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UGANDA'S MAYUGE DISTRICT: CONTRACEPTIVE LOGISTICS SYSTEM ASSESSMENT AND ACTION PLAN

COVERING THE LAST MILE TO ENSURE CONTRACEPTIVE AVAILABILITY

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UGANDA'S MAYUGE DISTRICT:
CONTRACEPTIVE LOGISTICS SYSTEM ASSESSMENT AND ACTION PLAN

COVERING THE LAST MILE TO ENSURE CONTRACEPTIVE AVAILABILITY

USAID | DELIVER PROJECT, Task Order 1
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Abstract
The Ugandan Ministry of Health (MOH) and its partners recognized that a sound logistics system is critical for achieving the continuous availability of public health commodities at health facilities. As a result, attention and resources have been allocated to strengthen logistics systems. Key steps have been taken to ensure the availability of public health commodities, including the design and implementation of logistics systems, training of health workers on logistics, provision of technical expertise, and policy formulation to achieve commodity security. In September and October 2008, the Ugandan Ministry of Health (MOH), with technical assistance from the USAID | DELIVER PROJECT, Task Order 1, conducted a qualitative survey, using the LSAT tool, whose overall objective was to assess how the logistics systems managed selected family planning commodities at public and non-governmental health institutions in Mayuge district and develop an action plan to cover the last mile and ensure contraceptives availability. This report presents the findings of the assessment as well as the short- and medium-term action plan to improve the contraceptive logistics systems and cover the last mile to ensure product availability in Mayuge district.

Cover photo: District officials and health centre in-charges, together with USAID | DELIVER PROJECT staff, during a Logistics System Assessment Tool session that took place at the Metropole Hotel in Kampala in 2008. The photo was taken by Dr. Kenneth Ofosu-Barko.

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ACRONYMS

ADRA	Adventist Development and Relief Agency
CAO	Chief Administrative Officer
CBD	community-based distributors
DADI	District Assistant Drug Inspector
DHO	District Health Officer
DHT	District Health Team
FEFO	first to expire, first out
FP	family planning
FY	financial year
HC	health centre
HF	health facility
HIV	human immunodeficiency virus
HMIS	Health Management Information System
HSD	Health Sub-District
IEC	information, education and communication
IUD	intra-uterine device
JMS	Joint Medical Stores
LMIS	Logistics Management Information System
LSAT	Logistics System Assessment Tool
LAPM	long acting permanent method
MAX	maximum
MIN	minimum
MOH	Ministry of Health
NGO	non-governmental organization
NMS	National Medical Stores
PHC	primary health care
RH	reproductive health
SDP	service delivery point
USAID	U.S. Agency for International Development

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We would like to also express sincere gratitude to the transport associate who delivered us to Mayuge district and back to Kampala safely.

EXECUTIVE SUMMARY

A new district created in late 2001, Mayuge district is comprised of seven sub-counties in southeastern Uganda, approximately 125 km from the national capital of Kampala. With a population of 383,995[1], people from this large district come from a diversity of tribal origins and religious denominations, primarily Protestant, Catholic and Islamic faiths. The population is predominantly rural (95.5%) with very few people having formal employment. With median population age of 16, nearly three-quarters of the population survive on subsistence farming, depending mainly on their small gardens, with a few also fishing and trading on a small scale. Literacy rate is very low, although there is a new government policy of UPE and primary education school enrollment has significantly increased. The district has a total of 38 functional health units, 6 of which are NGOs, and is comprised of three health sub-districts (HSD). The transport system in the district is entirely murram (soil/gravel) roads, which makes transport difficult during the rainy season. The district includes mainland areas and also islands which have differing transport needs including weather conditions and motor boat fuel.

A combination of Logistics System Assessment Tool (LSAT) and Logistics Indicator Assessment Tool (LIAT) was applied in order to assess the performance of the family planning logistics system both nationally and sub-nationally in Uganda. A quantitative tool, the LIAT, was modified to include qualitative assessment items for assessing health facilities in one of the Health Sub-Districts. Several members from health facilities in the district were invited to participate in a meeting in which the tool components were discussed and conclusions drawn with the findings from the LIAT.

Table 1. LSAT Component Scores

LSAT components	Scoring (%)
0rganization and staffing	73.3
Logistics management information system	35.5
Obtaining supply and Procurement	49.2
Inventory control procedures	54.1
Warehousing and storage	39.3
Transportation and distribution	0
Organizational support for logistics	86.2
Product use	70
Finance and donor coordination	71.4

As the above table demonstrates, none of the components of the LSAT except for organization support for logistics scored over 80. Logistics management information system (LMIS), obtaining supplies, and warehousing and storage all scored below 50, highlighting the need for additional

[1] Projected population census, 2002

attention to these areas. Transportation and distribution, a major component of supply chain system, got a score of zero indicating a particularly key challenge.

Mayuge district is supported by a logistics management unit (LMU) with a full time logistics office. Communication between different levels of health facilities is good and logistic guidelines exist; however district logistics are hampered by high staff attrition and vacancies, with four current vacancies. Additional challenges include geographic access in this widespread area and cultural and religious beliefs that may not coincide with program goals. Recommendations include filling vacancies, strategizing for increased retention, improved supervision, and behavior change communications for family planning.

An LMIS form is used for reporting essential data items which moves along the pipeline. Stockout rates are reported and some monitoring related decisions are made accordingly. However, the system is not functioning to its full potential. Data is not used for ordering. Stock on hand is not reported and physical inventory is not conducted regularly. LMIS data are not analyzed in a timely manner and feed back to lower facilities are irregular. Recommendations were made to include stock on hands data available in the LMIS template at all levels and regular physical inventory to be conducted regularly.

