



Providing quality medicines for people  
living with and affected by HIV and AIDS



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## SCMS Supply Lines October 2009

### State of the Project

By the end of 2008, some four million people had access to ARV therapy in low- and middle-income countries—a dramatic 36 percent increase over the year before and a five-fold increase in five years.

This rapid scale-up was made possible in part by strengthening public health supply chains globally, regionally and nationally. SCMS has played a significant role in this aspect of the scale up. In addition to providing enough ARVs to PEPFAR countries to support more than 750,000 people on treatment, we have helped create and strengthen an integrated supply chain globally, regionally and within countries. At each step of the process—including forecasting and supply planning, procurement, warehousing and distribution—supply chains are doing better in delivering the medicines and other commodities to the patients and health care professionals who need them.

But once those living with advanced HIV start ARV therapy, they must stay on treatment to maintain their health and avoid developing drug resistance. After such dramatic progress in scale-up, HIV/AIDS programs now face the challenge and responsibility of a long-term commitment to maintaining those four million people on treatment.

In this issue of *Supply Lines* we look at various ways that SCMS is working to help build sustainable solutions for public health supply chains in the countries where we work. To succeed for the long-term, strengthened supply chains will rely on having a skilled work force in each country where we work.

Rather than focus on our efforts to build infrastructure, we report in this issue on multiple ways that we are working to create a cadre of supply chain professionals who will forecast the need for commodities, purchase medicines and supplies, manage logistics and operate the warehouses and distribution systems for years to come.

We hope you enjoy this issue of *Supply Lines*.

### Quarterly Trends

Each quarter *Supply Lines* reports on global trends in HIV/AIDS supply chains. For further information, e-mail [SCMSInfo@pfscm.org](mailto:SCMSInfo@pfscm.org). Here are the current highlights:

#### Procurement

*Longer lead times for ARVs containing Zidovudine*

Active pharmaceutical ingredients (APIs) required to produce Zidovudine (AZT) are in tight supply, resulting in lead times of four months or more for ARVs containing AZT,

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#### SCMS Project Team

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MAP International | North-West University | Northrop Grumman | PATH | PHD | UPS Supply Chain Solutions | Voxiva | 3i Infotech

both as a single formulation and as a fixed-dose combination (FDC). The shortage of API has been exacerbated by the increasing demand for the Lamivudine/Zidovudine and Lamivudine/Zidovudine/Nevirapine FDCs as alternatives to Stavudine-based regimens. The demand for Zidovudine-based FDCs has grown four-fold since 2008, and we expect even greater demand in 2010. Our source of reliable supply is essentially limited to two vendors, Aurobindo and Matrix, who are currently quoting the best lead times of around four months, in part because these vendors own their own API production. Other sources that do not control their own API supply are tending to have significantly longer lead times and higher prices. Even with lead times for three or four months, vendors are at times missing promised delivery dates for these ARVs. We will continue to be flexible, moving order dates to accommodate the needs of our clients prior to actual delivery. Additionally, we may ask some clients to shift delivered quantities (to take partial deliveries, for example) in order to ensure that all of our clients are able to maintain sufficient in country stocks and a steady supply for patients.

### **Freight & Logistics**

#### *Plan ahead for the year-end Red Zone and the 2010 World Cup*

Each year the available air cargo space is very limited before and during the annual December/January holiday season, known among international logistics specialists as the “Red Zone”. Additionally, many customs and port or airport facilities close during this period. We are working with our clients and offices to plan for deliveries before December 10 and after January 5 to avoid delays or stockouts, and the risk of deliveries being held in customs for extended periods. Precise dates of closure will vary from country to country. We recommend that other programs and implementing partners also consider programming their deliveries outside the Red Zone.

