

GLOBAL CALL FOR CASE STUDIES OF HEALTH SYSTEMS STRENGTHENING (HSS)

1. **Name of Project:** Supply Chain Management System
2. **USAID funding source of project:** USAID Mission
3. **Country:** Ethiopia
4. **Years of Project Implementation:** 2006 – Present
5. **Health System Strengthening Outcome Theme:** Service coverage of essential services
6. **Health System Components that your project includes:** Service Delivery & Medical Products, Vaccines and Technologies
7. **Project Overview (300 words):**

When SCMS Ethiopia began operations in 2006, the Government of Ethiopia and the Ministry of Health recognized the need to develop a more robust public health supply chain to ensure the supply, accessibility and availability of life-saving medicines throughout the country. SCMS, a project under PEPFAR administered by USAID, collaborated with the newly created Pharmaceuticals Fund and Supply Agency (PFSA) to achieve this. One of the greatest barriers that held back the development of the public healthcare system was insufficient warehousing and distribution capacity.

SCMS worked to support the nationwide initiative to build, develop and optimize the warehousing and distribution system for the pharmaceutical supply chain. As the volume and diversity of products expanded, the demands upon storage capacity continued to strain an already insufficient system. In support of the construction of 10 new regional warehouses, SCMS provided technical assistance in developing structural designs and warehouse layouts. SCMS also provided vertical racking, cold rooms, warehouse operations management training and offered materials handling equipment training at the warehouses.

The introduction of modern warehouse facilities increased the national capacity to deliver pharmaceutical products, improved organization, space utilization and handling of short shelf-life products and reduced stockouts, emergency orders and product expiries. SCMS increased pallet spaces throughout the country to more than 30,000, enabling the expansion of service delivery and the provision of life-saving medicines at thousands of new health facilities. The 25 antiretroviral treatment (ART) sites that were in operation in 2006 have now increased to more than 1,050; with an additional 1,351 sites providing prevention of mother-to-child transmission

(PMTCT) services. Ethiopia is moving rapidly toward complete ART coverage for all that require it, and currently serves more than 300,000 clients. **(280)**

8. Project Deliverables (200 words):

SCMS warehousing work includes a large number of outputs, each of which contribute to system achievements since 2006. Some of these deliverables include:

- A national warehouse network was designed increasing PFSA warehouses from 6 to 17
- Warehouse structural designs for 10 primary and 7 secondary warehouses
- Internal layout designs developed for 10 primary warehouses along with appropriate kitting out plan
- Six cold rooms supported with a capacity of 1,194m³
- Vertical racking system in 10 modern warehouses
- Vertical racking introduced providing 30,340 pallet spaces adding more than 50% more storage capacity to PFSA
- 40 staff trained in warehouse operations management in South Africa
- 1,031 ART treatment sites supported
- 1,351 PMTCT-only sites supported
- 568 Food-by-Prescription sites supported
- 22 new forklifts and materials handling equipment
- 74 delivery trucks, 5 field vehicles and 5 motorcycles for data-collection
- Training on vehicle and forklift management to 84 staff members

The collaboration between PFSA and SCMS included physical and human resources capacity building support, ensuring newly introduced technologies and processes were accompanied with training, seconded-staff, supervision and support. PFSA and SCMS also ensured future needs were taken into account when planning the warehouse capacity. **(155)**

9. Tools Produced (200 words):

Warehousing Standard Operating Procedures (SOPs) were developed and training was provided throughout the country. The development, printing and training on SOPs for storage and distribution ensured the growing warehousing and distribution system was conducted in a consistent, timely and cost-effective manner. The SOPs improved warehouse management by introducing new uniform processes, increasing

accountability, improving safety and security, reducing wastage and improving delivery to service points.

In order to improve operations, regional warehouse improvement plans were developed following warehouse operations management training in South Africa and, on average, 23 improvements were made at each warehouse branch. SCMS supported regional warehouse distribution planning with the creation of regional distribution maps, currently being enhanced and expanded to create a geocoded national facility map.

