



Ministry of Medical Services &
Ministry of Public Health and Sanitation

EFFECTIVE MANAGEMENT OF LABORATORY COMMODITIES

TRAINERS GUIDE

NOVEMBER 2012



USAID
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Kenya Health Commodities and Services Management

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FOREWORD

Laboratory health commodities are essential to the provision of quality health services. Effective Commodity Management which includes rational selection, efficient procurement, effective logistics management systems and promoting rational use is important to ensure improved access to and use of quality diagnostics and laboratory supplies. Several gaps exist in the laboratory supply chain both at national and peripheral levels. These include lack of skills in commodity management, inadequate supply of laboratory commodities, weak inventory management, poor records and weak information flow systems.

The Effective Management of Laboratory Commodities course is designed to address some of these gaps by equipping health care providers with the necessary knowledge and skills on commodity management. The application of this curriculum will go a long way in increasing awareness of the various commodity management aspects and ultimately availability of quality laboratory commodities.

Sincere appreciation goes to all those who dedicated their efforts and resources in the development of this trainers guide. Special thanks to USAID Kenya for providing the financial and technical support through the Health Commodities and Services Management Program.



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We acknowledge the efforts and dedication of those who worked tirelessly towards the development of these training materials and countless health facility staff who shared their experiences and challenges on health commodity management thereby informing the content of the training package.

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ACRONYMS AND ABBREVIATIONS

AFB	Acid-Fast Bacilli
AIDS	Acquired Immune Deficiency Syndrome
AMC	Average Monthly Consumption
AMR	Antimicrobial resistance
ART	Antiretroviral Therapy
CD4	Cluster of Differentiation Number 4
CD8	Cluster of Differentiation Number 8
DAR	Daily Activity Register
D-CDRR	District Consumption Data Report and Request form
DH	District Hospital
DMLT	District Medical Laboratory Technologist
FBC	Full Blood Count
FBO	Faith Based Organization
F-CDRR	Facility Consumption Data Report and Request
FEFO	First to expire, first out
FIF	Facility Improvement Fund
FIFO	First in, first out
HCSM	Health Commodities & Services Management program
HIV	Human Immunodeficiency Virus
KEMSA	Kenya Medical Supplies Agency
LMIS	Logistics Management Information System
LMU	Logistics Management Unit
M&E	Monitoring and Evaluation
MOMS	Ministry of Medical Services
MOPHS	Ministry of Public Health and Sanitation
MSH	Management Sciences for Health
MTP	Monitoring, Training and Planning
OJT	On Job Training
NASCOP	National AIDS & STI Control Programme
NP HLS	National Public Health Laboratory Services
PGH	Provincial General Hospital
PLWHA	People Living with HIV & AIDS
PITC	Provider initiated counseling and testing
PMLT	Provincial Medical Laboratory Technologist
PMTCT	Prevention of mother to child transmission
RDT	Rapid Diagnostics Tests (Malaria)
S11	Counter Requisition and Issue Voucher
S12	Issue and Receipt Voucher
SCMS	Supply Chain Management System
SOPs	Standard Operating Procedures
STD	Sexually Transmitted Diseases
TB	Tuberculosis
TOTs	Trainers of Trainers
USAID	United States Agency for International Development
VCT	Voluntary Counseling and Testing

1. INTRODUCTION

Currently the laboratory services are wanting in terms of service delivery and availability of laboratory commodities. Laboratory service is essential in disease management, diagnosis and surveillance. This can only be achieved when Lab commodities are available and managed appropriately to address shortages, stock outs, expiries and wastages. This is partially as a result of inadequate training on commodity management.

Most Laboratory personnel have undertaken their training in local medical training institutions that do not incorporate Laboratory commodity management in their curricula. To bridge the gap in the number of staff requiring these skills and knowledge, MOMS/MOPHS with support from various stakeholders developed this curriculum and therefore reduce the challenges noted above.

2. PURPOSE OF THE COURSE

The goal of this course is to equip participants with the necessary knowledge and skills in Laboratory commodity Management practices.

Specific objectives of the course are to enable participants to:

- Discuss the background situation of laboratory services in Kenya.
- Describe the concepts of effective management of laboratory commodities.
- Discuss good Inventory management
- Outline the national system for flow of laboratory commodities and laboratory commodity information
- Discuss quality improvement of laboratory commodity management
- Describe the concept of monitoring and evaluation and its importance in program activities implementation

3. TARGET GROUP

This course is designed for staff in Primary Healthcare settings who are involved in managing laboratory commodities. These include Laboratory Technologists and Technicians, Nurses & Clinical Officers, store personnel, procurement officers and health records personnel.

The course is also useful for pre-service and in-service laboratory commodity management trainers and On-the-job training (OJT) by laboratory commodity management Mentors.

4. COURSE DURATION

This is a three day residential training.

5. CERTIFICATION

The participants of the course will be awarded a certificate of attendance after attending all sessions outlined in this curriculum.

6. COURSE ORGANIZATION

This course is organized into six (6) modules which are closely related.

Module I: Overview of Laboratory Services

Module II: Laboratory Commodity Management

Module III: Laboratory Inventory Management

Module IV: Introduction to Laboratory Commodity and Information Flow and Use of data for decision-making

Module V: Planning to implement Changes in Laboratory commodity management practice

Module VI: Overview of M&E, Data Quality and Use of Data for Decision Making

7. TRAINING/FACILITATION

This course will involve various teaching methods and will emphasize methods appropriate for adult learners. These methods will include overview and illustrated lectures, small group discussions, class exercises, case studies and demonstrations.

8. PERFORMANCE ASSESSMENT

Facilitators will assess participants through question and answer sessions. Pre- test and post-test questions will be administered at the beginning and at the end of the course. This will form an important part of the assessment. In addition, evaluations will be administered to obtain feedback on the course content and delivery.

9. CURRICULUM IMPLEMENTATION

The trainers/facilitators for the course will be drawn from healthcare providers who have expertise and experience in laboratory commodity management. The time schedule for the course will be between 8 am to 5 pm with tea breaks and a lunch break in between. The course will last approximately 3 days providing 8 hours of didactic and practical sessions as outlined in this curriculum.

10. CURRICULUM REVIEW AND CHANGE

There will be a course evaluation by participants and implementers at the end of each course and appropriate changes should be made where necessary. After the first course there will be a review of the curriculum by all stakeholders. The stakeholders will evaluate the course objectives, course content and all the resources for the course. Subsequent periodic reviews will be conducted after 5years.

COURSE OVERVIEW

Duration: 20 minutes

Goal: To provide an overview of the training course

Objective: To describe the course objectives, teaching methodology, course structure and materials

Content: Course goal & objectives, structure, methodology, outline, teaching materials

Trainer's notes:

This session provides a general overview of the overall training and thus gives a roadmap for the Effective Management of Laboratory Commodities training.

A 20-minute presentation giving an outline of the overall training course objectives, teaching methodology, course structure and materials, course program.

The trainer should be very conversant with the general flow of the course, the course objectives and the trainers for the various sessions as they may be introduced during this session.

Lesson Plan Guide:

SESSION	CONTENT	ACTIVITY	TIME
1	Course goal & objectives, structure, methodology, outline, teaching materials	Lecture/Dis-cussion	20 minutes

TRAINING CURRICULUM ON EFFECTIVE MANAGEMENT OF LABORATORY COMMODITIES BY HEALTH CARE WORKERS IN KENYA

Course Overview

Course Program

Day 1	Participant registration, introduction and climate setting, pre-test, official opening, Course overview, Overview of Laboratory services, Introduction to Laboratory commodity management (LCM), Roles and responsibilities in LCM
Day 2	Recap, Introduction to Laboratory Inventory Management, Determining quantities to order, good storage practices
Day 3	Recap, Receiving and Issuing commodities, Records and Tools supporting Inventory management, Introduction to Laboratory commodity and information flow (LMIS) Recap, Use of data for decision-making (monitoring and evaluation), Planning to implement changes in Laboratory commodity management practice (MTP approach), presentation of action plans, Overview of M&E, Data Quality and Use of Data for Decision Making, post test and course evaluation, closing ceremony and awarding of certificates

About the Course

Why the course?

- Currently the laboratory services are wanting in terms of service delivery and availability of laboratory commodities.
- Increased attention to the sector has provided unprecedented opportunity to improve access to quality laboratory services.
- Overriding need to strengthen laboratory commodity management systems.

Target Audience

- Laboratory Commodity Management Staff in Primary Healthcare settings
Laboratory Technologists and Technicians, Nurses & Clinical Officers, store personnel, procurement officers and health records personnel OR those health care workers who handle Laboratory commodities
- In-service laboratory commodity management trainers
- Training of Mentors or TOT in Laboratory commodity Management as a scale up and sustainability strategy
- On-the-job training (OJT) by laboratory commodity management Mentors or TOTs

Purpose of this Course

- The purpose of the course is to:
Provide the necessary knowledge and skills to enable staff to efficiently and effectively manage laboratory commodities in support of laboratory services

Specific Objectives of the Course (1)

- To introduce the principles of effective management of laboratory commodities.
- To impart skills on how to practice good inventory management.
- To describe and apply on good laboratory commodity flow and logistic management information system.

Specific Objectives of the Course (2)

- To apply the concepts of monitoring and evaluation to Lab commodity management
- To enable implementation of changes in Laboratory commodity management practice using the MTP approach
- To orient health care workers on the use of laboratory commodity management tools

Course Structure and Methodology (1)

Structure:

3-day residential training

- 3 days didactic class sessions
- **Separate Half or 1-day practicum**

or

Individual Module level application according to identified needs or gaps

Course Structure and Methodology (2)

Methodology:

- Pre and Post Course assessment
- Adult learning Training Methods applied:
 - **Lectures, Discussions, Buzz sessions, Démonstrations, exercises/practice sessions, Case studies**
- Module and Facilitator evaluations
- Certification

Course Outline

This course comprises of 6 broad modules:-

Module I: Overview of Laboratory Services

Module II: Laboratory Commodity Management

Module III: Laboratory Inventory Management

Module IV: Introduction to Laboratory Commodity and Information Flow and Use of data for decision-making

Module V: Planning to implement Changes in Laboratory commodity management practice

Module VI: Overview of M&E, Data Quality and Use of Data for Decision Making

Course Material

- Stationery materials for Participants
 - Pen, Writing pad / Notebook, Name tag, Pocket folder
- Participant Handouts: Power-points and Session handouts
- Sample commodity management tools
- Job aids
- Calculators
- Flipcharts

MODULE 1: OVERVIEW OF LABORATORY SERVICES

duration: 1 hour

Goal: To describe the background situation of laboratory services in Kenya.

Objectives

At the end of this module, the participants will be able to:

- Describe the types of laboratory services provided in Kenya
- Identify and describe health policies related to laboratory services
- Identify the challenges in Laboratory services at various levels of the healthcare system.

Trainers Notes

Trainer should be conversant with the organization of laboratory services in Kenya. The trainer should also obtain copies of health policies related to laboratory services e.g. Kenya Medical Laboratory Policy 2012 and provide highlights of what the documents cover.

The trainer can also lead a discussion on the best practices for medical laboratory services.

Teaching Aids:

- Kenya Medical Laboratory Policy 2012
- Power point presentation
- LCD Projector, Flip Charts, Flip Chart Stand, Markers, Masking tape

Content

Components of the health system supported by laboratory services; KEPH levels providing laboratory services; health policies related to laboratory services; challenges in providing laboratory services.

Module 1: Overview of Laboratory Services

Lesson Plan Guide:

UNIT	CONTENT	ACTIVITY	TIME
1	Overview of Laboratory services	Lectures Group discussion	1 hour

References and Recommended Readings

- Ministry of Medical Services and Ministry of Public Health & Sanitation. Kenya Medical Laboratory Policy 2012

Module 1

Overview of Laboratory Services

The Situation of Laboratory services in
Kenya

Objectives

- The main goal of this module is to give the participant some background information on situation of laboratory services in Kenya.
- On completion of this module, the participant should be able to:
 - Describe the types of laboratory services provided in Kenya
 - Identify and describe health policies related to laboratory services
 - Identify challenges in current Laboratory services at various levels of the healthcare system.

Use this slide to outline the objectives of the module

Background (1)

Laboratory services, as part of the national health system, support the following health service components:

- Curative
- Preventive
- Palliative (monitoring)
- Health promotion
- Counseling
- Surveillance
- Research

Background (2)

All six levels of health care offer medical laboratory services differentiated according to the KEPH level:

- 6: Tertiary hospitals
- 5: Secondary hospitals
- 4: Primary hospitals
- 3: Health centers, maternities, nursing homes
- 2: Dispensaries/clinics
- 1: Community:
Villages/Households/Families/Individuals

Ask the participants to list some of the medical laboratory services provided at each KEPH level. Trainer should show the participants some of the lab policy documents and provide information on where they can be obtained.

Background (3)



"What's the opposite of 'Eureka'?"

Challenges (1)

Medical laboratory services have existed for many years in Kenya.

However the sector has been faced with tremendous challenges:

- Inadequate allocation of resources
- Inadequate infrastructure
- Staffing (HR) - inadequate numbers and skills

Challenges (2)

- Value of the laboratory in supporting diagnosis and management of patients is generally overlooked
- Limited capacity of Facility laboratories to meet the increased demand for Lab services
- Limited capacity to deal with emerging and re-emerging diseases and cross-border health concerns
- Inadequate capacity to address surveillance in a coordinated manner

Rationale for the Effective Management of Laboratory Commodities Training (1)

- Increased demand for the laboratory services has prompted the need to have an uninterrupted supply of laboratory commodities
- Efforts to improve Lab commodity has been previously mainly limited to key MoH programs (TB, HIV and Malaria) - therefore need to enhance skills to address management of **all** Lab commodities

Efforts to improve Lab commodity has been previously mainly limited to key MoH programs (TB, HIV and Malaria) - the rest of the commodities which form about 90% of the bulk, are left to the facilities to procure through FIF and/or central government annual procurements.

Due to their complexity and nature, laboratory commodities require a well-organized and co-ordinate management system.

Rationale for the Effective Management of Laboratory Commodities Training (2)

- Due to the above, there is need to train personnel involved in laboratory commodity management on good laboratory practices and efficient handling of the commodities

Module 2: Laboratory Commodity Management

Duration: 2 Hours 15 Minutes

Goal: To discuss the concepts of effective management of laboratory commodities.

Objectives:

At the end of this module, the participants will be able to:

- Define the terms used in commodity management
- Describe the components of the Laboratory Commodity Management cycle
- Identify and discuss the best practices and challenges in current Laboratory commodity management practices at health facilities
- Describe the roles and responsibilities of healthcare workers handling laboratory commodities.

Trainers Notes

Make sure you understand the laboratory Commodity Management Cycle and are able to explain it in simple terms to the participants, many of whom may be seeing it for the first time.

Teaching aids:

- Kenya Essential Medical Laboratory Supplies List
- Medical Laboratory Services of Kenya- National Strategic Plan 2012- 2017
- Medical Laboratory Policy 2012
- flip charts, markers, power point, LCD projector

Content

Definition of key terms, components of the commodity management cycle, current Laboratory commodity management practices at health facilities, roles and responsibilities of health care workers handling laboratory commodities in service delivery points.

Module 2: Laboratory Commodity Management

Module 2: Laboratory Commodity Management

Lesson Plan Guide

UNIT	CONTENT	ACTIVITY	TIME
1	Laboratory commodity management	<ul style="list-style-type: none">• Lecture• Group discussion / buzz sessions	2 hour 15 Minutes

References and Recommended Readings

Management Sciences for Health. *MDS-3: Managing Access to Medicines and Health technologies*. Arlington, VA: Management Sciences for Health.

Management Sciences for Health and World Health Organization. *Managing Drug Supply*. 1997. 2nd edition. West Hartford, Connecticut. Kumarian Press, Inc.

Galer, Joan, Sylvia Vriessendorp, and Alison Ellis. 2005. *Managers who lead: a Handbook for improving Health Services*. Cambridge, Massachusetts: Management Sciences for Health.

Module 2

Laboratory Commodity Management

1

This session introduces the concept of the Laboratory Commodity Management Cycle and presents an overview of the current processes used in Kenya for laboratory commodity management.

Objectives

By the end of the session, participants will be able to:

- Define the terms used in commodity management
- Describe the components of the Laboratory Commodity Management cycle
- Identify and discuss the best practices and challenges in current Laboratory commodity management practices at health facilities
- Describe the roles and responsibilities of health care workers handling laboratory commodities in service delivery points

2

Use this slide to outline the objectives of the module

Buzz session (10 minutes)

- Identify best practices and challenges in current Laboratory commodity management practices in your health facility

3

Guide the discussion and request one person to write the participants' suggestions on a flipchart

What is Commodity Management?

Commodity management is a set of practices and procedures for ensuring the:

- Availability
- Accessibility
- Effectiveness
- Quality
- Appropriate use of lab commodities in all service delivery points.

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Use this slide to introduce the concept of commodity management. Explain that during this module, they will be able to identify the current commodity management practices used in their facilities and emphasize that these practices represent the starting point for the changes and improvements that the teams will initiate at the end of the course.

Importance of Commodity Management (1)

- **Ensure continuous availability of, and access to,** laboratory commodities for the patients at a health facility at all times
- **Demand:** The availability of supplies, such as HIV test kits, increases the demand for Lab services and encourages health-seeking behaviour
- **Quality** of services is dependent on availability of commodities, and improves staff motivation

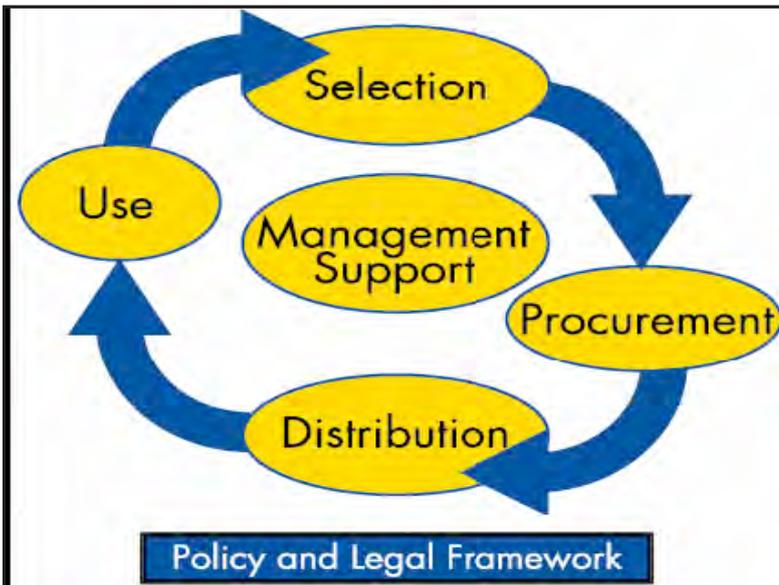
6

- Explain that the various components of commodity management cycle are highly interrelated and thus will be discussed in an integrated manner.
- Point out that all the staffs have an important role to play in ensuring good commodity management even if they do not directly handle the commodities.
 - If the commodities are not continuously available and accessible, then a health facility is not able to offer the care and treatment required.
 - When commodities are not available, then staff feel discouraged since they are not able to offer good patient care.
 - HIV/AIDS affects people mainly in developing countries where resources are already limited.
 - Managing the commodities ensures that they are stored and distributed efficiently to prevent wastage.
 - Careful management of commodities minimizes expiries

Importance of Commodity Management (2)

- **Cost:** Many lab commodities are **costly** to procure. Effective management maximises utilisation of scarce resources and prevents waste
- Facilitates **task-shifting** to non-lab staff handling lab commodities
- Promotes **good governance**, including transparency and accountability

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- Managing drugs, diagnostic test kits, and other health commodities in any setting (public or private sector) and at any level (local, regional, or national) follows a well-recognized system that can be viewed as a cycle of selection, procurement, distribution, and use
- The Laboratory Commodity Management Cycle is made up of various components. Every piece of the cycle must work well for the next step to occur effectively and efficiently. Problems in any part of the cycle can disrupt the whole commodity management system. It also helps managers to visualize the components of the laboratory supply system

Discussion

What role do you play in each of the components of commodity management?

Product Selection: This is where decisions are made on which health commodities are needed. This is based on information such as the condition being treated, the number of patients on treatment or expected in future, (Deciding which lab supplies and equipment to purchase e.g. when using FIF to buy reagents in your facility (Local level), i.e. Usually decided at national level). Involves establishing and using a list of carefully selected Laboratory reagents and supplies is perhaps the single most cost-effective action to: Promote regular supply, prevent the wasting of scarce resources on unnecessary, unsafe, or ineffective commodities.

Procurement: Involves getting funding for commodities, ensuring life-long availability of good quality commodities for the care of PLWHA. Process of ordering laboratory supplies, need to quantify requirements

Distribution: Inventory management,

Storage and Distribution: Products are taken from the central medical stores. it involves receiving ,issuing to other benches.

Use: The person living with HIV/AIDS (PLWA) is the key end-user; other users include laboratory staff who use laboratory commodities to perform lab tests needed by PLWA, clinical staff who will issue or use the medical supplies to care for the PLWA. E.g. correct use of supplies to perform tests effectively and efficiently according to SOPs, technical specifications and instructions.

Policy law and regulations: HIV test kits may need registration, approval for use, policy on equipments to be purchased, policies like decentralization etc. Emphasize that the entire cycle rests on a policy and legal framework that establishes the mechanisms for each function and supports the commodity management system.

Management Support:—financing, information management, staffing, monitoring, and evaluation—hold the cycle together. essential for all the components especially for HR,

Relate commodity management with good laboratory practices: records, SOPs, QC

Selection

- Selection process involves establishing and using a list of carefully selected Laboratory commodities
- Selection is perhaps the single most cost-effective action to:
 - promote regular supply of quality commodities
 - prevent the wasting of scarce resources on unnecessary or ineffective commodities
- Selection helps you to decide which laboratory commodities to purchase
- Example:- when using funds available at the facility level such as facility improvement fund (FIF) or health sector services fund (HSSF) to procure commodities at the facility

9

Mention that the selection of medical supplies and equipment where laboratory commodities fall is not given much attention compared to medicines even though supplies and equipment may consume up to 40% of the amount spent on drugs. Main issues revolve around the lack of policies, standardization and quality assurance.

Ask the participants why it is important to have a standardized list. Expect the following responses:-

- The list defines priority items and ensures that the most essential items are available where needed
- Promotes cost effective use of scarce financial resources
- Reduce the number of items through standardization
- serve as the basis for training staff
- Large number of commodities/ equipment are available
- Impossible to keep up to date with all commodities in the market

Criteria for selection of laboratory commodities

The equipment or supplies selected should include:

- Local availability of essential supplies
- Well established brand of simple sturdy design
- Local possibilities for servicing and spare parts for equipment
- Local possibilities for training staff in use, service and maintenance.
- Cost considerations

10

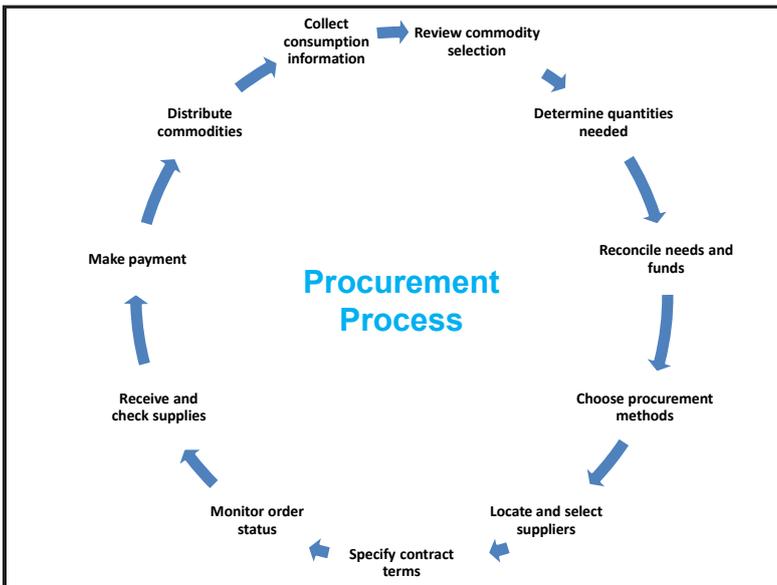
Point out that selection of laboratory commodities should be needs driven and based on the range of tests required at each level.

Procurement

- Procurement is the process through which items are purchased or obtained from suppliers
- The procurement management process is described in the flow diagram below

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Use this slide to describe what procurement is and what it involves. Mention that effective and transparent procurement ensures that quality laboratory commodities are availed at the right time.



At the health facility level, procurement is done in 2 ways:-

- Through the regular KEMSA procurements (from where supplies may be ordered and received from KEMSA)
- Procurement using FIF (facility improvement funds).

For procurement using FIF, the Lab person in the Health facility should ensure that he/she is a part of the Health Facility's Procurement committee. This committee will then follow the Procurement process cycle on the slide.

Key Components of Procurement

- Need to know how much to procure and for what periods (Forecasting & Quantification)
- Who to buy from (supplier selection)
- How to buy (e.g. pooled procurement)
- How to ensure quality of the products you buy (quality assurance)
- Systematic and sequential follow-up of the procurement activity (procurement planning and monitoring)

This slide outlines the key components of procurement

Benefits of Effective Procurement

- Right commodities or equipment
- Right quantities
- Competitive purchase price
- Meet recognized quality standards
- Timely delivery of commodities
- Reliable supplies
- Sufficient support in service and maintenance

Engage the participants in a short discussion, describing each of the above points with examples

Distribution

- Goal is to deliver procured commodities and supplies to the point of use
- Components of effective distribution include:-
 - Delivering in a timely manner
 - Keeping appropriate records
 - Monitor available stock:
 - Expiry dates
 - Inventory levels
 - Storage conditions, such as light and temperature

15

Discuss the importance of having a good distribution system.

- What happens when the distribution system is compromised?

Prevents theft, pilfering or diversion to outlets other than those intended;

- Point out that it is important to have a good distribution system to distribute commodities from the central level to the facility's primary stores and then to the user / service point store. E.g. From NPHLS to the facility.

Distribution involves.....

- Port Clearing
 - Receipt and Inspection
 - Inventory Control
 - Storage
- } NATIONAL LEVEL
-
- Requisition for supplies
 - Delivery
 - Receipt and Inspection
 - Inventory control
 - Storage
 - Use of the commodities and supplies
 - Reporting on use/consumption
- } FACILITY LEVEL

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Point out that the distribution cycle begins when the commodities are dispatched by the manufacturer or supplier and ends when the drug consumption information is reported back to the procurement unit.

- Briefly explain what the distribution cycle entails: Port clearing, receipt and inspection, inventory control, storage, requisition of supplies, delivery, deliveries to patients and reporting consumption
- Point out the four major elements of a distribution system

Buzz session (5 minutes)

- What are the elements of a good distribution system?

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Good distribution ensures:

- the maintenance of product quality;
- Reduces wastage;
- Controls use and gathers information for ongoing procurement needs

Elements of a good distribution system

System design- (Geographic or population coverage, number of levels in the system, push vs pull, degree of centralization)

Information system –(Inventory control, records and forms, consumption report, information flow)

Storage – selection of sites, building design, materials handling systems, order picking)

Delivery - (choice of transport, collection versus delivery, routing and scheduling of delivery)

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Use (1)

- The appropriate use of laboratory commodities completes the laboratory commodity management cycle

- *What are some of the important aspects of appropriate use of laboratory commodities?*

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Discussion point: Irrational / inappropriate use of lab commodities: Does this happen?

Engage the participants in a discussion and identify problems arising from irrational use of laboratory commodities.

Ask the participants to outline some of the important aspects of commodity use.

Expect the following responses and add on any other that is raised during the discussion

- Recording which commodities are used for which patients and why;
- feedback into the supply system of data required for planning continuity and further procurement,
- feedback on product acceptability to patients;
- Communication of requirements for new products or changes in guidelines which will result in variations in usage and changes in procurement;
- Introduction of stock management principles at all levels.

Use (2)

Appropriate Use of Laboratory commodities entails:

- Correct use of commodities and supplies to perform tests effectively and efficiently
- Adhering to SOPs, technical specifications and instructions
- Taking into account the cost, i.e. selecting a cost-effective test
- Inclusion of Laboratory managers in the health facility's Medicines & Therapeutics Committee (MTC) to improve appropriate use of lab commodities in the facility

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Group discussion (15 min)

In groups, discuss factors influencing appropriate lab commodity use in relation to the following:

- Prescriber
- Lab staff
- Patients/clients and community
- Health supply system

DRUGUSE 5

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Point out that the distribution cycle begins when the commodities are dispatched by the manufacturer or supplier and ends when the drug consumption information is reported back to the procurement unit.

- Briefly explain what the distribution cycle entails: Port clearing, receipt and inspection, inventory control, storage, requisition of supplies, delivery, deliveries to patients and reporting consumption
- Point out the four major elements of a distribution system

Factors Influencing appropriate lab commodity use

- Prescriber: prescribing the wrong or unnecessary tests/ investigations
- Lab staff: Lack of competency and skills
- Patients/clients and community: preference for particular tests, prevalent conditions, personal beliefs, mis-information
- Health supply system: poor inventory management, inadequate funding, poor policies

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Summarize the above discussion with this slide.

Types of interventions to improve rational use of laboratory commodities

- Educational ⇒ Persuade
- Regulatory ⇒ Force
- Managerial ⇒ Guide

On a flip chart, write down and explain the activities under each intervention that can be employed to improve rational use of laboratory commodities.

- Educational: use of guidelines and SOPs, Continuous Medical Education (CME), seminar, On Job training (OJT), mentorship
- Regulatory: Policies on practice, e.g. restricting certain test to specific cadres/levels of care
- Managerial: Use of Essential Lab commodities List, guidelines, SOPs, support supervision

DRUGUSE 8

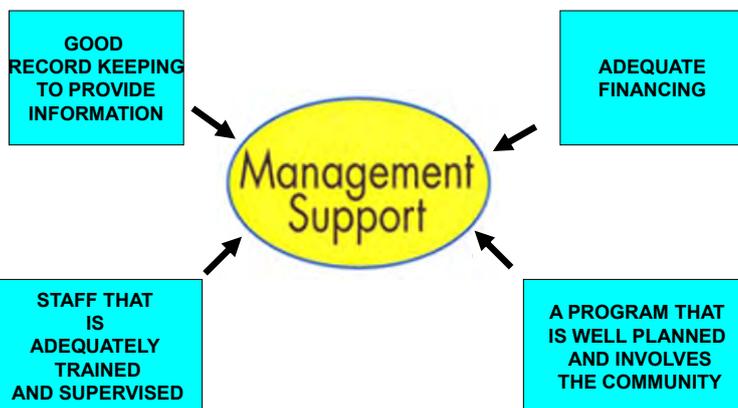
23

Management Support

- Enables each component of the Commodity management cycle to function well
- It includes:
 - Organizational structure with a clear flow of authority
 - Demonstrate lab revenue generation and advocate for involvement in the health facility's budgeting processes
 - Maintenance of accurate, useful, and up-to-date information system
 - Capacity development for lab staff

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Management Support



Facilitators Notes

This slide summarizes what Management support involves.