Responsible officers are present to obtain supplies. Good communication and coordination exist between all. The district has an ordering schedule in place. Regular pipeline monitoring is performed to reduce over-stocking and under-stocking. Expiry dates are checked as a means of quality assurance. However, products are not obtained based on forecasted need and minimum-maximum is not taken in to account. Contraceptives are not always obtained in time. NGOs are not aware of the availability of free contraceptives for distribution.

Alternative funds for procurement can be used to handle prolonged stockouts. FEFO is followed and expiry products are separated. Not all staffers know maximums and minimums, nor is this practice enforced. Inventory control guidelines are not practiced leading to overstock. There is no written guideline for redistribution of excess stock and personnel are unaware of emergency ordering procedures. Recommendations include ensuring max-min properly known to all staff and enforced, encouraging routine and continuous stock assessment and developing guidelines for redistribution of excess supplies.

Annual physical inventory is conducted. There is adequate storage at the district level. Regular visual inspections of commodities are conducted. There is no written guideline for storage at the facility level or disposal of bio-hazardous materials. Storages are inadequate and poorly organized at the HSD and facility level. Recommendations include DADI to distribute written guidelines to all levels. Efforts need to be given to improve organization in the store at all levels and arrange funds to destroy expiry drugs and installation of fire-safety program.

There is a budget line for fuel, maintenance and salaries. Weaknesses include inadequate number of functional vehicles to meet the demand of the program. PHC funds for transport and maintenance is inadequate and deliveries at all levels are unscheduled and late. Recommendations include borrowing of vehicles through the CAO's office from other departments and integrating distribution of supplies with other district activities.

Regular communication between levels and there is supervision system in place. Weaknesses include limited training for staff, gaps in the supervision guidelines, and not areas being covered in the supervision. Recommendations are made to conduct refresher training for all staff, developing a

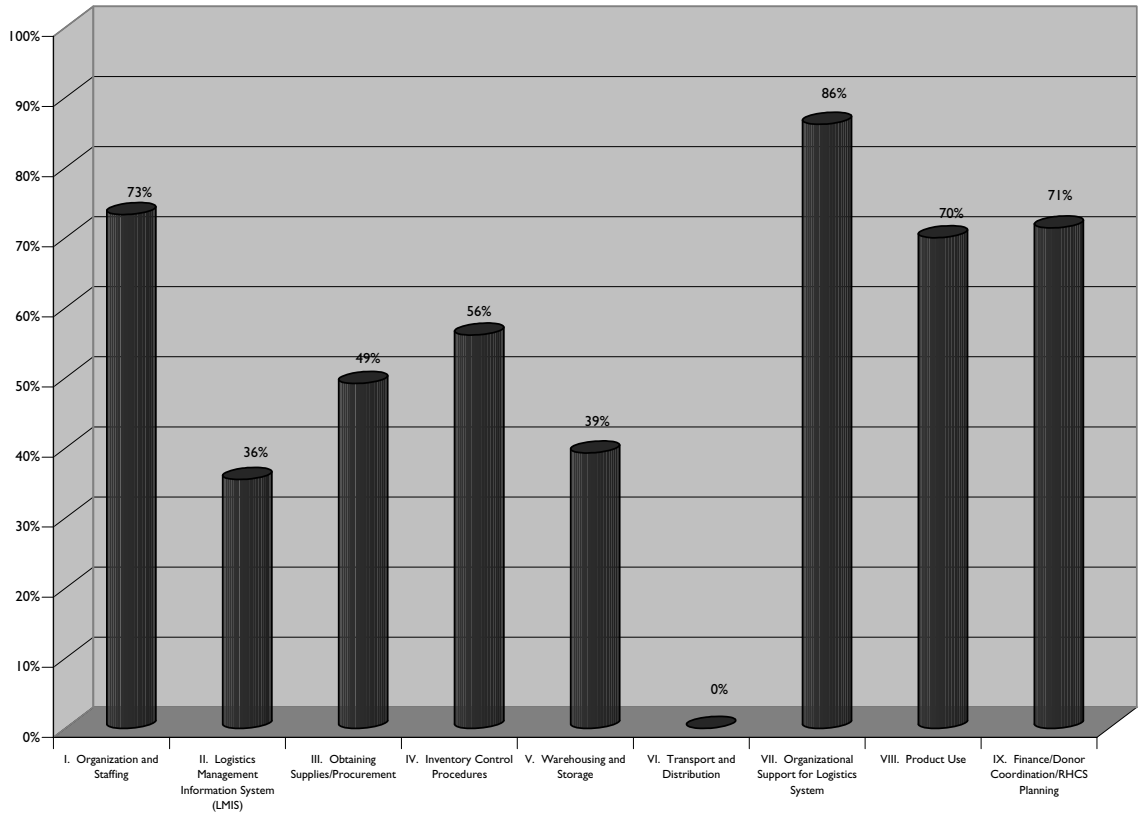
supervisory checklists and training district managers, inclusion of logistics training within Continuous Medical Education.

There are availability of standard treatment guidelines with availability of variety of products to be distributed free of charge. Universal safety procedures are in place. There are however newly opened facilities lacking treatment guidelines and limited number of staff trained in long term FP methods. There is also lack of written procedure for monitoring and supervision for prescribing practices. Recommendations include increase number of health workers trained in long term methods, provide guidelines to newly opened facilities and monitor adherence to the prescribing practices during supervision.

A budget line is available for product procurement, transportation, warehousing, storage, LMIS, remuneration for staff; however, there is a lack of budget for logistics staff development and waste management. Recommendation includes submitting development plans to the district planning committee at the end of the year.