In collaboration with PFSA, SCMS developed a Pharmaceutical Logistics Information Tracking System (PLITS). This system includes all health commodities and supports planning, quantification and distribution. SCMS and PFSA also developed a Short Shelf-Life Product Management System to track and manage short shelf-life products, some of which have an expiry of as little as 16 days. This system provides real-time monitoring for all short shelf-life products and alerts staff to take action. (190)

10. Evidence of contribution to health system strengthening (400 words):

SCMS contributions to warehousing and distribution in Ethiopia have facilitated the strengthening of the health care system. The expansion of warehousing and distribution enabled the expansion of service provision. When SCMS started operations there were 25 ART sites in the country; there are now more than 1,050 ART sites and 1,351 PMTCT sites. AN enhanced warehousing and distribution capacity was essential to this exponential expansion of the HIV/AIDS service.

The technical assistance provided by SCMS in designing the warehouse network ensured the regional warehouses were built in optimal locations to balance the distribution needs of health facilities and the population. The warehouse layouts improved space utilization and organization by designating loading sites, forklift pass-through points, introducing pick-and-pack processes and cold room locations. The provision of cold rooms and mobile cold rooms enabled a rapidly growing volume of temperature-sensitive products to be stored in appropriate conditions. The provision and installation of 30,340 pallet-space vertical racking, newly introduced to PFSA, expanded storage capacity by more than double, whereas previously the warehouses had no vertical racking capacity and storage was limited to floor space. To ensure the new warehouses, technologies and processes were managed optimally, 40 PFSA and SCMS staff members were sent for international warehouse operations management training. As a result, an average of 23 new

practices have been introduced at each warehouse and there is an increase of PFSA management support for on-going warehouse operations management. The physical capacity of warehouses was also supported with the provision of 22 forklifts and other materials handling equipment, with training for respective staff. SCMS also provided private sector training to build the capacity of vendors to ensure warehouse construction and vertical racking assembly met international standards – this capacity was previously unavailable in the country.

SCMS supported PFSA's distribution capacity by providing 74 trucks, five vehicles and five motorcycles. This resulted in significant cost-savings as PFSA and SCMS were previously renting trucks and vehicles. Before this addition, over USD 2 million was spent in a three-year period. A food-by-prescription program that was once held back due to limited warehousing and distribution capacity now serves 568 sites as a result of expanded PFSA capacity. SCMS provides technical and logistical support for the implementing partners of the food-by-prescription program, which is a crucial component of its success. (370)

11. Evidence your project improved the health status of target population (400 words):

When SCMS started operations in Ethiopia there were 24,000 people receiving treatment and more than one million people living with HIV. It was difficult to ensure that those in need received proper treatment due to, among other factors, a lack of warehouse space throughout the country, which resulted in insufficient capacity to maintain required pharmaceutical products stock levels to adequately serve patients.

As of 2014, there is expanding coverage for all people that require ART. The number of ART sites has increased to more than 1,050 and PMTCT sites have increased to 1,351. More than 300,000 people are now on ART. Since SCMS operations began in Ethiopia, despite the large increase in demand, there have been no treatment interruptions due to stockouts, lack of supply or breaks in the supply chain. The national prevalence rate of HIV in the adult population has declined from 4.4 percent (2003) to 1.5 percent (2014). Warehousing supported these achievements and enabled them to occur as it facilitated and life-saving medicines diagnostic and other supplies to be available and accessible throughout the country. Enhanced capacity has resulted in more reliable and consistent access to required medicines and services.

PFSA procures, stores and distributes pharmaceutical products throughout Ethiopia. One of the outcomes of strengthened PFSA capacity, as a result of SCMS support, is a significant increase of distribution. As envisioned in the Pharmaceutical Logistics

Master Plan in 2006, PFSA now directly delivers products to health facilities as well as warehouse branches throughout the country. In 2008/09 the value of distributed products was over USD 100 million and in 2013/14 it exceeded USD 630 million. In addition to increased value and volume, PFSA is now serving over 3,400 sites in total. The expanded warehousing and distribution capacity has also enabled the food-by-prescription program to expand, serving 568 sites. This expansion directly benefits the people of Ethiopia by improving their access to essential medicines. (301)

Photos (3)

Proposed captions:

1. Temporary warehouse: before racking



2. Temporary warehouse: after racked by SCMS



3. Newly constructed warehouse: racked by SCMS