SCMS is also recommending that countries in southern Africa begin to consider their delivery requirements in the later part of the first half of 2010. South Africa is hosting the Football (soccer) World Cup from June 11 until July 11, 2010. This event attracts as many or more spectators as the Olympics and will dominate the airlines and South Africa throughout the tournament. Again, we recommend that programs and implementing partners plan major airfreight deliveries to arrive before the tournament begins to ensure sufficient stock until major new deliveries can be programmed from August onward. It is anticipated that there will be a major backlog of deliveries that may take some time to clear after the tournament is finished. Programs may, therefore, want to consider holding a somewhat larger stock than normal in this period.

#### *Cost savings in shipping help programs do more with current budgets*

When procuring HIV/AIDS commodities, switching from air freight to sea and land freight can save up to 90 percent in shipping costs. Such savings in shipping can be assigned to other uses. For example, relative stability in Zimbabwe is now allowing road shipments of ARVs from SCMS's regional distribution center in South Africa. Switching from air freight to land is saving around 60 percent - or potentially \$130,000 per year - on transportation costs for the PEPFAR program, which supports 40,000 people on treatment. Initial savings were used to purchase HIV test kits to make up for a shortage in the national testing program.

*An integrated approach can provide even greater savings*

Working with the USG team and PEPFAR Implementing Partners (IPs) in Nigeria, SCMS has developed a multi-pronged approach to pooled procurement. A key component of the strategy is the purchase, shipping and distribution of two high-volume ARVs that provide significant savings on shipping costs via a secure supply chain from the manufacturer to the partners' warehouses in Nigeria. Road freight from SCMS's regional distribution center in Ghana is not possible due to Nigerian regulations prohibiting pharmaceutical shipments across land entry points, but shipping by charter airplane direct to Abuja rather than traditional commercial flights through Lagos or even Europe ensures availability of cargo space and saves about 50 percent on shipping costs. SCMS's clients saved more than \$500,000 on freight costs for the first four shipments of ARVs (valued at \$17.4 million) under the pooled procurement program.

### **Innovative approaches to training support sustainability**

Lack of trained staff is acknowledged as a major impediment to long-term health systems strengthening. In at least two countries, SCMS is developing innovative approaches to training that will help build human resource capacity.

In Namibia, the SCMS team is implementing a strategy to make a lasting impact and ensure sustainability in building supply chain capacity at National Institute of Pathology (NIP), the main institution responsible for managing all Namibian government laboratories, and laboratory systems countrywide. We worked with the Polytechnic School in Windhoek to include supply chain management—with a focus on laboratory logistics—in the curricula of the Bachelor of Science Laboratory Technologist degree program. Students from the Polytechnic School feed straight into the NIP to study supply chain management during their industrial attachment year (internship) at NIP.

SCMS will initially run the courses while developing a pool of lecturers made up of Polytechnic School and NIP staff. As at any educational institution, the approval of a new set of curricula can be a lengthy and bureaucratic process. By initiating lectures during student's internship rather than as a class at the Polytechnic School, SCMS bypasses this hurdle and ensures sustainability of the effort. The course will give all students an appreciation of supply chain management issues, and more broadly, will lead to the development of a cadre of supply chain professionals well trained in laboratory logistics, thus strengthening the overall Namibia health system.

Vietnam has also been spearheading pioneering work in training. In order to reduce the costly and time-consuming process of repeated classroom training for pharmacy dispensers specifically due to staff turnover, SCMS in Vietnam piloted four self-learning modules to train new dispensers whenever they come on board instead of waiting for a periodic workshop.

Dispensers who participated in the self-learning module pilot tested comparably to those who participated in similar classroom trainings, with no significant difference in the two groups' reported level of understanding and confidence in using the information. The success of the July 2009 pilot has led to the modules now being provided to all new dispensers and is making new dispenser training more immediately accessible and cost-effective.

## Inter-country collaboration builds capacity for supply chain management

The rapid scale up of HIV/AIDS supply chains has required significant improvements to national and regional supply chains. To manage the increased flow of public health commodities, SCMS is helping countries build infrastructure and train those who manage national supply chains. In the past this kind of training and technical assistance may have often been led by international consultants from the U.S. or other donor countries, but expertise can also be found within recipient countries.

