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# MANAGEMENT OF HIV & AIDS COMMODITIES IN ZIMBABWE

## A CAPACITY ASSESSMENT OF NATPHARM AND MINISTRY OF HEALTH AND CHILD WELFARE



**JULY 2006**

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A CAPACITY ASSESSMENT OF NATPHARM AND  
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## **DELIVER**

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Implemented by John Snow, Inc. (JSI) (contract no. HRN-C-00-00-00010-00) and subcontractors (Manoff Group, Program for Appropriate Technology in Health [PATH], and Crown Agents Consultancy, Inc.), DELIVER strengthens the supply chains of health and family planning programs in developing countries to ensure the availability of critical health products for customers. DELIVER also provides technical management of USAID's central contraceptive management information system.

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## **Abstract**

The Zimbabwe National HIV & AIDS program is rapidly evolving with the expansion of HIV counseling and testing (CT), prevention of mother-to-child transmission (PMTCT), prevention of opportunistic infections (OI) and antiretroviral therapy (ART) services. ARV drugs and related HIV & AIDS commodities are currently in short supply, but there is anticipation of a massive arrival of these products in the next few years. In the absence of a well defined supply chain management system for the commodities which are currently available, the National HIV & AIDS Program faces enormous challenges in managing the quantities of products that will arrive soon.

DELIVER was contracted to assist the Ministry of Health and Child Welfare (MOHCW) to assess the current capacity of NatPharm, the AIDS & TB Unit, and Department of Pharmaceutical Services to manage HIV & AIDS commodities and to provide appropriate recommendations for building capacity in and harmonizing the functions of the three entities to improve commodity security. The assessment determined a need to improve coordination and collaboration of logistics activities between the three groups and strengthen the logistics management capacity of NatPharm and the DPS. The MOHCW is encouraged to hire two HIV/AIDS Logistics Focal Persons supported by donor funds for NatPharm and DPS and create an interim HIV/AIDS logistics subunit within NatPharm comprised of three full-time staff - the NatPharm HIV/AIDS Logistics Focal Person as the coordinator and two logistics officers seconded from the AIDS & TB Unit.

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# ACRONYMS

ART	Antiretroviral therapy
AIDS	acquired immune deficiency syndrome
CT	counseling and testing
DFID	British Department for International Development
DPS	Department of Pharmaceutical Services
ESP	Expanded Support to the Zimbabwe HIV and AIDS Program
EU	European Union
GFATM	Global Fund to Fight AIDS, Tuberculosis and Malaria
GMS	Government Medical Stores
GOZ	Government of Zimbabwe
HIV	human immuno deficiency virus
JSI	John Snow, Incorporated
M&E	monitoring and evaluation
MCAZ	Medicines Control Authority of Zimbabwe
MOHCW	Ministry of Health and Child Welfare
NAC	National AIDS Council
NAFT	National AIDS Trust Fund
NatPharm	National Pharmaceutical Company
NGO	Non-Governmental Organization
NVP	nevirapine
OI	opportunistic infections
PHC	primary health care
PMD	Provincial Medical Director
PMTCT	prevention of mother-to-child transmission
SDP	service delivery point
STI	sexually transmitted infection
TB	tuberculosis
UNDP	United Nations Development Program
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
VCT	voluntary counseling and testing
WHO	World Health Organization
ZACH	Zimbabwe Association of Church-Related Hospitals



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We are hopeful that the recommendations of this assessment will help NatPharm and MOHCW improve their capacity to manage HIV/AIDS commodities to ensure the continuous availability of these products to all those who need them.

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# EXECUTIVE SUMMARY

The Zimbabwe National HIV & AIDS program is rapidly evolving with the expansion of HIV counseling and testing (CT), prevention of mother-to-child transmission (PMTCT), prevention of opportunistic infections (OI) and antiretroviral therapy (ART) services. ARV drugs and related HIV & AIDS commodities are currently in short supply, but there is anticipation of a massive arrival of these products in the next few years. In the absence of a well defined supply chain management system for the commodities which are currently available, the National HIV & AIDS Program faces enormous challenges in managing the quantities of products that will arrive soon.

To alleviate this problem, the Government of Zimbabwe Ministry of Health and Child Welfare (MOHCW) took a policy decision to appoint the National Pharmaceutical Company (NatPharm) to store and distribute the HIV & AIDS commodities on behalf of the national HIV & AIDS program. The Ministry is aware that three entities – NatPharm, the MOHCW AIDS & TB Unit and the MOHCW Department of Pharmacy Services (DPS) – are central to the establishment and sustainability of a robust HIV & AIDS supply chain management system. Currently, NatPharm handles the storage, order processing and physical distribution of the products. The AIDS & TB Unit quantifies product requirements, reviews the appropriateness of orders from sites, and monitors the overall HIV & AIDS commodity supply chain. The DPS coordinates facility level pharmacy staff in the management of the essential drugs and HIV & AIDS commodities.

DELIVER was contracted to assist the MOHCW in assessing the current capacity to manage these products and to provide appropriate recommendations for building capacity in and harmonizing the functions of the three entities. The main thrust of the assistance was to determine if NatPharm requires any additional support to what it is already receiving from the GOZ, European Union (EU) and Global Fund Rounds 1 and 5. The specific objectives of the assessment were to:

1. Review the procedures for HIV and AIDS supply chain management, including procurement, storage, distribution, inventory control and logistics management information systems at NatPharm and relevant central level MOHCW units.
2. Review the institutional arrangements for HIV and AIDS supply chain management within NatPharm and the MOHCW AIDS & TB Unit and DPS.
3. Make recommendations to strengthen the institutional capacity for HIV and AIDS supply chain management and improve coordination between NatPharm and relevant MOHCW departments.
4. Conduct a pipeline analysis for ARVs to determine current stock status, consumption levels, and stock on order, compared to future targets estimated by the MOHCW AIDS & TB Unit. Use the results to inform overall recommendations for strengthening NatPharm's capacity.
5. Assist NatPharm in providing a framework for the recruitment and hiring of staff for NatPharm HIV/AIDS logistics function as well as draft a functional statement and job descriptions for the HIV/AIDS Logistics Subunit at NatPharm.

Using a set of questionnaires adapted by the consultants from various DELIVER assessment tools, the team interviewed key informants and stakeholders including the AIDS & TB Unit Chief Coordinator and logistics staff, the Acting Director of the Department of Pharmacy Services, NatPharm Acting Managing Director and staff and donor representatives from the EU, United Nations Children's Fund (UNICEF),

British Department for International Development (DFID), United States Agency for International Development (USAID) and others. The team also reviewed government and partner policy documents and other technical assistance reports and carried out site visits to NatPharm facilities and ART sites in an effort to better understand the current situation and make recommendations on the way forward.

The assessment determined a need to:

- improve coordination of logistics activities between the three entities (AIDS & TB Unit, DPS and NatPharm) involved in the management of HIV & AIDS commodities
- strengthen the logistics management capacity of NatPharm and the DPS
- ensure enhanced collaboration between AIDS & TB Unit, NatPharm and DPS.

In an effort to strengthen the logistics capacity and better coordinate logistics functions, the MOHCW is encouraged to:

- hire two HIV & AIDS Logistics Focal Persons supported by donor funds for NatPharm and DPS
- create an interim HIV & AIDS logistics subunit within NatPharm comprised of three full-time staff - the NatPharm HIV & AIDS Logistics Focal Person as the coordinator and two logistics officers seconded from the AIDS & TB unit.

The subunit, under the direct supervision of the NatPharm Operations Manager, will be responsible for coordinating all logistics functions in the management of HIV & AIDS commodities including forecasting, quantification and inventory management of these commodities. The HIV & AIDS Logistics focal person at DPS and AIDS & TB Unit will interact regularly with the interim subunit for activities such as forecasting and quantification and system monitoring that requires the collaboration of all the above-mentioned entities. The performance of the interim subunit will be reviewed annually and changes made accordingly.

Summary of recommendations:

1. Strengthen the staffing of the DPS in terms of both numbers and competence to enable the Department to execute its functions with respect to the management of HIV & AIDS commodities. This would provide DPS with the capacity and capabilities necessary to carry out its proposed functions and achieve strategic objective number six of the *Nationwide ART Provision Plan 2005-2007* cited above. To jump start its activity in the short term a position should be created at DPS for an HIV & AIDS logistics focal person whose principal responsibility is to liaise with all other structures involved with the management of HIV & AIDS commodities, participate in related activities, and coordinate the HIV & AIDS logistics activities in the DPS.
2. DPS should assume co-chairmanship of the Procurement and Logistics Subcommittee of the HIV Care and Treatment Partnership Forum. This would enhance the coordination role the DPS would play around logistics activities as well as provide a forum for coordination between donors and implementers on funding, forecasting and procurement.
3. Establish an interim HIV & AIDS logistics subunit based at NatPharm to build adequate capacity in supply chain management of HIV & AIDS commodities. The Subunit, which will be under the direct supervision of the NatPharm Operations Manager, will be responsible for coordinating all logistics functions in the management of HIV & AIDS commodities including forecasting, quantification and inventory management.
4. Fill appointments to the position of Managing Director as well as that of Finance Manager to improve the motivation and morale of the management of the company.

5. Move two of the three logisticians in the logistics unit of the AIDS & TB Unit to the proposed interim logistics subunit to be based in NatPharm so that they can collaborate actively with logisticians from NatPharm and the DPS to enhance the collaboration of these three structures in managing HIV & AIDS commodities. Their proposed job description can be found in Appendix D.
6. Operationalize the interim HIV & AIDS commodities ordering and distribution subsystem which defines the desired stock levels and ordering intervals as soon as possible to enable the proper management of stocks and prevent stock outs.
7. Utilize the LMIS system and forms designed as part of the Interim HIV & AIDS Commodities Inventory and Distribution Subsystem to capture and report three essential logistics data: stock on hand, consumption and losses/adjustments. The report should be completed by all participating sites and should include essential data collected for all HIV test kits, nevirapine for PMTCT, ARVs, and OI drugs such as Diflucan and Co-trimoxazole.
8. Utilize Pipeline software as a procurement planning tool to complement Navision in stock management especially in maintaining stock within the desired levels and to plan shipments appropriately while efforts are being made to activate the procurement planning component of Navision.
9. Conduct a national forecast and quantification exercise as soon as possible to provide a clearer picture of total national requirements of HIV & AIDS commodities. The forecast should be based on combined consumption, service statistics data and expansion plans including the timelines and should be reviewed quarterly. This is needed for resource mobilization to ensure commodity security.
10. Harmonize procurement plans of different funding sources through information sharing among different donor agencies. This can be done through the already existing Procurement and Logistics Subcommittee of the Partnership Forum.
11. Secure storage space to cater for anticipated increased volume of HIV & AIDS commodities. Calculate the space requirements taking into consideration the interim logistics subsystem design including the maximum stock level at the central level and the refurbishment and use of existing cold rooms to take care of increasing volume of commodities.
12. Secure financing for proper storage and distribution and ensure that the charges are carefully negotiated because of the high cost of ARVs. Any price negotiation based on value should consider possible devaluations in the price of ARVs over time. Payment terms should be strictly adhered to and guaranteed through MOU.
13. In light of the scaling up of ART services, conduct a more detailed assessment of NatPharm's distribution system with specific focus on future transport needs.

The implementation of the recommendations of this assessment will go a long way in strengthening the capacity of the MOHCW and NatPharm to manage the anticipated increased volume of HIV & AIDS commodities and ensure constant availability of these products.



# BACKGROUND

Zimbabwe has a generalized HIV & AIDS epidemic, which ranks as one of the three most severe in the world. In 2004, the AIDS & TB Unit of Zimbabwe's Ministry of Health and Child Welfare (MOHCW) estimated the adult prevalence at 24.6 percent with 1.8 to 2.3 million people living with HIV and AIDS. The number of those who are infected who are currently in need of ART is approximately 342,000, including infants and children. As of April 2006, 24,000 are reported to be on treatment, and 28,000 are wait-listed for ART, largely due to drug shortages. The government's target for enrolling patients on ART for 2006 is 60,000 and 170,000 by the end of 2007.

Government of Zimbabwe established National AIDS Council (NAC) through the Act of Parliament of 1999 to coordinate and facilitate the national multi-sectoral response to HIV and AIDS. It also mandated administration of the National AIDS Trust Fund (NATF), which is collected through the AIDS Levy i.e. the three percent collected from every workers' taxable income and corporate tax. NAC's operations were first governed by The National HIV/AIDS Strategic Framework (2000-2004) and currently by a three-year Strategic Plan (2005-2007) and an operational guideline for HIV & AIDS programs in Zimbabwe.

The Zimbabwe National HIV & AIDS program is rapidly evolving with the expansion of HIV counseling and testing (CT), prevention of mother-to-child transmission (PMTCT), management of opportunistic infections (OI) and antiretroviral therapy (ART) services. ARV drugs and related HIV & AIDS commodities are currently in short supply, but there is anticipation of a massive arrival of these products in the next few years. In the absence of a well defined supply chain management system for the commodities which are currently available, the National HIV & AIDS Program faces an enormous task of managing the quantities of products that will arrive soon.

To alleviate this problem, the MOHCW took a policy decision to appoint the National Pharmaceutical Company (NatPharm) to store and distribute the HIV & AIDS commodities on behalf of the national HIV & AIDS program. The MOHCW is aware that three entities – NatPharm, the AIDS & TB Unit and the Department of Pharmacy Services (DPS) – are central to the establishment and sustainability of a robust HIV & AIDS supply chain management system. Currently, NatPharm handles the storage, order processing and physical distribution of the products which include ARVs, HIV Test Kits and drugs to treat opportunistic infections (OIs). The AIDS & TB Unit quantifies product requirements, reviews the appropriateness of orders from sites, and monitors the overall HIV & AIDS commodity supply chain. The DPS coordinates facility level pharmacy staff in the management of the essential drugs and to lesser extent HIV & AIDS commodities. To ensure that NatPharm and the MOHCW are well equipped to perform these tasks, DELIVER was contracted to assist the MOHCW in assessing the current capacity to manage these products and to provide appropriate recommendations for building capacity in and harmonizing the functions of the three entities. The main thrust of the assistance is to determine if NatPharm requires any additional technical support to what it is already receiving from the Government of Zimbabwe (GOZ), European Union (EU) and Global Fund Rounds 1 and 5.

## SCOPE OF VISIT

The overall purpose of the technical assistance visit was to assess the current capacity of NatPharm to manage HIV & AIDS commodities including ARVs, HIV Test Kits and drugs to treat OIs on behalf of the MOHCW. Ultimately the purpose was to make recommendations for strengthening NatPharm capacity and ensure that the efforts of NatPharm, AIDS & TB Unit, and the DPS in the supply chain management of HIV & AIDS commodities are carefully coordinated. The assessment findings and recommendations will be made available to both NatPharm and MOHCW for appropriate next steps.

