

Guidelines for District and Service Outlet Managers

On Logistic Management of Contraceptives

Facilitator's Manual



Index

	Contents	Page. #
1. Introduction to Trainings		
•	Session Objectives, Methodology and Material required.	2
•	What is Training?	3
•	Adult learning	3
•	Pedagogy Vs. Andragogy	3
•	Training Approach	5
•	Who is Trainer?	6
•	Quality of a Good Trainer	6
•	Measures to be taken before, during and after training	6
•	Training Methodologies	9
•	Quiz: Training Methodologies	15
2. Section-1 : Introduction to Logistics		
•	Session Objectives, Methodology and Material Required	18
•	Introduction to Logistics	19
•	Components of a Logistic System	20
•	Objectives of Logistic System	22
•	What Does Contraceptives Logistic means	23
•	Quiz: Introduction to Logistics	25
3. Section-2 : Introduction to Statistics		
•	Session Objectives, Methodologies and Material Required	28
•	Basic Statistic	29
•	Data and Information	30
•	Vital Statistics	32
•	Variables	32
•	Demographic Count	33
•	Proportion/Percentage	33
•	Rate	34
•	Mean or Average	35
•	Quiz: Introduction to Statistics	37
4. Section-3: Contraceptives Logistics Management.		
A Unit-3.1: Product Selection and Forecasting		
•	Session Objectives, Methodology and Material Required	40
•	Introduction to Product selection and Forecasting	41
•	Process of Forecasting	41
•	Advantages and Disadvantages of Different Data Sources	42
○	Consumption Based Estimation	42
○	Service Data Estimates	43
○	Contraceptives Year Protection (CYP)	44
○	Population Based Estimates	44

• Formula of Forecasting by Various Methods	45
• Responsibilities of Fore casters	48
B. Unit-3.2: Requisitioning.	
• Session Objectives, Methodology and Material Required	51
• Introduction	52
• Contraceptives Requisitioning	52
• Public Sector Integrated CLR-6 Form	53
• Instructions to Fill Public Sector Integrated CLR-6 Form	53
• Contraceptives Reporting and Requisitioning by SDP	56
• Transportation	59
C Unit-3.3 Inventory Management	
• Session Objectives, Methodology and Material Required	62
• Introduction	63
• Brief Logistics Glossary	63
• Types of Inventory Management	64
• Using a MIN/MAX System	66
• Assessing Stock Status	68
• Quiz: Inventory Management	69
D Unit-3.4-Logistics Management Information System	
• Session Objectives, Methodology and Material Required	71
• Introduction	72
• Information and Recording System	74
○ Stock Register	74
○ Contraceptive Issue and Receipt Voucher for Warehousing	80
○ Bin Card	84
○ SDP/ Health Facility Monthly Contraceptive Report & Requisition	86
• Physical Verification of Stocks.	86
• Quiz: Logistics Management Information System	93
E Unit-3.5- Warehousing& Monitoring	
• Session Objectives, Methodology and Material Required	95
• Introduction	96
• Warehousing Types and Location	96
• Warehouse/Store Size	97
• Storage Space Calculation	98
• Warehousing Process	99
• Warehousing Procedures and Policies	99
• Tools and Equipment Required for Store	101
• Guidelines and Best Practices for proper Storage and Managing Material.	101
• Contraceptives Shelf life and Storage Conditions	103
• Monitoring and Supervision.	104
○ Checklist for District Store Monitoring.	105
○ Checklist for Service Outlet Store Monitoring	107
• Quiz : Warehousing	110

F Unit- 3.6- Disposal of Unusables.

- Session Objectives, Methodology and Material Required 112
- Introduction 113
- Main and Some other Reasons for Commodities Becoming Unusable. 113
- Guidelines to be Followed for immediately if supplies become unusable 114
- Major Steps of Safe Disposal 114

G Unit-3.7- Roles and Responsibilities.

- Session Objectives, Methodology and Material Required 117
- Introduction 118
- Logistics Management Staff Roles and Responsibilities 119
- Responsibilities of Store Keeper/ Family Welfare Worker/ Lady Health Worker/ lady Health Visitor. 121

Annexure.

- **Annexure- I**
 - Measures to be taken before, during and after training. 126
- **Annexure-II**
 - CLR-6 Form 127
- **Annexure- III**
 - CYP Conversion Factors 133

Tables

	Tables	Page. #
1.	Table 1.1: Basic Steps of Introduction to Logistics	
2.	Table 3.1.1: Advantages and Disadvantages of consumption based estimates	43
3.	Table 3.1.2: Advantages and Disadvantages of Service Data estimates	44
4.	Table 3.1.3: Advantages and Disadvantages of Population Based estimates	44
5.	Table 3.2.1 : instructions for filling relevant columns of CLR-6 Form	54
6.	Table 3.3.1: Brief Logistics Glossary	63
7.	Table 3.5.1: Tools and Equipment Required for Store	101
8.	Table 3.5.2: Contraceptives Shelf Life and Storage Conditions	103
9.	Table 3.7.1: Key Logistics Staff at Various Levels	118
10.	Table 3.7.2: The Roles and responsibilities at various levels	119
11.	Table 3.7.3: The Roles and responsibilities SK/FWW/LHW/LHV	121

