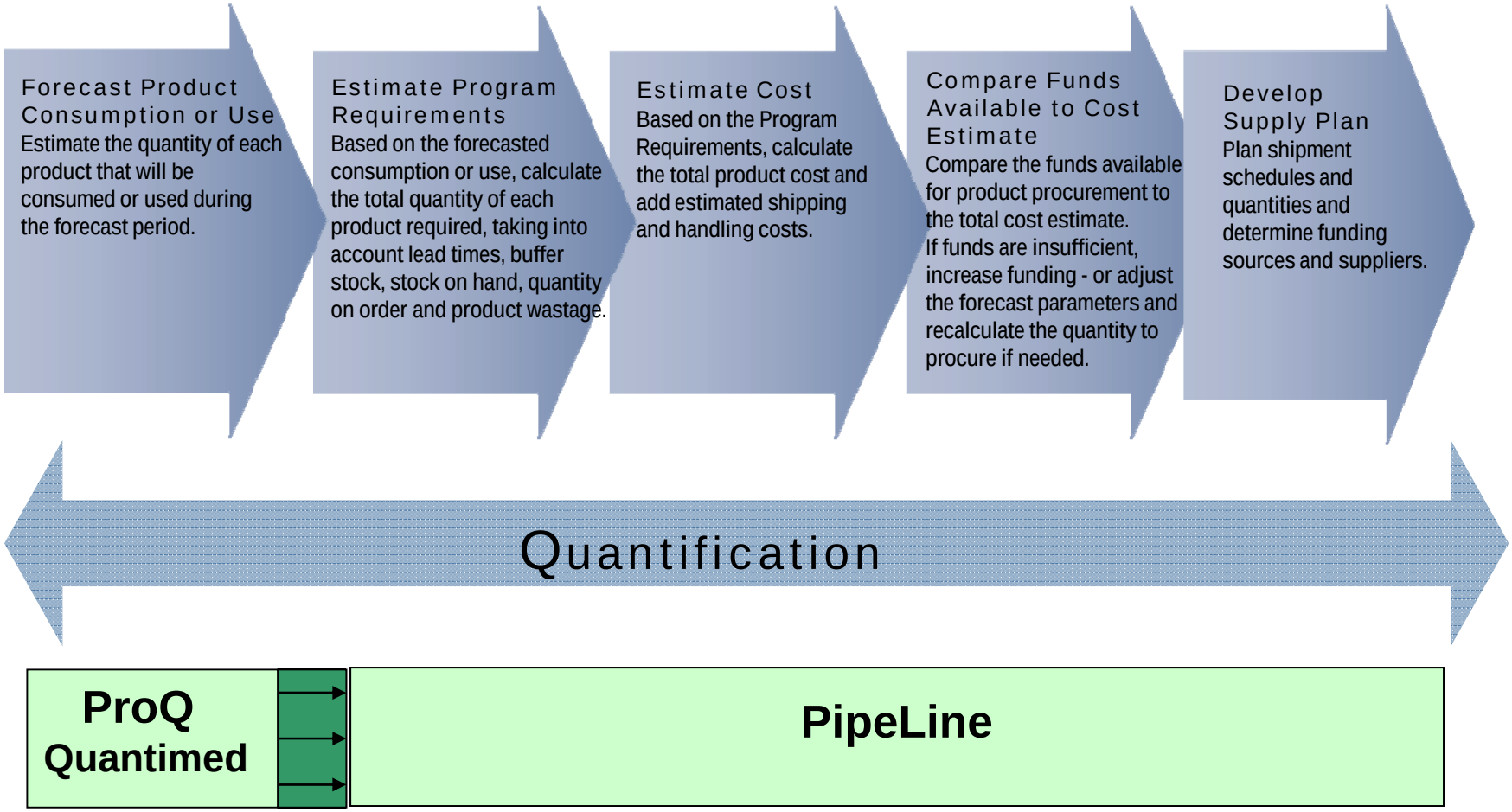
- Critical to determining that the right products, in the right quantities are procured at the right time and for the right cost

- Informs manufacturer production decisions

Purpose of Quantification

- Assures product selection according to STGs and regulatory requirements
- Informs decisions on quantities, cost and timing of procurements
- Facilitates mobilization and allocation of financial resources
- Enhances timely procurement and shipment delivery planning
- Serves as an advocacy tool for supply chain improvements