The specific objectives of the technical assistance were to:

- Analyze and document the current capacity of NatPharm in terms of strengths and necessary improvements to manage increased volumes and variety of HIV & AIDS commodities; consider procedures for supply chain functions – storage, inventory control, management of logistics information and distribution – as well as physical capacity with respect to storage, cold chain requirements, and staff capacity; develop recommendations for strengthening NatPharm’s capacity in all these areas.
- As part of the NatPharm review, conduct a pipeline analysis for ARVs to determine current stock status, consumption levels, and stock on order, compared to future targets estimated by the MOHCW AIDS & TB Unit. Use the results to inform overall recommendations for strengthening NatPharm’s capacity.
- Review the functions of the DPS related to HIV & AIDS commodities and recommend ways to improve coordination of functions of the DPS, AIDS & TB Unit and NatPharm and determine if there are additional support requirements for the DPS in order to improve its functioning.
- Coordinate with the consultant undertaking a separate review of the organizational structure and functioning of the Logistics Unit at the MOHCW AIDS & TB Unit and jointly recommend how the functions should be organized and improved, including the liaison between that unit and the HIV & AIDS commodities management function or subunit at NatPharm and the MOHCW DPS. Determine with the consultant undertaking the separate review of the AIDS & TB Logistics Unit if there are additional staffing requirements, technical assistance support or other support requirement for that unit to improve its functioning.
- Assist NatPharm in providing a framework for the recruitment and hiring of staff for NatPharm HIV & AIDS logistics function as well as draft a functional statement and job descriptions for the HIV & AIDS Logistics Subunit at NatPharm.

More details on the Terms of Reference can be found in Appendix A.





# ASSESSMENT METHODOLOGY

The team was made up of four consultants and collaborated with logistics staff of the AIDS & TB Unit during the site visits to ART facilities and NatPharm branches. To facilitate the assessment, the team developed a questionnaire directed at the different stakeholders including donors, program managers, technical staff and other implementing partners. The team also carried out extensive document review and interviewed key informants and stakeholders including AIDS & TB Unit Chief Coordinator and logistics staff, the Acting Director of the Department of Pharmacy Services, NatPharm Acting Managing Director and staff and donor representatives such as EU, UNICEF, British Department of International Development (DFID), and United States Agency for International Development (USAID) (see Appendix B for the schedule of visits).

Specific activities carried out by the team included:

- Collected and reviewed government and relevant partner (e.g. NatPharm) policy and program documents.
- Met with NatPharm management team to determine key background information for the assessment, including strategic priorities, and agreed on activities for assessing the organization's physical, human and systems capacity.
- Conducted interviews and meetings with relevant NatPharm staff at headquarters and paid site visits to the two regional and six branch stores to identify and document current procedures, systems and physical and staff capacity. This was also done at selected facilities providing ART.
- Visited the warehouse of Geddes Limited, Zimbabwe to assess stock status of HIV & AIDS commodities stored by DELIVER and donors.
- Collected data and conducted pipeline analysis to determine the stock status of ARVs in country.
- Met with MOHCW /AIDS & TB Unit General Coordinator and other relevant staff to obtain information on future targets for ART and other HIV & AIDS program expansion goals, in an effort to understand both service and patient expansion plans and timeframes, and collect information on current plans for funding and procurement of ARVs.
- Met with staff of the Logistics Unit at the MOHCW AIDS & TB Unit to identify strengths and existing capacity in HIV & AIDS commodity management, and determine improvements required to perform functions as the program expands.
- Met with the acting Director of Pharmacy Services to identify issues related to management of HIV & AIDS commodities and coordination with the AIDS & TB Unit and NatPharm, and to identify technical assistance support or other support required for the DPS to improve its functioning.
- Conducted a gap analysis of NatPharm, identifying existing strengths and opportunities for improvement and made recommendations as requirements for logistics management of HIV & AIDS commodities increases in volume and complexity.
- Participated in a workshop organized by MOHCW to discuss the planned Expanded Support to the National HIV and AIDS Program, which brought together various stakeholders.

The assessment of NatPharm's capacity to manage HIV & AIDS commodities focused on procurement, receiving, inventory control, storage procedures and storage space available, order picking, packaging and distribution. The team met daily to discuss accuracy and consistency of findings and where necessary further contacts were made to validate the information gathered. At the end of the assessment, the team presented its preliminary report on findings and recommendations to the MOHCW.





# CURRENT SITUATION AND RECOMMENDATIONS

## **PROVISION OF ART AND CHALLENGES**

To scale up ART in Zimbabwe, the MOHCW is using a phased district approach by gradually adding sites that had been assessed and found to have the capacity to provide ART. The provision of ART services was initiated in five sites in 2004 and has gradually expanded since then based on capacity. Currently there are 55 sites providing ART services around the country with a total of approximately 24,000 patients in the public sector. The current ART sites include central hospitals, provincial hospitals, district hospitals, local authority hospitals and mission hospitals. In May 2002, the government of Zimbabwe declared the lack of access to ART an emergency to last for five years and a legal framework was put in place following the TRIPS agreement to facilitate access to ART. In this regard, patent laws were amended to allow for parallel importation and compulsory licensing for the manufacture of generic AIDS drugs. Varichem Pharmaceuticals, Ltd, a Zimbabwean pharmaceutical company, has started local production of generic ARV drugs for government and private sector use while another local company, Datlabs, imports most of the country's ARVs from Indian supplier, Ranbaxy.

Since the initiation of ART services in Zimbabwe, the government has shown the political will and commitment to ensure that ART services are made accessible to the population by mobilizing and making resources available for the implementation of the program. In 2003, the government provided a budget line for the ART program with the appropriation of about Z\$2.5billion (US\$714,000) and an additional Z\$10billion (US\$2.9million) in 2004. The budgetary allocations subsequently increased to Z\$30billion in 2005 and Z\$83billion in 2006. Despite these allocations, procurement of HIV & AIDS commodities has been severely affected by delays in disbursement of the allocated funds from central treasury. The real value of the budgetary allocations has also been critically reduced by worsening inflation and acute shortage of foreign currency to import the drugs or raw materials for drug manufacturing.

## **SOURCES OF FUNDING FOR PROCUREMENT OF HIV & AIDS COMMODITIES**

The GOZ central treasury is the principal funding source for the national programs. Additional domestic funding for HIV & AIDS program is derived from NATF, which is drawn from 3 percent income tax levy administered by the NAC. Funds from budgetary allocations to the MOHCW have been used for local procurement through Varichem. Due to the current shortage of foreign currency, it has been difficult for Varichem to manufacture more drugs as it requires foreign currency to import the raw materials needed. Varichem is currently undergoing refurbishing in preparation for a prequalification inspection by a WHO team. A tender floated by NatPharm on behalf of the MOHCW in the amount of Z\$23 billion is still to be finalized due to the lack of foreign currency. In a bid to overcome the acute lack of foreign currency to procure commodities, NAC entered into an understanding with WHO and UNICEF in October 2005. Under this understanding, WHO and UNICEF agreed to make available to NAC a total of US \$900,000 monthly for the procurement of HIV & AIDS commodities, in exchange for the equivalent in Zimbabwean dollars to be provided by NAC. For a potential sum of US \$5,400,000 in foreign currency to be provided by WHO and UNICEF during the last six months, NAC has been able to come up with only a total equivalent of US \$1,495,236 in Zimbabwean dollars. This amount has been used by NAC to procure ARVs.

## PARTNER SUPPORT OF THE ART PROGRAM

The government's plan for scaling up ART services has received tremendous support from various partners and from the donor community as a whole. There has been support from partners through the recruitment and training of staff, payment of staff salaries, strengthening health systems and procurement of commodities. There currently exists an HIV Care and Treatment Partnership Forum that has as part of its activities, monitoring the functioning of the logistics system with a goal of ensuring the continuous availability of HIV & AIDS commodities. This is done through the Procurement and Logistics subcommittee. Membership of the forum includes donors, various entities of the MOHCW including AIDS & TB Unit and the DPS, NatPharm and other stakeholders. The Subcommittee is currently chaired by the AIDS & TB Unit. Table 1 shows the different partners and areas of support to the national ART program.

**Table 1. Partner Support to the Components of the National ART Rollout Plan**

Area of Support	Technical Assistance, Capacity Building, Training	Drugs	Lab Support	Human Resources	Logistics	Communications and Coordination	Policy	Direct Site Support and Service Delivery	Other
UNICEF	X				X				HBC
UNAIDS						X	X		
EU		X			X				ESP
UNDP	X					X			ESP
USG	X	X	X	X	X	X	X		
GFATM	X	X							
DFID									ESP, HBC
WHO	X			X			X		ESP
MSF/Luxembourg	X	X						X	
MSF/Spain	X							X	
CESVI (ISPED,COSV)		X						X	
EGPAF	X						X	Linking PMTCT	
ZACH						X	X	X	
Red Cross		X							HBC
JSI	X	X			X				Site assessments

*Courtesy: JSI Assessment Report April 2005*

Partner support to the HIV & AIDS program is provided below.

### Global Fund Round 1

The Principal Recipient for the Global Fund Round 1 is UNDP and the procurement agent is UNICEF. A total of USD14.1 million was approved for the support of HIV & AIDS activities for a period of two years. Some of the funds disbursed in Round 1 were used to procure ARV drugs and HIV test kits in 2005. This was meant to support five institutions covering a total of 7,000 patients. All commodities

procured are stored in NatPharm regional stores in Harare and distributed by NatPharm to the various facilities (see table 3).

### **Global Fund Round 5**

The award for Round 5 comes to a total of US\$62.5million for HIV & AIDS activities. The Principal Recipients are National AIDS Council (NAC) and Zimbabwe Association of Church-related Hospitals (ZACH). The Round 5 funds are meant to support 22 districts and put a total of 40,000 patients on ART for a period of two years, 15,000 patients during the first year and 25,000 more during the second year. The procurement agent for Global Fund Round 5 is the NatPharm/Crown Agents consortium.

### **United States Government**

The US Government (USG) through USAID currently supports 550 patients on first line, first line alternate, and second line branded ARVs drugs at four national program sites using JSI/ DELIVER as the implementing partner. The USG provides Efavirenz for general program use. They also provide HIV test kits and nevirapine for PMTCT through CDC. These commodities are currently being stored in Geddes warehouse from where they are distributed to designated facilities as needed.

### **Abbott Pharmaceuticals**

Abbott provides support to the ART scale up plan through the donation of Determine HIV test kits for the PMTCT program. This donation is a part of the international donation program which is managed by Axios International. In country the products are stored and distributed by Geddes Limited, a drug wholesaler, through a contract with CDC.

### **Clinton Foundation**

The Clinton Foundation donated ARV drugs in March 2006 for 1,000 pediatric patients for a period of two years. These drugs are stored and distributed by NatPharm. Eleven pilot sites have been selected to administer these pediatric formulations (see Table 2).

### **British Department for International Development**

DFID is currently involved in supporting the expansion and intensification of Zimbabwe's response to HIV & AIDS in an equitable and integrated manner. This response covers a range of activities related to prevention, treatment, care and mitigation of HIV and AIDS. Efforts are also being made to strengthen key national organizations involved in planning and coordination of the national response, such as the NAC, and the Zimbabwe AIDS Network. DFID through the EU Vital Health Services Support Programme (VHSSP) initiative has allocated about \$1 million for the procurement of ARVs.

### **Expanded Support to the Zimbabwe HIV and AIDS Program (ESP)**

The Expanded Support Program (ESP) is a Donor /MOHCW partnership initiative which has as its goal to establish an appropriate and acceptable mechanism for the mobilization of additional funding for the HIV and AIDS response. This involves the introduction of a common funding mechanism to facilitate a significant increase in the flow of funds to the Zimbabwe HIV/AIDS response. A portion of the funds generated (an estimated US\$16.8 million) are available for the procurement of HIV & AIDS commodities. Donors currently involved in the ESP initiative include DFID, SIDA and CIDA.

### **European Union**

The European Union (EU) has been actively involved in supporting MOHCW with the provision of essential drugs and providing technical assistance to NatPharm on drug management under the Health Sector Support Programme, now completed. The EU and the GOZ recently signed an agreement for a new EU-funded health program. The program will support the vulnerable groups in Zimbabwe for a total amount of 15.8 million Euros.

The 3-year VHSS initiative will be implemented in both rural and urban areas. This program makes provision for the support of 3,000 patients on ARVs for a period of 30 months for an amount of 1.4 million Euros; 400,000 Euros provided by the EU and 1 million Euros provided by DFID. The EU agreement also makes provision for capacity strengthening at NatPharm.

## **UNICEF**

UNICEF was retained by the National AIDS Council as the procurement agent for the implementation of the Global Fund Round 1 grant. UNICEF is also assisting the MOHCW to procure ARVs through a currency swap where the GOZ pays UNICEF in local currency to procure an equivalent quantity of ARVs through its Supply Division in Copenhagen.

## **PIPELINE ANALYSIS AND COMMODITY AVAILABILITY**

The continuous availability of commodities is critical to the achievement of program plans and goals. In assessing the capacity of NatPharm and MOHCW to manage HIV & AIDS commodities, it was critical to look at the commodities currently available in the pipeline including those in the warehouses and the commodities on order. The main purpose of a pipeline analysis is to determine how much stock is available in the pipeline and how long the stock is going to last taking into consideration prevailing consumption trends, number of patients on treatment, the regimens they are on and the program expansion plans. The team found it impossible to carry out a complete national pipeline analysis because although information was supposedly being collected, it was not readily available for use in decision making. Reports from sites were incomplete and did not give enough details on number of patients on treatment and patient breakdown by regimen which made it difficult to depend on them for any analysis. Although some sites had complete information on stock status and consumption, it was difficult to access this information from the majority of the sites that obtained their supplies from NatPharm but report through the AIDS & TB Unit.

In the absence of consumption data from facilities, issues data from the warehouse to facilities can be used as a proxy for consumption to determine how long stocks will last. Unfortunately the issues data at NatPharm was also incomplete. Thus, the assessment focused on product availability for each storage facility by source of funding. This was done exclusively for antiretroviral drugs.

Information was collected on the commodities available at the NatPharm warehouse where commodities for Global Fund Round 1, Clinton Foundation and MOHCW are being stored, and Geddes where commodities from USG were being stored. Although information required included stock received during the last six months, issues from the warehouses to the facilities during this period, stock on hand as at the day of the visit and reports from facilities on their stock balances and consumption, the information that was actually available and collected was on stock available at the time of visit. The results are tabulated below in tables 2 – 5.

**Table 2: Clinton Foundation Stock available at NatPharm on April 30th 2006**

<b>Description</b>	<b>Pack Size</b>	<b>Quantity</b>
Lamivudine 150mg tabs	B/60	116
Nevirapine 200mg tab	B/60	2,394
Stavudine 20mg caps	B/60	2,895
Stavudine 30mg caps	B/60	965
Zidovudine 100mg tabs	B/60	265
Zidovudine 300mg tabs	B/60	29
Zidovudine oral solution	B/100ml	823
Lamivudine oral solution	B/100ml	7,490
Nevirapine oral solution	B/100ml	8,928
Stavudine 15mg caps	B/60	2,136

The pediatric drug formulations in table 2 were donated by the Clinton foundation and are meant to support patients at 11 designated ART sites. As at the time of this report, complete information on the distribution of the drugs to the various facilities and which facilities had received the drugs was not available. It is difficult to say how long the stock is going to last because information on how many patients will be treated was not also available; it is not yet clear how fast the sites will enroll patients on these drugs. Nevertheless the Clinton Foundation has indicated that it can supply additional pediatric formulations if there is rapid uptake of this first shipment of drugs.

**Table 3. Global Fund Round 1 Drugs (UNDP) Stock available at NatPharm on April 30th 2006**

<b>Description</b>	<b>Pack Size</b>	<b>Quantity</b>
Didanosine 100mg Tabs	B/60	720
Efavirenz 600mg Tabs	B/30	1,384
Lopinavir/Ritonavir caps	B/180	663
Triomune 30 tabs	B/60	818
Triomune 40 tabs	B/60	689
Stavudine 30mg+Lamivudine150 tabs	B/60	290
Stavudine 40mg+Lamivudine150 tabs	B/60	143
Zidovudine 300mg tabs	B/60	721

The Global Fund Round 1 drugs are meant to support five ART sites with a total of about 7000 patients for a period of two years. Information on the patient regimens and percentage breakdown among regimens was very scarce.