Figures

	Figures	Page. #
1.	Fig.1.1: Logistics Cycle	21
2.	Fig. 3.3.1: PUSH and PULL System	65
3.	Fig. 3.3.2: Bar Graph Showing Maximum/Minimum Level Stock	68
4.	Fig. 3.4.1: Flow of Logistics	73
5.	Fig. 3.5.1: Logistics Channel	97

ACRONYMS

BHU	Basic Health Unit
CMIPHC	Chief Minister's Initiative for Primary Health Care.
CoC	Combined oral Contraceptive pill
CW&S	Central Ware House & Supplies
CYP	Couple Year Protection
DHO	District Health Officer
DPWO	District Population Welfare Officer
EDO (H)	Executive District Officer Health
FEFO	First expiry First Out
FIFO	First In First Out
FLCF	First Level Care Facility
FP	Family Planning
FWC	Family Welfare Center
IRV	Issue/Received Voucher
IUCD	Intra Uterine Contraceptive Device
LHV	Lady Health Visitor
LHW	Lady Health Worker
MNCH	Maternal, Neonatal & Child Health Program
MoPW	Ministry of Population Welfare
MSU	Mobile Service Units.
NGO	Non Governmental Organization.
PoP	Progesterone only pill
PPHI	Peoples Primary Health Care Initiative(
PWD	Population Welfare Department
RHS	Reproductive Health Centers
SDP	Service Delivery Point
SK	Store Keeper
TCH	Tertiary Care Hospitals.

3-Days Agenda

Of

Training of Trainers

Logistics Management of Contraceptives

S.#	TOPICS	TIME ALLOCATION
DAY-1		
1.	Training Methodology	2 hours & 30 minutes
2.	Section-1- Introduction to Logistics	45 minutes
3.	Section-2 -Basic Statistics	2 hours
4.	Section-3 Contraceptives Logistic Management. <ul style="list-style-type: none"> • unit 3.1-product selection and forecasting 	45 minutes
day-2		
5.	Section-3 Contraceptives Logistic Management <ul style="list-style-type: none"> • Unit-3.2-Requisition. • Unit-3.3-Inventory Management • Unit -3.4 Logistics Management Information System (cont....) 	3 hours 1 hour 2 hours
day-3		
6.	Section-3 Contraceptives Logistic Management <ul style="list-style-type: none"> • Unit -3.4 Logistics Management Information System • Unit-3.5- Warehousing & Monitoring • Unit-3.6 Disposable of Unusables • Unit-3.7 Roles and Responsibilities 	2 hours 2hours 30 minutes 30 minutes 1 hours

2-Days Agenda of Training of Logistics Staff

Logistics Management of Contraceptives

S.#	Topics	Time Allocation
Day-1		
1.	Section-1. Introduction to logistics	30 minutes
2.	Section-2 -Basic statistics.	1 hour
3.	Section -3 Contraceptives Logistics Management <ul style="list-style-type: none"> • Unit-3.1 Product selection and Forecasting • Unit-3.2 Requisitioning • Unit-3.3-Inventory Management 	1 hour 2 hours 30 minutes 1 hour 30 minutes
Day-2		
4.	Section -3 Contraceptives Logistics Management <ul style="list-style-type: none"> • Unit -3.4 Logistics Management Information System • Unit-3.5- Warehousing & Monitoring. • Unit-3.6 disposable of unusables • Unit-3.7 Roles and Responsibilities 	3 hour 2 hour 30 minutes 30 minutes

Introduction to Training

Instructions for Trainers:

Ask the Trainers what they understand with the terms “Training” and “Skills” to mean. After listening to their replies, explain to them from the notes in an interactive manner (See page 10 of Trainers Guide)

What is Training?

It is a learning process that involves the acquisition of knowledge, sharpening of skills, concepts, rules, or changing of attitudes and behaviors to enhance the **performance of employees**.

Training is the activity leading to skilled behavior.

- It's not what you want in life, but it's knowing how to reach it
- It's not where you want to go, but it's knowing how to get there
- It's not how high you want to rise, but it's knowing how to take off

A **skill** is the learned capacity to carry out pre-determined results often with the minimum outlay of time, energy, or both.

Adult Learning

Instructions for Trainers:

Introduce them to the terms andragogy and pedagogy. Divide the participants in to 2 groups and assign each group the task of preparing a presentation on adult learning and child learning through brain storming and using background knowledge and write down the difference between the two. Give 10 minutes for preparation of group work and 5 minutes for each group to present. After presentation with the help of Trainer's guide explain the meaning of the two.

Teaching adults is not like teaching children. Traditionally, children are viewed as empty vessels into which teachers can pour knowledge. Parents and teachers try to control the information that goes into the classroom to determine the quality of learning that comes out. Trainers cannot control adults this way.

What we learn in childhood forms the foundation of what we learn as adults. Our life experiences can add to that, thus creating a substantial reservoir of information.

Developing insight into how adults learn helps trainers become more successful¹.