In order to improve the logistics performances, first priority is to fill the vacant posts on an urgent basis. Improve in supervision needed to be enforced with emphasis on the proper filling out of the forms. LMIS needs to be strengthened with better collection of essential data and utilization of it for decision making purposes such as ordering quantity. Guidelines need to be developed where needed as a priority. Refresher trainings for staff on logistics management and training for newly hired staff are strongly recommended and support supervision should be intensified to ensure that staffs apply their knowledge in logistics to inventory control and orders are based on logistics information.

Figure 1. LSAT Scores by Component



BACKGROUND

CONTEXT

MAYUGE DISTRICT PROFILE

Location

Mayuge district is located approximately 125 km from the capital Kampala, in the South-Eastern part of Uganda. The district, formally the Bunya county of Iganga district, came into being in the last quarter of the year 2001. Mayuge district was created because of the marginalization and inadequate access by most of its people to important services. It is fairly a large district considering there are several islands attached to its mainland area. It is bordered to the north by Iganga district, on the North East by Bugiri district to the west by Jinja district and to the south west by Lake Victoria and Tanzania. The district is composed of seven sub-counties namely Baitambogwe, Imanyiro, Kigandalo, Buwaya, Malongo, Kityerera and Mayuge Town council.

People

The district has a projected population of 383,995(Projected population census, 2002). These are people from different tribal origins who were resettled here mainly in the late 1950s after the years when the area had been previously infested with Tsetse flies which were causing epidemics of sleeping sickness. Likewise, the people of Mayuge are also from several religious denominations but are mainly from the Protestant, Catholic and Islamic faiths. The medium age of the entire population is 16 years.

Industry and Transport

Most people survive on subsistence farming (74% of the total population) depending mainly on their small gardens, but a few of them also do fishing and trade on a small scale. Mayuge district does not have any sizeable factory except for a few grain mills. The population is predominantly rural (95.5%) with very few people having formal employment.

Literacy rate is very low although with the new government policy of UPE, the school enrollment for primary education has significantly increased. There are also more functional literacy classes that are taking place, but mainly in the sub-counties of Kityerera and Malongo under the sponsorship of an NGO called ADRA. With these efforts, literacy is expected to increase tremendously.

The transport system in the district is entirely murram (soil/gravel) roads, which makes transport difficult during the rainy season. Also comprising a section of the district are the islands to which transport relies a lot on availability of adequate amounts of fuel for the motor boats and good weather.

Structure of the health system

The district health services are headed by the District Health Officer (DHO) and supported by other staff such as the District Health Educator and the District Assistant Drug Inspector (DADI). The DHO is responsible for the procurement and distribution of logistics and supplies.

The district has a total of 38 functional health units of which 6 are NGOs and is made up of three health sub districts (HSD):

- Bunya West HSD having Buluba Hospital, an NGO, as the headquarters and the only referral facility. Buluba hospital is the national Tuberculosis referral centre and is catholic-founded.
- Bunya East HSD with Kigandalo HC IV as its headquarters and having one HC III and 11 HC II, 8 of which are public and the rest NGO.
- Bunya South HSD with Kityerera HC IV as its headquarters and having one HC III and 9 HC II, 8 of which are government facilities.

The sector is manned by 1 Medical officer, 11 clinical officers, 21 nurses, 13 nursing assistants, 31 midwives, 2 lab technicians and 6 health assistants.

Objectives of the district council.

Regarding contraceptives, the district plans to increase the number of new family planning acceptors by 20% by the year 2008.

Key performance indicators

Mayuge had planned 55% coverage of total population within 5 kilometres of a government or Private-not-for-profit health unit for the year FY 2006/2007and were able to achieve 50.5% by December 2006.

The percentage of facilities without stock outs of key drugs in FY 2006/07 was 90% compared with the targeted 85%. This had increased from the previous year's 77%. Reporting rates however were poor as the proportion of HSDs submitting quarterly assessment reports fell from 40% in 2005/06 to 20% by December 2006/07.

The contraceptive prevalence rate is 25.15% for all the methods and 5% for the long acting ones.

Health indicators

The district has a fertility rate of 7.02 higher than Uganda's rate of 6.7.

13,717 (4.8%) of the total population of 288,095 were infected with sexually transmitted diseases of which 5347 were AIDS infections.

Key indicators such as infant mortality rate, maternal mortality and under 5 mortality rates for the district were not established. However, the doctor/ population ratio- 1:8040, nurse: population ratio-1:628 and the midwife: population ratio: 1:1031.

Table 2: Contraceptive Prevalence Rates and Projections

COMMODITY	MOST RECENT DATA POINT	PROJECTIONS	
	2006	***2007***	***2008***
Pill	3.50	3.98	4.45
Injection	8.20	8.90	9.60
Condom	1.50	1.63	1.75
Any traditional	6.50	5.88	5.25
Implant	0.80	1.35	1.90
IUD	0.00	0.25	0.50
Female St	2.90	3.05	3.20
Male St	0.00	0.13	0.25
Any method	23.40	25.15	26.90
Any modern method(excluding LAPM)	16.90	19.28	21.65
All LAPM methods	3.70	4.78	5.85

FP services have been targeting women with very little involvement of men. Some women access FP services without consulting their spouses for fear that they won't welcome the idea. Condom use is the major FP method to prevent unwanted births and also prevent Sexually Transmitted Diseases. This issue is being addressed with assistance from ACQUIRE project which emphasizes male involvement and Long Acting Permanent Methods (LAPM) for both male and female.

Some of the constraints that are hindering the performance of the district include:

- Underfunding and understaffing
- Lack of accommodation for the DHO office as well as the medical stores
- Inadequate referral system
- Poorly equipped and furnished health units
- Lack of security at health units
- Inadequate lighting and water.

