

# No Product? No Program.

## Supply Chains—the missing link in HIV/AIDS programs

### Introduction

The success of health programs is dependent on their ability to reliably and consistently supply the essential commodities to support service delivery. Effective HIV/AIDS programs rely on having a range of commodities available to the intended consumer for both prevention and treatment. This requires a strong supply chain (see figure 1).

An effective supply chain ensures the “six rights” for product distribution and is essential to program success—without it, programs cannot succeed or even survive.

Supply chain improvements increase program impact, enhance quality of care, and improve cost-effectiveness.

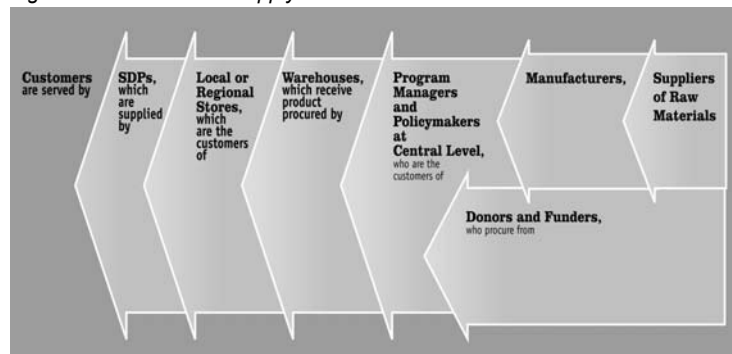
#### The Six Rights

The right product  
in the right quantity  
in the right condition  
in the right place  
at the right time  
for the right cost.

### Background

Most organizations only pay attention to the supply chain when it stops working. For HIV/AIDS programs, it is especially critical that the supply chain servicing the commodities ensure that there are *no stockouts* at the dispensing point, because partial treatment can quickly result in drug resistance.

Figure 1. Public Sector Supply Chain



SDP=Service Delivery Point

### Findings for the MAPs

In reviewing the MAP project appraisal and information documents, several issues were identified that could limit success if they are not properly planned.

#### Hundreds of commodities support HIV/AIDS programs

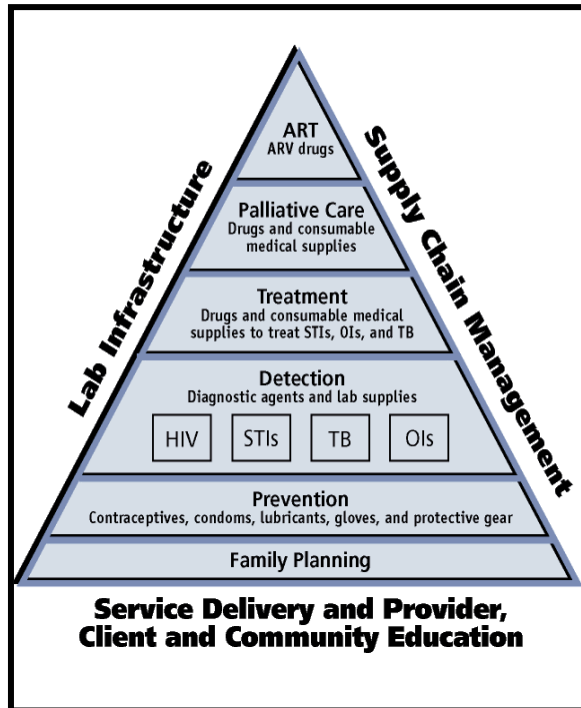
Most of the MAPs include a range of interventions for prevention, care, and treatment. These programs require more than 120 distinct products.

In most of the MAPs, the following programs were usually listed:

- HIV/STI prevention
- VCT
- Blood safety
- PTMCT
- Clinical diagnosis
- Sentinel surveillance
- Detection and treatment of STIs and opportunistic infections
- TB
- Malaria
- Anti-retroviral therapy.

Figure 2, the pyramid, illustrates the range of programs and commodities, and the infrastructure required for the programs.

Figure 2. Comprehensive HIV/AIDS Program



Preventive products must still be the basis for any HIV/AIDS program. The other interventions, and the products that support them, build on this base.

### **HIV/AIDS project implementation is complex**

In addition to all the complexities that impact the management of other health commodities—contraceptives, vaccines, and essential drugs—the HIV/AIDS products add more challenges.

- To support service delivery, a functioning laboratory infrastructure.
- A streamlined supply chain that can deliver the products to the dispensing unit before they expire or are diverted.

- A service delivery for HIV/AIDS—most systems are in their infancy.
- A set of inter-dependent comprehensive services.
- Because most community members may not have the skills to manage the products, additional planning and coordination is required to decentralize the interventions to the community level.

### **Scaling-up has caused a large infusion of commodities**

A growing proportion of resources are being spent to procure products. Many countries are experiencing a large infusion of commodities, as a result of funding from MAPs and Global Fund. In many cases the products are new that the MOH have never managed.