Pedagogy vs. Andragogy

The term “**pedagogy**” was derived from the Greek words for “**child**” and “leading”, thus being defined as the art and science of teaching children.

The term “**andragogy**” was coined by researchers of adult learning in order to contrast their beliefs about learning to the model of teaching children.

The term was derived from the Greek word for “man, not boy.” The concept of andragogy implies self-directedness and an active student role, as well as solution-centered activities.

Differences between Children and Adults as Learners:

CHILDREN	ADULTS
Rely on others to decide what is important to be learned	Decide for themselves what is important to be learned
Accept the information being presented at face value.	Need to validate the information based on their beliefs and experience.
Expect what they are learning to be useful in their long-term future	Expect what they are learning to be immediately useful.
Have little or no experience upon which to draw – are relatively “clean slates.”	Have much experience upon which to draw – may have fixed view points.
Little ability to serve as a knowledgeable resource to teacher or fellow classmates	Significant ability to serve as a knowledgeable resource to trainer and fellow learners.

Educators have determined that most adults, adolescents, and children learn best by experiencing a blend of activities that promote the three learning domains:

1. **Cognitive** refers to knowledge or a body of subject matter.
2. **Affective** refers to attitudes and beliefs
3. **Behavior** refers to practical application.

Training Approaches

Instructions for Trainers:

Teach this session by adopting two way lecture approach. Request 3 participants to read the 3 different approaches turn by turn .after reading one approach ask questions like “what do they understand with this approach?”

In the end the Trainer will elaborate the answer using interactive approach in simple way.

For adult learning active learning approach or andragogy method is appropriate.

The three primary learning styles are: visual, auditory, and kinesthetic.

§ Visual learners tend to learn by looking, seeing, viewing, and watching.

- ❖ Visual learners need to see an instructor’s facial expressions and body language to fully understand the content of a lesson.
- ❖ They tend to sit at the front of the classroom to avoid visual distractions.
- ❖ They tend to think in pictures and learn best from visual displays.
- ❖ During a lecture or discussion, they tend to take detailed notes to absorb information.

§ Auditory learners tend to learn by listening, hearing, and speaking.

- ❖ Auditory learners learn best through lectures, discussions, and brainstorming.
- ❖ They interpret the underlying meaning of speech by listening to voice tone, pitch, and speed and other speech nuances.
- ❖ Written information has little meaning to them until they hear it.
- ❖ They benefit best by reading text out loud and using a tape recorder.

§ Kinesthetic learners tend to learn by experiencing, moving, and doing.

- ❖ Kinesthetic learners learn best through a hands-on approach and actively exploring the physical world around them.
- ❖ They have difficulty sitting still for long periods of time.

Training should take into account all three styles

Instructions for Trainers:

Draw 3 columns on board/flip chart and write down 3 approaches in the upper row

Visual

Auditory

Kinesthetic

Ask the participants to use their background knowledge and experience, think different training methodologies that will justify these approaches. In the end the Trainer will add or correct the missing and incorrect methodologies.

Visual	Auditory	Kinesthetic
Transparencies	Lectures	Role plays
Videos/Slides	Group discussions	Simulations
Flip charts	Informal conversations	Practice demonstrations/ case studies /exercises
Readings	Stories and examples	Writing/Note taking
Demonstrations	Brainstorms	Activities

Who is a Trainer?

The Trainer is a guide or mentor and has full knowledge regarding relevant topic, works at the same level as the participants, respects participants' ideas and experiences, is supportive of the learning process, is an organizer of learning experiences

Qualities of a good Trainer

- Should have a positive attitude and respect all individuals.
- Has intention of supporting participants in learning.
- Has the ability to keep conducive and comfortable training environment for the trainees.
- Willing and committed person and ready to work till late hours if required.

Measures to be taken before, during and after training

Instructions for Trainers:

Tell the participants that we will discuss the preparations required for conducting training, like planning before training, during and after trainings. Divide the participants into 3 groups for group work. Assign each group a topic from below to prepare a presentation on flip chart. Give 10 minutes for preparation and 5 minutes to each group for presentation.

When one group presents the other groups will observe and give feedback afterwards. After all presentations, clear and misconceptions and answer any questions.

Group-1---- planning before training.

Group-2---- Arrangements and measures required during training.

Group-3---- Actions required after training.

Afterwards ask each group to read their relevant topic from the manual.

Planning Before training

- Prepare training plan with all relevant people.
- Arrange venue and all logistic material required.
 - Training booklets.

- Black/white board
- Markers/chalk
- Audiovisual aids
- Stationary.
- Registration form and attendance sheets.
- Ensure that all participants are informed well before time.
- Inform trainers and hold a preliminary meeting with them about agenda and distribute topics among trainers.

During Training

- Training venue and sitting arrangements are as per protocols.
- Trained Trainers available.
- All training material available with the participants.
- Attendance sheet maintained.
- Agenda being followed.
- Logistics for practical trainings, demonstration and visits has been arranged.