**Table 4. MOHCW Stock available at NatPharm on April 30<sup>th</sup> 2006**

<b>Description</b>	<b>Pack Size</b>	<b>Quantity</b>
Efavirenz 600mg tabs	B/30	2,605
Didanosine 100mg tabs	B/60	750
Lamivudine 150/Zidovudine 300 tabs	B/60	308
Nevirapine 200mg tabs	B/60	343
Claudine 40 + Lamivudine + Nevirapine	B/60	8,100
Stavudine 30 + Lamivudine 150 + Nevirapine 200 tabs	B/60	10,430
Stavudine 30 +Lamivudine 150 tabs	B/60	4,204
Stavudine 40 +Lamivudine 150 tabs	B/60	4,113

The drugs on table 4 were procured using GOZ funds and meant to support some designated sites. These drugs were procured through UNICEF as the procurement agent. The number of patients to be treated by this stock of drugs was not available.

**Table 5. USG Stock available at Geddes as of May 10<sup>th</sup> 2006**

<b>Description</b>	<b>Pack Size</b>	<b>Quantity</b>	<b>Months of Stock</b>
Epivir (Lamivudine) 150mg tabs	B/60	3,083	<b>8</b>
Kaletra (Lopinavir/Ritonavir) Caps	B/90	240	<b>7</b>
Retrovir (Zidovudine) 300mg tabs	B/60	0	<b>0</b>
STOCRIN (Efavirenz) 600mg tabs	B/30	2,335	<b>4</b>
Videx (Didanosine) 200mg caps	B/60	91	<b>14</b>
Videx (Didanosine) 50mg caps	B/60	37	<b>25</b>
Viramune (Nevirapine) 200mg tabs	B/60	6,273	<b>26</b>
Zerit (Stavudine) 30mg caps	B/56	930	<b>4</b>
Zerit (Stavudine) 40mg caps	B/56	1,652	<b>8</b>

The drugs available at Geddes are meant to support five ART sites. Information on consumption from the facilities was available and a pipeline analysis produced the above-mentioned results. It should be noted that at the time of this report, some of the drugs on order were expected in country.

Procurement of drugs from Global Fund Round 5 award is in the process and is being executed by the NatPharm/Crown Agents Consortium.

It is expected that with implementation of the interim HIV & AIDS logistics sub system, patient data including number of patients on treatment and the regimens they are on, consumption data and service data will become more readily available for use in decision making including a more complete pipeline analysis.

# INSTITUTIONAL FRAMEWORK INVOLVED IN THE MANAGEMENT OF HIV & AIDS COMMODITIES

## DEPARTMENT OF PHARMACY SERVICES

The team met with the Head of the Department of Pharmacy Services, who highlighted the current functions and responsibilities of the department. At the time of the assessment, the department was almost completely depleted of staff. This hampers its smooth functioning and impedes the department from carrying out its responsibilities. There are currently four pharmacists in the whole department; two from the Government of Zimbabwe and two seconded from the international NGO, Pharmacists without Borders. The two expatriate pharmacists are currently assisting in revising the national drug policy, the essential drug list and the training of trainers. They will depart in June 2006 when the program of assistance ends. In principle, the Directorate of Pharmacy Services doesn't exist; what is currently known as the DPS is just a skeleton of the former directorate. There is no clear documentation of the objectives and responsibilities of the DPS at the current time but it is assumed that they are supposed to perform a majority of the functions and responsibilities that were performed by the Directorate. Through the recommendation of a European Union consultant, the Government is in the process of reinstating the Pharmacy Services as a Directorate.

The former Directorate of Pharmacy Services had as its mission:

*To improve and sustain, within the available resources, the health of the majority of the population of Zimbabwe by treating, curing, reducing or preventing diseases and conditions through the use of safe, effective, good quality, affordable and accessible essential pharmaceutical products.*

The function was to constitute a fulcrum for the implementation of the Zimbabwe National Drug Policy, whose objectives are:

- To ensure the availability and accessibility of safe, efficacious, cost-effective, good quality and affordable pharmaceutical products to the entire population of the country.
- To promote the rational use of drugs in the public and private sectors through improved information, prescription and compliance by the production and distribution of appropriate drug information materials, continuous training and research activities.
- To promote and encourage further the production of essential pharmaceutical products and raw materials required for these, thus achieving self reliance in Zimbabwe.
- To develop, monitor, regularly review, improve and advocate appropriate drug legislation and regulations with regard to allopathic and traditional medicines.
- To maintain high standards and efficiency in all drug handling activities by ensuring the availability of adequate numbers of well-trained pharmacy personnel and other relevant health workers at all levels of the health system in Zimbabwe.
- To prevent the dumping, proliferation or use of inferior substandard or non-registered or counterfeit drugs in the country.
- To contribute to the control of alcohol and drug abuse through preventive, treatment and rehabilitative measures.

The activities included:

- Strengthening of the DPS as a policy making organ of the Ministry MOHCW as well as its planning and administrative functions.
- Strengthening of the Medicines Control Authority of Zimbabwe (MCAZ) by supporting its strategic plans.
- Reorganization of Government Medical Stores (GMS) for efficient autonomous commercial operation.
- Promotion of Rational Drug Use (RDU) and Information, Education and Communication on medicines.
- Monitoring and evaluation of pharmacy services delivery country-wide.

From the above described function and activities of the former Directorate of Pharmacy Services, it is clear that the current structure is inadequately staffed to even remotely fulfill the mission of this department. This has greatly compromised the department's ability to take leadership in pharmaceutical policy and strategy, monitor the implementation of the national drug policy and provide oversight in both the public and private sector on issues of drug management.

The introduction of ART in Zimbabwe in 2004 provided the DPS, as the supervisory department on all matters relating to pharmaceuticals, the opportunity to play a frontline role in the management of ARVs and other related drugs. The *Plan for the Nationwide Provision of Antiretroviral Therapy 2005-2007* provided a clear role for the DPS in strategic objective number six to ensure the availability of good quality medicines, diagnostics and other medical supplies for HIV and AIDS. This required that the DPS take the lead in most of the activities that were to be carried out in order to achieve the above-mentioned strategic objective. These activities include: the selection and quantification of medicines, diagnostics and other supplies for HIV and AIDS in timely manner, improving the procurement and supply chain management for medicines, diagnostics and other medical supplies for HIV and AIDS, assist in procuring and distribution of these commodities and ensuring the use of quality and safe medicines in Zimbabwe.

With the current low staffing and infrastructural level, the Department is unable to take the lead in the activities mentioned above. The Department's role in the management of HIV & AIDS commodities is currently limited to membership of the National Drug and Therapeutics Policy Advisory Committee and membership of the Procurement and Logistics Subcommittee for HIV & AIDS Partnership Forum which works to ensure the continuous availability of commodities. The DPS currently plays a very limited role in forecasting and quantification, procurement, and inventory management.

**Recommendation 1**

To enable the DPS to execute its functions with respect to the management of HIV & AIDS commodities, the staffing of the department should be strengthened in terms of both numbers and competence especially in the area of commodity logistics. This would provide DPS with the capacity and capabilities necessary to carry out its proposed functions and achieve strategic objective number six of the *Plan for the Nationwide Provision of Antiretroviral Therapy 2005-2007* cited above. To jump start its activity in the short term and to put it back in touch with the management of HIV & AIDS commodities, a position should be created at DPS for an HIV & AIDS logistics focal person whose principal responsibility is to liaise with all other structures involved with the management of HIV & AIDS commodities, participate in related activities, and coordinate the HIV & AIDS logistics activities in the DPS. The logistics focal person in DPS should be provided with adequate support to enable him/her fully participate in HIV & AIDS commodity management activities including field monitoring of facilities.

## **Recommendation 2**

It is also recommended that the DPS assumes co-chairmanship of the Procurement and Logistics Subcommittee of the HIV Care and Treatment Partnership Forum. This would enhance the coordination role the DPS would play around logistics activities as well as provide a forum for coordination between donors and implementers on funding, forecasting and procurement.

## **AIDS AND TB UNIT**

The AIDS & TB Unit MOHCW section is charged with the mandate to coordinate the implementation of the health sector HIV & AIDS response. The Unit covers several technical areas including: HIV & AIDS, TB, STI, PMTCT, Surveillance, AIDS in the Workplace and Monitoring and Evaluation. Each area has an assigned technical coordinator.

### **HIV & AIDS**

To facilitate scaling up of the ART services, the efficient, effective and close coordination of the ART, TB, STI and PMTCT programs is critical. As part of the service expansion, these programs will play important roles as entry points, and/or in ensuring quality care and treatment. The AIDS & TB Unit develops policies, plans, strategies and guidelines for providing antiretroviral therapy as well as coordinates with other implementing partners. Unfortunately the unavailability of foreign currency has delayed the rapid expansion program of ARVs in the public sector health institutions. In 2005, only 20,000 patients have received ART in private and public health facilities. This represents a mere 8.3 percent of the estimated total number of people with advanced HIV infection.

The capacity of the program to ensure commodity security of ARVs and other HIV & AIDS related products has been strengthened through the secondment of three logisticians: two from JSI/DELIVER and one from CDC. The aim has been to secure regular forecasting and quantification of HIV & AIDS commodities as well as closely monitor stocks of ARV drugs at ART sites. However, due to the lack of skilled manpower, these individuals are forced to work on all programmatic areas rather than concentrate strictly on the logistics requirements of the programs.

### **Treatment of Opportunistic Infections**

The Government has made strides in introducing treatment of OIs and in planning for the provision of ARVs. Policies and protocols for the management of HIV & AIDS opportunistic infections were developed in 2003 and continue to be updated. OI clinic services have been established for both adults and children at provincial and district hospitals.

### **Diflucan**

In 2003, the MOHCW started providing Diflucan (fluconazole) in the public sector through the Pfizer Diflucan Program. To date, the program has expanded rapidly to more than 58 health institutions countrywide. The AIDS & TB Unit has not been conducting procurement planning routinely because it lacks the expertise and capacity.

### **Prevention and Control of Tuberculosis**

Zimbabwe is one of 22 tuberculosis high-burden countries worldwide. TB notification rates have steadily risen since 1982 from 68 to 462/100,000 population in 2003. This unprecedented increase in the TB burden can be attributed to an increase in poverty and the HIV epidemic. Amongst TB patients, the estimated sero-prevalence is between 50 to 80 percent. Zimbabwe is currently working at integrating TB and HIV care activities and has 100 percent coverage of the Direct Observed Treatment Strategy (DOTS) on TB.

Although efforts by the Government and civil society are underway to address the impact of the epidemic, the magnitude of the problem and the difficult socio-economic situation pose a severe constraint to scaling-up interventions. The already constrained human resources situation is aggravated by illness and death of government and NGO staff and by retrenchment and resignation from employment in search of greener pastures. Linked to this are commonly-experienced logistical constraints, including shortages of vehicles, spare parts and fuel, which, together with the constraints mentioned above, affects implementation and monitoring of interventions. The single most important challenge facing the national response is the severe shortage of foreign currency.

### **Recommendation 3**

Two of the three logisticians in the logistics unit in the AIDS & TB Unit should be moved to the proposed Interim Logistics Subunit to be based in NatPharm so that they can collaborate actively with logisticians from NatPharm and the DPS to enhance the coordination of these three structures in managing HIV & AIDS commodities. Their proposed job description can be found in Appendix D.

## **NATIONAL PHARMACEUTICAL COMPANY (NATPHARM)**

The NatPharm mission statement reads

*NatPharm is committed to the service of its valued customers through the provision of safe, effective and affordable quality pharmaceuticals and other medical supplies through a dedicated and motivated workforce.*

The company's vision is stated as:

- To be a recognized player in the pharmaceutical and medical supply sector
- To be a key contributor in the reduction of the cost of pharmaceutical and medical supplies in Zimbabwe
- To be a customer-focused and professionally-run organization boasting of a competitively rewarded workforce

NatPharm is composed of office headquarters in Harare, two regional stores in Harare and Bulawayo respectively, and four branch stores in Chinhoyi, Gweru, Masvingo and Mutare. Each regional store is responsible for supplying two of the above branch stores. NatPharm is the officially appointed procurement, storage and distribution agent for the MOHCW.

## **Background**

NatPharm was established as a not-for-profit organization following the Government Medical Stores (Commercialization) Act 2000, which created NatPharm as parastatal entity from the then Government Medical Stores (GMS) which operated as a department in the MOHCW. The Government is the sole shareholder in NatPharm.

The creation of NatPharm arose within the background of the introduction of various economic reform programs in the mid-90s during which the Government rationalized its operations resulting in the commercialization or privatization of some public enterprises. In addition the commercialization of GMS, it also had the objectives of creating a commercially viable business entity free from bureaucracy with reasonable autonomy and able to attract competent manpower through attractive remuneration packages. The establishment of NatPharm under such status was seen as the solution to a stable, efficient, well-managed medical procurement and supply agency that would in the longer term ensure a sustainable supply of quality, affordable essential drugs and other medical commodities.

The transition from GMS to NatPharm was executed smoothly beginning with the putting in place of an appropriate legal structure supported by a Memorandum and Articles of Association, the appointment of a Board of Directors and recruitment of appropriately qualified and experienced personnel to run the company. The company officially took over the functions of the former GMS on the 1<sup>st</sup> October 2001, with management already having in place a business plan to guide the operations of the year 2002.

In formulating strategies for the new organization, management recognized the need to have robust systems in place for the company to operate commercially. In that respect, as stated above, annual business plans have been produced since 2002 to provide strategic direction to the company operations. The first business plan recognized the need for prudent financial management, reliable and accurate costing procedures, effective debt collection and the need to establish a pricing formula as some of the key success factors.

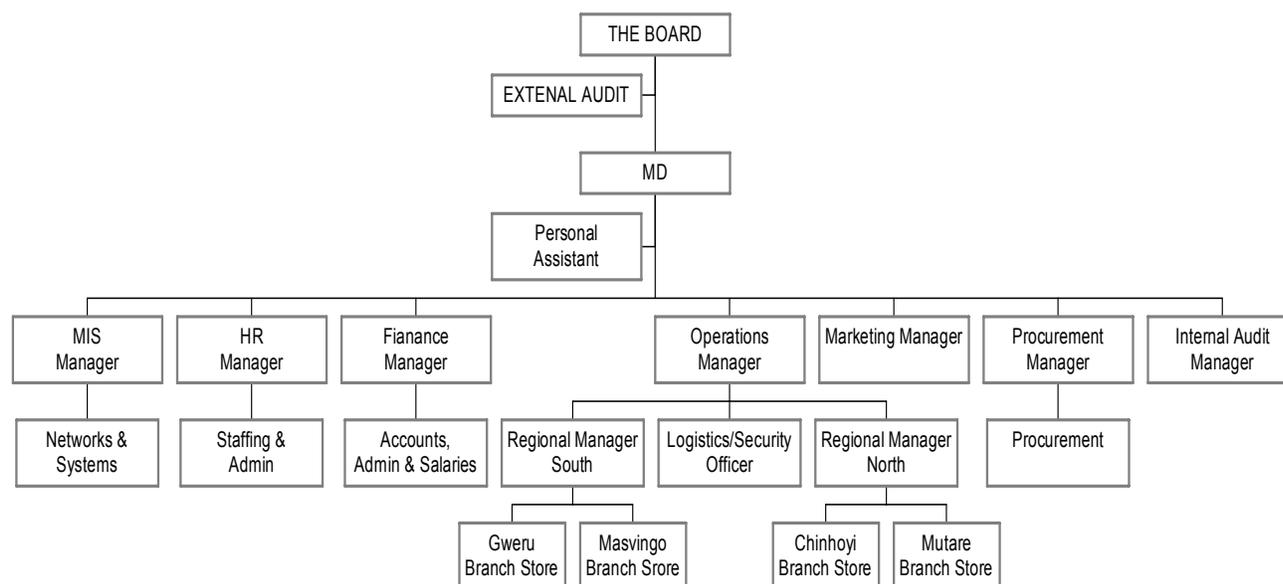
### Corporate Leadership

The policy and strategic direction of the company are provided by a Board of Directors guided by annual strategic business plans. The day-to-day operations of the company fall under a Managing Director appointed by the Board. At present this position is vacant with the Operations Manager in an acting capacity since September 2005.