Policy, Laws & Regulations

- Affect the above other components of commodity management
- Provides the environment for effective delivery of lab services

E.g.

- Set quality standards at each level
- Define requirements for licensing, i.e. personnel
- Policies on tests, techniques and equipment
- Policies affects allocation of resources / budgets e.g. FIF, HSSF, decentralization

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Buzz Session

Ask the participants to list some of the policies or guidelines that affect the operation of Laboratory services in Kenya

Examples include:

- Kenya Medical Laboratory Policy 2012
- Medical Laboratory Services of Kenya- National Strategic Plan 2012- 2017

Buzz session (10 minutes)

- Discuss the Roles and Responsibilities of Laboratory Staff in the Laboratory Commodity Management cycle

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Summary of Roles and Responsibilities of Laboratory Staff in LCM (1)

- Selection and decision on what commodities to be ordered
- Procurement: Quantify for the commodity, supplies and equipment requirements
- Distribution: Ensuring safety and security of the commodities, inventory management, daily maintenance of equipment and cold chain management
- Use: observe the guidelines, algorithms, SOPs

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Summary of Roles and Responsibilities of Laboratory Staff in LCM (2)

- Management support: awareness of lines of authority, involvement in budgeting, reporting, mentoring staff
- Policy, laws and regulation: be up-to-date and aware

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MODULE 3: GOOD LABORATORY INVENTORY MANAGEMENT

Duration: 9 Hours

Goal: To discuss good Inventory management practices

Objectives:

At the end of this module, the participants will be able to:

- Define the key terms used in inventory management and give reasons for the importance of good inventory management
- Define key terms used in quantification and the importance of good quantification for laboratory commodities and supplies; and be able to use one quantification method
- Describe good storage practices in laboratories and in other facility stores and identify and articulate problems of storage at their facilities
- Describe the procedures for receiving and issuing laboratory commodities within a health facility, and the appropriate forms and records used
- Identify and demonstrate the use of records and tools supporting inventory management for lab commodities.

Trainers Notes

The trainer should ensure that all the inventory management tools are available for this session. These should be available to the participants at the end of each session so that they can acquaint themselves.

Teaching aids:

- Inventory management tools – Laboratory stock card, lab top up form, chart to track expiry dates of laboratory reagents, Facility CDRR form, 2°-8 ° C Temperature monitoring chart, -80° C Temperature monitoring chart, Daily Activity Register
- Lab Job Aids- quantification job aid
- Lab commodity management SOPs
- Power point, flip charts, markers, LCD Projectors

Content:

Session 1: Introduction to Inventory Management: Definition of the terms 'Inventory' and 'Inventory management' and other key terms; identification of the key components of the Inventory management cycle; the purpose of Inventory management; the characteristics of good inventory management for laboratory commodities; description of the challenges in inventory management.

Session 2: Determining Quantities to order for Lab Commodities: Definition of key terms used in quantification, importance of quantification of laboratory commodities and supplies, challenges / problems in quantification, appropriate choice of quantification method based on the data available, application of concepts of quantification in facility setting by quantifying the commodity needs for a facility using the Consumption method.

Session 3: Requesting Lab Commodities: Appropriate procedures used to request laboratory commodities; appropriate forms and records used when requesting laboratory commodities for a health facility.

Session 4: Good Storage Practices: Various aspects of good storage practices in laboratories and in facility stores, special storage conditions that are applicable to laboratory commodities, problems of storage at the facilities.

Session 5: Receiving and Issuing: Definition of terms (receiving, issuing); procedures for receiving and issuing laboratory commodities within a health facility; the appropriate forms and records used to receive and issue commodities for a health facility; receiving and issuing practices

Session 6: Records and Tools supporting Good Inventory Management practices: Records and tools used in support of good inventory management practices, demonstrating use of the tools and identifying the problems/challenges encountered in using the tools.

Module 3: Good Laboratory Inventory Management

Lesson Plan Guide

UNIT	CONTENT	ACTIVITY	TIME
1	Introduction to Inventory Management	<ul style="list-style-type: none"> Lecture Group discussion / buzz sessions 	20 minutes 10 minutes
2	Determining Quantities to order for Lab Commodities	<ul style="list-style-type: none"> Lecture Group Exercise Exercise 	1 hour 1 hour 15 minutes 30 minutes
3	Requesting Lab Commodities	<ul style="list-style-type: none"> Lecture Group discussion / buzz sessions 	20 minutes 10 minutes
4	Good Storage Practices	<ul style="list-style-type: none"> Lecture Group discussion 	1 hour 30 minutes
5	Receiving and Issuing	<ul style="list-style-type: none"> Lecture Group discussion Exercises 	1 hour 15 minutes 30 minutes
6	Records and Tools Supporting Good Inventory Management Practices	<ul style="list-style-type: none"> Lecture Demonstration / Exercises 	1 hour 1 hour

References and Recommended Readings

Management Sciences for Health. *MDS-3: Managing Access to Medicines and Health technologies*. Arlington, VA: Management Sciences for Health.

Management Sciences for Health and World Health Organization. *Managing Drug Supply*. 1997. 2nd edition. West Hartford, Connecticut. Kumarian Press, Inc.

USAID / DELIVER Project, Task Order 1. 2008. *Building Blocks for Logistics System Design for HIV test and ARV Drugs: Inventory Control Systems, Logistics Management information Systems, and storage and Distribution*. Arlington, VA.: USAID/DELIVER Project, task order 1.

USAID/DELIVER Project, Task order 1. 2008. *Quantification of HIV test kits: a practical guide to estimating national HIV test kit requirements and costs*. Arlington, Va: USAID/DELIVER Project, task Order 1.

USAID/DELIVER Project, TASK ORDER 1. 2009. *Laboratory Logistics handbook: a guide to Designing and Managing Laboratory Logistics Systems*. Arlington, Va.: USAID/DELIVER Project, Task Order 1.

USAID/DELIVER Project, Task order 1. 2008. *Guidelines for Managing the Laboratory Supply Chain: version 2*. Arlington, Va.: USAID/DELIVER Project, Task order 1.

USAID/DELIVER Project, Task order 1. 2009. *The Logistics Handbook: A practical guide for Supply Chain Managers in Family Planning and Health Programs*. Arlington, Va.: USAID/DELIVER Project

USAID/DELIVER Project, Task Order 1. 2008. *Quantification of Health Commodities: A Guide to Forecasting and Supply Planning for Procurement*. Arlington, Va.: USAID/DELIVER Project, Task Order 1.

USAID/DELIVER Project, Task Order 1. 2009. *Quantification of Health Commodities: HIV Test Kit Companion Guide, Forecasting Consumption of HIV Test Kits*. Arlington, Va.: USAID/DELIVER Project, Task Order 1.

USAID/DELIVER Project, Task Order 1. 2009. *Quantification of Health Commodities: ARV Companion Guide: Forecasting ARV Drugs Using the Morbidity Method*. Arlington, Va.: USAID/DELIVER Project, Task Order 1.

Introduction to Inventory Management

Module 3 Session 1

Use this slide to introduce the session on Inventory management.

Objectives

By the end of this session, participants should be able to

- Define the terms 'Inventory' and 'Inventory management' and other key terms
- Identify the key components of the Inventory management cycle
- Describe the purpose of Inventory management
- List the characteristics of good inventory management for laboratory commodities
- Describe the challenges in inventory management

Use this slide to introduce the session on Inventory management.

What is Inventory?

- **Inventory** is the commodities, supplies, equipment, and other materials that are available in stock in an institution (e.g. a medical store) at a given time

Use this slide to introduce the session objectives

What is Inventory management?

- Inventory management refers to the processes of ordering, receiving, storage and distribution or issuing of items
- The goal of efficient inventory management is to ensure that commodities are available and accessible so as to provide uninterrupted services.

Explain that inventory management is intended to ensure timely supply of items avoiding both under and over supply.

Buzz session (5 minutes)

- What are the challenges you see in Inventory management in your health facility?

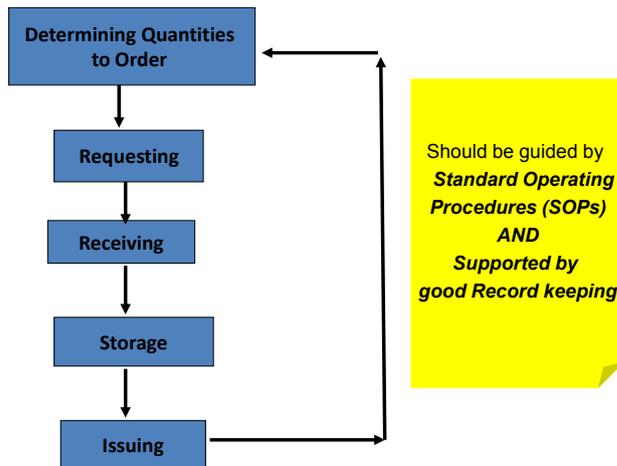
Guide discussion with one person writing the challenges on a flipchart

Challenges in Inventory Management

- Frequent stock-outs of commodities
- Wastage due to expiry
- Weak or no Standard ordering procedures (SOPs)
- Rationing of commodities
- Associated products not ordered concurrently (buffer solution, lancets, etc)
- Multiple vertical commodity sources and pipelines (for HIV lab, TB, Malaria, general Lab, donations)
- Inadequate and/or lack of supply of standard inventory management tools

This slide gives examples of some of the common challenges in inventory management

Inventory Management cycle



This slide illustrates the Inventory Management Cycle.

- Briefly describe what is involved in each component of the cycle.
- Point out that each component will be tackled at a later session.
- It comprises the activities related to
- Requesting (determining quantities to Order and ordering / re-ordering supplies)
- Receiving,
- Storing (e.g. in Bulk storage in the main store)
- Issue / Distribute to SDPs and benches
- All these activities are tracked with appropriate documentation, thus good record-keeping is critical. Record keeping is essential for tracking / monitoring of use of the Commodities

Brain-storming session (Time: 5 minutes)

Answer the following question:

“What is the purpose of Inventory management?”

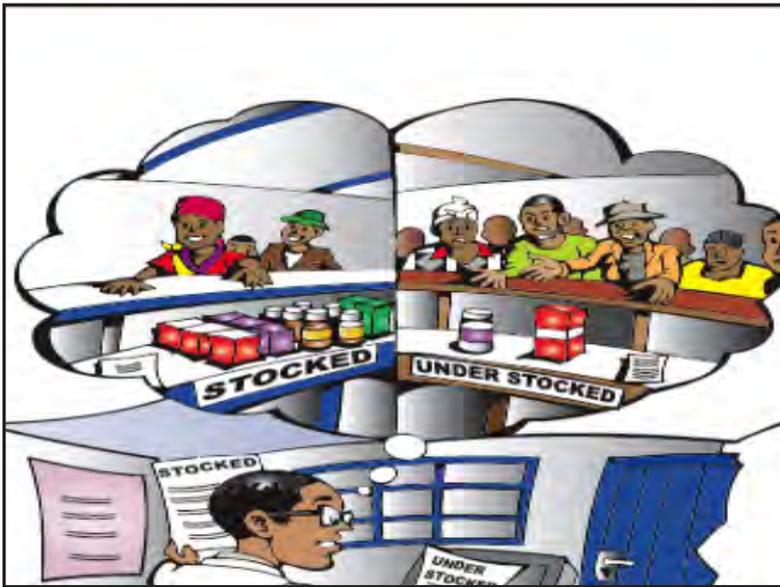
Facilitator to engage the participants in discussing the purpose of inventory management

Allow about 3-5 minutes for this exercise

Purpose of Inventory Management

- To ensure continuous supply for required items (no stock-outs)
- To determine the quantity of an item to order and the right time to place the order
- To ensure appropriate, safe and secure storage
- To minimize losses, e.g. expiries

Summarize participants' contribution using the above slide



Use the slide to emphasize the importance of inventory management in ensuring consistent availability of lab supplies

Good Inventory management system

A good inventory management system informs the storekeeper -

- When to order or issue
- How much to order or issue
- How to maintain an appropriate stock level of all products to avoid both shortages and overstocks.

Remind the participants that continuous supply of quality laboratory commodities can be guaranteed only through the selection, design, and proper implementation of an appropriate inventory control system.

Characteristics of Good Inventory Management (1)

- Availability of an established or approved stock list for each store/facility
- Adequate security, e.g. protection against theft
- Accurate records of all stock movements
- Accurate physical stock balances
- All staff members are aware of good inventory management practices

Established or approved stock list for each store/facility- Most dead inventory is “D.O.A” (dead on arrival). Order only the amount of non-stock or special order items that your clients need.

Secure, protection against theft – Pilferage is a bigger problem than most facilities realize. To address this challenge, it is important to restrict movement into or out of the stores especially for unauthorized personnel.

Accurate records of all stock movement – There should be appropriate paperwork for every type of stock withdrawal. Under no circumstances should material leave the store without appropriate entries being made on the stock records

Process paperwork in a timely manner – All printed issuing/receiving documents should be filled by the end of the day. Stock receipts should be put away and entered in the computer system if available within 24 hours of arrival.

Stock balances are accurate– Implement a comprehensive stock-taking cycle. This will ensure that stock balances are accurate and will remain accurate

Make sure all staff members are aware of good inventory management practices: – Poor inventory management is costly, e.g. loss through expiry, theft, breakage, or obsolescence must be converted to the money’s worth.

Characteristics of Good Inventory Management (2)

- Clear guidelines stating the maximum and minimum stock levels within which stocks should stay
- Set re-order level that guides on when to order
- SOPs to handle re-distribution of excess stock, and disposal of expired or obsolete stock

Notes:

Specify guidelines for setting the reorder method and other purchasing parameters to maximize inventory turns and minimize stock-outs:

The following can be specified within the facility

- Minimum/Maximum quantities
- Order up to a specific stock level (re-order level)
- Has ongoing management of expired/obsolete stock and excess inventory
- Excess inventory is usually considered to be any quantity of a product greater than the maximum stock level.
- One of the ways in which such inventory can be dealt with, is transferring excess stock to a facility that needs it (re-distribution)

Good Inventory management system

A good inventory management system informs the storekeeper -

- When to order or issue
- How much to order or issue
- How to maintain an appropriate stock level of all products to avoid both shortages and overstocks.

Determining Quantities to order for Lab Commodities

Module 3 Session 2

Use this slide to introduce this very important session. Point out that this session will describe several methods of calculating quantities to order, however only two of these methods are used in practice, in the laboratory setting.

Objectives

At the end of this session, participants should be able to:

- Define key terms used in quantification
- Identify the challenges / problems in quantification
- Outline the importance of quantification of laboratory commodities and supplies
- Quantify the commodity needs for a facility using the Consumption method

Briefly outline the learning objectives of the session Elaborate a little on each one rather than reading from the slide.

What is Quantification?

- A process that involves
 - estimating quantities of a specific item needed for procurement for a specific period of time,
 - the financial requirements needed to procure those items
- Quantification is an important step in procurement and in ordering supplies

Read the definition and elaborate on the following key phrases used in the definition giving examples relating to the laboratory

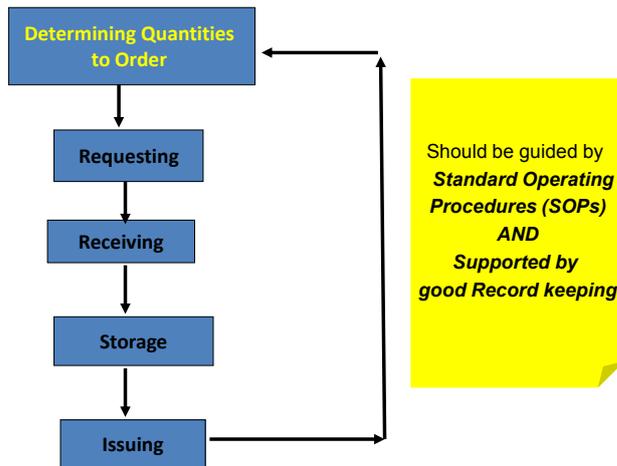
- Estimating quantities
- Specific item
- Specific time period
- Financial requirement for purchase

Differentiate quantification from forecasting:

Ask the participants to try and give the differences between the two terms.

Forecasting has an element of determining future needs.

Inventory Management cycle



- This slide illustrates the Inventory Management Cycle.
- Briefly describe what is involved in each component of the cycle.
- Point out that each component will be tackled at a later session.
- It comprises the activities related to
- Requesting (determining quantities to Order and ordering / re-ordering supplies)
- Receiving,
- Storing (e.g. in Bulk storage in the main store)
- Issue / Distribute to SDPs and benches
- All these activities are tracked with appropriate documentation, thus good record-keeping is critical. Record keeping is essential for tracking / monitoring of use of the Commodities

Buzz session (10 minutes)

- What are the challenges / problems in Quantification that you have experienced in your health facility?

Ask the participants to discuss the challenges and problems in quantification. Write the responses on a flipchart.

Terms used in Quantification (1)

- **Consumption**
 - Quantity of an item used to carry out diagnostic tests
- **Consumption review period (CP)**
 - Period over which consumption is being reviewed, usually 1 month
- **Average monthly consumption (AMC)**
 - A measure of the number of units of a commodity that was used in an average month over a specified period (e.g. in the last 1 or 3 or 6 or 12 months)

This slide and the next few give definitions and descriptions of the terms commonly used in quantification.

- For some participants, the description on the slide is self-explanatory. For others, an expanded explanation is given in the notes below
- After introducing each term, allow for time for questions and by seeking feedback, ensure that the whole group understands what the terms mean before proceeding to the next slide.
- Total consumption is obtained from stock records maintained in the facility, i.e. the total quantity of the commodity that has been used during the period under consideration.
- Average monthly consumption refers to the average number of units expected to be used per month. Also called Average monthly usage.

Terms used in Quantification (2)

- **Adjusted consumption**

This is consumption adjusted to cater for when the item was in stock and when it was out of stock, within the consumption review period

- **Maximum stock level (MSL):**

The maximum quantity of a laboratory commodity that should be held at the facility at any given time

- **Minimum stock level (Min):**

The minimum quantity of a laboratory commodity that the facility should hold at any given time

Terms used in Quantification (4)

- **Stock-out**

When there is no stock of a commodity, in the whole facility

- **Safety / Buffer stock**

– This is the minimum quantity that should be kept in stock in the lab at any given time, to cushion against uncertainties in demand and supply.

- **Unit of issue**

– The quantity of a commodity in a container or pack size (e.g. tests, pieces, mls, litres, gms, vials)

Importance of Quantification

- To avoid surpluses that may lead to over-stocking, expiries and/or wastage of commodities
- To avoid shortages/stock-outs
- To assist with the preparation and justification of a budget
- To make informed adjustments to procurement when faced with budgetary constraints
- To plan for new policies and new or expanding programs
- To estimate how much storage space may be required in the future



The Trainer is expected to ask the participants to explain what they see, and discuss the implications of the situation shown by the picture.



The Trainer is expected to ask the participants to explain what they see, and discuss the implications of the situation shown by the picture i.e. stockouts

Some key issues to consider when Quantifying

- **Disease burden** - To treat a certain proportion of the priority disease burden in the region
- **Laboratory KEPH levels** - Caters for different levels of care
- **Available Laboratory equipment**
- **Budgetary allocation** - To ensure that a certain product accounts for no more than a certain proportion of the available budget

Mention that orders can be either delivered in full supply or rationed, depending on the situation. Ask the participants to identify situation where commodities can be rationed (e.g. test kits) and where they have to be delivered in full supply (ARVs for a desired number of patients for a given period). Point out that for full supply commodities, facilities have to set the maximum and minimum levels to ensure continuous supply.

A max-min system allows objective resupply decisions based on need and takes into account established levels of safety stock, with the ultimate goal of having a product available each and every time it is needed.

How do you quantify?

Quantification Methods

Two main methods:

- Consumption-based
- Morbidity-based

- Trainer points out that other methods exist:
 - **Service level projection** - A budget-based method involving calculating the cost per patient
 - **Adjusted Consumption** - Uses data from a “standard” supply system and extrapolates it to the target supply system.
- Trainer should be familiar with these other methods.

Consumption-based method

- It estimates the commodity needs based on records of past consumption
- Works well where:
 - All records are available, up-to-date and the information is reliable
 - There are minimal stock out periods
 - Consumption patterns are stable
- Adjustments are made for stock-outs, wastage and losses.

The Trainer should note the following on the Consumption method:

- Uses data from existing programs on previous commodities’ consumption
- Predicts future needs most accurately when current usage patterns will continue
- Requires reliable consumption data
- Consumption data may or may not reflect rational prescribing and use of commodities
- Comparison with morbidity-based method allows an estimate of the extent to which the current consumption —
 - Addresses priority health needs
 - Reflects rational use of medicines

Morbidity-based Method

- Estimates needs based on the frequency of health problems and their standard management
- Is used to:
 - estimate needs for a new program or in disaster situations or where consumption data is not available/ reliable
 - developing and justifying budgets

The Trainer should note the following on the Morbidity method:

- Used for new programs or for programs where consumption data are not available
- Forecasts the quantity of medicines needed for prevention/treatment of specific diseases based on projections of the incidence of those diseases
- Requires accurate information on the population and morbidity as well as clinic attendances, and uses STGs to project needs
- Calculations can be complex

The Trainer should explain that the STGs for a program narrow down the number of drug options.

Records that provide Information for Quantification

1. For Consumption
 - Daily Activity Register
 - Issues Register (issues to clients/patients)
 - Consumption data report & request forms
 - Service data (e.g. number of clients/patients)
 - Lab stock or Bin cards
2. For Morbidity
 - District Health records
 - Hospital Health records

The trainer should note the following:

- For chronic treatment commodities (continuing patients), other sources of morbidity data include the DAR which give information on regimens, number of patients per regimen, weight bands, etc.
- Programs may provide data on service statistics, morbidity data where such data is not available at the facility level.

Consumption-based method: Steps

Step 1:

Select the Consumption period (CP)

Determine the period over which the consumption is being reviewed in months.

Normally for supplies received from central level, the CP is 4 months

The trainer should inform participants that it is important for them to decide on the period for which the consumption of each item is to be calculated.

For items received from KEMSA and SCMS, this is usually 4 months.

For other items, they may use one year in order to cover seasonal morbidity changes, or a longer period if reliable data is available, or a shorter period (less than one year) if the data is representative of a whole year.

The trainer should note that some key MoH programs use monthly or quarterly consumption periods since this has been pre-set by the program.

Consumption-based method: Steps

Step 2:

Determine the Consumption (C)

Determine the quantity used during the consumption period.

This information is obtained from the DAR or other consumption record, or the lab stock card

Consumption-based method: Steps

Step 3:

Determine the Average Monthly Consumption (AMC)

$$\text{AMC} = \frac{\text{Consumption (C)}}{\text{Consumption period (CP)}}$$

Consumption-based method: Steps

Step 4:

Determine the Maximum Months of Stock (Max MoS)

Max MoS =

Desired Consumption period (CP) + Buffer (in months)

Consumption-based method: Steps

Step 5:

Calculate the Maximum Stock level (MSL)

$$\text{MSL} = \text{AMC} \times \text{Max MoS}$$

Consumption-based method: Steps

Step 6:

Conduct the Physical count to get the Stock on Hand (SoH)

Ensure that the SoH covers the stock at the various service points as well as the lab store, if any.

Consumption-based method: Steps

Step 7:

Calculate the Quantity to Order (QO)

$$QO = MSL - SoH$$

Consumption-based method: Adjusting for stock-outs

To Adjust Consumption for stock-outs:-

- Calculate the Adjusted Consumption (**C2**)

C2 = Consumption (C) x [Consumption period (CP)
Period in stock (in days)]

$$C2 = C \times \frac{CP}{\text{Period in stock}}$$

- Trainer should explain the need for adjusting for stock-outs, i.e. the ACTUAL consumption period is the period in question MINUS the stock-out period.
- The Trainer should note to participants that if the commodity was out-of-stock for part of the consumption period, it is likely that at the point of use, it was not available and used during that time, thus the calculated consumption from the previous slides over the full period is less than it should be. Therefore an adjustment using the formula is necessary to get a more accurate consumption figure over the given consumption period.

REPUBLIC OF RWANDA
QUANTIFICATION JOB AID FOR LABORATORY COMMODITIES

Quantification is the process used to determine how much of a product is required for the purpose of procurement or ordering from the supplier(s).

PREPARATION

Items to be quantified: paper, consumables, stock units, DAF, etc for Laboratory connections (MSP, KAG, laboratory registers and registers)

Prepare a quantification worksheet. (See example)

List laboratory commodities to be quantified

For each commodity, carry out the steps listed below:

- CP** Determine Consumption Period (CP) i.e. period over which consumption is being reviewed in months e.g. 3 months
- C** Determine consumption (C) i.e. quantity used during consumption period (CP). If there was a stock out during Consumption Period (CP), adjust as shown. NB CP must be in months
- AMC** Calculate Average Monthly consumption (AMC).
 $AMC = C/CP$ (in months)
- Max** Calculate Maximum months of stock (Max MOS). Max MOS = Desired CP + Buffer. E.g. if desired order period is 3 months and buffer required is for 1 month, then Max MOS will be 3+1 = 4 months
- MSL** Calculate Maximum Stock Level (MSL) i.e. maximum quantity that a facility should have at any one time.
 $MSL = AMC \times Max MOS$
- SoH** Count Stock on Hand (SoH) for each item
- QO** Calculate Quantity to Order (QO). $QO = MSL - SoH$

ADJUSTING CONSUMPTION FOR STOCK OUTS

Adjusted consumption for stock outs (C2) is given by the equation below:

Adjusted consumption for stock outs (C2) is given by the equation below:

Worksheet Example

Commodity Name	RTD test kits
Receipts	900 Units
Issues	600 Units
Stock on hand 9 (SoH)	400 Units
consumption period (CP)	3 Months or 90 Days
Period in Stock	2 Months or 60 Days
Maximum Months of Stock (Max MOS)	4 Months

Given that CP is 90 days and the product was stocked out for 30 days, then the period in stock is 90 days-30 days = 60 days

Quantification Worksheet

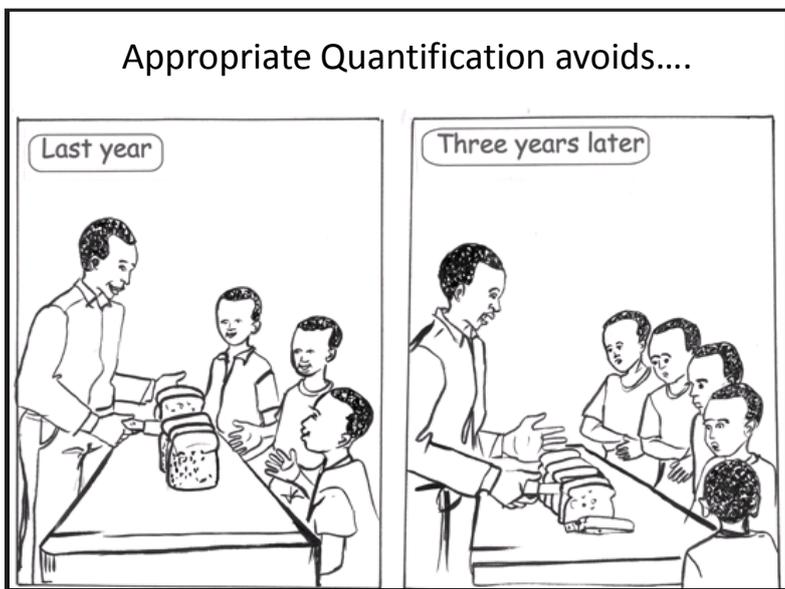
Consumption (C)	ADJUSTED CONSUMPTION FOR STOCK-OUT (C2)	AVERAGE MONTHLY CONSUMPTION (AMC)	MAXIMUM STOCK LEVEL (MSL)	STOCK ON HAND (SoH)	QUANTITY TO ORDER (QO)
Issues	C (units) / CP (days) / Period in Stock	C2 (Units) / CP (Months)	AMC x Max MOS	Closing stock in units	MSL - SoH
600	$600 \times \frac{90}{60} = 900$	$\frac{900}{3} = 300$	$300 \times 4 = 1200$	400	$1200 - 400 = 800$

NB

1. Consider using the second in calculation ONLY if you had stocks out during the CP.
2. Maintain the same unit of measure throughout the calculations e.g. tests or kits/ packs.

Provide the participant with copies of the quantification job aids so that they can see and familiarize themselves with its contents



Use this slide to introduce this very important session.

Requesting Lab commodities

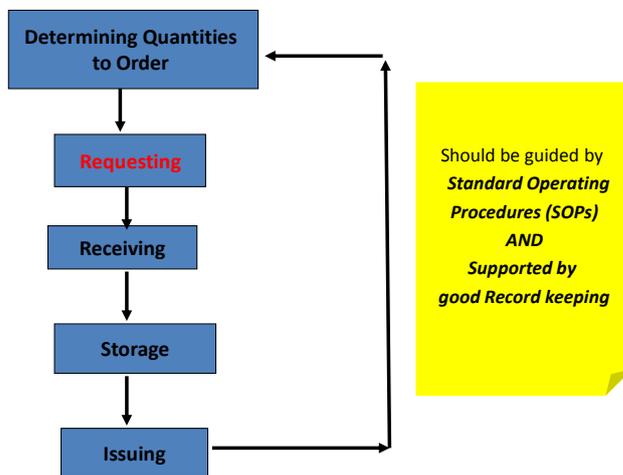
Module 3 Session 3

Objectives

At the end of this unit, the participants will be able to:

- Describe the appropriate procedures used to request laboratory commodities
- Describe the appropriate forms and records used when requesting laboratory commodities
- Be able to prepare the appropriate intra-facility orders for a health facility

Inventory Management cycle



This slide illustrates the Inventory Management Cycle.

Point out to the participants that the session will focus on the requesting step.

Requesting Commodities

- Requesting

The process of ordering for commodities from a point of issue (e.g. the main facility store) or from a selected supplier (e.g. KEMSA)

Requesting Commodities

- Requesting for commodities occurs
 - after quantification is done
 - whenever commodities fall below Re-order level or Minimum stock levels
- Requesting should be documented on official Requisition forms
- There are standard MoH forms for requesting supplies, for example:
 - Counter Requisition & Issue voucher (S11)
 - Facility Consumption Data Report & Request (CDRR) form

The trainer is expected to be aware that some of the forms for the MoH Lab programs undergo review from time to time. S/he is therefore expected to be aware of the current forms in use. If the names of forms have changed, the trainer should delete the old names and replace them appropriately. Some facilities may use the Issue and Receipt voucher (S12) due to absence of specific ordering forms.