After Training

- Feedback taken from participants and trainers.
- Evaluation of training and assessment of trainees done

Suggestions for a quality Training

Instructions for Trainers:

Ask the participants to tell turn by turn any suggestions that help in making quality training and write them on the board /flipchart. After completion, the trainer with the help of Trainer's guide will add the missing suggestions and will omit the unnecessary suggestions.

1. Always follow the lesson plan.
2. Each time start session on time, it will help to maintain the discipline.
3. Arrange all the essential items required for the particular session well before time and keep them in an organized manner before start of session.(like demonstration items, charts, dummy, videos)
4. It is essential to prepare the topic thoroughly before start of any session. Deliver only that much detail which is relevant to their qualification status and related to their job description.
5. Try to finish the session within the stipulated time and duration.
6. Use simple and local language and give culturally appropriate examples for better understanding.
7. Try to use various teaching methodologies to keep and maintain the interest of the participants.
8. Always arrange outdoor practice of that topic which has been taught in the class.
9. Clearly mention the home assignments at the end of the day or session.
10. Start daily session with revision, so that the participants will get a chance of clearing any confusion if any.
11. Try to answer the questions of the participants in a clear manner. If there is any doubt, don't convey wrong information. Tell them to answer next day.

12. Appreciate good student and good work and don't criticize any participant instead try to correct them.
13. Adopt participatory approach in the beginning of the session so as to get the idea of their level of knowledge regarding a particular topic. It will also keep the interest and attention of the participants in the class.
14. Trainer should be an observer and have high patience and tolerance level.
15. Trainer should be good listener as well and for this:
 - a. Develop habit of listening carefully.
 - b. Be physically and mentally attentive all the time.
 - c. Avoid boredom expressions and negative body language.
 - d. Talk less and listen more.
16. Encourage participant's views and experiences.
17. Try to involve participants by asking frequent questions relevant to topic.
18. Develop habit of giving feedback as:
 - a. It helps participants to assess themselves.
 - b. It informs about the level of perception of participants.
19. To establish good rapport between trainers and trainees, it is better to arrange classroom in a "U" or "V" shaped manner.

Training Methodologies

Instructions for Trainers:

Ask the participants:

- Have they ever attended any training? Ask those who said 'yes' to list down the different training methodologies they have observed during that training like lecture, transparencies etc.

Afterwards add any missing methodology. Inform them that we will know the details of these topics with the help of group work. Divide the participants into 3 groups and assign 2- 3 methods to each group according to number of groups. Ask them to prepare a presentation by defining the method and write positive and negative points for each.

Give 10 minutes for preparation and 5 minutes to each group for presentation.

When one group will present the other groups will observe and give feedback.

Afterwards make them read the definitions from the Trainers' guide to better understand the concepts

There are various **methods of training**, and usually the 2 mentioned are in practice **cognitive, and behavioral methods**. Trainers need to understand the pros and cons of each method and its impact on trainees considering their background and skills.

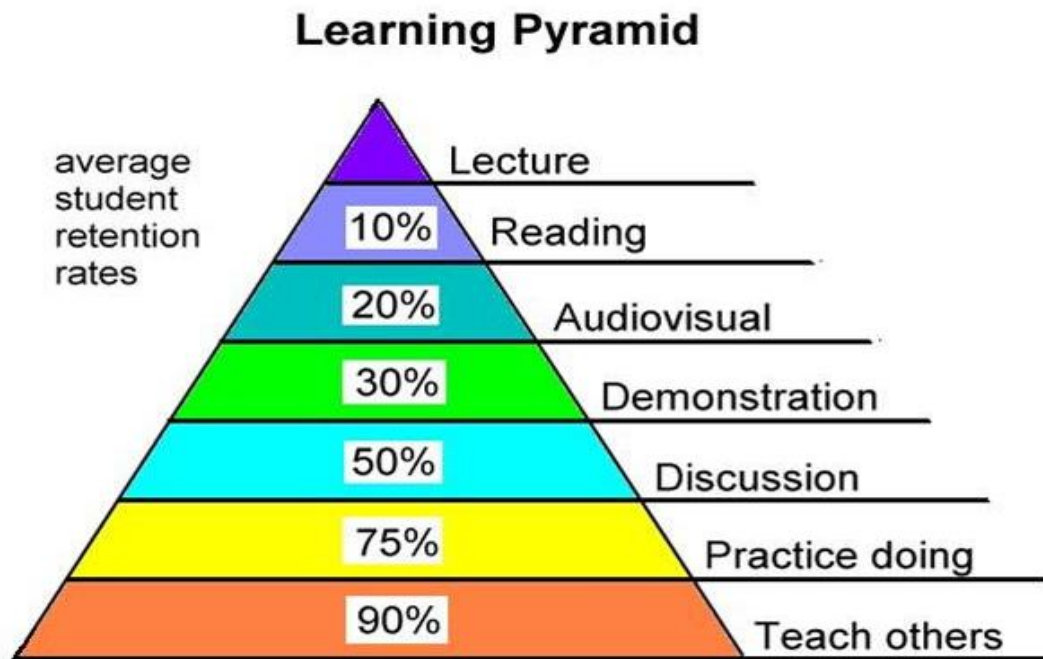
Cognitive methods are more of giving theoretical training to the trainees. The various methods under Cognitive approach provide the rules for how to do something, written or verbal information, demonstrate relationships among concepts, etc. These methods are associated with changes in knowledge and attitude by stimulating learning.