### Organizational Capacity

The company is organized into functional departments as depicted on the organogram, Figure 1.

**Figure 1. NatPharm Organizational Structure**



### Current Operations

As stated above NatPharm has the primary mandate to procure and distribute drugs and medical supplies to the health institutions in the country. These include referral and central hospitals; provincial hospitals; district, general and mission hospitals as well as all Primary Healthcare facilities.

Most of NatPharm's commodity management activity is related to essential drugs and medical supplies. Financing for the procurement of these commodities within the recent past has come mostly from the European Union for a total amount of 10.6 million Euros during the year 2004 alone. Other sources of funding have included sales of drugs to health facilities for the recapitalization of NatPharm.

## Donor Support to NatPharm

Major donor support to NatPharm has been provided by the EU through the supply of essential drugs and the provision of technical assistance in the areas of financial management, transport study, IT and monitoring and evaluation of the performance of NatPharm in the procurement, storage and distribution of essential drugs.

The EU tenders for the supply of essential drugs has been as follows:

Tender	Value €
Tender 2002	16,677,047
Tender 2003	5,739,765
Tender 2004	7,839,322
Tender 2005/6	8,000,000
<b>TOTAL 2002 - 2006</b>	<b>38,256,134</b>
Tender 2006/7 (VHSSP not yet floated)	10,000,000

## Corporate Business Viability and Sustainability

NatPharm faces a number of challenges, which have a significant impact on its ability to perform effectively:

- delays in payment by MOHCW
- uncertainty in the continued allocation of foreign currency
- remuneration of key staff not keeping pace with the market
- controls on pricing will weaken the company's financial position.

The continued provision of efficient service by NatPharm is dependent on the continued viability and sustainability of the company. The company does not receive grants from the MOHCW for the payment of staff salaries and day to day operational expenses. These costs need to be met from income generated by the company. There was a special arrangement whereby the drugs supplied under EU support could be sold by NatPharm to the MOHCW institutions and the money would go towards the capitalization of NatPharm. The challenge threatening the viability of NatPharm has long been established as the delays in payment by the MOHCW institutions. Compounding this is the high rate of inflation that the country is operating under.

In order to address these threats, there is need to put mechanisms in place that ensure NatPharm is 1) adequately compensated for the services it renders to its customers, and 2) paid on time. At the time of the assessment, the position of Managing Director was vacant as well as that of Financial Manager with no clear timeframe to finalize those appointments.

### Recommendation 4

The team recommends appointment to the position of Managing Director as well as that of Finance Manager to enhance the motivation and morale of the management of the company.

## Involvement in HIV & AIDS Commodities

The ultimate involvement of NatPharm in the procurement, storage and distribution of HIV & AIDS commodities was inevitable since NatPharm is the recognized procurement and supply agent for the GOZ. NatPharm is seen as the most logical and cost effective method that programs involving the MOHCW should utilize. This is supported by its robust management, organizational systems and capacity for delivery. However, it is recognized that the logistics management of HIV & AIDS commodities has its

own unique requirements that entail the need for strengthening NatPharm in those specific areas to adequately equip the company to assume this additional role.

### **NatPharm/Crown Agents Consortium**

The NatPharm/Crown Agents Consortium was formed in February 2006 to create a secure, reliable and sustainable supply chain capability through harnessing the requisite strengths of each separate organization. The Consortium's primary objective is to establish a replicable procurement-plus services model of excellence for GFATM and other similar projects in Zimbabwe. They have been tasked with the procurement and supply chain management for Round 5 of the Zimbabwe GFATM for which they are currently preparing the procurement plan. It is expected that the deploying of the combined strengths will result in considerable improvement in the procurement and logistics systems to support HIV & AIDS initiatives and other health service projects in Zimbabwe.

The consortium office is located at NatPharm HQ and is staffed with dedicated qualified personnel. The combined team offers procurement and total supply chain management of all commodities, goods and services. It is involved in logistics planning, distribution and provision of national warehousing and freight forwarding services.

The team works with the recipients, multi and bilateral donors and the GOZ. It is familiar with the requirements of projects involving GFATM, World Bank, and other donors including their preferred format for procurement plans.

## **LOGISTICS MANAGEMENT OF HIV & AIDS COMMODITIES**

The management of HIV & AIDS commodities includes the procedures that will govern how these commodities are received, stored, handled, distributed to other facilities and issued to users at the service delivery points. This process involving inventory control, storage and transportation should ensure a continuous supply of needed commodities to the patients and other users whenever they are needed.

Securing a dependable, regular supply of HIV & AIDS commodities especially ARV drugs to service delivery points is critical to the success of ARV treatment programs because any interruption to supplies will endanger the lives of the patients due to risk of drug resistance or discontinuation of treatment.

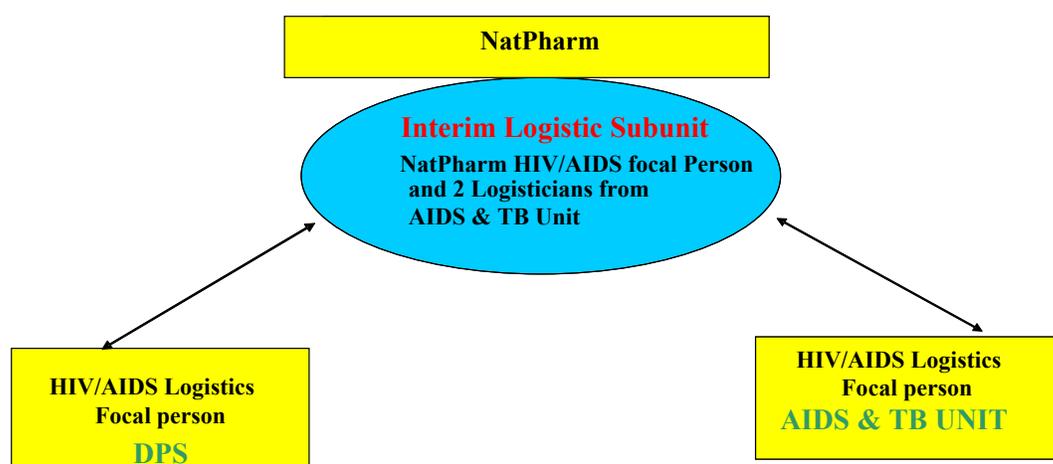
### **COORDINATION AND ORGANIZATION FOR LOGISTICS MANAGEMENT**

While it is the expressed desire by all to coordinate activities of the AIDS & TB Unit, DPS and NatPharm, there is currently no mechanism for harmonizing the efforts of each of these units or their structures. The AIDS & TB Unit manages the ART program, DPS is the titular department with respect to drug management and also the supervisory structure of NatPharm and NatPharm maintains the inventory of essential drugs, and more recently, HIV & AIDS commodities. Their activities intersect from time to time, but there is limited ability to integrate logistics operations to ensure an uninterrupted supply chain of HIV & AIDS commodities.

To build adequate capacity, it is highly recommended that an interim HIV & AIDS Logistics Subunit be established and based in NatPharm. The Subunit, under the direct supervision of the NatPharm Operations Manager, will be responsible for coordinating all logistics functions for the management of HIV & AIDS commodities including forecasting, quantification and inventory management. The AIDS & TB Unit and DPS will work closely with NatPharm on forecasting and quantification while their combined influence will strengthen the day to day HIV & AIDS logistics operations at NatPharm including monitoring of stock status, receiving and analyzing reports from facilities and calculating re-supply quantities for these facilities. Figure 2 illustrates the Subunit and coordination between the three entities.

This interim NatPharm HIV & AIDS Logistics Subunit would be manned full-time by three staff - an HIV & AIDS Logistics Focal Person who will be donor supported and based at NatPharm and two logistics officers seconded from the AIDS & TB Unit. The HIV & AIDS Logistics Focal person based in the AIDS & TB Unit and the one based in the DPS together with the staff of the Subunit would comprise a larger collaborating body focusing primarily on the process of forecasting and quantification and monitoring the performance of the HIV & AIDS interim logistics subsystem. The NatPharm HIV & AIDS Focal Person will coordinate the functions of the logistics subunit in NatPharm.

**Figure 2. Coordinating Structure for Interim Subsystem**



The main objectives and tasks to be undertaken by NatPharm logistics subunit include:

- Communicating logistics information with the HIV Care and Treatment Partnership Forum to enhance resource mobilization, supply chain and procurement planning and decision making. Regular sharing of information such as delayed shipments, stock status, unexpected increases in demand and thus commodity use with members of the forum will enhance the Partnership’s ability to ensure continuous product availability.
- Coordinating amongst stakeholders to conduct and regularly update national forecasts for ARV drugs, HIV tests and other HIV & AIDS commodities. This should include coordinating and improving methodologies for forecasting and quantification of ARVs, HIV tests, and other HIV & AIDS-related commodity requirements, and updating consumption and stock status of these commodities.
- Harmonizing the procurement planning process and aligning procurement based on the availability of funds to ensure appropriate stock levels of HIV & AIDS commodities are available nationally at all times.
- Collaborating with key implementing partners involved in supply chain management of HIV & AIDS commodities to share and use logistics information for day-to-day decision making, enhance the ability of users at all levels of the system to perform logistics functions and ensure the supply chains remain flexible and responsive to changes in the environment. Examples include:

- Participate in the development of procedures for management of ARVs, including procedures for resupply to facilities and a system for monitoring facility stock levels of ARVs.
- Participate in the design and implementation of an LMIS to capture essential logistics data and track product use in the system. Standard forms and procedures should also be instituted for the reporting of service information.
- Develop the procedures on how ARVs and other HIV & AIDS commodities currently stored and distributed outside NatPharm will be integrated into the supply chain for HIV & AIDS commodities stored and distributed at NatPharm.
- Define a set of logistics system performance indicators to monitor the implementation of the ART supply system. Develop procedures for regular monitoring of system performance and regular supervision of staff.
- Participate in the training of lower level staff on management of HIV & AIDS commodities at the facility level, and ensure procedures for on-the-job and refresher training.

**Recommendation 5**

To build adequate capacity, it is highly recommended that an interim HIV & AIDS Logistics Subunit be established and based in NatPharm. The Subunit, which will be under the direct supervision of the NatPharm Operations Manager will be responsible for coordinating all logistics functions in the management of HIV & AIDS commodities including forecasting, quantification and inventory management.

**Recommendation 6**

Functioning of the HIV & AIDS Logistics Subunit should be reviewed annually to appraise its performance in meeting the needs for which it was created.

**FORECASTING AND QUANTIFICATION**

Forecasting is currently done by the AIDS & TB Unit with assistance from NatPharm in determining final quantities to order. Forecasting is based on targets set for service delivery and established treatment and testing protocols and driven by the funds available for procurement. It is recommended that a systematic process for forecasting national commodity requirements be established. More accurate consumption-based forecasts will only be possible if essential logistics data on commodities dispensed to clients is collected and reported on a routine basis. In addition, service-based forecasts can be refined as information about program acceptance and severe adverse reactions to ARVs become available.

NatPharm should take the lead together with DPS and AIDS&TB Unit in forecasting and quantification. This should be the responsibility of the logistics subunit based at NatPharm working in close collaboration with the logistician from AIDS & TB Unit at MOHCW and the logistician at DPS. Multi-year forecasting should be done and then reviewed quarterly to ensure that assumptions made during the forecast are replaced by actual occurrences on the ground.

**Recommendation 7**

A national forecast and quantification exercise should be carried as soon as possible to provide a clearer picture of total national requirements of HIV & AIDS commodities and the forecast should be based on combined consumption, service statistics data and expansion plans including the timelines and should be reviewed quarterly. This is needed for resource mobilization to ensure commodity security.

## **PROCUREMENT**

Multiple procurement efforts have taken place driven by different funding sources. Currently, most donors are using their own procurement mechanisms to bring HIV & AIDS commodities into the country. These are not coordinated and as such impose the risks of duplication and gaps in product availability. Therefore, it is of vital importance to harmonize procurement plans through information sharing among different donor agencies. This can be done through the already existing Procurement and Logistics Subcommittee.

NatPharm should build upon their experience in the procurement of essential drugs through close collaboration with technical partners and agencies to carry out procurement of HIV & AIDS commodities. As a result of capacity building, NatPharm should be in the position to carry out bulk procurements to access lower prices and sign framework contracts with suppliers to enable them to adjust deliveries according to the needs. Procurement of commodities should be coordinated with other functional areas of the logistics system, including forecasting and quantification, inventory management and calculating stock status, within the pipeline at all times. Currently there is no direct correlation between the procurement actions, forecasting and quantification and the supply pipeline at any particular time. Procurement is mostly driven by the availability of funds.

### ***Recommendation 8***

It is vital that procurement plans of different funding sources be harmonized through information sharing among the different donor agencies. This can be done through the already existing Procurement and Logistics Subcommittee of the Partnership Forum.

### ***Recommendation 9***

While efforts are being made to activate the procurement planning component of *Navision*, NatPharm, with assistance from technical partners should utilize Pipeline software as a procurement planning tool to complement *Navision*.

## **INVENTORY CONTROL**

A well performing logistics system is dependent upon the existence of and adherence to well established inventory control systems based on sound technical considerations. This involves the setting of parameters such as stock level to be held at each level of the system, re-ordering levels or intervals and the tiers in the system, among others.

An interim subsystem for the management of HIV & AIDS commodities is in the beginning stages of implementation (see Appendix F). This interim system defines and sets parameters including desired stock levels that would be required for adequate stock management. The system is a two-tiered distribution subsystem made up of the Central level and ART site level only. It has resupply period of one month at the ART sites with minimum stock level of two months and maximum stock level of three months. At the central level it has a minimum stock level of six months and maximum stock level of 12 months.

### ***Recommendation 10***

The interim HIV & AIDS logistics subsystem which defines the desired stock levels and ordering intervals should become operational as soon as possible to enable the proper management of stocks thereby preventing stock outs ensuring constant availability.