Who should Request for commodities?

- Staff in charge of commodities and supplies
 - Laboratory manager (or Laboratory In-charge)
 - Laboratory technologist or technician
 - Stores officer or Procurement officer
- Staff designated by the program / facility
 - E.g. at VCT sites

The trainer should emphasize who a designated person is, e.g. technical person trained by the program, authorized by the facility and recognized by the supplier.

When to Request?

- When stocks reach or fall below the pre-determined Minimum stock level
- At the scheduled order times for your facility
- Also depends on how long it takes to order and receive (Lead Time)
NB: Lead time (period between ordering and receiving) may have an effect on the order time!

For Lab commodities, ordering and reporting is currently done on monthly basis for most items. However KEMSA and some programs may use different ordering periods, e.g. KEMSA supplies Rural health facilities on quarterly basis and Hospitals on bi-monthly with non-pharmaceuticals.

Records that provide information for Requesting commodities

At Service delivery point / Facility level:

- *Daily activity register (MoH 642) or other Consumption record*
- *Facility Consumption Data Report & Request (F-CDRR, e.g. MoH 643)*
- *Service data, e.g. Number of tests conducted, Number of clients*
- *Bin cards*

At the Central warehouse (e.g. KEMSA):

- *Reports from the facilities i.e. Facility Consumption data report & request (F-CDRR)*
- *Central warehouse Stock cards (e.g. Bin cards)*
- *Procurement plans/schedules*

The trainer should explain that the above forms will be demonstrated later in the module.

Who should Request for commodities?

- Staff in charge of commodities and supplies
 - Laboratory manager (or Laboratory In-charge)
 - Laboratory technologist or technician
 - Stores officer or Procurement officer
- Staff designated by the program / facility
 - E.g. at VCT sites

The trainer should emphasize who a designated person is, e.g. technical person trained by the program, authorized by the facility and recognized by the supplier.

Good Storage Practices

Module 3 Session 4

Introduce this session by explaining that the purpose of a storage and distribution system is to ensure the physical integrity and safety of products and their packaging as they move from the central storage facility to peripheral facilities and into the hands of the clients/patients. A sound storage and distribution system will help ensure that products reach the client in usable condition, with minimal loss or waste.

Emphasize that proper storage requirements are essential to maintain the quality of all laboratory supplies, to keep the storage area secure, and to ensure efficient inventory management.

Inform the participants that in this session, storage requirements for a laboratory facility will be considered in depth with a view to evaluating existing arrangements and providing guidelines for improvement where needed.

Objectives

By the end of this session, participants should be able to:

- Describe the different aspects of good storage practices in laboratories and in other facility stores
- Describe special storage conditions that are applicable to laboratory commodities
- Identify and articulate problems of storage at their facilities
- Discuss safe disposal and waste management

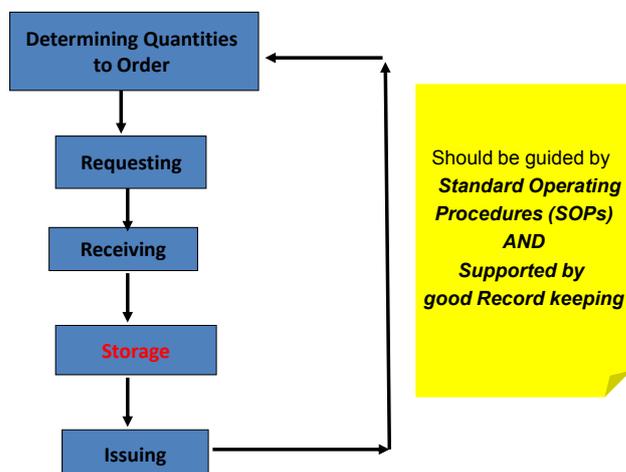
Briefly outline the session objectives and explain that this session describes important aspects of storage for laboratory reagents, test kits, and other commodities.

The participants will learn the special storage conditions these commodities require and will assess the fitness of their own laboratory and hospital store rooms.

Inform them that they will

- Discuss storage requirements for tests used for HIV/AIDS
- Brainstorm optimum storage conditions in laboratories
- Participate in small-group exercises focusing on the conditions at their own facility.

Inventory Management cycle



- This slide illustrates the Inventory Management Cycle.
- Briefly describe what is involved in each component of the cycle.
- Point out that each component will be tackled at a later session.
- It comprises the activities related to Requesting (determining quantities to Order and ordering / re-ordering supplies)
- Receiving,
- Storing (e.g. in Bulk storage in the main store)
- Issue / Distribute to SDPs and benches
- All these activities are tracked with appropriate documentation, thus good record-keeping is critical. Record keeping is essential for tracking / monitoring of use of the Commodities

Importance of Proper Storage (1)

- **Stability:** wastage reduced and constant availability assured
- **Retrieval:** easy for issuing or conducting physical counts
- **Quality:** assures maintenance of viability of the items
- **Security:** ensures safety of held stocks, prevents loss from damage, fire, pilferage etc

Briefly discuss each of the points mentioned in this slide giving relevant examples.

Importance of Proper Storage (2)

- **Record-keeping**

NB. An inventory can be either in hard or soft copies and should be updated regularly.

- **Retiring** of obsolete equipment
- **Disposal** of expired commodities

Briefly discuss each of the points mentioned in this slide giving relevant examples.

Facilitate a group discussion on the mentioned topic, and capture the points on flip chart paper.

The following are important considerations for storage of laboratory commodities

- Access to the laboratory and storage area must be restricted to authorized personnel ,
- Cleanliness—benches, shelves, and trash and waste disposal,
- Humidity,
- Temperature control—general and special requirements and temperature monitoring , Air conditioning, Adequate refrigerated space maintained at optimal temperatures (+2 to +6 degrees Celsius), Adequate freezer space at –20 and –70 degrees Celsius
- Emergency power supply, Lighting—remember that direct sunlight on supplies may cause deterioration, Shelving, cupboards—adequate, accessible, and stable.
- Organization of stock
- Stock rotation by first expired, first out (FEFO); first in, first out (FIFO); expiry dates
- Bin cards, stock cards
- Security for dangerous or expensive items
- Special precautions
- Safety issues for flammables, irritants and corrosives (Refer to the handout.)
- Fire extinguisher
- Pest control

Exercise 1

Whole group discussion:
10 mins

What factors should be considered for optimal storage of commodities in the laboratory?



Ask the whole group to discuss the slide.

Ask the participants to describe what they have picked out in the picture on the slide shown. *Ask what are the key storage issues here and engage them to discuss how these shortcomings can be addressed.*

Spend about 5 - 10 minutes on this exercise.

Guidelines to Good Storage Practices (1)

- Provide appropriate space and security for stored stock
- Provide safe and orderly arrangement of stock in storage
- Maintain correct storage conditions to safeguard quality
- Good stock control and rotation-(practice FEFO&FIFO)

This slide outlines good storage guidelines. Briefly discuss each guideline with the participants giving relevant examples

Guidelines to Good Storage Practices (2)

- Maintain updated laboratory stock cards and the Expiry tracking chart
 - Label clearly all reagents and chemicals with their name, date of preparation, date of expiry and biohazard symbol.
- NB: For reagents prepared/constituted in the lab, the name of the officer who prepared the reagent should be indicated on the label.
- Store chemicals and reagents in correct zones to make sure incompatible chemicals are not stored together

This slide outlines good storage guidelines. Briefly discuss each guideline with the participants giving relevant examples

Guidelines to Good Storage Practices (3)

- Secure storage areas for expensive or dangerous items
- Maintain the correct temperature and other conditions for commodities
- Conduct regular physical stock counts and record the results
- Develop and implement SOPs for storage of laboratory commodities and other supplies

This slide outlines good storage guidelines. Briefly discuss each guideline with the participants giving relevant examples



Facilitators Notes

Ask the whole group to discuss the slide. Ask the participants to describe the good storage practices depicted in the picture on the slide shown. Spend about 5 - 10 minutes on this exercise.

Guidelines for Zoning Lab Items

Laboratory commodities must be located in a part of the store with the correct combination of temperature and security.

The most basic way in which supplies can be arranged is through the use of the zoning process.

Exercise 2: Defining Zoning 10 min

1. What does zoning mean/imply?
2. Have you had to zone your lab commodities?



Whole-group Exercise

Zoning refers to putting items in a particular area because they have a particular characteristic, purpose or use, or because they have a particular restriction.

There is no clear consensus on what and how many classes of items should be segregated. To a large extent, how reagents are divided and assigned will depend largely upon the amount of space available.

The bottom line is: know your laboratory, know the reagents. Be organized. Manage this change. Read and learn all the time about the items you have in stock.

Zoning: Introduction (1)

• What is a Zone?

Is a part of a store; it can be a separate building, room, locked cupboard, a refrigerator, a freezer or a cold room

• What is Zoning?

It is a process of putting items in a particular area or in a separate area due to their special storage requirements or other characteristics.

Discuss each of the points on the slide and ask participants to give examples.

Explain that items are classified in different categories based on

- Bulkiness
- Related use items like :FACS Calibur reagents, glassware, plastics
- Items requiring special precautions
- Items requiring special conditions such as
 - Restricted Access
 - Special temperature conditions
 - Managed Stock Items
 - Security considerations
 - Risk of contamination

Zoning: Introduction (2)

• Why Zone Lab Commodities in stores?

- Safety and Security reasons
- Reduction of accident risks or contamination
- Allows for special requirements, e.g. Cold Chain
- Easier Stock management (e.g. FEFO and FIFO arrangement, stock taking)

Types of zones

- Temperature zones
 - Storage at uncontrolled room temperature
 - Storage at controlled temperature and humidity
 - Cold storage
- Secure storage
 - Fuel should be stored in a locked compound for safety purposes
- Flammables
 - Keep in separate building or store, well ventilated, fireproof, fitted with explosion hatch

- Use this slide to introduce the different types of zones.
 - Ask the participants to give examples of laboratory commodities which can be zoned in the different areas.
- Flammables such as alcohol and ether must be stored in special buildings or rooms.
 - Ask the participants how flammables are zoned in their facilities.

What do these laboratory safety symbols stand for? (1)



Notes

These signs stand for:
 Electrical hazard; Combustible materials; No open flames; Corrosive materials
 Flammable symbol; Fire extinguisher; Toxic chemical;
 Non-portable water

What do these laboratory safety symbols stand for? (2)



Notes

These signs stand for:
 Environmental Hazard; Toxic materials hazard;
 Explosive materials sign
 Radioactive sign; Biohazard sign; Chemical hazard label

Zoning - Special Precaution items

Always Check and understand the hazard symbols such as:

- | | |
|-----------------------|------------------------------|
| a. Very toxic | k. Toxic |
| b. Irritant | l. Extremely flammable |
| c. High voltage | m. Explosive |
| d. Harmful | n. Highly flammable |
| e. Corrosive | o. Radioactive |
| f. Oxidizing | p. Dangerous for Environment |
| g. Biohazard | q. No open flames |
| h. Radioactive | r. Fire extinguisher |
| i. Chemical hazard | |
| j. Non portable water | |

Emphasize that it is important to always checkout and understand the hazard symbols on different laboratory commodities and reagents.

Meanings of symbols Answers to Buzz session exercise

Correct answers for slide 1 are:

1. Electrical hazard
2. Combustible materials
3. No open flames
4. Corrosive materials
5. Flammable
6. Fire extinguisher
7. Toxic chemical
8. Non-potable water

The correct answers to the buzz session are presented with this slide

Correct answers are:

- Oxidizing
- Fire extinguisher
- High voltage
- Toxic
- No open flame
- Non portable water
- Corrosive
- Dangerous for Environment
- Highly Flammable
- Radioactive
- Explosive
- Very toxic
- Radio active
- Irritant
- Biohazard
- Harmful
- Chemical hazard
- Extremely flammable

Meanings of symbols Answers to Buzz session exercise

Correct answers for slide 2 are:

1. Environmental hazard
2. Toxic materials hazard
3. Explosive materials
4. Radioactive
5. Biohazard sign
6. Chemical hazard label

The correct answers to the buzz session are presented with this slide

Correct answers are:

- Oxidizing
- Fire extinguisher
- High voltage
- Toxic
- No open flame
- Non portable water
- Corrosive
- Dangerous for Environment
- Highly Flammable
- Radioactive
- Explosive
- Very toxic
- Radio active
- Irritant
- Biohazard
- Harmful
- Chemical hazard
- Extremely flammable

Zoning:- Storage requirement

Optimal storage conditions

- If no special storage conditions are given normal storage conditions apply, i.e.
 - Dry
 - Well ventilated premises
 - Temperatures of +15°C to +25°C or up to +30°C (WHO 1990)
- Each storage zone should have at least one thermometer and temperatures should be recorded daily at the hottest time of the day.

Point out that it is essential to follow the product manufacturer's storage instructions to the extent possible to ensure that the product remains safe and effective under the actual storage conditions

Stock location within a Zone (1)

Within each zone, there may be several location types:-

- **Fixed:-** Each stock item is always stored in the same place
- **Fluid:-** Items are stored wherever there is space at time of delivery
- **Semi-fluid locations:-** A combination of the previous two. Each item is assigned some fixed space for picking stock. The remainder of the store is filled on the fluid location principle.

Fixed location

- The simplest –each stock item is always stored in the same place
- Stocks are allocated specific pallets, shelves or area of floor
- Stock administration is relatively easy
- Disadvantages
 - Inflexible
 - If new item is supplied there might be no space allocated
 - Waste of storage space if item is not available

Fluid Location

Store is divided into many designated locations each with a code

Items are stored wherever there is space at time of delivery

Uses available space efficiently

Requires sophisticated stock administration

Semi fluid location

A combination of the previous two.

Each item is assigned some fixed space for picking stock.

The remainder of the store is filled on the fluid location principle.

Stock classification within a zone (2)

- Items should be clearly organized within each zone of the store
 - Alphabetical order
 - Level of use
 - Commodity code: flammable, inflammable, corrosive, radio active, toxic, carcinogenic etc

Explain that it is important to classify stock and that there are many ways of doing this. Ask the participants to give examples in each of the categories.

CAUTION!!! ITEMS CANNOT ALWAYS BE STORED ALPHABETICALLY. IN AN ELISA LAB THIS CAN BE DANGEROUS!

Hydrogen peroxide + ferrous sulphide vigorous, highly exothermic reaction*

Sodium cyanide + sulphuric acid release of HCN gas, death.

Take time to read the signs on containers and understand what they mean. Is it glassware? Are they bulky, Liquids?

Safety is important, but so is convenience in getting the items, preserving the items, and also being on top of your stock.

Stock storage and handling

- Items may be stored in Four basic ways:
 - Shelves
 - Floor pallets
 - Block shaped pallets
 - Pallet racks
- Choice depends on
 - Quantity of products to be stored
 - Nature of the product and its package
 - Volume of each product
 - Internal height of store
 - Local availability of mechanical handling equipment

Pallets: Common in a very large store eg KEMSA. Point out the need to have one product per pallet. Can be moved easily; inspection of goods is easily performed; goods are kept off from floors which may be damp

Shelving: Most common at the district level ideal when the volume and weight of individual items is small, if internal height of store is not large enough

Housekeeping tasks

These include

- Cleaning and pest control
- Regular inspection system
- Disposal of stock (expired or damaged)
- Precautions against fire
- Strict security measures
- Regular stock taking and communicating the findings to higher levels.

Remind the participants that proper storage requirements are essential in maintaining the quality of all laboratory supplies. Routine procedures like cleaning should not be overlooked.

Group Discussion 10 min

How do you dispose off expired, damaged, or deteriorated laboratory commodities?
(Refer to the guidelines by MOH)

This slide introduces a discussion about the issues surrounding disposal of laboratory reagents and supplies.

Team discussion

Ask the participants how they currently undertake disposal at their respective facilities

- Is there a national policy on the disposal of expired, damaged or deteriorated laboratory reagents and supplies? If not, what does your facility do in practice?
- What are your options?
 - Return to supplier
 - Incinerate
 - Bury
 - Other

Summary

- Know your Laboratory store space
- Know your reagents/supplies/chemicals - keep a list
- Effect the Zoning system
- Label the various zones/storage areas appropriately

Remind the participants that it is important for each one them to know their laboratory stores space, the reagents available in order for them to effect good storage practices.

Briefly recall and summarize the lessons learnt from this session using the headings from the slide.

Note that although some problem areas are specific to one or two facilities, many problems are common to all facilities

Congratulate the group for their contribution toward providing ideas for resolution of the problems identified.

Problem identification...



What problems do you face at your facility with regard to laboratory commodity storage practices?

Small group discussion

- Working in facility specific groups and using the worksheet provided, identify problem areas or areas for potential improvement at the individual facility level
- These will be revisited in the last module of the course.

Receiving and Issuing

Module 3 Session 5

Objectives

By the end of this session, participants should be able to:

- Define the terms – receiving, issuing
- Describe the procedures for receiving and issuing laboratory commodities within a health facility
- Describe and be able to complete the appropriate forms and records used to receive and issue commodities for a health facility
- Enumerate good receiving and issuing practices

Definitions

- **Receiving:** Process of accepting requested commodities from a supplier or point of issue and making inventory entries
- **Issuing:** Process of supplying commodities from a main or bulk store to another store or to a point of use on demand

Both Receiving and Issuing require making necessary inventory entries

- Introduce the session by pointing out that securing a dependable, regular supply of laboratory commodities and supplies at the facilities is critical to the success of **laboratory diagnosis** and the provision of many services (**HIV prevention, care and treatment, Malaria, TB**).
- Emphasize that any interruption in the supply chain will prevent diagnosis of new patients or endanger the lives of patients already on therapy because of the risk of discontinuation of treatment or development of drug resistance. Frequent interruptions will compromise the success of **service delivery programs**
- Good stock management results in **adequate** stock levels, smooth consumption patterns, and supplies that always arrive on time; however, this goal is rarely achieved in practice.
- Inform the participants that it is therefore very important that good ordering and receiving practices are **put in place** and maintained to ensure the success of **service delivery programs**.

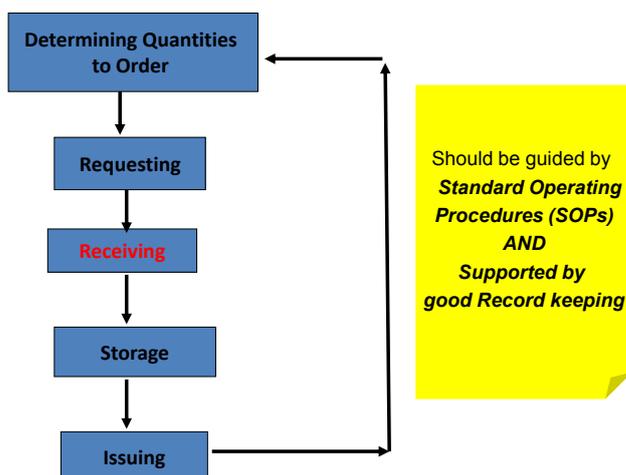
Remind the participants that continuous supply of quality laboratory commodities can be guaranteed only through the selection, design, and proper implementation of an appropriate inventory control system.

Use this slide to ensure a common understanding of the terms defined.

Inventory Management: Receiving

This slide introduces the receiving part of the inventory management cycle

Inventory Management cycle



- This slide illustrates the Inventory Management Cycle.
- Point out to the participants that this session will focus on receiving

Receiving Commodities

- A health facility may **receive** commodities from:
 - The central stores (e.g. NPHLS, KEMSA)
 - Direct from suppliers
 - From other health facilities
 - Donors, i.e. as donations

Laboratory commodities can usually be received/ distributed in one of two ways: a **pickup system**, where the lower level collects the products at the supplying facility, or a **delivery system**, where the upper-level supplying facility brings the products to the lower-level receiving facility.

Ask the participants to identify what type of distribution system they are on.

Checklist for Receiving commodities

- | |
|---|
| 1. Is the Delivery Note / Invoice for your facility? |
| 2. Are the goods delivered the same as the ones that were ordered? |
| 3. Are the quantities delivered the same as those in the Delivery note or Invoice? |
| 4. Is the condition of the boxes at the time of delivery acceptable? |
| 5. Are the goods delivered in good condition? (check liquids for leakages; check also for broken containers, unsealed, unusual odors) |
| 6. Is the Expiry date of the commodities acceptable to your facility? |
| 7. Document any discrepancies and follow up with supplier. |

The above checklist is also available in a more comprehensive receiving procedures checklist, provided in the materials for this course.

Trainer please point out that short expiry commodities should not be received at the facility unless one is certain that they will be consumed before they expire.

Receipt and inspection

Conduct a visual inspection of the commodities assessing the following:

- Quantity
- Quality (packaging, cleanliness, integrity of container)
- Expiry date (if available)
- Breakages
- Packing instructions (to ensure appropriate transportation conditions were maintained)
- Source

Visual inspection is the process of examining products and their packing by eye to look for obvious problems with the product quality.

Tools used for Receiving Lab commodities

Delivery documents include:

- **MoH and other supplier forms**
 - *Supplier / KEMSA Delivery note; Invoice; Packing Lists; Transporters delivery note*
 - *S12 (Issue & Receipt voucher)*
 - *Lab stock card / S5 (Bin card)*
- **Others**
 - *Counter Receipt Voucher (S13)*
 - *Shipment Discrepancy form*
 - *Checklist for Receiving health commodities*

The trainer should have samples of the different tools used in Receiving commodities. He/she should demonstrate how they are used.

The trainer should inform participants that

- Lab stock cards / Bin cards are the standard for every facility, however larger commodity stores may also use Stock (ledger) cards
- Sometimes where commodities are issued in small quantities to dispensing points or in absence of bin cards, some facilities may use the Daily Activity Register (DAR) to record receipts. This is not however recommended.

The trainer should bring to the attention of the participants that copies of these forms are available in the course materials and will be provided for exercises

Good Receiving Practices (1)

- Only authorized persons should receive laboratory commodities
- Verify that the supply is for your facility/district
- Inspect goods for quality and quantity before receiving
- Check contents against your original order and supplier's invoice/delivery note.
- Sign accompanying delivery documents if satisfied

NB: authorized officers are - the laboratory officer, Health Facility in-charge, Procurement officer or any other designated officer

The next two slides are a summary of the actions that need to be taken when receiving or issuing practices. Take the participants through each of the points and ensure that all have understood the receiving/issuing process.

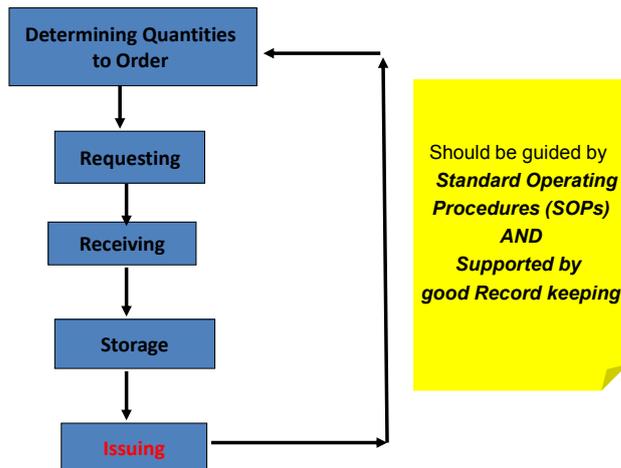
Good Receiving Practices (2)

- Enter received items in the laboratory stock card
- Store cold-chain dependent commodities immediately in the appropriate fridge or freezer according to manufacturer 's specifications
- Ensure your facility has clear, written SOPs for ordering/receiving laboratory commodities
- Always use a separate Laboratory stock control card for each inventory item

Inventory Management : Issuing

Use this slide to introduce the element of issuing

Inventory Management cycle



- This slide illustrates the Inventory Management Cycle.
- Briefly describe what is involved in each component of the cycle.
- Point out that each component will be tackled at a later session.
- It comprises the activities related to
 - Requesting (determining quantities to Order and ordering / re-ordering supplies)
 - Receiving.
 - Storing (e.g. in Bulk storage in the main store)
 - Issue / Distribute to SDPs and benches
- All these activities are tracked with appropriate documentation, thus good record-keeping is critical. Record keeping is essential for tracking / monitoring of use of the Commodities

How are commodities issued?

- From Central stores (e.g. NPHLS, KEMSA) to the health facilities
- **Inter**-facility (e.g. from one health facility to another)
- **Intra**-facility (e.g. from laboratory bulk store to the lab benches)

Use the following three slides to discuss the three main modes of issuing

Inter-facility issuing

- Between sites in the same organization, e.g. from a MoH district hospital to a MoH health centre or vice versa
- Between sites in different organizations, e.g. from a government health facility to a faith-based facility (FBO)

Intra-facility issuing

Examples:-

- From the bulk store to laboratory
- From lab main store to lab benches
- Any other examples?

How are commodities issued?

- From Central stores (e.g. NPHLS, KEMSA) to the health facilities
- **Inter**-facility (e.g. from one health facility to another)
- **Intra**-facility (e.g. from laboratory bulk store to the lab benches)

Use the following three slides to discuss the three main modes of issuing

Guidelines for issuing commodities

- Ensure that the sites you are issuing to are authorized by the GOK
- Ensure proper records are used and maintained, e.g. S11 or other facility based order/issue forms
- Develop SOPs for issuing commodities
- During the issuing process, ensure the following:
 - Correctly fill the referenced information
 - Correctly determine the issue quantity
 - Fill in the issue form correctly and completely

Discuss guidelines for issuing commodities using this slide as a guide

Tools used for Issuing of commodities

Forms used for issuing:

- S11 (Counter Requisition and Issue voucher) – for **Intra**-facility issuing
- S12 (Issue and Receipt voucher) – for **Inter**-facility issuing

Records used for reference when issuing:

- S5 (Bin card) or Lab stock card

The trainer should have samples of the different tools used in Issuing commodities. He/she should demonstrate how they are used.

Procedure for Issuing

- 1) At the facility, fill in the following in the S11 or S12 clearly:-
 - Indicate point to which the issue is being made and the point of use
 - Include description of commodities, unit of issue and quantities to be issued
 - Depending on available quantities, determine the quantities to be issued compared to the quantities requested
 - Sign, date and stamp the form
- 2) Forward the appropriate copies to the relevant officers once the transaction is complete.

Before presenting this slide, ask the participants to brain-storm on the procedures for Issuing RH commodities.

Take home messages (1)

- Ordering should be done on the right form which should be completely filled with all required information
- Ensure accurate quantification and timely submission of orders
- Prompt and accurate inspection of all shipments is essential to ensure that suppliers fulfill their contract terms

The points listed in the next two slides are the key messages on receiving and issuing of commodities in inventory management.

Take home messages (2)

- There should be a clear procedure for receiving laboratory commodities
- Confirmation of delivery is a vital part of this procedure
- Correct and timely documentation of the receipt of lab commodities is important
- Share documents with higher level

Group Discussion (30 min)

Identify and list current challenges and their possible solutions in your facility/district in the following areas:

- Receiving
- Issuing

Small group discussion

Ask the participants to break into their small groups and identify the problem areas in receiving and issuing in their facilities.

Using the flip charts available, the participants should write down the problems identified for presentation at plenary.

Remind them that these problems identified will be used for further action planning at the end of the course.

Allow

- 15 minutes for discussions
- 10 minutes for two groups to present in plenary
- 5 more minutes to clarify any “peculiar” issues that would not have been mentioned by the two groups.

Records and Tools supporting Good Inventory Management practices

Module 3 Session 6

This session will focus on the tools used in support of good inventory management practices already discussed in the previous session. The participants will have a hands on experience in using the different tools.

Reference materials.

Sample forms and instructions for completing each of the following tools.

- Monthly/quarterly stock take card (inventory control card)
- Laboratory stock card
- Facility CDRR form
- Lab Top up form
- 2°-8 °C Temperature monitoring chart
- -80 ° C Temperature monitoring chart
- Daily Activity Register

Objectives

By the end of this session, participants will be able to

- Identify records and tools used in support of good inventory management practices
- Demonstrate use of the tools to support good inventory management practices in their facilities
- Identify the problems/challenges encountered in using the tools

Briefly explain how these objectives will be achieved

Tools for Inventory Management

1. Lab Stock card (Bin card)
2. Stock ledger card
3. S11
4. DAR (MoH 642)
5. F-CDRR (MoH 643)
6. Expiry tracking chart
7. Top-up form
8. Temperature monitoring charts

Discussion point : Ask how many facilities represented at the workshop already have each of these records? Ask participants to briefly describe the use of each of the stock records.

Explain that 5 of the records listed on the slide (Lab stock card, S11, Expiry tracking chart, Temperature monitoring chart, Lab Top-up form) will be discussed in detail in this presentation as well as the exercise to follow and that the participants will have the opportunity of using them.

Stock records in inventory management

- Lab stock cards / Bin cards – These cards are kept with the physical stock. This makes a visual check easy and serves as a reminder to maintain records.

These are:

- The core records in the inventory management system
- Primary source of information used when calculating orders
- Source of data used to compile reports

Note: They may be manual or computerized records

Remind the participants that without accurate up to date stock records, it is difficult to calculate order quantities and monitor consumption or use of commodities.

Other Commonly used Inventory records (1)

- Lab Top-up forms – These cards are physically kept on the bench. This makes it easy to monitor Bench stock levels closely.
- Expiry tracking chart – Is kept in a strategic position in the commodity store. This assists in tracking expiry dates of identified commodities.
- Temperature monitoring chart – Is attached to the door of the store. Used in monitoring the temperatures of the storage areas.

Other Commonly used Inventory records (2)

Tracking and reporting commodity usage:

- DAR – This is kept on the bench to keep track of the daily usage of commodities
- F-CDRR - Kept in the office to be filled at the end of the month or any time one has to make an order

Instructions for Laboratory commodity management forms, cards and charts

- Provide description of Lab tools
- Accompanied by instructions for completing the tool, which highlight:
 - »Description of the tool
 - »Resources needed to fill it
 - »Location / where kept
 - »Who fills it
 - »Steps taken when filling it

Laboratory stock card

- Description: Serially numbered two-sided card
- Keeps track of stock movements within the facility
 - A *Stock card* is the basic record needed to establish accurate quantities of individual items to re-order
 - The Lab commodity usage reports summarize information from the stock cards on a regular (usually monthly) basis.
- All stock cards and Lab commodity usage forms must be maintained in a **clean, legible, and up-to-date** manner.

Example : Discuss the basic components of the stock card.