Behavioral methods are more of giving practical training to the trainees. The various methods under Behavioral approach allow the trainee to behavior in a real fashion. These methods are best used for skill development.

The various methods that can be used in this training are:

1. Lectures.
2. Discussions
3. Demonstrations
4. Audiovisual Aids
5. Role Play
6. Brain Storming
7. Reading
8. Case Studies
9. Field Visit

How the different teaching methodologies help in retaining the knowledge



LECTURES

It is one of the oldest methods of training. This method is used to create understanding of a topic or to influence behavior, attitudes through lecture. A lecture can be in printed or oral form. Lecture is telling someone about something.

Lecture is given to enhance the knowledge of listener or to give him the theoretical aspect of a topic. Training is basically incomplete without lecture.

- **Straight Lecture:** Straight lecture method consists of presenting information, which the trainee attempts to absorb. In this method, the trainer speaks to a group about a topic. However, it does not involve any kind of interaction between the trainer and the trainees. A lecture may also take the form of printed text, such as books, notes, etc.

Lectures should be kept to a minimum (maximum 15% of the total time). As much as possible, encourage learners to be interactive and participative.

- **Interactive Lecture:** Interactive lecture is a method in which the facilitator delivers information by engaging participants in discussion. The aim of this method is to engage students by finding the ways for them to interact with the contents, the instructor and the class mates. This method captures and maintains student's attention more than the straight lecture and allows student to apply what they have learnt or give them a context for upcoming lecture material.

Lecture with Visual Aids

This method presents training content both orally and visually. PowerPoint and/or transparencies may be used to present content when the equipment is available and there is a dependable supply of electricity.

Other visual methods include the use of whiteboard, blackboard, or flip charts.

Main Features of Lecture Method

- Inability to identify and correct misunderstandings
- Less expensive
- Can be reached large number of people at once
- Knowledge building exercise
- Less effective because lectures require long periods of trainee inactivity.

According to research

- At one time participants cannot remember more than 03 points of a lecture.
- Most of the participants lose interest in lecture after 10 minutes.
- 10 percent participants pay less attention to lecture after 15 minutes.
- After 35 minutes no one listens to a lecture, either sleeping or engage themselves in other activities.

A lecture can be made attractive if:

- It is interactive and full of discussion with arguments and criticism.
- Delivered in Simple language.
- Combine it with visual aids and other techniques.

DISCUSSION

This method helps the trainer to explain and elaborate the contents through interaction with the trainees. The interaction and the communication between the two make it much more effective and powerful than the lecture method. If the discussion method is used with proper sequence i.e. lectures, followed by discussion and questioning, it can achieve higher levels of learning objectives.

Benefits of Discussion

- It enhances confidence of the participants.
- No equipment and material is required.
- It lessens shyness among the participants.
- It develops patience, tolerance and sympathy in the participants and the trainers as well.
- It leads to solution of problems.

Role of Trainers while conducting Discussion

For an affective and fruitful discussion the trainer should have:

- Skills of encouragement.
- Ability to seek and maintain attention.
- Skills to control the dominating and talkative participants and encouraging reserved and shy ones.
- Competency to keep the discussion on track.
- Capability of keeping the discussion simple.

DEMONSTRATIONS

This method is a visual display of how something works or how to do something. As an example, trainer shows the trainees how to stack the cartons in a warehouse. In order to be more effective, demonstration method should be accompanied by the discussion or lecture method.

To carry out an effective demonstration, a trainer first organizes the material required for demonstration. While performing the demonstration, the trainer should:

- Organize all relevant material required for demonstration before time and try to demonstrate at a place where everyone is able to see it clearly.
- First tell the participants the steps of demonstration and then perform each step accordingly.
- Repeat and revise steps if needed.
- Then invite participants to describe the steps and perform the task as told and demonstrated.
- It helps in skill enhancement of trainees.
- It creates great enthusiasm and energy among participants.
- If there are a large number of participants it will be difficult for all of them to hear and see the demonstration and they may adopt wrong techniques.
- Many people may not be able to practice the skills demonstrated practically due to shortage of time and resources.

AUDIOVISUAL AIDS

The audiovisual aids makes the process of learning effective, remember:

- People forget easily if they only listen.
- By seeing you remember for longer a period.
- Participants will learn more if you demonstrate it as well.

By incorporating multiple methods of teaching, the learning process will become more successful.

