Kenya

Assessment of the Health Commodity Supply Chains and the Role of KEMSA

Dana Gelfeld Aronovich
Steve Kinzett

Kenya: Assessment of the Health Commodity Supply Chains and the Role of KEMSA

Dana Gelfeld Aronovich
Steve Kinzett

DELIVER

DELIVER, a five-year worldwide technical assistance support contract, is funded by the Contraceptives and Logistics Management Division (CLM) in the Center for Population, Health and Nutrition of the Bureau for Global Programs, Field Support and Research of the U.S. Agency for International Development (USAID).

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], Social Sectors Development Strategies, Inc., and Synaxis, 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 and analysis of USAID's central commodity management information system (NEWVERN).

Recommended Citation

Aronovich, Dana Gelfeld, and Steve Kinzett. 2001. *Kenya: Assessment of the Health Commodity Supply Chains and the Role of KEMSA*. Arlington, Va.: DELIVER/John Snow, Inc., for the U.S. Agency for International Development (USAID).

Abstract

The health sector in Kenya is a complicated web of vertical health programs with parallel logistics systems that manage health commodities. To improve efficiency within the health sector, the Government of Kenya decided to transform its central and regional medical supply stores into a parastatal organization that would apply private sector management techniques to supply the public health system with the health commodities it requires. Because of the complexity of the logistics systems that serve the health sector, and following the decision to privatize the medical supply stores to streamline these systems, a comprehensive assessment of the health commodity supply chains and the potential role of the new parastatal was conducted during February–March 2001. The assessment reviews all aspects of health commodity management at the time the assessment was carried out for essential drug kits, contraceptives (including condoms for STI/HIV prevention), STI drug kits, HIV test kits, tuberculosis and leprosy drugs, and malaria prophylaxis. This report offers recommendations for the next steps in this process of increasing efficiency, although the results and the recommendations presented here are relevant to the time period of the study. It is important to note that the situation in Kenya is continuously evolving. This report summarizes the results of this study, led by consultants from John Snow, Inc./DELIVER, in collaboration with the Ministry of Health, and with support from the U.S. Agency for International Development.

DELIVER

John Snow, Inc.
1616 North Fort Myer Drive, 11th Floor
Arlington, VA 22209 USA
Phone: 703-528-7474
Fax: 703-528-7480
Email: deliver_project@jsi.com
Internet: deliver.jsi.com

Contents

Tables

Figures

Acronyms

ADB	Asian Development Bank
ACU	AIDS Control Unit
AFS	APHIA Financing and Sustainability Project
AIDS	acquired immune deficiency syndrome
AMREF	African Medical and Research Foundation
BCG	Bacillus Calmette Guérin (TB vaccine)
BTC	Belgian Technical Cupertino
CBD	community-based distributor
CDC	Centers for Disease Control and Prevention (United States)
CIDA	Canadian International Development Agency
CLM	Contraceptives and Logistics Management Division
CP	care package
CRS	Catholic Relief Service
CYP	couple-years of protection
DANIDA	Danish International Development Agency
DARE	Decentralized Reproductive Health and HIV/AIDS Project (World Bank)
DFID	British Department for International Development
DHMB	District Health Management Board
DHMT	District Health Management Team
DMPA	depot medroxy progesterone acetate (injectable contraceptives)
DPT	diphtheria, pertussis, tetanus
ED	essential drugs
ELISA	Enzyme-Linked Immunosorbent Assay
EPI	Expanded Program on Immunization
EU	European Union
FEFO	first-to-expire, first-out
FP	family planning
FPAK	Family Planning Association of Kenya
FPLM	Family Planning Logistics Management (project)
GAVI	Global Alliance for Vaccines and Immunization
GOK	Government of Kenya
GON	Government of the Netherlands
GTZ	*Deutsche Gesellschaft für Technische Zusammenarbeit* (German Technical Cooperation Agency)
HAPAC	HIV/AIDS Prevention and Care Project
HIV	human immunodeficiency virus
HSRS	Health Sector Reform secretariat
HSSP	Health Sector Strategic Plan
ICRC	International Committee of the Red Cross
IDA	International Dispensary Association
IMCI	Integrated Management of Childhood Illness
IPPF	International Planned Parenthood Federation
IUD	intrauterine device
IV	intravenous (fluids)
JICA	Japan International Cooperation Agency
JSI	John Snow, Inc.
KEMRI	Kenya Medical Research Institute

KEMSA	Kenya Medical Supplies Agency
KEPI	Kenya Expanded Programme for Immunisation
KfW	*Kreditanstalt für Wiederaufbau* (German funding agency for international development)
LMIS	logistics management information system
LMU	Logistics Management Unit, Kenya
MB	multi-bascillary
MEDS	Mission for Essential Drugs and Supplies
MOH	Ministry of Health
MSCU	Medical Supplies Coordinating Unit, Kenya
MSF	*Médecins sans Frontières*
MSH	Management Sciences for Health
NACC	National AIDS Coordinating Committee
NASCOP	National AIDS Control Programme, Kenya
NGO	nongovernmental organization
NID	National Immunization Day
NLTP	National Leprosy and Tuberculosis Programme
NPHLS	National Public Health Laboratory Service, Kenya
ORS	oral rehydration salts
PATH	Program for Appropriate Technology in Health
PB	pauci-bascillary (TB bacterial classification)
PHC/P&P	(Department of) Primary Health Care/Preventative and Promotive Health Services, Kenya
PHMT	Provincial Health Management Team
PIU	Project Implementation Unit
PMO	Provincial Medical Officer
PSI	Population Services International
RH	reproductive health
RPM	Rational Pharmaceutical Management Project
SDP	service delivery point
SIDA	Swedish International Development Authority
STI	sexually transmitted infection
SWAP	sector-wide approach
TB	tuberculosis
TB/L	tuberculosis/leprosy
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
VAT	value-added tax
VCT	voluntary counseling and testing
WB	World Bank
WHO	World Health Organization

Acknowledgements

The authors of this report would like to acknowledge the assistance, support, and guidance of all those involved with the design, organization, and implementation of this assessment. In particular, we would like to thank all the team members for their hard work in the field and the staff of the Logistics Management Unit in the Division of Reproductive Health (Ministry of Health [MOH] and DELIVER personnel) for providing valuable support. Special thanks to Susan Mwangi for arranging appointments for the Nairobi-based team and to the drivers for transporting us safely to the study sites.

We are grateful for the cooperation and information shared with us by those whom we interviewed from divisions of the MOH, nongovernmental organizations (NGO), private organizations, donors, and other institutions that enabled us to put together such a comprehensive report. Special thanks go to Mr. J. Kibera and the staff of KEMSA, who were always available during this assessment.

Thanks are also due to Dr. M. Meme and Dr. E. Ogara for their support and guidance during this process and to Dana Vogel, Neen Alrutz, Bedan Gichanga, Jerusha Karuthiru, and Mike Strong from USAID for providing direction, feedback, and support for this activity.

Finally, thanks to all the members of the team who contributed their data collection skills, institutional knowledge, inputs to this assessment, and production of the report—Augustine Bahati, Bedan Gichanga, Catherine Lwenya, Joseph Mburu, Josiah Munene, Cosmas Mutunga, Booker Odenyo, Anthony Ophwette, and Nancy Wachira.

Executive Summary

Purpose

To clarify the role of the U.S. Agency for International Development (USAID) and the DELIVER project for the next five years, an assessment was undertaken to evaluate the logistics management of all health commodities in Kenya. This was done particularly in light of the decision by the Government of Kenya to transform the Medical Supplies Coordinating Unit (MSCU)—the central- and regional-level warehouses for essential drugs, family planning, and other health commodities—into a parastatal body, the Kenya Medical Supplies Agency (KEMSA).

Methodology

The assessment, carried out in February–March 2001, studied four primary vertical programs—family planning/reproductive health, including contraceptives, condoms for sexually transmitted infection (STI)/HIV prevention, and some STI drugs and HIV test kits; tuberculosis and leprosy; vaccines/vitamin A; and essential drugs. The performance of the logistics systems was measured using a series of qualitative and quantitative research instruments at the central and peripheral levels. The management and distribution of HIV test kits, laboratory equipment and supplies, and other medical equipment were also studied, although at a lower level of detail. The various stakeholders for each of these programs were identified and interviewed using a semi-structured qualitative interview guide to produce a supply chain map for distribution of these commodities to the facility level. These data were supplemented by the collection of quantitative data on the management, distribution, and availability of commodities at all levels of the system.

Findings

The assessment team found that the supply chains for each of the different health commodities varied in coverage, availability of information and commodities, and logistics system performance. Findings demonstrated that family planning commodities, tuberculosis and leprosy drugs, and vaccines were generally maintained in full supply with relatively good supervision and information systems. However, some issues were identified within these vertical programs, such as poor inventory control at the service delivery point level, poor reporting for reproductive health commodities, and high wastage rates for vaccines. In addition, HIV test kits were in short supply and a number found in the central cold store had expired before use. The existing STI drug kits are scheduled to run out in June 2001, and neither the MOH nor the donors have planned another procurement. Conversely, essential drugs, including anti-malaria drugs, were consistently undersupplied for those in high demand, and oversupplied for those in low demand. The information system was non-operational because of chronic stockouts, poor supervision and monitoring, and an absence of regular reporting of stock levels and consumption trends. A kit system is used for essential drugs; however, the kit's contents have not been updated since the mid-1980s. In general, lack of transportation and communication among the levels of the system make supervision and monitoring of stock levels and consumption difficult.

KEMSA

As a result of ongoing reforms in the health sector, decisions on health commodity requirements will be made at the district level, instead of the central level. KEMSA theoretically will begin selling commodities to all health facilities. Therefore, the role of KEMSA to provide health commodities according to requested needs (pull system) rather than allocated proportions of the total supply (push system) presents a number of challenges. While many within the donor community are actively engaged in promoting this decentralized approach, support for KEMSA has not been forthcoming from either donors or the Government of Kenya (GOK). It is obvious that KEMSA needs to be capitalized if it is to carry out the new mandate of procuring, storing, and distributing health commodities for the public sector, as opposed to the storage role it has primarily played in the past.

Recommendations

To accomplish its mandate, KEMSA should—

- Finalize a business plan to ensure that health commodities are available in Kenya.
- Establish a logistics management information system (LMIS) for essential drugs.

At the same time, the GOK, through the MOH, should—

- Secure a clear policy on the capitalization of KEMSA.
- Relinquish responsibility for the procurement of drugs and commodities to KEMSA (or its appointed agent) as specified in the Gazette notice.
- Turn over control of district budgets to the District Health Management Teams (DHMT) with ratification by the District Board and the District project implementation units in place.
- Maintain vertical systems for family planning, tuberculosis and leprosy, and vaccines among the central, regional, and district levels for procurement, distribution, and inventory control of commodities until the logistics system for essential drugs, managed by KEMSA, is fully operational.

The donors and other stakeholders should also—

- Establish quarterly donor coordination meetings for the health sector—paying close attention to commodity supply and the role of decentralization.
- Secure funding for a new shipment of STI drugs to follow the current supply that is soon to end.
- Assist the MOH with quantification of national drug requirements.

KEMSA must act quickly to become competitive on the open market and to secure its position as the main supplier of health commodities for the public sector in Kenya. First, the GOK should consider using loan money or credits to capitalize KEMSA, so it can operate initially with a limited amount of drugs, in a limited number of districts. Another option is to outsource the management and operations of KEMSA to a third-party agent who could facilitate the launch of the new KEMSA in the short term before turning it over to full parastatal management. Once capitalized, KEMSA (or its agent) may consider converting the regional depots into wholesalers, establishing retail outlets at the district level, or further outsourcing distribution.

Conclusions

The supply and distribution of health commodities in Kenya is endangered by the unanswered questions surrounding the privatization of KEMSA. In addition, the fate of the successful vertical programs is also uncertain. The move toward decentralization by many of the donors and the World Bank will compel the districts to re-examine and prioritize their needs, which could threaten the vertical programs if commodities become marginalized in an environment where resources are limited. KEMSA and the districts also need to set up advanced financial management systems to cope with the new cash-and-carry system. It is unlikely that KEMSA will be in a position to meet the needs of the districts by 1 July 2001, when KEMSA will become a parastatal organization. Therefore, immediate action must be taken to resolve the issues of capitalization and KEMSA's ability to compete in an open market and to respond to the needs of its new clients.

1. Introduction

The provision and management of health commodities in Kenya is supported by a complex combination of parallel logistics systems that have emerged to handle specific vertical programs within the Ministry of Health (MOH) and usually were initiated in response to specific donor interests. These parallel systems for the procurement, warehousing, and distribution of commodities have functioned effectively, although they are not an efficient use of scarce resources. With the increasing trend toward decentralization of donor and government support for the health sector, and the decrease in funding for some health commodities at the central level, streamlining functions and increasing efficiency are critical goals of current health sector reforms.

In February 2000, to increase efficiencies within the health sector, the Government of Kenya (GOK) created a plan to transform the Medical Supplies Coordinating Unit (MSCU) into a parastatal organization, and created the Kenya Medical Supplies Agency (KEMSA). KEMSA was given a mandate to manage the forecasting, procurement, warehousing, distribution, and inventory control for essential drugs and drugs for sexually transmitted infections (STI) for the public sector, with the possibility of eventually integrating the management of vaccines, contraceptives, tuberculosis (TB) drugs, and other medical equipment.

A board of directors and chairman were appointed in August 2000, and the first meeting of the board was held in December 2000. KEMSA is scheduled to begin operating officially as a parastatal on 1 July 2001. KEMSA will inherit many of the facilities and staff of the MSCU, which it is replacing, but with a substantially enhanced mandate.

Since December 2000, additional board meetings have taken place and, to elaborate on KEMSA's internal operations and structures and plan for its July launch, a retreat is now scheduled for May 2001. Since KEMSA is a fledgling organization, and there are substantial capitalization issues to overcome, KEMSA will not be able to address its full mandate immediately. However, from the start, and as soon as possible, a vision and realistic plan are needed to make KEMSA functional and sustainable.

To assist the MOH, USAID, and other donors and stakeholders to specify the type of assistance that will be needed, particularly in relation to KEMSA, a comprehensive assessment of the supply and management of health commodities was conducted in February and March 2001. Appendix G includes a scope of work for the assessment. John Snow, Inc./DELIVER organized the assessment, with funding from USAID and with the cooperation of the MOH, to provide current information on issues concerning the various logistics systems supporting public health commodities. This assessment of the different logistics systems is a starting place for strategic planning for the range of possible logistics responsibilities of KEMSA.

The Family Planning Logistics Management (FPLM) project worked in Kenya for 10 years with the Family Planning/Reproductive Health Division within the MOH. In October 2000, a new, five-year global contract entitled DELIVER was awarded by USAID to provide logistics management support for a broader range of public health commodities beyond family planning products, including essential drugs, vaccines, STI and HIV test kits and drugs, and other medical equipment. This broader mandate enabled the assessment team in Kenya to focus on the following main objectives:

1. *To understand the policies and vision of the government related to the management of logistics systems for all health-related commodities.* This includes an understanding of the government's current overall organizational management, commitment to commodity purchasing, and responsibility

and financing for each type of health or family planning commodity distributed through the health care system.

2. *To improve understanding of other donors' and stakeholders' issues and policies related to logistics management of health commodities in Kenya.* The discussions will clarify the current and planned donor-funded commitments and activities in this area. Other questions might include how stakeholders view the emergence and capacity of KEMSA and the donors' potential role in providing support to or through KEMSA.

3. *To clarify the short- and long-term plans and capabilities of KEMSA.* This assessment will help clarify the current and potential capabilities of KEMSA in managing the logistics system for all health-related commodities and to suggest opportunities for DELIVER to support KEMSA's development.

4. *To undertake site visits that will provide information about the logistics systems at the distribution levels.* The site surveys, with interviews, will result in a set of baseline data regarding the current status of all of the vertical logistics systems for products currently being procured and distributed.[1] The survey will gather information about the products themselves; the technical areas related to their forecasting, procurement, distribution, storage, etc.; and the issues related to the sectors where they are distributed (public and private, including social marketing).

[1] These include contraceptives (both free and socially marketed), vaccines, TB drugs, essential drugs, STI drug kits, HIV test kits, and medical equipment.

2. Assessment Methodology

This assessment, funded by USAID, was conducted in Kenya during February and March 2001. Interviews and site visits were conducted at the central level in Nairobi and in the field, including six of the eight provinces. The study team included representatives from JSI/DELIVER, from both the Washington, D.C., and Kenya offices, plus USAID, the MOH, the Department of Primary Health Care, the Division of Reproductive Health, KEMSA, and Crown Agents. See appendix D for a list of team members.

To establish a clear picture of the roles of all the stakeholders involved in the health care system at the central level, interviews were conducted to elicit their present, past, and future roles using semi-structured qualitative interview guides (instruments and guides are available in a separate document from DELIVER). Those interviewed included representatives from government agencies, donor agencies, the World Bank, private organizations, and NGOs. See appendix F for a list of contacts. From these interviews, a complicated diagram was created, mapping out the supply chain for all public health commodities (see figure 1 in section 3). See appendix A for a detailed description of each stakeholder's role in the health care system, specifically regarding the provision of health commodities. See appendix E for the current MOH structure, including the various divisions and departments.

At the peripheral level, using several structured questionnaires at the regional level, district level, and service delivery points (SDP), a combination of qualitative and quantitative information was collected (these instruments are available in a separate document from DELIVER). The questionnaires collected information on the management, storage, and distribution of commodities and supplies, and on supervision and training. A number of quantitative indicators were also applied to collect information on consumption rates, stockout rates, stock levels, inventory control, reporting accuracy, storage conditions, and product losses and expiries. See appendix C for a detailed description of these field-level findings.

Three teams conducted the field research, visiting a total of six KEMSA regional depots, 16 GOK district warehouses, and 40 SDPs. The teams used a convenience sample of facilities, which were selected by consensus by all team members using several criteria. First, facilities were selected by stratifying the health care system to select a mix of urban, peri-urban, and rural facilities. Next, physical access was taken into consideration, because the teams had only two weeks to conduct the field work, although the teams tried to include facilities off the main roads to ensure a mix of accessibility and commodity availability. Six out of the eight KEMSA regional depots were selected, followed by three to four districts within each region (approximately eight districts per region). Finally, two to four SDPs were selected from each district, including a mix of MOH rural health centers and dispensaries, municipal facilities, mission hospitals, and various other SDPs serving tea plantations, game parks, and the railways. See appendix D for the list of facilities visited.

The information collected was analyzed in-country, and the results and recommendations were presented to stakeholders in Nairobi, including a discussion of the results and how KEMSA should proceed.

3. Assessment Findings

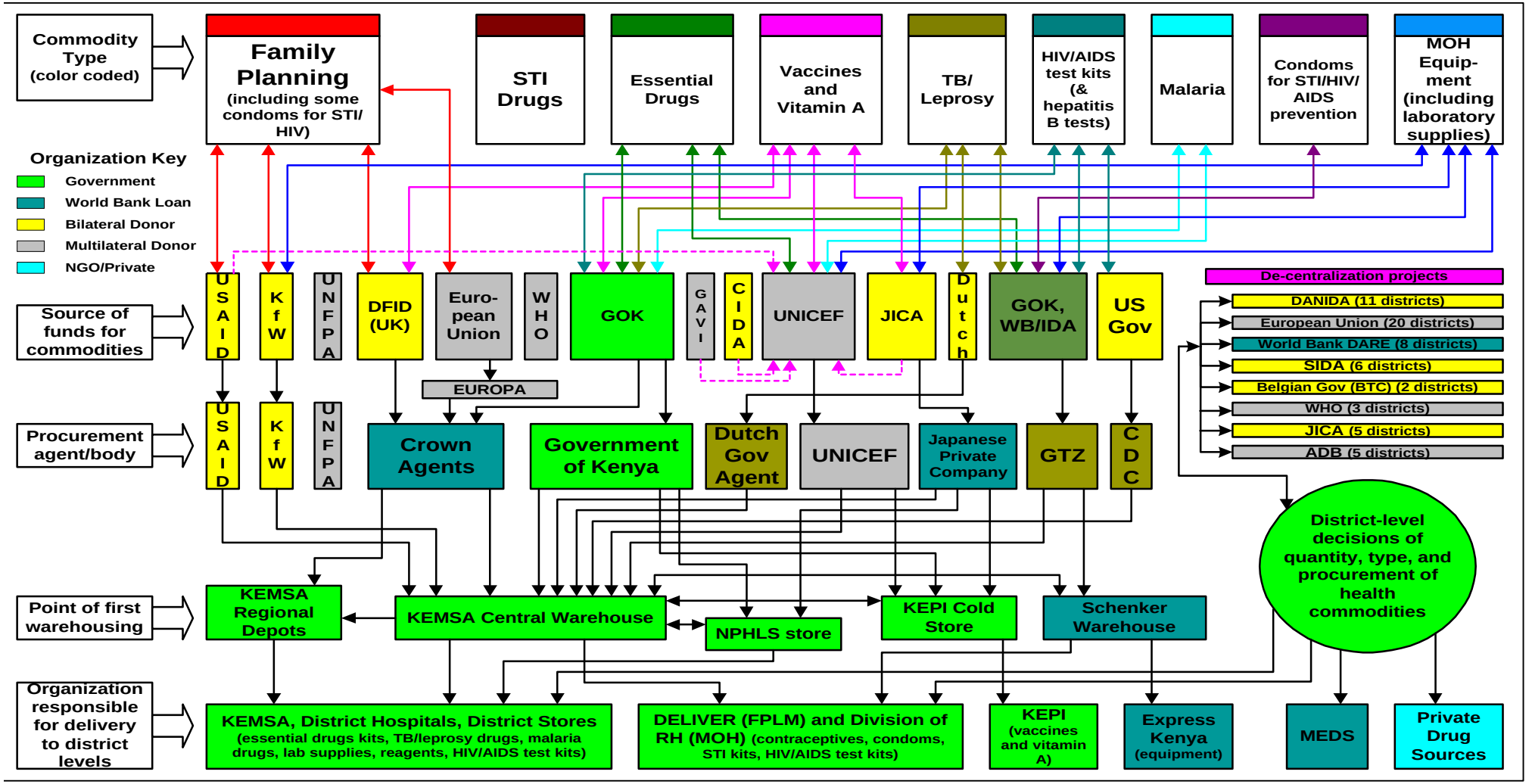
The provision of health commodities in Kenya involves a complicated supply chain with numerous stakeholders. Figure 1 maps the flow of all health commodities available in Kenya—from their financing and procurement to warehousing and distribution to the district level. Figure 1 diagrams the complexity of the provision and management of health commodities in the country. It also highlights the relatively recent moves by a significant number of donors and loan organizations to support the district level directly as part of the push toward decentralization under the umbrella of health sector reform. See appendix A for more details about each stakeholder in the Kenyan health system.

Table 1 and the sections that follow describe the four primary logistics systems that manage and distribute the majority of health commodities throughout the country. Also listed for each system are some of the principal issues that should be addressed to increase the effectiveness and efficiency of the system. See appendix C for the results of the field-based research conducted during the assessment, which provides a more detailed description of each logistics system.

Table 1. Vertical Logistics Systems in Kenya

Logistics System	Supply Status	Commodity Financing	Inventory Control	Push/Pull System	Reporting Frequency
Family Planning/ Reproductive Health (FP/RH)	FP: full supply STI: full supply until current stock is finished	GOK/WB donors	FP: max-min levels of avg. monthly consumption STI: one	Pull based on consumption	FP: quarterly consumption reports STI: quarterly patient load and consumption reports
Kenya Expanded Programme for Immunisation (KEPI)	Full supply	GOK/WB donors	Average monthly consumption	Pull based on consumption	Monthly immunization summary sheets
National Leprosy and Tuberculosis Programme (NLTP)	Full supply	GOK/WB donors	Current no. of TB and leprosy cases being treated per SDP	Push based on patient load, managed by provincial and district NLTP coordinators	Monthly (SDPs) and quarterly (Districts/Provin-ces) reports of current patient load
Essential Drugs	Non-full supply—rationing	GOK and GOK/WB	None due to inconsistent and irregular supply	Push: number and type of kit issued is based on type of facility	Not required to report consump-tion

Figure 1.
Public Health Commodity Supply Chain in Kenya



Reproductive Health Commodities

To support the broad reproductive health program, the Ministry of Health, with financial and technical assistance from international donor agencies, is committed to providing a range of contraceptive methods, condoms for STI and HIV prevention, drug kits for treating various STIs, and testing kits and reagents for STIs and HIV. While management of these commodities is streamlined primarily through the Reproductive Health Division's Logistics Management Unit, with support from DELIVER, each category of commodities has its own unique characteristics.

Family Planning

In Kenya, family planning commodities are currently provided by USAID, KfW, DFID, the World Bank, and the European Union (EU). Contraceptive supplies are usually in full supply, although there is currently a shortage of low-dose pills in the system, and supplies reportedly are arriving via KfW. USAID and KfW commodities are procured directly through the donors' own procurement systems, but DFID and EU commodities are procured through Crown Agents. The World Bank, which supplies some Norplant®, uses GTZ as the procurement agent. A noticeable lack of supplies from UNFPA is partly due to a cut in funding, but also because the MOH did not place a request for commodities. Stockouts of contraceptives are rare.

All of the commodities are initially stored in the reproductive health section of the KEMSA central warehouse; they are distributed from the warehouse to the districts by the Logistics Management Unit (LMU) of the Reproductive Health (RH) Division using LMU and DELIVER trucks. Dispensed-to-user data from service delivery points (SDP) and issues data from the districts are compiled quarterly in a central database. To facilitate appropriate distribution of commodities across Kenya, this logistics management information system combines delivery schedules with vehicle hauling capacities. (See figure 2.)

Demand for injectable contraceptives continues to grow, while demand for IUDs is declining. In addition, it appears that the demand for condoms for family planning is low, because there is some evidence that condoms are above maximum stock levels at some SDPs.

Main issues to be addressed include—

- Inventory control procedures are often not respected at the SDP level.
- Lack of procedures has resulted in overstocks in IUDs and condoms at many of the SDPs visited.
- SDP quarterly reporting rate is low, so distribution usually is based on issues from the district.
- Integration into the central KEMSA distribution system may not be sensible at this point.