Full name (all items) and chemical formula (where appropriate) Enter the full name and chemical formula (as appropriate) of the commodity (e.g., Unigold HIV rapid test kit, potassium iodide [KI])

Unit. Provide the distribution unit of measure. Determine in what unit the item will be distributed (i.e., by packs of 100 tests or base units such as by grams or liters).

Item code. Record the unique identification code used by a health system. This code is normally assigned to each facility by the Health Management Information System.

Expiry date. Find the expiry date, which is printed on the container. This date is determined by the manufacturing company. When the item passes this date, the manufacturer does not guarantee the potency, purity, or safety of the product.

Minimum stock level. Determine and record the minimum stock level. When stocks are depleted to the minimum stock level, you must reorder the item.

Maximum stock level. The maximum stock level is the total quantity necessary to meet the needs of the health facility for a specific period.

Demonstration on filling the Lab Stock cards

- Examine the Laboratory Stock card
- Look at the Instruction sheet for completing the Lab Stock card
- Identify various sections/rows/columns of the tool

Project the image of the tool using an LCD.

- Ask participants to go to the section on instructions for the tool
- Take the participants through all the sections/ columns of the card one by one
- Refer them to the instructions at each point.

Practice Exercise on Lab Stock card (20 min)

Take your blank form and complete it using the information provided below:

- District : Nakuru
- Facility : Nakuru PGH
- Serial No.: 0082
- Commodity: Determine
- Unit of issue: tests
- Item code: 0012
- Storage requirement: room temperature
- Average Monthly Consumption: 100
- Minimum Level: 150
- Maximum level: 300

Receipts

- Date: 12/07/08
- Received from: KEMSA
- Doc no :004
- Quantity received: 200
- Batch no: 0060
- Expiry Date: 12/09/09
- Name: Jackson Onyango

Trainer's notes

- Project the practice exercise
- Ask participants to read the case scenario above and use it to complete their blank form/register in pencil

Let Us Check

MINISTRY OF HEALTH

Serial No....0082.....

Laboratory Stock Card

District: Nakuru Name of Facility: Nakuru PGH

Commodity name and Description		Unit of issue		Item Code		Storage requirements								
Determine		Tests		0012		Room Temperature								
Average Monthly Consumption				Minimum Level		Maximum Level								
100				150		300								
RECEIPTS								DISBURSEMENT/ISSUES				STOCK		
Date	Received from	Doc. No.	Quant.	Batch No.	Expiry	Loc.	Name	Doc. No.	Quant.	Dest.	Name	Balance	Unit Value	Total Value
12/07/08	KEMSA	004	200	0060	12/09/09	Lab store	Jackson	0060	100	Njoro HC	Jackson	100	100	10,000
17/07/08														

Doc. No. = Document Number, Quant. = Quantity, Loc. = Location, Dest. = Destination

Balance C/F..... to Card No.....

Demonstration on filling the Lab Stock cards

- Examine the Laboratory Stock card
- Look at the Instruction sheet for completing the Lab Stock card
- Identify various sections/rows/columns of the tool

Project the image of the tool using an LCD.

- Ask participants to go to the section on instructions for the tool
- Take the participants through all the sections/ columns of the card one by one
- Refer them to the instructions at each point.

S11

(Counter Requisition and Issue voucher)

- This assists in tracking movement of commodities
- Used for Intra-facility issuing
- Contents:
 - Point to which the issue is being made (issue point) and the point of use
 - Description of commodities, unit of issue, quantities requested, quantities issued
 - Actioning staff

Explain to how the S11 form is supposed to be filled. You can refer the participants to the specific page on the laboratory SOPs that details the steps of filling out the S11 form.

FORM S11		Serial No.				
COUNTER REQUISITION AND ISSUE VOUCHER						
Ministry		Dept/Branch.....			Unit.....	
To (Issue point).....						
Please issue the stores listed below to (Point of use).....						
Code No.	Item Description	Unit of Issue	Quantity Required	Quantity Issued	Value	Remarks/Purpose
Account No:		Designation:		Date:		
Requisitioning Officer:		Signature:		Sign:		
Issued by:		Designation:		Date:		
Received by:		Designation:		Sign:		

Practice Exercise (10 min) for Lab Top-Up form

Take your blank Top-Up form and complete it using the information provided below:-

- Serial no.: 0040
- Facility : Rift Valley PGH
- Department/section: VCT
- Date : 12/10/2011
- Commodity: Determine
- Units of issue: Tests
- Current balance: 200
- Tests done : 400 tests
- Order quantity: 600
- Issue quantity: 300
- Name (Issued): Kamau
- Name (Received): Omondi
- Remarks: No Losses

Trainer's notes

- Project the practice exercise
- Ask participants to read the case scenario and use it to complete their blank form/register in pencil

Lets Check

MINISTRY OF HEALTH

Serial No.....

NATIONAL PUBLIC HEALTH LABORATORY SERVICES

LABORATORY TOP-UP FORM

Name of Facility:Rift Valley PGH..... Department/Section:VCT.....

Date	Commodity	Unit of Issue	Current balance	Tests done	Order Quantity	Issue Quantity	Issued by		Received by		Remarks
							Name	Sign	Name	Sign	
12/10/2011	Determine	Tests	200	400	600	300	Kamau	KA	Omondi	OM	No Losses

+2°C to +8°C

Temperature Monitoring chart

- Used for regular charting of the temperature of the refrigerator storing reagents/ media/samples/blood units for the purpose of monitoring the maintenance of the cold chain.
- Location: should be physically located or pinned on the door of each 4°C fridge in the laboratory or section.
- Filled TWICE a day at 9.00 am and 4.00 pm

Project this slide onto the screen

REPUBLIC OF KENYA
MINISTRY OF HEALTH
+2° TO +8° C TEMPERATURE MONITORING CHART

District _____ Name of Health Facility _____ Month _____ Year _____

NAME AND TYPE OF REFRIGERATOR _____ OPERATING ON GAS ELEC SOLAR KEROSENE

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
14																																
12																																
10																																
8																																
6																																
4																																
2																																
0																																
-2																																
-4																																

DO NOT WRITE TEMPERATURE MONITORING AND AFTERNOON IN DEGREES CENTIGRADE

Initials _____ Sign _____

Faults and Problems

Date	Fault	Action Taken	Date

Project the tool on LCD

- Ask participants to go to the section on instructions for the tool.
- Take the participants through all the sections/ column of the chart one by one.
- Refer them to the instructions at each point

Demonstration On how to Fill the Temperature monitoring chart

- Look at the projected +2°C to +8°C Temperature monitoring chart
- Look at the Instruction sheet for completing the Temperature monitoring chart
- Identify various sections/rows/columns of the tool

Project the tool on to the screen

- Ask participants to go to the section on instructions for the tool.
- Take the participants through all the sections/ column of the chart one by one.
- Refer them to the instructions at each point

Practice Exercise (10 min)

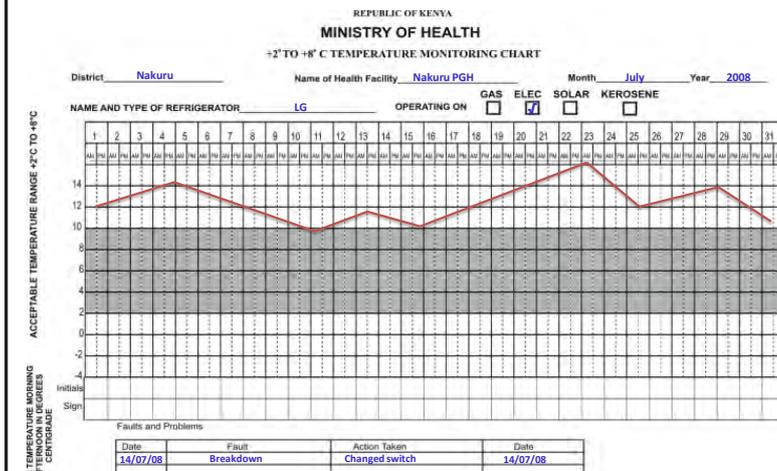
Take your blank form and complete it using the Information provided below:

<ul style="list-style-type: none"> ▪ District: Nakuru ▪ Facility: Nakuru PGH ▪ Month: July ▪ Year: 2008 ▪ Refrigerator: LG ▪ Operation: Electric 	<p>Faults and Problems:</p> <ul style="list-style-type: none"> • Date fault noted: 14/07/08 • Fault: Breakdown • Action taken: Changed switch • Date action taken: 14/07/08
--	---

Trainer's notes

- Project the practice exercise
- Ask participants to read the case scenario above and use it to complete their blank form/register in pencil

Lets Check



Summary: Key points about Inventory records

- All records must be kept current / up-to-date, legible, clean, complete and accurate
- It is impossible to manage the ordering/re-ordering process if stock movements cannot be tracked

In summary **emphasize** the importance of accurate, complete and up to date stock records.

Practice Exercise (10 min)

Take your blank form and complete it using the Information provided below:

- | | |
|------------------------|-------------------------------|
| ▪ District: Nakuru | Faults and Problems: |
| ▪ Facility: Nakuru PGH | • Date fault noted: 14/07/08 |
| ▪ Month: July | • Fault: Breakdown |
| ▪ Year: 2008 | • Action taken: Changed |
| ▪ Refrigerator: LG | switch |
| ▪ Operation: Electric | • Date action taken: 14/07/08 |

Trainer's notes

- Project the practice exercise
- Ask participants to read the case scenario above and use it to complete their blank form/register in pencil

MODULE 4: LABORATORY COMMODITY AND INFORMATION FLOW

2 hours

Goal: To outline the national system for flow of laboratory commodities and related information

Objective

At the end of this module, participants should be able to:

- Define a Logistics Management Information System, its purpose and importance
- Describe the laboratory commodity logistics and information flow pipelines and accompanying records/documentation

Trainers Notes

The trainer should try to ensure that ample time is allocated for hands on practice in completing the tools. If possible, photocopies of the actual tools should be provided to the participants. Where photocopies are not available the blank copies of the tools in the participant manuals should be utilized

Teaching Aids

- FCDRR
- Daily Activity Register
- Laboratory Commodity Management SOPs

Content

Session 1: Introduction to Logistics Management Information System (LMIS)

Definition of terms; basic concepts of LMIS; purpose of LMIS; importance of LMIS in the laboratory Commodity management cycle

Session 2: Laboratory Commodity and Information Flow

Commodity flow and Commodity Information flow; Current laboratory commodity and information flow pipelines; Rationale of tracking and reporting lab commodities; necessary data collection and reporting tools (DAR, CDRR)

Lesson Plan Guide:

UNIT	CONTENT	ACTIVITY	TIME
1	Introduction to Logistics Management Information System (LMIS)	<ul style="list-style-type: none">• Lecture• Group activity	1 hour
2	Laboratory Commodity and Information Flow - Tracking use and reporting on laboratory commodities	<ul style="list-style-type: none">• Lecture• Group activity and report back	1 hour

References and Recommended Readings

Management Sciences for Health. MDS-3: *Managing Access to Medicines and Health technologies*. Arlington, VA: Management Sciences for Health.

Management Sciences for Health and World Health Organization. *Managing Drug Supply*. 1997. 2nd edition. West Hartford, Connecticut. Kumarian Press, Inc.

USAID / DELIVER Project, Task Order 1. 2008. *Building Blocks for Logistics System Design for HIV test and ARV Drugs: Inventory Control Systems, Logistics Management information Systems, and storage and Distribution*. Arlington, VA.: USAID/DELIVER Project, task order 1.

USAID/DELIVER Project, TASK ORDER 1. 2009. *Laboratory Logistics handbook: a guide to Designing and Managing Laboratory Logistics Systems*. Arlington, Va.: USAID/DELIVER Project, Task Order 1.

USAID/DELIVER Project, Task order 1. 2008. *Guidelines for Managing the Laboratory Supply Chain: version 2*. Arlington, Va.: USAID/DELIVER Project, Task order 1.

USAID/DELIVER Project, Task order 1. 2009. *The Logistics Handbook: A practical guide for Supply Chain Managers in Family Planning and Health Programs*. Arlington, Va.: USAID/DELIVER Project

Introduction to Logistics Management Information System (LMIS) and Laboratory Commodity and Information flow

Module 4

Introduction to Logistics Management Information System (LMIS)

Module 4 Session 1

Briefly outline the objectives for the entire Module 4

Session Objectives

By the end of this session, participants should be able to

- Define Logistics Management Information System (LMIS)
- Describe the purpose of LMIS
- Highlight the importance of LMIS in the laboratory Commodity management cycle

Facilitators Notes

- Use this slide to introduce this session.
- Mention that for commodities to be tracked it is important to have a functional Logistics Management Information System.
- Explain to the participants that this session will describe the LMIS and its role in tracking and reporting of Laboratory commodities

Definition of LMIS

- A Manual or computerized system that comprises:
 - Recording logistics data
 - Processing the data into information
 - Information interpretation and presentation for decision-making

Briefly outline the objectives emphasizing that this session introduces the Logistics Management

Information System and its importance in Laboratory commodity supply chain management.

LMIS Design

Consider:-

What **decisions** need to be made?



What **data items** are needed to make those decisions?



What **forms or tools** are required to collect this data?

Describe the Logistics Management Unit at KEMSA and ask the participants to give examples of commodities managed using data collected through the LMU.

Expect the following answers:

The KEMSA LMU- for ART, Malaria, TB, Reproductive Health, Laboratory commodities and supplies for HIV

- Explain that a LMIS helps to collect and manage the information necessary to support sound and objective decision making in managing the supply chain
- Emphasize that the goal of this decision making is to ensure an uninterrupted supply of commodities in the supply pipeline.
- Point out that the LMIS is composed of all the forms and documentation used to maintain records and produce reports.

LMIS Design Considerations

- Data sources and reporting tools
- Reporting frequency
- Reporting deadline
- Reporting officer
- Receiving office/officer
- Number of levels in the Logistics system
- Mode of transmitting the reports
- Feedback content and flow

Emphasize the need to first determine the type of decisions that will be made as they will determine the type of data elements the system will need to collect and process/analyze

Once the data elements are determined then the various forms to be used to facilitate the collection and reporting the data elements are then designed and implemented.

LMIS data recording and reporting varies according to:

- the design of the logistics system,
- number of reporting sites where data are aggregated,
- data processing capacity at each level,
- ease of communication among levels, and
- processes for inventory control decisions at each level.

Importance of LMIS

- LMIS helps answer the following questions:
 - Which commodities are required?
 - What kind and in what quantities?
 - Where in the pipeline (level) are they required?
 - When are they required?
 - How will they get there?

There are three types of data collecting tools used to collect the required logistics data in a logistic system:

- Stock keeping cards (e.g. Store ledger cards, Bin cards and S13)
- Transaction records (e.g. requisition and Issue vouchers (S11 and S12))
- Consumption records (e.g., Daily Activity Register DAR)

LMIS Summary reports (CDRRs) which should:

- contain all the essential logistics data elements;
- be completed by the person responsible for collecting the essential data elements;
- be completed at the end of the reporting period (usually monthly or quarterly).

The LMIS indicates

- The rate of consumption
- Whether more stock is required and when to place orders for re-supply
- Location of the commodities in the pipeline
- Where there are losses in the pipeline needing action
- Where there are expired and short-expiry commodities needing action
- Where there is need for stock adjustments

Facilitators Notes

A Logistics system ensures the movement of commodities from one place to another, to reach their destination in the required quantity, in the least possible time and at the least possible cost.

Re-cap on the 6 rights

An effective Logistics System ensures;

- **the right goods**
- **in the right quantities**
- **in the right condition**
- **are delivered to the right place**
- **at the right time**
- **for the right cost**

Essential Data elements

- **Stock on Hand (End of Month Physical count):**
Quantities of stock available at the end of the review period
- **Consumption (Quantity used)**
Quantity consumed in testing/analysis
- **Losses & Adjustments**
 - a) **Losses** – Quantity of stock removed from the pipeline for any reason other than consumption, e.g. expiries
 - b) **Adjustments** – Quantity received or given to other facilities or difference between the physical count and what is recorded in the stock control cards:- positive (+) or negative (-)

- A Logistics system ensures the effective accountability of commodities.
- Point out that an LMIS and the inventory control system have a close relationship: the LMIS provides the data required to maintain the inventory control system.
- Explain that the data collected through the LMIS enables a laboratory manager to determine how many months of stock of an item are currently kept at the facility; knowing this, the laboratory manager will know if the supply is above, below, or within the established maximum and minimum stock levels, or whether an emergency order must be placed.
- Mention that at the central level, laboratory commodity managers can use the LMIS to track trends in overall consumption and adjust national-level procurements as needed.

Essential Data elements

- **Stock on Hand (End of Month Physical count):**
Quantities of stock available at the end of the review period
- **Consumption (Quantity used)**
Quantity consumed in testing/analysis
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 - b) **Adjustments** – Quantity received or given to other facilities or difference between the physical count and what is recorded in the stock control cards:- positive (+) or negative (-)

LMIS: Other Data Elements collected

- **Beginning Balance:** Quantity of stock on hand at the beginning of the review period
- **Quantity Received:** Quantity received during the review period
- **Quantity expiring in less than 6 months:** Quantity of stock with short expiry
- **Days out of stock:** Number of days that the whole facility was stocked out of the item
- **Quantity Requested for Re-supply:** Quantity calculated and ordered needed for re-supply

Role of LMIS in Commodity Management Cycle



The facilitator should stress:

- The LMIS is part of the Management Support section, together with HR, Organization and Financing.
- Emphasize the data collected and processed by the LMIS is used to inform all the elements of the cycle involved before decisions are made.

Brainstorm 5 min

- What will make a LMIS not function properly?

Small group discussion

Have the participants break into their teams and discuss and write down what would make their LMIS not function properly

What will make a LMIS not function properly?

- No reports!
- Late reports
- Inaccurate reports
 - data collection errors; incorrect filling of the report; incorrect calculations
- Incomplete data reporting
 - not all data elements are reported, e.g. missing facility details
- Lack of required reporting tools in the pipeline
- Use of Old reporting formats / tools

Facilitators Notes

After the participants share their experiences in LMIS. Project this slide and discuss each point briefly with relevant examples.

Remember to show the participants the sample records and reports obtained from different facilities.

Group Exercise (10 min)

- In your respective groups, please discuss and write down the problem areas experienced with LMIS in your facilities related to:
 - Tracking commodity use
 - Reporting commodity consumption

Facilitators Notes

- This exercise covers the Logistics Management System operations.
- For each team, suggest that they assess the existing LMIS in their facility/workplaces and identify the problem areas and how they can solve these problems
- Active OJT, mentorship and skill transfer are important in improving commodity management and reporting practices

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Challenges in Laboratory Commodities LMIS (1)

- Difficult to track and measure laboratory commodities
 - Many laboratory commodities are liquids or powders that are difficult to count
 - Same commodity may be used for a variety of different tests and by a number of different people in a single laboratory, thereby making actual consumption of the commodity difficult to quantify
 - Distinguishing the use of commodities for QC from the use of commodities for testing is difficult and time-consuming.

Explain that unlike commodities such as tablets or capsules that can be easily counted, many laboratory commodities are liquids or powders that are difficult to count. Only a few drops or a weighed measure of a laboratory commodity may be used at a time. The same commodity may be used for a variety of different tests and by a number of different people in a single laboratory, thereby making actual consumption of the commodity—either as its actual use or as a function of the number of tests performed—difficult to track and measure.

Challenges in Laboratory Commodities LMIS (2)

- Because of the short shelf life of reconstituted reagents, they may be discarded before being completely consumed
- A certain amount of wastage should be expected in laboratory services. This wastage differs from loss caused by damage, expiry, or theft.
- Loss should be tracked in an LMIS, while it is difficult to separate wastage from consumption.

Whole group discussion

Using the challenges given, ask the participants to identify the most commonly encountered challenge in their LMIS.

Challenges in Laboratory Commodities LMIS (1)

- Difficult to track and measure laboratory commodities
 - Many laboratory commodities are liquids or powders that are difficult to count
 - Same commodity may be used for a variety of different tests and by a number of different people in a single laboratory, thereby making actual consumption of the commodity difficult to quantify
 - Distinguishing the use of commodities for QC from the use of commodities for testing is difficult and time-consuming.

Explain to the participants that there are different ways of tracking consumption as described below.

- Consider two ways of capturing consumption: issues from stock as proxy consumption or tracking actual use through daily registers.

There are two major ways of capturing consumption for laboratory commodities.

- The first is to use issues from stock at the lowest level—within the laboratory itself, this means issues from the store to the bench—as a proxy for consumption.
- The second is to track the actual consumption of a test, that is, the amount of product used in the process of conducting a test. Issues from the storeroom to the bench as a proxy for consumption are the appropriate choice for the vast majority of products.
- Review each product, including how it is issued and used, to determine the appropriate unit for stock keeping and reporting.

To facilitate stock keeping, issuing, and reporting of these commodities, review each product, how it is issued to the bench, how it is used at the bench, and the number of pack sizes to determine which unit is most appropriate to use in recording and reporting commodity information.

For example, though sputum containers may be delivered to the facility in packs of a 1,000, only 100 at a time are issued to the bench; therefore, “piece” is the most appropriate unit for tracking and reporting. On the other hand, a syphilis test kit, which has 100 tests in a single kit but cannot be separated into individual tests, is issued and recorded as a kit of 100 tests.

- Use and maintain stock-keeping records; consider the advantages and disadvantages of having one or multiple stock cards for the same commodity. Stock cards should be maintained for each commodity used by the laboratory, updated each time an issue is made, and balances verified by physical inventory at the end of each reporting period.

They should have adequate identifying information: name and description of the commodity, and a commodity code, if applicable. The description should indicate the type and packaging unit selected. For example, for the stain crystal violet, the stock card should indicate “Crystal Violet Stain, powder, 25 gm bottle.

Recommendations for LMIS (2)

- Routinely report stock levels, issues, losses, adjustments and stock outs.
- Link reporting with re-supply
- Computerize the LMIS where possible.

- **Routinely report stock levels, issues, losses, adjustments and stock outs; link reporting with re-supply.**

- To facilitate inventory management and procurement decisions and to provide valuable consumption data for forecasting, logistics data on laboratory commodities should be routinely reported to the central level. At a minimum, the data reported should include the following:

- consumption
- losses and adjustments
- stock on hand.

- Duration of stock outs should also be reported. These data can be used to inform resupply decisions for the laboratory, as well as to monitor the performance of the logistics system.

Computerize the LMIS where possible:

In light of the large number of commodities that need to be managed, supplied, and reported in support of laboratory services, the central-level LMIS should be computerized where possible. Intermediate levels should also be computerized where possible. Manual aggregation of logistics data for laboratory supplies can be cumbersome and time-consuming. A computerized LMIS can rapidly aggregate logistics data, accurately perform calculations, and produce reports and graphs for analysis in a timely manner.

LMIS as a Monitoring, Evaluation & Supervision Tool

Indicators Monitored:

- Accuracy and completeness of reporting – **Data Quality**
- Stock-out rates at any point during a given period
- Stock levels between Maximum and Minimum
- Rate of loss of commodity by reason (Expiry, damage, pilferage, etc)
- Frequency of reporting and list of non-reporting facilities
- Rate of consumption in a given period

Explain to the participants that a functional LMIS can be used as a Monitoring and Evaluation tool for the program.

Conclusion – Benefits of LMIS

- Accountability for all products in the supply chain
- A reduction in supply imbalances (stock outs, overstocks) at the facilities and stores.
- Efficient, cost-effective supply chain management
 - Improved quality of care
 - Improved Impact
 - Informed decisions on supply chain management

Summarize the session by reviewing the benefits of a functional LMIS.

Laboratory Commodity and Information Flow

Module 4 Session 2

Introduce the session on commodity and information flow. Explain that flow is any tracking of referential information by a person or group. Information may be new, just introduced into the conversation; given, already active in the person's consciousness; or old, no longer active.

Session Objectives

By the end of this session participants should be able to:

- Describe Commodity flow and Commodity Information flow
- Describe the current laboratory commodity and information flow pipelines
- Understand rationale of tracking and reporting on laboratory commodities
- Identify the necessary data collection and reporting tools and fill in the same (DAR, CDRR)

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Commodity and Information flow

- A Commodity pipeline is the entire chain of facilities through which commodities move from the manufacturer / supplier to get down to the user / patient / client
- *Commodity flow* describes, in form of a diagram, the flow of commodities along the pipeline
- *Commodity information flow* describes, in form of a diagram, the flow of information concerning the commodities along the pipeline
- Documentation is needed for each transaction in order to track the item from ordering/purchase, delivery/receipt, distribution/issuing, to actual use.

Whole group discussion

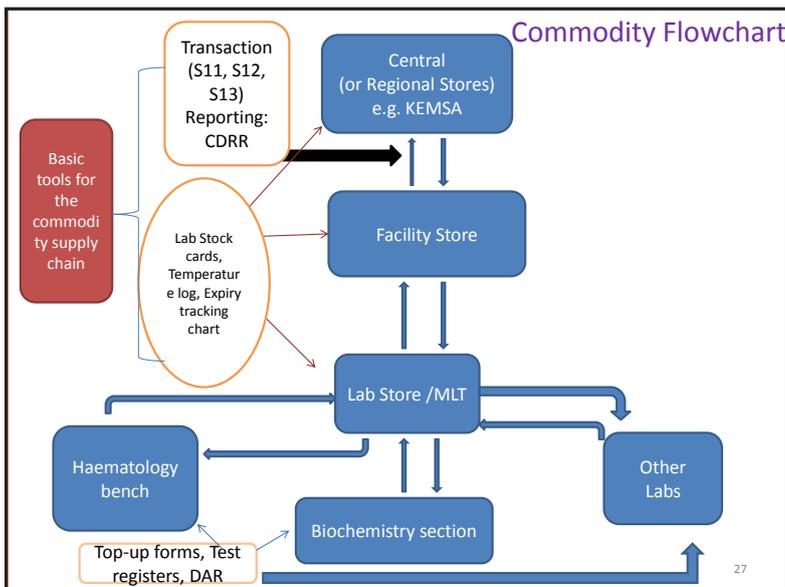
- Ask the participants to list reasons why commodity information flow is important.
- Expect the following responses:-
- Commodity consumption information flows up and down the network
- Reliable management information is vital for coordinating the procurement, warehousing and distribution network

Group Exercise (10 min)

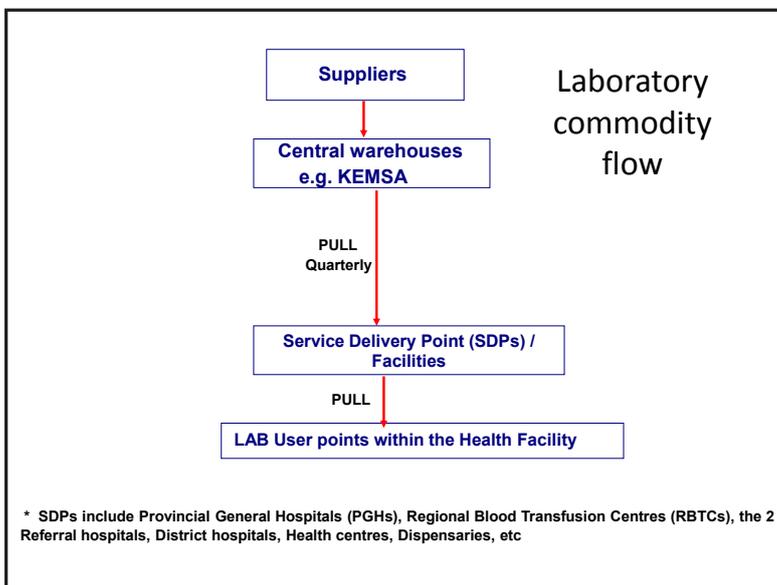
- In your groups, draw a flowchart that depicts the flow of commodities within the health facility from the initial laboratory request to the facility store to when commodities are availed at the user points.
- For each step, indicate the documentation (records, tools) required.

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Engage the participants in group-work and ask each of the groups to undertake the exercise as it happens in their facility or district.



- Point out that the information system consists of forms and procedures to record inventory levels, cost and sale prices, receipt and issue of supplies
- The diagram above illustrates the types of documentation in use at the various stages of the supply chain for HIV/AIDS related commodities.



Key notes – Commodity flow

- Central (and regional) stores e.g. KEMSA supply commodities directly to SDPs
- Copy of items supplied is provided to DMLTs
- SDPs should submit a copy of the delivery note to the DMLT once commodities are delivered.
- Within SDPs / Facilities, stock is issued from the store to the Lab user points
- Inventory management tools, e.g. Lab stock cards, are used to track inventory
- Test registers and LMIS tools, e.g. DAR, used to record tests done and consumption on daily basis

Rationale for direct supply of items from KEMSA to SDPs

- Address logistical / transportation challenges at the District (DMLT) level
- Lack of storage space at district level
- More efficiency when items are supplied directly to SDPs
- Addressing maintenance of cold chain

Key notes – Commodity information flow

- SDPs complete consumption reports (F-CDRR)
- Required reports are prepared on monthly basis to summarize consumption and guide requisition for resupply
- SDPs channel their F-CDRRs through the DMLT for further transmission to the central level
- Data from SDPs aggregated at central level
- Re-supply decisions made and orders sent to KEMSA
- Feedback between DMLTs, PMLTs, central level and the SDPs

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Tracking and reporting use of Laboratory Commodities

- Learn how to complete Laboratory Commodities Daily Activity Register (DAR)
- Learn how to complete usage reporting tool for Laboratory Commodities, i.e. the Facility Consumption Data Report & Request (F-CDRR)

- Use this slide to introduce the session on tracking and reporting use of Laboratory commodities.
- This session describes the documents/tools which can be used for tracking chemicals, media, reagents and laboratory materials used in support of laboratory commodity management practices.
- Point out that tracking supplies from date of receipt is an essential quality control practice.

Introduction (1)

- Data on stock, transactions and consumption should be recorded promptly in the relevant recording tool
- Records must be carefully controlled but accessible to responsible officers through
 - Storing them in locked and secured record storage areas
 - Limited access areas
 - Use of computer/ computer programs with restricted access

- Emphasize that facilities should maintain documents and records that accurately reflect all transactions involved in the receipt and disposition of all commodities up to the point the commodities are issued for distribution or consumption.
- Ask the participants to give the reasons why only authorized personnel should have access to the secured files.

Expected response:

- To ensure that the data is not tampered with (integrity is maintained)
- To protect the stock status of a facility.

Add any other reasons that the participants will raise during the discussion for future reference.

Introduction (2)

- Inventory records at all levels must
 - Be accurately kept
 - Reflect at all times the quantities on hand and the quantities disbursed
 - Meet the needs of external and internal audits
- For quality control purposes, the required information is documented in the LMIS

The main message to deliver from this slide is on the accuracy of the reports kept and their security.