1. **Black/White Board.** The use of a board with a lecture is an easy way to improve learning. Due to its big surface, big words can be written which can be seen at a distance easily. While writing on board take care that:
 - a. You have legible and clear writing skill(practice)
 - b. You always stand on side of board so as not to block the board and to keep an eye on the participants as well.
2. **Posters.** A poster is a large, usually printed placard, bill, or announcement, often illustrated, and i.e. posted to advertise or publicize something. In poster picture and message (relevant to picture) is shown side by side on one page. Posters help making lectures and discussions more effective. Posters on different topics are available in markets but one can make poster by pasting different pictures on a chart paper and writing small relevant messages along with the pictures. Posters are easy and cost effective way of teaching. **A good poster must have:**
 - a. **Comprehensible topic**
 - b. **Picture appropriate and relevant to the topic.**
 - c. **One message in simple language.**
 - d. **Informative or catchy message.**
3. **Flip Charts/cards.** It is usually a sequence of pictures followed by messages which may also include pictures however sometimes it may be a single chart or sometimes it may be without picture. They are created in such a way that they make the messages more clear and elaborative. It helps in creating awareness in illiterate or less educated masses. For example, for advantages of breast feeding, 3-4 flip charts can be developed.
 - a. Page-1—Pictures of early initiation of breast feeding and related message on its back.
 - b. Page-2—Pictures of disadvantages of giving bottle and nipple and related messages on its back.

How to use Flip Charts/cards

Trainers must know which flip charts should be used and when these charts should be used during session.

- ❖ Show the chart/card to the participants. (hold it in such a way that it is visible to all the audience)

- ❖ Ask them what they understand.
- ❖ If participants want, allow them to hold the chart/card in their hands.

After listening to their views, explain to them the important features of the message e.g. picture showing stacking of cartons in warehouse, the trainer must brief the participants about how to stack goods in warehouse.

4. Over head projector (OHP). Hand written or printed transparencies are used as visual aids on an OHP.

- Place the OHP in the center so that the light of OHP falls on a straight clean wall.
- Before start of session place the set of transparencies in an order, it helps to avoid wastage of time during session.
- The trainer must stand on its side facing towards the participants so that it is visible to all.
- Turn off the room lights to make it clearer.
- Write or print 8-10 lines or important tips on one transparency. Don't overwrite or clutter the transparency.
- With the help of points mentioned on the transparency explain the topic.

5. Film (Video). Video is an alternative way of learning. Film or videos show the facts of life in the form of drama. For example if you want to tell the participants about the condition of a dehydrated child suffering from diarrhea, instead of giving lecture or discussion showing video of a dehydrated child will be a better way of depicting the situation.

Directions for Using Videos/material

- Arrange video, TV or computer components before the session.
- Select appropriate materials for the session.
- Check the material a day before displaying.
- Before displaying, brief the participants what they will learn from the material
- After showing the material, discuss with the participants what they have seen and learnt from it.
- Revise the topic in light of the material shown.

ROLE-PLAY

Role-play is an exercise in which the trainers and the learners act the parts of different people to experience some of the feelings of these people. Role-plays must have a clear learning objective and should be carefully planned. Always check the accuracy of the information given and the communication skills used by the role-players.

- Role-play must have a clear learning objective and should be carefully planned.
- Role-play means acting the part of another person in a specific situation.
- Role-play exercises are very useful for teaching communication and decision-making skills.
- Role-playing exercises are used to show a situation, enabling everyone to understand the attitudes and reactions involved in that particular situation.
- Devise a simple situation with two to four role-players.
- Role-players should be given a basic description of who they are supposed to be and what the situation is and should be given time to prepare.
- It may be difficult for the role-players to follow instructions if they are given too many details.
- Describe to the class each player's role and the situation to be enacted.
- Role-play may come to a natural end or you may decide that it has lasted long enough for educational purposes and stop it.

- When role-play is over, guide the discussion to emphasize the main points learned and summarize the session by asking questions rather than giving answers.
- Check the accuracy of the information given and the communication skills used by the role-players.

BRAIN STORMING

The main purpose of brainstorming is to generate an extensive list of ideas, thoughts or alternative solutions on a specific topic or problem. This technique allows the wealth of life and work experience to be shared with the group. It is a highly effective way for adults to learn by allowing many ideas to be shared in a short period of time. It stimulates thought and creativity and is often used to start group discussions.

READING:

Self reading is also an effective way of learning. The trainees pay more attention and concentrate more on lesson while reading. During this period trainers get some free time and can focus or observe the weak participants. After reading, strong discussion on the read material can be generated and level of understanding of the trainees can be assessed.

CASE STUDIES

Case studies allow trainees to apply what they have learned to "real life" situations. Case studies are used primarily to strengthen knowledge, problem-solving and clinical decision-making skills. Typically, participants read and answer questions on a case study in writing or during a group discussion.

FIELD VISIT

Field visits help in understanding those problems and issues of community that are difficult to recognize in classroom setup. Participants also get chance of interacting with the community and enhance their communication skills.

Preparations required for field visit

- Inform the relevant community members. Staff of service outlet or staff relevant to visit site about the schedule and purpose of visit before time.
- Arrange proper transport for the visitors.
- Brief the participants about the objectives of visit, the venue and time of visit.
- Tell the participants what is expected from them and how they will approach visiting the field.
- Explain to them the cultural and traditional values of the site/community to be visited.

QUIZ – Introduction to Training Methodologies

Section-1 Write short answers.