Under a new initiative, SCMS is increasingly leveraging the knowledge and experience of supply chain professionals in the countries where we work. We are encouraging collaboration across national borders to maximize the reach and impact of technical support visits. Expertise comes from those who better understand cultural contexts, and the sharing of information, best practices and lessons learned internationally among peers.

Since the start of this initiative last year, SCMS has supported 14 technical assistance activities plus a number of other collaborations that fall into three categories:

- **Multi-country training.** As part of a skills-building exercise for quantifying antiretroviral medicines, SCMS staff from Botswana, Ethiopia, Kenya, Mozambique, Namibia and Uganda attended one training in Ethiopia rather than training programs in each country. In addition, SCMS is currently training field office procurement staff as part of an initiative to decentralize procurement of appropriate commodities. Eighteen staff from more than 10 field offices have already participated in two trainings in Arlington, VA; the next round of trainings will take place in South Africa and Vietnam this fall. Multi-country training provides a unique opportunity for SCMS to share information and experiences from multiple countries. Given limited human and financial resources, it makes sense to extend the reach of a particular training event to technical staff with similar training needs.
- **Collaboration among SCMS field offices.** SCMS offices in Ethiopia and Nigeria have built a close relationship and have identified opportunities to share information on an on-going basis. One staff member of the Ethiopian office traveled to Nigeria in June to provide technical assistance for a two-day stakeholder workshop on rapid test kit quantification. Working closely with representatives from the Global Fund, Ministry of Health, PEPFAR and the U.S. government, he demonstrated how to conduct a national quantification of test kits for 2009 – 2010 and helped develop a five year forecast. Through this experience, the two field offices have built a close relationship and continue to collaborate and share information.

In another example, a staff member from Ethiopia traveled to Namibia to help address concerns about the delivery of pharmaceuticals to health care facilities. To help the Ministry of Health make decisions for improvements, he conducted an in-depth analysis of the transport fleet and fleet management system of the Central Medical Stores and made recommendations for creating a secure, effective and cost-efficient delivery system.

- **Government-to-government collaboration.** Countries that have rapidly improved their public health supply chains can inspire others to adopt best practices. Guyana has taken the lead among PEPFAR countries in improving its warehousing system. All public health indicators – including life expectancy, child and maternal health and incidence of HIV infection – have improved markedly in the least seven years. In a country where aspirin was

difficult to find not too long ago, doctors and nurses demand access to all kinds of medicines for their patients. SCMS is facilitating opportunities for the government of Guyana to collaborate with Centrale d'Achate Medicaments Essentiels du Rwanda (CAMERWA) to improve its warehouse operations. Representatives from Rwanda, including the Director General of CAMERWA, have visited Guyana to see first-hand its warehousing and distribution systems. CAMERWA will adopt many of the systems and approaches from Guyana, including a new warehouse management system. Inspired by Guyana's example, Rwanda is working to develop a fully modernized and professional operation for procurement, warehousing and distribution that will become a center of excellence for East Africa. In a similar activity, officials from Mozambique visited Uganda's Joint Medical Stores to observe implementation of a new warehouse management system. They decided to adopt the same system in Mozambique and are currently in the process of making the change.

Step by step, SCMS is bringing together peers from neighboring countries to help build long-term sustainability and empowering local professionals as experts in their respective fields.

### **A hands-on course in warehouse training inspires excellence**

Hands-on experience is a valuable addition to classroom instruction. In another example of multi-country collaboration, participants from various countries enrolled in SCMS's Warehouse Operations Management (WOM) course receive four weeks of classroom instruction *and* hands-on training in South Africa, plus continuing support via the Internet after returning to their home countries.

Andrew Cohen Nsubuga, Operations Manager at the Joint Medical Store (JMS) in Uganda, is a recent graduate of the program. He compared his experience with the seemingly backward approach he has seen in other settings. After completing the first module on *'Introduction of Warehouse Design and Capacity,'* he said, "I felt like this is what I always wanted and finally I got it! One point I will never forget from that session, and what is responsible for 80 percent of the problems associated with most warehouse operations is that they started with building the warehouse and then later defined what was going to be done there instead of the other way round."