Role of LMIS in tracking commodities (1)

LMIS enables personnel:

- Make routine decisions that affect commodity availability
- Determine how much of each commodity to order or resupply
- Forecast future demand for commodities and plan procurement and shipments
- Identify potential supply problems and handle other issues related to commodity management

- This slide is a reminder of the role of the LMIS in tracking commodities.
- Briefly recap the importance of the LMIS in inventory management.

Role of LMIS in tracking commodities (2)

- Collect the three essential data items needed to make logistics decisions: **stock on hand, consumption, losses and adjustments**
- Those data are recorded on stock-keeping records, transaction records, and consumption records.
- The data are then used at the facility and are reported to higher levels for re-supply and management purposes.

Explain that an LMIS provides the mechanism through which personnel collect and manage such information, which is necessary to support sound and objective decision making in managing the supply chain. The goal of this decision making is to ensure uninterrupted supply of commodities and to identify any problems in the supply pipeline. Data provided through the LMIS also help inform policy and product selection decisions.

Point out to the participants that they can:

- Use issues from stock as proxy consumption data (stock issued from the stores to the bench)
- Use a Register to track the actual consumption of only a small number of tracer commodities, e.g. DAR.
- Use the unit of issue at the facility level as the unit for stock keeping and reporting.
- Routinely report stock levels, issues, losses and adjustments, and stock-outs (number of days out of stock).
- If using a “pull” system, link reporting with resupply.

Information provided to higher levels is processed and reported back to lower-level facilities as feedback reports to encourage and improve the performance of the logistics system

Why Report Lab commodity Consumption?

- To support Planning at the National level, e.g. through Forecasting and quantification
- To ensure continuous supply of Lab commodities and supplies
- For accountability and commodity tracking
- For monitoring and evaluation

Facilitators Notes:

The Facilitator to lay emphasis on the goals, purpose and usefulness of reporting.



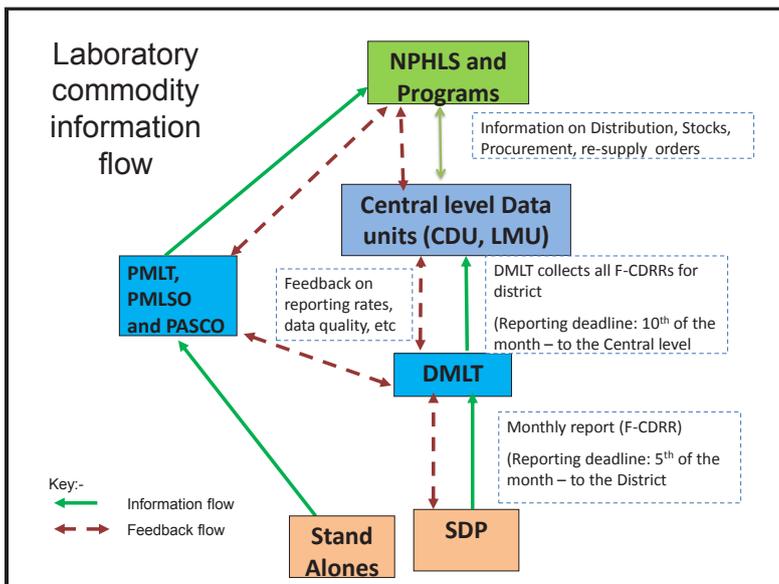
Consumption data is useful in determining quantities to order

Records / Forms / Tools used

- Stock-keeping and Transaction Tools
 - S11, S12 , S13
 - Lab Top-up form
 - Lab Stock card / Bin cards
 - Expiry Tracking chart
 - Temperature Monitoring chart
- LMIS Consumption Data collection tools
 - Daily Activity Register (DAR) for Laboratory commodities (MoH 642)
- LMIS Consumption Reporting tools
 - Facility Consumption Data Report & Request Form (F-CDRR) for Laboratory commodities (MoH 643)
 - Facility Consumption Data report and request (F-CDRR) form for ART Laboratory monitoring reagents

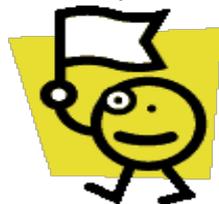
This slide describes the documents/tools which can be used for tracking chemicals, media, reagents and laboratory materials used in support of laboratory commodity management practices.

Find out from the participants if their facilities have the tools listed in this slide and whether they are in use. Mention that they will have a detailed practice session on how to use each of the tools



Exercise: Problem identification (10 min)

- Identify the problems encountered in tracking consumption and reporting the use of laboratory commodities in your facility



- Ask the participants to get into their groups and discuss their facility's commodity tracking and reporting mechanisms
- Ask them to identify and write down the problems encountered in tracking and reporting, and suggest ways of overcoming the problems.
- Problems may include:- absence of reporting tools, lack of knowledge and skills on reporting, lack of facilitation/ management support, inadequate supportive supervision etc

Demonstration of Lab LMIS tools (15 min)

Lab LMIS tools

- DAR (MoH 642)
- F-CDRR (MoH 643)
- F-CDRR for ART Lab monitoring reagents

- Facilitator should have guided the participants according to the Instructions / SOP on how to fill the various tools on the slide
- Get the participants to read the SOPs loudly as you take them through the tools.

Group Exercise (30 min)

Using the sample data on the records and registers availed

- complete the register with the transactions
- complete the summary report tool provided

45

Purpose of this exercise:

To demonstrate and train on how to complete Laboratory-specific commodity utilization reports using data contained in primary records and registers. This information should include consumption, service statistics (e.g. number of tests done, where applicable) at a facility or higher level, depending on the cadre of the participants.

Instructions for the Facilitator:

- First demonstrate the Data collection and Reporting tools, and explain each element by going through the Instructions for completing the tool
- Provide raw data on records and registers and have participants practice how to complete the records using the raw data
- Assist participants and review correct way of completing the reports.

Exercise: Tracking commodity usage (data collection)

Tools in use:

- Daily Activity Register (DAR) for Lab commodities (MoH 642)

Exercise 1

- Practicum on completing the DAR form

NB: Avail exercise and tool

Facilitator should have guided the participants according to the Instructions / SOP on how to fill the DAR.

- Get the participants to read the SOP loudly.
- Get the participants to practically fill the DAR as per the DAR question.

Exercise: Reporting Commodity Consumption

Tools in use:

- F-CDRR (MoH 643)
- F-CDRR for ART Lab monitoring reagents

Exercise 2

- Practicum on how to complete the Facility CDRR form

Avail exercise and the tool

Facilitator should have guided the participants according to the Instructions / SOP on how to fill the CDRR

- Get the participants to read the SOP loudly.
- Get the participants to practically fill the Facility CDRR as per the CDRR question.

Copy 1: Action Plan template

Objectives	Activities	Responsible person	Resources	Time / By when	Indicators

Copy 2: Action Plan template

Objectives	Activities	Responsible person	Resources	Time / By when	Indicators

Exercises on Laboratory commodity logistics reporting tools

Exercise 1: Filling in the Daily Activity Register (DAR)

Materials needed:

For this exercise you will need:

- blank copies of the DAR for Laboratory Reagents and Consumables (MoH 642) – provided below
- a copy of the job aid for the completion of the DAR
- Pen and paper for rough-work or a calculator.

Assignment

Use the following to fill in the DAR:-

You are John Mali, working on the Serology, Microbiology and Haematology bench at Serowe District Hospital (DH). You are working on the day shift for the entire month of March 20XX, and there is no night shift.

You started the month with quantities indicated in the table below. On 1st March, using the Lab Top-up form, you requested and received the following commodities from the Lab store:-

Commodity name	Batch No.	Expiry date	Beginning balance	Quantity received
Rapid Test kit – HIV screening	0060	Dec 20XX	200	500 tests
Carbol Fuschin solution	0020	Sept 20XX	0	500ml
Malaria Rapid diagnostic test (RDT)	A0254	Dec 20XX	0	40 tests
FACS Count CD4CD3 reagent (Adult)	00125	June 20XX	0	50 tests

During the month, you conducted the following transactions:

March 2nd

- 20 tests for HIV

March 5th

- 30 tests for HIV
- 15 TB AFB microscopy smears (Note: each smear uses 3ml of Carbol fuschin solution)

March 18th

- 50 tests for HIV
- 15 malaria tests using the RDT, including 1 repeat test. Of these, 10 were for patients < 5years and 4 of these turned positive, while 4 were for patients aged 5 years and above, and all were negative.
- 15 TB AFB microscopy smears (note: each smear uses 3ml of Carbol fuschin solution)

March 29th

- 30 CD4 tests plus 2 controls
- 100 tests for HIV

During the month, you also made the following adjustments:

- On 30th March, you noticed 100 Rapid HIV tests had been damaged by rain water
- On 29th March, you gave 30 Rapid HIV tests to the MCH clinic for HIV testing under PMTCT
- Assume you had no stock-out days

Instructions

Please complete the DAR pages provided below using the information provided above.

Filing DAR (blank)

MOH 642 Bench / Section:																
Date	Shift	Unit of Issue	Beginning balance at the Bench / section	Quantity Received during the Shift	Origin of the received stock	Batch Number	Expiry Date	Quantity used during the Shift	Name of Commodity:	Number of Tests done during the Shift	Losses during the Shift	Adjustments during the Shift [Positive / Negative]	Ending Balance at the end of the Shift	Remarks (Including explanations for Losses or Adjustments)	Name of officer	Signature
Page Totals																
Date:													Balance carried forward: <i>(use the Ending Balance quantity from last row on the page)</i>			

Blank page of DAR 2:

MOH 642 Bench / Section:																
Date	Shift	Unit of Issue	Beginning balance at the Bench / section	Quantity Received during the Shift	Origin of the received stock	Batch Number	Expiry Date	Quantity used during the Shift	Name of Commodity:	Number of Tests done during the Shift	Losses during the Shift	Adjustments during the Shift [Positive / Negative]	Ending Balance at the end of the Shift	Remarks (Including explanations for Losses or Adjustments)	Name of officer	Signature
Page Totals																
Date:													Balance carried forward: <i>(use the Ending Balance quantity from last row on the page)</i>			

Blank page of DAR 3:

MOH 642 Bench / Section:																
Date	Shift	Unit of Issue	Beginning balance at the Bench / section	Quantity Received during the Shift	Origin of the received stock	Batch Number	Expiry Date	Quantity used during the Shift	Name of Commodity:	Number of Tests done during the Shift	Losses during the Shift	Adjustments during the Shift [Positive / Negative]	Ending Balance at the end of the Shift	Remarks (Including explanations for Losses or Adjustments)	Name of officer	Signature
Page Totals																
Date:													Balance carried forward: <i>(use the Ending Balance quantity from last row on the page)</i>			

Blank page of DAR 4:

MOH 642 Bench / Section:																
Date	Shift	Unit of Issue	Beginning balance at the Bench / section	Quantity Received during the Shift	Origin of the received stock	Batch Number	Expiry Date	Quantity used during the Shift	Name of Commodity:	Number of Tests done during the Shift	Losses during the Shift	Adjustments during the Shift [Positive / Negative]	Ending Balance at the end of the Shift	Remarks (Including explanations for Losses or Adjustments)	Name of officer	Signature
Page Totals																
Date:													Balance carried forward: <i>(use the Ending Balance quantity from last row on the page)</i>			

Answers to Exercise 1 : Filling in the Daily Activity Register (DAR)

MOH 642		<i>Serology and Haematology</i>				<i>Rapid HIV Test Kit - Screening</i>									
Bench / Section:															
Date	Shift	Unit of Issue	Beginning balance at the Bench / section	Quantity Received during the Shift	Origin of the received stock	Batch Number	Expiry Date	Quantity used during the Shift	Number of Tests done during the Shift	Losses during the Shift	Adjustments during the Shift [Indicate if (+) or (-)]	Ending Balance at the end of the Shift	Remarks (including explanation for Losses or Adjustments)	Name of officer	Signature
01/03/20XX	Day	Test	200	500	Lab-store	0060	Dec 20XX					700		John Mali	JM
02/03/20XX	Day	Test	700			0060	Dec 20XX	20	20			680		John Mali	JM
05/03/20XX	Day	Test	680			0060	Dec 20XX	30	30			650		John Mali	JM
18/03/20XX	Day	Test	650			0060	Dec 20XX	50	50			600		John Mali	JM
29/03/20XX	Day	Test	600			0060	Dec 20XX	100	100			500		John Mali	JM
29/03/20XX	Day	Test	500			0060	Dec 20XX			100		400	Tests damaged by rain water	John Mali	JM
30/03/20XX	Day	Test	400			0060	Dec 20XX				30	370	Transferred to MCH for PMTCT	John Mali	JM
Page Totals				500				200	200	100	0	30			
Date:	31/03/20XX				Balance carried forward:			370				0			

MOH 642		<i>Serology and Haematology</i>				<i>Carbol Fuschin solution</i>									
Bench / Section:															
Date	Shift	Unit of Issue	Beginning balance at the Bench / section	Quantity Received during the Shift	Origin of the received stock	Batch Number	Expiry Date	Quantity used during the Shift	Number of Tests done during the Shift	Losses during the Shift	Adjustments during the Shift [Indicate if (+) or (-)]	Ending Balance at the end of the Shift	Remarks (including explanation for Losses or Adjustments)	Name of officer	Signature
01/03/20XX	Day	ml	0	500	Lab-store	0020	Sept 20XX					500		John Mali	JM
05/03/20XX	Day	ml	500			0020	Sept 20XX	45	15			455		John Mali	JM
18/03/20XX	Day	ml	455			0020	Sept 20XX	45	15			410		John Mali	JM
Page Totals				500				90	30	0	0	0			
Date:	31/03/20XX				Balance carried forward:			410				0			

MOH 642

Bench / Section:		Serology and Haematology					Malaria Rapid Diagnostics test (RDT)								
Date	Shift	Unit of Issue	Beginning balance at the Bench / section	Quantity Received during the Shift	Origin of the received stock	Batch Number	Expiry Date	Quantity used during the Shift	Number of Tests done during the Shift	Losses during the Shift	Adjustments during the Shift [Indicate if (+) or (-)]	Ending Balance at the end of the Shift	Remarks (including explanation for Losses or Adjustments)	Name of officer	Signature
01/03/20XX	Day	Test	0	40	Lab store	A0254	Dec 20XX					40		John Male	JM
18/03/20XX	Day	Test	40			A0254	Dec 20XX	15	14			25		John Male	JM
Page Totals				40				15	14	0	0	0			
Date:		31/03/20XX	Balance carried forward:						25	Days out of stock:			0		
<i>(use the Ending Balance quantity from last row on the page)</i>															

MOH 642

Bench / Section:		Serology and Haematology					FACS Count CD4CD3 reagent (Adult)								
Date	Shift	Unit of Issue	Beginning balance at the Bench / section	Quantity Received during the Shift	Origin of the received stock	Batch Number	Expiry Date	Quantity used during the Shift	Number of Tests done during the Shift	Losses during the Shift	Adjustments during the Shift [Indicate if (+) or (-)]	Ending Balance at the end of the Shift	Remarks (including explanation for Losses or Adjustments)	Name of officer	Signature
01/03/20XX	Day	Test	0	50	Lab store	00125	June 20XX					50		John Male	JM
29/03/20XX	Day	Test	50			00125	June 20XX	32	30			18		John Male	JM
Page Totals				50				32	30	0	0	0			
Date:		31/03/20XX	Balance carried forward:						18	Days out of stock:			0		
<i>(use the Ending Balance quantity from last row on the page)</i>															

Exercise 2: Filling in the Facility Consumption Data Report and Request Form (FCDRR)

Materials needed:

For this exercise you will need:

- blank copy of the F-CDRR for ART Laboratory monitoring reagents
- blank copy of the F-CDRR for Laboratory commodities (MoH 643)
- filled DAR for Laboratory Reagents and Consumables (MoH 642) – from Exercise 1 above
- a copy of the job aids for the completion of the F-CDRRs
- Pen and paper for rough-work or a calculator.

On 1st April, the Lab Tech in/charge, Felix Mambo, and the hospital store person sat down together to compile the monthly report for the month of March 20XX for Serowe DH, which is located in Central district of Northern province.

They conducted a physical count and found the following closing stock balances at the District hospital store, and then compared with the Laboratory stock cards for the various commodities. They then compiled the following information:

Stock count at the beginning and end of the month of March 20XX:

Item	Rapid Test kit – HIV screening	Carbol Fuschin solution	Malaria Rapid diagnostic test (RDT) kit	FACS Count CD4CD3 reagent (Adult)
	Tests	mls	Tests	Tests
Stock Balance (as at 29th February)				
At the hospital store	150	0	120	50
Received during the month Date of receipt: 1st March 20XX	600 Batch/Lot No. 0065	1000 ml Batch/Lot No. 0020	0	50 Batch/Lot No. 00126
Expired during the month	0	0	10	0
Stock Balance (as at 31st March)				
At the hospital store	250	300	70	100

The stock receipts from KEMSA and the District store during the month are noted in the table above.

Adjustments: During the month, the Lab Tech in/charge issued to Kutus Health centre 200ml of Carbol Fuschin solution. In the same month, the DH received 50 tests of FACS Count CD4CD3 reagent (Adult) from Faidha PGH.

The PMTCT clinic, being the other user point in the DH, provided the following report for the month:-

Name of commodity	Beginning balance	Adjustments	Quantity used	Number of Tests done	Balance carried forward	Days out of stock
Rapid Test kit – HIV screening (tests)	10	+30 (from Serology bench)	10	10	30	0

The PMTCT clinic had no losses and adjustments.

The Lab Tech in-charge also noted that the F-CDRR for ART Laboratory monitoring reagents was nearly finished so another copy of the tool should be ordered.

Using the data provided above and the completed DAR from No. 1, you are required to complete the following reports on behalf of Felix Mambo

- F-CDRR for ART Laboratory monitoring reagents, and
- F-CDRR for Laboratory commodities (MoH 643) for Serowe DH for the month ending 31st March 20XX.

Filling in the F-CDRR for ART Laboratory monitoring reagents (Blank)

ORIGINAL

MINISTRY OF HEALTH
NHPLS / NASCOP
FACILITY CONSUMPTION DATA REPORT & REQUEST (F-CDRR) FOR ART LABORATORY MONITORING REAGENTS

Name of Facility:	Facility Code:	District:	Province / County:
Affiliation:	Ministry of Health <input type="checkbox"/>	Local Authority <input type="checkbox"/>	Private <input type="checkbox"/>
	FBO <input type="checkbox"/>	NGO <input type="checkbox"/>	
REPORT FOR PERIOD: BEGINNING: <input type="text"/>		ENDING: <input type="text"/>	
dd/mm/yyyy		dd/mm/yyyy	
State the number of CD4 Tests conducted:-			
TOTAL NUMBER OF CD4 TESTS DONE DURING THE MONTH (REPORTING PERIOD): <input type="text"/>			

COMMODITY CODE	COMMODITY NAME	UNIT OF ISSUE	BEGINNING BALANCE	QUANTITY RECEIVED FROM CENTRAL WAREHOUSE (e.g. KEMSA)		QUANTITY RECEIVED FROM OTHER SOURCE(S)		QUANTITY USED	LOSSES / WASTAGE	ADJUSTMENTS Indicate if (+) or (-)		ENDING BALANCE (PHYSICAL COUNT at end of Month)	QUANTITY REQUESTED	
				Quantity	Lot No.	Quantity	Lot No.			Positive	Negative			
FACS Calibur Reagents and consumables														
CAL 002	Tri-TEST CD3/CD4/CD45 with TruCOUNT Tubes	test												
CAL 003	Calibrite 3 Beads	test												
CAL 005	FACS Lysing solution	ml												
CAL 006	Falcon Tubes	pcs												
CAL 009	Printing Paper	1 ream												
CAL 010	Printer Cartridge	1												
FACS Count Reagents and consumables														
FACS 001	FACSCount CD4/CD3 Reagent [Adult]	test												
FACS 002	FACSCount CD4 % reagent [Paediatric]	test												
FACS 003	FACS Control kit	test												
FACS 004	Thermal Paper FacsCount	1 roll												
Cyflow Partec Reagents and consumables														
PART 001	EASY Count CD4/CD3 Reagent [Adult]	test												
PART 002	EASY Count CD4 % reagent [Paediatric]	test												
PART 003	Control check beads	test												
PART 004	Thermal paper	1 roll												
Common Reagents / Consumables														
CON 001	Sheath fluid	20L												
CON 002	Cleaning fluid	5L												
CON 003	Rinse fluid	5L												
CON 005	Yellow Pipette Tips (50µl)	pcs												
CON 006	Blue Pipette Tips (1,000µl) [FACSCalibur]	pcs												
CON 008	CD4 Stabilizer tubes 5ml	pcs												
CON 009	EDTA Microtainer tubes [Paediatric]	pcs												
CON 010	EDTA Vacutainer tubes 4ml	pcs												
CON 011	Red top / Plain / Silica Vacutainer tubes 4ml	pcs												
Haematology Analyser														
Tick Type of Machine at the Facility as appropriate								Systemx MSA <input type="text"/>	Celtax 6400/8223 Coulter <input type="text"/>	Other (please specify) <input type="text"/>				
HAS 001	Cell / ACT Pack	20L												
HAS 002	Cell Clean / ACT Rinse	50ml												
HAS 003	Stromatolyser	1,500ml												
HAS 004	Cell Control	4ml												
HAS 005	Calibrators	4ml												
HAC 001	Cleanac	5L												
HAC 002	Cleanac 3	1L												
HAC 003	Isotonac-3	20L												
HAC 004	Haemolynac-3N	1L												
HAC 005	Haemolynac-5	1L												
HAC 006	Low control	2ml / 3ml												
HAC 007	Normal control	2ml / 3ml												
HAC 008	High Control	2ml / 3ml												
Biochemistry Analyser														
Tick Type of Machine at the Facility as appropriate								BTS 330/310/305 <input type="text"/>	Eurolyser <input type="text"/>					
BAE 001	Sodium	720 Tests												
BAE 002	Chloride	895 kit												
BAE 003	Urea	4x20ml												
BAE 004	Potassium	720 Tests												
BAE 005	Creatinine	5 x 20ml												
BAE 006	Alanine Aminotransferase (ALT/GPT)													
BAE 007	Aspartate Aminotransferase (AST/GOT)	5 x 20ml												

Comments:

Order for extra LMIS tools: (1) Daily Activity Register for Laboratory Reagents and Consumables (MOH 642): (2) F-CDRR for ART Lab Monitoring Reagents:

To be requested only when your Data collection or reporting Tools are nearly full. Indicate quantity required for each tool type.

Filled by (name): _____ Signature: _____ Designation: _____ Telephone / Mobile: _____ Date Filled: _____

Approved by: _____ Signature: _____ Designation: _____ Telephone / Mobile: _____ Date Approved: _____

Filling F-CDRR for Laboratory commodities (MoH 643) (Blank):

MINISTRY OF HEALTH FACILITY CONSUMPTION DATA REPORT AND REQUEST (F-CDRR) FOR LABORATORY COMMODITIES

Name of Facility: Facility Code:

District: Province / County:

Affiliation: Ministry of Health Local Authority FBO
 NGO Private

Report for Period: Beginning: Ending:
ddmm/yyyy ddmm/yyyy

Type of service	No. of Tests done
Applicable to HIV Test Kits only	
VCT	
PTCT	
PMCT	
Blood screening	
Other (please specify)	

Applicable to Malaria testing only			
Test	Category	No. of Tests performed	No. Positive
RDT	Patients under 5 years		
	Patients aged 5-14 yrs		
	Patients aged 14 years		
Microscopy	Patients under 5 years		
	Patients aged 5-14 yrs		
	Patients aged 14 years		

Commodity Name	Unit of Issue (e.g. Test)	Beginning Balance	Quantity Received	Quantity Used	Number of Tests done	Losses	Adjustments [Indicate if (+) or (-)]		End of Month Physical count	Quantity expiring in less than 6 months	Days out of stock	Quantity Requested for Re-supply
							Positive	Negative				
HAEMATOLOGY COMMODITIES												
Haematology reagents												
Normal control												
Abnormal high control												
Abnormal low control												
Grouping anti-sera - Anti-A												
Grouping anti-sera - Anti-B												
Grouping anti-sera - Anti-D												
Grouping anti-sera - Anti Human Globulin (AHG)												
Haemocue cuvettes												
Leishman stain												
BIOCHEMISTRY COMMODITIES												
Albumin												
Alkaline phosphatase												
ALT (SGPT)												
AST (SGOT)												
Creatinine												
Electrolytes												
Gamma GT												
Glucose test strips												
HDL Cholesterol												
Multistix												
Pregnancy test strips												
Serum Amylase test kit												
Serum protein kit												
Total Cholesterol												
Triglycerides												
Urea												
CONSUMABLES												
Applicator sticks												
Blue tips												
EDTA Vacutainer Stabilizer tubes												
EDTA Vacutainer tubes												
Latex Gloves												
Microscope slides												
Plain Vacutainer tubes												
Stool Polytops												
Vacutainer needles G21												
Vacutainer needles G23												
Yellow tips												
MICROBIOLOGY COMMODITIES												
Macconkey agar												
CLED agar												
Methanol												
Glycerol												
Oil Immersion												
Universal bottles												
Culture Plates												
MALARIA-RELATED LABORATORY COMMODITIES												
Malaria Rapid Diagnostic Test (RDT)												
Field Stain A												
Field Stain B												
Giemsa Stain												
TB-RELATED LABORATORY COMMODITIES												
Auramine-O (*for District hospital labs)												
Carbol Fuschin (solution)												
Falcon tubes												
Hydrochloric acid (HCL)												
Lens Tissue												
Methylene Blue												
Microscope slides												
Potassium Permanganate (*for District hospital labs)												
Sputum mugs (AFB Polytops with lids)												
Sulphuric acid												
HIV-RELATED LABORATORY COMMODITIES												
Rapid HIV 1+2 Test 1 - Screening												
Rapid HIV 1+2 Test 2 - Confirmatory												
Rapid HIV 1+2 Test 3 - Tiebreaker												
Hepatitis B (ELISA) Test (Hepanostika)												
Hepatitis C (ELISA) Test (Murex HCV)												
ELISA HIV & AIDS 1+2 Test (Vironostika)												
ELISA HIV & AIDS 1+2 Test (Murex HIV)												
Rapid Syphilis Test (RPR)												

Explain Losses & Adjustments:

Order for extra LMIS tools: *To be requested only when your Data collection or reporting Tools are nearly full. Indicate quantity required for each tool type.*

(1) Daily Activity Register for Laboratory Regents and Consumables (MOH 642):

(2) F-CDRR for Laboratory Commodities (MOH 643):

Completed by: Tel: Designation: Sign: Date:

Approved by: Tel: Designation: Sign: Date:

Answers to Exercise 2: Filling in the F-CDRR for ART Laboratory monitoring reagents

MINISTRY OF HEALTH
NHPLS / NASCOP

FACILITY CONSUMPTION DATA REPORT & REQUEST (F-CDRR) FOR ART LABORATORY MONITORING REAGENTS

Name of Facility: <i>Serowe District hospital</i>		Facility Code: _____		District: <i>Central</i>		Province / County: <i>Northern</i>	
Affiliation: Ministry of Health <input checked="" type="checkbox"/>		Local Authority <input type="checkbox"/>		FBO <input type="checkbox"/>		NGO <input type="checkbox"/>	
Private <input type="checkbox"/>		REPORT FOR PERIOD: BEGINNING: <i>01/03/20XX</i>		ENDING: <i>31/03/20XX</i>			
		<small>ddmm/yyyy</small>		<small>ddmm/yyyy</small>			
State the number of CD4 Tests conducted:-							
TOTAL NUMBER OF CD4 TESTS DONE DURING THE MONTH (REPORTING PERIOD):				32			

COMMODITY CODE	COMMODITY NAME	UNIT OF ISSUE	BEGINNING BALANCE	QUANTITY RECEIVED FROM CENTRAL WAREHOUSE (e.g. KEMSA)		QUANTITY RECEIVED FROM OTHER SOURCE(S)		QUANTITY USED	LOSSES / WASTAGE	ADJUSTMENTS <small>Indicate if (+) or (-)</small>		ENDING BALANCE <small>(PHYSICAL COUNT at end of Month)</small>	QUANTITY REQUESTED
				Quantity	Lot No.	Quantity	Lot No.			Positive	Negative		
FACS Calibur Reagents and consumables													
CAL 002	Tri-TEST CD3/CD4/CD45 with TruCOUNT Tubes	test											
CAL 003	Calibrite 3 Beads	test											
CAL 005	FACS Lysing solution	ml											
CAL 006	Falcon Tubes	pcs											
CAL 009	Printing Paper	1 ream											
CAL 010	Printer Cartridge	1											
FACS Count Reagents and consumables													
FACS 001	FACSCount CD4/CD3 Reagent [Adult]	test	50	50	00126	0	0	32	0	50		118	10
FACS 002	FACSCount CD4 % reagent [Paediatric]	test											
FACS 003	FACS Control kit	test											
FACS 004	Thermal Paper FacsCount	1 roll											
Cyflow Partec Reagents and consumables													
PART 001	EASY Count CD4/CD3 Reagent [Adult]	test											
PART 002	EASY Count CD4 % reagent [Paediatric]	test											
PART 003	Control check beads	test											
PART 004	Thermal paper	1 roll											
Common Reagents / Consumables													
CON 001	Sheath fluid	20L											
CON 002	Cleaning fluid	5L											
CON 003	Rinse fluid	5L											
CON 005	Yellow Pipette Tips (50µl)	pcs											
CON 006	Blue Pipette Tips (1,000µl) [FACS Calibur]	pcs											
CON 008	CD4 Stabilizer tubes 5ml	pcs											
CON 009	EDTA Microtainer tubes [Paediatric]	pcs											
CON 010	EDTA Vacutainer tubes 4ml	pcs											
CON 011	Red top / Plain / Silica Vacutainer tubes 4ml	pcs											

Comments:

50 tests of FACS Count reagent were received from Faidha PGH

Order for extra LMS tools:-

[1] Daily Activity Register for Laboratory Reagents and Consumables (MOH 642):

[2] F-CDRR for ART Lab Monitoring Reagents:

To be requested only when your Data collection or reporting Tools are nearly full. Indicate quantity required for each tool type.