OBJECTIVES

- Diagnose areas that need improvement to improve contraceptive commodity security.
- Monitor the contraceptive logistics system's performance.
- Raise stakeholders' collective awareness about the system's performance.
- Gather informants' logistics knowledge, and use results of the analysis for work planning.

METHODS

The survey was a cross-sectional qualitative study to assess different components of the logistics system relating to contraceptives. The contraceptives that were taken into consideration were: microgynon, ovrette, lofemenal, Intra-uterine devices (IUD), implants, condoms and depo provera. A combination of Logistics Indicator Assessment Tool (LIAT) and Logistics System Assessment Tool (LSAT) was employed in this study. Prior to the survey, the data collection teams underwent a 3 day training session in the administration of the tool.

STUDY AREA

Part of the study (LIAT) was carried out in Mayuge district in Kityerera HSD with its subsequent health centres Malongo HC III, Kaluba HCIII and Kitovu HC II. The next phase of the study was carried out in Kampala where selected district officials where invited to provide information on the district's logistics system performance as per LSAT.

DATA COLLECTION TOOL

Two questionnaires were used. At the facility, a structured questionnaire was used to collect qualitative data. During the LSAT sessions in Kampala, another questionnaire was used to assess and score the strengths and weaknesses of the district, derive recommendations and draw an action plan so as to improve contraceptive commodity security in the district.

LIAT

The LIAT was modified into a semi-structured questionnaire and country specific. Although the LIAT is a quantitative tool, the modified LIAT in this survey was applied mainly as a qualitative guide to assess specific logistics components such as ordering, reporting, logistics information management system, storage capacity, transportation etc at the facility level.

SAMPLING

Within focal districts, the choice of the HSD was selected by the DHO according to the most available in-charge. A total of 5 facilities were to be visited as this was a qualitative study and did not require a lot of information from different units. Of the HC's chosen, one had to be an NGO facility so as to ascertain the problems faced by private not for profit units. The other selection criteria was that one of the chosen health facilities had to be far from the HSD headquarters while another had to be near in terms of distance.

LSAT

In Kampala, a two-day LSAT workshop was organized where representatives from the district were invited to determine the strengths, weaknesses and recommendations to the problems that were faced by the district logistics system. An action plan was then formulated based on the findings from the LSAT to improve the system and enhance contraceptive availability. The participants from Mayuge district included the DADI, the district FP focal person, the district data manager, the HSD in-charge Bunya South, as well as the in-charges of Kaluba and Kitovu health facilities.

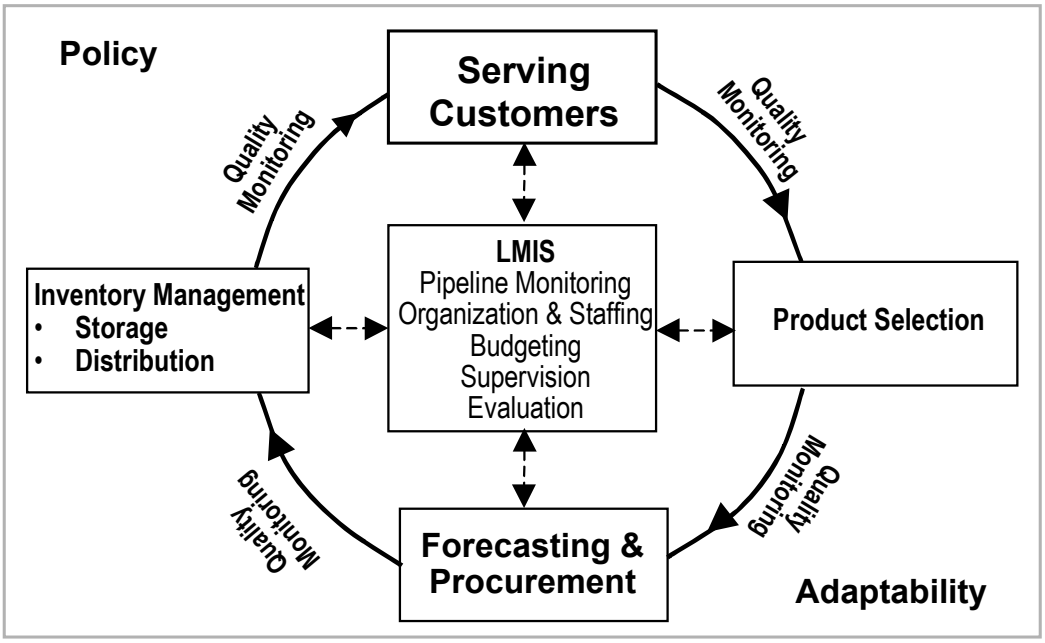
EVALUATION FIELD VISIT

The team introduced itself to the DHO and permission was sought to carry out the survey. The district store was visited and assessed on the different logistics components such as ordering supplies, storage, logistics management information system, supervision, transportation and distribution. The district FP focal person was also interviewed to ascertain the specific problems related to contraceptives. The Bunya South HSD in-charge was selected to take the team to different facilities which included: Kityerera HC IV, an NGO facility (Kaluba HC III), HC III (Malongo) and an HC II (Kitovu). This was done to follow and investigate the problems at each level of the district contraceptive pipeline.

LOGISTICS SYSTEMS

The Logistics System Assessment Tool (LSAT) allows for a comprehensive system-level assessment of the performance of a logistics system for any health program managing any health commodity. The tool follows the logistics cycle and includes questions on all components of the cycle. It can be used with the Logistics Indicators Assessment Tool (LIAT) to provide an overall assessment of a program's ability to ensure the continuous availability of health commodities at service delivery points (SDPs).