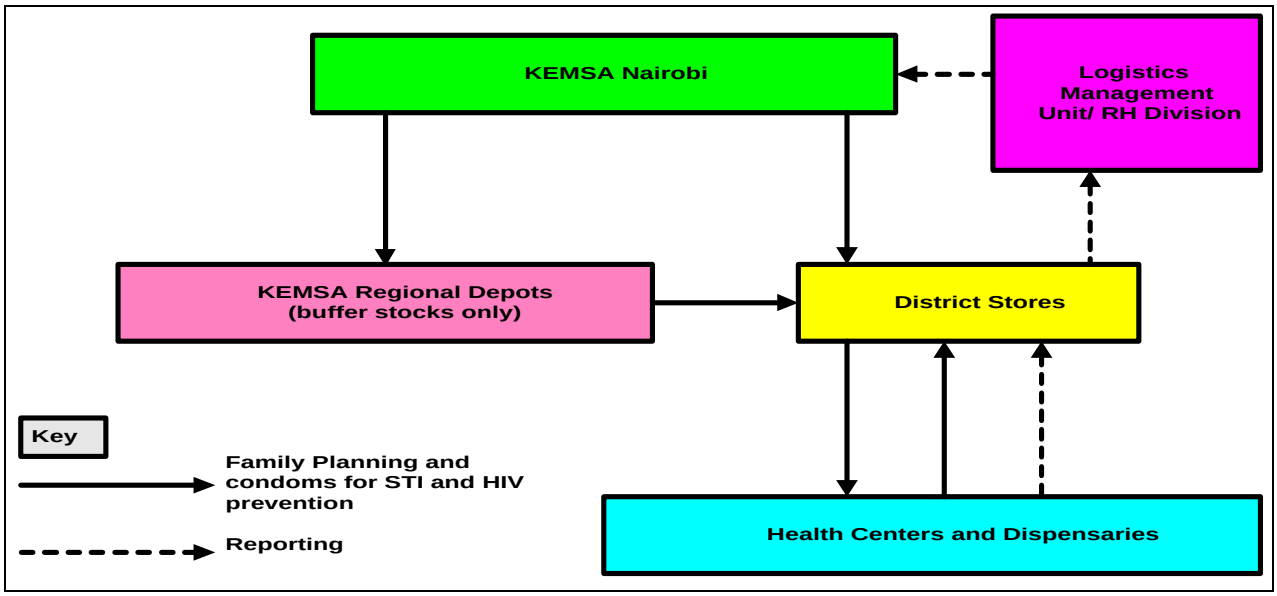
Condoms for STI and HIV Prevention

Condoms for STI and HIV prevention are being procured through the new World Bank project for the next five years (2001–2005). The procurement agent was GTZ under the last World Bank project, and it will continue this role for some of the procurements for the new project. Tenders have yet to be released to enable procurement and distribution of these commodities, but it is envisioned that, once supplied, these will be stored in the RH section of the KEMSA central warehouse, and some will be distributed via the LMU.

Main issue to be addressed:

- As noted above, the demand for condoms in the family planning program has been low; therefore, their use for STI and HIV prevention will require more marketing and alternative strategies for reaching clients.

Figure 2.
Supply Chain for Family Planning and Condoms for STI and HIV Prevention



STI Drugs

After the current shipment of KfW-funded STI drug kits is distributed, no new supplies are scheduled to enter the system. A few kits procured under the World Bank STI project can still be distributed, but this will be completed by June 2001. The KfW-funded STI kits are stored at the central level with the family planning commodities in KEMSA, and are distributed directly to service delivery points by the LMU at the RH Division, with support from DELIVER. These drugs are integrated into the RH logistics management information system, and patient loads and consumption reports are compiled quarterly in this central database. Some of the drugs in the kits are close to expiry, and the MOH has issued a memo authorizing service providers to use the STI drugs for other life-threatening conditions. (See figure 3.)

Main issues to be addressed:

- Reporting requirements are confusing. It is unclear to whom, where, and when to send quarterly consumption reports.
- Despite the major World Bank project on HIV/AIDS prevention, no donor, including the GOK, has committed to the procurement of STI drugs at present. Supplies will be depleted by June 2001.

STI and HIV Test Kits

Currently, HIV test kits, as well as hepatitis B and STI test kits, are provided by the GOK with assistance from the Japan International Cooperation Agency (JICA). JICA has developed its own test kits for HIV and hepatitis B. HIV test kits also will be provided using World Bank credits under the new Decentralized

Reproductive Health and HIV/AIDS (DARE) project, signed recently. In addition, the U.S. Centers for Disease Control and Prevention (CDC) are planning to provide at least two types of rapid HIV test kits (which require no refrigeration), using U.S. government funding. At first, the kits will be procured in small quantities, specifically for the voluntary counseling and testing (VCT) pilot sites.

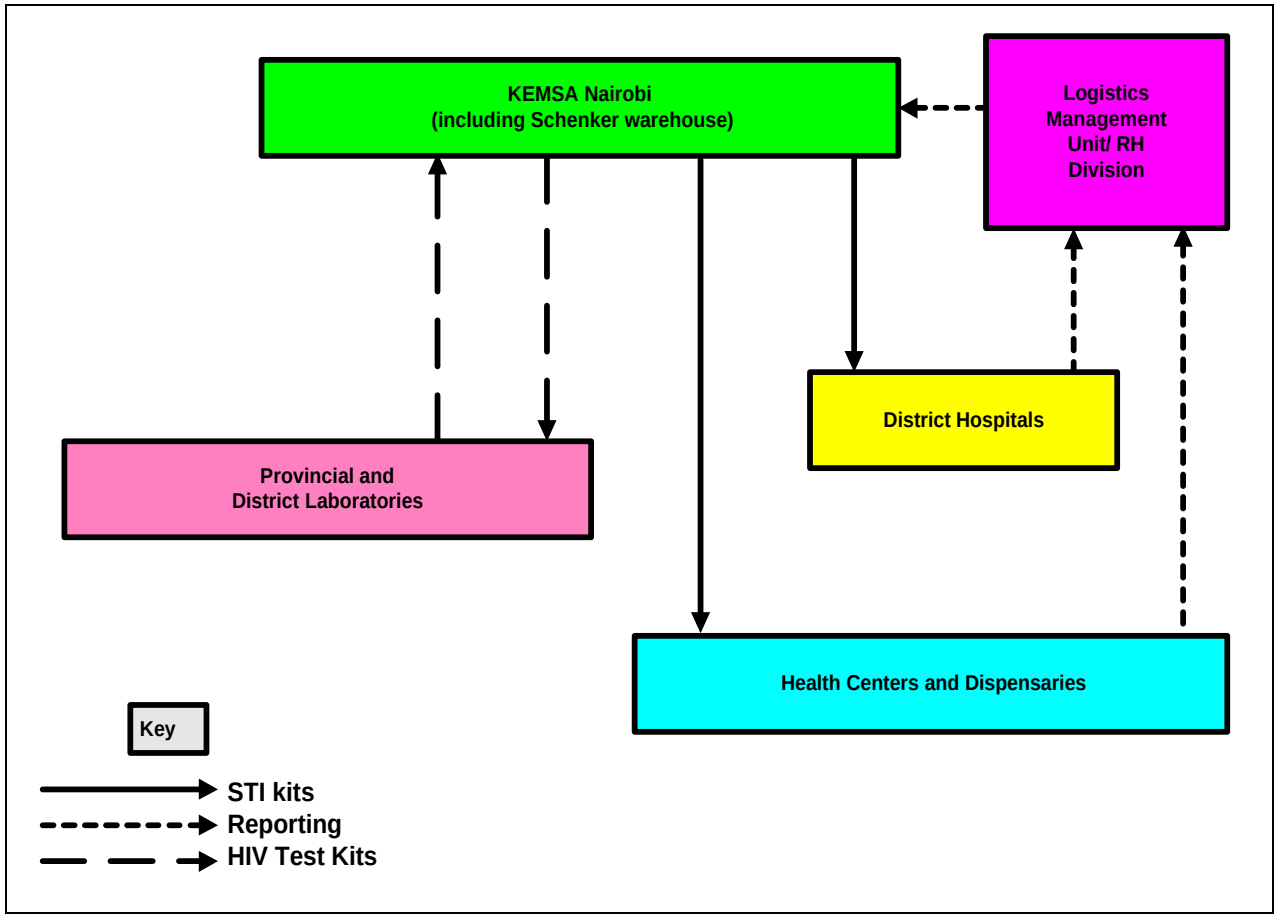
The GOK also procures these commodities as a contribution toward laboratory supplies that are managed and distributed by the National Public Health Laboratory Service (NPHLS). However, some of these supplies were transferred to the KEMSA RH section, where they were distributed by the LMU of the RH Division and DELIVER via the same distribution channels as family planning. The LMU no longer distributes the HIV test kits; laboratory staff go to the Schenker warehouse in Nairobi, after clearing their order with NASCOP and KEMSA, to collect supplies when they run out, if the supplies are available (pull system). Reports of laboratory test results should be sent to NASCOP, but no reports of stock levels or consumption are kept. The CDC-funded kits will also be distributed initially by the LMU through the same channel as contraceptives. (See figure 3.)

HIV test kits are used for three main purposes—blood screening, surveillance monitoring, and VCT. Different tests are used for different purposes depending on the number of tests to be run during a specific time. For example, it is a waste of resources to run an ELISA test with only a handful of samples, but there should be a review of the guidelines for the circumstances under which each type of test should be used.

Main issues to be addressed:

- Inconsistent supply and establishment of inventory control procedures that are not based on rationing.
- Confusing reporting requirements: to whom, where, and when to send reports is unclear.
- Frequent stockouts of HIV testing reagents and kits that are not adequately supplied to meet current demand. At a few facilities visited, expired stock was being used for testing, and test results often were not reconfirmed.
- Guidelines are needed for using different kinds of tests for different circumstances.
- Different types of kits are available, making logistics resupply planning extremely difficult.
- Abbott equipment was given to certain facilities where staff were not trained to use it, and/or staff are not able to repair the equipment when it breaks.

Figure 3.
Supply Chain for KfW-Donated STI Kits and HIV Test Kits



Vaccines and Vitamin A

The GOK and several international donors, including DFID, UNICEF, JICA, and CIDA, currently provide vaccines for the Kenya Expanded Programme for Immunisation (KEPI). UNICEF procures vaccines through its own procurement agency, and DFID procures through Crown Agents. Both vaccines and vitamin A capsules are managed and distributed through the KEPI vertical program and are stored at the central level in the KEPI cold store. KEPI has a strong information system that includes regular reporting of immunization rates from the lower levels. A fleet of KEPI cold storage trucks delivers vaccines to the KEMSA regional depots. The vaccines are then delivered to the district stores and the SDPs through the cold chain. Stockouts of vaccines are rare, with the exception of a national Bacillus Calmette-Guérin (BCG) vaccine stockout in 2000 that lasted approximately six months. (See figure 4.)

Main issues to be addressed:

- Stock levels are not monitored consistently at SDPs, leading to significant product wastage.
- Low supply of syringes/needles at the rural facilities requires staff to buy from local pharmacies using cost-sharing funds or clients to buy locally.
- National Immunization Days (NID) are particularly disruptive to inventory control because the system is flooded with vaccines in a short period of time.

- Vitamin A is distributed during NIDs only, and any remaining stock expires in storerooms.
- At this time, it may not be practical to integrate vaccines and vitamin A into the central KEMSA distribution system.

Figure 4.
Supply Chain for KEPI Commodities

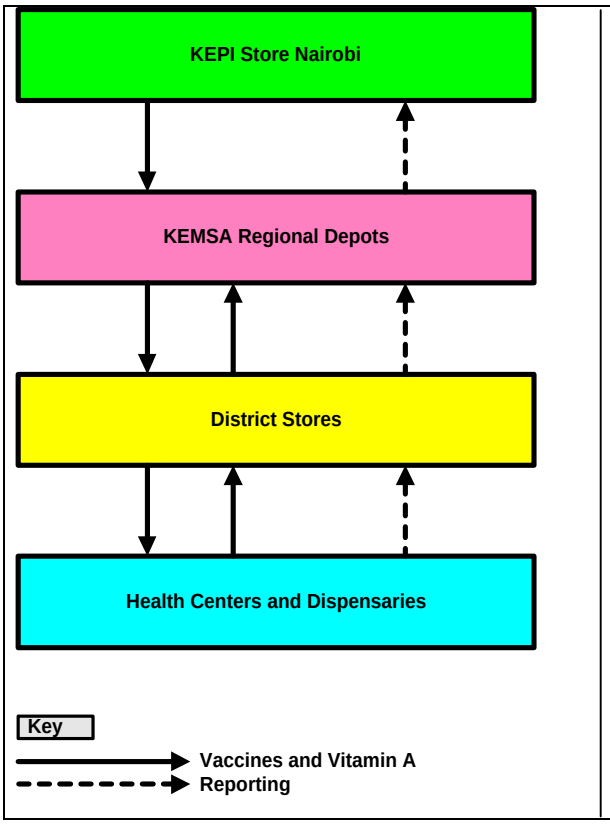
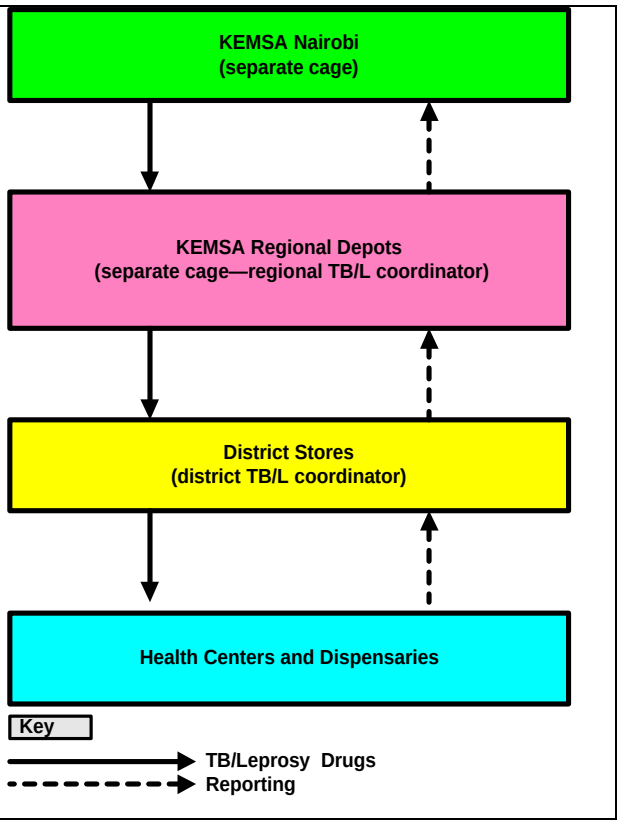


Figure 5.
Supply Chain for NLTP Commodities



Tuberculosis and Leprosy Commodities

The Dutch government and the GOK supply tuberculosis and leprosy drugs, although, after 1 July 2001, the Dutch are ceasing all support for this program. However, a three- to four-year supply of National Leprosy and Tuberculosis Programme (NLTP) drugs reportedly is in the system or is being procured. Drugs are procured by a Dutch procurement agent, stored in a secure cage in the KEMSA central warehouse, and managed by NLTP. NLTP staff use their own vehicles to collect and distribute stock to the KEMSA regional depots and the stock is stored in a separate cage. The provincial NLTP coordinator arranges for distribution to the district level, where dedicated district NLTP coordinators follow each case and ensure adequate drug supply at the SDPs. Stock levels are monitored consistently through monthly and quarterly consumption reports so, consequently, stockouts of these commodities are rare. The NLTP will lose the majority of this logistics support when the Dutch government pulls out in mid-2001. It is unclear whether KEMSA will take over these functions. The NLTP is depending on GOK support to sustain the program. (See figure 5.)

Main issues to be addressed:

- The end of support from the Dutch government means that some organization will have to step in with funding to continue the program.
- At this point, it may not be sensible to integrate TB/L into the central KEMSA distribution system.

Essential Drugs

Currently, essential drugs are funded only by the GOK—through both the national MOH budget and World Bank loans. UNICEF also provides some individual drugs for specific programs, such as Integrated Management of Childhood Illness (IMCI), but their availability is unclear. It is interesting to note that KEMSA and the MOH chose Crown Agents as the procurement agent for the essential drugs kits being distributed through a push system on a strictly rationed basis. Crown Agents made arrangements for some regions and for certain kits to be shipped directly from the suppliers to the KEMSA regional depots to compensate for the lack of adequate space in the central warehouse and to shorten the distribution chain. The MOH also procures and distributes a limited number of individual (loose) drugs through KEMSA. (See figure 6.)

A report by Crown Agents[2] shows that the GOK allocation for essential drugs has been increasing in Kenyan shillings during the past few years. However, the real value has been leveled by inflation, an increase in morbidity, and an increase in population. Almost all donors have withdrawn from procuring essential drugs at the central level.

Main issues to be addressed:

- No reporting of consumption and stock levels is required; therefore, records are not kept up-to-date or accurate, and inventory control is poor.
- The composition of the kits for essential drugs leads to overstocks of unused commodities (i.e., niclosamide, benzyl benzoate, IV fluids and giving sets, etc.), and stockouts of high-demand commodities (i.e., paracetemol, amoxycillin and other penicillins, norfloxacin, etc.) that are replaced from local pharmacies using cost-sharing funds.
- There are chronic stockouts of drugs in high demand because essential drugs are not maintained in full supply.

Malaria Drugs

Malaria drugs are included in the kits for essential drugs, and there are very few supplementary supplies procured and distributed separately by the GOK or UNICEF. Buffer stocks to combat outbreaks have been exhausted at KEMSA; therefore, many clients buy these drugs from private pharmacies if they can afford them. Insecticide-treated bed nets also are donated by UNICEF—some are distributed through the Population Services International (PSI) social marketing program. (See figure 6.)

It is expected that demand for these commodities will increase, because malaria remains one of the top killers in the country, particularly in the rainy seasons, when there are serious outbreaks.

[2] Crown Agents. 2001. "Review of the Essential Drugs Programme in Kenya and Development of an Interim Strategy." Kenya: Crown Agents.

Main issues to be addressed:

- There are uncertainties over future supplies (DFID used to provide anti-malarial drugs).
- Provision of SP rather than other drugs that may be either ineffective or adding to resistance build-up.

Figure 6.
Supply Chain for Essential Drugs (Including Malaria Drugs)

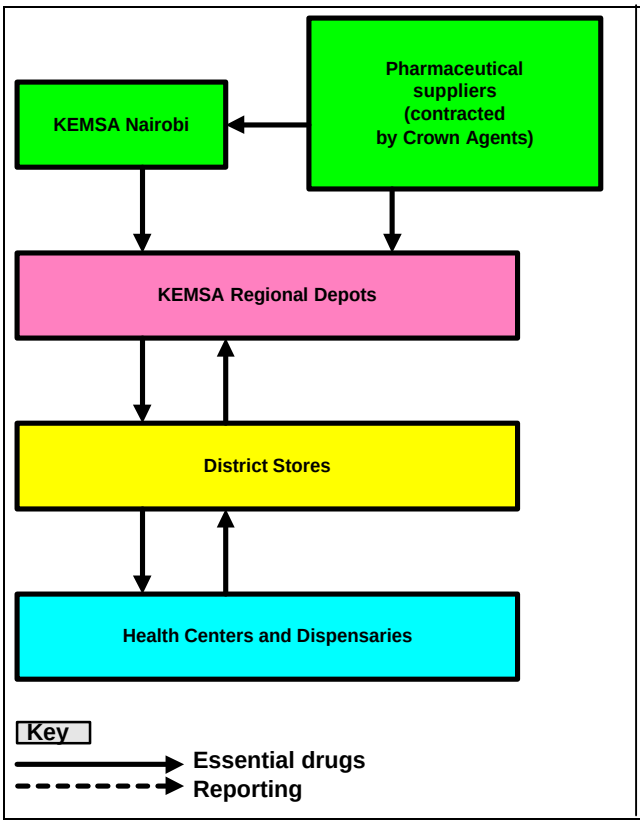
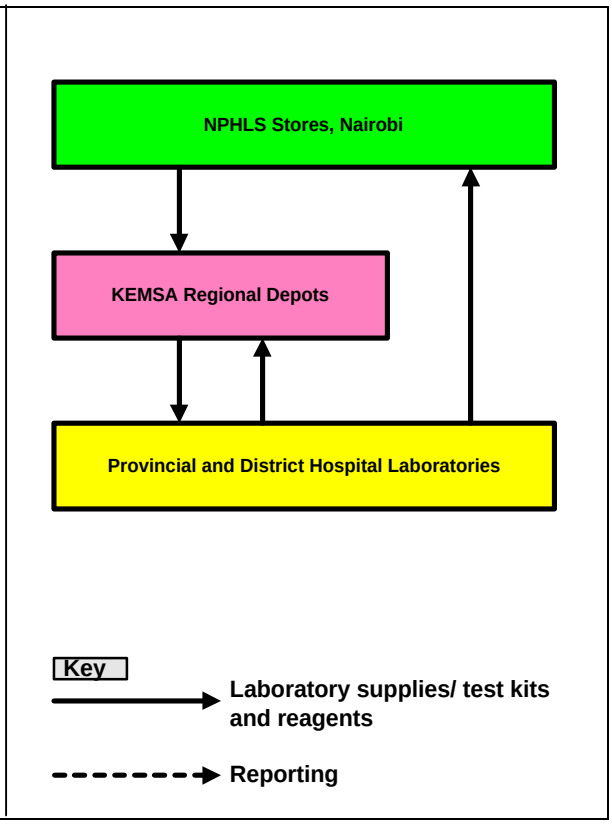


Figure 7.
Supply Chain for Laboratory Supplies and Equipment



Laboratory Supplies and Equipment

A variety of MOH equipment, laboratory supplies, and consumables are funded by the GOK, KfW, UNICEF, JICA, and the World Bank. These include gloves, syringes, and disinfectants; reagents for test kits; laboratory equipment, such as microscopes; maternal and child health equipment, such as sutures, forceps, growth charts, etc.; and larger equipment, such as refrigerators for vaccines and some vehicles (including two boats for Lamu and the lake area). Some of the larger equipment funded by the World Bank loans was stored at the Schenker warehouse and delivered to the provinces and districts by a private freight forwarding company (Express Kenya). Other laboratory supplies are stored at the NPHLS store before being collected by the respective provinces or districts. (See figure 7.)

4. Decentralization by GOK and Donors

A decentralized approach to health services has been introduced by the GOK and supported by donors as part of the Health Sector Strategic Plan (HSSP). In lieu of providing commodities at the central level, the GOK and the donors are supporting specific regions and districts in line with the GOK decentralization policy for enabling greater decision making at the district level. See appendix B for a list of the districts being supported by donors.

The total resource envelope for each district for the health sector includes the GOK allocation, donor contributions, and the collection of user fees (cost sharing) at service delivery points, although the proportion of each will vary by district. Until now, user fees have been charges for consultation rather than fees for the drugs themselves—however, this could change in the future. Donor support varies by district because not all districts receive it; this is not the "basket funding" arrangement that MOHs and donors have adopted in some other countries. Under this initiative, the District Health Management Teams (DHMT) and the District Health Management Boards (DHCB) will prioritize their own needs based on the total resource envelope. So, if a land cruiser is required, the DHMT, DHMB, and Provincial Health Management Team (PHMT) must first approve it. Subsequently, all procurements using donor money need to be approved by that donor's Project Implementation Unit (PIU) for that district.

While these projects are all in very early phases, each donor has a particular focus or strategy for the districts it intends to support. For example, some donors are adopting a "matching funds" approach—any use of donor resources has to be matched with a similar amount from district MOH funds. Other donors are reimbursing the districts after they have bought goods or services entirely with GOK funds. One of the Belgian-supported districts, Nyamira, is focusing on a revolving drug fund. The JICA-supported districts are focusing on upgrading health facilities and providing of equipment. The DANIDA/ and EU-supported districts are focusing on health systems and services. SIDA and the World Bank are offering a total health package, which is more flexible, to the districts they are supporting. And, the WHO is focusing on systems strengthening in the districts they are supporting. However, some districts will receive more resources than others, depending on the level of donor support, especially in the districts supported by two or more donors.

Some of these donors will provide limited funds for procuring drugs and other health commodities and some will not. Regardless, the supplementary donor support will allow the districts to spend more of their GOK allocation on drugs. Therefore, the districts will be responsible for managing of commodities, services, and systems for the health sector. The districts will be able to make choices, not only in the types and quantities of the essential drugs they procure, but also in where they obtain those commodities. What they choose to do will depend largely on the availability of commodities and their relative cost from KEMSA, Mission for Essential Drugs and Supplies (MEDS), and other private sector sources. In fact, evidence from the field-based research showed that the districts are already buying certain drugs from private wholesalers because of the inadequacy of the kit system. These purchases are made with the limited amount of cost-sharing money available to the districts.

To survive, KEMSA must be competitive in this open market. However, a study by Management Sciences for Health (MSH)[3] showed, in a drug price analysis, that commodities purchased by the MOH were, on average, 81 percent of the price of the MEDS drugs on the open market. Thus, after a mark-up for system running costs, infrastructure costs, salary costs, and anything else to be supported from the sale

[3] Bates, Jim. March 1998. "Options for Promoting Financial Sustainability of Drugs, Vaccines and Family Planning Supplies." Boston: APHIA Financing and Sustainability Project, Management Sciences for Health.

of the drugs—the price of drugs provided by the government was likely to be much higher than the MEDS prices. Even when compared to the commercial retail price of drugs, this proportion is 53 percent—meaning that the mark-up on drugs by KEMSA could only be 89 percent before it would exceed those in the private sector.

It is unclear whether the GOK or donors providing funds to the districts will encourage them to buy from KEMSA in the beginning; there is no obligation for them to do so. Even if districts are obliged to buy some or all of their drugs from KEMSA, they will be unable to comply if KEMSA does not have the drugs to sell, if they are priced too high, or if KEMSA cannot deliver the commodities.

Likewise, the health commodities must be available and affordable to clients, or they also will meet their needs in the private sector. There is not yet a clear policy on cost recovery and what percentage of the costs will be recovered from clients. However, this should be clarified because cost recovery is a factor in the total resource envelopes for the districts. This, in turn, will determine what the districts can procure in terms of commodities and, consequently, how many drugs KEMSA ultimately will need to make available for districts to purchase.

Another critical concern is whether these district-level management units have the expertise to calculate the types and quantities of the drugs they require, and when they should order them. The districts will need assistance with their quantification processes to ensure that the right kinds and quantities of drugs are procured to prevent stockouts and expirations (due to overstocks). Distribution of commodities is also of concern. Delivery channels have not yet been established, and, currently, KEMSA does not have the capacity to distribute commodities to all regions and districts.

5. The Role of KEMSA

Legislation enacted in February 2000 transformed the public sector Medical Supplies Coordinating Unit (MSCU) into the parastatal (government), Kenya Medical Supplies Agency (KEMSA), with the same staff but with a different focus. The organization was officially launched in November 2000, and the board of directors met for the first time in December 2000. KEMSA's new mandate includes the procurement, warehousing, and distribution of health commodities, whereas the MSCU was essentially a series of warehouses for public sector health commodities. KEMSA is also expected to become a parastatal, changing to a "cash-and-carry" pull system for health commodities on behalf of the public sector, to provide the districts with the commodities they require. However, to meet these objectives, KEMSA must be capitalized so it can procure the required drugs and other commodities to sell to the districts.

Many of the donors have adopted a "wait and see" approach during this time, with many doubting that KEMSA can fulfill the mandate it has been given as a parastatal with its present structure and operating procedures. Instead of considering the idea of capitalizing KEMSA, many donors have supported the HSSP, and they have diverted their efforts to the decentralization efforts described above. Meanwhile the MOH refers to its role in KEMSA as "hands off, eyes on"—meaning they want to give KEMSA a free hand to manage the systems in place, but they will be watching it closely.