- Q.1- What is the best method of training the trainers?
 Q.2- Which training methodology is best for training of District and facility master trainers?
 Q3- What precautions are required for practical demonstration and practical training of participants?
 Q.4-Why is self reading important?
 Q.5- Name four qualities of a good trainer

Section-2 Fill in the Blanks.

1. The training methodology in which practical actions are accompanied with commentary is called._____
2. The term Andragogy means-----
3. The three primary learning styles of andragogy are -----,-----and-----
4. -----helps in retaining the contents about 20%
5. Always take -----from the participants after completion of every training

Section-3

Write True or False.

Statement	True	False
A skill is the learned capacity to carry out pre-determined results often with the minimum outlay of time, energy, or both.	<input type="checkbox"/>	<input type="checkbox"/>
Adult and child hood learning has no difference in principle.	<input type="checkbox"/>	<input type="checkbox"/>
Cognitive methods are more of giving theoretical training to the trainees	<input type="checkbox"/>	<input type="checkbox"/>
It is not necessary for the trainer to show respect and be supportive towards trainees	<input type="checkbox"/>	<input type="checkbox"/>
Always brief the participants about the objectives, the venue and time of field visit.	<input type="checkbox"/>	<input type="checkbox"/>

Answers

Section-1

Q.1- Which training methodology is best for training of District and facility master trainers?

Ans. A single training methodology may not result in to quality training. Mixed Training methodologies in which interactive lectures, healthy discussions, practical demonstrations and use of different or relevant audiovisual aids could be the best, if required role plays and field visits can also be added.

Q2- What precautions are required for practical demonstration and practical training of participants?

Ans. While performing the demonstration, trainer:

- Organize all relevant material required for demonstration before time and try to demonstrate at a place where everyone is able to see it clearly.
- First tell the participants the steps of demonstration and then perform each step accordingly.
- Repeat and revise all steps.
- Then invite participants to describe the steps and perform the task as told and demonstrated.

Q.3-Why is self reading important?

Ans.Self reading is an effective way of learning. The trainees pay more attention and concentrate more on lesson while reading. During this period trainers get some free time and can focus or observe the weak participants. After reading, strong discussion on the read material can be generated and level of understanding of the trainees can be assessed.

Q.4- Name four qualities of a good trainer?

- o Should have a positive attitude and respect all individuals.
- o Has intention of supporting participants in learning.
- o Has the ability to keep conducive and comfortable training environment for the trainees.
- o Willing and committed person and ready to work till late hours if required.

Section-2. Fill in the Blanks

1. The training methodology in which practical actions are accompanied with commentary is called **Demonstration**
2. The term Andragogy means **Adult Learning**
3. The three primary learning styles of andragogy are **Visual, Auditory and Kinesthetic.**
4. **Audiovisual aids** helps in retaining the contents about 20%
5. Always take **Feedback** from the participants after completion of every training

Section-3

Mark True or False.

Statement	True	False
A skill is the learned capacity to carry out pre-determined results often with the minimum outlay of time, energy, or both.	True	
Adult and child hood learning has no difference in principle.		False Adult have background knowledge and experience regarding the subject so different ways and techniques are required for them
Cognitive methods are more of giving theoretical training to the trainees	True	
It is not necessary for the trainer to show respect and be supportive towards trainees		False It is necessary for the trainer to show respect and be supportive towards trainees
Always brief the participants about the objectives, the venue and time of field visit.	True	

Section-1- Introduction to Logistics

Section-1: Introduction to Logistics

Session Objectives

The participants will:

- Learn The Concept of logistics with special reference to contraceptive logistics
- Identify essential activities that formulate the components of logistics.
- Recognize objectives of the logistic system

Session Time: 45 minutes

Methodology:

- Lecture with discussion.
- Discussion on case studies.

Material Required.

- Flip Charts and chart markers.
- White board and markers.
- Participants' manual (Pages 2-5)
- Copy of case studies
- Lead pencil, eraser and sharpener

Trainer's Notes:

Introduction to Logistics

Instructions for Trainers:

Start the session by asking open ended question to generate discussion like:

- What do they understand by the term” logistics” What are the six (rights?) of a logistic system?
- Does anyone know the basic activities involved in logistic management cycle.

Listen to the answers, encourage experience sharing and in the end describe the topic in detail with the help of examples.

Overview:

Logistics is a branch of supply chain management, which deals with making the commodities available to a group of people or consumers. Logistics system covers all the activities which take place between manufacturer of the product and the point at which the products are supplied to the end user or consumer. A logistics cycle consists of the following steps:

Table 1.1: Basic Steps

STEP 1: Select contraceptives (both the methods and brands to be used).

STEP 2: Estimate quantities to be procured.

STEP 3: Identify sources and procure contraceptives

STEP 4: Develop a logistics management information system (LMIS) to record contraceptive distribution and client use.

STEP 5: Develop procedures to efficiently manage contraceptive inventories.

Supply needs are usually based on estimates of the population to be served. The organization estimates supply needs for the target population, identifies a source of supply and then plans appropriate management, transportation and warehousing systems.