Figure 2. Logistics Cycle



I. ORGANIZATION AND STAFFING

The contraceptive logistics system in the district is headed by the District Health Officer (DHO) who sanctions orders, the DADI who follows the pipeline and the FP focal person who educates the community at the district level. The district is divided into HSD's whose in-charges supervise and oversee the lower level HC's. Each of the lower level HC's has an in-charge who monitors stock status and orders for the facility. Stores are managed by stores assistants or record keepers at HC III and IV only.

This logistics management unit is responsible for most activities in the logistics cycle but is not in charge of staffing logistics positions, as this is done by the district service commission. Inventory management, distribution and storage are also performed by the unit, however, they are not done regularly nor are they accomplished according to guidelines, some of which are not disseminated to the newly created facilities.

The district is unable to retain staff due to the poor living conditions and as a result, there are vacant positions where HSD in-charges should be medical officers but are instead clinical officers.

External forces that impact the supply chain include the presence of anti-family planning service providers, such as St. Francis Buluba Hospital which is a Catholic-founded HC IV, and also cultural beliefs that men with fewer children are inferior in virility to their counterparts with larger families.

STRENGTHS

- Existence of logistics management unit
- Presence of guidelines on inventory control, distribution and storage
- Good coordination of logistics activities at district level
- Good communication between levels
- Availability of strategic plan and budget for logistics staff to stay
- Presence of full time logistics officer

WEAKNESSES

- Need to fill 4 vacant logistics position
- High attrition rate
- Cultural and religious FP barriers
- Geographical accessibility limitations (islands)

RECOMMENDATIONS

- Develop strategies to motivate staff to stay longer in position
- Implement behavior change communication for FP
- Consolidate best practices already existent in the district
- Fill out vacant logistics positions
- Improve planning to supervise islands (integrated supervision and budget management)

II. LOGISTICS MANAGEMENT INFORMATION SYSTEM

A functional LMIS up and down the pipeline is in place. Information is channeled to lower levels through meetings and supervisory visits, while the HMIS 018 and 105 forms are used to send information up to the central level.

However, this communication is not performing to its full potential. Important data items are not captured, including: stock on hand, losses and adjustments and quantity received. Physical inventories are not conducted regularly. Most reports are not received on time, especially those from the islands as communication is expensive and difficult. Delivery schedules, forecasting and re-supply quantity calculations are not performed based on logistics information reports. LMIS data are not analyzed in a timely manner and feed back to lower facilities are irregular. The purpose of these reports is not known to the staff.

STRENGTHS	WEAKNESSES
• LMIS form with essential data • Some level of monitoring such as the stock out rate and the data is being used to make decisions • Information sent to higher levels(HMIS 105)	• Reports sent do not include stock on hand which makes monitoring difficult • Physical inventory is not done frequently enough. • LMIS is not automated • LMIS is not fully utilized and the data is not analyzed in a timely manner • There is no use of logistics data for ordering • Feedback to lower levels not adequate.

RECOMMENDATIONS

- Reports should include stock on hand at all levels.
- Regular physical inventory should be done at all levels
- Templates should be installed on the computers for facilities. Create a column for stock on hand on the template.

III. OBTAINING SUPPLY AND PROCUREMENT

Facilities adhere to a bi-monthly ordering schedule, which is enforced by the DADI who penalizes all latecomers to do their own ordering from NMS. The contraceptive pipeline is also monitored by the DADI who is in continuous physical communication with NMS offices when deliveries are late.

There's very little use of essential data items for commodity forecasting. Quantification is done by estimation of consumption in comparison with a visual inspection of stock on hand, with no consideration of losses and adjustments. Estimation is done with the long lead time associated with NMS. Products are not obtained based on forecasted needs and min-max is not taken in to account.

NGO facilities are unaware that contraceptives are free of charge. They do not know the ordering process from NMS; as such, PHC funds may be used to buy from the district's pre-qualified suppliers or 'borrow' from government facilities.

NMS contributes to the high overstocking levels in the district by pushing commodities that were not ordered. Delivery of contraceptives is tagged to that of essential drugs; therefore, when a district is over the credit line limit which finances essential drugs, both commodities are not delivered. Contraceptives are not always obtained in time.

Implementers of RH communication programs through the mass media do not involve district officials. These programs affect consumption for which district contraceptive focal people are not prepared when quantifying.

STRENGTHS	WEAKNESSES
• Responsible officers for obtaining supplies • Coordination, communication by all officers. • District ordering schedules available • Procuring from pre-qualified suppliers • Following the appropriate procurement program or ordering schedule. • Monitoring the pipeline to reduce over-stocking or under-stocking, continuous communication with NMS. • Quality assurance of products is done by checking for expiry date.	• Facilities are not obtaining products basing on forecasted needs • Facilities are not taking into account min-max levels. • Contraceptives are not obtained in the appropriate time • NGO facilities are not aware that contraceptives are free of charge

RECOMMENDATIONS

- Support supervision to re-emphasize max-min levels and quantification
- On the job training should be encouraged.
- Campaigners should consult district officials when they do community education so that incharges can quantify with potential increased product use in mind.
- Orient NGO facilities in the ordering process for free contraceptives.

IV. INVENTORY CONTROL PROCEDURES

Although there is a budget line using PHC funds for purchase of contraceptives in case of prolonged stockout, this has never been put into practice. Logistics personnel are always optimistic that one of their backorders will arrive to save the situation. This is also compounded by the fact that logistics personnel are unaware of the emergency ordering procedure.

Facilities in the district follow the principle of FEFO in keeping their stock. Expired products are separated from inventory and their quantities are reconciled in the stock cards. Transfers to other facilities are also tracked using the stock card.

There are no established policies for maintaining stock between maximum and minimum levels. Re-supply quantities are estimated and not calculated. The HSD in-charge does not verify facility orders to check for over-ordering and neither does the FP focal person check for the different HSD's.