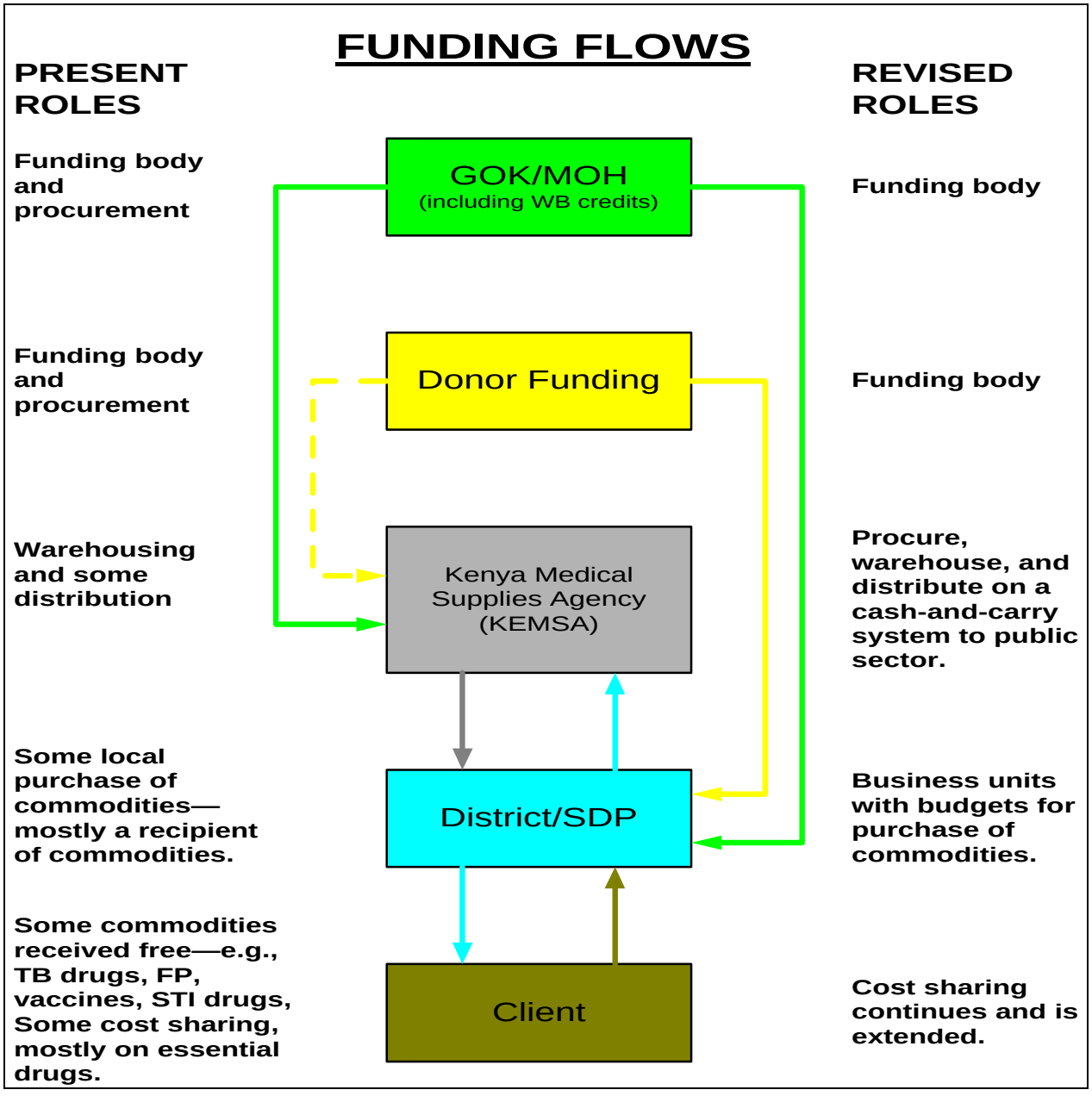
Many donors recognize the need for KEMSA to survive and succeed and want to see it in a new role of supplying affordable drugs to the districts. However, the donors also realize that KEMSA will need assistance in areas such as procurement, finalizing a business plan, obtaining the appropriate staff profile, and financial management. In any case, either the GOK or the donors must provide capital to KEMSA at the central level for it to be able to procure the drugs to supply the districts. The MOH has stated clearly that the drugs currently in the KEMSA warehouses (in kits) do not belong to KEMSA—they have already been allocated to the districts. It is imperative that KEMSA be allowed to act independently from the MOH in procuring health commodities. KEMSA must be allowed to make independent procurement decisions based on price and quality, including the selection of generic versus branded commodities. In this regard, it needs strong management to resist the pressures that may accompany procurement of essential drugs and other commodities. Figure 8 shows the present and future roles of the various stakeholders in the health system with a focus on KEMSA. It also highlights some of the issues that KEMSA is facing during its transition to a parastatal organization.

It is apparent that there is limited time for establishing the new working practices of KEMSA, and, although it is able to distribute prepackaged drug kits that are consigned to districts, it will not be ready to respond to a nationwide pull system by 1 July 2001. KEMSA first will need to establish financial management systems to handle the new cash-and-carry system. Additionally, the role of the regional depots and the integration of the vertical logistics systems into the KEMSA system are unclear at this point. There is also the question of the commodities (family planning products, drugs for TB and leprosy, and vaccines) that currently are subsidized or provided free to the GOK by the donors. Are these commodities to be paid for like essential drugs? And, if not, who will pay for their storage and distribution if they are coming from KEMSA? Will the districts pay a handling fee to receive these free commodities for their total needs, while still not paying for the commodities?

KEMSA has drawn up some preliminary plans and actions, including an early May retreat for senior staff and board members to formulate the management structure and strategic plans, finalize a business plan, identify a skills matrix and training needs, lobby for funding and a proper start-up base, and market its

services. This report, which presents the results of the assessment, provides information for these decisions and recommends future options for KEMSA, the MOH, donors, and other stakeholders.

Figure 8.
Stakeholder Roles



6. Recommendations

Following this brief description and interpretation of the findings of this assessment, it must be stressed that the provision and distribution of health commodities in Kenya is very complex and the number of stakeholders great. Recommendations pertaining to the role of KEMSA are tentative and must be viewed in the political atmosphere that pervades current decisions regarding the MOH, the role of the World Bank, donor attitudes, and the present state of the economy. The following recommendations are classified by the responsible party: KEMSA, the MOH, or donors/DELIVER/other stakeholders also according to their nature: policy, structural, and technical. Recommendations are also prioritized in order within each section. Recommendations in bold are the highest priority.

Level	KEMSA	MOH	Donors/DELIVER/Other Stakeholders
Policy		• **Secure a clear policy on the capitalization of KEMSA.** • **Relinquish control of district budgets to the DHMT with ratification by the District Health Board and the District Project Implementation Units already in place. Return cost-sharing funds and revenues to the DHMT so the funds stay in the health sector.** • Establish national standards and quality assurance mechanisms for HIV test kits. • Establish and disseminate national policies for facilities conducting HIV testing for requirements to reconfirm test results, ensure confidentiality of results, and counsel patients. • Establish a national policy to promote the procurement of generic drugs. • Eliminate standardized drug kits (STI and essential drugs), but not before systems are in place for individual drug procurement.	**Establish a quarterly donor coordination/donor information meeting for the health sector—particularly looking at commodity supply and the role of decentralization. These meetings could be convened by WHO or another donor and coordinated by the MOH. DELIVER could facilitate this process.**

Level	KEMSA	MOH	Donors/DELIVER/Other Stakeholders
Structural	• **Finalize a business plan for KEMSA that will ensure provision of health commodities in Kenya.** • Transfer storage of all STI commodities and HIV test kits from the Schenker warehouse back to the KEMSA central warehouse in Nairobi, as soon as possible, and streamline paperwork for obtaining supplies. • Clarify lines of authority between the KEMSA regional depots and KEMSA/Nairobi, and the PMO's office. • Participate in selected KEMSA staff internships at private drug wholesalers or MEDS**.**	• **Maintain vertical systems for family planning, TB, leprosy, and vaccines among the central, regional, and district levels for procurement, distribution, and inventory control of commodities until the logistics system for essential drugs managed by KEMSA is fully operational.** • **Turn over responsibility for procurement of drugs and commodities to KEMSA (or its appointed agent) as specified in the Gazette notice.** • Issue a new memorandum from the MOH regarding the management and destruction of expired commodities, which may include a nationwide recall of expired commodities or a "spring cleaning" of warehouses. • Integrate the distribution and transportation of health commodities between the district and health facility level. (This already occurs in many cases and should be a standard procedure to streamline distribution and reduce the number of trips to the lowest level.) • Facilitate supervision and monitoring at all levels for an effective and efficient logistics system by ensuring sustainable methods of transport (i.e., motorcycles or allocation of funds for public transport). • Clarify reporting requirements for STI and HIV/AIDS programs and the respective roles of NASCOP and the RH Division. • Issue refrigerators to facilities that have been upgraded recently to include vaccines. • Use private transportation for distribution of commodities to increase efficiency of the distribution system where financially feasible and cost-effective, without posing a threat to product quality (e.g., Coastal Province). • Establish feedback mechanism from central level to regional, district, and rural health facilities regarding program outcomes (i.e., number of TB or STI cases currently being treated, CYPs achieved, and changes in stockout rates, etc.).	

Level	KEMSA	MOH	Donors/DELIVER/Other Stakeholders
Technical	• **Establish an LMIS for essential drugs.** • **Secure resources to print and disseminate bin cards, which are in short supply nationally.** • Conduct a market survey to establish KEMSA's potential market share and to understand the competition and barriers to competing in the open market. • Focus on limited number of drugs in the short term. • Re-evaluate standards of quality for drugs procured locally and internationally.	• Standardize public sector records and reports across all programs. • Train laboratory staff (who were issued the equipment) in how to use and maintain Abbott machines for HIV testing. • To reduce waste in the system, implement inventory control procedures for vaccines. • To design intervention strategies, and because of excessive staff turnover and retrenchment, conduct a nationwide training needs assessment for the logistics management for all commodities to establish performance levels and gaps. This assessment should not be done until current changes in the logistics systems are completed, including decentralization, cost recovery, potential integration, establishment of KEMSA, and other recommendations noted above.	• **To follow the current supply that will soon end, secure funding for an adequate supply of drugs to treat STIs.** • **Assist the MOH with quantification of national drug requirements.** • Convert all health logistics systems to pull systems where facilities determine needs based on logistics data (i.e., usable stock on hand, dispensed-to-user data, losses and adjustments, inventory control procedures, etc.).

7. Further Considerations—The Way Forward

Bearing in mind the various recommendations suggested earlier, a number of options are available to successfully operationalize KEMSA under its parastatal mandate due to begin on 1 July 2001. These options are merely discussion points to consider once the position of funding for KEMSA becomes clearer, when the GOK intentions/policies are better defined, or when the KEMSA board and senior staff meet for their retreat.

Some of these options and strategies have worked in other countries under similar circumstances. They are included so that they may be considered in light of the imminent changes in role envisioned by KEMSA, the MOH, the GOK, the donors, and the World Bank as of 1 July 2001. The options are not presented in any particular order of importance.

Option 1: Secure credit to capitalize KEMSA, beginning with a limited number of drugs to cover a limited number of districts.

This option allows for the limited capitalization of KEMSA, so that it may begin supplying the most common drugs that districts require on a cash-and-carry basis—as long as the districts themselves have the resources to buy these drugs. This initial credit may come from institutions such as the World Bank or African Development Bank, or perhaps a donor eventually will come forward with limited funding. The question is, how much capital does KEMSA need to commence its business? All districts are not going to be ready at the same time, so it would be wasteful to capitalize KEMSA for the whole country's needs immediately. However, by selling to a few districts at a time, KEMSA should be able to use the money generated from those sales to purchase additional drugs, enabling it to supply other districts that subsequently come on board. For the first few years, KEMSA may not generate significant profits, since it inevitably will have to reinvest its profits in the growth of the organization.

However, caution should be exercised in allowing districts to take commodities on credit. A credit system was permitted in Ghana, where it worked for a limited time before the Central Medical Stores became heavily indebted because the cash-and-carry system became a credit-and-carry system, because the districts did not have enough capital. So the success of this system requires districts (or customers) to be able to pay for their goods. However, financial management has been a problem for previous decentralization attempts.

It is important, therefore, not only for districts to have access to quality drugs and medical supplies at affordable prices, but also that the financial mechanisms are in place to ensure that the districts are encouraged to procure from these sources. In this respect, a voucher system could provide the necessary checks and balances. Such a voucher system would involve an allocation to the districts from the GOK or donor resources in the form of vouchers that would only be redeemable at KEMSA. The vouchers would be cashed at KEMSA in exchange for drugs and medical supplies. KEMSA would supply quality products at competitive prices and would provide a sound and transparent mechanism for accounting for those supplies. KEMSA in turn would exchange the redeemed vouchers for cash with the GOK or donors, as appropriate. In this way, KEMSA could facilitate the decentralization process and at the same time be assured of receiving funds with which to buy additional supplies.

Option 2: Start on a small scale with a limited number of districts and gradually add districts as they become ready to purchase from KEMSA.

A variation on option 1 is actually to start with a specific number of districts that KEMSA will promise to supply—for example, the DANIDA-supported districts in Coast province. It could offer to fully supply the districts in that region from the regional depot in Mombasa—in effect, operating as a small business within the larger KEMSA operation until it has gained experience regarding the quantities of drugs to procure to meet the needs of one particular region.

Option 3: Outsource the management and operations of KEMSA to a third-party agent who would run KEMSA for three to five years and then turn it over to the parastatal management.

This option could attract donor funding for the initial phase so that a guarantee could be made as to the appropriate procurement of essential drugs and other health commodities. It would mean that the third party would have the control to restructure the operation along commercial lines while retaining the "social responsibility" that comes with being the main provider of commodities to the public health sector. Restructuring may involve the changing of staff, role adjustment, retraining schedules, and the responsibility for the financial aspects of the business. This approach was taken in Tanzania, where a major donor supplied five key staff and capitalized the operation so that, after several years, the Medical Stores Department was working as a viable business.

Option 4: Once capitalized, other options to consider are to—

- establish KEMSA pharmacy stores at the district level,
- convert regional depots into regional wholesalers, or
- outsource distribution.

These options may be carried out after some capitalization or restructuring of KEMSA has taken place. They depend on availability of financing for such investments but also may be undertaken step-by-step, bringing more facilities or more distribution avenues online as circumstances allow.

8. Conclusions

The Kenya health sector is facing serious challenges as described in this detailed analysis of the supply chains for all major health commodities. First of all, the essential drugs supply and delivery system is seriously threatened as a result of the uncertainty of KEMSA's future role. Even if decisions regarding KEMSA are made quickly, and its capability of carrying out its new mandates is strengthened, it will take months for a new system that can provide at least some of the drug requirements nationwide to be up and running. In the interim, clients may be forced to go without drugs or face the prospect of obtaining them from private sources. Given the state of Kenya's economy, this will place a heavy burden on the population—particularly those who are already living below the poverty line and whose health is often the most threatened.

In addition, the fate of the successful, vertical programs is uncertain. For example, if KEMSA is not in a position to assume certain functions of the NLTP program when funding from the Dutch government ends in June, the success of the program may be compromised. With the high rates of TB in Kenya, this should be a top priority for the MOH and the GOK. Furthermore, with the high STI and HIV/AIDS rates, prevention and treatment also should be a top priority, particularly as the STI drugs run out without a GOK or donor commitment of resupply. Likewise, HIV test kits are not supplied in sufficient quantities to meet current demands. While the KEPI and family planning programs do not appear to be at risk of losing donor support in the near future, they eventually may be integrated into KEMSA's distribution system. In the short-term and the future, who will cover the storage and personnel costs for these commodities at the KEMSA warehouses if KEMSA is functioning as a private business? It would not be unreasonable for KEMSA to expect that rent be paid for storing these commodities even though they have been donated to the MOH.

Some of these problems were faced in Tanzania as well, and the lessons that can be learned from that experience can serve to guide KEMSA. An MSH presentation reported that integration of logistics systems can produce significant savings and benefits but only if it is implemented in partnership with an efficiently functioning logistics organization with spare capacity. KEMSA does not run efficiently at present and does not have spare capacity.[4]

In addition, there must be genuine political commitment to the process. That means that all stakeholders—not just KEMSA—must have a common view of changes to take place. For example, it took more than two years to build consensus and reach final agreements for the family planning commodities to be distributed by the Medical Stores Department in Tanzania—even though demonstrable savings were evident for integration of the logistics systems.

Finally, the push toward decentralization by many of the donors and the World Bank is designed to force the districts to look at their needs more closely and prioritize those needs. It is unlikely that KEMSA will be in a position to meet those needs on July 1 unless immediate steps are taken with regard to its capitalization and ability to respond to a pull system.

[4] Clark, M. July 2000. "Integration of Family Planning Supply Systems: Tanzania." Washington: Global Health Council Conference 2000.

Appendix A
Stakeholder Roles in the Kenyan Health System

Stakeholder Roles in the Kenya Health System

The provision of health commodities in Kenya currently involves a complex supply chain with numerous stakeholders. Figure 1 in the report maps the flow of all the health commodities available in Kenya, from their financing, to procurement, to warehousing and distribution, to the district level. The figure displays the complexity of providing and managing health commodities in Kenya, and highlights the relatively recent moves by a significant number of donors and lenders to support the district level directly, as part of the push toward decentralization under the umbrella of health sector reform.

The information in this appendix, gathered during this assessment, is the perceptions of those interviewed and does not provide a definitive statement of each stakeholder's activities or any quantification of its level of support. The information is organized under the following categories: KEMSA, Ministry of Health (MOH), donors, the World Bank, nongovernmental organizations, other cooperating agencies and private organizations.

1. Kenya Medical Supplies Agency (KEMSA)

KEMSA (formerly the MSCU) is the primary organization used by the Kenyan MOH to store and distribute health commodities and medical supplies, through its central warehouse in Nairobi and seven regional depots throughout the country. At present, KEMSA is still operating as an arm of the MOH, but is in the process of becoming a parastatal organization. As a parastatal, it will function independently of the MOH, while still receiving supplies financed by the MOH and the international donor agencies that support it. A board of directors was established in February 2000, and met for the first time to begin plans for privatization in December 2000. Full transition to parastatal status is slated for July 1, 2001.

Currently, KEMSA receives funding for its operating costs from the GOK, and a business plan is being finalized to allow KEMSA to begin to operate as a private organization, covering its own operating costs through the sale of health commodities. As a parastatal organization, KEMSA will be responsible for the procurement, storage, distribution, and management of all essential drugs, health supplies, and equipment. (See main report for further details.)

2. Ministry of Health (MOH)

The MOH is divided into three main departments—the (Department of) Primary Health Care/Preventive and Promotive (PHC/P&P) Health Services, the (Department of) Curative and Rehabilitative Services, and the (Department of) Standards and Regulatory Services (see appendix E). Each of these comprises several divisions. This assessment primarily focused on the PHC/P&P Health Services.

For the management and distribution of health commodities and supplies, four primary vertical programs operate parallel logistics systems, which cover the majority of health commodities: reproductive health, including family planning, condoms for STI/HIV prevention, and some of the STI drug kits and HIV test kits; Kenya Expanded Programme of Immunization (KEPI); National Leprosy and Tuberculosis Programme (NLTP); and essential drugs. These logistics systems are described in detail in appendix C. Altogether, these logistics systems cover the six high-priority care packages (CP) identified by the National Health Sector Strategic Plan (HSSP):

- Malaria prevention and treatment
- Reproductive health

- HIV/AIDS prevention and management
- Integrated Management of Childhood Illness (IMCI)
- Expanded Program on Immunization (EPI)
- Control and prevention of major environmental health-related communicable diseases (TB, cholera, typhoid, dysentery, etc.)

Representatives from the following MOH programs and divisions were interviewed during this assessment and are responsible for the supply and management of health commodities and their respective logistics systems, as described below.

Department of Primary Health Care

The Department of Primary Health Care (PHC), the body that oversees the individual divisions and vertical programs within the MOH, offers the majority of health care services in Kenya. This department is responsible for financing the essential drug requirements of the nation. For many years, donors have been contributing to the availability of commodities, in addition to those that GOK purchases itself. For essential drugs, a kit system was introduced in the 1980s to facilitate management and distribution of essential drugs by consolidating them in kits. At present, the various kits for essential drugs include the following:

- In-patient kit
- Out-patient kit
- Rural Health Center kit 1
- Rural Health Center kit 2
- Dispensary kit 1
- Dispensary kit 2

These kits have been procured by Crown Agents on behalf of DFID, other donors, and the GOK. Crown Agents were able to facilitate this procurement process because they have banking arrangements that allow the GOK to deposit the cost of the drugs they wished to purchase into an account, in turn reassuring local and international manufacturers and drug wholesalers that prompt payments would be made. Essential drugs provided by the GOK have consistently been in short supply, and stockouts of these drugs are chronic throughout the system. No kits were available to GOK health facilities for most of 2000.

Malaria Control Division

The malaria division is concerned primarily with the provision of malaria drugs and insecticide-treated bed nets. The drugs are currently financed by the GOK, and are procured through the Crown Agents as part of the essential drug kits for the GOK. The GOK is also committed to procuring these drugs when there is a severe outbreak of malaria, but often does not have the resources to buy the drugs needed. DFID had been supporting separate procurements of a small quantity of loose malaria drugs, although, since this stopped, emergency stocks are no longer available at KEMSA for serious outbreaks. UNICEF supplied the insecticide-treated bed nets for a limited time.

Because they are included in the kits, most of the anti-malarial and treatment drugs provided by the GOK are managed and distributed through the logistics system that handles the essential drug kits. Because the essential drug kits were not available for most of 2000, anti-malaria drugs have been undersupplied

recently. This has resulted in some stockouts of these drugs for a disease that is easily prevented and treated, yet remains a significant cause of morbidity and mortality in Kenya. The increased prevalence of malaria, as well as the increasing population in endemic areas and increases in the prices of the drugs (inflation), exacerbates this situation.

The main concerns for malaria case management in terms of commodities are—

- Inadequate supply of malaria drugs.
- Hoarding at the district level.
- Poor use of bednets—need to promote behavior change efforts to increase use.
- Decrease the cost and help increase use by removing VAT on nets.

National Public Health Laboratory Service

The National Public Health Laboratory Service (NPHLS) is responsible for providing all laboratory needs, including various reagents and testing kits, such as HIV/AIDS, STI, malaria, diabetes, urine, and so on. Both the World Bank and the GOK have procured HIV tests, including both the rapid tests and the more complex ELISA tests. Most of the ELISA tests in the public sector are Abbott machines that were donated by Abbott (along with training); NPHLS has to buy the reagents from Abbott because the machines are closed type. There are also some INOTEST and INOGENETICS machines that are the open type, and these are to be used mainly for blood screening. In the case of rapid testing kits, there are basically three types that NPHLS will manage: UNIGOLD, DETERMINE, and HEALTH SPOT, although algorithms for the system of testing are to be revised for these rapid tests.

NPHLS makes projections of its needs each year, and these are passed on to KEMSA, which tenders for the supplies and then directs NPHLS back to the MOH for procurement. Around one-third of all the supplies come from BioTech in the UK. However, NPHLS usually only receives about one-third of what it requires through this system, so all laboratory supplies have to be rationed to the provinces and districts. Supplies, such as equipment, are kept in KEMSA, but the reagents come to the NPHLS store in Nairobi and are sent to the provincial depots where there are cold rooms. The districts come up to the provincial depots and to the central store to collect laboratory supplies.

The Kenyan Medical Research Institute (KEMRI), with JICA assistance, has designed and manufactured its own HIV and hepatitis B tests, so these will be supplied in the future, in addition to anything that the new World Bank project supplies. Projected requirements include one million HIV tests (to arrive in batches of 200,000) over the next five years, but these figures are not based on any past consumption or statistics. Data need to be collected to review and revise these projections periodically.

Concerns about commodity management include—

- A number (unspecified) of the World Bank-supplied HIV test kits expired in the Schenker warehouse before they could be distributed.
- FPLM distributed some of these same kits. They were delivered to districts in the wrong quantities, and some stayed in the district stores without being transferred to the laboratories in those districts, rendering them unusable.
- Future World Bank procurements of HIV test kits should be confined to the type of kits that laboratory staff have been trained to use. New kits will mean a massive retraining exercise.
- GOK funding is inadequate to provide all of Kenya's laboratory needs.

Reproductive Health Division

The Reproductive Health (RH) division is responsible for managing all contraceptives, some of the STI drugs, and HIV test kits, reproductive health equipment (e.g., forceps, delivery equipment), surgical contraceptive equipment (e.g., vasectomy kits), and even furniture and refrigerators. These commodities have been distributed through the vertical FP/RH logistics system. Contraceptives are financed and procured entirely by international donors (DFID, EU, KfW, and USAID), while STI kits and other reproductive health equipment have been procured in recent years with KfW funding and with World Bank credits through the STI project, using GTZ as the procurement agent. In the past, support for STI drugs has also come from DFID and the Dutch government. The supply of STI drugs after the current kits run out is uncertain. In the near future, condoms for STI and HIV prevention also will be procured with World Bank credits via the new Decentralized Reproductive Health and HIV/AIDS (DARE) project.

Donor coordination meetings, called by the RH Division, are held approximately once per quarter to examine the supply, demand, and distribution of contraceptives to ensure that full supply and contraceptive security is maintained. In the near future, to meet the growing demand, contraceptives likely will remain the responsibility of the donors.

Some of the main concerns facing the RH division for commodity management are—

- Only family planning commodities have a fully computerized LMIS.
- After the current batch of STI drug kits is gone, there are no more currently in the pipeline.
- There is currently a slight shortage of low-dose pills in the system.

National AIDS Control Programme

The National AIDS Control Programme (NASCOP) is concerned with the supply of condoms, STI drugs, HIV test kits, and TB drugs (as an opportunistic infection); however, all of these commodities are actually managed and distributed to the various levels of the system through the other vertical logistics systems. Nonetheless, the division head is informed about the status of these commodities through a weekly report sent by the supplies officer at KEMSA. In any case, NASCOP is not directly responsible for managing any of these commodities apart from associated IEC materials. WHO and UNAIDS have supported NASCOP in the production of IEC materials.

Some of the main concerns include—

- A better information system is needed to track commodities and project future needs.
- Use of condoms in the public sector is poor.
- Impending end of STI drugs supply unless a donor can be found.

Kenya Expanded Programme for Immunisation

The Kenya Expanded Programme for Immunisation (KEPI) is managed as a vertical program and is responsible for all vaccines, including diphtheria, pertussis, tetanus, (DPT); polio; measles; and Bacillus Calmette Guérin (BCG); and their associated equipment (needles, syringes, and other consumables); and vitamin A. It also provides refrigerators (and spare parts), thermometers and sterilizing equipment, and IEC materials. All KEPI commodities are managed and distributed through a separate vertical logistics system.

International donors (UNICEF, JICA, DFID, and CIDA) primarily finance KEPI, with some contributions from the GOK. An interagency coordinating committee, comprised of the international donors and the GOK, meets every month to review workplans and establish a coordinated procurement plan to ensure that donors and the GOK procure the required commodities. Currently, JICA is providing syringes and refrigerators, and UNICEF vaccines and refrigerators; DFID and GOK are procuring vaccines. In addition, the Global Alliance for Vaccines and Immunization (GAVI) has pledged one-half million Kenya shillings for vaccine procurement in the near future.