Quantification Process



Forecasting Methodologies

1. Consumption-based methodology

Estimates of the quantity of each product that will be used during forecast period based on past use and expected future use

2. Morbidity-based methodology

Estimates of the number of people expected to receive treatment/services during the forecast period and application of STGs/testing protocols to arrive at the quantity of each product needed

Types of Data

- Consumption data
  - Quantity of products actually dispensed or used
- Service statistics data
  - Program/facility based data on number of visits or number of services actually provided, number of people actually tested or number of cases treated
- Demographic/morbidity data
  - Population based estimates of number of people with a condition, no. people requiring or accessing services, or no. of cases to be treated based on incidence or prevalence rates
- Program target data
  - Number of people to be tested set as program target or determined by available resources

Forecasts based on ...

- Consumption data
- Service statistics data
- Demographic/morbidity data
- Program target data

Adjusted for ...

- Service delivery capacity
- Storage and distribution capacity
- Budget/funding available

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CASE STUDY

CHALLENGES IN FORECASTING ARV DRUGS

Forecasts Using Consumption Data

Advantages

- Reflects actual use of each commodity
- Few assumptions needed
- Easy to understand
- Easy to prepare
- Accounts for program capacity limitations

Disadvantages

- Requires historical data
- Inaccurate if oversupply or stockouts
- Assumes future same as past
- Does not account for changing program plans

Forecasts Using Service Statistics Data

- <u>Advantages</u>
- Easy to understand
- Accounts for program capacity limitations
- Easy to account for changing program plans

- <u>Disadvantages</u>
- Requires historical data
- Inaccurate if service disruptions
- Assumes future same as past
- Requires multiple assumptions (e.g. testing algorithms, STGs)

Forecasts Using Demographic/ Morbidity Data

Advantages

- Independent of service delivery system
- Usable in new programs
- Estimates maximum need
- Data readily available

Disadvantages

- Requires multiple assumptions (e.g. program %, STGs)
- Data may be old
- Does not account for program capacity limitations
- Usually overestimates quantity required

Forecasts Using Program Targets

Advantages

- Easy to understand
- Easy to prepare
- Easy to account for changing program plans
- Politically expedient /useful for advocacy

Disadvantages

- Assumptions often not explicit
- Does not account for program capacity limitations
- Frequently over-estimates quantity required

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Small Group Exercise

QUANTIFICATION OF ARV DRUGS

Challenges in Quantification of ARV Drugs

- Multiple ARV drug regimens
  - Adult vs pediatric regimens
  - 1st and 2nd line regimens
  - Use of other regimens not in STGs
  - ARV prophylaxis (PMTCT, PEP)
  - HIV/TB co-infected
- Single drug substitutions and regimen switches
- Multiple product formulations
- Changing ART guidelines
- New ARV drug products on the market
- Storage and distribution considerations

Challenges in Quantification (1)

- Data availability and quality
- Compliance with STGs/testing protocols
- Multiple uses of product/product substitution
- Need to validate forecast using different types of data and methodologies
- Need to agree on and document forecasting assumptions

Challenges in Quantification (2)

- Forecasted need vs. service capacity
- Forecasted need vs. procurement quantity
- Multiple sources of funding for a product, may be designated for a specific use only
- Need to reconcile need with available funding
- Quantification as tool for advocacy and resource mobilization

Recommendations (1)

- Invest time and effort in defining scope, purpose, and outputs of the quantification in advance
- Coordinate quantification with budgeting and procurement cycles
- Coordinate multiple sources of funding, funding amounts and different disbursement schedules

Recommendations (2)

- Prepare medium-term forecasts of commodity needs (2 years)
- Use different types of data and forecasting methodologies
  - Compare forecasting results using different forecasting methodologies and at least two different types of data
  - Use informed assumptions to determine final forecast quantities
- Adjust for changes in ART regimens and ARV drug selection

Recommendations (3)

Engage in consultative process

- Seek and ensure participation and collaboration of wide range of stakeholders (program managers; government officials; donors; implementing partners; commodity managers; service providers; clinical, laboratory, and pharmaceutical experts, counselors)
- Obtain consensus on forecasting assumptions
- Reconcile quantity of products to be procured with funding constraints

Recommendations (4)

- Adjust quantities to procure to cover procurement and supplier lead times, buffer stock and to account for quantities on order
- Review and update ARV quantifications at least every six months
- Use quantification as tool for advocacy and resource mobilization

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Thank you for your participation !