Although the district level is expected to store some condoms for the district health educator to give to clients during community sensitization, the district store has been stocked out of condoms since April 2007. This stockout is due to a personnel change, where the incoming DHE was not aware of this arrangement. At the HSD, stockouts of condoms and Depo-Provera resulted from high consumption and NMS delivery delay, while those of Ovrette were linked to health workers not ordering it due to low customer uptake.

STRENGTHS	WEAKNESSES
• Use of alternative funds for procurement is a possibility if there is a prolonged stock out • FEFO procedure is documented and followed • Expired products are separated from inventory and their quantities are deducted in the stock cards • There are no significant expiries or adjustments	• Established Max-Min levels not widely known and not enforced • Inventory control guidelines not practiced leading to overstocking • No continuous stock monitoring to ensure there's appropriate stock • No written guidelines for retrieval and re-distribution of excess stock • Emergency ordering procedures are not known

RECOMMENDATIONS

- Ensure that established Min-Max levels are known by all the health workers and enforced through support supervision
- Encourage routine and continuous assessment of stock status
- Develop and disseminate procedures for retrieval and re-distribution of excess supplies
- Increase awareness about the concept of emergency orders and its application

V. WAREHOUSING AND STORAGE

Physical counts are done at least once a year by the district board of survey. Regular visual inspections of commodities are also conducted. However, the district faces a multitude of storage problems including:

- Inadequate storage space at the HSD and lower facilities. These were originally lower level HC's that were upgraded when Mayuge became a district. To handle inadequate storage capacity at the district level, commodities are delivered directly to the facilities without prior storage. This creates a problem with ordering since orders are taken by the DADI on delivery which does not give enough time for the health workers to quantify. Cartons are also haphazardly stock-piled, with some products put in corridors or other rooms.

- The storage capacity improvement budget is always undermined due to priority departmental needs. Other storage needs include: control of insects and rodents, improved organization of products by supplying pallets and shelves, and de-junking the store of expired products.
- No guidelines on storage and handling of products at all levels nor are there guidelines for disposal of sharps, bio-hazardous material or other medical waste.
- No procedure for registering complaints. Any product quality problems are passed on from facilities to the district by word of mouth.
- Quality assurance at the district is done by checking expiry dates. Other product characteristics cannot be checked due to delivery in cartons. Expired products are stacked in the district store due to lack of funding for destruction and this takes up space for incoming commodities.

STRENGTHS	WEAKNESSES
• Conducting of annual physical inventory • Adequate storage at the district • Delivery to facility level or HSD level to cope with inadequate space at the district • Carrying out of visual inspection of commodities	• No written guidelines for storage at the facility level or for the disposal of biohazardous material at the facility level • Inadequate storage space at the HSD and the HF level • Poor organization of the stores • No written complaints procedure

RECOMMENDATIONS

- DADI to distribute the written guidelines from the ministry to the facilities
- Improve on the organization in the stores at all levels
- A procedure to obtain complaints from the facilities is to be established
- Advocate/ lobby for funds to destroy expired drugs
- Ensure facilities have a bag of sand to control fires

VI. TRANSPORTATION AND DISTRIBUTION

The district has a budget line for most activities related to the maintenance of vehicles such as fuel, spare parts, repairs and drivers. However, the funding is inadequate which delays distribution. Other problems relating to transport include:

- Insufficient number of functioning vehicles; the district only has one.
- Inappropriate use of the functioning vehicle
- Documented distribution schedules are unavailable. The existence of these is frustrated by NMS which does not follow its delivery schedules.
- Absence of a documented distribution system. This is also disrupted by the inadequate space in the district store. Supplies are taken directly to the HSD which then distributes them to the lower HC's.

- Integration of transport with other departments is difficult due to the different time frames of the activities since the supplies have to be followed by the DADI/ Stores assistant.

Outsourcing used to be a mechanism of coping with the inadequate number of vehicles, however, this was stopped by NMS because some supplies were not reaching their ultimate destination.

STRENGTHS	WEAKNESSES
• Budget line for fuel, maintenance and driver salaries.	• Inadequate number of irregularly serviced vehicles to meet demand from all programs • Staff are inconvenienced by unscheduled deliveries • PHC funds for transport and maintenance is inadequate to cater for them • Deliveries at all levels are late.

RECOMMENDATIONS

- Borrowing of vehicles through the CAO' s office from other departments
- Integrating distribution of supplies with other district activities.

VII. ORGANIZATIONAL SUPPORT FOR LOGISTICS

Communication to the district occurs monthly through the HMIS 105, while the district communicated to the facilities during commodity deliveries and support supervision that are done quarterly and the annual general meeting.

Supervision is done monthly but this is not regular due to lack of transport. Various aspects are tackled such as: product storage and review of logistics records and reports; however, forecasting and ordering as well as conducting physical inventory are not done. Supervision schedules are available but not routinely followed. External project field assistants boost supervision by carrying out on-the-job training with facility staff.

There are measures for the staff to improve knowledge and skills in logistics at the HSD and facility level but not the district level due to lack of funding. Training was done for the current staff at all levels in logistics management. However this has not been extended to the newly recruited staff. In addition, there are written procedures and guidelines to help staff carry out logistics responsibilities but these are not widely disseminated especially to the newer facilities.

Staff at district and HSD levels have a logistics component in their job descriptions but this does not apply to the lower health facility staff who juggle several different responsibilities.