Some of KEPI's main concerns include—

- Changing technology, in terms of equipment.
- Changing from sterilizing needles (sometimes used 200 times) to using disposable needles.
- Retraining staff on temperature maintenance and cold chain management.
- Slipping immunization coverage to around 75 percent in recent years, which should return to 90 percent within a few years.
- Shortage of staff for manual tasks, especially at regional depots—presently hiring daily workers to offload and load trucks.

National Leprosy and Tuberculosis Programme (NLTP)

The National Leprosy and Tuberculosis Programme (NLTP) in Kenya operates as a vertical program within the MOH, responsible for procuring and distributing drugs for both TB and leprosy. All products are managed and distributed through a separate vertical logistics system. The TB drugs include streptomycin, ethambutol isonizide, and ethambutol plain, funded by the GOK; and rifampicin isonizide and parazenomide, along with lab reagents and supplies, such as microscopes, funded by the Government of the Netherlands (GON). Leprosy drugs are only found in certain areas of the country where leprosy cases are still registered. The leprosy drugs managed through this system include multi-bascillary (MB) and pauci-bascillary (PB) blister packs, depending on the classification of the patient's bacteria levels, and prednisone as a complementary drug. Certain other supplies, such as leprosy shoes to prevent injury, are also managed by this program.

The program has been funded for the last five years by a 50/50 split between the GOK and GON. Dutch support officially ended on December 31, 2000; however, the project funds remaining at the end of the project are currently covering 50 percent of the program costs through June 2001. After this time, the GOK will be fully responsible for financing this program, and World Bank funds have been committed for the procurement of future TB drugs as part of the new HIV/AIDS project. Due to the close coordination between the GOK and the GON, these drugs and supplies have not experienced stockouts in recent years, although stock levels have dropped when procurements have been delayed.

Some of the main issues of concern to the NLTP program are—

- In June 2001, all funding for the distribution, follow-up, and tracking of TB drugs ceases as part of the GON withdrawal from Kenya. This means that others will have to take on this role.
- There are enough TB drugs in the country or currently being procured to last about three to four years, but plans must be made to procure resupplies in the near future.

Health Sector Reform Secretariat

Although not a division within the Department of PHC, the Health Sector Reform Secretariat (HSRS) is spearheading the reforms that have an impact on the activities of the various divisions and KEMSA. The HSRS is definitely pushing the idea that the districts need to have the power to decide the quantity of drugs and other health commodities they need and when they require them. This effectively means reversing the present push system for essential drugs to a pull system.

The HSRS is working very hard to decentralize the health system, with the support of many of the donors. An allocation from the GOK is to be made to each district, and this, coupled with any support from donors for that particular district, and the cash revenue from cost sharing by clients, will form the total "resource envelope" for the district. The districts will then decide what they need, in consultation with all involved. The province's role in this is to act as a monitoring and supervisory body only. This will leave the central level to do policy, administration, planning, regulation, and creating standards, although some of this will also be done at the provincial level.

3. Donors

In addition to interviews with the MOH divisions and vertical programs responsible for the provision of commodities, a number of interviews were conducted with representatives of the international donor agencies. Historically, there have been many donors working in Kenya for the health sector (see figure 1). However, their roles have changed significantly since 1998, switching from supporting national health commodity requirements to a decentralized approach focused at the district level. There are exceptions to this change (see following text).

This section is not intended to document all possible projects and support to Kenya that donors are undertaking. This discussion is limited to projects that assist with the management of health commodities directly rather than those that influence their use through IEC or behavior change communication projects.

U.S. Agency for International Development (USAID)

The DELIVER results package has been supported in Kenya by USAID for nearly 10 years. Formerly called the Family Planning Logistics Management (FPLM) project, DELIVER is based at the Logistics Management Unit (LMU) in the RH division, in the MOH, in Nairobi. In direct collaboration with the RH division, DELIVER is responsible for forecasting, coordinating donor procurement, and storing and distributing all contraceptives and the KfW-funded STI kits in the public sector, as well as some in the NGO/private sector. Specifically, USAID continues to procure IUDs but, with falling demand and adequate supplies in the country, the need for further procurements are not necessary at this time.

All contraceptives and STI kits are stored in the KEMSA central warehouse in a separate section that is managed by specifically designated KEMSA staff. This program is effectively vertical. It has its own transport/distribution system from central level to district level (regional depots only have an emergency buffer stock) that is managed by purpose-written software packages for the logistics management information system (LMIS). Because of its ability to distribute commodities from the central level to the districts, the DELIVER/RH division unit has also helped to distribute World Bank credit-funded STI kits and HIV test kits on a temporary basis. The unit also supplies commodities to the NGO and community sector through reproductive health and family health projects (see RH division section), coordinated by GTZ.

Management Sciences for Health RPM+ is also represented in Kenya, supported by USAID, and has been instrumental in getting rational drug use accepted in Kenya. In addition, MSH, also under USAID funding, has undertaken comprehensive work in cost-sharing through the APHIA Financing and Sustainability Project, including assessments on the options for promoting the financial sustainability of drugs, vaccines, and family planning supplies. This work by MSH is about to conclude, but work by the POLICY project will continue.

USAID also supports the running costs of the social marketing effort under the management of Population Services International (PSI) but not the commodities. PSI is described in more detail below. Social marketing for contraceptives account for a greater share of the condom market than it does now.

Concerns:

- KEMSA's role and how it should develop.
- Continuing a vertical system of contraceptive supply.

Department for International Development (DFID), United Kingdom

There are few commodities that DFID has not provided in the past or is not currently providing (see figure 1). In reproductive health, DFID continues to supply injectables (DMPA) and condoms for the Kenya Family Health Project, as well as DMPA for the rest of the country. DFID also supports the PSI social marketing program with condoms, low-dose pills, and DMPA. Under the HAPAC project, it provided STI drugs in 1998–1999. DFID has procured malaria drugs and essential drugs in the recent past, but at the moment is committed to vaccines only.

All DFID's procurements are managed through Crown Agents, which has a large office in Nairobi. They, in turn, consign all RH commodities to the KEMSA warehouse, where they are stored, with the exception of the PSI commodities that are held there temporarily until they are picked up as a whole by PSI.

DFID is interested in promoting a sector-wide approach (SWAP), and its programs are committed to poverty alleviation.

Concerns:

- "Balkanization" of Kenya by the other donors— i.e., splitting up the districts supported by donors and those not supported, which leads to inequity.
- Absence of SWAP.
- Lack of donor for funding of STI drugs in the next World Bank project, even though it is centrally concerned with HIV/AIDS.
- Importance of supporting KEMSA.

Kreditanstalt f?r Wiederaufbau (KfW)

As with DFID, the German Bank, KfW, has provided many health commodities in the past, including essential drugs, equipment, and other reproductive health commodities, to government programs and the Family Planning Association of Kenya (FPAK). Currently, KfW is providing the majority of the country's low-dose contraceptive pills, in three shipments, starting now. KfW manages its own commodity procurement and uses a clearing agent to deliver the commodities to KEMSA.

KfW is considering ideas to promote social marketing of pills and condoms, but not through PSI. In particular, it is concerned that the number of condoms going through the GOK system is too large, and that healthy competition among brands of inexpensive condoms would encourage use.

Concerns:

- Too many condoms being pushed through the public sector—no evidence of them being used.
- Need additional brands to stimulate competition—social marketing of condoms and pills should be extended. Clients should start paying for these products, no matter how small the amount.
- UNFPA should not provide commodities if donors can.
- Role of KEMSA.

United Nations Population Fund (UNFPA)

Although in the past UNFPA was a substantial provider of family planning commodities in Kenya, this ceased in 1997 when the GOK did not ask for any commodities. However, UNFPA does support a capacity-building project in eight districts to strengthen reproductive health services. This project includes providing RH equipment to those districts, as well as vehicles and office equipment.

Procurement of equipment or commodities is done through UNFPA's office in New York, and deliveries are consigned to the MOH districts for which the commodities are intended. In February 2001, an international earmarking of funds was announced, provided by the Dutch government and DFID to UNFPA New York, specifically to procure contraceptives. A request should be sent by UNFPA/Kenya to New York if the RH division of the MOH wants to access these funds for contraceptives. This request is in process.

It should be noted that, in addition to drastic curtailment of funds, UNFPA has had its program cycle extended until 2003 with no extra funds. This means that the MOH cannot request any funding of commodities from UNFPA until the beginning of the next program cycle, except for the specially earmarked funds referred to earlier.

Concern:

No further resources to contribute to commodities until 2003 (start of next project cycle) unless commodities are procured through the earmarked DFID/Dutch funding to UNFPA in New York.

United Nations Children's Fund (UNICEF)

For many years UNICEF has been the primary provider of vaccines and some of the essential drugs in Kenya. It continues to provide these in some quantity procured through its own agents and delivered to either the KEPI cold store (vaccines) or KEMSA (essential drugs and vitamin A). In addition, UNICEF has supplied around 10,000 insecticide-treated mosquito nets to PSI for social marketing and is continuing to procure more. Other donors also provide funding to UNICEF to procure drugs and vaccines on their behalf—e.g., the Canadian International Development Agency (CIDA) and the Japanese International Cooperation Agency (JICA). USAID has also provided a grant to UNICEF to purchase vaccines.

Concerns:

- Collaboration among donors is lacking on the supply side—i.e., instead of a steady procurement of commodities, supply has been inconsistent.
- Use of essential drug kits has meant little expertise in the country for the procurement, packing, and distribution of loose drugs.
- Logistics is a major issue—e.g., recent lack of BCG vaccine in Coast province.
- KEMSA is not responsive enough to respond to epidemics—e.g., latest outbreak of malaria, but no buffer stocks of malaria pills in the store.

Danish International Development Agency (DANIDA)

DANIDA has been one of the main suppliers of commodities in Kenya for many years. It was responsible for the bulk of the donor portion of vaccines in the country, as well as providing a substantial number of essential drugs. However, this ended with a change in approach to a decentralized district focus. This project is being run in 11 districts (seven in Coast and four in North East provinces), and a similar project funded by the European Union will include the Central and East provinces.

This focus, which is repeated by other donors (see below), is designed to provide districts with the ability to determine the commodities and services they require within the total resource envelope they have at their disposal. Under the terms of this project, a lump sum will be provided each year to support implementation of activities, as long as there is cost sharing by the GOK. The government will have to procure items before being reimbursed. These plans have to be approved by the District Health Boards, the Provincial Health Management Team, and the Project Management Unit of DANIDA.

At the present time, it is impossible for the districts to order the drugs they require from KEMSA because there is no mechanism for them to do so; therefore, they have been given forms for Mission for Essential Drug Supplies (MEDS) to purchase supplies from them. Each district will have a small drug capitalization fund to do this and be expected to revolve the funds it receives from cost sharing to replace the drugs it needs.

Therefore, DANIDA will supply commodities, although not directly, because the districts will decide what they need. If they need some type of essential drugs or a vehicle, for example, they must justify the procurement.

Concerns:

- KEMSA is not yet set up to provide the service required by these decentralized districts.
- Provincial teams need to be empowered.
- The expertise to perform a quantification of commodity needs probably does not exist at the district level, and costly mistakes may be made until districts learn the system.

European Union (EU)

The EU has projects concerning health commodities on two fronts. First, it is in the latter stages of supporting the Family Health Project in the division of RH, with DFID, by providing condoms, pills, and DMPA. Through a subcontract, Crown Agents procure these from EUROPA (the EU procurement agent), so that Crown Agents may consolidate procurements made with DFID or EU money. As stated earlier,

these commodities are cleared at customs and sent to the RH section of the KEMSA central warehouse, where the commodities are distributed by the LMU.

The other project involving commodities is virtually identical to the one being implemented with DANIDA assistance described earlier. The EU is covering the East and Central provinces (total of 20 districts) with a similar decentralized project, but it is embarking on this with pilot districts (one in each province) before scaling up. The EU is behind DANIDA's schedule, but this project is funded at approximately $15 million over the next four and a half years.

Concerns:

- KEMSA is vital for the health commodity system to work, and it needs to survive.
- Better donor collaboration is needed.
- More competition is needed in selling generic drugs so the districts can get a better deal with their community development or the cost-sharing money they collect.

Belgian Government

The Belgian Government is funding two projects implemented by the Belgian Technical Cupertino (BTC). One specifically sets up a revolving drug fund in Nyamira district, the other is a reproductive health project in Makwini district. Both of these, particularly the first, provide funds for essential drugs and other health commodities. Under the first project, the district pharmacy that has been constructed will supply the district hospital and the 24 health centers and dispensaries within the catchment area. They should be self-sustaining after the first year, given appropriate cost sharing and allocation by the MOH. In both projects, a project management committee will be set up with the MOH. These two projects only started in early 2001.

Concern:

Training is required for needs quantification and operating revolving drug funds.

Swedish International Development Authority (SIDA)

SIDA has embarked on a decentralized program of its own in six districts, similar to the World Bank-funded program in eight districts (see below). Again, the project is looking at the total resources for the district, in terms of health provision. The districts then decide how they want to use the resources they have at their disposal, including ordering of commodities, under the guidance of the District Health Coordinating Board and the project implementation unit set up for each district.

The plan enables districts to determine the quantity of the commodities they require, rather than having the commodities pushed to them in essential drug kits by KEMSA, based on their entitled allocation. The plan also should enable the districts to embark initially on a revolving drug fund through cost sharing, and then to recover costs of the drugs.

Concerns:

- Personnel at the district level are not trained to perform adequate quantification of their essential drug and other health commodity needs.
- KEMSA may not be able to supply the demand, so districts may need to go elsewhere for their supplies.

World Health Organization (WHO)

In 1999, WHO and the GON collaborated in a drugs policy implementation program that ceased after the Dutch pulled out. However, there has been an international initiative in WHO to establish pilot projects that attempt to create revolving drug funds. As part of this initiative, Kenya was one of the countries chosen and, subsequently, WHO intends to try its ideas in three districts. The ideas behind the initiative are very similar to those produced by SIDA (see earlier discussion). Therefore, the same points apply for this project about commodities, especially the supply of generic, cheap, but high-quality, essential drugs for the treatment and prevention of common diseases.

Concern:

Health system needs to be strengthened.

4. World Bank-GOK loans

A new $50 million loan agreement has been signed between the World Bank and the GOK to provide a fair amount of financing to procure health commodities. The agreement on the Decentralized Reproductive Health and HIV/AIDS Project (DARE) follows a large project on STI prevention. Included in this project is a nationwide initiative for HIV/AIDS that has several built-in commodities, such as HIV/AIDS test kits, TB drugs, condoms for HIV/AIDS prevention, and some essential drugs and equipment. Tenders also will be made for vaccines and IMCI drugs. In addition, there is a step-wise approach for decentralizing at district level, beginning with eight selected districts (one in each region) using a similar approach to that being used by SIDA (see above). This approach has been adopted by some donors (see above), and it is the World Bank's intention to cover all the districts using this approach.

To respond to the decentralized needs of the districts, in terms of commodity provision, a limited amount of financing for KEMSA is included in this project to enable the shift from government department to parastatal.

Concerns:

- KEMSA needs to be organized and have a business plan before funds are permitted to flow to it.
- Decentralization is a priority

5. Nongovernmental Organizations (NGO)

Several NGOs were interviewed as part of this assessment, but due to a lack of time, these were not exhaustive. Therefore, although a number of important NGOs are not reflected in this section, the most important ones, in terms of commodity supply, are. The NGOs account for as much as 40 percent of the essential drugs distributed in the country, although the percentages for other programs (e.g., family planning) may be less.

Two projects under the RH division administered by GTZ are provided with contraceptives from these sources. The first is the MOH/GTZ Reproductive Health Project—working in 20 districts with high-population densities providing family planning, condoms for STI/HIV prevention, STI information and treatment, and HIV information and referral. The second is the Kenya Family Health Program (supported by DFID and EU), which provides family planning to NGOs and community-based distribution workers.

Mission for Essential Drugs and Supplies (MEDS)

MEDS was set up in 1987 by combining two church-based organizations that began to deliver drugs to church-based hospitals. After a feasibility study by WHO, a revolving drug fund was set up by the donors, which, after nine years, became self-sustaining. MEDS now delivers drugs and other consumables to more than 700 mission and NGO facilities, including 70 hospitals. These are supplied on a strict cash-and-carry basis—the money is sent with the order, then the goods are delivered.

Closed tendering for the supply of drugs to be kept in the central warehouse occurs three times a year, with preselected suppliers, both locally and internationally. Seventy percent of the drugs are supplied locally, to avoid foreign exchange problems. MEDS has 110 employees, eight warehouses (all at the same site), and, to meet the continued demand for its services, has expanded greatly since it began. A zonal system of supply has now been established for its three trucks and one pickup, although private trucks are contracted once a month for the delivery of drugs. The use of a software inventory control package called IMPACT (from South Africa) maintains stock records and the flow of products in and out of warehouses.

All staff have been trained in minimum-maximum inventory control procedures and stores management. Rational use of drugs is also considered important for quality treatment. All drugs orders are packed by the individual responsible for the whole order. Trustworthiness and honesty do not seem to be a problem because it is a religious organization.

One part of the operations being subsidized is the quality-control laboratory, which was originally donor funded. This is very expensive to maintain, but it is necessary because of the random tests that have to be performed on samples of ordered drugs. MEDS hopes that this laboratory can become part of the national facilities in Kenya.

Clients of MEDS include African Medical and Research Foundation (AMREF), World Vision, Red Cross, ICRC, Médecins sans Frontières (MSF), and others. Clients are also in other countries, such as Uganda and the Sudan.

The key to their success is a corruption-free organization, low mark-up for generic drugs, and swift, efficient service. In many ways, it is a model for how KEMSA should do business.

Concerns:

- KEMSA should not be allowed to flood the country with very cheap drugs that will destroy MEDS's markets.
- The National Quality Control Laboratory should be part of KEMSA—to ensure quality drugs on the market.
- MEDS wants to avoid the business of supplying government facilities.
- MEDS is currently working at capacity.

Family Planning Association of Kenya (FPAK)

FPAK in Nairobi has excellent new premises, with purpose-built clinics, storage, and laboratory services. All types of commodities are provided, not just for family planning, but for maternal and child health, STIs, and HIV testing as well. A large part of its work is also advocacy, behavior change communication, and counseling for FP, STIs, and HIV/AIDS. The MOH, IPPF, and USAID provide contraceptives. Some commodities (especially drugs and HIV test kits) are procured locally using funds generated from client fees. Other donors who have provided either commodities or support to the running of the programs

include DFID, the EU, and the Netherlands Trust Fund, although these are decreasing, forcing FPAK to look seriously at revolving drug funds and sustainability.

A number of clinics around the country are supplied from the headquarters in Nairobi, and some of these are already recovering up to 80 percent of their costs. Supplies are sent out based on a pull system from those clinics (minimum stock level—one month of supply, maximum stock level—four months of supply). These supplies are usually sent by Securicor, as this is often cheaper than using FPAK's own two-ton truck. Logistics capabilities are strong in the organization.

Concern:

FPAK is eager to expand its services beyond just family planning to reproductive health and essential drugs for common ailments.

African Medical and Research Foundation (AMREF)

AMREF was set up particularly to serve clients in remote areas or in places where normal services are difficult to access. Most of the drugs used by AMREF come from MEDS, but laboratory supplies usually come from abroad because MEDS cannot supply them. AMREF supplies to many countries—not just Kenya—and it operates a flying doctor service, especially to areas hit by war and famine (e.g., Sudan). In addition, AMREF carries supplies for the government to remote areas of Kenya.

One of AMREF's main concerns was the outdated laboratory procedures in the GOK. AMREF's procedures are more up-to-date and show what can be done to streamline the system and run a laboratory in a sustainable way through the rationalization of operating procedures. The number of tests that actually need to be done can be minimized, but the GOK is still using unnecessary, outdated tests.

Concern:

GOK laboratory procedures and tests should be updated as soon as possible.

6. Other Cooperating Agencies

Crown Agents

Crown Agents acts as the main procurement agent for DFID, but also has acted as a procurement agent for the GOK through the MOH. All the recently acquired essential drug kits were arranged through Crown Agents, and it recognized that the central warehouse did not have the space to cope with all the drugs. Therefore, deliveries were made directly to the regional depots to effect significant savings.

With Crown Agents acting as the procurement agent for the government, it has managed to obtain better drug prices from local manufacturers, who are assured of being paid. Crown Agents is able to do this by providing offshore banking facilities so the GOK can deposit funds, then Crown Agents uses these funds to obtain contracts for drugs. Crown Agents have a large office in Kenya, because they deal with many other clients and have years of experience in procurement, clearing, and distributing commodities and goods. One activity Crown Agents may be centrally concerned with is reformulation of the essential drug kits and a complete drug quantification process with MSH and DELIVER.

Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ)

GTZ has two main roles in Kenya. First, it acts as a procurement agent for the World Bank project, although this arrangement finishes in June 2000. For Kenya, this part of GTZ has been responsible for procurement of all equipment, commodities, and consumables for the last three World Bank credits in the health sector. Thus, condoms, STI kits, HIV/AIDS test kits, as well as such odd items as powerboats (for distribution in Lamu and on Lake Victoria), have been procured through the GTZ unit. Activities included renting space at the Schenker warehouse (a private concern) to supplement the warehouse space at KEMSA and providing a reliable cold store for the HIV/AIDS reagents.

GTZ's second role is as implementing agency for two reproductive health projects based in the Division of Primary Health Care—the MOH/GTZ Reproductive Health Project, funded by KfW, and the Kenya Family Health Program, funded by the EU and DFID. The first of these projects is working in about 400 SDPs with approximately 13,000 community-based distributors (CBD), who are distributing pills and condoms. In addition, at selected SDPs, Norplant and IUD insertions are provided. The Kenya Family Health Program is also working with CBDs, but delivers its commodities through NGOs. As part of this project, Crown Agents have been used to procure condoms and DMPA with EU and DFID funding. This project ends in early 2002 and will total $30 million over five years.

The Futures Group International—HAPAC II

The HIV/AIDS Prevention and Care (HAPAC) project is an institutional-strengthening project that delivers services through NGOs in Nyanza province, especially syndromic management of STI/HIV, behavior change communication, and condom promotion. The project works with NASCOP, NACC, and through the division of PHC for logistics and condoms, as well as many NGOs, such as FPAK, KAPC, ACE Communications, Center for British Teachers, CARE Kenya, CRS, CISS International, and others. In addition, FPLM (now DELIVER) has provided logistics management training, and the project is also working very successfully with the private sector.

Supplies of STI kits and condoms have been sufficient until now, but there is concern about future shortages.

Population Services International (PSI)

PSI operates the major social marketing scheme in Kenya. USAID provides all of the operating costs for PSI, and DFID provides funding for condoms, pills, and injectables (procured through Crown Agents). In addition, USAID and UNICEF provided mosquito nets and insecticides for social marketing, but only for a year (1999–2000). Roughly 13.5 million condoms were sold last year (mostly the Trust brand), but sales of pills and DMPA were disappointing. Insecticide-treated mosquito nets could increase sales substantially soon, and it may be possible to sell up to 100,000 per year. Other products that may be socially marketed in the future are oral rehydration salts (ORS), vitamin A, iron tablets, and iodine-fortified salt.

The Trust brand is well known—especially in Nairobi—but there are concerns about distributing free condoms at bars, clubs, and hotels to people who could afford to buy them. In addition, the Japanese are supplying 300,000 mosquito nets, which threatens the sale of the socially marketed nets.

Centers for Disease Control and Prevention (CDC)

CDC has had a presence in Kenya for more than 20 years and now has direct funding from the U.S. government to procure a number of HIV test kits, initially for voluntary counseling and testing (VCT) and

surveillance. The test kits will satisfy the following criteria: simple and rapid, do not require electricity, do not require refrigeration, good rates of sensitivity and specificity (99.5 percent), use whole blood (finger prick), do not require batching, available on the commercial market, and well-tested elsewhere. From the criteria, three tests have been selected (DETERMINE, UNIGOLD, and Hema-Strip); the first two types have been ordered (40,000 of each test) and were available as of March 2001.

CDC required assistance in forecasting/quantification of future supplies and with storage and distribution to its 20 VCT sites. This will require additional effort when the number of VCT sites is expanded, after the pilot stage of the project. However, because of the information system that will run next to these VCT centers (a client questionnaire), CDC should be in an excellent position to advise the GOK, through NACC, on expanding the program.

7. Private Organizations

Two pharmaceutical companies are included under the section that sells health commodities. There is a thriving drug market in Kenya, as seen by the number of small pharmacies and drugstores, particularly in urban areas. In addition, MEDS and the GOK procure approximately 70 percent of their needs from local manufacturers and drug wholesalers. At present, all family planning commodities come from international procurement by the donors, including commodities available for sale.

Cosmos

Cosmos is one of the private drug companies that supplies the GOK by bidding on tenders issued by the GOK. The company is extremely pleased with Crown Agent's role as procurement agent, because they know they will be paid. In addition, MOH prepared a list of prequalified manufacturers, to ensure that suppliers have the capacity to fill orders.

Surgipham

Surgipham, mainly a private drug wholesaler that sells to the public and private sectors, has expressed concern about the bureaucracy in the public system. Suggestions included opening more pharmacies to promote competition; the privatizing pharmacy, X-ray and laboratory services; and changing hospitals into profit centers.

Appendix B
List of Districts Supported by Donors

District	Province
SIDA	
Kajiado	Rift Valley
Nandi	Rift Valley
Koibatek	Rift Valley
Busia	Western
Nyando	Nyanza
Kuria	Nyanza
European Union	
Marsabit	Eastern
Moyale	Eastern
Isiolo	Eastern
North Meru	Eastern
Central Meru*	Eastern
South Meru	Eastern
Tharaka	Eastern
Mwingi	Eastern
Kitui	Eastern
Makueni*	Eastern
Machakos*	Eastern
Embu	Eastern
Mbeere	Eastern
Nyeri	Central
Nyadarua	Central
Kirinyaga*	Central
Muranga	Central
Maragwa	Central
Thika	Central
Kiambu*	Central
WHO	
Laikipia	Rift Valley
Central Meru*	Eastern
Kirinyaga*	Central
* Supported by two donors.	

District	Province
World Bank/GOK DARE	
Garissa*	North Eastern
Mandera*	North Eastern
Kilifi*	Coast
Nakuru*	Rift Valley
Kiambu*	Central
Siaya	Nyanza
Machakos*	Eastern
Bungoma	Western
DANIDA	
Garissa*	North Eastern
Ijara	North Eastern
Mandera*	North Eastern
Wajir	North Eastern
Mombasa	Coast
Kwale	Coast
Kilifi*	Coast
Taita-Taveta	Coast
Malindi	Coast
Lamu	Coast
Tana-River	Coast
JICA	
Kericho	Rift Valley
Bomet	Rift Valley
Nyamira*	Nyanza
Kisii	Nyanza
Gucha	Nyanza
Belgian Government (BTC)	
Nyamira	Nyanza
Makueni	Eastern

Appendix C
Vertical Logistics Systems—Field-Level Results

Vertical Logistics Systems—Field-Level Results

Each of the various MOH divisions and vertical programs described in this report channels its respective health supplies and commodities through four primary logistics systems, with limited overlaps in storage at all levels and distribution at the lower levels of the system. These parallel logistics systems include the FP/RH program (including some HIV test kits and KfW-funded STI drug kits); the KEPI/vitamin A program; the NLTP and the essential drugs program.