Filed by (name): *Felix Mamba* Signature: *FM* Designation: *Lab Tech U/c* Telephone / Mobile: *07XX* Date Filled: *01/04/20XX*

Approved by: _____ Signature: _____ Designation: _____ Telephone / Mobile: _____ Date Approved: _____

b. F-CDRR for Laboratory commodities (MOH 643)

MOH 643

MINISTRY OF HEALTH

FACILITY CONSUMPTION DATA REPORT AND REQUEST (F-CDRR) FOR LABORATORY COMMODITIES

Name of Facility: Serowe District hospital Facility Code: _____

District: Central Province / County: Northern

Affiliation: Ministry of Health Local Authority _____ FBO _____
 NGO _____ Private _____

Report for Period: Beginning: 01/03/20XX Ending: 31/03/20XX
dd/mm/yyyy dd/mm/yyyy

Type of service		No. of Tests done
Applicable to HIV Test Kits only		
VCT		0
PITC		200
PMTCT		0
Blood screening		0
Other (please specify)		0

Applicable to Malaria testing only			
Test	Category	No. of Tests performed	No. Positive
RDT	Patients under 5 years of age	10	4
	Patients aged 5 years and over	5	0
Microscopy	Patients under 5 years of age		
	Patients aged 5 years and over		

Commodity Name	Unit of Issue (e.g. Test)	Beginning Balance	Quantity Received	Quantity Used	Number of Tests done	Losses	Adjustments [Indicate if (+) or (-)]		End of Month Physical count	Quantity expiring in less than 6 months	Days out of stock	Quantity Requested for Re supply
							Positive	Negative				
MALARIA-RELATED LABORATORY												
Malaria Rapid Diagnostic Test (RDT) kit	Test	120	0	15	17	10	0	0	95	0	0	0
Field Stain A												
Field Stain B												
Giemsa Stain												
TB-RELATED LABORATORY COMMODITIES												
Auramine-O (*for District hospital labs)												
Carbol Fuchsin (solution)	mls	0	1,000	90	30	0	0	200	710	0	0	0
Falcon tubes												
Hydrochloric acid (HCl)												
Lens Tissue												
Methylene Blue												
Microscope slides												
Potassium Permanganate (*for District hospital labs)												
Sputum mugs (AFB Polypots with lids)												
Sulphuric acid												
HIV-RELATED LABORATORY COMMODITIES												
Rapid HIV 1+2 Test 1 - Screening	Test	360	600	210	210	100	0	0	650	0	0	190
Rapid HIV 1+2 Test 2 - Confirmatory												
Rapid HIV 1+2 Test 3 - Tiebreaker												
Hepatitis B (ELISA) Test (Hepanostika)												
Hepatitis C (ELISA) Test (Murex HCV)												
ELISA HIV & AIDS 1+2 Test (Vironostika)												
ELISA HIV & AIDS 1+2 Test (Murex HIV)												
Rapid Syphilis Test (RPR)												

Explain Losses & Adjustments:

100 Rapid HIV tests were damaged; 10 Malaria RDTs expired; 200ml of Carbol Fuchsin were transferred to Kutus Health Centre.

Order for extra LMIS tools:-
 To be requested only when your Data collection or reporting Tools are nearly full. Indicate quantity required for each tool type.

(1) Daily Activity Register for Laboratory Regents and Consumables (MOH 642): _____

(2) F-CDRR for Laboratory Commodities (MOH 643): _____

Completed by: Felix Mamba Tel: 07XX Designation: Lab Technician Sign: FM Date: 01/04/20XX

Approved by: _____ Tel: _____ Designation: _____ Sign: _____ Date: _____

MODULE 5: MONITORING, TRAINING AND PLANNING (MTP) FOR LABORATORY COMMODITIES

Duration: 3 hours 15 minutes

Goal: To describe the concept of continuous performance and quality improvement for laboratory commodity management

Objectives

- Define Monitoring, Training and Planning (MTP) approach
- Differentiate between problems and challenges
- Identify priority challenges on commodity management practices at the facility
- Convert problems to challenges
- Set SMART targets for their priority challenges
- Develop a plan of action for the challenges identified throughout the course

Teaching Aids

- Power point presentation
- LCD Projector, Flip Chart, Markers

Content:

Session 1: Introduction to MTP: Definition of terms; introduction to MTP and the MTP approach; determining key problems / challenges in laboratory commodity management at facility level; prioritizing problems; and converting problems to challenges

Session 2: Action planning: Developing Action plans for the challenges identified in laboratory commodity management at facility level; setting SMART targets for the priority challenges; identifying activities with time lines to address the challenges and discuss benchmarks for monitoring the implementation process.

Monitoring, Training and Planning (MTP) for laboratory commodities

Lesson Plan Guide:

UNIT	CONTENT	ACTIVITY	TIME
1	Introduction to MTP	<ul style="list-style-type: none">• Lecture• Group activity	45 minutes
2	Action planning	<ul style="list-style-type: none">• Lecture• Practice of action plans• Presentation of action plans	1 hour 45 minutes 45 minutes

References and Recommended Readings

Rational Pharmaceutical Management (RPM) Plus program. 2009. *A guide for implementing the Monitoring-Training-Planning (MTP) Approach to build skills for Pharmaceutical Management*. Arlington, VA: Management Sciences for Health.

Galer, Joan, Sylvia Vriedsendorp, and Alison Ellis. 2005. *Managers who lead: a Handbook for improving Health Services*. Cambridge, Massachusetts: Management Sciences for Health.

Applying the Monitoring Training and Planning (MTP) approach to Laboratory commodity management

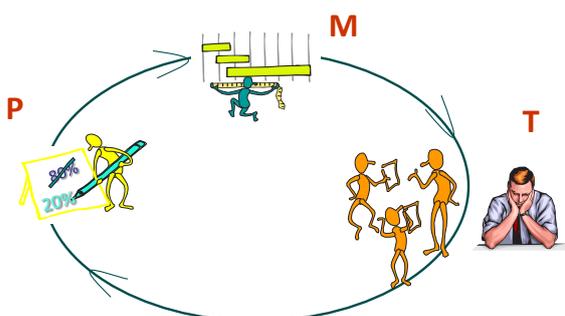
Module 5

Objectives

- Define Monitoring, Training and Planning (MTP) approach
- Differentiate between problems and challenges
- Identify priority challenges on commodity management practices at the facility
- Convert problems to challenges
- Set SMART targets for the priority challenges
- Develop a plan of action for the challenges identified throughout the course

What is MTP?

Monitoring – Training – Planning



Question for discussion

Has anyone heard of or used this process before?

Trainer's Notes:

Trainer should ask participants to describe what they see in the illustration.

The participants should try to describe what is taking place at points M, T and P

What is the MTP approach?

Description:

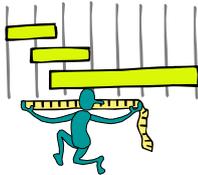
- MTP (Monitoring, Training, Planning) is a **performance improvement** methodology
- May be used at facility or district level to improve laboratory services

Facilitators Notes

MTP is a methodology to implement health programs - it helps people to get things done in their facilities and learn useful techniques for meeting their goals and responsibilities.

Monitoring

Problem Identification



First Visit

- Discuss the gaps identified during the visit
- Identify specific Problems
- Measure the extent of the problem(s)
- Prioritize problems

Subsequent visits

- Follow up on commitments from the previous visit
- Evaluate the result of the intervention
- Document and communicate outcomes

Monitoring is about Identifying problems and Prioritizing them.

Prioritizing Problems:

Example of Criteria

- **Priority A** - Those which if **not** corrected would cause a program or service to collapse (**Immediate action required**) e.g. Stock-out of lab commodities
- **Priority B** - Those which if corrected would improve service delivery (**Action required in the short term**) e.g. increased staffing levels
- **Priority C** - Those which if **not** corrected would hinder improvement of service delivery (**Action required in the long term**) e.g. infrastructural improvements

Training

•Training / Problem solving

Discuss the problem:-

1. Why is it happening? What are the underlying factors?

- *Root Cause Analysis*

2. Decide how to solve the problem.

Find a solution, i.e. the Intervention



The trainer should lead the participants through a process of Root Cause Analysis (RCA) to identify the underlying causes of identified problems

Root Cause Analysis is a process of understanding the reasons behind the gap between *desired performance and actual performance*

The “*root*” cause is the factor that has led to the gap Without identifying the “*root*” cause, there is likelihood to treat the symptoms without affecting the source of the gap

The *Multiple Whys* technique of questioning permits you to dig deep below the symptoms

For each gap, ask “why is this occurring?”
For each answer, ask “why” again?

Chart multiple answers if they come up

Keep asking “why?” until no more answers are available

Stop when you have to say “I don’t know”

The root cause is the lowest-level cause you can do something about

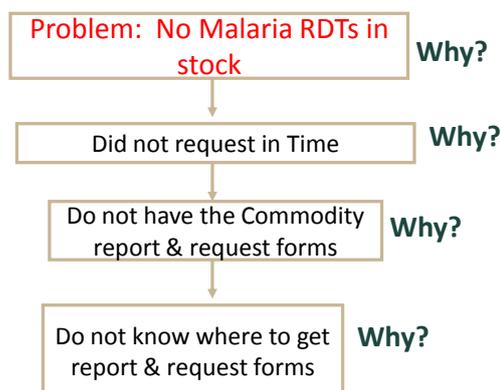
The act of asking the question “why?” several times will help you to:

- Avoid identifying symptoms as root causes
- Have a better understanding of what must be done to resolve a problem and make a difference.

Root cause analysis

- It is important to differentiate between the *cause* of a problem and the *symptom* of a problem
- Treating the symptoms only leads to short-term solutions
- Asking the question “Why?” several times helps to identify the “real” reason or cause of a problem
- A single problem can have more than one root cause

Root cause analysis: Example 1



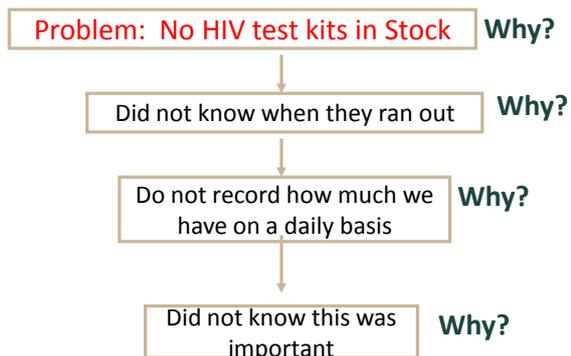
Main Message to Deliver From this slide

Asking why several times will usually help in determining the root cause.

Trainers Notes

A supervisor goes to a facility and discovers that there are no Malaria Rapid Diagnostic Tests (RDTs) in stock. In order to determine the root cause for this problem, the support supervisor gently inquires of the staff members.

Root cause analysis: Example 2



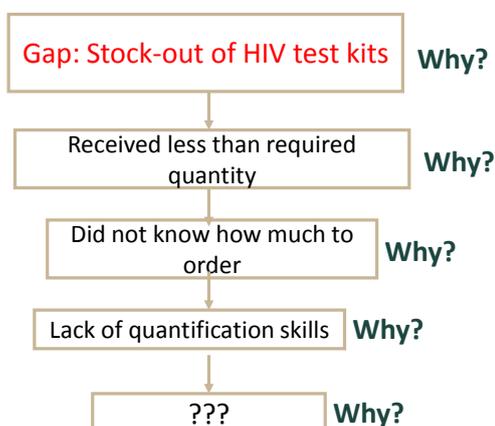
Main Message to Deliver From this slide

Asking why several times will usually help in determining the root cause. The root cause may vary even for similar situations and from one facility to another.

Trainers Notes

A supervisor goes to a facility and discovers that there are no HIV Rapid test kits in stock. In order to determine the root cause for this problem, the support supervisor gently inquires of the staff members.

Root cause analysis: Example 3



Main Message to Deliver From this slide

Asking why several times will usually help in determining the root cause. The root cause may vary even for similar situations and from one facility to another.

Examples of Problems converted into Challenges (1)

Problem

- o Our district often runs out of stock for HIV rapid test kits and does not meet the needs of all the testing facilities
- o The manual lab tools (DARs, Lab Stock Card, F-CDRRs, etc) have not been availed in adequate quantities in our district

Challenge

- o How can we ensure that the district always has sufficient rapid test kits to issue to all the testing areas?
- o How can we obtain additional copies of the manual tools (DARs, Lab Stock cards, CDRRs) in adequate quantities for all facilities in the district?

Facilitators Notes

- Show the slide above with the list of problems converted to challenges.
- Facilitator demonstrate how each problem can be stated as a challenge
- Invite volunteer one at a time to read out the problem and the corresponding challenge .
- Ask if there are any questions
- Ask each team to use the examples in this slides to convert their list of six problems to challenges.
- Let them put on a flipchart the problems with the entire class. If necessary, have the class participate in improving the challenge statement
- Ask one or two teams to share at least one problem that has been converted to a challenge

Examples of Problems converted into Challenges (2)

Problem

- o Our facility staff do not know how to use the new inventory management tools
- o Our facility store has limited secure space for storage of Lab commodities and supplies

Challenge

- o How can we make sure that all facility staff have the knowledge and skills required to use the new manual inventory management tools correctly?
- o How can we obtain additional storage space for the Lab commodities and supplies?

Facilitators Notes

- Show the slide above with the list of problems converted to challenges.
- Facilitator demonstrate how each problem can be stated as a challenge
- Invite one volunteer at a time to read out the problem and the corresponding challenge
- Ask if there are any questions
- Ask each team to use the examples in this slides to convert their list of six problems to challenges.
- Let them put on a flipchart the problems with the entire class. If necessary, have the class participate in improving the challenge statement
- Ask one or two teams to share at least one problem that has been converted to a challenge

Group activity (30 minutes)

- In your groups, convert your identified problems into challenges

Facilitator's Notes

- Organize the participants for group-work.
- Ask each of the teams to undertake the exercise for at least six problems they had identified and convert them into to challenges.
- Ask the groups to use the examples in the previous 2 slides as examples. If necessary, first select one problem and work on it with the entire class.
- Give groups 15 minutes and use 15 minutes for feedback
- Ask one or two groups to share at least one problem that has been converted to a challenge. If necessary, have the class participate in improving the challenge statement.

Finding Solutions

- The solution should address the root cause
- Find **local** solutions:- think of
 - “What can I do to solve the problem”
 - Consider solutions that do not require external assistance (e.g. authorities, stakeholders, government) as the first option
- Be creative
- If there are no local solutions, then the facility in-charge or the lab in-charge becomes the liaison to outside authorities
 - Prepare information on the extent of the problem and the difficulties in solving the problem locally
 - Take the problem to regional/national authorities
 - Assist the staff to write a letter/proposal/follow-up

Action Plans (1)

- Once the solution is agreed on, then a plan to implement the solution is needed
- **An Action Plan answers**
 - **What will be done**
 - **Who will do what**
 - **When will they do it**
 - **Where will they do it**
 - **How will they do it**
- Action Plans should also include Targets and means of monitoring progress towards targets

Action Plans (2): Class Discussion

- Review the action plan below and think about what might be problematic about it

No.	Problem	Solution	By Whom	By When
1	Frequent Stock outs	Order from KEMSA	In-Charge	Immediately
2	Inadequate space for storage	Request for Donor Funding	In-Charge	Two weeks
3	Inadequate staff	Hire more Staff	Government	ASAP

Trainers Notes

- The solution to order from KEMSA may not be the root cause of frequent stock outs. In addition, the Facility In-charge might not be the responsible person for ordering supplies. The time-line “immediately” is not measurable.
- The solution is an external solution. A creative local solution might have been sought. The long term solution may be to consider re-modeling. Local Facility Improvement Funds (FIF) may be used. The timeline of 2 weeks most likely will not solve the problem - just because the in-charge requested support from a donor does not mean the problem will be resolved in that timeline.
- The solution is once again external, and the timeline (ASAP) is not measurable. A creative solution such as training a substitute staff on site to assist may be possible; other potential solutions may be review of roles and responsibilities, review of hours of operation, task shifting, etc.

Activity: Action plan session (25 min)

Objectives	Activities	Responsible person	Resources	Time / By when	Indicators

Plenary session / Discussion (20 min)

• Feedback and peer review of the Action plans

Facilitators Notes

- Invite each team to present its action plan in turn from a flipchart / slides, etc.
- Immediately after each team has made its presentation, ask the other participants to provide useful feedback.
- Explain to the participants how to give useful feedback by providing some examples:
 - Examples of positive feedback:
 - o “We liked the way you....” (Identifying positive aspects)
 - o “We were not clear what you are proposing to do in activity number__ __. Please, can you explain?” (Asking for clarification where there is some ambiguity or something you have not understood)
 - o “Would it help your team to achieve your measurable result if you included... ?” (Making a positive suggestion)
 - Guide the feedback by asking the following questions.
 - o Are the activities specific or are they too general

or vague?

- o Are the activities likely to contribute to addressing the key challenges?
 - o Are the activities likely to contribute to achieving the measurable results?
 - o Are the activities feasible within the time specified?
 - o Are the names of the persons responsible clearly stated?
 - o Are the necessary resources specified?
 - o Is the timeline for each activity likely to be feasible?
 - o Are any of the activities superfluous?
 - o Are any important activities missing?
- Guide the team response to positive feedback.
 - Ask the team members to listen in silence to the feedback.
 - Then give them an opportunity to explain, clarify, agree to modify or include additional items in their action plan, ask further advice, and so forth.
 - Action Plan modifications might include the following
 - After all the presentations and feedback are complete, ask each team to make the agreed modifications to their action plan and hand in a copy to the facilitator.
 - Suggest that when they return to their health facility, they may display their modified action plan on a flipchart in a prominent place.

MODULE 6: MONITORING AND EVALUATION IN COMMODITY MANAGEMENT AND DATA FOR DECISION MAKING

Duration: 2 hours

Goal: To describe the concept of monitoring and evaluation and its importance in program activities implementation

Objectives:

At the end of this module, the participants should be able to:

- Identify the basic purposes and scope of M&E
- Differentiate between monitoring functions and evaluation functions
- Identify criteria for the selection of indicators
- Discuss M&E indicators and what should be monitored for commodity management
- Describe data quality dimensions and how to detect data quality errors
- Describe the process of using Data for Decision-making

Content:

Introduction to monitoring and evaluation

Definition of key terms; Importance of monitoring and evaluation; what programs should monitor for commodity management

Session 1: Overview of Monitoring & Evaluation (M&E) for commodity management

Definition of terms; Basic concepts of M&E; M&E indicators and what should be monitored for commodity management

Session 2: Improving Data Quality

Definition of terms; Data quality dimensions; how to detect types of errors that impact on data quality; identify data quality challenges in facilities

Session 3: Use of Data for Decision Making

Concepts of decision-making; components of decision-making cycle; Steps of the framework for using data for decision-making

Lesson Plan Guide:

UNIT	CONTENT	ACTIVITY	TIME
1	<ul style="list-style-type: none">• Introduction to monitoring and evaluation• Overview of Monitoring & Evaluation (M&E) for commodity management	<ul style="list-style-type: none">• Lecture• Group activity	45 minutes
2	<ul style="list-style-type: none">• Improving data quality• Use of Data for Decision-making	<ul style="list-style-type: none">• Lecture	45 minutes
3	<ul style="list-style-type: none">• Post Test• Course evaluation• Closing ceremony		30 minutes

References and Recommended Readings

MEASURE Evaluation (MENTOR) under USAID M&E fundamentals. A self-guided Mini-course. Nina Frankel, Anastasia Gage. January 2007

FHI and Division of Reproductive Health under MOH. Training Module on Data for Decision Making. May 2007

Overview of M&E, Data Quality and Use of Data for Decision Making

Module 6

Objectives

By the end of the session, the participants should be able to:

- Discuss basic concepts of M&E
- Discuss M&E indicators and what should be monitored for commodity management
- Describe data quality dimensions and how to detect data quality errors
- Describe the process of using Data for Decision-making

Overview of Monitoring & Evaluation (M&E) for commodity management

Module 6 Session 1

Introduce the session on M&E.

Whole group brainstorming:

- Ask the participants what they understand by M&E and why it is important for Laboratory commodity management.

Definition of Terms

- **Monitoring:**

- The continuous review of the degree to which program activities are completed and targets are met

Trying to know if we are doing things in the right way

- **Evaluation:**

- To assess progress toward meeting established objectives and goals, while providing feedback on the performance of the program and direction for future plans

Trying to know if we did the right things

How do you monitor and evaluate?

- M/E is done using **Indicators**
- An Indicator is:-
 - A variable that measures one aspect of a program or project
 - A unit of information measured over time that documents changes in a specific condition.
- An indicator is easy to use, useful, measurable, reliable and valid.

Importance of M&E

M&E helps to:

- Track project/program implementation
- Determine whether the project/program is relevant, efficient and having the intended effects
- Provide an insight into what is working and what is not working
- Identify any operational problems while they can still be corrected, and thus ongoing performance improvement

Purpose of Monitoring and Evaluation (M & E):

- To make informed decisions regarding operations management and service delivery
- To ensure the most effective and efficient use of resources
- To determine whether the program is on track and make needed corrections
- To determine whether the program is having the desired impact

M&E helps to:

- Track program implementation in terms of inputs, outputs, outcomes and resource accounting.
- Determine whether the program is relevant, efficient and having the intended effects.
- Provide an insight into what is working and not working in view of the changing environment in the public health scenario

By keeping track of specific areas of a program's performance, any operational problems can be identified while they can still be corrected, and thus ongoing performance can be improved

What programs should monitor for commodity management

- Accurate information on consumption at the Service delivery point (SDP) or facility
- Stock at hand at every facility store
 - Does physical inventory fall within Max-Min levels, over- or under-stock?
 - Is there short expiry stock that can be re-distributed or exchanged?
- Losses (due to expiry, damage, etc)
- Timeliness, accuracy, and completeness of Commodity usage Reporting
- Performance in Procurement and Distribution

Examples of indicators used in Lab commodity management

What to monitor	Indicator used
Stock status	Percentage of facilities providing the service that experienced stock-out of a tracer commodity* on the day of the visit
	Percentage of facilities providing the service that experienced stock-out of a tracer commodity during a specified period of time
	Proportion of health facilities having expiries of at least one lab commodity from the Tracer Laboratory commodities list
Inventory management	Proportion of facilities with updated Lab Stock / Bin cards
	Proportion of health facilities where physical stock and record counts are in agreement for a set of tracer laboratory commodities
Reporting	Percentage of facilities submitting (timely, complete, accurate) lab commodity consumption reports to the central level

*A tracer commodity should be a product whose stock -out would result in cessation of services

Introduce the session on Data quality.

Whole group brainstorming:

- Ask the participants what they understand by the term Data quality, and how this is important for Laboratory commodity management.

Improving Data Quality

Module 6 Session 2

9

What is Data quality?

- Data quality is an assessment of the ability of the data to serve its purpose in a given context, e.g. planning, decision-making, etc
- High quality data serves its intended purpose
- Data quality also describes:
The processes and technologies involved in ensuring that data conforms to its organizational requirements

Data quality and Data Quality assurance (DQA)

- Data quality is affected by the way data is entered, stored and managed
- Data quality assurance (DQA) is the process of verifying the reliability and effectiveness of data

Dimensions of Data quality (1)

- Validity
- Reliability
- Precision
- Integrity
- Timeliness

Dimensions of Data quality (2)

- **Validity:**

Validity refers to the extent to which a measure actually represents what we intend to measure

- **Reliability:**

Data should reflect stable and consistent data collection processes and analysis methods over time

- **Precision:**

Precise data have a sufficient level of detail to present a fair picture of performance and enable decision-making

Dimensions of Data quality (3)

- **Integrity:**

Integrity focuses on whether there is improper manipulation of data

- **Timeliness:**

Data should be available and up-to-date enough to meet management needs

- **Relevance:**

Data should be relevant to the program. Data collection tools should include relevant data

Detecting Data quality errors

- What data is missing or unusable?
 - E.g. data for a whole reporting period missing
- Which data values are in conflict?
 - E.g. Contradictions between variables
 - 10 paediatric patients (5 girls and 7 boys)
 - A pregnant male
- Which items or records are duplicated?
- What linkages are missing?
- Calculation and Typing errors
 - E.g. $5000 + 4 = 50004$
- Guessing / cooked data
 - Guessing a likely looking number.
- Intentional errors
 - Increase count of clients served to show improved workload

Group Discussion 1 10 min

- What data quality problems are you experiencing currently at your facility / district related to commodity management?

- How can they be resolved?

Group Discussion 2 5 min

Commodity consumption

Year	2011	2011	2011	2011	2011
Period	Feb	Mar	Apr	May	Jun
Name of item	Qty used (Units)				
HIV Rapid Test kit (Determine)	8,023	9,225	7,846	38,225	6,746
Malaria Rapid Diagnostic Tests	30,318	31,511	35,662	67,975	37,778

What data quality issues do you see in the above data?

Group Discussion 3 15 min

Discussion using Samples of some of the Facility reports received at the LMU (central level)

- Project some of the reports received for the participants to analyze their quality.
- Ask the participants to analyze the sample reports given and highlight problems identified

Use of Data for Decision-making

Module 6 Session 3

20

Introduce the session on Use of Data for Decision-making.

Whole group brainstorming:

- Ask the participants what they understand by the term Decision-making, and this is important for Laboratory commodity management.

Why Data for decision making?

- **Scenario 1:** A manager is in the process of hiring someone. Interviews have been conducted, and two candidates emerged tops but they both have very similar qualifications. The manager made a decision on who to hire based on his intuition and opinion.
 - **Scenario 2:** When determining the cost of a lab test, e.g. HIV rapid test, a Lab manager may believe that KSh 100 is a reasonable price per test. He/she dictated that the price always be set at KSh 100.
1. For each scenario, do you think the manager made the right decision? Why or why not?
 2. What other factors might the manager have considered before making his/her decision?
 3. Who else might the manager consult about his/her decision?

The concept of decision-making (1)

- What is a **decision**?
A Decision is a choice arrived at on the basis of information received that may lead into a course of action.
- What is **decision-making**?
This is the process involved in identifying alternative courses of action and selecting one or more to undertake with the aim of maximizing attainment of the desired objective. Every decision making process produces a final choice.

The concept of decision-making (2)

- Who makes decisions?
All staff in the organization do
- At what level are decisions made?
Every level of the organization, from executive level to operational level.

The concept of decision-making (3)

- How does the decision-making process happen?
 - i. The decision-maker looks at the benefits and disadvantages of the decision situation
 - ii. Selects criteria to define the alternatives
 - iii. Identifies the alternatives
 - iv. Makes a choice from among the alternatives

Components of the Data for Decision-making cycle

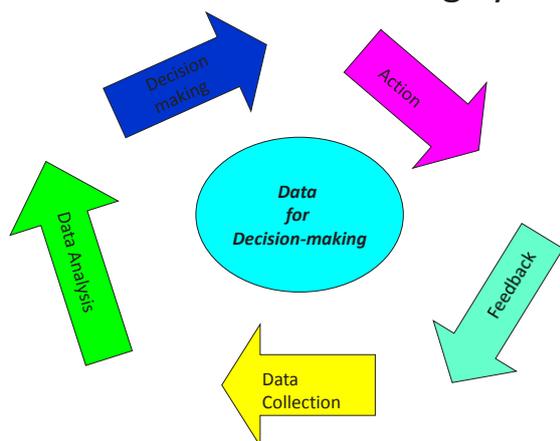
The data for decision-making cycle has the following components:

- i. Data collection
- ii. Data analysis
- iii. Decision-making
- iv. Action
- v. Feedback

Notes:

- The steps flow logically
- Each step influences the next just as all members in an organization influence each other.

Data for Decision-making cycle



Adapted from Source: page 62 of the manual *Training Module on Data for Decision-making*, 1st Edition, April 2007. Nairobi: Ministry of Health/DRH, Kenya.

Steps of the framework for using data for decision-making

- Step 1: **Collect data in a timely way**
Two healthcare providers are compiling their monthly commodity consumption report, but they cannot find the relevant registers. Besides they never received feedback on the last two monthly reports they sent in, nobody gave them feedback on. Their supervisor in the district calls to say that the report is already late by two days.
- What problems can you identify here?
- What do you think happened next?

Steps of the framework for using data for decision-making

- Step 1: **Collect data in a timely way**
 - Decide which data should be collected
 - Decide at what level the data will be collected
 - It is important to
 - set deadlines for data collection and
 - ensuring that deadlines are kept

Steps of the framework for using data for decision-making

- Step 2: **Put data into perspective**
 - Facility B reports that they used 400 test kits during the month. Is there a problem with this report ?To answer that question, a data manager needs to several questions:
 - Does the number reflect an acceptable or unacceptable usage rate?
 - Is it higher or lower than the previous month?
 - Is it what was expected or unexpected?
 - How does it compare to other projects (e.g. service data)?
 - Does it indicate that you are likely to meet your district-wide target to testing?

Steps of the framework for using data for decision-making

- Step 2: **Put data into perspective**
 - Determine its validity and accuracy
 - This enables us to compare it with other data to verify it.
 - Data is said to be valid if it is true in all interpretations
 - Data is said to be accurate if it is found to be close to its true value

Steps of the framework for using data for decision-making

- Step 3
 - Find the story – what does the data tell us?**
 - Raw data on its own is not useful, it needs to be transformed into information through a process of **analysis and interpretation**
 - One has to
 - Describe the event
 - Find the causes of the event
 - Explain how to control the phenomena

Steps of the framework for using data for decision-making

Step 3

Find the story – what does the data tell us?

Ask the following questions:

- Have there been any significant differences over time?
- Has the context changed over the period of time during which the data were being collected?
- What were the expectations versus actual outputs/targets according to the work plan and/or other project
- Was there new, unexpected information?
- What lessons were learned?

Steps of the framework for using data for decision-making

• Step 4

Develop explanations and determine actions to take. Take action.

- Interpret the data so that you can tell the story
- Always ask why something happened
- Examine trends to note, changes over time
- Compare actual outputs to targets
- Test if your conclusions are true

Steps of the framework for using data for decision-making

• Step 5

Report on analysis and actions

- State lessons learnt
- Prepare a summary brief or complete report in simple language for ease of understanding

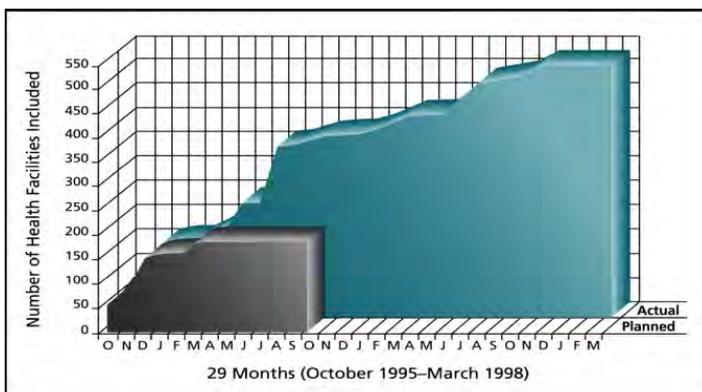
Steps of the framework for using data for decision-making

- After reporting, remember to **obtain feedback**
 - Enables adjustment actions to be undertaken
 - Different types of feedback are suitable for different audiences

Steps of the framework for using data for decision-making

1. Collect data in a timely fashion
2. Put data into perspective
3. Find the story
4. Develop explanations and take action
5. Report on analysis and actions

Example of commodity logistics impact



This data came from Kenya, where kits for the diagnosis and treatment of sexually transmitted infections (STI) were funded in 1995 by DfID. Without accurate data on usage, and without a reliable distribution system, a \$600,000 supply of STI kits was projected to serve 143 sites for one year. That's the small gray hill in the bottom left corner. With the design and implementation of a new tracking and distribution system, the same commodity budget for STI kits was used to supply more than 500 service sites for more than 29 months - that's the big blue mountain.