STRENGTHS	WEAKNESSES
• Regular communication between levels • There's a supervisory system in place	• Limited training for staff • Gaps in the supervision guidelines • Job aids not available in all the facilities • Staff at higher levels have logistics responsibilities as part of their job description • Some areas are not being covered during supervision

RECOMMENDATIONS

- Conduct refresher training for all staff
- Develop a supervision checklist and train district managers in its use
- Development and dissemination of job aids to all facilities
- Include logistics training in Continuous Medical Education

VIII. PRODUCT USE

Standard treatment guidelines are available, along with availability of variety of products to be distributed free of charge. However, there are newly opened facilities lacking treatment guidelines and limited number of staff trained in long term FP methods. Universal safety procedures are in place. Resources are in place for implementing these safety mechanisms but these sometimes run out and as a result, the health workers stop the administration of the contraceptive. Written guidelines for monitoring and supervising prescribing practices are non-existent.

A number of barriers limit the access and use of these products:

- Inadequate number of trained personnel to administer LAPM, all based at HC III and IV. Private health service providers also lack the skill to screen clients for different FP methods.
- Lack of fuel for timely delivery of products to the facilities.
- Cultural stigma toward FP as family size reduction puts the virility of the man into question
- Inability of St. Francis Buluba hospital and HC IV to administer products (Catholic-founded)
- Rumors and misconceptions surrounding FP commodities.
- NGO facilities are associated with poor quality of service and product unavailability.

STRENGTHS	WEAKNESSES
• Standard treatment guidelines available • Availability of a variety of products and these are free of charge • Universal safety procedures are in place and are being enforced during supervision	• Newly opened facilities do not have some of the treatment guidelines • Limited number of trained personnel in long term methods • Lack of written procedures for monitoring and supervising prescribing practices

RECOMMENDATIONS

- Increase the number of health workers trained in long term FP methods
- Provide guidelines to newly opened health facilities
- Monitor adherence to prescribing practices during supervision

IX. FINANCE AND DONOR COORDINATION

The program budget includes line items for procurement of contraceptives in cases of extended stockout periods, warehousing, the logistics management information system, transportation and salaries for logistics staff. However, no funds are budgeted for staff development or waste management at this time.

STRENGTHS	WEAKNESSES
• Availability of budget line for products procurement, transportation, ware housing, storage, LMIS, remuneration for staff	• Lack of budgets for logistics staff development and waste management

RECOMMENDATIONS

- Submit capacity development plans to the district planning committee at the end of the year.

CONTRACEPTIVE LOGISTICS SYSTEM ASSESSMENT CONCLUSION

Formerly the Bunya county of Iganga district, Mayuge district came into being in the last quarter of the year 2001. Mayuge district was created because of the marginalization and inadequate access by most of its people to important services. It is fairly a large district considering there are several islands attached to its mainland area. It is bordered to the north by Iganga district, on the North East by Bugiri district to the west by Jinja district and to the south west by Lake Victoria and Tanzania.

The district health services are headed by the District Health Officer (DHO) and supported by other staff such as the District Health Educator and the District Assistant Drug Inspector (DADI). The DHO is responsible for the procurement and distribution of logistics and supplies.

The logistics management unit is responsible for most activities in the logistics cycles. At the time of the survey, most of the logistics personnel positions were vacant and the district was unable to retain staff due to poor living conditions and isolation of some areas. There are also cultural and religious barriers to FP use. LMIS is somewhat established and forms includes essential data items. Information from LMIS is sent to the highest level (HMIS). However, LMIS is not fully utilized and data are not being used for ordering.

Facilities adhere to bimonthly ordering schedule which is enforced by DADI. But there is very little use of essential data items to forecast commodities. Quantification is done by estimation of consumption in comparison with a visual inspection of the stock on hand and with no consideration of losses and adjustments

There is a budget line using PHC funds for purchase of contraceptives incase of prolonged stockout but this is not practiced. Logistics personnel are also unaware of emergency ordering procedure. FEFO is followed but there is no established policies for following minimum and maximum which often result in over stocking or under stocking. The district is also facing multitude of storage and warehouse problem starting from having no guidelines for storage or disposal of bio-hazardous materials to inadequate storage place. Transport and maintenance of vehicles are also inadequate hampering schedule delivery of products to the facilities. Although a budget is available for procurement, transportation, and staff salaries, there is limited budget available for staff development.

In order to improve the logistics performances, first the vacant posts need to be filled on an urgent basis. Supervision improvements should be enforced, with emphasis on the proper filling out of the forms. LMIS needs to be strengthened with better collection of essential data and utilization of it for decisionmaking purposes, such as determining ordering quantity. Guidelines need to be developed where needed as a priority.

Findings from this assessment were utilized as inputs to development of the District Action Plan.

ACTION PLAN

Table 3. Mayuge District Action Plan

Logistics components Objectives	Activities	Indicators Objectively verifiable	Timeline	Responsible
Organizational context and staffing	Conduct exchange visits between HSDs to facilitate sharing of best practices	Exchange visits conducted	By December 2008	HSD in-charge
	Advocate for recruitment of relevant staff to fill vacant posts at technical meeting	Issue presented to DHT	By December 2008	DHO
	Regular supervision and recognition of excelling lower level staff at annual general meeting and other meetings to encourage continued service and therefore reduce turnover	Recognition system in place and functioning.	By December 2008	DHO
LMIS	Additional form to be created by the district to include stock on hand to be reported together with HMIS 105 at all levels. Hence physical count should be done monthly and no forms will be accepted without SOH	Form available and being utilized. Physical count done at the end of each month and attached to HMIS 105 for October	End of October 2008	DADI
	Procure and distribute to all health facilities updated stock cards with a losses and adjustments column	All health facilities have the new updated stock cards	End of October 2008	DADI
	Orient health incharges on use of logistics data for determining re-order quantities	All Health unit incharges knowledgeable on use of logistics data	Mid- October 2008	HSD in-charge for Bunya South