For each of these programs, the assessment teams reviewed inventory control and management information systems; warehousing and storage conditions; distribution systems; and overall availability of products at the provincial, district, and service delivery point (SDP) levels. Three teams spent two weeks in the field covering a total of six KEMSA regional depots, 18 GOK district warehouses, and 41 SDPs, including rural health centers and dispensaries, several municipal facilities, and mission hospitals. While the findings varied somewhat across regions, they were predominantly consistent across the facilities visited. The components of each logistics system are described in the following sections.

Inventory Control and Information Systems

The assessment teams found consistent weaknesses in stock management and inventory control procedures, as well as irregular or delayed reporting from the rural health facilities to the district level and some problems from the district level to the provincial or central level. This varied by program, but, in general, the majority of staff interviewed did not recognize the purpose or value of inventory control or completing the reports, because they often do not have control over the quantity of stock they manage and rarely receive feedback or supervision.

Family Planning/Reproductive Health Program

For contraceptives, the FP/RH program includes standardized and well-defined inventory control and reporting procedures, and the commodities are maintained in full supply with assistance from several international donors, as noted earlier. The program uses a maximum-minimum inventory control system based on actual consumption of contraceptives at the facility level. At the rural health facility level, quarterly consumption reports should be sent to the district level responsible for consolidating the reports and submitting them, along with their own quarterly report of issues data, to the Logistics Management Unit (LMU) of the RH division. Staff at the LMU review the reports, and the data are entered into a central-level database and used for forecasting and procurement and distribution planning. LMU and DELIVER staff collect any district reports that have not been submitted by the quarterly deadline during quarterly distribution visits to every district. This program operates as a pull system, with each district and rural health facility determining its order quantities based on its quarterly consumption patterns and inventory control procedures.

However, during this assessment, the teams found that the majority of quarterly consumption reports are not sent from the rural health facilities to the district level or are not submitted by the deadline. In turn, at a few of the facilities visited, district-level staff were not maintaining up-to-date records of issues to the rural facilities. Instead, they often complete these reports with the LMU staff during the distribution visits using the requisition and issues vouchers collected during the quarter from the rural facilities under their management. Because so few rural facilities submit their quarterly consumption reports via the district, LMU and DELIVER staff base the quantity to be distributed to each district on issues data from previous quarters.

Although almost no stockouts were noted in family planning commodities during this study, stock levels typically did not follow the defined maximum and minimum inventory control procedures at rural facilities. Most notably, condoms and IUDs generally were found to be used only marginally, so they were overstocked at many rural facilities. The teams found a consistently high demand for injectables. Because FP commodities do not have a high value on the open market, pilferage is low.

The KfW-funded STI kits are also distributed through this logistics system, although no specific inventory control system exists. After this current batch of kits is distributed, there are no more STI drugs in the pipeline, and no donor has committed to resupplying them. The kits are managed through a pull system. The facilities that receive the kits submit quarterly consumption reports to establish their requirements to the LMU at the RH Division responsible for their distribution. These consumption data and data on the number of clients being treated for STIs is compiled quarterly at the central level, and is used to estimate demand for these drugs. Because of the overlapping roles of the RH division and NASCOP, reporting procedures and requirements for this effort are confusing, and staff are often unclear about when, where, and to whom they should send the reports.

The composition of the STI kits is frequently criticized because there is often a short supply of drugs in high demand and an excessive supply of drugs in low demand. In addition, several of the drugs in the STI kit are scheduled to expire beginning in May and June 2001. Consequently, the MOH has issued a memo authorizing staff to use the soon-to-expire antibiotics from the STI kits for any life-threatening condition. There is also concern at the lower levels about the end of the STI project, especially because of rising HIV prevalence. The drugs will expire and stock out soon, while STI cases continue to rise.

Finally, this program was also temporarily responsible for the management and distribution of HIV test kits procured through World Bank loans. An inconsistent supply of these kits has lead to central-level rationing, which has prevented creation of any inventory control procedures. Staff from laboratories using these tests come to Nairobi to collect the supplies under a pull system after they have used up their stock, if the drugs are available. Occasionally, these kits are pushed out to the laboratories from the central level. Laboratory test results should be sent to NASCOP; however, reports of consumption and stock levels are rarely kept. There is a stock level monitoring form, but very few facilities submit it, and it is not required to collect supplies. Again, reporting requirements are confusing, and staff are often unsure where and when to send the reports.

Kenya Expanded Programme for Immunisation (KEPI)

The KEPI program, which also includes vitamin A, operates as a vertical pull system and maintains commodities in full supply through GOK and donor financing. The peripheral levels establish the quantity of vaccines usually required during a monthly reporting period. Health facilities maintain stock levels based on average monthly consumption and on a demographic estimate of the number of children under age five in their catchment area, plus a wastage factor. The records of monthly immunization levels are maintained and monitored consistently by the program, but stock levels are not.

Because the GOK and some international donors provide vaccines in full supply, and because they have little market value, so there is little leakage from the system, the program is usually able to avoid stockouts, with the exception of a national BCG stockout during 2000. To ensure that the program is meeting its defined target coverage rates, procedures are in place for fairly consistent supervision and regular monitoring of immunization targets at all levels.

National Leprosy and Tuberculosis Programme (NLTP)

The NLTP has one of the best inventory control and information systems in place among these vertical programs. TB/L drugs and supplies are maintained in full supply through GOK and donor financing and, because of their tight budget, the program is monitored very closely throughout the system. Stock levels are based on the number of patients currently being treated at any given facility, and the regional and district coordinators determine distribution quantities through a push system.

In general, the assessment teams found that monthly or, at a minimum, quarterly supervision and inventory control (delivery or removal and redistribution of drugs) was done by the district NLTP coordinator of the rural health facilities that offer these drugs for follow-on treatment. In turn, the district coordinators report the number of cases identified and the number of patients currently undergoing treatment to the provincial NLTP coordinators once per quarter, who then report to the central level. Reporting from the rural health facilities to the districts, from the districts to the provinces, and then to the central level, is consistent and reliable because of ongoing supervision throughout the system. A few drugs managed through this program also have value on the open market, because they can be used to treat certain STIs, so strict monitoring procedures attempt to prevent leakage in the system and to avoid stockouts, which are rare.

A two-part, computerized LMIS managed at the central level monitors program activities and supplies regularly. The first part is a balance sheet that tracks supplies received and issued from the KEMSA/Nairobi warehouse. A full physical inventory is conducted twice a year to crosscheck the LMIS data. The second part of the LMIS is a spreadsheet that tracks the registered number of TB and leprosy cases and estimates the quantity of drugs required to treat these patients. These estimates are used to develop a five-year procurement plan, which is updated annually based on quarterly reports received from the district through the provincial level. The provincial level consolidates the reports from the districts under its supervision.

Essential Drugs Program

Because of the inconsistent and irregular supply of drugs by the GOK, the essential drugs program is a push system that does not follow strict inventory control procedures. The type and number of kits distributed to each facility depend on the type and level of the facility. The program does not require staff to report consumption or stock levels to the higher level of the system, therefore, most records at the peripheral level are not up-to-date or accurate. This is due in large part to a stockout of the essential drug kits during 2000, when facilities were forced either to purchase drugs with their cost-sharing money from local private pharmacies or to give patients prescriptions to buy the drugs themselves at the pharmacies. This prolonged shortage of drugs has led to a breakdown in the flow of information between levels of the system and weak, wasteful inventory control at all levels of the system. In addition, staff interviewed consistently complained about the drug kits. They are not supplied consistently, and they include a surplus of drugs and other supplies that are not used at the peripheral level and a dearth of other drugs and supplies that are in high demand.

Storage and Distribution

The assessment teams visited storage facilities at all levels of the supply chain, from the KEMSA central warehouse, to the KEMSA regional depots, to the district warehouses, to the rural facilities. These warehousing and storage facilities were assessed based on a list of minimum storage conditions that must be met to protect the integrity and effectiveness of the products as they move through the logistics systems. The teams also reviewed the distribution channels at each level of the logistics systems.

The KEMSA central and regional warehouses store commodities from the FP/RH division, KEPI, the NLTP, and the essential drugs program. In addition to the essential drug kits, KEMSA manages the storage and distribution of medical equipment, such as theater apparatus, controlled substances (pethadine), and other consumables (gloves and other loose items, including emergency anti-malaria supplies). However, methods of distribution, vary by program.

Family Planning/Reproductive Health Program

Family planning commodities, RH equipment, and the KfW-funded STI drug kits are stored at the KEMSA central warehouse in Nairobi, but are clearly sectioned off with a separate loading area and have dedicated personnel. Only a small buffer stock is kept at the KEMSA regional depots because commodities are delivered directly to the district level.

All contraceptives are donated and distributed quarterly to the district level from the KEMSA warehouse by DELIVER and the Logistics Management Unit (LMU) of the RH Division using trucks that belong to both groups. The commodities are then passed on to the rural health facilities, although the mode of transportation to rural facilities varies. Sometimes the rural facilities pick up commodities at the district level, and sometimes the district level distributes to the rural facilities.

The KfW-funded STI kits are marked in Nairobi for direct delivery by the LMU and DELIVER to 240 specified service delivery points around the country, mostly municipal and NGO facilities.

Overall, FP/RH storage conditions were found to be good; conditions did not pose a threat to the products. However, in some regions, extreme heat in storage areas may affect condom quality.

The HIV test kits and some STI commodities from the World Bank project are stored at the Schenker warehouse in Nairobi, which GTZ used to manage most of the World Bank procurements under the last STI project. These test kits are not sent to the regional depots, but are issued straight to the laboratories at provincial- and district-level hospitals. Staff from these facilities generally come to Nairobi to collect the kits, although KEMSA occasionally ships them out from the central level.

Storage conditions for these test kits were found to be adequate; however, due to the short shelf life of the reagents, they often expire soon after they are received at the laboratories. The assessment teams observed that expired stock is rarely removed from inventory and discarded. Because of the scarce and irregular supplies of these reagents, a few laboratories visited during the assessment continue to use the expired products for lack of alternative reagents.

Kenya Expanded Program for Immunization (KEPI)

All cold chain KEPI commodities are stored in the KEPI store in Nairobi, which is managed by the KEPI program. In case of power outages, the store has backup generators and tanks of petrol to preserve the cold chain. The vaccines are distributed through a vertical cold chain system operated by KEPI, using refrigerated vehicles, from the central level to the KEMSA regional depots, to the district level, and on to the rural health facilities. To distribute the vaccines, five trucks distribute to the regional depots quarterly. The districts then go to the regional depots, also quarterly, using KEPI vehicles (one vehicle in each district). The districts are then responsible for distributing vaccines to the rural health facilities.

Cold chain storage conditions appeared to be sufficient for maintaining product quality, and functional refrigerators were found at almost all facilities visited. Temperature charts were almost always up-to-date and appeared to maintain the commodities at required temperature levels. However, an unstable supply of electricity in some areas raises questions about the consistency of maintaining vaccines at proper

temperatures. The teams also found some hospitals that had been upgraded recently and need refrigerators.

National Leprosy and Tuberculosis Programme (NLTP)

TB and leprosy drugs are stored at the KEMSA central and regional warehouses, in separate rooms, under the control of the NLTP. KEMSA staff do not have access to these commodities, even though they are stored in the warehouse. TB/L commodities usually are stored separately at the district warehouse under the management of the district NLTP coordinator. However, at the rural facility level, TB/L commodities usually are stored with other essential drugs. Storage conditions for these commodities were usually adequate, and do not seem to pose any threat to the integrity of the commodities.

The commodities are distributed through a vertical logistics system from the KEMSA central warehouse to the KEMSA regional depots. Provincial NLTP coordinators are then responsible for distributing the commodities to the district level, where district NLTP coordinators are responsible for distributing them to the rural facilities. Each provincial coordinator is equipped with a vehicle for supervision and distribution, and each district coordinator is equipped with a motorcycle for the same purposes. The Dutch government currently provides support to operate and maintain these vehicles and motorcycles. At present, the NLTP is responsible for distributing its supplies from the central level all the way through the system to the rural health facilities. Because the Dutch government funding is ending soon, the GOK and KEMSA will have full responsibility for procuring and distributing of these supplies.

Essential Drugs Program

Essential drug kits are stored at the KEMSA central and regional warehouses before they are distributed to the district level and sent to the rural facilities. Fifty percent of the time, the essential drug kits are distributed by KEMSA from the central warehouse to the regional depots. The rest of the time, these kits are delivered directly to the KEMSA regional depots from the suppliers, as arranged by the MOH procurement agent, Crown Agents. From the regional depots, the MOH staff distribute the kits to the district level and on to the rural facility level. The mode of transport varies between levels. Sometimes the regional depots deliver to the district, and the districts deliver to the rural health facilities. To bring supplies down the system, when transport or fuel is not available, the rural health facilities must pick up commodities at districts, and the districts must pick up at regional depots, using public transport or private carriers, or fueling the trucks from the higher level.

Storage conditions for these commodities were usually adequate. However, delivery of a large number of drug kits, which were just arriving at the regional and district warehouses without warning, has led to temporary chaos at these facilities. Boxes are piled to the ceilings and many have been crushed in the process. Because they have not been arranged properly, as they arrived unexpectedly in large quantities, it is difficult to track the number of kits received, and staff are unable to respect first-to-expire, first-out inventory control.

Commodity Availability

In general, the assessment teams found that stockouts of family planning and other reproductive health commodities are rare. However, inventory control procedures are not respected at the rural health facility level, leading to poor stock management, particularly overstocks in condoms and IUDs. The demand for condoms and IUDs remains very low, while the demand for injectables continues to rise as users switch from pills.

STI drugs, currently distributed through kits, are currently in sufficient supply. However, the stockout of these kits, the impending expiration of a number of drugs in the current kits, and the lack of a commitment to resupply these high-demand drugs will soon leave the system undersupplied and, eventually lead to massive stockouts.

In addition, HIV testing reagents and kits are not adequately supplied to meet current demand. Stockouts are common. As a result, expired stock is accumulating at laboratories and, in a few cases, is still being used for testing. Another problem found in the field was that Abbott equipment was given to certain facilities where staff are not trained to use it and/or do not have the capacity to repair it when it breaks, so these machines are underused.

With the exception of a national BCG stockout for approximately six months in 2000, vaccines were found to be in full supply, with rare stockouts. However, poor inventory control procedures lead to significant product wastage, since some facilities maintain too much stock, which then expires. The National Immunization Days (NID) are particularly disruptive to inventory control and stock management. The teams also found that vitamin A was distributed during the NIDs only, and the rest expires on the shelves because staff do not distribute it regularly, because they are supplied only irregularly.

TB/L commodities were also in full supply and being managed at relatively good stock levels because the program's consumption is strictly monitored.

Essential drugs are not maintained in full supply, and stockouts of products in high demand are chronic. Other supplies sent through the kits, which are not in high demand, are piling up at the district and regional levels.

General Observations

- Very few staff interviewed had received logistics management training, or they had been trained more than two years ago, leading to the weaknesses found in inventory control and information systems.
- Lack of transportation and communication between the levels of the system makes it difficult to supervise and monitor consumption and stock levels.
- The kits were poorly composed and represented an inefficient use of scarce resources.

Appendix D
List of Health Facilities Visited and Survey Teams

No.	Province/Region	District	Name of facility
1.	Coast		KEMSA Regional Depot, Mombasa
2.	Coast	Mombasa	Pt. Reitz District Store
3.	Coast	Mombasa	Likoni Health Center
4.	Coast	Mombasa	Mwembe Tayari Municipal Health Center
5.	Coast	Lamu	Lamu District Store
6.	Coast	Lamu	Matondoni Health Center
7.	Coast	Kilifi	Bamba Division Health Center
8.	Coast	Kilifi	Tsangasini Dispensary
9.	South Rift Valley		KEMSA Regional Depot, Nakuru
10.	South Rift Valley	Nakuru	Nakuru West Municipal Dispensary
11.	South Rift Valley	Nakuru	Mogotio Health Center
12.	South Rift Valley	Baringo	Kabernet District Store
13.	South Rift Valley	Baringo	Timboiywo Dispensary
14.	South Rift Valley	Baringo	Tenges Health Center
15.	South Rift Valley	Kericho	Kipchimchim Mission Hospital
16.	South Rift Valley	Kericho	Kaitui Dispensary
17.	South Rift Valley	Kericho	Kerenga Tea Estate Health Center
18.	South Rift Valley	Narok	Narok District Store
19.	South Rift Valley	Narok	Ewaso Nyiro Mission Health Center
20.	North Rift Valley		KEMSA Regional Depot, Eldoret
21.	North Rift Valley	Uasin Gishu	Eldoret District Store
22.	North Rift Valley	Uasin Gishu	Huruma/Uasin Gishu Acting District Hospital
23.	North Rift Valley	Uasin Gishu	6531 Pioner Health Center
24.	North Rift Valley	Uasin Gishu	Turbo Rural Health Demonstration Center
25.	North Rift Valley	Uasin Gishu	Railways Dispensary
26.	North Rift Valley	Trans Nzoia	Kitale District Store
27.	North Rift Valley	Trans Nzoia	Endembes Dispensary
28.	North Rift Valley	Nandi	Kapsabet District Store

No.	Province/Region	District	Name of facility
29.	North Rift Valley	Nandi	Kapkangani Health Center
30.	Western		KEMSA Regional Depot, Kisumu
31.	Western	Vihiga	Vihiga District Store
32.	Western	Vihiga	Tigoi Health Center
33.	Western	Vihiga	Shiru Dispensary
34.	Western	Vihiga	Sabatia Health Center
35.	Western	Kakamega	Kakamega District Store
36.	Western	Kakamega	Savane Dispensary
37.	Western	Kakamega	Iguhu Health Center
38.	Western	Kakamega	Shihome Dispensary
39.	Western	Busia	Nambukhu Dispensary
40.	Western	Busia	Nambale Health Center
41.	Eastern	Kitui	Kitui District Store
42.	Eastern	Kitui	Matinyani Dispensary
43.	Eastern	Kitui	Ikanga Health Center
44.	Eastern	Kitui	Katulani Health Center
45.	Eastern	Kitui	Muthale Mission Hospital
46.	Eastern	Kitui	Kisasi Health Center
47.	Eastern	Mwingi	Mwingi District Store
48.	Eastern	Mwingi	Kyuso Health Center
49.	Eastern	Mwingi	Waita Dispensary
50.	Eastern	Makueni	Makueni District Store
51.	Eastern	Makueni	Mukuyuni Health Center
52.	Eastern	Makueni	Ukia Dispensary
53.	Eastern	Isiolo	Isiolo District Store
54.	Eastern	Isiolo	Anti Poaching Unit Dispensary
55.	Central		KEMSA Regional Depot, Meru
56.	Central		KEMSA Regional Depot, Nyeri

No.	Province/Region	District	Name of facility
57.	Central	Nyeri	Nyeri District Store
58.	Central	Nyeri	Othaya Health Center
59.	Central	Meru	Meru District Store
60.	Central	Nyandarua	Nyandarua District Store
61.	Central	Nyandarua	Ndaragwa Health Center
62.	Central	Nyandarua	Kahembe Dispensary

Total of 62 Facilities Visited:

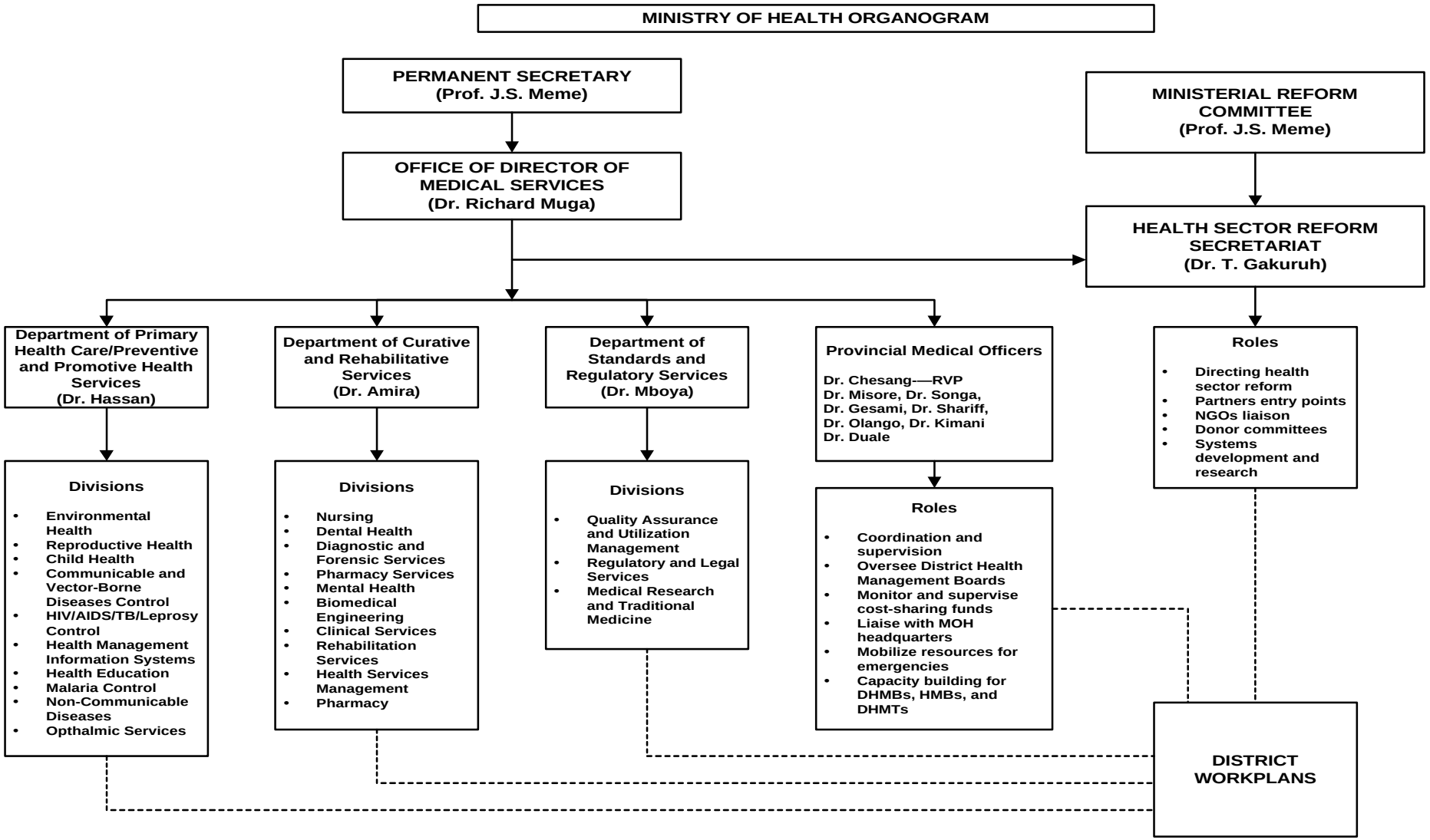
Six KEMSA/MSCU Regional Depots
16 District Stores
40 Health Centers and Dispensaries (all types included)