Mr. Nsubuga felt confident in his abilities, but knew there were areas in warehouse operations management that needed improvement – and the WOM course would provide him with the opportunity to expand his knowledge.

The effectiveness of the course is due to integration of classroom instruction with a hand-on approach to learning. "The idea of covering the concepts in a class session and then going down to a warehouse where the concepts I learned are actually practiced was amazing! It was inspiring."



The course covers warehouse operations management in 13 modules. Like most participants, Mr. Nsubuga was knowledgeable about some and quite unfamiliar with others. “Cold chain management – the principles were new to me and this was one area where as an organization, there was a lot of room for improvement. Warehouse design and capacity, situational analysis and decision-making processes had a lot of new elements that were very instrumental in enriching my knowledge.”

Mr. Nsubuga was eager to apply what he learned after returning to Uganda and has since implemented ways to track and measure improvements. “We have since acquired I–buttons (automatic instruments for temperature control), and we understand better the implications of the break down of the cold chain, and our way of work reflects this,” he said. “Naturally with every new idea, you will experience resistance and the degree of the resistance in my situation depended on various factors, like the extent to which staff were going to be affected by the change, financial implications and lastly how well I had sold the idea to the staff. Every change that we have implemented took a bit of time.” He says patience and unwavering focus on what he wanted to achieve have helped him implement that change.

For participants like Mr. Nsubuga, SCMS provides an online forum where participants can receive ongoing support and advice long after the training program ends. He uses the forum “to share with colleagues about the progress we are making at JMS and have also shared information on various subjects that had been posted by the moderators.”

Mr. Nsubuga has big plans for making JMS an example on warehousing best practices. “I want to see the Joint Medical Store as a center of excellence in warehouse operations management in the next five years. However, this requires people with clear direction, knowledge, skills and attitude. It’s such a huge challenge. However, it is motivating to see that we have started this journey.”

### **Accurate and timely commodity data helps supply chain decision making in Ethiopia**

Information is power. Without accurate and timely data, HIV/AIDS program supply chain managers cannot efficiently and effectively forecast commodity needs and make decisions on financing, procurement, shipment scheduling, storage, and planning.

In Ethiopia, as the country rapidly scaled up HIV/AIDS treatment to include more facilities and patients, decision makers from the Federal Ministry of Health (FMOH) and its multiple partners needed ways to quickly and accurately track usage of HIV/AIDS commodities. After persistent problems in the supply of laboratory commodities, the FMOH declared the laboratory supply chain a weak link in its HIV/AIDS program.

SCMS helped to redesign the laboratory commodities supply chain system and then to implement the change in 112 laboratory monitoring sites nationwide. The new system includes standard operating procedures for reporting stock levels and ordering supplies, and a quick response system to address emergencies. With timely and accurate information, decision makers have essentially eliminated stockouts in the supply of laboratory commodities, reduced the incidence of costly emergency orders and sped the delivery of supplies to laboratories.

As the program continued to grow, an electronic information system was required to process and track all HIV/AIDS commodity data—not just for laboratories—that would then be used in forecasting, trend analysis and re-supply decisions. In addition, decisions about commodity resupply were made at the central level rather than at treatment sites, based on anticipated rather than actual needs.

To address these challenges, SCMS has helped the FMOH in the implementation of the Health Commodities Tracking System (HCTS), a web-based system in which treatment sites can report patient and commodity data through one of three reporting tools: personal digital assistants (PDAs), a web-based portal or desktop computers.



The system will link to and from different data sources including the FMOH Health Management Information System. The Ministry will use the system to capture a range of data about commodity use and number of patients, and then will generate reports for stakeholders and partners to facilitate supply chain decision-making. In summary, HCTS is the next phase of ongoing efforts to improve reporting and supply chain management in Ethiopia.