## LOGISTICS MANAGEMENT INFORMATION SYSTEM

The overall purpose of the LMIS in the management of HIV & AIDS commodities is to prevent stockouts and stock imbalances of commodities at the central level and sites that provide HIV & AIDS services to clients. LMIS data should inform future forecasting of requirements and will help validate forecasts based on morbidity or other service methodologies. The LMIS, with service reports, provides a mechanism for verifying and reconciling service data with commodity data, an important aspect of drug accountability. Routine access to LMIS data helps with commodity management in other areas such as inventory control and distribution. The high costs of ARVs means that holding buffer stocks against uncertainties in uptake and changes in regime use has a high cost in terms of potential lives saved (essentially, with limited amount of drugs, the higher the buffer stock you maintain, the fewer people you can treat). There is also a higher risk of pilferage if inventory levels are kept high. An agile and responsive LMIS and coordination with key stakeholders is critical for ensuring uninterrupted supplies while maintaining lower levels of stock, without compromising service.

An LMIS is also useful in providing data on how many patients are given first-line, alternate first-line and second-line drugs, not only to help resupply, but also to help the program monitor rational drug use and correct prescribing patterns. For example, if one site has an unusually high number of patients on alternate regimens, then the AIDS & TB Unit can follow-up and determine if the prescribers are adhering to the STGs.

There are two types of MIS that currently exist at the central, regional and facility levels:

	Manual Systems	Computerized Systems	Mix (Manual and Computerized)
<b>Forecasting</b>	✓	NAVISION	✓
<b>Procurement</b>		NAVISION	
<b>Inventory management</b>	✓	NAVISION	✓
<b>Distribution</b>	✓	NAVISION	✓
<b>Patient Statistics</b>	✓	HMIS	✓

*Courtesy of Zimbabwe GFATM HIV & AIDS PSM Plan*

Logistics data are captured by NatPharm using *Navision*. From information gathered from the staff of NatPharm this is a fully integrated financial, inventory management and procurement system. *Navision* has nine modules four of which are fully operational whilst the rest can be activated and customized. *Navision* is on WAN countrywide. The system has the capability to forecast and calculate minimum and maximum stock per stock item and reorder levels. The program processes sales, produces invoices on line and captures distribution data. The tender module enables order tracking and supplier performance monitoring. The system has a large database and can generate real time reports.

The MOHCW operates the Health Management Information System that runs on the “T” series. The “T” series is a computerized electronic information system that captures patient statistics from the treatment sites through monthly progress reports. The information coming from the sites is supposed to be consolidated at the district level, and sent for further consolidation to the provincial level and finally to the national level.

*Navision* is currently being used for the management of both HIV & AIDS commodities and other essential medicines. NatPharm also uses manual stock cards to track the flow of HIV & AIDS commodities from the warehouse to the facilities. The information captured both manually and electronically includes products received, issued and stock balances. Conspicuously absent is information on losses/adjustments. Reporting from the ART sites is sent to the AIDS & TB Unit and as such, NatPharm does not have information on the consumption and stock status at the facilities. Although the NatPharm collects the above mentioned logistics information, the team found it difficult to access this information.

As the number of sites providing HIV & AIDS services expands, it will be necessary to easily aggregate and use data from all service sites. Therefore, it is recommended that standard reporting formats be used for reporting service and logistics data. The report should be completed by all participating sites and should include essential data collected for all HIV test kits, nevirapine for PMTCT, ARVs, and OI drugs such as Diflucan and Co-trimoxazole. The LMIS system should be designed to capture and report:

- beginning stock balance
- receipts
- consumption (dispensed to patients)
- losses and adjustments (transfers to other sites, expiry, damaged commodities)
- ending stock balance (including quantities per expiry date).

In addition to the above and particularly for HIV & AIDS commodities the facilities should be able to collect and report patients' data including number of patients on treatment and the regimens they are on.

Reporting from facilities should be done monthly as reflected by the proposed interim HIV & AIDS subsystem design.

The proposed NatPharm logistics subunit should use this information to determine re-supply quantities for facilities, monitor stock levels, cross-check quantities dispensed with service statistics, plan procurement, and implement stock transfers when needed to avert stockouts and stock expiration. NatPharm logistics subunit should also provide regular logistics status reports to program managers, partner organizations, and commodity donors to maintain the confidence and financial support of the donor community and government policy makers.

### ***Recommendation 11***

The LMIS system and forms designed as part of the interim HIV & AIDS commodities inventory and distribution subsystem should be implemented to capture and report three essential logistics data: stock on hand, consumption and losses/adjustments. Standard reporting formats should be used for reporting service and logistics data. The report should be completed by all participating sites and should include essential data collected for all HIV test kits, nevirapine for PMTCT, ARVs, and OI drugs such as Diflucan and Co-trimoxazole.

## **STORAGE AND DISTRIBUTION**

All products require procedures for safe storage that maximize their shelf life and make them readily available for distribution. For the storage of ARV drugs as for other health commodities, standard storage procedures should be followed. Warehouses and storerooms at the various levels must have sufficient space, acceptable storage conditions, explicit quality assurance mechanisms and physical security of the products.

Proper storage procedures can help ensure that only high-quality products are issued by a storage facility and there is less wastage in terms of damaged or expired products. When all levels of the pipeline follow these procedures, customers can be assured that the same high-quality product has been put in their hands. Warehouse managers can evaluate how well their warehouse is performing against these procedures and look for ways to improve storage quality.

The value of ARVs, cost as well as life-saving potential, creates an incentive for mismanagement and pilferage if appropriate security control procedures and dedicated secured storage space are not provided.

Therefore, procedures for handling ARVs and HIV & AIDS commodities are needed to provide additional security; these should be consistent with existing procedures for handling high-cost or controlled drug items at NatPharm stores.

NatPharm has two Regional Stores in Harare and Bulawayo and four branches (Mutare, Chinhoyi, Masvingo and Gweru). Each Regional Store serves the two branches and health facilities in its region. Harare serves Greater Harare, Mashonaland East, Mashonaland Central and Harare and Parirenyatwa Central Hospitals. The Harare Regional Store also serves Mutare and Chinhoyi branches. Bulawayo Regional Store serves all public health facilities at Bulawayo urban and Matabeleland North and South Provinces. The Bulawayo Regional Store also distributes to Gweru and Masvingo branches which serve health facilities in Midland and Masvingo provinces.

NatPharm six warehouses nationwide have a total storage capacity of more than 12812m<sup>2</sup>. The regional stores which will serve as the major international receiving stores together have a capacity of 6621m<sup>2</sup>. Although NatPharm is currently under stocked on essential drugs, there is still enough space that can accommodate all HIV & AIDS commodities without requiring any further expansion of physical space.

Storage capacity	m <sup>2</sup>
Harare old warehouse	3176 + 390 old manufacturing area
Harare new warehouse	3055
Bulawayo	2907
Mutare	826
Gweru	848
Masvingo	602
Chinhoyi	1008

Calculations carried out to estimate the storage space required for HIV & AIDS commodities projected a total requirement of about 4008m<sup>2</sup> (346 for ARVs and 7670 for HIV test kits). Details of the calculations including assumptions made are found in Appendix C.

In general, at all NatPharm Stores visited all commodities are stored in accordance with good storage practices and laid down standard operating procedures. Temperatures in the main store are appropriate. Storage areas appear clean, dry and well maintained. There is provision for secured storage space for HIV & AIDS commodities in the regional warehouses; however this space would be insufficient taking into consideration the anticipated increased volume of ARV drugs and other HIV & AIDS commodities (see calculation). Also, current cold chain capacity is insufficient even for essential drugs.

It should nevertheless be noted that the calculations done assumed that the commodities will be in full supply which in reality may take some time for that to happen. Currently products are being managed only from the Harare Regional warehouse, thus measures should be taken to allow for staggered shipments of products such that there is no overstocking of products at these warehouses.

Despite available funding for procuring ARVs, and a decision that the drugs will be stored and managed through the existing systems at NatPharm, no concrete decision has been made of how the storage and distribution will be financed. The current practice is for NatPharm to include a 4–6 percent charge on the value of the drugs, which covers storage, handling, and distribution. If this model is followed, it is important that the charge is carefully negotiated because of the high cost of ARVs. Any price negotiation based on value should consider possible devaluations in the price of ARVs over time. Payment terms should be strictly adhered to and guaranteed through MOUs. Extra measures that NatPharm will have to institute to ensure security of the supply should be also taken into consideration.

**Recommendation 12**

NatPharm should provide additional secured storage space for the anticipated increased volume of HIV & AIDS commodities. The space to be secured should be calculated taking into consideration the interim logistics subsystem design including the maximum stock level at the central level and the refurbishment of existing cold rooms to take care of increasing volume of commodities.

**Recommendation 13**

It is recommended that financing for proper storage and distribution be sought and secured as soon as possible and that the charges are carefully negotiated because of the high cost of ARVs. Any price negotiation based on value should consider possible devaluations in the price of ARVs over time. Payment terms should be strictly adhered to and guaranteed through MOU.

**DISTRIBUTION**

There is a sufficient number of functioning vehicles, available and efficiently used for routine and emergency distribution. In general, orders are delivered on time between NatPharm Stores and Provincial and District Hospitals and facilities. The distribution capacity was strengthened two years ago from an EU donation of six seven tone trucks. This fleet has enabled NatPharm to distribute essential supplies to all health facilities in the country using robust scheduling system. The efficiency of distribution system was often hampered by erratic availability of fuel. The USAID-funded DELIVER project will provide an additional three 7-tonne trucks dedicated to delivery under the new Interim HIV and AIDS Ordering and Distribution System. The support includes provision of trucks, salary for drivers, fuel and vehicle maintenance. In addition, the support project will outsource distribution to private courier if need arises. The system targets ART sites and will become operational during the month of June 2006.

According to the interim subsystem ARVs are going to be stored only at Bulawayo and Harare regional stores and ART sites. So far, all ART sites are at the District level and Mission Hospitals that are equivalent to the District Hospitals. Currently, with the number of trucks they have NatPharm Regional Stores are able to cover all the facilities with essential drugs. The arrival of new trucks is expected to provide adequate distribution capacity to cater for anticipated increased number of facilities providing ART. The additional transport resources should complement current resources and would thus boost NatPharm's capacity to meet all its distribution obligations.

**Recommendation 14**

In light of the scaling up of ART services, it is recommended that NatPharm conducts more detailed assessment of its distribution system with specific focus on future transport needs.





# REFERENCES

- DELIVER. 2006. *The HIV Care and Treatment Program in Zimbabwe: Current State and Recommendation for USAID*. Arlington, Va.: DELIVER, for the U.S. Agency for International Development.
- Ministry of Health and Child Welfare. *PMTCT 2004 Annual Report*. Harare: Zimbabwe Ministry of Health and Child Welfare.
- Ministry of Health and Child Welfare. MOHCW Global Fund Application 2005. Harare: Zimbabwe Ministry of Health and Child Welfare.
- Ministry of Health and Child Welfare. December 2004. *AIDS Care in Zimbabwe: Plan for the Nationwide Provision of Antiretroviral Therapy, 2005-2007*. Harare: Ministry of Health and Child Welfare.
- Ministry of Health and Child Welfare. October 2005. *Zimbabwe National Guidelines on HIV Testing and Counseling*. Harare: Zimbabwe Ministry of Health and Child Welfare
- Noguera, M. Alt, D., Hirschhorn, L., Maponga, C. Osewe, P. & Abbenyi, S. February 2003. *Zimbabwe Antiretroviral Therapy Program: Issues and Opportunities for Initiation and Expansion*. Arlington, VA: John Snow, Inc./DELIVER, for the U.S. Agency for International Development.
- NatPharm. *NatPharm Business Plan 2004 and 2005*. Harare: National Pharmaceutical Company.



# APPENDIX A: TERMS OF REFERENCE

## Assessment of Zimbabwe National Pharmaceutical Company (NatPharm) and Zimbabwe Ministry of Health and Child Welfare (MOHCW) Capacity to Manage the Supply Chain for the National HIV & AIDS Program

### DELIVER Technical Assistance

May 2006

### BACKGROUND

The Zimbabwe National HIV & AIDS program is rapidly expanding, with the number of patients receiving counseling and testing, availing of PMTCT and OI preventive services, and being put on OI treatment and ART increasing daily. ARV drugs and related HIV & AIDS commodities are currently in short supply, but there is anticipation of a massive arrival of these products in the next few years. In the absence of a well defined supply chain management system for the commodities which are currently available, the National HIV & AIDS Program faces an enormous task of managing the quantities of products that will arrive soon.

To alleviate this problem, the Government of Zimbabwe/Ministry of Health and Child Welfare (MOHCW) took a policy decision to appoint the National Pharmaceutical Company (NatPharm) to store and distribute the HIV & AIDS commodities on behalf of the national HIV & AIDS program. The Ministry is aware that three entities – NatPharm, the MOHCW AIDS & TB Unit and the MOHCW DPS (DPS) – are central to the establishment and sustainability of a robust HIV & AIDS supply chain management system. NatPharm handles the storage, order processing and physical distribution of the products. The AIDS & TB Unit quantifies product requirements, reviews the appropriateness of orders from sites, and monitors the overall HIV & AIDS commodity supply chain. The DPS coordinates facility level pharmacy staff in the management of the essential drugs and HIV & AIDS commodities. To ensure that NatPharm and the MOHCW are well equipped to perform these tasks, DELIVER was contracted to assist the MOHCW in assessing the current capacity to manage these products and to provide appropriate recommendations for building capacity in and harmonizing the functions of the three entities. The main thrust of the assistance is to determine if NatPharm requires any additional support to what it is already receiving from the GOZ, EU and Global Fund Rounds 1 and 5. The secondary purpose being to help define the optimal functional relationship among the DPS, NatPharm and AIDS & TB Unit in the management of HIV & AIDS related commodities and determine if the latter two entities require capacity building support.

### PURPOSE

The overall purpose of the technical assistance visit is to assess the current capacity of NatPharm to manage HIV & AIDS commodities on behalf of the MOHCW in order to make recommendations for

strengthening NatPharm capacity and to make recommendations to ensure that the efforts of NatPharm, AIDS & TB Unit, and the DPS in the supply chain management of HIV & AIDS commodities are carefully coordinated. The assessment findings and recommendations will be made available to both NatPharm and MOHCW for appropriate next steps.

## **OBJECTIVES**

The specific objectives of the technical assistance are to:

1. Analyze and document the current capacity of NatPharm in terms of strengths and any improvements necessary to manage increased volumes and an increasing variety of HIV & AIDS commodities. Considerations to be included in the analysis include procedures for supply chain functions – including storage, inventory control, management of logistics information and distribution – as well as physical capacity, with respect to storage, cold chain requirements, and staff capacity, including assessing the possible need for an HIV & AIDS commodities subunit at NatPharm. Develop recommendations for strengthening NatPharm’s capacity in all these areas.
2. As part of the NatPharm review, conduct a pipeline analysis for ARVs to determine current stock status, consumption levels, and stock on order, compared to future targets estimated by the MOHCW AIDS & TB Unit. Use the results to inform overall recommendations for strengthening NatPharm’s capacity.
3. Review the functions of the DPS related to HIV & AIDS commodities and recommend on ways to coordinate the functions of the DPS with those of the AIDS & TB Unit and NatPharm and determine if there are additional support requirements for the DPS in order to improve its functioning.
4. Coordinate with the consultant undertaking a separate review of the organizational structure and functioning of the Logistics Unit at the MOHCW AIDS & TB Unit and jointly recommend how the functions should be organized and improved, including the liaison between that unit and the HIV & AIDS commodities management function or subunit at NatPharm and the MOHCW DPS. Determine with the consultant undertaking the separate review of the AIDS & TB Logistics Unit if there are additional staffing requirements, technical assistance support or other support requirement for that unit to improve its functioning.
5. Assist NatPharm in providing a framework for the recruitment and hiring of staff for NatPharm HIV & AIDS logistics function as well as draft a functional statement and job descriptions for the HIV & AIDS Logistics Subunit at NatPharm.