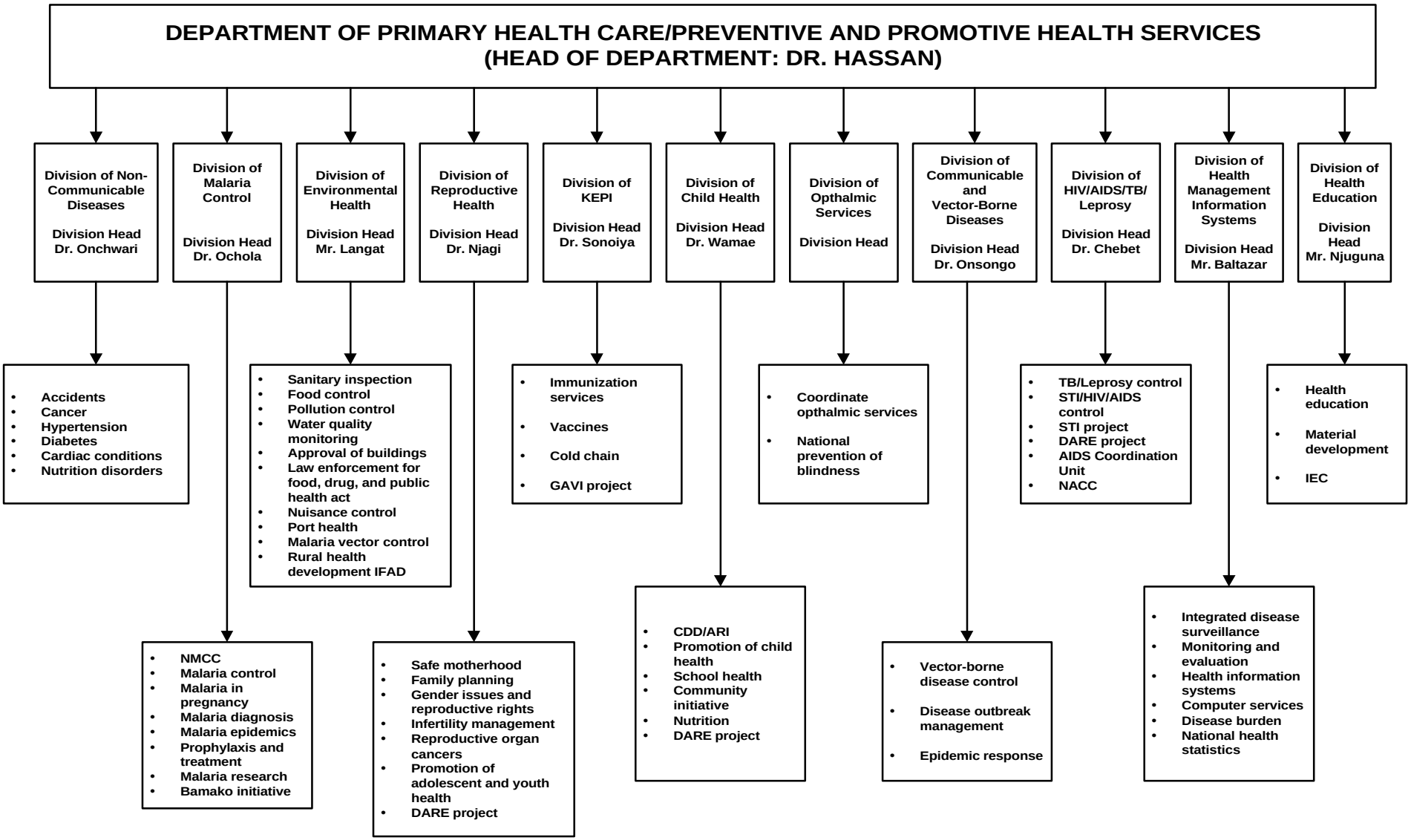
Survey Teams

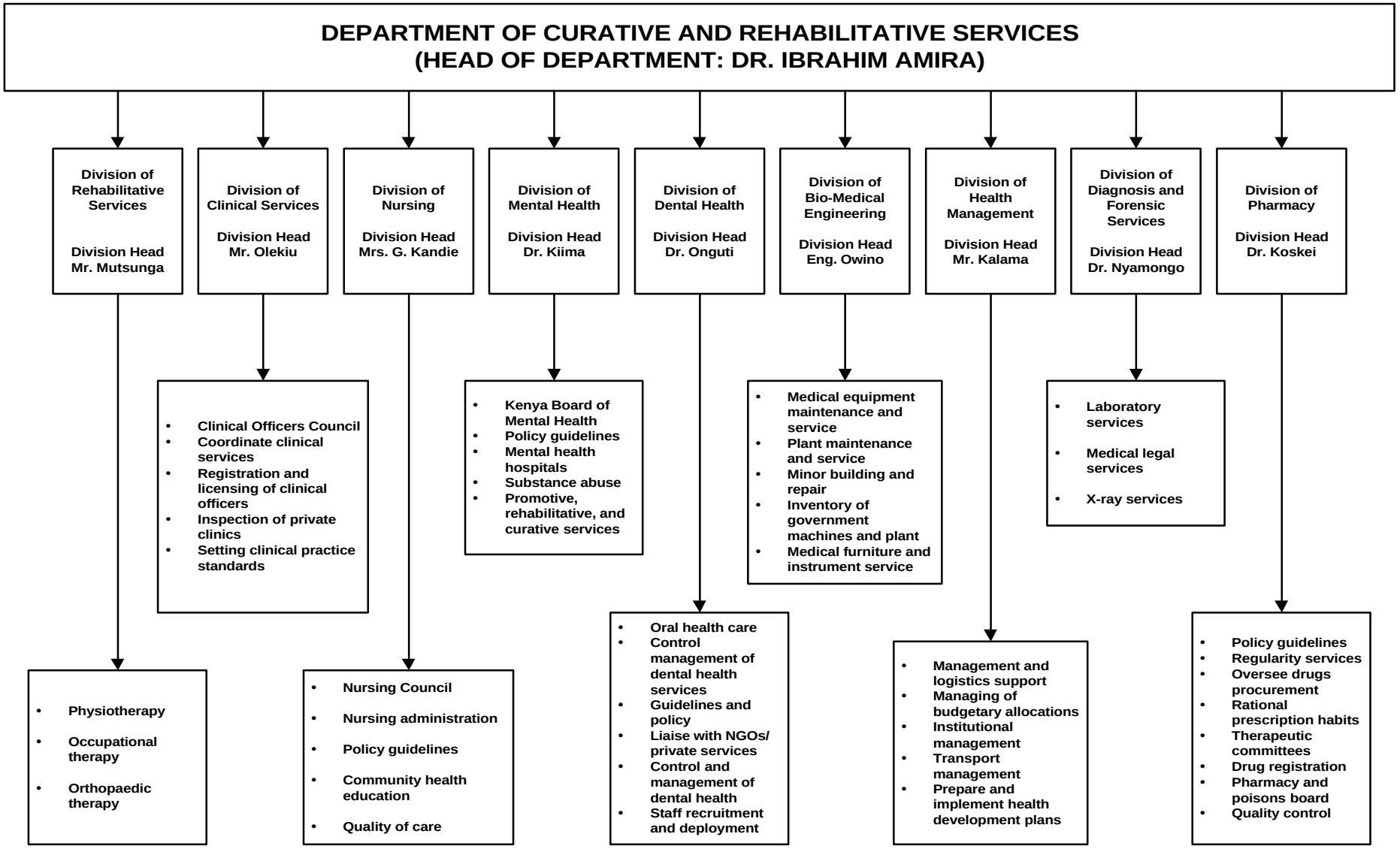
	Team 1*	**Team 2**	**Team 3**	**Team 4**
Week 1	**Nairobi**	**Coast**	**Western**	**North Rift Valley**
Week 2	**Nairobi**	**South Rift Valley**	**Eastern**	**Central**
Team	Steve Kinzett Gideon Nzoka Bedan Gichanga (week 2)	Dana Gelfeld Aronovich Cosmas Mutunga Bedan Gichanga (week 1) Nancy Wachira (week 2)	Anthony Ophwette Joseph Mburu Catherine Lwenya	Booker Odenyo Augustine Bahati Josiah Munene

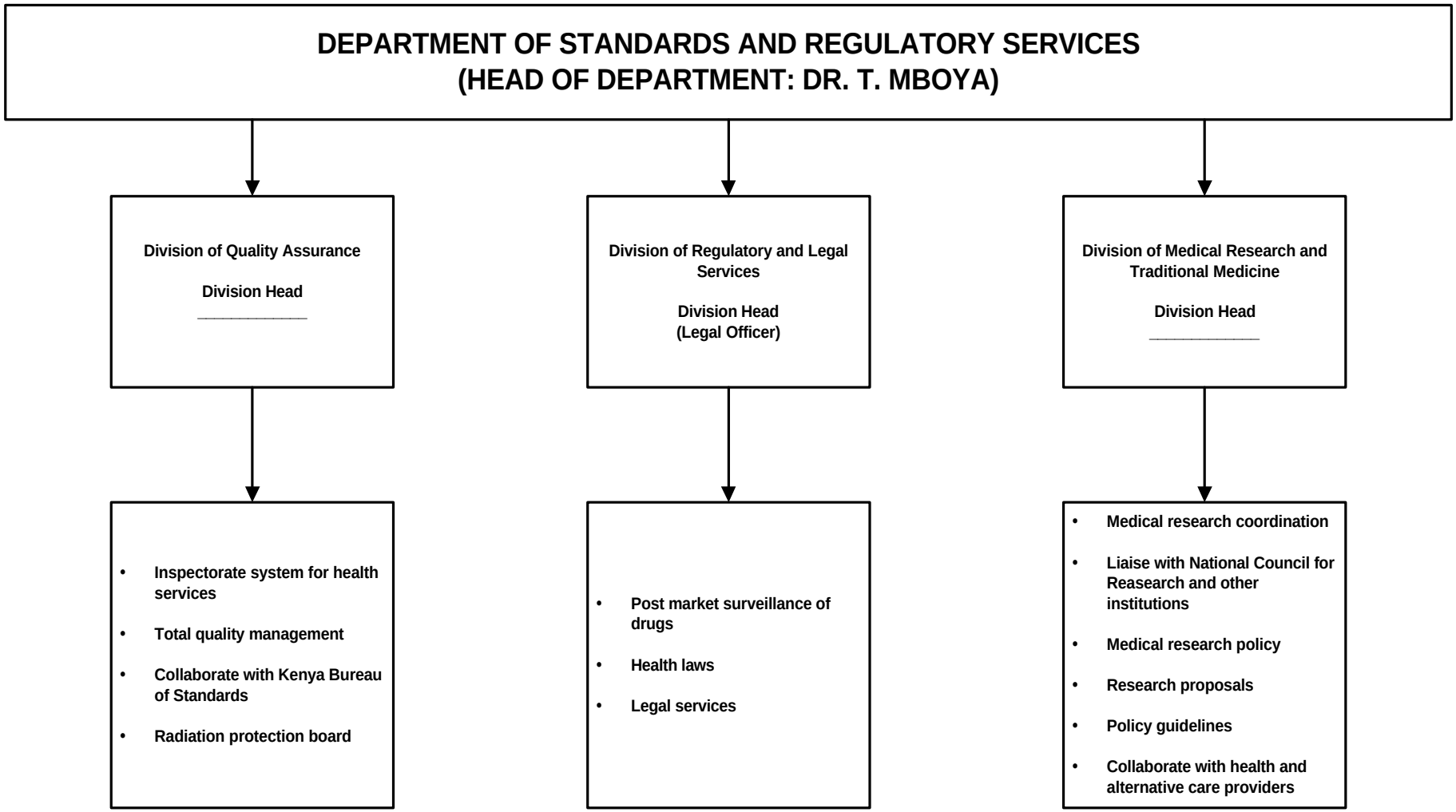
*Team 1 did not use the quantitative instruments and its members interviewed divisional heads of the MOH, donors, NGOs, and other stakeholders.

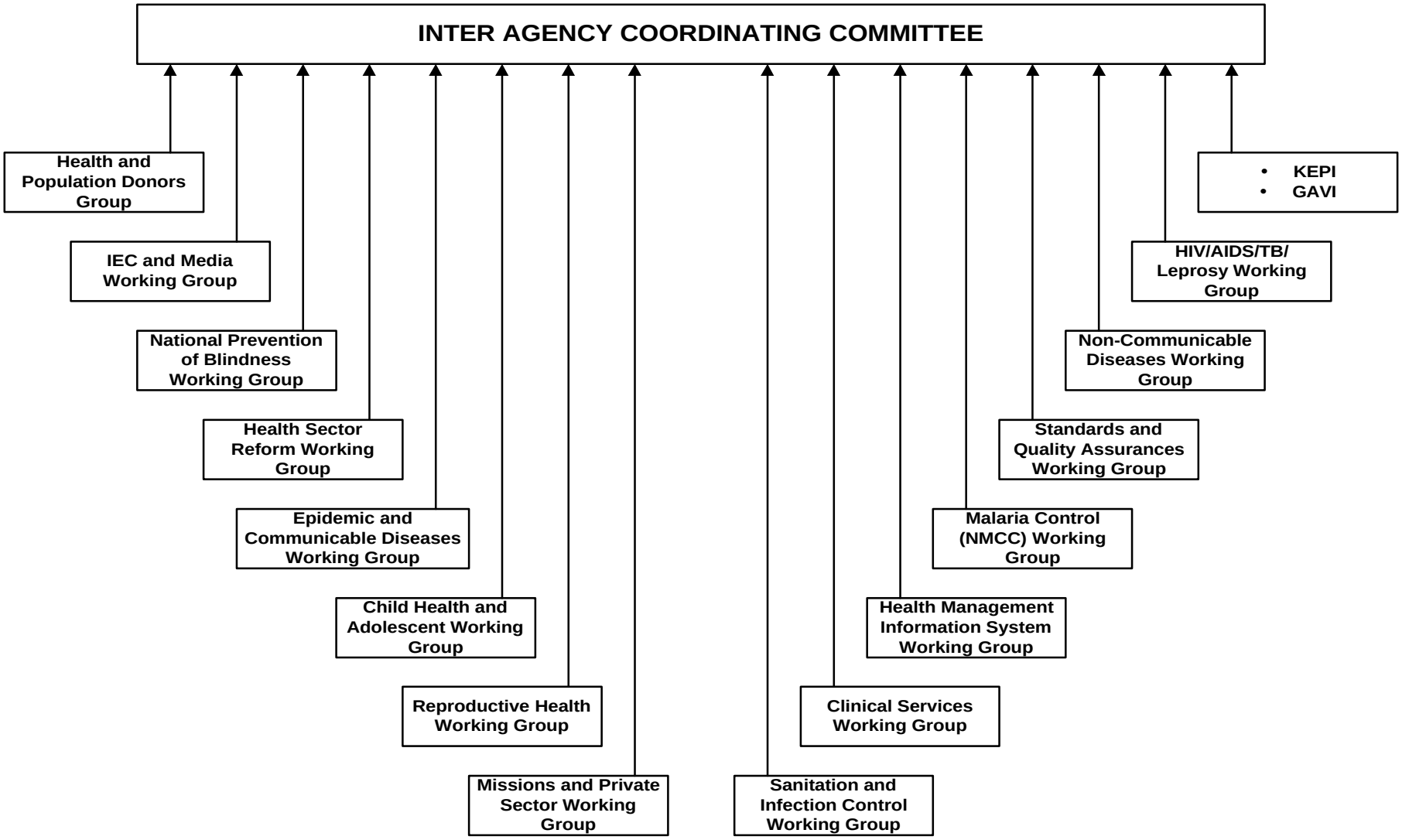
Appendix E
Ministry of Health Structure


MINISTRY OF HEALTH ORGANOGRAM
PERMANENT SECRETARY
(Prof. J.S. Meme)
OFFICE OF DIRECTOR OF MEDICAL SERVICES
(Dr. Richard Muga)
MINISTERIAL REFORM COMMITTEE
(Prof. J.S. Meme)
HEALTH SECTOR REFORM SECRETARIAT
(Dr. T. Gakuruh)
Department of Primary Health Care/Preventive and Promotive Health Services
(Dr. Hassan)
Department of Curative and Rehabilitative Services
(Dr. Amira)
Department of Standards and Regulatory Services
(Dr. Mboya)
Provincial Medical Officers
Dr. Chesang-—RVP
Dr. Misore, Dr. Songa,
Dr. Gesami, Dr. Shariff,
Dr. Olango, Dr. Kimani
Dr. Duale
Roles
Directing health sector reform
Partners entry points
NGOs liaison
Donor committees
Systems development and research
Divisions
Environmental Health
Reproductive Health
Child Health
Communicable and Vector-Borne Diseases Control
HIV/AIDS/TB/Leprosy Control
Health Management Information Systems
Health Education
Malaria Control
Non-Communicable Diseases
Opthalmic Services
Divisions
Nursing
Dental Health
Diagnostic and Forensic Services
Pharmacy Services
Mental Health
Biomedical Engineering
Clinical Services
Rehabilitation Services
Health Services Management
Pharmacy
Divisions
Quality Assurance and Utilization Management
Regulatory and Legal Services
Medical Research and Traditional Medicine
Roles
Coordination and supervision
Oversee District Health Management Boards
Monitor and supervise cost-sharing funds
Liaise with MOH headquarters
Mobilize resources for emergencies
Capacity building for DHMBs, HMBs, and DHMTs
DISTRICT WORKPLANS


DEPARTMENT OF PRIMARY HEALTH CARE/PREVENTIVE AND PROMOTIVE HEALTH SERVICES
(HEAD OF DEPARTMENT: DR. HASSAN)
Division of Non-Communicable Diseases
Division Head Dr. Onchwari
Division of Malaria Control
Division Head Dr. Ochola
Division of Environmental Health
Division Head Mr. Langat
Division of Reproductive Health
Division Head Dr. Njagi
Division of KEPI
Division Head Dr. Sonoiya
Division of Child Health
Division Head Dr. Wamae
Division of Opthalmic Services
Division Head
Division of Communicable and Vector-Borne Diseases
Division Head Dr. Onsongo
Division of HIV/AIDS/TB/ Leprosy
Division Head Dr. Chebet
Division of Health Management Information Systems
Division Head Mr. Baltazar
Division of Health Education
Division Head Mr. Njuguna
• Accidents
• Cancer
• Hypertension
• Diabetes
• Cardiac conditions
• Nutrition disorders
• Sanitary inspection
• Food control
• Pollution control
• Water quality monitoring
• Approval of buildings
• Law enforcement for food, drug, and public health act
• Nuisance control
• Port health
• Malaria vector control
• Rural health development IFAD
• Immunization services
• Vaccines
• Cold chain
• GAVI project
• Coordinate opthalmic services
• National prevention of blindness
• TB/Leprosy control
• STI/HIV/AIDS control
• STI project
• DARE project
• AIDS Coordination Unit
• NACC
• Health education
• Material development
• IEC
• NMCC
• Malaria control
• Malaria in pregnancy
• Malaria diagnosis
• Malaria epidemics
• Prophylaxis and treatment
• Malaria research
• Bamako initiative
• Safe motherhood
• Family planning
• Gender issues and reproductive rights
• Infertility management
• Reproductive organ cancers
• Promotion of adolescent and youth health
• DARE project
• CDD/ARI
• Promotion of child health
• School health
• Community initiative
• Nutrition
• DARE project
• Vector-borne disease control
• Disease outbreak management
• Epidemic response
• Integrated disease surveillance
• Monitoring and evaluation
• Health information systems
• Computer services
• Disease burden
• National health statistics


DEPARTMENT OF CURATIVE AND REHABILITATIVE SERVICES
(HEAD OF DEPARTMENT: DR. IBRAHIM AMIRA)
Division of Rehabilitative Services
Division Head Mr. Mutsunga
Division of Clinical Services
Division Head Mr. Olekiu
Division of Nursing
Division Head Mrs. G. Kandie
Division of Mental Health
Division Head Dr. Kiima
Division of Dental Health
Division Head Dr. Onguti
Division of Bio-Medical Engineering
Division Head Eng. Owino
Division of Health Management
Division Head Mr. Kalama
Division of Diagnosis and Forensic Services
Division Head Dr. Nyamongo
Division of Pharmacy
Division Head Dr. Koskei
Physiotherapy
Occupational therapy
Orthopaedic therapy
Clinical Officers Council
Coordinate clinical services
Registration and licensing of clinical officers
Inspection of private clinics
Setting clinical practice standards
Nursing Council
Nursing administration
Policy guidelines
Community health education
Quality of care
Kenya Board of Mental Health
Policy guidelines
Mental health hospitals
Substance abuse
Promotive, rehabilitative, and curative services
Oral health care
Control management of dental health services
Guidelines and policy
Liaise with NGOs/ private services
Control and management of dental health
Staff recruitment and deployment
Medical equipment maintenance and service
Plant maintenance and service
Minor building and repair
Inventory of government machines and plant
Medical furniture and instrument service
Management and logistics support
Managing of budgetary allocations
Institutional management
Transport management
Prepare and implement health development plans
Laboratory services
Medical legal services
X-ray services
Policy guidelines
Regularity services
Oversee drugs procurement
Rational prescription habits
Therapeutic committees
Drug registration
Pharmacy and poisons board
Quality control


DEPARTMENT OF STANDARDS AND REGULATORY SERVICES
(HEAD OF DEPARTMENT: DR. T. MBOYA)
Division of Quality Assurance
Division Head
Division of Regulatory and Legal Services
Division Head
(Legal Officer)
Division of Medical Research and Traditional Medicine
Division Head
• Inspectorate system for health services
• Total quality management
• Collaborate with Kenya Bureau of Standards
• Radiation protection board
• Post market surveillance of drugs
• Health laws
• Legal services
• Medical research coordination
• Liaise with National Council for Reasearch and other institutions
• Medical research policy
• Research proposals
• Policy guidelines
• Collaborate with health and alternative care providers


INTER AGENCY COORDINATING COMMITTEE
Health and Population Donors Group
IEC and Media Working Group
National Prevention of Blindness Working Group
Health Sector Reform Working Group
Epidemic and Communicable Diseases Working Group
Child Health and Adolescent Working Group
Reproductive Health Working Group
Missions and Private Sector Working Group
Sanitation and Infection Control Working Group
Clinical Services Working Group
Health Management Information System Working Group
Malaria Control (NMCC) Working Group
Standards and Quality Assurances Working Group
Non-Communicable Diseases Working Group
HIV/AIDS/TB/ Leprosy Working Group
• KEPI
• GAVI

Appendix F
List of Contacts

Surname	Forename	Title	Organization
Adelhardt	Michael	Program Coordinator	Kenya Family Health Program
Adewa	Jane	Assistant General Manager	MEDS
Agisu	Adangah	Economist	KEMSA
Alrutz	Neen	Senior Program Manager	USAID
Amira	I.B.	Deputy Director Medical Services	MOH
Bahati	Augustine	Data Analyst	JSI/DELIVER
Bebbington	Trisha	Senior Program Officer	DFID
Boussery	Gunter	Technical Advisor	BTC
Carter	Jane	Head, Laboratory Program	AMREF
Cripps	Gilbert	Technical Advisor	USAID
Dickerson	Donald	Project Coordinator	HAPAC/ TFGI
Fleischhacker	Karl-Heinz	Vice-President East Africa	KfW
Frederichs	Franz	GTZ-PMU Team Leader	GTZ Procurement Management Unit
Fujisaki	Tomoko	Executive Director	Health and Development Service (HANDS)
Gachara	Margaret	Director	NACC
Gakiria	G.	Deputy Head, NLTP	MOH
Gallacchi	Alberto	Adviser	Health Sector Support Program
Gichanga	Bedan	Health Specialist	USAID
Gotink	Marinus	Health and Nutrition Officer	UNICEF
Hoenen	Joseph	First Secretary Women and Development	Royal Netherlands Embassy
Ikua	Wachuka	Operations Officer	World Bank
Kalweo	Jane	Communications Specialist	PSI
Kandie	Charles	Pharmacist	KEMSA
Kanina	T.M.	Supplies Officer	Kenyatta National Hospital
Karite	David	Administrator	JSI/DELIVER
Karuthiru	Jerusha	Program Officer	USAID
Kibera	Johnson	Acting Director	KEMSA
Koskei	Kipkerich	Chief Pharmacist	MOH
Larsen	Charlotte	Junior Professional Officer	UNFPA
Lwenya	Catherine	Project Manager	JSI/DELIVER
Mansoer	John	Technical Advisor	NLTP/MOH
Marum	Elizabeth	Senior Medical Officer	CDC
Masiga	Jane	Assistant General Manager, Operations	MEDS
Mathang'a	S.K	Under Secretary	KEMSA
Mbugua	Karanja	Senior Training Advisor	Intrah/Amkeni

Surname	Forename	Title	Organization
Mburu	Joseph	RH/F	KEMSA
McDonagh	Marilyn	Health Advisor	DFID
Meme	Margaret	Senior Medical Officer and Acting Head, Division of RH	MOH
Mogeru	Joseph	Senior Supply Officer	KEMSA
Mueni	Lorna	Computer Room in charge	KEMSA
Muga	Richard	Director of Medical Services	MOH
Munene	Josiah	RH/FP Warehouse Manager	KEMSA
Munyiri	Agoshiro	Program Officer	UNICEF
Muriuki	Peris W.	Project Manager, UNFPA Reproductive Health/FP project	UNFPA
Mutokaa	Richard	Supplies Officer	FPAK
Mutunga	Cosmas	Clinical Officer	Logistics Management Unit, RH Division, MOH
Mwangi	John	Clinical Officer	Logistics Management Unit, RH Division, MOH
Mwangi	Susan	Office Manager	JSI/DELIVER
Njau	Wangoi	Program Officer	UNFPA
Njuguna	Rhodah	National Project Officer	European Union
Njuguna	Rhodah	National Program Officer	European Union
Nyambati	Willie	Senior Health Program Officer	JICA
Nyamongo	Jack	Head NPHLS	MOH
Nzoka	Gideon	MIS Specialist	JSI/DELIVER
Ochieng	George	Warehouse Manager	KEMSA
Odenyo	Booker	Deputy Representative	Crown Agents
Ogaja	Elizabeth	Executive Director	National Quality Control Laboratory
Ogara	Esther	Division of RH	MOH
Onyango	Jacob	Finance Manager	MEDS
Ophwette	Anthony	Logistics Training Coordinator	Logistics Management Unit, RH Division, MOH
Oyombei	Grace	Stock Controller	KEMSA
Pringle	Alan	Senior Representative	Crown Agents
Sambuli	Ibrahim	Program Officer	UNFPA
Shah	Vipin	Director	Surgipham Limited
Shehata	Ibrahim	National Health Accounts Technical Manager	Partnerships for Health Reform
Strong	Michael	Reproductive Health Advisor	USAID
Thuo	Michael	Regional Technical Advisor	MSH/RPM +
van den Hombergh	Henri	Team Leader	MOH/GTZ Reproductive Health Project

Surname	Forename	Title	Organization
Varsani	Laxman	Director	Cosmos Limited
Vogel	Dana	Chief, Office of Population and Health	USAID
Wachira	Nancy		KEMSA
Walker	David	Country Representative	PSI
Wambua	Daniel	Systems Engineer	JSI/DELIVER
Wanyanga	Wilberforce	General Manager of Regulatory Affairs	COSMOS Limited

Appendix G
Scope of Work

NATIONAL LOGISTICS SYSTEMS ASSESSMENT
SCOPE OF WORK
FEBRUARY 12–MARCH 9, 2001

DELIVER, in cooperation with USAID/Kenya and the Ministry of Health

I. Introduction

USAID plans to continue its long-time support to health sector logistics in Kenya. To help the Ministry of Health (MOH), USAID planners, other donors, and stakeholders make decisions about the kinds of assistance that will be necessary, particularly related to the newly created Kenya Medical Supply Agency (KEMSA). An assessment, which will be undertaken in February 2001, will provide current information on issues concerning the various current logistics systems supporting all public health commodities.

This assessment will recommend long-term strategies for DELIVER project activities in Kenya, and provide information for strategic planning by the MOH in the logistics sector. DELIVER is a follow-on project to the Family Planning Logistics Management (FPLM) project, which has assisted the Government of Kenya (GOK) in logistics management of family planning commodities for 10 years. The assessment will be organized by the DELIVER project, in cooperation with the MOH.

II. Background

Health commodity logistics systems in Kenya (as elsewhere) have evolved haphazardly, with vertical logistics systems growing to support specific MOH needs, supported by specific donor interests. These systems have functioned fairly well, but with growing personnel costs, increasing transportation costs, and expanding demands on the public health systems, the efficiency of these separate systems must be improved and costs must be reduced by joining various functions, where practical.

KEMSA. In February 2000, the GOK created the Kenya Medical Supply Agency (KEMSA) with a mandate to forecast, procure, warehouse, distribute, and manage inventory control for essential and STI drugs, with the possibility of eventually including vaccines, family planning products, and other medical equipment. The Board of Directors and a Chairman of the Board were appointed in August 2000, and the first meeting of the board was held in December 2000. KEMSA inherited many of the facilities and staff from the Medical Supplies Coordinating Unit (MSCU), but with a substantially enhanced mandate.

Because KEMSA is a fledgling organization, and there are substantial capitalization issues to overcome, KEMSA will not be able to address its full mandate immediately. However, to begin, a vision and realistic plan are needed to make KEMSA functional and sustainable as soon as possible. This proposed assessment of different logistics systems will be the starting point for a strategic plan to determine a realistic picture of the logistics responsibilities possible under KEMSA.

DELIVER. The Family Planning Logistics Management (FPLM) project has worked in Kenya for 10 years**,** ending in September 2000. In October, DELIVER, a new five-year project, was authorized by USAID to provide logistics management support to a broader range of public health commodities, beyond family planning products only. The DELIVER mandate was expanded to include drugs, vaccines, STI/HIV test kits and drugs, and other medical equipment. Given the need to reduce costs and improve efficiencies, the broader mandate for DELIVER, and the creation of KEMSA, it is important to

understand the existing situation, which comprises a variety of procurement and logistics systems, and to begin thinking about how to improve the efficiencies of these systems.

III. Objectives

1. *To understand the policies and vision of the government related to the management of logistics systems for all health-related commodities.* This includes understanding the government's current overall organizational management control, commitment to commodity purchasing, and responsibility and financing of each kind of health or family planning commodity being distributed or planned to be distributed.

2. *To better understand from other donors and stakeholders their issues and policies related to logistics management of health commodities in Kenya.* The discussions will clarify what donor-funded commitments and activities (both current and planned) are doing in the drug arena. Other questions might include how stakeholders view the emergence and capacity of KEMSA, and donors' possible eventual role in providing support to or through KEMSA

3. *To clarify the short- and long-term plans and capabilities of KEMSA.* This assessment will help clarify the potential and capabilities of KEMSA in managing the logistics system for all health-related commodities, and eventually determine the best way for DELIVER to support the development of KEMSA. The assessment should review the GOK's long-term plan to capitalize KEMSA, develop a cash-and-carry system, and identify financing gaps. In addition, KEMSA staffing and training needs should be reviewed.