Logistics components Objectives	Activities	Indicators Objectively verifiable	Timeline	Responsible
Obtaining supply/ Procurement	Health units to be made aware of on going campaigns by ACQUIRE to increase uptake of LTMP by sending out a notice	All health units II and III should have received the notice and family planning providers and incharges should be aware so that they order with this in mind.	3RD week of October 2008	DHE
	Order forms to be distributed to health facilities. Copy of each endorsed order to be retained by the health facility	Order forms available at all facilities. Copies of order forms properly filed.	By end of October 2008	DADI
	District to communicate to NGO's that contraceptives are free of charge and provide ordering guidelines	NGO's obtaining free contraceptives through the HSD	By first week of December 2008	DHO
Inventory control procedures	Orienting health unit in-charges on the accepted max-min levels and ensure enforcement during supervision	Number of in-charges oriented and reduced number of facilities overstocked with contraceptives	February 2009	DADI
	Develop and disseminate guidelines for retrieval and distribution of excess supplies	Availability of guidelines	By December 2008	DADI
Warehousing and storage	Develop and disseminate storage guidelines to all health centers	Storage guidelines in place and being enforced during supervision	By Jan 2009	DHO
	Emphasize stores organization during routine support supervision to health facilities and recognize facilities that improve and maintain good storage conditions	Stores are well-organized and the best performers recognized.	By April 2009	Data manager

Logistics components Objectives	Activities	Indicators Objectively verifiable	Timeline	Responsible
	Establish a system for health facilities to submit complaints about the quality and supply of commodities	Complaint system established and operational	By January 2009	DHO
Transportation and distribution	Idea of borrowing of vehicles from other departments through the CAO's office to be introduced in the technical review meeting	Idea tabled to other departments at the technical meeting.	By end of December 2008	DHO
	Use every opportunity from other departments visiting sites to transport drugs	Idea tabled to other departments at the technical meeting.	By end of December 2008	DADI
	Advocate for a special budget for activities in the islands including commodity distribution	Idea tabled to other departments at the technical planning meeting.	By March 2009	DHO
Organizational Support for Logistics System	Orientation of health unit incharges on logistics management through Continuous Medical Education	Number of CME sessions on logistics conducted	Beginning November 2008	HSD in-charges
	Dissemination of Job aids to all facilities and enforcing their use during support supervision	Job aids in all facilities and being used	By March 2009	DHO
	Refresher training of all staff on use of job aids	Training carried out.	By June 2009	DHO
Product use	Distribution of standard treatment guidelines to other facilities	Treatment Guidelines available at the facilities.	By October 31st 2008	DADI
	Develop a check list for observing and evaluating prescribed practices	Check list available	First week of November 2009	DHE
	Advocate for training of more providers on LTP methods	Budget allocation for training approved	By June 2009	DHE
Financing/Donor coordination/RHCS Planning	Develop and submit capacity development plan including logistics to the district planning unit	Plan developed and submitted	By end of March 2009	DHO

Logistics components Objectives	Activities	Indicators Objectively verifiable	Timeline	Responsible
	Advocacy for recruitment/assignment of logistics staff at HC III at the technical review meeting	Staff with logistics responsibilities in place at all HC IIIs	By end of March 2009	DHO
	Advocate for funds for regular retrieval and disposal of the expired drugs from health facilities to the district store	Budget included in the PHC work plan.	By June 2009	DHO

REFERENCES

1. Uganda Bureau of Standards (UBOS) and Macro International Inc, 2007. *Uganda Demographic and Health Survey 2006*. Calverton, Maryland, USA: UBOS and Macro International Inc.

APPENDIX A

LIST OF PEOPLE INTERVIEWED

Table 4. Interview Participants

N	Name	Qualification/Title	Facility/Institution	Contacts
1	Dr. Paul Isiko	DHO	Mayuge district	0772-428225
2	Sebikali Charles	District Drug Inspector/ Acting Storekeeper	Mayuge district store	0782-517111
3	Nalubega Sarah	Family Planning Focal Person/ District Health Educator	Mayuge district	0782-465140
4	Wangoye Khalim	Clinical officer/ HSD in-charge	Kityerera HC IV	0712-000352
5	Micheal Mugweri	Clinical officer HSD in-charge	Kityerera HC IV Bunya South HSD	0772-527121
6	Bumali Habib	Stores assistant	Kityerera HC IV	0782-421024
7	Mugoya Nanda	Clinical officer	Malongo HC III	0714-674725
8	Izibu	Nursing officer	Malongo HC III	0772-902635
9	Mirembe rita	Enrolled nurse	Kaluba HC III	0772-527121
10	Ndikyeganantya Irene	Nursing assistant	Kaluba HC III	0754-561571
11	Teddy Ndagire	Midwife	Kitovu HC II	0774-622325

APPENDIX B

LIST OF FACILITIES VISITED

- Kityerera Health Centre IV
- Kaluba Health Centre III
- Malongo Health Centre III
- Kitovu Health Centre II

APPENDIX C

LIST OF PARTICIPANTS TO THE LSAT AND ACTION PLAN DEVELOPMENT WORKSHOP

Table 5. LSAT and Action Plan Development Workshop Participants

N	Name	Qualification/Title	Facility/Institution	Contacts
1	Sebikali Charles	District Drug Inspector/ Acting Storekeeper	Mayuge district store	0782-517111
2	Nalubega Sarah	Family Planning Focal Person/ District Health Educator	Mayuge district	0782-465140
3	Micheal Mugweri	Clinical officer HSD in-charge	Kityerera HC IV Bunya South HSD	0772-527121
4	Bazibu Daniel	Data manager	Mayuge district	0782-675792
5	Mirembe rita	Enrolled nurse	Kaluba HC III	0772-527121
6	Teddy Ndagire	Midwife	Kitovu HC II	0774-622325

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