*“A poor manager uses statistics as a
drunken man uses lamp-posts - for
support rather than for illumination”*

Andrew Lang

Appendix 2: Sample course timetable

EFFECTIVE MANAGEMENT OF LABORATORY COMMODITIES BY HEALTH WORKERS IN KENYA

Venue: _____ Dates: _____

TIME	MODULE/SESSION	FACILITATOR
	DAY 1	
8.00 – 8.30 am	Arrival and Registration	
8.30 – 9.30 am	<ul style="list-style-type: none">• Welcome and Introductions• Remarks from MOH representative• Expectations• Group Norms and Schedule announcements• Course Overview	
9.30 – 10.30 am	Module 1: Overview of Laboratory Services	
10.30 – 10.45 am	TEA BREAK	
10.45 – 1.00 pm	Module 2: Laboratory Commodity Management	
1.00 – 2.00 pm	LUNCH BREAK	
2.00 – 2.30 pm	Module 3: Good Laboratory Inventory Management Session 1: Introduction to Inventory Management	
2.30- 3.30 pm	Module 3: Session 2: Determining Quantities to order and Requesting for Lab Commodities	
3.30 - 3.45 pm	TEA BREAK	
3.45 – 5.00 pm	Group Exercise: Quantification of Lab Commodities	

TIME	SESSION	FACILITATOR
	DAY 2	
8.30 - 8.45am	Recap of Day 1	
8.45 - 9.15 am	Plenary Discussion: Quantification Exercise	
9.15 – 9.45 am	Module 3: Session 3: Requesting for Lab Commodities	
9.45 – 10.45 am	Module 3: Session 4: Good Storage Practices	
10.45 – 11.15am	TEA BREAK	
11.15 – 11.45 am	Group discussion on Storage	
11.45 – 1.00 pm	Module 3: Session 5: Receiving and Issuing	
1.00 – 2.00 pm	LUNCH BREAK	
2.00 – 2.30 pm	Exercise: Receiving and Issuing	
2.30 – 3.30pm	Module 3: Session 6: Records and Tools supporting Inventory Management Practices Demonstration and exercises on use of various tools (1)	
3.30- 4.00pm	TEA BREAK	
4.00 – 5.00pm	Demonstration and exercises on use of various tools (2) - S11, Lab Stock Card, Laboratory Top-up form, Lab Expiry tracking chart, Lab Temp monitoring chart	

TIME	SESSION	FACILITATOR
	DAY 3	
8.15 – 8.30 am	Recap of previous day	
8.30 - 9.30 am	Module 4: Laboratory Commodity and Information flow Session 1: Introduction to Logistics Management Information System (LMIS)	
9.30 – 10.30am	Demonstration and Exercise: Lab LMIS	
10.30 – 10.45 am	TEA BREAK	
10.45- 11.30pm	Module 5: Applying the Monitoring Training and Planning (MTP) approach to Laboratory commodity management Session 1: Introduction to MTP and the MTP approach	
11.30-12.30pm	Session 2: Action Planning for facility level Laboratory Commodity Management practice	
12:30- 1.15pm	Presentation of action plans (1)	
1.15 – 2.15 pm	LUNCH BREAK	
2.15 – 3.00pm	Presentation of action plans (2)	
3.00- 3.45pm	Module: 6. Overview of M&E, Data Quality and Use of Data for Decision Making: Session 1: Overview of Monitoring & Evaluation (M&E) for commodity management	
3.45-4.30pm	Session 2: Improving Data Quality Session 3: Use of Data for Decision-making	
4.30 – 5.00 pm	<ul style="list-style-type: none"> • Post Test • Course Evaluation • Closing Ceremony 	
5.00 pm	TEA BREAK	

APPENDIX 3: INVENTORY MANAGEMENT TOOLS

Bin card/ Stock card:

1. Description of the stock card

- Is a serially numbered, single-copy, two- sided card
- Must exist for each laboratory stock preparation
- Is used for inventory control of laboratory commodities (including reagents, consumables, chemicals etc) in the facility or district laboratory store
- Is used for checking physical stock against records in the laboratory store
- A supply of Laboratory Stock cards is to be kept as a stock item by each laboratory in-charge of a PGH and DMLT

2 Other forms or resources needed to complete the stock card:

- Invoice or delivery note number accompanying the commodity from KEMSA or supplier
- Counter Requisition and Issue Voucher (S11) serial number accompanying goods from the general stores of the hospital/ facility or district

3. Location

Must be located next to each item if room available, or in a file or box in close proximity to the commodities- preferably within the laboratory store

4. Who fills the card

Laboratory in charge/laboratory manager (or his/her designated proxy) is responsible for documentation and recording of all laboratory commodity receipts and issues from the laboratory stores (including storage refrigerators, cool rooms etc).

5. When is the card filled

Every new receipt and issue must be entered at the time that stock is received or removed, without exception, for purposes of tracking movement of laboratory stock in storage

6. Steps for completing the stock card:

6.1 Open /complete a separate stock record card for differing strengths/concentrations and units of issue

6.2 Record for a new stock card:

- District: laboratory in charge enters the name for the district where facility is located followed by name of facility
- Commodity name and description: enters the generic name (trade name in brackets) and strength/ concentration of the item as appropriate
- Unit of Issue: enters pack size (e.g. number of tests per kit, or number of pieces per box etc)
- Item code: enters the code number allocated by the supplier/ requisitioning office and normally reflected against the item name on the delivery note from KEMSA/ supplier, or S11, S12, S13 or S3
- Add storage requirements: Enters special storage conditions (e g refrigeration at +2 to 8 0C)
- Average monthly consumption: enters a figure which he/she has calculated from

- Minimum level of stock for that commodity-as calculated by the manager
- Maximum levels of stock-as calculated by the manager (Note-since these values change over time, the calculations are best done using the electronic lab commodity tool)

6.3 Receipts: In the receipts column the Lab in charge will enter information as follows: -

- **Date:** enters the date the transaction occurred as dd/mm/yyyy
- **Received from:** enters the supply source of the stock item - for example KEMSA, NTLP, a name of Supplier, Hospital stores, NPHLS etc
- **Document Number:** Writes the number of the invoice or delivery note accompanying the commodity, or the serial number of the S11 or S12 that prompted the order being received.
- **Quantity:** enters the amount received (e.g. 1000 tests, 500 pairs of gloves)
- **Batch Number:** indicates this as is written on the packaging
- **Expiry date:** indicates as written on the item container
- **Location:** indicates where goods are received and stored e.g. cold room, or Lab store, or refrigerator
- **Name:** enters name of the officer receiving the commodity

6.4 Disbursements /Issues: In the disbursements/ issues column the Laboratory in charge will enter information as follows: -

- **Document number:** enters the serial number of S11 or Top- Up Form, or any other order/ request form accompanying the goods that are disbursed/ issued
- **Quantity:** inserts the amount/ quantity of goods disbursed (e.g. 10 liters of ethanol, 2 boxes of slides)
- **Destination:** specifies the unit or bench or ward to which the goods are issue For the district and PGH Laboratory store, destination could be a lower level/satellite facility such as a health centre or sub-district hospital, or police clinic
- **Name:** enters the name of person who physically receives and takes the commodity goods away

6.5 Stock: In the Stock column the Laboratory in charge will enter the following information: -

- **Balance:** inserts quantity of commodity in stock after each transaction i.e. after each receipt or issue
- **Unit value:** enters value in Kenya shillings for each unit of issue if known
- **Total value:** calculates and indicates the total value of commodity left in stock, calculated as balance multiplied by unit value

6.6 At bottom of each page, once the card is full indicate the balance carried forward and to which card number the balance is moved.

TOP UP FORM

Instructions for completing the laboratory Top -Up form

1. Title:

Laboratory Top-Up Form

2. Objective of instructions:

To describe the correct use of the supply Top -Up Form

3. Description and location of the form

- a. Is a serialized two-sided card used to order supplies for use on the bench or section from the laboratory store / laboratory in-charge.
- b. It allows for documentation of all issues from the lab store made to the bench or section in order to replenish or top-up lab supplies
- c. It helps the **lab in-charge to see at a glance the usage of a particular commodity on the bench or section.**

4. Location:

The card under current use is kept in a file within the section or next to the bench.

5. Who fills the Top-Up Form?

- a. Both the staff who is requesting /ordering items for the bench or section and the one issuing from Laboratory store(s) will fill the form
- b. The staff of the bench/ section/unit will fill in this card every time he/she is requesting initial or additional commodities from the laboratory store(s).
- c. The laboratory in-charge /or the designated laboratory staff will fill relevant columns of this card to the bench or section.

6. Steps for filling the top up form

6.1 The staff or section head who initiates the order fills in the following information:

- Name of Facility: enter name of the laboratory, e.g. “Coast PGH” or ‘Hola D/H”
- Department/Section: indicate the bench or section, e.g. serology, parasitology, etc or the unit/area ordering this item, e.g. “VCT” or “MCH”, etc
- Date: write down the date of the transaction
- Commodity: indicate the name of the commodity as it appears on the laboratory stock card in the store(s)
- Unit of issue: enter as it appears on the laboratory stock card
- Current balance: enter the amount/quantity of units that are remaining for use on the bench/section
- Tests done: enter the number of tests done between your last order from the store and this order
- Order quantity: **indicate the number of units you are ordering through this request**

Present the top-up form with this order to the laboratory in-charge or the staff member designated to man the laboratory store(s).

6.2 The laboratory in-charge or his/her designated proxy fills the relevant column as follows:

- **Issue quantity:** enter the number of units the laboratory in-charge is issuing to the bench
- **Issued by:** enter name of the issuing officer who also appends his/ her signature
- **Received by:** enter name of the staff officer collecting/receiving the issued stock for the bench/ section
- **Remarks:** enter any relevant remarks.

Temperature Control Log

Steps for completing Temperature Control Log:

- Facility: Enter the facility name
- Location: Enter the location where the temperature is being checked. i.e. commodities, commodities fridge and Lab fridge.
- A.M./P.M. Time: Enter the time the temperature is checked
- Recorded temp (°C): write down the temperature
- Indicate if the temperature recorded is within the acceptable range by writing Yes or No
- Enter the initials of the person who recorded the temperature

Distribution:

- The logs in use are pinned up in the relevant area.
- Completed logs are filed and stored in the LAB store or Lab working area as may be relevant name of the staff officer collecting/receiving the issued stock for the bench/section

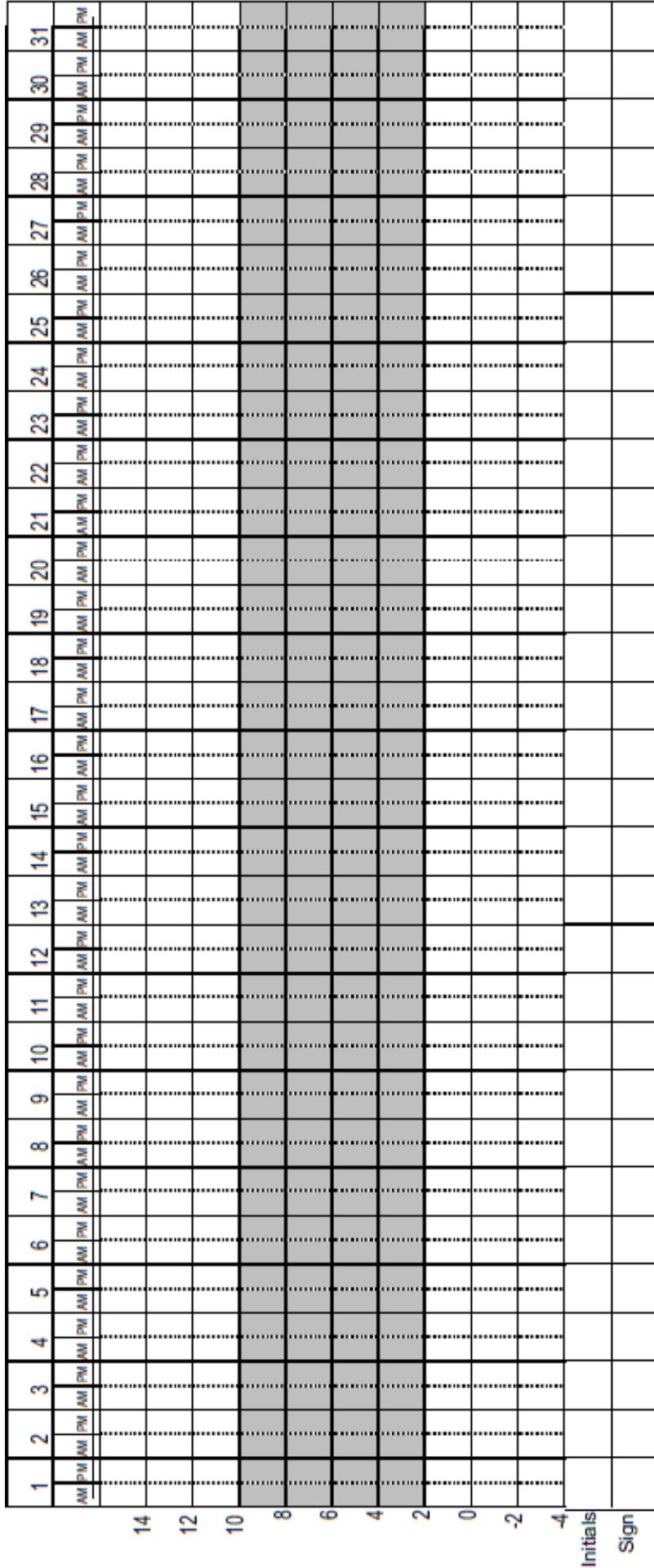
MINISTRY OF HEALTH

+2° TO +8° C TEMPERATURE MONITORING CHART

District _____ Name of Health Facility _____ Month _____ Year _____

NAME AND TYPE OF REFRIGERATOR _____ OPERATING ON GAS ELEC SOLAR KEROSENE

ACCEPTABLE TEMPERATURE -16°C OR COLDER



DOT THE TEMPERATURE MORNING AND AFTERNOON IN DEGREES



Tracking Expiry dates of Laboratory Commodities

Date Approved: October 2012

Approved by: Ministries of Health

1. Objective

To describe the procedure for tracking the expiry dates of Laboratory commodities in order to avert expiries.

2. Responsible Persons

2.1. The facility staff member in charge of managing Laboratory commodities or his/her designated proxy.

3. Tools Needed (Refer to appendices)

3.1. Expiry Tracking Chart for Laboratory reagents and consumables

3.2. Erasable Marker Pen or stickers

Note:

- The Expiry Tracking Chart for Laboratory reagents and consumables is designed to be reusable.
- Use an erasable marker pen or stickers. DO NOT USE A PERMANENT MARKER. If you use a permanent marker, you will need to use spirit or other ink removers to erase the entries.
- The chart has three columns for three years. The first column should be used for the current year and the other two for the following two consecutive years. Fill in the corresponding years.
- At the beginning of each year, delete the old year. Thereafter shift the originally second year to become the first year. Finally, add the subsequent two years in the remaining two columns.

4. Procedure

The staff in charge of the Lab commodities or his/her designated proxy shall

- 4.1. Write the name of the product in the column marked "Commodity".
- 4.2. Indicate the batch number of the product in the second column. This column has space to list up to three different batches or lot numbers.
If you have more than three batches/lots, record the three that have the shortest expiry.
- 4.3. Indicate the expiry date for each of the 3 batches listed.
- 4.4. Mark the month and year when the commodities expire (in the correct year/month column) using a **bold red X or sticker**
- 4.5. Mark the month and year when the commodities will reach 3 months prior to expiry date (in the correct year/month column) using a **bold green X or sticker**
- 4.6. Take action 6 months prior to the expiry date by issuing, re-distributing or exchanging the short-dated commodities.
- 4.7. Erase the entry from the chart once the short-dated product has been removed from stock and indicate the next batch to expire.

Note:

- If a commodity is to expire after the three years covered on the chart, do not enter it on the chart. Wait until it is within three years expiry then enter the details of the reagents accordingly.
- If a commodity has a shorter shelf-life than 6 months (e.g. hematology controls), adjust the timelines accordingly.
- You may need to use more than one chart, depending on the number of commodities and Laboratory commodity storage areas.

5. Storage of Tools

5.1. The Expiry Tracking Chart for Laboratory reagents and consumables should be hung on a wall in the Laboratory commodity storage area and should be visible at all times.

APPENDIX 4: ISSUE AND RECEIPT OF COMMODITIES

Issue and Receipt Voucher (S12):

- Is serially numbered, bound in a book. Each voucher has six pages, one original and five copies.
- Is used to transfer LAB stocks from one facility to another external site or other peripheral facility.

Steps for completing the Issue and Receipt Voucher (S12):

a. The Lab staff in charge of the LAB commodities or designated proxy records: Under Supplier/Issuing Office

- Name of Facility: requesting reagents
- Supplier/Issuing Office: e.g. CPGH
- Min./Dept: Health/Medical
- Address: of CPGH
- Issuing officer: Lab staff's name
- Designation and Lab stamp
- Merchant name/Address: is left blank
- Date: date stock issued
- Issue approved by: name of designated authorizing officer signing letter of request
- Date: date of signed letter
- Stores packed by: issuing laboratory staff's name
- Stores recorded by: issuing laboratory staff's name
- Mode of transportation: record how Reagents were sent, or if collected, by whom
- Designation and Lab stamp
- L.P.O. No.: is left blank
- Delivery note: is left blank
- Invoice: is left blank

2. The requisitioning/receiving facility records upon receipt of Reagents: Under Requisitioning/Receiving Office:

- Min./Dept.: e.g., Health /Port Reitz District Hospital
- Indenting unit: Lab
- Address: of indenting unit
- Receiving officer: name
- Designation and stamp:
- Reasons for demand: Write A
- Indent approved by: the name of the designated authorizing officer signing letter of request
- Date: date of letter of request
- Address for delivery: address of receiving facility
- Receipt recorded by: name of person recording the receipt of Reagents
- Chargeable to: is left blank
- Vote/Head: is left blank
- S/Head/Item No.: is left blank
- Quantity Issued Received: number of packs received
- Certified that the above items/s has/have been Received/Issued and recorded on Ledger/Inventory: signed by receiving Lab personnel.
- Signature of Receiving Officer and Date

Distribution:

- The S12 document has six pages.
 - o The original is retained by issuing facility Lab.
 - o The receiving facility receives the second and third pages.
 - o The fourth page is sent to the receiving facility's accounts department.
 - o The fifth page is sent to the issuing site's accounts department.
 - o The sixth page remains in the book.
- The S12 will be filed together with the letter of request and accompanying needs list from the peripheral facility in the issuing site
- S-11 has three pages
- Retain the original copy and file it chronologically for easy retrieval.
- The duplicate is retained by the receiving facility.
- The triplicate is left in the S11 book.

Where S12 is not available facilities may use the Counter Requisition and Issue Voucher (S11), and S13

FORM S12 (revised)		REPUBLIC OF KENYA		No.....
ISSUE AND RECEIPT VOUCHER				
Name of Facility:				
Requisitioning/Receiving Office:.....				
Supplier/Issuing Office:		Min./Dept:		
Issue approved by:		Indent approved by:		
Date:		Date:		
Stores packed by:		Address for delivery:		
Stores recorded by:		Receipt recorded by:		
Mode of transportation:		Designation and stamp:		
Designation and stamp:		Chargeable to:		
L.P.O. No.:		Vote/Head:		
Delivery note:		S/Head/Item No.:		
Invoice:		Total value		
Unit		Quantity to follow		Rate
Description		Quantity Issued/Received		Sh.
Item code		Quantity Required/Ordered		Cts.
1				Stock Balance
2				Ledger Folio. No.
3				Remarks
4				
5				
6				
7				
8				
9				
10		Total		
Certified that the above items/s has/have been Received/Issued and recorded on Ledger/Inventory				
Signature of Issuing Officer and Date		Signature of Receiving Officer and Date		

COUNTER REQUISITION AND ISSUE VOUCHER (S11):

Counter Requisition and Issue Voucher (S11):

- Is used for issue, delivery, and receipt of stock.
- Is a serially numbered triplicate form.
- Is used by the outpatient Lab to order from the Lab commodities, and by wards and other departments to order from the outpatient Lab.
- Is kept in each department requiring its use.

Steps for completing the Counter Requisition and Issue Voucher (S11):

1. Designated person, authorized to requisition the stock, records:
 - Ministry (of Health) Depart./Branch (Medical) and Unit (e.g., CPGH/ART)
 - To (Issue point): e.g., Lab store
 - Issue to (Point of use): receiving location
 - Item Description:
 - Unit of Issue: the quantity in the container or pack size
 - Quantity required: the number of units of issue required
 - Account No.: designated number if appropriate
 - Date: of requisition
 - Requisitioning Officer: name, designation, and signature
2. Designated person, authorized to issue the stock, records:
 - Quantity Issued: the number of units of issue which are actually issued
 - Value: of total amount of stock issued (calculated using average unit price)
 - Remarks/Purpose: expiry date of stock issued
 - Issued by: issuing officer's name and signature
 - Date: issued
3. Designated person authorized to receive the stock checks identity and quantity of supplies issued and records:
 - Received by: name, designation, and signature

Distribution:

The Counter Requisition and Issue Voucher (S11) is to be completed in triplicate:

- The original is kept by the Lab personnel.
- Duplicate is retained by the initiating department. Triplicate remains in the S11 book.

FORM S11	Serial No.					
REPUBLIC OF KENYA						
COUNTER REQUISITION AND ISSUE VOUCHER						
Ministry	Unit.....					
Dept/Branch.....						
To (Issue point).....						
Please issue the stores listed below to (Point of use).....						
Code No.	Item Description	Unit of Issue	Quantity Required	Quantity Issued	Value	Remarks/Purpose
Account No:		Designation: (Laboratory in - charge)				
Requisitioning Officer:		Signature:				
Issued by:		Designation:				
Received by:		Signature:				
Date:		Date:				
Sign:		Sign:				
Date:		Date:				
Sign:		Sign:				

APPENDIX 5: DISPOSAL OF LAB REAGENTS OR ITEMS (F.O.58)

F.O. 58

**REPUBLIC OF KENYA
REPORT OF THE BOARD OF SURVEY ON STORES (UNSERVICEABLE AND SURPLUS TO REQUIREMENTS)**

Ministry of Station.....
 N.B.-Column Nos. 1-6 to be completed by the Department prior to the assembly of the Board. Department.....

1	2	3	4	5	6	7	8	9	10
Item No.	Article	Quantity	Date Of Purchase	Original Value	State Whether Unserviceable Or Surplus	Board's Report On Condition	Recommendation Of Board For Disposal	Estimated Local Saleable Value If Sale Is Recommended	Remarks
DECISION OF: -									
Signature and Official Designation of Officer-in-Charge of Stores Date..... Station.....						ACCOUNTING OFFICER Accounting Officer Date.....			
.....ChairmanMemberMember Date..... Station.....									

Steps for completing Report of the Board of Survey on Stores (Unserviceable and Surplus to Requirements) (F.O.58) – *applicable to GOK sites only*

1. Record:

- Ministry of: Health; Department: Medical; Station: Facility name
- Complete the table:
 - Column 1: Item No.
 - Column 2: Article: generic name; strength/concentration; dosage form
 - Column 3: Quantity: write in quantity to be destroyed
 - Column 4: Date of Purchase: write date the product was delivered to facility
 - Column 5: Original value: insert value if known
 - Column 6: State whether Unserviceable or Surplus: Unserviceable

2. Signature and Official Designation of Officer-in-Charge of Stores: Sign; state position, and date the form.

Distribution:

ART Programme: Notification of Reagents Set Aside for Disposal

- The original is forwarded to the ACCU or KEMSA/LMU
- One copy of the completed and signed ART Programme: Notification of Reagents Set Aside for Disposal is retained by the Laboratory in charge of the ART Programme.
- One copy of the completed and signed ART Programme: Notification of Reagents Set Aside for Disposal is retained by the Laboratory in charge.

How to fill the daily activity register (DAR).

1. Title of Register

Daily Activity Register for Laboratory Reagents and Consumables (MoH 642)

2. Objective

To describe the procedure for completing the register accurately

3. Description

This tool is to be used for recording and tracking reagents and consumables issued and used daily / in each shift in the laboratory or the SDP.

It also records and tracks the number of tests done, quantity used and ending balance by end of each day/shift.

4. Location of the register

Must be physically located or placed on every bench, lab section or user point e.g. service delivery point (SDP) such as VCT.

5. Who will fill it?

The laboratory technician/technologist or primary user of the item during the particular shift duty / day at the particular bench/section/SDP.

6. When to fill the register?

For each shift/day, (i) Immediately you receive new stock of a commodity, complete the first eight (8) columns of the register (ii) Each time you undertake a test.

7. How to use the register for different commodity items

Before using this register, the Lab In-Charge must allocate each commodity a number of pages according to frequency with which the commodity is used/ consumed. Each different unit of issue of a commodity should be on a separate page.

8. Steps for filling the register

On the first page of the DAR book, fill in the following:-

Facility name: Write the name of your health facility.

Facility code: Write your Master facility list code.

Province/County: Write the province or county where the health facility is located.

District: Write the district where the health facility is located.

During each shift, the Laboratory staff or In-Charge must fill in the details as follows:

- 8.1 Enter the bench or section each time you open a new page
- 8.2 Enter the name of the commodity being tracked in the space provided
- 8.3 Fill in the date in the format dd/mm/yyyy in the first column
- 8.4 Enter the shift duty as appropriate (e.g. 8 to 5; 8 to 2; 2 to 7; etc)
- 8.5 Enter the unit of issue e.g. 1 kit of 50 tests each (1x50 tests)
- 8.6 Enter the Beginning balance of the commodity at the bench or section. This is the amount of the particular commodity left over from the previous shift or filled page

- 8.7 Fill in the quantity received by the bench during your shift
- 8.8 Origin of the received stock: State the source or where the item originated from e.g. Lab i/c, Lab Store, DTLC, main hospital store
- 8.9 Indicate the batch number and expiry date of the received items as indicated on the package/ container
- 8.10 Quantity used during the shift: Enter the total quality of the commodity used during the shift/day
- Note: This quantity should include the sum of the quantity of commodity actually used for testing as well as quantity used for repeats and controls.
- 8.11 Number of Tests done during the shift: At the end of the shift/day, count the total number of tests done using information from the relevant Test register (e.g. Haematology register), and enter the total in the relevant row and column
- 8.12 Losses during the shift: In this column, enter the total amount/volume of commodity that was lost if any (e.g. from spills, damage, pilferage, etc)
- 8.13 In the Adjustments column, enter the number of tests either received from another facility or excess quantities counted when stock-taking (Positive adjustments) or number of tests given to another site or quantities of stock found to be missing when stock-taking or those quantities used for training purposes (Negative adjustments).
- 8.14 Ending balance at the end of the shift: Enter the quantity of the specific commodity that you have on hand at the end of the shift/day
- 8.15 In the 'Remarks' column, record any special comments, including an explanation for the losses or adjustments
- 8.16 Enter the name and signature of the Laboratory technician/technologist or primary user who is filling the register, in the appropriate columns
- 8.17 Every time a page is full, add up the figures in the following columns "Quantity received during the shift", "Quantity used during the shift", "Number of tests done during the shift", "Losses during the shift", "Positive adjustments", "Negative adjustments". Fill the totals in the Row marked Page totals.
- 8.18 On the full page, also enter the Balance carried forward from the last row's Ending balance, the date and complete the number of Days out of stock, if any, for that commodity.

The totals of each individual commodity from the various pages should be added up at the end of the month and used to fill the Facility CDRR.

Facility Consumption Data Report and Request (F-CDRR) for ART Laboratory monitoring reagents

02/04/14

MINISTRY OF HEALTH
NHPLS / NASCOP
FACILITY CONSUMPTION DATA REPORT & REQUEST (F-CDRR) FOR ART LABORATORY MONITORING REAGENTS

Name of Facility:		Facility Code:		District:		Province / Country:	
Affiliation:		Local Authority:		FBO:		Private:	
REPORT FOR PERIOD: BEGINNING:		ENDING:		REPORT FOR PERIOD: BEGINNING:		ENDING:	

State the number of CD4 Tests conducted:-
TOTAL NUMBER OF CD4 TESTS DONE DURING THE MONTH (REPORTING PERIOD):

COMMODITY CODE	COMMODITY NAME	UNIT OF MEAS	BEGINNING BALANCE	QUANTITY RECEIVED FROM CENTRAL WAREHOUSE (e.g. KEMSA)		QUANTITY RECEIVED FROM OTHER SOURCE(S)		QUANTITY USED	LOSSES / WASTAGE	ADJUSTMENTS (outside of (+) or (-))		ENDING BALANCE (PHYSICAL COUNT at end of Month)	QUANTITY REQUESTED						
				Quantity	Lot No.	Quantity	Lot No.			Positive	Negative								
FACS Caliber Reagents and consumables																			
CAL 002	Tri-TEST CD3CD4CD45 with TRUCOUNT Tubes	test																	
CAL 003	CellBrite 3 Beads	test																	
CAL 005	FACS Lysing solution	ml																	
CAL 006	Falcon Tubes	pcs																	
CAL 009	Printing Paper	ream																	
CAL 010	Printer Cartridge	1																	
FACS Count Reagents and consumables																			
FACS 001	FACSCOUNT CD4CD3 Reagent (Adult)	test																	
FACS 002	FACSCOUNT CD4 % reagent (Paediatric)	test																	
FACS 003	FACS Control kit	test																	
FACS 004	Thermal Paper FacsCount	1 roll																	
Cyflow Partec Reagents and consumables																			
PART 001	EASY Count CD4CD3 Reagent (Adult)	test																	
PART 002	EASY Count CD4 % reagent (Paediatric)	test																	
PART 003	Control check beads	test																	
PART 004	Thermal paper	1 roll																	
Common Reagents / Consumables																			
CON 001	Sheath fluid	20L																	
CON 002	Cleaning fluid	5L																	
CON 003	Rinse fluid	5L																	
CON 005	Yellow Pipette Tips (50µl)	pcs																	
CON 006	Blue Pipette Tips (1,000µl) / FACScalibur	pcs																	
CON 008	CD4 Stabilizer tubes 5ml	pcs																	
CON 009	EDTA Microtainer tubes (Paediatric)	pcs																	
CON 010	EDTA Vacutainer tubes 4ml	pcs																	
CON 011	Red top / Plain / Silica Vacutainer tubes 4ml	pcs																	
Haematology Analyser																			
												Tick Type of Machine at the Facility as appropriate		System: <input type="text"/>		Celtax 54003222 <input type="text"/>		Other (please specify): <input type="text"/>	
HAS 001	Cell / ACT Pack	20L																	
HAS 002	Cell Clean / ACT Rinse	50ml																	
HAS 003	Stromatolyser	1,500ml																	
HAS 004	Cell Control	4ml																	
HAS 005	Calibrators	4ml																	
HAC 001	Cleanac	5L																	
HAC 002	Cleanac 3	1L																	
HAC 003	Isotonic-3	20L																	
HAC 004	Haemolysin-3N	1L																	
HAC 005	Haemolysin-5	1L																	
HAC 006	Low control	2ml / 3ml																	
HAC 007	Normal control	2ml / 3ml																	
HAC 008	High Control	2ml / 3ml																	
Biochemistry Analyser																			
												Tick Type of Machine at the Facility as appropriate		BTS 335010/000 <input type="text"/>		Eurolyser <input type="text"/>			
BAE 001	Sodium	720 Tests																	
BAE 002	Chloride	665 kit																	
BAE 003	Urea	4x20ml																	
BAE 004	Potassium	720 Tests																	
BAE 005	Creatinine	5 x 20ml																	
BAE 006	Alanine Aminotransferase (ALT/GPT)	5 x 20ml																	
BAE 007	Aspartate Aminotransferase (AST/GOT)	5 x 20ml																	

Comments:

Order for extra LMS tools:- (1) Daily Activity Register for Laboratory Reagents and Consumables (MOH 542): (2) F-CDRR for ART Lab Monitoring Reagents:

To be requested only when your Date collection or reporting Tools are nearly full. Indicate quantity required for each tool type.