4. *To undertake site visits that will verify the logistics system information at the distribution levels.* These site surveys, with the interviews, will result in a baseline data set of the current status of all vertical logistics systems for products currently being procured and distributed.[5] The survey would gather information about the products; the technical areas related to their forecasting, procurement, distribution, storage, etc.; and the issues related to the sectors to which they are distributed (public and private, including social marketing).

IV. Methodology

A. Team interviews and stakeholder meetings at the national level

At the beginning of the assessment, a core team composed of staff from the MOH, KEMSA, DELIVER, USAID, and others, as appropriate, will conduct interviews with key informants, including the MOH, donors, and other stakeholders, to gather information on policies, issues, concerns, and future programming at the national level.

During these meetings, the team will solicit input on the general approach and objectives of the assessment and suggest additional questions that might be asked during the site visits. Interviews or joint meetings should include the following organizations: MOH (including KEPI, TB program, NASCOP, ACU, and other MOH departments or divisions, as appropriate); other GOK ministries or agencies (NACC, Treasury); KEMSA; bilateral donors (DFID, KfW, GTZ, JICA, DANIDA); UN agencies (UNFPA, UNICEF), World Bank; private sector groups (Crown Agents, MEDS, others); and USAID cooperating agencies (FHI/IMPACT, PSI, POLICY, FHI, AMKENI, AFS, MSH/RPM+).

[5] These include contraceptives (both free and socially marketed), vaccines, TB drugs, essential drugs, STI drug kits, HIV test kits, and medical equipment.

Near the end of the assessment, the team will sponsor a half-day meeting to share preliminary findings with all stakeholders and to discuss possible areas to improve coordination. A separate meeting will be held with senior MOH officials to discuss the assessment findings, preliminary recommendations, and next steps.

B. Site visits

Members of the assessment team will visit selected sites at provincial and district levels, including some service delivery sites, major hospitals, and clinics. Visits may be undertaken in Western, Rift Valley, Coast, or Central provinces. The surveys will look at the existing vertical logistics systems for commodities provided to the different sites. The primary purpose of this survey will be to verify systems information provided from the national level, examine interrelationships and functional integration, and identify resources at that level. A secondary purpose of this data collection will be to provide baseline data to monitor changes in the logistics system as they affect customers at the district and SDP levels. This will also enable measurement of the impact of changes to the logistics system occurring through health sector reform (e.g., decentralization).

The survey will include a review of the complete in-country supply chain at all tiers of the system, and will review all functions of logistics: procurement, distribution, transportation, warehousing, inventory control, and LMIS. In addition, members of the assessment team will review the adequacy of facilities and equipment (warehouses, security, vehicles), staff availability and training, supervision, quantities handled in the most recent year, commitments and funds for commodity costs, and, where possible, systems costs.

A number of interview guides and data collection instruments will be used (see annex 1).

V. Prospective Results of the Assessment

- *Provide guidance to GOK and donors in long-term strategic planning*. This assessment will produce a comprehensive report of all vertical logistics systems supporting public health activities, which the MOH and all stakeholders would be able to use to develop long-term strategic plans.
- *Provide guidance to USAID*. This assessment will provide a guide for USAID logistics assistance to develop KEMSA and to USAID's continued support to systems that ensure the timely provision of contraceptive supplies.
- *Provide guidance to DELIVER and other cooperating agencies*. This assessment will enable DELIVER and other cooperating agencies to combine collaborative technical assistance strategies to respond to appropriate areas identified by stakeholders.

VI. Timing

The assessment is scheduled from February 12 through March 9, 2001.

VII. Proposed Assessment Team Members

Dr. Margaret Meme—Acting Division Head RH, MOH
Dr. Esther Ogara—RH, MOH
To be decided—Senior officer, Department of Primary Health Care
Mr. Joseph Mburu—Senior Planning Officer, KEMSA
Mr. Bedan Gichanga—Health Specialist, OPH, USAID/Kenya
Ms. Jerusha Karuthiru—Program Specialist, OPH, USAID/Kenya
Mr. Gideon Nzoka—LMIS Specialist, DELIVER/Kenya
Mr. Booker Odenyo—Deputy Representative, Crown Agents
Mr. Steve Kinzett—Senior Technical Advisor, DELIVER/Washington
Ms. Dana Gelfeld Aronovich—Monitoring and Evaluation Advisor, DELIVER/Washington
Site visit participants from MOH—to participate in field survey
Other stakeholders as interested

These personnel will divide into four teams: one will concentrate on the qualitative key informant interviews at central level and take part in one week of site visits. The other three teams will concentrate on pilot testing the instruments and collecting quantitative and qualitative data at the SDP and district levels, for two weeks.

VIII. Proposed Assessment Schedule (2001)

The table below outlines the schedule of steps to be completed by the team.

Activity	Pre-assessment	Week 1	Week II	Week III	Week IV	Follow up
Consensus-building meeting with MOH, stakeholders	Feb 6					
Team meetings (objectives, qualitative instrument familiarity, schedules)		Feb 12,13				
Information collection at central level		Team A Feb 14–16	Team A Feb 19–23			
Finalize site visit instruments		Teams B,C & D Feb 14 & 16				
Pilot test field questionnaire		Teams B, C & D Feb 15				
Conduct field survey			Teams B, C and D	Teams A, B, C & D		
Prepare draft report					March 4–6	
Meetings with MOH, USAID					March 7	
Stakeholders discussion					March 8	
Revise draft report					March 8–9	
Analyze survey data						March 11–31
Produce full system assessment report						April 1–13

Annex 1: List of Interview Guides and Data Collection Instruments

A. SDP quantitative survey instrument

B. District quantitative survey instrument

C. Central/Regional quantitative survey instrument

D. Facility qualitative interview guide

E. Central-level stakeholder interview guide

F. Donor interview guide

G. KEMSA qualitative interview guide

H. Logistics system assessment composite indicator tool

The quantitative instruments will be pilot tested and modified in Kenya with input from the whole assessment team. Qualitative guides will be pretested wherever possible.

Appendix H
Instruments

A variety of instruments were derived from the standard instruments for indicators available at the DELIVER project. These comprised the following:

Instrument A—Quantitative survey for Service Delivery Points

Instrument B—Quantitative survey for District Stores

Instrument C—Quantitative survey for Regional and Central Stores

Instrument D—Qualitative survey for Heads of MOH divisions and Central-level NGOs

Instrument E—Qualitative guide for Donors and Lenders

All these instruments were field tested and revised before being administered in the field as part of the sample. In addition, some of the questionnaires were revised after the first week of field data collection because some questions were found to be superfluous to requirements.

Instrument A: SDP Questionnaire

(For Provincial Hospitals, Service Delivery Points, Hospitals, Health Centres, Dispensaries)

Date _____ **Interviewer(s)** _____
Province _____ **District** _____ **SDP** _____

Beginning Time of Interview _____ End Time of Interview _____

Introduce yourself and all members of the team, including titles/positions. Present the objectives of this assessment and how this interview will help the team achieve the objectives. The objectives, as stated in the scope of work, are:

1. To understand the policies and vision of the government related to the management of logistics systems for all health-related commodities.
2. To better understand from other donors and stakeholders their issues and policies related to logistics management of health commodities in Kenya.
3. To clarify the short- and long-term plans and capabilities of KEMSA.
4. To undertake site visits that will verify the logistics system information at the distribution levels.

Explain how the team will conduct the interview, invite relevant interviewees to join the group, and begin.

Respondents interviewed at this site:

[ ] I. Clinical Officer
[ ] II. Rural Health Nurse
[ ] III. Other _____

Respondent information:

Name/Title: _____

Length of time in current position: _____ years/months

No	Question (and instructions)	Response (and skip instructions)	Code
10.	What is the total number of storeroom staff at this SDP?	_____ # of store room staff	
11.	List the staff categories and number of staff per category. *(We do not require names of all the staff—just the numbers.)*	Staff categories # of staff 1. _____ _____ 2. _____ _____ 3. _____ _____ 4. _____ _____ 5. _____ _____	
12.	Have you ever received formal training in logistics in (specific product category)?** If so, when was the last training? ** *Logistics includes the following functions: ordering, receiving supplies, inventory management, supervision. If speaking to the person in charge of EPI, ask specifically, "Have you received formal training for cold chain and vaccine logistics?"*	Category Date of last training 1. _____ _____ 2. _____ _____ 3. _____ _____ 4. _____ _____ 5. _____ _____ 6. _____ _____ 7. _____ _____ 8. _____ _____	
13.	What were the logistics components of the training? *(e.g., LMIS, transport, storage, record keeping, drug management, rational drug use etc.)*	1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____	

	FP	STI drugs	HIV test kits	Ess. drugs	TB drugs	Vaccines	Vit A	Malaria
14. How do you use the information that you collect on the forms? a. calculating use b. calculating needs c. reporting use to district d. requesting supplies from district e. other, please explain								
15. How often do you send these forms to the district?								
16. How often are you **supposed** to send these forms to the district?								
17. Who determines SDP resupply quantities? a. SDP (pull) b. district (push/topping up) c. other, please explain								
18. How are SDP resupply quantities determined? a. formula b. district determined **(go to Q21)** c. other means **(go to Q20)**								
19. If formula, what formula? **(If formula used, go to Q21)**								
20. If other means, what other means? (Provide a short description of what they actually do—if it is a guess, say so.)								

	FP	STI drugs	HIV test kits	Ess. drugs	TB drugs	Vaccines	Vit A	Malaria
21. Which data elements are used to calculate SDP resupply quantities? Note all that apply: a. beginning of reporting period stock b. end of reporting period stock c. quantity received d. quantity dispensed e. losses and adjustments f. other, please specify								
22. How did you learn to complete the forms used at this facility?								
23. How are commodities transported to your SDP? a. SDP collects b. district delivers c. other, please explain								
24. When did you have your last supervisory visit? d. within the last month e. within the last 3 months f. within the last 6 months g. other (explain) h. never i. Not Applicable **(If never or NA, go to Q30)**								
25. Who conducted the supervisory visit?								

	FP	STI drugs	HIV test kits	Ess. drugs	TB drugs	Vaccines	Vit A	Malaria
26. What was done during the visit? Note all that apply: a. supplies checked b. stock cards checked c. expired stock removed d. LMIS reports checked e. OJT/coaching f. other, please explain								

27. Complete the following form for authorized products that are being tracked in this survey:

#	Authorized Product	Units	Category	3
1	Low-dose pills	cycles	FP	
2	Injectables	vials	FP	
3	Condoms	pieces	FP	
4	IUDs	devices	FP	
5	Vitamin A capsules	caps	Vit A	
6	Ferrous sulfate (iron tablets)	tablets	Iron	
7	BCG	doses	Vaccine	
8	DPT	doses	Vaccine	
9	Ethambutol plain	tablets	TB	
10	Rifata	tablets	TB	

#	Authorized Product	Units	Category	3
11	Doxycycline	tablets	STI	
12	Benzathine penicillin (2.4MU)	doses	STI	
13	Sulfadoxine pyrimethamine (SP)	tablets	Malaria	
14	Amoxycillin	tablets	Ess. Drugs	
15	Cotrimoxazole	tablets	Ess. Drugs	
16	Metronidozole	tablets	Ess. Drugs	
17	Gloves	pairs	Consum	
18	Syringes and needles	units	Consum	
19	Rapid test kits	tests	HIV/AIDS	
20	Elisa test kits	kits	HIV/AIDS	

28. How and/or where do you obtain your supply of gloves? If sent by one of the vertical programs, please specify the program(s)?

29. How and/or where do you obtain your supply of syringes and needles? If sent by one of the vertical programs, please specify the program(s)?

30. On the back of this page, please list the types/brands of HIV test kits that you find at this facility, if applicable.

31. Stock Status: Use the following guidelines to complete the following table for authorized products only:
    a. Calculate the total consumption/issues for the last three months (or the last six months if data are available) and enter it in column 2—taking note of the units in column 3 (pieces not boxes—and tablets not bottles).
    b. Divide column 2 by either 3 or 6 depending on the number of months of total consumption/issues to obtain the average monthly consumption/issues and enter the result in column 4.
    c. Assess the quantity of usable stock by taking a physical inventory or obtaining numbers from stock ledger or stock cards, and enter the answer(s) in column 5 and/or 6.
    d. If both can be done, enter the absolute size of discrepancy between physical inventory and records in column 7.
    e. Divide the usable stock by the average monthly consumption/issues (from physical count preferably, if not available, use LMIS record count) to give months of stock on hand, and enter the result in column 8.
    f. Enter the order interval time for each product in column 9.
    g. Enter the maximum and minimum levels if applicable in columns 10 and 11—note that products not kept in full supply will be blank.
    h. For fully supplied products, the months of stock on hand should be within the maximum and the minimum level minus order interval. Indicate in column 12 whether this is over (+), under (-), or correctly (=) stocked.
    i. For non-fully supplied products, the table is filled in the same way, but stock status is marked as (+) if column 8 is greater than column 9, and (-) if column 8 is less than column 9.
    j. Enter comments into the last column, if required.

31A. Stock status table

Authorized products	Total consumption or issues last 6 months	Units of count	Average monthly consumption	Usable stock on hand		Absolute difference between physical inventory and records	Months of stock on hand	Order interval time	If Applicable		Stock Status (+, -, =) or comments
				From physical inventory	From stock ledger or stock cards				Maximum level	Minimum level	
1	2	3	4	5	6	7	8	9	10	11	12
Low-dose pills		cycle									
Injectables		vial									
Condoms		piece									
IUCDs		dev									
Vitamin A capsules		cap									
Ferrous sulfate (iron tablets)		tablet									
BCG		dose									
DPT		dose									
Ethambutol plain		tablet									
Rifata		tablet									
Doxycycline		tablet									
Benzathine penicillin (2.4MU)		dose									
Sulfadoxine pyrimethamine (SP)		tablet									
Amoxycillin		tablet									
Cotrimoxazole		tablet									
Metronidozole		tablet									
Gloves		pair									
Syringes and needles		unit									
Rapid test kits		test kit									
Elisa test kits		kit									

32. Stockout assessment

For all products that are both checked as available products and had a stockout in the last six months complete the following table:

- List the products in column 1.
- Enter whether there was a stockout of the product at the time of the visit in column 2.
- Enter the date (or estimated date) of the stockout in column 3, and the date of the end of the stockout in column 4. Mark an x in column 4 if the product is stocked out on the day of visit.
- Calculate or estimate the duration of the stockout in days and enter in column 5. If the product is not in stock on the day of the visit, calculate the duration up to that day.
- Check column 6 if the date of the stockout has been taken from the stock cards or other logistics information, or check column 7 if the date of the stockout has been estimated.
- **Note:** It may be necessary to use more than one line per product in the table. For example, there may have been three stockouts of Depo-Provera® in the last six months.

Product	Stockout at time of visit (Y/N)	Stockout start date	Stockout end date	Duration of stockout (in days)	Source: stock cards or other records	Source: informant's knowledge
1	2	3	4	5	6	7

33. Pipeline Wastage

Ask—or determine from records—if products have expired, been damaged (or otherwise rejected), or lost during the last six months? If yes, make a list of the circumstances in the table below. Do this only if there is ample evidence that it would be worthwhile, i.e., are there sizeable amounts of expired stock or damaged stock in evidence or are there records writing off losses. If there were losses but the quantities cannot be verified with hard data, provide as much detail as possible in the comments box below as to the type of products, amount of wastage, causes, consequences, etc.

1	2	3	3	4	5	6	7	8	9
Product	Source of ata	Number expired	Number damaged	Other losses and adjustments	Total wasted	Total products issued in last six months	Wastage rate (divide column 5 by col. 6)	Brief reason for expiry/ damage	Approximate dates
Comments:									

34. Storage/Warehouse conditions

Below are the minimum standards for all facilities. Circle all products being assessed at the storage facility. For each item in the checklist, place a check mark in the appropriate column if the condition is met according to visual inspection of the storage facility, and note any relevant observations under comments. In order to check "yes", all products and cartons have to meet the criteria. If the different types of products are stored separately, or if there is more than one storage area in the facility, use separate columns for each of the different storage spaces.

Contraceptives STI drugs HIV drugs/kits Essential drugs TB/Leprosy Vaccines Vit A Malaria

No	Description	Cont	STI	HIV	Ess	TB/L	Vac	Vit A	Mal	Comments
1.	Products that are ready for distribution are arranged so 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.									
4.	Damaged and/or expired products are separated from good products and removed from inventory.									
5.	Products are protected from direct sunlight at all times of the day and 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.									
8.	Storage area is secured with a lock and key, accessible during normal working hours, and limited to authorized personnel.									
9.	Products are stored at the appropriate temperatures throughout the day and during all seasons, according to protocols.									
10.	Hazardous waste is properly disposed of, such as needles, toxic materials, etc.									
11.	The roof is maintained in good condition to avoid sunlight and water penetration at all times of the day and during all seasons.									

These additional standards below can be applied to larger facilities, as appropriate:

No	Description	Cont	STI	HIV	Ess	TB/L	Vac	Vit A	Mal	Comments
12.	Storeroom is maintained in good condition (e.g., cleaned, all trash removed, sturdy shelves, organized boxes).									
13.	Products are stacked at least 10 cm (4 inches) off the floor.									
14.	Products are stacked at least 30 cm (1 foot) away from the walls and other stacks.									
15.	Products are stacked no more than 2.5 meters (8 feet) high.									
16.	Fire safety equipment is available and accessible.									
17.	Products are stored separately from insecticides and chemicals.									

Guidelines for using the instrument:

Item 1: Referring to products at storage facilities to be distributed to the lower level and products at service delivery points ready to be dispensed to clients.

Item 2: This should be considered separately for the expiration date of products at SDPs and warehouses, as well as for the different products in a facility. The expiration date on products stored in warehouses should account for the lead-time (time elapsed for products to reach the lower level of the system). The shelf life of the different products should also be considered. **Please note if cartons of different lot numbers are open at the same time.**

Item 3: Cartons should be checked to determine if they are smashed due to mishandling. The condition 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. **Please note if storage capacity is inadequate.**

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 5: Products outside the storage facility being received and handled and those inside the storage facility should be checked, taking all times of the day and all seasons of the year into consideration.

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

Item 8: This can refer to either a warehouse secured with a lock or to a cabinet with a key in a clinic. The storage facility visited needs to meet all the conditions in this item to answer "yes."

Item 9: Note the protocols that exist. If there are no protocols, please ask the facility personnel how they handle the temperature requirement necessary for a product in question. Ensure that temperatures are controlled at all times of the day and during all seasons of the year.

Item 10: All hazardous materials should be properly disposed of and inaccessible to non-medical personnel.

Item 11: Ensure that products will be protected at all times of the day and during all seasons of the year.

Item 16: 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.

No	Question (and instructions)	Response (and skip instructions)	Code
35.	Do you have a functioning refrigerator(s) to store vaccines and/or HIV test kits?	1. yes number___ 2. no **(go to Q43)**	
36.	Write down the actual temperature by looking at the internal thermometer inside the refrigerator (ideally temperature should be between 0 and +8 degrees centigrade). *(note if thermometer is broken or missing).*	Temperature (centigrade) _____	
37.	Are refrigerators located away from any surrounding objects?	1. yes 2. no	
38.	Is the temperature chart up-to-date? (To be up-to-date, there has to be an entry for the day of the visit)	1. yes 2. no	
39.	Do you have a supply of paraffin or LPG for cold chain and sterilization purposes?	1. yes 2. no	
40.	Which three commodities do you always run out of before resupply?	1. _____ 2. _____ _____ 3. _____	
41.	Which three commodities do you always have a surplus of before resupply?	1. _____ 2. _____ _____ 3. _____	
42.	What could be done to ensure the regular supply of products?	1. _____ 2. _____ 3. _____	
43.	Aside from “more staff” and “salary issues,” what kind of support could be provided to help you do your job more effectively?	1. _____ 2. _____ 3. _____	
44.	Ask the person/people you interviewed if they have any questions for you.		
45.	Thank the person/people who talked with you. Reiterate how they have helped us achieve our objectives, and assure them that the results will be used to develop improvements in logistics system performance.		

Instrument B: District Questionnaire

(For District Warehouses)

Introduce yourself and all members of the team, including your titles/positions. Present the objectives of this assessment and how this interview will help the team achieve the objectives. The objectives, as stated in the scope of work, are:

1. To understand the policies and vision of the government related to the management of logistics systems for all health-related commodities.
2. To better understand from other donors and stakeholders their issues and policies related to logistics management of health commodities in Kenya.
3. To clarify the short- and long-term plans and capabilities of KEMSA.
4. To undertake site visits that will verify the logistics system information at the distribution levels.

Explain how the team will conduct the interview, invite relevant interviewees to join the group, and begin.

Date _____ **Interviewer** _____

Province _____ **District** _____ **Facility Name** _____

Respondents interviewed at this site:

[ ] I. Medical Superintendent
[ ] II. Hospital Secretary
[ ] III. Nursing Officer in Charge
[ ] IV. Supplies Officer (Hospital)
[ ] V. Supplies Officer (District)
[ ] VI. District Medical Officer of Health
[ ] VII. District Public Health Nurse
[ ] VIII. Other _____
[ ] IX. Laboratory Tech
[ ] X. Pharmacist/Pharm Tech
[ ] XI. District Clinical Officer
[ ] XII. District TB/Leprosy Coordinator

Respondent information:

Title : _____ Length of time in current position : _____ years/months

Please circle the product categories that are available at this facility for which the above person is responsible:

Contraceptives STI drugs HIV test kits Essential drugs TB/Leprosy Vaccines Vit A Malaria

No	Question (and instructions)	Response (and skip instructions)	Code
10.	What is the total number of warehouse staff at this district warehouse?	_____ # of warehouse staff	
11.	List the total number of staff per category who manage supplies. Specify program affiliation. *(We do not require names of all the staff—just the numbers and affiliation.)*	Staff affiliation # of staff Staff affiliation # of staff 1. _____ _____ 4. _____ _____ 2. _____ _____ 5. _____ _____ 3. _____ _____ 6. _____ _____	
12.	Have you ever received formal training in logistics in (specific product category)?** If so, when was the last training? **(If no go to Q14.)** ** *Logistics includes the following functions: ordering, receiving supplies, inventory management, supervision. If speaking to the person in charge of EPI, ask specifically "Have you received formal training for cold chain and vaccine logistics?"*	Category Date of last training 1. _____ _____ 2. _____ _____ 3. _____ _____ 4. _____ _____ 5. _____ _____	
13.	What were the logistics components of the training?	1. _____ 2. _____ 3. _____	

	FP	STI drugs	HIV test kits	Ess. drugs	TB drugs	Vaccines	Vit A	Malaria
14. What is the mechanism used for sending LMIS reports to the central level? a. hand-carried to central level by district staff b. picked up by supervisor c. picked up by other central staff d. sent via district driver e. sent through the mail f. other, please explain:								
15. How do you use this information that you collect on the forms? a. calculating use b. calculating needs c. reporting use to central level d. requesting supplies from central level e. other, please explain								
16. How often do you send these forms to the central level?								
17. How often are you **supposed** to send these forms to the central level?								
18. Who determines district resupply quantities? a. district (pull) b. central (push/topping up) c. other, please explain								
19. How are SDP re-supply quantities determined? a. formula b. district determined **(go to Q22)** c. other means **(go to Q21)**								
20. If formula, what formula? **(If formula used, go to Q22)**								

	FP	STI drugs	HIV test kits	Ess. drugs	TB drugs	Vaccines	Vit A	Malaria
21. If other means, what other means? (Provide a short description of what they actually do—if it is a guess, say so.)								
22. Which data elements are used to calculate SDP resupply quantities? Note all that apply: a. beginning of reporting period stock b. end of reporting period stock c. quantity received d. quantity dispensed e. losses and adjustments f. other, please specify								
23. How are commodities transported to the district? a. district collects b. central delivers c. other, please explain								
24. How are commodities transported to the SDPs? a. SDP collects b. district delivers c. other, please explain								
25. How many vehicles does this district have?								
26. How many of these vehicles are operational?								
27. Are any products transported together from the central level to the district? Specify which are sent together: a. routinely b. as opportunity arises c. other, please explain								

	FP	STI drugs	HIV test kits	Ess. drugs	TB drugs	Vaccines	Vit A	Malaria
28. Are any products transported together from the district level to the SDPs? Specify which are sent together: a. routinely b. as opportunity arises c. other, please explain								
29. Do you conduct any supervisory visits? a. yes b. no **(if no, go to Q33)**								
30. How often are the SDPs supposed to be supervised? a. every month b. every 3 months (per qtr) c. every 6 months d. other, please explain								
31. When did you conduct your last supervisory visit? a. every month b. every 3 months c. every 6 months d. other, please explain								
32. What was done during the visit? Note all that apply: a. supplies checked b. stock cards checked c. expired stock removed d. LMIS reports checked e. OJT/coaching f. Other, please explain								

33. How and/or where do you obtain your supply of gloves? If sent by one of the vertical programs, please specify the program(s).

34. How and/or where do you obtain your supply of syringes and needles? If sent by one of the vertical programs, please specify the program(s).

35. Please list the types/brands of HIV test kits that you find at this facility, if applicable.

36. Complete the following form for authorized products that are being tracked by this survey:

#	Authorized Product	Units	Category	3
1	Low-dose Pills	cycle	FP	
2	Injectables	vial	FP	
3	Condoms	piece	FP	
4	IUCDs	device	FP	
5	Vitamin A capsules	cap	Vit A	
6	Ferrous sulfate (iron tablets)	tablet	Iron	
7	BCG	dose	Vaccine	
8	DPT	dose	Vaccine	
9	Ethambutol plain	tablet	TB	
10	Rifata	tablet	TB	
11	Sulfadoxine pyrimethamine (SP)	tablet	Malaria	
12	Amoxycillin	tablet	Ess. Drugs	

#	Authorized Product	Units	Category	3
13	Cotrimoxazole	tablets	Ess. Drugs	
14	Metronidozole	tablets	Ess. Drugs	
15	Gloves	pairs	Consumables	
16	Syringes and needles	units	Consumables	
17	Rapid test kits	tests	HIV/AIDS	
18	Elisa test kits	kits	HIV/AIDS	
19	STI kits first line	kits	STI Kit	
20	Rural health centre kit 1	kits	Ess. Drug Kit	
21	Rural health centre kit 2	kits	Ess. Drug Kit	
22	Dispensary kit 1	kits	Ess. Drug Kit	
23	Dispensary kit 2	kits	Ess. Drug Kit	

37. Stock Status

Use the following guidelines to complete the following table for authorized products only:

a. Calculate the total consumption/issues for the last three months (or the last six months if data are available) and enter it in column 2—taking note of the units in column 3 (pieces not boxes—and tablets not bottles).
b. Divide column 2 by either 3 or 6 depending on the number of months of total consumption/issues to obtain the average monthly consumption/issues, and enter the result in column 4.
c. Assess the quantity of usable stock by taking a physical inventory or obtaining numbers from stock ledger or stock cards, and enter the answer(s) in column 5 and/or 6.
d. If both can be done, enter the absolute size of discrepancy between physical inventory and records in column 7.
e. Divide the usable stock by the average monthly consumption/issues (from physical count preferably; if not available use LMIS record count) to give months of stock on hand and enter the result in column 8.
f. Enter the order interval time for each product in column 9.
g. Enter the maximum and minimum levels, if applicable, in columns 10 and 11—note that products that are not kept in full supply will be blank.
h. For fully supplied products, the months of stock on hand should be within the maximum and the minimum level minus order interval. Indicate whether this is over (+), under (-), or correctly (=) stocked in column 12.
i. For non-fully supplied products, the table is filled in the same way, but stock status is marked as (+) if column 8 is greater than column 9, and (-) if column 8 is less than column 9
j. Enter comments into the last column, if required.