## **ACTIVITIES**

- Brief USAID on arrival and departure.
- Collect and analyze information on the following issues, requirements and procedures:
- Collect and review government and relevant partner (e.g. NatPharm) policy and program documents.
- Conduct initial meeting with NatPharm management team to determine key background information for the assessment, including strategic priorities, and agree on activities for assessing the organization’s physical, human and systems capacity.
- Conduct interviews and meetings with relevant NatPharm staff at headquarters and a sampling of the six regional and branch stores to identify and document current procedures, systems and physical and staff capacity
- Collect data and conduct pipeline analysis, to enable expansion targets to be compared against the current situation.

- Meet MOHCW AIDS and TB program coordinators and other relevant staff to discuss, obtain information on future targets for ART and other HIV & AIDS program expansion goals, understand both service and patient expansion plans and timeframes, and collect information on current plans for funding and procurement of ARVs.
- Meet with consultant, AIDS & TB Program Coordinators, and relevant staff from the Logistics Unit at the MOHCW AIDS & TB Unit to identify strengths and existing capacity, and identify capacity improvements required to perform functions as the program expands.
- Meet with Director of Pharmacy Services to identify issues related to management of HIV & AIDS commodities and coordination with the AIDS & TB Unit and NatPharm, and to identify technical assistance support or other support required for the DPS to improve its functioning.
- Conduct gap analysis of NatPharm, identifying existing strengths and recommendations for improvement as requirements for logistics management of HIV & AIDS commodities increases in volume and complexity. Include a detailed breakdown of staff requirements, including a framework for new and existing positions, draft job descriptions for recommended new positions and other recommendations to enable NatPharm to proceed with timely recruitment and hiring of new staff.
- When and where possible within the timeframe of the visits to the warehouses, conduct visits to ART sites to interview program managers, service providers, pharmacists and laboratory staff regarding current status of HIV & AIDS commodities supply.
- Prepare and conduct a presentation of findings and recommendations, including proposal for next steps and timeframes.

## **DELIVERABLES**

Debriefing to USAID, NatPharm, MOHCW and other key stakeholders presenting the major finding and recommendations no later than May 19.

A technical report documenting the findings and providing recommendations on ways to strengthen the system to be submitted for review to USAID, NatPharm, and MOHCW, by June 15, 2006.

DELIVER Technical Assistance Report

## **TIME FRAME**

May 1-19, 2006 in Zimbabwe.

## **PROPOSED CONSULTANTS**

Mr. Eric Takang, JSI/DELIVER

Dr. Dragana Veskov, JSI/DELIVER

Mr. Celestine Kumire, Independent Consultant

Dr Jabulani Nyenwa, Independent Consultant



# APPENDIX B: NATPHARM CAPACITY ASSESSMENT SCHEDULE AND CONTACTS

May 1 – 19, 2006

Date	Time	Activity	Persons Involved	Venue	Contact
MON May 1	10:00	Orientation meeting, review of schedule,	Eric, Dragana	Holiday Inn	Dave Alt, Dr. Muka Chikuba, Dr. Tendesayi Kufa, Dr. Jabulani Nyenwa
TUE* May 2	08:30	Meet DELIVER staff	Eric, Dragana	DELIVER	
	10:00	USAID briefing	Eric, Dragana, Dave	USAID	Mr. Peter Halpert, Dr. Janis Timberlake
WED* May 3					
	10:00	PMTCT Meeting	Eric Takang Dragana Veskov	MOHCW	Dr Agnes Mahomva, PMTCT Technical Coordinator
	02:30	MOHCW meeting	Eric, Dragana, Dave, Peter, Jabu	MOHCW	Mrs. Tendai Simoyi, Director Pharmacy Services Dr. Owen Mugurungi, AIDS & TB Chief Coordinator Mr. Charles Mwaramba, NatPharm Managing Director
THU May 4	09:00	NatPharm meeting	Eric, Dragana, Celestine	NatPharm	Mr. Charles Mwaramba, Acting Managing Director
	11:00	NatPharm/Crown Agents consortium	Eric, Dragana, Celestine	NatPharm	Thomas Wushe, MD Crown Agents Mucha Mwonzora, Team Leader Estinah Chidzamira, Procurement Manager Jonas Manangazira, Accountant
	12:30	European Commission meeting	Eric, Dragana, Celestine	EU Office	Dr. Marc De-Bruycker, Head of Social Sector Calisto Chihera, Development

Date	Time	Activity	Persons Involved	Venue	Contact
					Cooperation Manager
	03:30	DFID meeting	Eric, Dragana, Celestine	Corner House	Dr. Allison Beattie, Health & HIV/AIDS Adviser Wendy Kawanzaruwa, Program Officer
FRI May 5	10:00	Department of Pharmacy Services meeting	Celestine, Jabu, Eric, Dragana	MOHCW	Mrs. Tendayi Simoyi
	12:00	Harare Regional warehouse visit	Eric, Dragana, Celestine	NatPharm	Mrs. Caroline Mashingaidze – Regional Manager NatPharm Harare
SAT May 6					
SUN May 7		Team A departs for Bulawayo Team B departs for Mutare	Dragana, Richard Eric, Mildred,		
MON May 8		Warehouse & ART site visits	Team A	Bulawayo, Gweru Masvingo	
			C. Kumire, D. Veskov, R. Sabumba	NatPharm Bulawayo Regional Store	Sifiso Moyo, Regional Manager South Denver Raisi, Stores Manager Semai P. Munoakna, Stock Controller
			C. Kumire, D. Veskov, R. Sabumba	Mpilo ART site	Muleya, Nurse
May 9			C. Kumire, D. Veskov, R. Sabumba	NatPharm Gweru Branch Store	Chipenyu Lysias, Pharmacy Technician
			C. Kumire, D. Veskov, R. Sabumba	Makoba Poly Clinic	Chanda, T. J. , Nurse, ART site
			C. Kumire, D. Veskov, R. Sabumba	NatPharm Masvingo Branch Store	Augustine Tanewadzara, Branch Manager
May10			C. Kumire, D. Veskov, R. Sabumba	Provincial Hospital, Masvingo	S. Rakatsinzwa, nurse, ART site
		Warehouse & ART site visits	Team B	Mutare	Mr. T. Mazanhi – Branch Manager
					Dr Nyandandu – Acting Provincial Medical Superintendent
TUE May 9					
		Warehouse & ART site visits	Team B	Chinhoyi	Evans Maketo – Branch Manager
WED		Warehouse & ART site visits	Team A	Masvingo &	

Date	Time	Activity	Persons Involved	Venue	Contact
May 10				return Harare	
	9am	Unicef Meeting	Eric Takang David Alt	UNICEF	Nicolette Moodie, Project Officer, HIV/AIDS Dr
	1:00pm	Geddes Warehouse			
	7pm	Euro Group Meeting	Eric Takang Dragana Veskov Celestine Kumire David Alt	Mikeles Hotel	Kim Hoppenworth, Pharmaceutical Advisor Brina Trap, Director, Eurogroup
THU May 11	8am – 5 Pm	ESP meeting	Eric, Dragana, Celestine, Dave	MOHCW	Multiple donors and partners
FRI May12		Revisit to NatPharm	Eric, Dragana, Celestine	NatPharm	NatPharm Staff
SAT May 13					
SUN May 14					
MON May 15		REPORT WRITING & PRESENTATION PREPARATION	Consultants		
TUE May 16		Debriefing USAID	Eric, Dragana, Celestine, Dave, Jabu	USAID	Mr. Peter Halpert Dr. Janis Timberlake
WED May 17		REPORT WRITING & PRESENTATION PREPARATION	Consultants		
THU May 18	10:00 am	MOHCW/NatPharm debriefing	Eric, Dragana, Celestine, Dave, Jabu, Peter	MOHCW	Permanent Secretary, MOHCW Dave Alt – Country Director DELIVER Mr. Charles Mwaramba, NatPharm Managing Director Peter Halpert - USAID Allison Bettie - DFID Emilia Venetsanou - EU NatPharm Staff Dr Nyemwa J. – Consultant Eric Takang- DELIVER Dragana Veskov - DELIVER Celestine Kumire – Consultant Nicollette Moodie- UNICEF
FRI May19		Complete TAR & Final Report			



# APPENDIX C: STORAGE SPACE ESTIMATION

## ARV Drugs

### Assumptions

Total number of patients:	60,000
Percent on first-line treatment:	99%
Percent on second-line treatment:	1%
Percent adults:	99%
Percent children:	1%

# adults on first-line treatment	58,806
# adults on second-line treatment	594
# children on first-line treatment	594
# children on second-line treatment	6

### Total number of patients on the first line

d4T (30mg)+3TC+NVP	99%	58,806
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### Total units required (12 months of stock at the central level)

d4T (30mg)+3TC+NVP	30716881
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## Calculating storage space requirements

Number of units to be stored / Number of units per cartons = Number of cartons

$$30716881/2400 = 12799$$

Number of cartons X Carton size (volume) = Storage space required

Ranbaxy Lab Shipping Carton volume for D4T/3TC/ NVP is 0.0338 (volume is the same for d4T 30 and d4T40 cartons)

$$12799 \times 0.0338 = 433 \text{ m}^3$$

If carton are stacked no more than 2.5 meters high then floor space required is:

$$433 / 2.5 = 173 \text{ m}^2$$

To allow room for aisles, handling and ventilation double storage is required:

$$173 \times 2 = 346 \text{ m}^2$$

Total storage space required: 346m<sup>2</sup>  
 Total space available at Regional Warehouses: 9528

## Test kits (Determine and Unigold)

### Assumptions

Total number of patients to be placed on ART by the end of 2007	150,000
HIV prevalence rate	20%
Currently on ART	25000
Tested HIV+ not on ART	28000
Total to be tested by the end of 2007 to place additional 97000 on ART	485 000
50% of those HIV+ will be eligible for ART, therefore No of test required should multiply by 2	970 000
No of tests Determine	970 000
No of Tests Unigold	970 000
Pack size Determine 100/pack	100/pack
Pack size Unigold	150/pack

\* to detect 1 HIV positive person if prevalence rate is 20% it is necessary to test 5 people

## Determine

Package Volume: 0.432

$970\ 000/100 = 9700$  Number of shipping cartons

Number of cartons X Carton size (volume) = Storage space required  
 $9700 \times 0.432 = 4190\text{m}^3$

If carton are stacked no more than 2.5 meters high then floor space required is:  
 $4190/2.5 = 1676\text{m}^2$

To allow room for aisles, handling and ventilation double storage is required:  
 $1676 \times 2 = 3352\text{m}^2$

## Unigold

Vol: 0.768

$970\ 000/150 = 6468$  No of shipping cartons

Number of cartons X Carton size (volume) = Storage space required  
 $6468 \times 0.768 = 4967\ \text{m}^3$

If carton are stacked no more than 2.5 meters high then floor space required is:  
 $4967/2.5 = 1987\text{m}^2$

To allow room for aisles, handling and ventilation double storage is required:  
 $1987 \times 2 = 3974\text{m}^2$

**Shelf life:**

Determine: 18 months

Unigold: 15 months



# APPENDIX D: TERMS OF REFERENCE OF THE INTERIM HIV/AIDS LOGISTICS SUBUNIT

The main objectives and tasks to be undertaken by NatPharm Logistics subunit include:

- Communicating logistics information with The ART Partnership Forum to enhance resource mobilization, supply chain and procurement planning and decision making. Regular sharing of information such as delayed shipments, stock status, unexpected increases in demand and thus commodity use with members of the forum will enhance the Partnership's ability to ensure continuous product availability.
- Coordinating amongst stakeholders to conduct and regularly update national forecasts for ARV drugs, HIV tests and other HIV/AIDS commodities. This should include coordinating and improving methodologies for forecasting and quantification of ARVs, HIV tests, and other HIV/AIDS-related commodity requirements, and updating consumption and stock status of these commodities.
- Harmonizing the procurement planning process and aligning procurement based on availability of funds to ensure appropriate stock levels of HIV/AIDS commodities are available nationally at all times
- Collaborating with key implementing partners involved in supply chain management of HIV/AIDS commodities to share and use logistics information for day-to-day decision making, enhance the ability of users at all levels of the system to perform logistics functions and ensure the supply chains remain flexible and responsive to changes in the environment. Examples include:
  - Participate in development of procedures for management of ARVs, including procedures for resupply to facilities and a system for monitoring facility stock levels of ARVs
  - Participate in the design and implementation of an LMIS to capture essential logistics data and track product use in the system. Standard forms and procedures should also be instituted for the reporting of service information.
  - Develop the procedures on how ARVs and other HIV/AIDS commodities currently stored and distributed outside NatPharm will be integrated into the supply chain for HIV/AIDS commodities stored and distributed at NatPharm.
  - Define a set of logistics system performance indicators to monitor the implementation of the ART supply system. Develop procedures for regular monitoring of system performance and regular supervision of staff
  - Participate in the training of lower level staff on management of HIV/AIDS commodities at the facility level, and ensure procedures for on-the-job and refresher training.

# **JOB DESCRIPTION**

<b>Position:</b>	NatPharm HIV/AIDS Logistics Focal Person
<b>Reports to:</b>	Operations Manager, NatPharm
<b>Supervises:</b>	Logistics Officers

## **Key Functions**

The overall purpose of the NatPharm HIV/AIDS Logistics Focal Person is to strengthen and broaden the capacity of NatPharm to manage HIV/AIDS commodities, and maintain a strong working relationship with the AIDS & TB Unit and the DPS. While being part of the permanent staff of the HIV/AIDS Logistics Subunit, they will be part of an enlarged team comprised of the HIV/AIDS Focal Persons in AIDS & TB Unit, DPS and the two Logisticians based in the HIV/AIDS Logistics Subunit that will be collaborating in the management of these commodities and building capacity at the central and facility levels of the system.

The NatPharm HIV/AIDS Logistics Focal Person

- Coordinates the activities of the Interim HIV/AIDS Logistics Subunit
- Supervises the staff of the subunit

In collaboration with the HIV/AIDS Logistics Focal Person from DPS and Focal Person from AIDS&TB Unit:

- Manage the HIV & AIDS commodities distribution system and logistics management information system as a staff of the Interim HIV/AIDS Logistics Subunit in NatPharm
- Forecast and quantify HIV/AIDS commodity needs
- Prepare procurement plans and delivery schedules
- Prepare technical and status/progress reports on HIV/AIDS logistics system performance and implementation activities
- Develop an effective logistics management system for all HIV & AIDS related products for central and facility level
- Work closely with MOHCW Pharmacy Directorate and Provincial Pharmacists to ensure accurate data collection and timely reporting of logistics data and to conduct regular monitoring of the logistics function at the SDP level.