In many cases, the supply chain has not been included in the scaling-up process. Existing distribution systems that worked well for smaller volumes and fewer products are collapsing under the weight of the new requirements.

### **Service levels or total number of people to benefit usually not defined in project documents**

Lack of this basic information makes it difficult to forecast or plan the total quantity of commodities required. The location of the people to be served also impacts the type of logistics systems design required to support the program.

### **In-country logistics management frequently not described in the project document**

Most of the projects have no description of the supply chain that will be required to support the commodity distribution. In many cases, managers may erroneously assume that the existing systems will be used or that the host governments have planned it.

Because of the special requirements for HIV products, many of the current operational logistics systems may not be appropriate. Logistics systems in the public sector in many developing countries are organized to suit the administrative set-up in the country rather than for efficiency.

**Typical public sector supply chains are not appropriate**

Many of the public sector supply chains in African countries have 3–5 tiers of distribution levels. This has a major impact on the length of the pipeline, which can span from 14 months–21 months. Long pipelines directly impact the amount of inventory the system has to carry to meet its service levels. These systems are no longer appropriate for HIV/AIDS products because expense and short shelf-life of some of the products. HIV/AIDS supply chains need to deliver directly to the consumer with the least number of tiers.

**Commodity planning can result in a successful program**

The following are the minimum questions that need to be addressed when planning for successful commodities.

**Product selection**

Has the program identified the list of products it has committed to making available at all times?

**Forecasting**

Do the forecasts account for the service capacity of the program?

**Procurement**

Do procurement plans consider inventory levels, shipping schedules, and anticipated changes in program activity?

**Warehouse and Storage**

Does the storage capacity meet the current needs?

**Inventory Control**

Are inventory control procedures in place?

**Ordering**

Are ordering procedures put in place?

**Transportation**

Are transportation resources adequate, maintained, and used effectively?

**Logistics Management Information System**

Is an LMIS in place and does it gather, aggregate, and report consumption data?

**Human Resources**

Does the organization have a logistics unit with adequate staff and budget?

**Policy**

Are financial resources allocated to manage the logistics systems?

**Support Services**

The HNP/Quality team can provide assistance in conducting supply chain assessments; and providing planning tools, guidelines, advice, and training.

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## **Examples of Supply Chain Failures**

### ***Think about the whole package***

In one country, the National Blood Safety receives 40 percent of its operating budget from the European Union. These funds are used to procure HIV/ELISA, hepatitis B, and syphilis test kits for testing donated blood. The remaining 60 percent of its funding is received through budgetary allocations from the MOH to purchase supplies, such as blood bags, reagents, etc. Due to delays in government disbursements, NBTU was stocked out of blood bags in May 2002. Adequate stocks of tests were available, but safe blood was unavailable because blood bags were unavailable.

### ***Product selection should be based on customer requirements***

Customers have little voice in the selection process. In one program, Bionor was chosen as the screening test for VCT. Bionor is a test that is arguably a “semi” rapid rather than a simple rapid. It requires equipment, cold chain, and special training. The program has only been able to distribute 60,000 of 180,000 units purchased between May and September 2002, because not enough providers were trained or there were no refrigerators at service delivery points.

### ***Forecasts based on demographic and morbidity data only***

The main reason for overestimating commodity requirements is basing estimates solely on need rather than on services actually provided. Morbidity and population-based data are very appropriate starting points for a quantification exercise, but such estimates must be compared both with historical levels of services and the maximum service delivery capacity of the system.

### ***Infrequent shipment can lead to waste***

The easiest way to minimize both procurement and delivery costs is to send everything in a single annual shipment. However, this won't work for products with a six-month shelf-life.

### ***Registration can be lengthy and can result in supplies rotting on the dock***

WB rules specify that the product does not necessarily have to be registered in-country prior to submitting a bid. However, in many countries this process can take from six months to two years. Currently, although the products are stocked out, several procurements are on hold in several countries for TB and STI products because of the lengthy registration process.

### ***Having all the supplies delivered before the end of the contract causes waste***

Commodity requirements under a multi-million dollar contract were overestimated based on morbidity data. To add to the problem, a contractual requirement required that all products be delivered during the first 15 months of an 18-month contract. Annual consumption is well below the estimated levels, and enormous losses are likely.

### ***Warehouse space and capacity needs to be included in procurement decision making***

In another country, 200,000 RPR syphilis screening kits were delivered, but none of the recipient programs were notified. They did not make advance arrangements for cold storage or contract for storage and distribution.

### ***Technology is rapidly changing***

HIV test kits is a dynamic field with new technology emerging continuously, with resultant rapid price changes. This raises the question of whether long-term contracts are advantageous for a country for such items as it locks in the quantity (which is difficult to predict) and the price, which could drop by up to 50 percent in one year.