37A. Stock status table

Authorized products	Total consumption or issues last 6 months	Units of count	Average monthly consumption	Usable stock on hand		Absolute difference between physical inventory and records	Months of stock on hand	Order interval time	If Applicable		Stock Status (+, -, =) or comments
				From physical inventory	From stock ledger or stock cards				Maximum level	Minimum level	
1	2	3	4	5	6	7	8	9	10	11	12
Low-dose pills		cycle									
Injectables		vial									
Condoms		piece									
IUCDs		dev									
Vitamin A capsules		cap									
Ferrous sulfate (iron tablets)		tablet									
BCG		dose									
DPT		dose									
Ethambutol plain		tablet									
Rifata		tablet									
Sulfadoxine pyrimethamine (SP)		tablet									
Amoxycillin		tablet									
Cotrimoxazole		tablet									
Metrinidozole		tablet									
Gloves		pair									
Syringes		unit									
Rapid test kits		test									
Elisa test kits		kit									
STI kits first line		kit									
Rural health centre kit1		kit									
Rural health centre kit2		kit									
Dispensary kit 1		kit									
Dispensary kit 2		kit									

38. Stockout assessment

For all products that are both checked as available products and had a stockout in the last six months complete the following table:

- List the products in column 1.
- Enter whether there was a stockout of the product at the time of the visit in column 2.
- Enter the date (or estimated date) of the stockout (column 3), and the date of the end of the stockout (column 4). Mark with an x in column 4 if the product is stocked out on the day of visit.
- Calculate or estimate the duration of the stockout in days and enter it into column 5. If the product is not in stock on the day of the visit, calculate the duration up to that day.
- Check column 6 if the date of the stockout has been taken from the stock cards or other logistics information or check column 7 if the date of the stockout has been estimated.
- **Note:** It may be necessary to use more than one line per product in the table. For example, there may have been three stockouts of Depo-Provera® in the last six months.

Product	Stockout at time of visit (Y/N)	Stockout start date	Stockout end date	Duration of stockout (in days)	Source: stock cards or other records	Source: informant's knowledge
1	2	3	4	5	6	7

39. Pipeline Wastage

Are there products which have expired, been damaged (or otherwise rejected) or lost during the last six months? If yes, make a list of the circumstances in the table below. This should be undertaken only if there is ample evidence that it would be worthwhile, i.e., are there sizeable amounts of expired stock or damaged stock in evidence—or are there records writing off losses.

1	2	3	4	5	6	7	8	9
Product	Number expired	Number damaged	Other losses and adjustments	Total wasted	Total products issued in last six months	Pipeline wastage rate (divide column 5 by column 6)	Brief reason for expiry/damage	Approximate dates

40. Storage/Warehouse conditions

Below are the minimum standards for all facilities. Circle if the condition is met for all products being assessed at the storage facility. For each item in the checklist, place a check mark in the appropriate column according to visual inspection of the storage facility, and note any relevant observations under comments.

To check "yes," all products and cartons have to meet the criteria. If the different types of products are stored separately, or if there is more than one storage area in the facility, use separate columns for each different storage spaces.

Contraceptives STI drugs HIV drugs/kits Essential drugs TB/Leprosy Vaccines Vit A Malaria

No	Description	Cont	STI	HIV	Ess	TB/L	Vac	Vit A	Mal	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.									
4.	Damaged and/or expired products are separated from good products and are removed from inventory.									
5.	Products are protected from direct sunlight at all times of the day and 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.									
8.	Storage area is secured with a lock and key, accessible during normal working hours, and limited to authorized personnel.									
9.	Products are stored at the appropriate temperatures throughout the day and during all seasons according to protocols.									
10.	Hazardous waste is properly disposed of, such as needles, toxic materials, etc.									
11.	The roof is maintained in good condition to avoid sunlight and water penetration at all times of the day and during all seasons.									

Guidelines on using the instrument:

Item 1: Referring to products at storage facilities to be distributed to the lower level and products at a service delivery points ready to be dispensed to clients.

Item 2: This should be considered separately for the expiration date of products at SDPs and warehouses, as well as for the different products in a facility. The expiration date on products stored in warehouses should account for the lead-time (time lapsed for products to reach the lower level of the system). The shelf life of the different products should also be considered. **Please note if cartons of different lot numbers are open at the same time.**

Item 3: Cartons should be checked to determine whether they are crushed due to mishandling. The condition 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. **Please note if storage capacity is inadequate.**

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 5: Products outside the storage facility being received and handled, as well as those inside the storage facility, should be checked, taking all times of the day and all seasons of the year into consideration.

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

Item 8: This can refer to either a warehouse secured with a lock or to a cabinet with a key in a clinic. The storage facility visited needs to meet all the conditions in this item to answer "yes."

Item 9: Note the protocols that exist. If there are no protocols, please ask how the facility personnel handle the temperature requirement necessary for a product in question. Ensure that temperatures are controlled at all times of the day and during all seasons of the year.

Item 10: All hazardous materials should be properly disposed of and inaccessible to non-medical personnel.

Item 11: Ensure that products will be protected at all times of the day and during all seasons of the year.

The additional standards below can be applied to larger facilities as appropriate:

No	Description	Cont	STI	HIV	Ess	TB/L	Vac	Vit A	Mal	Comments
12.	Storeroom is maintained in good condition. (e.g., cleaned, all trash removed, sturdy shelves, organized boxes.).									
13.	Products are stacked at least 10 cm (4 inches) off the floor.									
14.	Products are stacked at least 30 cm (1 foot) away from the walls and other stacks.									
15.	Products are stacked no more than 2.5 meters (8 feet) high.									
16.	Fire safety equipment is available and accessible.									
17.	Products are stored separately from insecticides and chemicals.									

Item 16: 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.

No	Question (and instructions)	Response (and skip instructions)	Code
41.	Do you have a functioning refrigerator(s) to store vaccines and/or HIV test kits?	a. yes b. no **(go to Q47)**	
42.	Write down the actual temperature by looking at the internal thermometer inside the refrigerator (ideally temperature should be between +4 and +8 degrees centigrade). *(note if thermometer is broken or missing)*	a. refrigerator _____ (centigrade) b. freezer _____ (centigrade) c. broken or missing	
43.	If you have a freezer, what do you keep in it?		
44.	Are refrigerators located away from any surrounding objects?	a. yes b. no	
45.	Is temperature chart up-to-date? (To be up-to-date, there has to be an entry for the day of the visit.)	a. yes b. no	
46.	Do you have a supply of paraffin/LPG for cold chain and sterilization purposes?	a. yes b. no	
47.	What could be done to ensure the regular supply of products?	a. _____ b. _____ c. _____	
48.	Aside from “more staff” and “salary issues,” what kind of support could be provided to help you do your job more effectively?	a. _____ b. _____ c. _____	
49.	Ask the person/people you interviewed if they have any questions for you.		
50.	Thank the person/people who talked with you. Reiterate how they have helped us achieve our objectives, and assure them that the results will be used to develop improvements in logistics system performance.		

Instrument C: KEMSA Warehouse and Provincial Depot Questionnaire

Introduce yourself and all members of the team, including your titles/positions. Present the objectives of this assessment and how this interview will help the team to achieve the objectives. The objectives, as stated in the scope of work, are:

1. To understand the policies and vision of the government related to the management of logistics systems for all health-related commodities.
2. To better understand from other donors and stakeholders their issues and policies related to logistics management of health commodities in Kenya.
3. To clarify the short- and long-term plans and capabilities of KEMSA.
4. To undertake site visits that will verify the logistics system information at the distribution levels.

Explain how the team will conduct the interview, invite relevant interviewees to join the group and begin.

Date _____ **Interviewer** _____

Province: _____ **District** _____ **Facility Name** _____

Respondents Interviewed at this site:

[ ] I. Officer In Charge

[ ] II. Storekeeper

[ ] III. LMIS Controller

[ ] VI. Other _____

Respondent information:

Name: _____ Title: _____

Length of time in current position: _____ years/months

Please circle the product categories that are available at this facility for which the above person is responsible:

Essential drugs Contraceptives Vaccines STI drugs TB drugs HIV test kits Malaria Vitamin A

Questions 10 onward refer specifically to above circled product categories.

No	Question (and instructions)	Response (and skip instructions)	Code
10.	What is the total number of warehouse staff at this warehouse?	_____ # of staff	
11.	List the staff categories and number of staff per category. Specify program affiliation. *(We do not require names of all the staff—just the numbers and affiliation.)*	Staff affiliation # of staff 1. _____ _____ 2. _____ _____ 3. _____ _____ 4. _____ _____ 5. _____ _____	
12.	Have you ever received formal training in logistics in (specific product category)?** If so, when was the last training? **(If no go to Q14)** ***Logistics includes the following functions: ordering, receiving supplies, inventory management, supervision. If speaking to the person in charge of EPI, ask specifically "Have you received formal training for cold chain and vaccine logistics?"*	Category Date of last training 1. _____ _____ 2. _____ _____ 3. _____ _____ 4. _____ _____ 5. _____ _____ 6. _____ _____ 7. _____ _____ 8. _____ _____	
13.	What were the logistics components of the training?	1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____	

	FP	STI drugs	HIV test kits	Ess. drugs	TB drugs	Vaccines	Vit A	Malaria
14. How do you use this information that you collect on the forms? a. calculating use b. calculating needs c. reporting use to division chiefs d. ordering supplies e. other, please explain								
15. How often do you collect these forms from the districts?								
16. How often are you **supposed** to collect these forms from the districts?								
17. What percentage of the districts send their reports to the central level?								
18. Who determines order quantities? a. district (pull) b. central (push/topping up) c. other, please explain								
19. How are resupply quantities determined? a. formula b. budget-determined **(go to Q23)** c. other means **(go to Q21)**								
20. If formula, what formula? **(If formula used, go to Q22)**								
21. If other means, what other means? (Provide a short description of what they actually do—if it is a guess, say so.)								

	FP	STI drugs	HIV test kits	Ess. drugs	TB drugs	Vaccines	Vit A	Malaria
22. Which data elements are used to calculate resupply quantities? Note all that apply: a. beginning of reporting period stock b. end of reporting period stock c. quantity received d. quantity dispensed e. losses and adjustments f. other, please specify								
23. How are commodities transported to the district facilities? a. district collects b. KEMSA delivers c. individual vertical program responsible d. other, please explain								
24. How are commodities transported from the Central level to the provincial level? a. Provincial depot collects b. KEMSA central delivers c. individual vertical program responsible d. other, please explain								
25. When did you conduct your last supervisory visit? a. within the last month b. within the last 3 months c. within the last 6 months d. other, please explain e. never f. not applicable **(If never or NA go to Q29)**								

	FP	STI drugs	HIV test kits	Ess. drugs	TB drugs	Vaccines	Vit A	Malaria
26. Who conducted the supervisory visit?								
27. What was done during the visit? Note all that apply: a. supplies checked b. stock cards checked c. expired stock removed d. LMIS reports checked e. OJT/coaching f. other, please explain								

28. Complete the following form for authorized products that are being tracked in this survey:

#	Authorized Product	Units	Category	3
1	Low-dose Pills	cycles	FP	
2	Injectables	vials	FP	
3	Condoms	pieces	FP	
4	IUCDs	devices	FP	
5	Vitamin A capsules	caps	Vit A	
6	Ferrous sulfate (iron tablets)	tablets	Iron	
7	BCG	doses	Vaccine	
8	DPT	doses	Vaccine	
9	Ethambutol plain	tablets	TB	
10	Rifata	tablets	TB	
11	Sulfadoxine pyrimethamine (SP)	tablets	Malaria	
12	Amoxycillin	tablets	Ess. Drugs	

#	Authorized Product	Units	Category	3
13	Cotrimoxazole	tablets	Ess. Drugs	
14	Metronidozole	tablets	Ess. Drugs	
15	Gloves	pairs	Consumables	
16	Syringes and needles	units	Consumables	
17	Rapid test kits	tests	HIV/AIDS	
18	Elisa test kits	kits	HIV/AIDS	
19	STI kits first line	kits	STI Kit	
20	Rural health centre kit 1	kits	Ess. Drug Kit	
21	Rural health centre kit 2	kits	Ess. Drug Kit	
22	Dispensary kit 1	kits	Ess. Drug Kit	
23	Dispensary kit 2	kits	Ess. Drug Kit	

29. Stock Status

Use the following guidelines to complete the following table for authorized products only:

a. Calculate the total consumption/issues for the last three months (or the last six months if data are available) and enter it in column 2—taking note of the units in column 3 (pieces not boxes—and tablets not bottles).
b. Divide column 2 by either 3 or 6 depending on the number of months of total consumption/issues to obtain the average monthly consumption/issues and enter the result in column 4.
c. Assess the quantity of usable stock by taking a physical inventory or obtaining numbers from stock ledger or stock cards, and enter the answer(s) in column 5 and/or 6.
d. If both can be done, enter the absolute size of discrepancy between physical inventory and records in column 7.
e. Divide the usable stock by the average monthly consumption/issues (from physical count preferably; if not available use LMIS record count) to give months of stock on hand and enter the result in column 8.
f. Enter the order interval time for each product in column 9.
g. Enter the maximum and minimum levels if applicable in columns 10 and 11—note that products that are not kept in full supply will be blank.
h. For fully supplied products, the months of stock on hand should be within the maximum and the minimum level minus order interval. Indicate whether this is over (+), under (-), or correctly (=) stocked in column 12.
i. For non-fully supplied products, the table is filled in the same way, but stock status is marked as (+) if column 8 is greater than column 9, and (-) if column 8 is less than column 9.
j. Enter comments into the last column, if required.

29A. Stock status table

Authorized products	Total consump-tion or issues last 6 months	Units of count	Average monthly consump-tion	Usable stock on hand		Absolute difference between physical inventory and records	Months of stock on hand	Order inter-val time	If Applicable		Stock Status (+, -, =) or comments
				From physical inventory	From stock ledger or stock cards				Maxi-mum level	Mini-mum level	
1	2	3	4	5	6	7	8	9	10	11	12
Low-dose Pills		cycle									
Injectables		vial									
Condoms		piece									
IUCDs		dev									
Vitamin A capsules		cap									
Ferrous Sulfate (iron tablets)		tablet									
BCG		dose									
DPT		dose									
Ethambutol plain		tablet									
Rifata		tablet									
Sulfadoxine pyrimethamine (SP)		tablet									
Amoxycillin		tablet									
Cotrimoxazole		tablet									
Metrinidozole		tablet									
Gloves		pair									
Syringes		unit									
Rapid test kits		test									
Elisa test kits		kit									
STI kits first line		kit									
Rural health centre kit1		kit									
Rural health centre kit2		kit									
Dispensary kit 1		kit									
Dispensary kit 2		kit									

30. Stockout assessment

For all products that are both checked as available products and had a stockout in the last six months, complete the following table:

- List the products in column 1.
- Enter whether there was a stockout of the product at the time of the visit in column 2.
- Enter the date (or estimated date) of the stockout in column 3, and the date of the end of the stockout in column 4. Mark with an x in column 4 if the product is stocked out on the day of visit.
- Calculate or estimate the duration of the stockout in days and enter in column 5. If the product is not in stock on the day of the visit, calculate the duration up to that day.
- Check column 6 if the date of the stockout has been taken from the stock cards or other logistics information or check column 7 if the date of the stockout has been estimated.
- **Note:** It may be necessary to use more than one line per product in the table. For example, there may have been three stockouts of Depo-Provera® in the last six months.

Product	Stockout at time of visit (Y/N)	Stockout start date	Stockout end date	Duration of stockout (in days)	Source: stock cards or other records	Source: informant's knowledge
1	2	3	4	5	6	7

31. Pipeline Wastage

Are there products that have expired, been damaged (or otherwise rejected), or lost during the last six months? If yes make a list of the circumstances in the table below. This should be undertaken only if there is ample evidence that it would be worthwhile, i.e., are sizeable amounts of expired stock or damaged stock in evidence or are there records writing off losses.

1	2	3	4	5	6	7	8	9
Product	Number expired	Number damaged	Other losses and adjustments	Total wasted	Total products issued in last six months	Pipeline wastage rate (divide column 5 by column 6)	Brief reason for expiry/damage	Approximate dates

32. Storage/Warehouse conditions

Below are the minimum standards for all facilities. Circle if the condition is met for all products being assessed at the storage facility. For each item in the checklist, place a check mark in the appropriate column according to visual inspection of the storage facility, and note any relevant observations under comments.

To check "yes," all products and cartons have to meet the criteria on each item. If the different types of products are stored separately, or if there is more than one storage area in the facility, use separate forms for each different storage space.

Essential drugs Contraceptives Vaccines STI drugs TB HIV test kits Vitamin A Malaria

No	Description	Cont	STI	HIV	Ess	TB/L	Vac	Vit A	Mal	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.									
4.	Damaged and/or expired products are separated from good products and are removed from inventory.									
5.	Products are protected from direct sunlight at all times of the day and 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.									
8.	Storage area is secured with a lock and key, accessible during normal working hours, and limited to authorized personnel.									
9.	Products are stored at the appropriate temperatures throughout the day and during all seasons, according to protocols.									
10.	Hazardous waste is properly disposed of, such as needles, toxic materials, etc.									
11.	The roof is maintained in good condition to avoid sunlight and water penetration at all times of the day and during all seasons.									

Guidelines on using the instrument:

Item 1: Referring to products at storage facilities to be distributed to the lower level and products at a service delivery points ready to be dispensed to clients.

Item 2: This should be considered separately for the expiration date of products at SDPs and warehouses, as well as for the different products in a facility. The expiration date on products stored in warehouses should account for the lead-time (time lapsed for products to reach the lower level of the system). The shelf life of the different products should also be considered. **Please note if cartons of different lot numbers are open at the same time.**

Item 3: Cartons should be checked to determine if they are crushed due to mishandling. The condition 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. **Please note if storage capacity is inadequate.**

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 5: Products outside the storage facility being received and handled and those inside the storage facility should be checked, taking all times of the day and all seasons of the year into consideration.

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

Item 8: This can refer to either a warehouse secured with a lock or to a cabinet with a key in a clinic. The storage facility visited needs to meet all the conditions in this item to answer "yes."

Item 9: Note the protocols that exist. If there are no protocols, please ask the facility personnel how they handle the temperature requirement necessary for a product in question. Ensure that temperatures are controlled at all times of the day and during all seasons of the year.

Item 10: All hazardous materials should be properly disposed of and inaccessible to non-medical personnel.

Item 11: Ensure that products will be protected at all times of the day and during all seasons of the year.

The additional standards below can be applied to larger facilities as appropriate:

No	Description	Cont	STI	HIV	Ess	TB/L	Vac	Vit A	Mal	Comments
12.	Storeroom is maintained in good condition. (e.g., cleaned, all trash removed, shelves are sturdy, boxes are organized.)									
13.	Products are stacked at least 10 cm (4 inches) off the floor.									
14.	Products are stacked at least 30 cm (1 foot) away from the walls and other stacks.									
15.	Products are stacked no more than 2.5 meters (8 feet) high.									
16.	Fire safety equipment is available and accessible.									
17.	Products are stored separately from insecticides and chemicals.									

Item 16: 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.

No	Question (and instructions)	Response (and skip instructions)	Code
33.	Do you have a functioning refrigerator(s) to store vaccines and/or HIV test kits?	a. yes b. no **(go to Q47)**	
34.	Write down the actual temperature by looking at the internal thermometer inside the refrigerator (ideally temperature should be between +4 and +8 degrees centigrade). *(note if thermometer is broken or missing).*	a. refrigerator _____ (centigrade) b. freezer _____ (centigrade) c. broken or missing	
35.	If you have a freezer, what do you keep in it?		
36.	Are refrigerators located away from any surrounding objects?	a. yes b. no	
37.	Is temperature chart up-to-date? (To be up-to-date, there has to be an entry for the day of the visit.)	a. yes b. no	
38.	Do you have a supply of paraffin/LPG for cold chain and sterilization purposes?	a. yes b. no	
39.	What could be done to ensure the regular supply of products?	d. _____ e. _____ f. _____	
40.	Aside from “more staff” and “salary issues,” what kind of support could be provided to help you do your job more effectively?	d. _____ e. _____ f. _____	
41.	Ask the person/people you interviewed if they have any questions for you.		
42.	Thank the person/people who talked with you. Reiterate how they have helped us achieve our objectives, and assure them that the results will be used to develop improvements in logistics system performance.		

INSTRUMENT D

Question guideline for Central Level Divisional Heads/Personnel and NGOs

Person(s) interviewed _____
Division of MOH _____ Date of interview_____
Other information _____

All these questions do not need to be answered in order; they are a guide only. No more than two hours should be taken to interview these people if possible. Take extensive notes. Elect at least one person in the team to ask the questions and another to take notes. The others may be free floating; the idea is that the main questioner can maintain eye contact with the interviewee.

1. What commodities are you responsible for in your division?
2. Do you have an adequate supply of your products?
3. Why or why not?
4. Do you routinely have stockouts of any of your products?
5. Do you know at any time how many of your commodities are in the KEMSA warehouse?
6. How do you know?

7. Who calculates how much you need?
8. How are the quantities you need determined?
9. Who carries out the procurement planning?
10. Who procures your commodity needs?
11. What support have you had from donors in this respect?
12. Which donors do you have the most dealings with, and what do each of them contribute to your program?
13. What commitment do you have from the GOK to procure commodities?
14. How do you see the future in terms of commodity procurement? (For example, what is the GOK-donor split, and for how long into the future do you have a guaranteed supply of these commodities?)

15. Does the program actively monitor/manage coordination of procurement plans among suppliers/donors?
16. Does the capability exist to obtain necessary resources, either internally or externally, to supply growing demand?
17. Who handles the importation and clearing of products?
18. Where are these products stored, and who manages the stock?
19. If NOT in KEMSA, where are they and why?
20. Who pays for warehousing of your commodities?
21. Is the present storage capacity large enough for present needs?
22. What distribution mechanisms do you use?

23. What is your impression of how well the commodities are moving down the system?
24. Who pays for distribution of your commodities?
25. What are your main problems concerning commodity provision?
26. Do you see any solutions to these problems?
27. Is there a logistics unit or dedicated officer for managing supplies in your program?
28. Are there sufficient staff performing supply chain functions?
29. Have you heard of FPLM or DELIVER?
30. How do you view the family planning and condom distribution?

31. What effects have the health sector reforms had on your program? (For example, has decentralization or cost sharing impacted your efforts?)
32. What do you see as the role of KEMSA?
33. How do you think that KEMSA will affect your program?

INSTRUMENT E: INTERVIEW GUIDE FOR DONORS

KENYA FEBRUARY/MARCH 2001

Person(s) interviewed _____
Job title/donor _____ Date of interview_____
Other information _____

All these questions do not need to be answered in order; they are a guide only. No more than two hours should be taken to interview these people if possible. Take extensive notes. Elect at least one person in the team to ask the questions and another to take notes. The others may be free floating, but the idea is that the main questioner can maintain eye contact with the interviewee.

Donor involvement

1. What part of the overall health program do you contribute to? Are there areas that you see as more important than others? If so, which?

2. Are you responsible for the provision of any commodities (either bilaterally or through basket funding) in the health system? If so, which, and to what extent? (This may include provision to NGOs, social marketing, private concerns, as well as the MOH.)

3. For the various programs you deal with, who in the MOH, NGOs, and other organizations are your principal contacts? How often do you communicate?

4. Do you ever communicate with DELIVER (formerly FPLM) or itsstaff? If so, how often? For what reasons? How do you communicate? To whom do you address this communication?

5. Which other cooperating agencies or NGOs are implementing projects using your donor funds here in Kenya? Do any of them involve commodity provision?

6. In providing commodities, have you ever thought of, or do you, provide extra funds for the logistics management of those commodities? Why or why not?

7. Have you or your staff attended any training on contraceptive or commodity logistics?

8. When did you and your staff receive the training?

9. Who sponsored the training?

10. What were the main ideas presented?

11. Is your organization sponsoring any efforts currently or in the near future that might affect consumption trends of any products?

Current roles and responsibilities of the stakeholders in Kenya

12. From your perspective, what are the relative roles of MOH, the NGOs, and social marketing in the overall health effort of the country? *(Focus on the programs that have particular significance to this donor.)*

13. Are you involved in or do you contribute to any of the reforms currently being implemented in the country? In what way?

14. What commitments of resources for commodities and logistics have been given in the past few years (concerning your own organization), and what commitment is there for the future?

15. How do these commitments relate to other donors? What is the extent of donor collaboration in the field of commodities and logistics?

16. Do you participate in donor collaboration meetings? If so, what is the purpose of these meetings? How often are these meetings held? What are the usual outcomes or results of these meetings?

17. What relationship/contact have you had with DELIVER (FPLM) in the past five years, and what do you see changing for the future?

Respondent's attitudes on the logistics system in Kenya

18. In regard to the health commodity supplies that you provide, have there been any problems in the last three years? If so, please explain. What trends in commodity use have you seen, and have these trends affected supply?

19. What is your impression of the supply situation at the service delivery points during the past three years? Do you think the service providers know the donor of each type of commodities?

20. Have you ever visited the MOH central store (now KEMSA)? Have you visited any stores at the regional/district/SDP level? If so, what were your impressions of their operations?

21. Are you involved with any training initiatives that may have an effect on the supply chain of health commodities? If so, what are they? If not, is there a role for any training?

22. Do you believe that data generated from the logistics information system provide the necessary information to make decisions for the health programs you support? *(Yes or no, and continue.)* Why? What type of logistics information does it provide? Who is responsible for processing and analyzing the information?

23. Does the information come to you in a timely manner? Is it of use to you? What do you do with the information that you receive?

24. Who is responsible for forecasting the commodity needs of the program? What information do you use for making these estimations?

Future strategies

25. What impact is health sector reform having on the vertical programs currently in place?

26. What impact do you think the integration of the management of health commodities may have on commodity availability?

27. What role do you see for KEMSA in the future, bearing in mind its relatively recent establishment?

28. What do you think it would require for KEMSA to succeed as a parastatal body? What further resources and other support from donors or the GOK do you think it will require?

29. Do you see a role for DELIVER in commodity logistics in the future?

Wrap-up

30. Are there any points that you would like to discuss that we have not covered in relation to commodity logistics, such as forecasting, procurement, storage, distribution, and consumption?