## **Responsibilities/Tasks**

Other responsibilities include but not limited to:

- Receive logistics reports and commodity orders from facilities, vet them, and generate resupply quantities to be packed and delivered to facilities.
- Forward determined resupply quantities to the store controller for order processing
- Keep the records of dispatched commodities
- Communicate with staff responsible for HIV/AIDS commodity management at the facilities to ensure that reports and requisitions are submitted at the stipulated times.
- Monitor the timeliness and accuracy of submission of HIV & AIDS commodity orders and reports and provide feedback to facilities
- Monitor the timeliness and completeness of deliveries of commodities to facilities and provide regular feedback to NatPharm management
- Update pipeline database on a monthly basis and generate regular stock status and logistics system progress reports to be presented to program managers, donors and other stakeholders
- Conduct regular pipeline analyses and monitoring of commodity supplies at the national and facility levels
- Implement the HIV/AIDS Logistics management information system
- Use data from the information system to monitor stock status of all HIV related commodities to inform commodity requirements forecasting, to validate previous forecasts of requirements, and to evaluate the functioning of the HIV & AIDS commodities logistics management system
- Develop and maintain collaborative working relationships with the MOHCW Pharmacy Directorate, MOHCW PMDs, and ZNFPC, HIV & AIDS commodity donors and NGOs, NAC and other agencies
- Assist in analyzing HIV & AIDS commodity consumption at the facilities and work in close liaison with the M&E Officer in managing databases
- Conduct regular field monitoring and logistics support visits to facilities (in coordination with Provincial Pharmacists whenever feasible) to appraise the management of HIV/AIDS commodities
- Conduct periodic physical inventories of HIV & AIDS commodities stored in distributors' warehouses and at SDPs
- Assist in conducting logistics management training and other related training and workshops
- Participate in collaboration with other public sector importers (USG, UNICEF, etc.) in clearing HIV related commodities through Customs and with MCAZ in registration, inspecting and testing of said commodities
- Serve on donor coordination and commodity management committees as requested
- Perform other duties as necessary.

## **Qualifications**

- Bachelor's degree in public administration, logistics, pharmacy or related field
- Five years progressively responsible experience in logistics management
- Very good reporting and writing skills in English
- Ability to conduct effective public presentations
- Demonstrated skills in representation, liaison and collaboration with government, private and non-governmental organizations
- Willingness to spend extended periods of time traveling in rural areas
- Demonstrated skills in word processing and use of spread sheets
- Demonstrated knowledge of the Zimbabwe public health sector
- HIV & AIDS work experience desirable
- Police clearance
- Good physical and mental health.

# **JOB DESCRIPTION**

- Position:** Logistics Officer, HIV & AIDS
- Reports to:** General Coordinator AIDS & TB Unit
- Supervised by:** NatPharm HIV/AIDS Logistics Focal Person
- Person in position:**

## **Key Functions**

In collaboration with the HIV/AIDS Logistics Focal Person from DPS and Focal Person from AIDS&TB unit:

- Manage the HIV & AIDS commodities distribution system and logistics management information system as a staff of the Interim HIV/AIDS Logistics Subunit in NatPharm.
- Forecast and Quantify HIV/AIDS commodity needs
- Prepare procurement plans and delivery schedules
- Prepare technical and status/progress reports on HIV/AIDS logistics system performance and implementation activities.
- Develop an effective logistics management system for all HIV & AIDS related products for central and facility level.
- Work closely with MOHCW Pharmacy Directorate and Provincial Pharmacists to ensure accurate data collection and timely reporting of logistics data and to conduct regular monitoring of the logistics function at the SDP level.

## **Responsibilities**

The HIV & AIDS Logistics Officer has responsibilities including, but not limited to, the following:

- Receive logistics reports and commodity orders from facilities, vet them, and generate resupply quantities to be packed and delivered to facilities.
- Forward determined resupply quantities to the store controller for order processing
- Keep the records of dispatched commodities
- Communicate with staff responsible for HIV/AIDS commodity management at the facilities to ensure that reports and requisitions are submitted at the stipulated times.
- Monitor the timeliness and accuracy of submission of HIV & AIDS commodity orders and reports and provide feedback to facilities

- Update pipeline database on monthly basis and generate regular stock status and logistics system progress reports to be presented to program managers, donors and other stakeholders
- Conduct regular pipeline analyses and monitoring of commodity supplies at the national and facility levels
- Implement the HIV/AIDS Logistics management information system
- Use data from the information system to monitor stock status of all HIV related commodities to inform commodity requirements forecasting, to validate previous forecasts of requirements, and to evaluate the functioning of the HIV & AIDS commodities logistics management system
- Develop and maintain collaborative working relationships with the MOHCW Pharmacy Directorate, MOHCW PMDs, ZNFPC, HIV & AIDS commodity donors and NGOs, NAC and other agencies.
- Assist in analyzing HIV & AIDS commodity consumption at the facilities and work in close liaison with the M&E Officer in managing databases
- Conduct regular field monitoring and logistics support visits to facilities (in coordination with Provincial Pharmacists whenever feasible) to appraise the management of HIV/AIDS commodities
- Conduct periodic physical inventories of HIV & AIDS commodities stored in distributors' warehouses and at SDPs
- Assist in conducting logistics management training and other related training and workshops
- Participate in collaboration with other public sector importers (USG, UNICEF, etc.) in clearing HIV related commodities through Customs and with MCAZ in registration, inspecting and testing of said commodities
- Serve on donor coordination and commodity management committees as requested
- Perform other duties as necessary.

# **JOB DESCRIPTION**

**Position:** HIV/AIDS Logistics Focal Person  
**Reports to:** Director of Pharmacy Services

## **Key Functions**

The overall purpose of the HIV/AIDS Logistics Focal Person at DPS is to strengthen and broaden the capacity of DPS to participating in the management of HIV/AIDS commodities, and maintain a strong working relationship with the AIDS & TB Unit and NatPharm. While being based in the DPS the HIV/AIDS Logistics Focal Person will be part of an enlarged team comprised of the HIV/AIDS Focal Persons in AIDS & TB Unit, NatPharm and the two Logisticians based in the HIV/AIDS Logistics subunit that will be collaborating in the management of these commodities and building capacity at the central and facility levels of the system

In collaboration with the HIV/AIDS Logistics Subunit and the HIV/AIDS Logistics focal person from AIDS&TB unit participate in:

- Forecasting and quantification of HIV/AIDS commodity needs
- Preparing procurement plans and delivery schedules
- Preparing technical and status/progress reports on HIV/AIDS logistics system performance and implementation activities; report to Director of Pharmacy Services
- Participate in all HIV/AIDS related activities as deemed necessary by the Director of Pharmacy Services
- Participate in other program support activities as requested by the Director.

## **Responsibilities /Tasks**

Specific responsibilities include but not limited to the following:

- Provide regular feedback on the management of HIV/AIDS commodities to the Director of Pharmacy Services
- Work closely with other counterparts at the Logistic Sub unit to ensure accurate data collection and timely reporting of these data and conduct regular monitoring of the logistics functions at the facility level
- Develop and maintain collaborative working relationships with the AIDS and TB Unit, MOHCW PMDs, ZNFPC, HIV & AIDS commodity donors and NGOs, NAC and other agencies.
- Conduct regular field monitoring and logistics support visits to facilities(in coordination with Provincial Pharmacists whenever feasible) to appraise the management of HIV/AIDS commodities
- Assist in HIV/AIDS commodity stock status analysis and together with other counterparts in Logistics Sub unit, provide feedback to the Procurement and Logistic sub committee of the HIV/AIDS partnership forum
- Assist in conducting logistics management training and other related training and workshops

- Serve on donor coordination and commodity management committees as deemed necessary by the Director of Pharmacy Services
- Perform other duties as deemed necessary by the Director of Pharmacy Services

### **Qualifications**

- Bachelor's degree in public administration, logistics, pharmacy or related field.
- Five years progressively responsible experience in logistics management.
- Very good reporting and writing skills in English.
- Ability to conduct effective public presentations.
- Demonstrated skills in representation, liaison and collaboration with government, private and non-governmental organizations.
- Willingness to spend extended periods of time traveling in rural areas.
- Demonstrated skills in word processing and use of spread sheets.
- Demonstrated knowledge of the Zimbabwe public health sector.
- HIV & AIDS work experience desirable.
- Police clearance.
- Good physical and mental health.



# APPENDIX E: ASSESSMENT QUESTIONNAIRE

(Spacing altered for inclusion in this report)

## HIV/AIDS Commodity Management Assessment Questionnaire

Name of Organization/Department/Unit:

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Date: \_\_\_\_\_ (day/month/year)

Interviewers:

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Name and title of interviewees:

Name

Title

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## **General Questions**

**1. What is the main role of your organization in the provision of antiretroviral therapy in the country?**

**2. What are the organization's activities that support this role?**

**- Policy development**

**- Program management**

**- Human resource development (e.g. staff hiring, training, supervision)**

**- Procurement and/or distribution**

**- Clinical services**

**Technical assistance to other organizations in the Country**

**Others**

**Comments on activities:**

**3. Describe the structure of the organization. (Obtain organogram, if possible.)**

**4. What challenges related to the supply of ARV drugs and other HIV/AIDS commodities have you experienced in providing services?**

**5. How do you measure the success of the organization in meeting its goals and in providing services? What indicators do you use? How are these monitored?**

## **Policy**

- 6. What are the policy guidelines on the provision of ART?**
- 7. What is the scale up or expansion plan with respect to provision of ART services?**
- 8. What policy decisions related to logistics management need to be addressed in preparation of ART scale up?**
- 9. What roles do donors play in the provision of ART services? (MAP, President's Initiative, Global Fund activities, etc.)**
- 10. How are these donor initiatives coordinated?**

## **Product Selection**

- 11. What role do you play in product selection?**
- 12. How is the selection of ARV drugs and other HIV/AIDS commodities determined? Whose responsibility is it to determine which ARV drugs are available for distribution?**
- 13. Are these ARV drugs registered for use in the country?**
- 14. What quality control procedures are used to ensure the quality of the ARV drugs and other HIV/AIDS commodities selected?**

## **Forecast/Quantification**

- 15. Who is responsible for forecasting or quantifying HIV/AIDS commodity needs?**
- 16. What information is used by the organization for developing forecasts and quantifications for HIV/AIDS commodities?**
- 17. How often are forecasts/quantifications prepared?**

## **Finance**

- 18. How is the procurement of HIV/AIDS commodities financed? Sources of financing? Level of financing?**

**19. Are funds specifically allocated for supply logistics in the organization's budget?**

**20. What is the price of the drugs to the patients? How is this price determined? How frequently does the price change?**

**21. What cost-recovery options for services and cost of medicines is implemented as part of the ART program?**

**22. What is the level of external resources that external stakeholders have committed so far (and plan to commit) to support the cost of HIV/AIDS commodities**

**23. What are the long-term sustainability issues with external financing commitments that relate to commodity security of HIV/AIDS Commodities?**

## **Procurement**

**24. What role do you play in the procurement of HIV/AIDS commodities?**

**25. What procedures are in place for managing the procurement of HIV/AIDS commodities?**

**26. Who is responsible for developing product specifications?**

**27. How are suppliers chosen? Who are the suppliers of the HIV/AIDS commodities that you are procuring?**

**28. What is the average length of contract with a supplier?**

**29. What is the average time between when an order is place and when a shipment arrives?**

**30. How frequently are shipments of HIV/AIDS commodities received?**

**31. How are shipments scheduled and monitored? Who monitors the shipments?**

**32. How is the in-country supply pipeline monitored?**

**33. What challenges have you faced in the procurement of HIV/AIDS commodities?**

## **LMIS (Obtain copies of reports generated at this level.)**

**34. What reports on ARV drug use do you receive from the service facilities?**

**35. How is this information analyzed?**

**36. What reports are generated from this analysis?**

37. What reports do you provide to organizations (funders, donors, MOH, etc.)?

38. How is this information used?

## **Distribution**

39. Who is responsible for calculating the quantities of HIV/AIDS commodities issued to the service facilities?

40. How are these quantities calculated?

41. How often are issues made to the service facilities?

42. Are there procedures for receiving and issuing emergency orders for HIV/AIDS commodities?  
Yes/No

43. What are the procedures for emergency orders?

44. How are the HIV/AIDS commodities transported to the service facilities? By what mode of transportation?

45. Who is responsible for transporting the HIV/AIDS commodities to the facilities?

46. Where do you store the HIV/AIDS commodities?

47. Who is responsible for managing the storage of HIV/AIDS commodities?

48. What records are used to manage HIV/AIDS commodities?

Stock keeping:

Transaction:

49. Are the essential data items (stock on hand, losses/adjustments) collected on the records?  
Yes/No

50. How often do you take a physical inventory of the HIV/AIDS commodities?

51. What are the procedures for handling expired or damaged HIV/AIDS commodities?

52. How many staff are involved in the management of HIV/AIDS commodities?

53. Has the staff received training in logistics, in pharmacy management? Please describe this training?

**STORAGE CONDITIONS TABLE**

**TO QUALIFY AS “YES,” ALL PRODUCTS AND CARTONS MUST MEET THE CRITERIA FOR EACH ITEM.**

No	Description	Yes	No	N/A	Comments
1.	Products that are ready for distribution are arranged so that identification labels and expiry dates and/or manufacturing dates are visible.				
2.	Products are stored and organized in a manner accessible for First-Expiry / First-Out (FEFO) counting and general management.				
3.	Cartons and products are in good condition, not crushed due to mishandling. If cartons are open, check if products are not wet or cracked due to heat/radiation (fluorescent lights in the case of condoms)				
4.	The facility makes it a practice to separate damaged and/or expired products from good products and remove them from inventory.				
5.	Products are protected from direct sunlight at all times of the day and during all seasons.				
6.	Cartons and products are protected from water and humidity during all seasons.				
7.	Storage area is visually free from harmful insects and rodents. (Check the storage area for traces of rodents (droppings) or insects).				
8.	Storage area is secured with a lock and key, but accessible during normal working hours, with access limited to authorized personnel.				
9.	Products are stored at the appropriate temperature during all seasons according to product temperature specifications.				
10.	All hazardous waste (e.g., needles, toxic materials) is properly disposed of and non-accessible to non-medical personnel.				

11.	Roof is maintained in good condition to avoid sunlight and water penetration at all times.				
12.	Storeroom is maintained in good condition (e.g. clean, all trash removed, shelves are sturdy, and boxes are organized).				
13.	The current space and organization is sufficient for existing products and reasonable expansion (i.e., receipt of expected product deliveries for the foreseeable future).				

The additional standards below can be applied to any facility large enough to require stacking of multiple boxes.

No.	Description	Yes	No	N/A	Comments
14.	Products are stacked at least 10 cm off the floor.				
15.	Products are stacked at least 30 cm away from the walls and other stacks.				
16.	Products are stacked no more than 2.5 meters high.				
17.	Fire safety equipment is available and accessible (any item identified as being used to promote fire safety should be considered).				
18.	Products are stored separately from insecticides and chemicals.				

**Additional guidelines for specific questions:**

**Item 2:** In noting proper product arrangement, the shelf life of the different products should be considered.

**Item 3:** Cartons should be checked to determine whether they are smashed due to mishandling. The conditions of the products inside opened or damaged cartons should also be examined to see if they are wet, cracked open due to heat/radiation (e.g. because of fluorescent lights in the case of condoms) or crushed.

**Item 4:** The discarding of damaged or expired products should be conducted according to the facility's procedures (which may differ from one facility to another). Please specify if procedures exist and note what they are.

Item 7: It is important to check the storage area for traces of rodents (droppings) or insects harmful to the products.

Item 8: This refers to either a warehouse secured with a lock or to a cabinet with a key in a clinic.

Item 17: Fire safety equipment does not have to meet international standards. Any item identified as being used to promote fire safety (e.g. water bucket, sand) should be considered.