With the new system, the percentage of ARV and lab LMIS forms submitted from the sites on time has increased to 95 percent. In addition, lead times for receiving and processing forms were reduced from one or two months to between three and seven days. The strengthening of the re-supply system has boosted confidence among staff at all levels. In this case, success is helping ensure sustainability; users of the system see the benefits and are more likely to accept even more changes—and just in time, since the Ministry and its partners are planning more improvements to the HIV/AIDS data management systems.

### **Passing the baton: Agencies eagerly accept responsibility for key supply chain functions**

In track and field, a relay is often won or lost not during the running of sprints, but instead when one runner passes the baton to the next. If done clumsily, the new runner loses her stride—or worse, drops the baton—and the race is lost. Building sustainable supply chains in PEPFAR countries requires passing of the baton, transferring responsibility for key functions from SCMS to the agencies with whom we work.

SCMS is well known for our work in Guyana with the Ministry of Health to build strong relationships among stakeholders. The Materials Management Unit of the Ministry of Health now leads the Quantimed Users' Group, which has responsibility of forecasting and demand planning for HIV/AIDS and other public health commodities. Guyana has also transitioned

leadership of the Supply Chain Stakeholders' meeting from SCMS to the Materials Management Unit. The Stakeholders' meetings, an innovation suggested by SCMS, are used to inform regional health leaders about improvements to the national supply chain and have helped assure regional hospitals and clinics that the Materials Management Unit can be counted on to deliver requested commodities. As a result, regions are now increasingly ordering only what is needed to support their patients rather than overly large quantities that in the past led to expiry and wastage.

In Mozambique, the Central de Medicamentos e Artigos Médicos (CMAM) has taken over leadership of meetings on laboratory and rapid test kit logistics. In its new role, CMAM created a forecasting forum for HIV test kits with broad participation across MOH programs, donors and PEPFAR partners. The group is expected to regularly update the annual test kit forecast. The creation and management of the forum marks a milestone in CMAM's ownership of the supply chain planning process.

And in a potential new trend, SCMS is participating in two innovative programs to develop management skills. First, Botswana's Ministry of Health has asked SCMS to help improve management of the Central Medical Stores. Under the new plan, SCMS recruited senior management advisors who will take over management of the Stores for two years. During that time, the Stores' senior staff will shadow the advisors and then transition back management of the facilities by the end of the program. This year, PEPFAR has committed \$2.3 million towards this three year capacity building initiative.

### **SCMS's E-catalog focuses on core lists for improved service**

For those ordering HIV/AIDS commodities, determining precisely what to buy can be a difficult process, particularly with laboratory commodities that are often confusingly similar. Errors in product specification can lead to delays and even delivery of the wrong product. SCMS is making it easier to identify and order products through our e-catalog (<http://scms.pfscm.org/scms/ecatalog>).

Clients can now download a catalog of standardized products including lab items such as analyzers and pipets. The PDF version of the catalog, intended for those with poor Internet connectivity, is updated on a quarterly basis. Whenever possible, we recommend that clients choose from products listed in this downloadable catalog or the web-based version when placing an order with SCMS; doing so helps reduce costs and speed delivery.

The catalog is organized by both key programs and products that meet the standards for a range of needs for HIV/AIDS initiatives. The product section is a subset of SCMS's entire product list and includes core lists of key antiretroviral (ARV) products, HIV test kits, medicines to treat opportunistic infections (OI), and laboratory equipment and supplies.

The program-specific section provides lists for blood safety, early infant diagnosis (EID), food products (FP), and prevention of mother-to-child transmission (PMTCT). Watch for a new list of standard products for male circumcision, currently in development.

Clients can also find other downloadable documents from the SCMS e-catalog to help facilitate the ordering process: Client and Recipient Information form, Price Request form, Vehicle Questionnaire Template, and Shipping Instructions form.

If a product you require is not listed in the e-catalog, please [contact us](#) and we will work with you to determine if we can supply it.