Filled by (name): _____ Signature: _____ Designation: _____ Telephone / Mobile: _____ Date Filled: _____

Approved by: _____ Signature: _____ Designation: _____ Telephone / Mobile: _____ Date Approved: _____

F-CDRR for ART Laboratory Monitoring reagents, v.1.0, Dec 2012

Facility Consumption Data Report and Request (F-CDRR) for ART Laboratory monitoring reagents

How to complete the Facility Consumption Data report and request (F-CDRR) form for ART Laboratory monitoring reagents

Use the following instructions to complete the F-CDRR for ART Laboratory monitoring reagents:-

Use of the F-CDRR:

- Used to report data on the following commodities:- Laboratory reagents for ART treatment monitoring (i.e. reagents for CD4 count, Haematology, Biochemistry) and related consumables at facility level
- It is used to summarize and report on consumption of individual commodities used by a facility each month, and also to request stock for the facility from KEMSA or other supply chains.
- Source of Data: It draws its information from the Daily Activity Register for Laboratory Regents and Consumables (MOH 642).

Who will fill the F-CDRR and When?

- The Facility Laboratory in-charge or his/her designated deputy will complete the form.
- The F-CDRR is completed by the facility at the end of each month and sent to the Logistics Management Unit (LMU) before the 10th of the following month.

To be filled on the second page of the F-CDRR book:

Name of Facility: Write the name of your health facility/laboratory.

Facility code: Write your Master Facility List (MFL) code.

Province/County: Write the province or county where the health facility/laboratory is located.

District: Write the district where the health facility is located.

To complete a report each month:

Facility name: Write the name of your health facility/laboratory

Facility code: Write your Master Facility List (MFL) code.

District: Write the district where the health facility/laboratory is located.

Province/County: Write the province/county where the health facility/laboratory is located.

Affiliation: Indicate the affiliation for your health facility/laboratory by ticking (✓) in the appropriate box.

(Options: Ministry of Health; Local authority; FBO (Faith-based organization); NGO (Non-governmental organization); Private)

Report for Period: Beginning (date): Write the date of the first day of the period covered by the report. Enter as day-month-year (in format dd-mm-yyyy), e.g. 01/09/2011.

Report for Period: Ending (date): Write the date of the last day of the period covered by the report. Enter as day-month-year (in format dd-mm-yyyy), e.g. 30/09/2011.

Number of CD4 Tests conducted: In this section, write the total number of CD4 tests conducted at the facility during the month, i.e. the actual number of tests done without repeats or failed runs.

Commodity code, Commodity name, Unit of Issue: The commodities are pre-printed on the form along with a code and unit of issue. For each commodity, complete the columns in the main part of the reporting form as follows:

Beginning Balance: Enter the quantity, in units, of each usable ART laboratory reagent or consumable available for use in the facility at the beginning of the reporting month.

Note: Please include all commodities irrespective of the supplier from whom they were sourced.

NB. The Beginning balance for this month should be equal to the Physical count (Ending balance) at the end of the previous month. If it is not, indicate the loss or adjustment in the respective columns of this F-CDRR and explain in the Comments section.

Quantity Received from the Central Warehouse (e.g. KEMSA): Enter the total Quantity, in units, of each ART laboratory reagent or consumable received by your facility from the Central Warehouses, i.e. KEMSA or SCMS during the reporting month under consideration. If no stock was received at the facility during the month, enter a zero ("0") in this column.

The Quantity received is obtained from the Quantity Received or Receipts section of the Bin card / Stock card.

Quantity Received from Other Source(s): Enter the total Quantity, in units, of each ART laboratory reagent or consumable received by your facility from any other sources (e.g. partner, donor) during the reporting month under consideration. If no stock was received at the facility during the month, enter a zero ("0") in this column. The Quantity received is obtained from the Quantity Received or Receipts section of the Bin card / Stock card.

Quantity Used: Enter the total Quantity, in units, of each ART laboratory reagent or consumable used in the facility during the reporting month. If no reagent or consumable was used during the month, enter a zero ("0").

Note: This quantity should include the sum of the quantity of commodity actually used for testing as well as quantity used for repeats and controls.

The Quantity used is obtained from the Daily Activity Register for Laboratory Regents and Consumables (MOH 642) or equivalent records of consumption in the facility. If several pages of the DAR have been used over the month, be sure to aggregate the figures across all the pages used that month for each laboratory reagent or consumable.

Losses / Wastage: Enter the total Quantity, in units, of each ART laboratory reagent or consumable lost or wasted at the facility during the month, e.g. defective, damaged or expired stock. The reason for the loss/wastage should be written in the “Comments” section.

Adjustments [Indicate if (+) or (-)]: Enter the total positive or negative adjustments for the month, for each ART laboratory reagent or consumable.

An **adjustment** is a change in stock balance for any reason other than reagents used in the laboratory or quantities received from suppliers.

Positive adjustment: Enter the quantity of each commodity that was added to the facility stock for any reason except receipt from the official supplier during the month. Examples: transfer of stock from another health facility to your facility, excess quantities counted when stock-taking.

Negative adjustment: Enter the quantity of each commodity that was removed from the facility stock for any reason except use in laboratory testing or loss/wastage. Examples: transfer of stock from your facility to another health facility, quantities of stock found to be missing when stock-

Adjustments should be recorded in the Bin card when they occur. The reason for the adjustment should be written in the “Comments” section.

Ending balance (PHYSICAL COUNT at end of Month): At the end of each month, conduct a physical count of each ART laboratory reagent or consumable, irrespective of their source. Enter the total Quantity, in units, of each ART laboratory reagent or consumable counted in the facility at the end of the reporting month. If there is no stock at the facility for a commodity, enter a zero (“0”).

Report any differences between the Physical count and the expected Stock Balance in the Bin card as Adjustments or Losses. The reason for the adjustments or losses should be written in the “Comments” section.

Quantity requested: Calculate the quantity, in units, for each ART laboratory reagent or consumable that your health facility should order, guided by the following formula:-

- Multiply the reported Quantity used by 4
- Subtract this value from it the Ending balance (Physical count)
- This gives the Quantity requested in units.

Tick Type of Machine at the Facility as appropriate [Haematology Analyser / Biochemistry Analyser]: For Haematology and Biochemistry sections, tick, in the boxes provided, the relevant machine that your health facility is using.

Comments: Use this space to explain losses and adjustments that have been reported as explained above. Additional remarks related to the commodities reported may also be made, e.g. need for stock re-distribution to prevent expiry.

Order for extra LMIS tools: Use this section to request for additional DAR or F-CDRR only when the tools in the facility are nearly full. Indicate quantity required for each type of tool.

Filled by: As the person who has filled in this form, write your name, designation, telephone contact, and date that the report was prepared, and sign the form.

Approved by: Take the report to the Facility in-charge (or other authorized person) for review. Once reviewed, this person should write their name, designation, telephone contact, and date that the report was approved, and sign the form.

The signature of the programme manager or other authorized person confirms that the report has been reviewed and is valid.

Facility Consumption Data Report and Request (F-CDRR) form for Laboratory commodities (MOH 643)

ORIGINAL

MOH 643

MINISTRY OF HEALTH
FACILITY CONSUMPTION DATA REPORT AND REQUEST (F-CDRR) FOR LABORATORY COMMODITIES

Name of Facility: _____ Facility Code: _____
 District: _____ Province / County: _____
 Affiliation: Ministry of Health _____ Local Authority _____ PBO _____
 NGO _____ Private _____
 Report for Period: Beginning: _____ Ending: _____
 dd/mm/yyyy dd/mm/yyyy

Type of service	No. of Tests done
Applicable to HIV Test Kits only	
VCT	
PTCT	
PMCT	
Blood screening	
Other (please specify)	

Applicable to Malaria testing only			
Test	Category	No. of Tests performed	No. Positive
RDT	Prisons <u>under</u> 5 years		
	Prisons <u>over</u> 5-14 yrs		
Microscopy	Prisons <u>under</u> 5 years		
	Prisons <u>over</u> 5-14 yrs		

Commodity Name	Unit of Issue (e.g. Test)	Beginning Balance	Quantity Received	Quantity Used	Number of Tests done	Losses	Adjustments (Indicate if (+) or (-))		End of Month Physical count	Quantity expiring in less than 6 months	Days out of stock	Quantity Reordered for Re-supply
							Positive	Negative				
HAEMATOLOGY COMMODITIES												
Haematology reagents												
Normal control												
Abnormal high control												
Abnormal low control												
Grouping anti-sera - Anti-A												
Grouping anti-sera - Anti-B												
Grouping anti-sera - Anti-D												
Grouping anti-sera - Anti-AB												
Grouping anti-sera - Anti Human Globulin (AHG)												
Haemocue cuvettes												
Leishman stain												
BIOCHEMISTRY COMMODITIES												
Albumin												
Alkaline phosphatase												
ALT (SGPT)												
AST (SGOT)												
Creatinine												
Electrolytes												
Gamma GT												
Glucose test strips												
HDL Cholesterol												
Multitix												
Pregnancy test strips												
Serum Amylase test kit												
Serum protein kit												
Total Cholesterol												
Triglycerides												
Urea												
CONSUMABLES												
Applicator sticks												
Blue tips												
EDTA Vacutainer Stabiliser tubes												
EDTA Vacutainer tubes												
Latex Gloves												
Microscope slides												
Plain Vacutainer tubes												
Shed Polypots												
Vacutainer needles G21												
Vacutainer needles G23												
Yellow tips												
MICROBIOLOGY COMMODITIES												
Mecconkey agar												
CLID agar												
Methanol												
Glycerol												
Oil immersion												
Universal bottles												
Culture Plates												
MALARIA-RELATED LABORATORY COMMODITIES												
Malaria Rapid Diagnostic Test (RDT)												
Field Stain A												
Field Stain B												
Giemsa Stain												
TB-RELATED LABORATORY COMMODITIES												
Auramine-O (*for District hospital labs)												
Carbol Fuchsin (solution)												
Falcon tubes												
Hydrochloric acid (HCL)												
Lens Tissue												
Methylene Blue												
Microscope slides												
Potassium Permanganate (*for District hospital labs)												
Sputum trays (AFB Polypots with lids)												
Sulphuric acid												
HIV-RELATED LABORATORY COMMODITIES												
Rapid HIV 1&2 Test 1 - Screening												
Rapid HIV 1&2 Test 2 - Confirmatory												
Rapid HIV 1&2 Test 3 - Tiebreaker												
Hepatitis B (ELISA) Test (Hepanostika)												
Hepatitis C (ELISA) Test (Murex HCV)												
ELISA HIV B AIDS 1&2 Test (Murex HIV)												
ELISA HIV B AIDS 1&2 Test (Murex HIV)												
Rapid Syphilis Test (RPR)												

Explain Losses & Adjustments: _____

Order for extra LMS tools: To be requested only when your data collection or reporting Tools are nearly full. Indicate quantity required for each tool type.

(1) Daily Activity Register for Laboratory Reagents and Consumables (MOH 642): _____ (2) F-CDRR for Laboratory Commodities (MOH 643): _____

Completed by: _____ Tel: _____ Designation: _____ Sign: _____ Date: _____
 Approved by: _____ Tel: _____ Designation: _____ Sign: _____ Date: _____

Facility Consumption Data Report and Request (F-CDRR) form for Laboratory commodities (MOH 643)

1. Use of the F-CDRR:

- Used to report data on the Laboratory (Lab) commodities, including reagents, consumables and other commodities in the Lab tracer item list at the health facility level, e.g. a hospital or other type of service delivery point (SDP). [Use the tracer item list identified by NPHLS as a primary priority list for regular tracking; however additional items may be tracked as per individual district or provincial/county tracking requirements.]
- Each month, it is used to summarize and report on consumption of individual commodities used by all lab sections / areas within a facility
- Also used to request stock for the facility from KEMSA or other supply chains, or any other appropriate source.
- Source of Data: It draws its information from the Daily Activity Register for Laboratory Reagents and Consumables (MOH 642), the Lab Stock cards and / or Top-Up forms in use by the main Lab, Lab store and the various user points within the facility, as applicable.

Who will fill the F-CDRR and When?

- The Facility Laboratory in-charge or his/her designated deputy will complete the form.
- Do not leave any blank cells. In case there is no value, put a zero (0).
- The F-CDRR is completed by the facility at the end of each month and sent to the Logistics Management Unit (LMU) before the 10th of the following month.

To be filled on the second page of the F-CDRR book:

Name of Facility: Write the name of your health facility/laboratory.

Facility code: Write the Master Facility List (MFL) code of your health facility/laboratory.

Province/County: Write the province or county where the health facility/laboratory is located.

District: Write the district where the health facility is located.

To complete a report each month:

Name of Facility: Write the name of your health facility/laboratory

Facility code: Write the Master Facility List (MFL) code of your health facility/laboratory.

District: Write the district where the health facility/laboratory is located.

Province/County: Write the province/county where the health facility/laboratory is located.

Affiliation: Indicate the affiliation for your health facility/laboratory by ticking (√) or putting a cross (X) in the appropriate box.

Select from the allocated options: - Ministry of Health; Local authority; FBO (Faith-based organization); NGO (Non-governmental organization); Private.

Report for Period: Beginning (date): Write the date of the first day of the month covered by the report. Enter as day-month-year (in format dd-mm-yyyy), e.g. 01/09/2011.

Report for Period: Ending (date): Write the date of the last day of the month covered by the report. Enter as day-month-year (in format dd-mm-yyyy), e.g. 30/09/2011.

Type of Service; No. of Tests done: In this section, write the total number of tests conducted at the facility during the month, for the following services:

- (i) HIV Testing: disaggregate the number of tests done by Voluntary Counseling & Testing (VCT), Provider-initiated Counseling & Testing (PITC), Prevention of Mother to Child transmission (PMTCT), Blood screening and any other.
- (ii) Malaria testing: This applies to Malaria tests done with either Rapid Detection Test (RDTs) or with Microscopy in category of above or below 5 years of age. Disaggregate the number of tests done by RDT or Microscopy for each age category given, as well as the number of positive tests obtained.

Commodity name: The various Lab commodities are pre-printed on the form categorized into the various laboratory sections, e.g. Haematology.

Use the additional empty rows to record any item not pre-printed – use the commodity name as it appears on the stock card.

For each commodity, complete the columns in the main part of the reporting form as follows:

Unit of Issue: Enter the unit pack size for each lab commodity available for use in your health facility, e.g. Test, piece, strip.

Beginning Balance: Enter the quantity, in units, of each usable laboratory commodity available for use in the facility at the beginning of the reporting month.

NB: The Beginning balance for this month should be equal to the Physical count (Ending balance) at the end of the previous month. If it is not, indicate the loss or adjustment in the respective columns of this F-CDRR and explain in the section labelled “Explain Losses & Adjustments”.

Quantity Received: Enter the total quantity, in units, of each usable laboratory commodity received by your facility from the central warehouses (e.g. KEMSA, SCMS, NPHLS) or any other sources (e.g. the District store, partner, donor, stock purchases), during the

reporting month under consideration. If no stock was received at the facility during the month, enter a zero ("0") in this column. The Quantity received is obtained from the Quantity Received or Receipts section of the updated Bin card / Stock card.
Note: Please include all commodities irrespective of the supplier from whom they were sourced. Stocks received from other health facilities are considered as stock transfers and listed in the Adjustments column.

Quantity Used: Enter the total Quantity, in units, of each laboratory commodity used/consumed in the facility during the reporting month. If no commodity was used during the month, enter a zero ("0").

Note: This quantity should include the sum of the quantity of commodity actually used for testing as well as quantity used for repeats and controls.
The Quantity used is obtained from the Daily Activity Register for Laboratory Regents and Consumables (MOH 642) or equivalent records of consumption in the facility. If several pages of the DAR have been used over the month, be sure to aggregate the figures across all the pages used that month for each laboratory reagent or consumable.

Number of Tests done: For each laboratory commodity used/consumed in the facility during the reporting month, enter the total number of tests conducted with it. If no commodity was used during the month, enter a zero ("0").
The number of tests done is obtained from the Daily Activity Register for Laboratory Regents and Consumables (MOH 642) or equivalent records of consumption in the facility

Losses: Enter the total Quantity, in units, of each laboratory commodity lost or wasted at the facility during the month, e.g. defective, damaged or expired stock. The reason for the loss/wastage should be written in the "Explain Losses & Adjustments" section.

Adjustments [Indicate if (+) or (-)]: Enter the total positive or negative adjustments for the month, for each laboratory commodity. An adjustment is a change in stock balance for any reason other than reagents used in the laboratory or quantities received from suppliers.
Positive adjustment: Enter the quantity of each commodity that was added to the facility stock for any reason except receipt from the official supplier during the month. Examples: transfer of stock from another health facility to your facility, excess quantities counted when stock-taking.
Negative adjustment: Enter the quantity of each commodity that was removed from the facility stock for any reason except use in laboratory testing or loss/wastage. Examples: transfer of stock from your facility to another health facility, quantities of stock found to be missing when stock-taking, quantities used for training purposes.
Adjustments should be recorded in the Bin card when they occur. The reason for the adjustment should be written in the "Explain Losses & Adjustments" section.

End of Month Physical count: At the end of each month, conduct a physical count of each laboratory commodity, irrespective of its source. Enter the total Quantity, in units, of each laboratory commodity counted in the facility at the end of the reporting month. If there is no stock at the facility for a commodity, enter a zero ("0").
Report any differences between the Physical count and the expected Stock Balance in the Bin card as Adjustments or Losses. The reason for the adjustments or losses should be written in the "Explain Losses & Adjustments" section.

Quantity expiring in less than 6 months: During the physical count, note and record for each laboratory commodity, the quantity that will expire in less than six months, and write it in this column. Should there be several short expiry batches, record the dates of each.
If there is no short expiry stock at the facility for a commodity, enter a zero ("0").

Days out of stock: During the month, all user points should note and record for each laboratory commodity, the days the commodity was out of stock. Write in this column the number of the days out of stock (if any) in the Facility.
Quantity requested for Re-supply: Calculate the quantity, in units, for each laboratory commodity that your health facility should order, guided by the following formula:-

- Multiply the reported Quantity used by 4
- Subtract this value from it the Physical count
- This gives the Quantity requested in units.

Explain Losses & Adjustments: Use this space to explain losses and adjustments that have been reported as explained above. Additional remarks related to the commodities reported may also be made, e.g. need for stock re-distribution to prevent expiry.

Order for extra LMIS tools: Use this section to request for additional DAR or F-CDRR only when the tools in the facility are nearly full. Indicate quantity required for each type of tool.

Completed by: As the person who has completed this form, write your name, designation, telephone contact, and date that the report was prepared, and sign the form.

Approved by: Take the report to the Facility in-charge (or other authorized person) for review. Once reviewed, this person should write their name, designation, telephone contact, and date that the report was approved, and sign the form.

The signature of the Facility in-charge or other authorized person confirms that the report has been reviewed and is valid.

GOVERNMENT OF KENYA

LOSS REPORT/AUTHORITY TO WRITE-OFF

Registered No.

Ministry.....
 Department.....
 Unit.....

The items/plant/equipment/vehicles listed below are the subject of loss to the Government due to the circumstances shown. All the circumstances concerned have been examined and are as reported below and overleaf. Remedial action has been carried out. Submitted for decision.

Officer-in-Charge.....

Designation.....

Date.....

Item No.	Code No.	Full Description	Unit	Value of Stock Charge	Estimated Value at the time of loss	Difference in value	Circumstances and Nature of the loss	Remarks
TOTAL ..								

Case History

1. Loss was from (full address)..... and discovered by..... on.....
2. Time and date it occurred.....
3. Date and time discovered and in what circumstances.....
4. Reason for the delay and who was responsible.....
5. Brief details of the circumstances of the Loss.....
6. Name of officer responsible for custody..... How long was he responsible for custody.....
7. (a) Describe the arrangements for safeguarding the stores.....
 (b) What periodical checking of the stores is carried out and by whom?.....

- (c) Were the checks properly carried out? Give the date of the last check and the name of the officer who carried it out.....
- (d) If proper checking was not performed who is responsible for the omission?.....
- (e) Was the loss, damage, deterioration attributable to any of the following:—(Delete which is not applicable)
1. Unavoidable accident
 2. Negligence
 3. Incompetence
 4. Misconduct?
- (f) If through (e) 2, 3 or 4, the name of the person concerned and his involvement in the loss.....
8. (a) In the case of theft or fraud when were the police informed?.....
- (b) By whom.....
- (c) When was their investigation performed?.....
- (d) The result of their enquiries.....
- (e) Whether prosecution will or has resulted?..... (A copy of the report should follow)
A copy of the judgement should be forwarded.
9. Proposals to prevent a recurrence.....

10. (a) If the responsibility for the loss in part or whole is attributable solely to the officer referred to at 7 should he be required to make restitution and to answer for his dereliction of duty?.....

(b) If not, why not?.....

11. If 10(a) applies, give details of the officer's emoluments, other income, property and family commitments.
To the best of my knowledge the above replies cover all the circumstances pertaining to the loss to the Government in respect of the stores referred to.

Sgd.....
Officer-in-Charge.....
Date.....

REPORT OF THE ACCOUNTING OFFICER OR OTHER COMPETENT AUTHORITY

Ref. No.....

To: Ministry.....
Department.....
Unit.....

The circumstances concerning the loss valued at..... have been investigated and authority is hereby given to write off the items shown on this report subject to the following:—

1. Disciplinary/Recovery action is to be taken against.....
2. Action to improve the security/safety is to be taken.....
3. Disposal of the items is to be arranged as follows.....

Date.....

Sgd.....
Permanent Secretary

GPK (L)

APPENDIX 8: SESSION AND OVERALL COURSE EVALUATIONS

Effective Management of Lab Commodities by Health Workers in Kenya

Module _____ Session _____

1. Did this session meet its stated objectives? If not, explain in what way:
2. What were the most useful features of this session?
3. What were the least useful features of this session?
4. Please comment on the speaker's presentation style:

Any other comment?

Modular Tests Questions (Module 1-6)

Module 1 Questions

INSTRUCTIONS

Choose the most correct answer (s) to the following questions.

Questions

For questions 1 (a and b), choose the correct response: true or false

- Benefits of Laboratory networking include;
 - Improved efficiency; True/False
 - Reduced access to diagnostic lab tests True/False
- Practices that increase risks of HIV infection may include;
 - Male circumcision
 - Condom use
 - Marriage
- Which one of the following is not an emerging issue in Anti-retroviral therapy?
 - Recognition of treatment failure
 - Adverse drug effects
 - Poor patient adherence
 - Condom use

Module 2 questions

- What is Laboratory commodity management?
 - Laboratory commodity management represents the set of practices that must be coordinated to ensure that appropriate high quality reagents/medicines/ supplies are available when needed for use.
 - Laboratory commodity management is a process by which items are purchased and received from external suppliers.
 - Laboratory commodity management is a process that sources and procures high quality laboratory commodities.
 - Laboratory commodity management is selection of laboratory commodities to be purchased.
- What is quantification?
 - Quantification is a process that involves estimating of quantities of a specific item needed for a procurement for specific period of time and the financial requirements needed to purchase those items
 - Quantification is coordinating data collection needed to purchase items which are needed for use at all times.
 - Quantification is a set of activities and procedures that ensure health commodities are available for use.
 - Quantification is a collaborative process between the procurement office and the technical and policy committees

Module 3: Inventory Management

Answer True or False to each of the first two questions below

- Application of good storage practices is encouraged because it prolongs the shelf lives of most laboratory commodities (True or False?)
- Proper record keeping facilitates monitoring of the inventory management system's performance. It cannot however help laboratory stores personnel to determine the point at which a theft/pilferage occurred. (True or False?)
- Which of the following documents is used during the process of receiving laboratory commodities?
 - Expiry tracking chart
 - Daily Activity Register
 - Facility CDRR
 - Inventory control Form
- Which of the following statements is False?
 - Proper storage conditions contribute to the security, stability and easy retrieval of commodities in a store
 - Regular stock taking is a critical part of inventory management
 - All laboratory chemicals should be poured down the sink as soon as they expire so as to create room for other usable products
 - The term "inventory" refers to commodities held in a store to meet future demand.

Module 4 Questions LMIS

- Logistics Management Information System (LMIS) encourages overstocking of commodities at the facilities
True _____
False _____
- Name one tool that is used to report LMIS Data.
Bin cards or stock cards
Top Up cards
Issue and requisition vouchers
Consumption data report and request forms
Expiry tracking charts
Temperature monitoring charts

- Which tool assist to aggregate data to feed to LMIS on monthly basis?
 - Consumption data report and request forms
 - Expiry tracking charts
 - Temperature monitoring charts
 - Bin cards or stock cards
 - Top Up cards
 - Issue and requisition voucher
 - Daily Activity Register

Module 5: questions MTP

1. Which 3 of the following are MTP approaches?
 - a) Planning
 - b) Monitoring
 - c) Training
 - d) Procurement
2. Which 2 of the following are problems and not challenges?
 - a) Our district often runs out of stock for HIV rapid test kits and does not meet the needs of all the testing facilities in our district
 - b) The manual lab tools (DARs, Lab Stock Card, CDRRs (F) and CDRRs have not been availed in adequate numbers in our district
 - c) How can we obtain additional copies of manual DARs, Lab Stock Cards, and CDRRs in adequate numbers?
 - d) How can we make sure that all facility staff has the knowledge and skills required to use the new manual inventory management tools correctly?
3. Vision provides a picture of desires future .True or false
Tick true or false for the following sentences on MTP
 - a. Provides resources and skills for implementation of lessons learned (T/F)
 - b. Encourages a systematic but flexible approach (T/F)
 - c. Is interactive, hands-on and easy to apply (T/F)
 - d. Has immediate practical application (T/F)

Module 6 Questions M&E and Data for decision Making.

1. The following are true or false on data quality issues
 - Data quality is an assessment of the ability of the data to serve its purpose in a given context, e.g. planning, decision-making, etc (T/F)
 - High quality data serves its intended purpose (T/F)
 - Data quality also describes processes and technologies involved in ensuring that data conforms to its organizational requirements (T/F)
2. Which of the following Steps A, B, C and D is not a framework for using data for decision-making. Choose one.
 - A)
 - i. Collect data in a timely fashion
 - ii. Put data into perspective
 - iii. Develop explanations and take action
 - iv. Report on analysis and actions
 - B)
 - i. Collect data in a timely fashion
 - ii. Put data into perspective
 - iii. Find the story
 - iv. Develop explanations and take action
 - v. Report on analysis and actions
 - C)
 - i. Collect data in a timely fashion
 - ii. Put data into perspective
 - iii. Develop explanations and take action
 - D)
 - i. Collect data in a timely fashion
 - ii. Develop explanations and take action
 - iii. Report on analysis and actions
3. The data for decision-making cycle has the following components except:
 - a) Data collection
 - b) Data analysis
 - c) Decision-making
 - d) Acknowledgment
 - e) Action
 - f) Feedback

Answers to all Modules

Module 1 Answers

For questions 1 (a and b), choose the correct response: true or false

1. Benefits of Laboratory networking include;
 - a) Improved efficiency; True/False
 - b) Reduced access to diagnostic lab tests True/False

2. Practices that increase risks of HIV infection may include;
 - a) Male circumcision
 - b) Condom use (ANS)
 - c) Marriage

3. Which one of the following is not an emerging issue in Anti-retroviral therapy?
 - e) Recognition of treatment failure
 - f) Adverse drug effects
 - g) Poor patient adherence
 - h) Condom use (ANS)

Module 2 questions

1. What is Laboratory commodity management?
 - e) Laboratory commodity management represents the set of practices that must be coordinated to ensure that appropriate high quality reagents/medicines/supplies are available when needed for use. ANS
 - f) Laboratory commodity management is a process by which items are purchased and received from external suppliers.
 - g) Laboratory commodity management is a process that sources and procures high quality laboratory commodities.
 - h) Laboratory commodity management is selection of laboratory commodities to be purchased.

2. What is quantification?
 - e) Quantification is a process that involves estimating of quantities of a specific item needed for a procurement for specific period of time and the financial requirements needed to purchase those items ANS
 - f) Quantification is coordinating data collection needed to purchase items which are needed for use at all times.
 - g) Quantification is a set of activities and procedures that ensure health commodities are available for use.
 - h) Quantification is a collaborative process between the procurement office and the technical and policy committees

Module 3: Answers on Inventory Management

Answers:

1. False
2. False
3. C
4. C

Module 4 LMIS Answers

1. False
2. CDRR
3. DAR

Module 5: Answers

Answers

1. b, c, a
2. a, b
3. True
4. True (All)

Module 6 Answers

1. True for all
2. B
3. D