#### SECURITY FOR ARV DRUGS

No	Description	Yes	No	N/A	Comments
1.	Is there a separate, secure storage area for high/value products or controlled substances?				
2.	Is there a doubling-up of staff for picking, packing, dispensing and recording of issues for these commodities? (i.e. staff person prepares the order, supervisor verifies?)				
3.	Do both the staff person and supervisor conduct physical inventory of remaining stock at the end of the day?				
4.	Is there a doubling-up of staff for unpacking, verification, and recording of receipts for these commodities? (i.e. staff person and supervisor are both present during receipt process?)				
5.	Are there unannounced audits or high value/controlled substances performed? (Specify frequency and procedure in comments section)				
6.	Describe the security mechanisms in place for protecting high value/controlled substances during transit?				
7.	Describe the security mechanisms in place for dispensing high value/controlled substances to patients?				
8.	Are theft/loss indicators being monitored for these commodities at this site?				
9.	Is staff performance evaluation and compensation (rewards and penalties) tied to theft/loss indicators for these commodities?				

#### COMMENTS OR GENERAL OBSERVATIONS ON COMMODITIES MANAGEMENT





# APPENDIX F: INTERIM HIV & AIDS COMMODITIES ORDERING AND DISTRIBUTION SUB- SYSTEM

**Zimbabwe  
Ministry of Health & Child Welfare (MOHCW)**

## **SYSTEM DESIGN**

**Apr 2006 v6**

Prepared by the  
ART Partners' Forum Procurement & Logistics Subcommittee

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# DESIGN FOR THE MOHCW INTERIM HIV & AIDS COMMODITIES ORDERING & DISTRIBUTION SUB-SYSTEM<sup>1</sup>

## BACKGROUND

The National ART program is in a very rapidly expanding, roll out phase with the number of people living with HIV/AIDS receiving ART increasing exponentially. Recently the program has been experiencing short supply of ARVs and related HIV & AIDS commodities. The supply chain management system for the HIV & AIDS commodities is currently not well defined. Indications are that forecasting drug requirements at individual health facilities will be largely a matter of “guesstimate” until facilities have gained more experience and have scaled up their treatment capacity. Interruption of supply of ARVs is a major challenge to the National Program. Supply interruption will increase the risk of treatment failure and development of ARV resistance.

The Procurement & Logistics Subcommittee of the ART Partners’ Forum has placed very high priority on the development of a robust and nimble interim HIV & AIDS commodities supply chain management system. Such a system will reduce the risk of stock outs during the rapid ART roll out phase and will strengthen the capacity of the government of Zimbabwe (GOZ) to absorb the expected high volume of HIV & AIDS commodities from the Global Fund and other donors. It is also envisaged that an efficiently run ART program will attract much needed additional donor support to the national ART program. Once the ART program has matured and patient loads have stabilized, the supply management of ARVs and related commodities could be integrated into the routine essential drugs program.

There are currently more than fifty health facilities which are offering ART services through the national program. The MOHCW plans to expand ART services to at least 100 health facilities by the end of 2006. The planned expansion will include six central hospitals, eight provincial hospitals, sixty district hospitals, six urban local authority sites, and approximately twenty mission hospitals. Given this envisaged rapid scale-up of the ART program, the Procurement & Logistics Subcommittee has proposed the development of a sub-system to manage the ordering and distribution of HIV & AIDS commodities including ARVs, rapid HIV test kits, Diflucan and Cotrimoxazole. It is proposed that the sub-system will initially be used for ordering and delivering all GOZ and Global Fund purchased ARVs & related products and USG procured Efavirenz. The proposed subsystem will be specially resourced and will be based within the existing NatPharm and MOHCW structures.

The HIV & AIDS sub-system will have two levels from the central to service delivery point (SDP) or health facility level. The system will maintain a maximum stock level of 3 months at SDP level. There will be a short, fixed order and delivery interval of one month. The system will allow generation of reports and information for logistics decision making. Details of how the system will operate are described in the following section.

## INVENTORY CONTROL

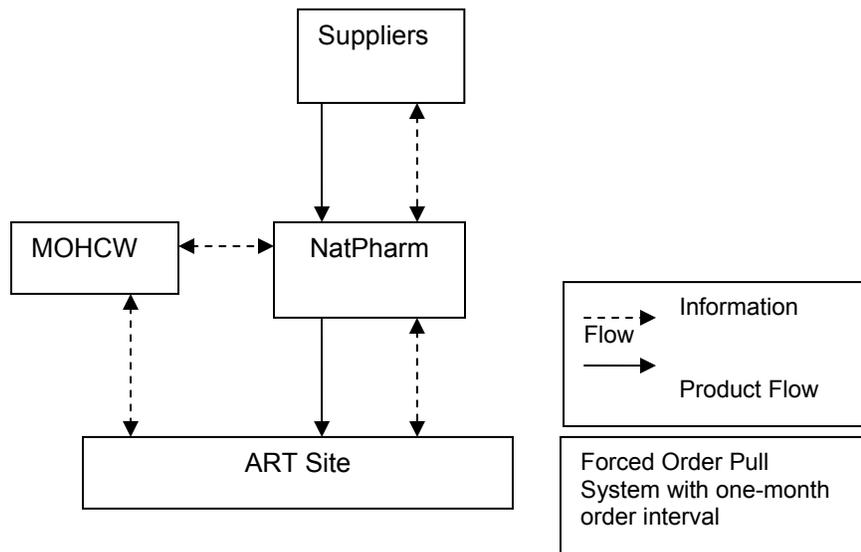
The inventory control portion of a logistics management system informs each level of the system when to order or issue stock, how much to order or issue, and how to avoid shortages or oversupply. The MOHCW/NatPharm HIV & AIDS sub-system (Figure 1) is two tiered. The central level includes the

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<sup>1</sup> This design focuses on the distribution, inventory control and LMIS portions of an overall HIV & AIDS commodities supply chain management system because this is the current most pressing need of the National ART program. The design will be expanded in the future to include product selection, forecasting, procurement, monitoring and supervision, staffing, budgeting and evaluation.

MOHCW head office and NatPharm central offices and warehouses. The ART site level of the system comprises all accredited and participating health facilities on the MOHCW National ART program.

**Figure 1. MOHCW/NATPHARM HIV & AIDS Supply Chain**



Storage and distribution of HIV & AIDS commodities under this subsystem will initially be done through the Harare and Bulawayo NatPharm warehouses. The Harare warehouse supplies products direct to all ART sites in the following provinces:

- Mashonaland West
- Mashonaland East
- Mashonaland Central
- Manicaland
- City of Harare

The Bulawayo warehouse supplies the products direct to all ART sites in the following provinces:

- Matabeleland North
- Matabeleland South
- Masvingo
- Midlands
- City of Bulawayo

## **ORDERING AND RE-SUPPLY**

ART sites place orders and are re-supplied every month. The ART site pharmacy manager completes the monthly Consumption/Requisition form (CR form) and it is cross checked by the site in-charge before it is sent to the MOHCW. See Annex A for a copy of the CR form.

## **MAXIMUM STOCK LEVELS**

For the ART site level of the system the maximum stock level for ARV drugs is three months of supply<sup>2</sup>.

For the central level of the MOHCW/NatPharm system the maximum stock level for ARV drugs is 12 months. It may be possible to reduce this maximum level once lead times for ordering and receiving ARV drugs from donors and suppliers are well established.

## **MINIMUM STOCK LEVELS<sup>3</sup>, LEAD TIME AND SAFETY STOCK**

At the ART site level the minimum stock level is two months. An ART site should have approximately two months of stock of ARV drugs remaining at the time it places its monthly order. The lead time<sup>4</sup> stock at the ART site level in the system is one month, i.e. the time between an ART site placing its order and receiving the commodities should be a maximum of one month. The safety stock<sup>5</sup> level at the ART site is one month.

The minimum stock level for ARV drugs for the central level of the system is six months.

## **EMERGENCY ORDER POINT**

For ART site level the emergency order point (EOP) is a one-month supply. The ART site must inform the AIDS & TB Unit at the MOHCW any time the stock of ARV drugs or other HIV & AIDS commodities reaches the one-month emergency order point level. If a regular monthly delivery is not about to take place, the AIDS & TB Unit informs the NatPharm Harare or Bulawayo warehouse of the emergency need and sends the emergency CR form. The warehouse staff delivers an emergency order of the required commodities to the affected ART site. Given the level of effort and expense involved in placing and filling an emergency order, it is imperative that the ART sites place regular monthly orders and that monthly deliveries occur without fail. If this is done NatPharm and the National program do not have to bear the expense of processing and delivering frequent emergency orders.

## **PLACING & PROCESSING ORDERS**

ART sites place orders on the unified MOHCW/NatPharm HIV & AIDS Commodities Interim Consumption/Requisition form (See Annex A). To place an order the site must estimate the numbers of patients who will be initiated on each ARV treatment regimen in the next month and the numbers of patients likely to go off each regimen in the next month (because of weight gain, toxicity, treatment failure, commencing TB treatment, death, drop out, etc.). The total number of patients on each regimen will be the sum of the estimated number of new patients to be initiated plus the number of existing or continuing patients on that regimen. To calculate the quantity of each regimen required the ART site will multiply the total number of patients expected to be on each regimen during the next month times the

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<sup>2</sup> Because of current ARV drug supply shortages ART sites may initially be given less than a full three month supply.

<sup>3</sup> The minimum stock level is the level of stock at which actions to replenish inventory should occur under normal conditions. The minimum stock level equals the lead time stock plus safety stock.

<sup>4</sup> Lead time stock is the level of stock used between the time when new stock is ordered and the time when it is received and available for use.

<sup>5</sup> The safety stock level is the buffer, cushion, or reserve stock kept on hand to protect against stock outs caused by delayed deliveries, markedly increased demand, or other unexpected events.

number of tablets to be consumed per month times 4<sup>6</sup>, and then subtract the stock on hand for each regimen. This is the order quantity.

Total number of patients on the regimen next month = Current number of patients continuing on the regimen + estimated number of new patients on the regimen – number of patients leaving the regimen

Order quantity = Total number of patients on the regimen X 4 (3 months maximum stock level + 1 month lead time) – Stock on hand

Since there are multiple sources of ARVs and related commodities on the national program, each ART site will place a separate order for each source used at that site, e.g. GOZ, Global Fund and USG

ART sites serviced by the NatPharm Harare warehouse are divided into two groups for ordering and distribution purposes: Harare A and Harare B. ART sites serviced by the NatPharm Bulawayo warehouse are likewise divided into two groups for ordering and distribution purposes: Bulawayo A and Bulawayo B. Harare A and Bulawayo A designated ART sites complete and submit their monthly CR form to the MOHCW AIDS & TB Unit no later than \_\_\_\_\_. Harare B and Bulawayo B designated ART sites complete and submit their monthly CR form to the MOHCW AIDS & TB Unit no later than \_\_\_\_\_. The AIDS & TB Logistics Unit will follow up each ART site from which it has not received an order by the prescribed date.

The AIDS & TB Logistics Unit reviews the CR forms from the sites and validates the quantities of each product to be resupplied to each site. The AIDS & TB Logistics Unit then completes a standard NatPharm Requisition and Issue Voucher (RIV) (see Annex B) for each site and forwards the RIV to NatPharm no later than 5 working days after the deadline for receiving the CR forms from the sites.

## **PHYSICAL DISTRIBUTION OF HIV & AIDS COMMODITIES**

NatPharm picks and packs the orders from stock held at the Harare and Bulawayo warehouses and delivers to the ART sites within 7 working days of receiving the Orders from AIDS & TB.

The NatPharm Harare and Bulawayo warehouses can either send deliveries directly to the ART sites from or through a corresponding NatPharm branch warehouse. In either case the filled orders must be received by the ART sites no later than 7 working days from the receipt at NatPharm of the respective RIVs from the AIDS & TB Logistics Unit. The HIV & AIDS ordering and distribution sub-system will maintain a dedicated fleet of distribution vehicles through NatPharm.

Wherever possible, orders from AIDS & TB Unit for Diflucan, nevirapine for PMTCT, and HIV rapid test kits for the ART sites which have been picked and packed by Geddes will be physically delivered to the ART sites along with the ARV drugs and other commodities being delivered by NatPharm. Orders for these products from AIDS & TB picked and packed by Geddes for non-ART sites will continue to be delivered as they are at present.

Other NatPharm essential drug order parcels can be delivered along with the HIV & AIDS commodities to the ART sites so long as they do not delay the delivery of the HIV & AIDS commodities.

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<sup>6</sup> Although the maximum stock level is 3 months, it is necessary in ordering to multiply by 4 months because one month will elapse between the time the ART site orders its stock and the time it receives its stock.

# LOGISTICS MANAGEMENT INFORMATION SYSTEM

## INFORMATION SYSTEM

Information is essential to the smooth running of any logistics system and assists program managers at every level of the system to monitor performance of the system and make important decisions.

At the completion of each monthly delivery round NatPharm will provide AIDS & TB Logistics Unit with a summary report of commodities delivered to ART sites with specific details on products delivered to each site. Additionally, as part of the invoicing process, NatPharm will provide an original signed copy of the RIV from each ART site as proof of delivery. NatPharm will also provide a monthly warehouse stock status report to AIDS & TB Logistics Unit. The AIDS & TB Logistics Unit will conduct periodic stock counts of HIV & AIDS commodities held on behalf of the MOHCW at the NatPharm warehouses to verify the monthly warehouse stock status reports. Additionally, NatPharm will code HIV & AIDS commodities provided by different sources, i.e. GOZ, GFATM 1, GFATM 5, etc with distinctive codes and will provide stock status reports on these specific items to MOHCW, the Global Fund Principal Recipients (UNDP, NAC, ZACH) and the Crown Agents/NatPharm Procurement Consortium.

The AIDS & TB Logistics Unit will enter in Supply Chain Manager® or similar software data from monthly CR forms and from the “received” copies of the NatPharm RIVs provided to the unit after each delivery. This will allow program managers to generate stock status and other reports. Copies of these reports will be provided to the respective Provincial Medical Directorate offices.

Similarly the AIDS & TB Logistics Unit will enter shipments, consumption, and other essential data into Pipeline® for purposes of forecasting and procurement planning for the national program.

## MONITORING AND EVALUATION

To allow for regular, rapid assessment of the performance of the interim HIV & AIDS Commodities Distribution System, the AIDS & TB Logistics Unit will maintain a monthly spreadsheet with the following data columns:

- Name and code number of facility
- Planned date for order to be received at AIDS & TB Logistics Unit from ART site
- Actual date order was received at AIDS & TB Logistics Unit
- Variance in receipt date of order
- Planned date for RIV to be received by NatPharm from AIDS&TB Logistics Unit
- Actual date RIV was received at NatPharm
- Variance in receipt date of RIV at NatPharm
- Planned date for delivery to be received by ART site from NatPharm
- Actual date delivery was received by ART site
- Variance in receipt date of delivery at ART site
- Stock outs of products by product i.e. regimen or rapid HIV test kit
- Duration of stock out by product i.e. regimen or rapid HIV test kit

The AIDS & TB Logistics Unit will use the data on the spread sheet to produce a monthly progress report to the AIDS & TB Programme Chief Coordinator and the NatPharm Managing Director. The report will give statistics on the following indicators:

- Number and percent of ART sites placing their orders on time
- Number and percent of orders received and reviewed
- Number of RIVs sent to NatPharm on time by the AIDS & TB Logistics Unit
- Number of orders picked, packed and delivered on time to the ART sites by NatPharm
- Number and percent of stock outs at provincial level

The report will also show a bar graph or line graph with the previous three months of data so that program managers can see at a glance if the ordering, order processing and delivery performances are improving or deteriorating.



For more information, please visit [www.deliver.jsi.com](http://www.deliver.jsi.com).

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