Most well established programs will have little control over some parts of their logistics system. Sources of supply, warehouses, and distribution points and logistics procedures are usually in place, particularly if the program is linked to other health related activities. Therefore, the program managers are not free in the short term to make major changes in these facilities or procedures. In such cases managers must try to improve the efficiency of an existing system rather than to develop new systems.

Case study 1.1:

Instructions for the trainer: Inform the participants that they will now do a case study. Give 5 minutes to read the case study and remaining 5 minutes to answer the questions given below. Ask one of the participants to read the case study slowly, so that everyone can understand its concept. If required the trainer may elaborate the concept. In the end ask turn by turn the answers and take help of Trainer notes to clear their concept.

Case Study

Dr. Ahmed Ali has recently taken over as the District Coordinator of a Reproductive health program in the district Rasool Nagar. One of his responsibilities is to manage the logistics systems for the medicine and contraceptives of the program. On reviewing the system he came to know that supplies are received on quarterly basis from the provincial office on the demand from the district office. As the district office has not sent any demand for the last one year the provincial office sent the contraceptive according to its own calculation which has resulted in overstocking of condoms where as the contraceptive pills and injections are out of stock for the last two months. On visit of the warehouse, which was located in the premises of the EDO Health office, he found that the commodities are haphazardly placed and most of the space is occupied by the carton of condoms due to which the warehouse looked to be congested with hardly any available space. The stock register was not updated.

What should Dr. Ahmed Ali do to improve the logistics system of his program?

Answer:

He may take following steps:

- Determine the quantity of available quantity of condoms
- Update the stock register
- Calculate the requirement condoms, contraceptive pills and injection
- Report to the provincial office about the situation
- Organize the warehouse
- Provide on the job training to the staff and inquire from the In-charge what they need to operate better.

Components of a Logistics Cycle

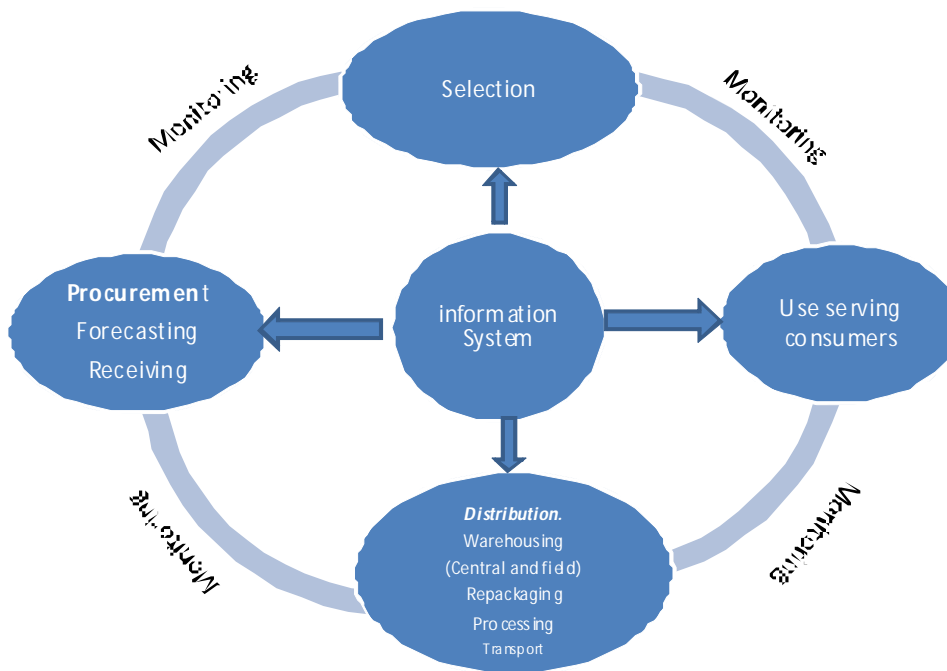
The following different activities make up the components of a logistics system:

1. Selecting the items (e.g. medicine or contraceptive)
2. Forecasting the quantities to be procured, manufactured or demanded
3. Procuring items or preparing demand
4. Receiving the items from the supplier/ higher level warehouse
5. Managing the inventory
6. Warehousing
7. Processing order for lower levels
8. Transporting items to lower levels
9. Serving customers
10. Monitoring and evaluation of logistics supplies

Fig.1.1: The Logistics Cycle

Instructions for Trainers:

Ask the participants to carefully look at the logistic cycle given on page 3 of their manual and tell what they understand with this cycle. Ask them why “information system” is in the center and why “monitoring” is covering the whole cycle. After listening to their replies explain to them fully with the help of matter given below.



The first activity is to determine what to procure, it differs according to the objectives of the program for which one is working, for example if one is working in a family planning program the items required could be the contraceptives, for malaria control one may need bed nets, malaria diagnostic kits, anti malaria medicine etc.

Once the items have been selected the next step is to determine the quantity of each item required for the specified period, this is called forecasting. It is done on the basis of various factors like prevalence of specific condition in the area or as in case of contraceptives average monthly consumption etc. on the basis of the forecasting the order/ demand are placed. The material is usually received at central (or provincial) level directly from the supplier. It is stored in the central/ provincial warehouse, and then supplied to different program outlets such as districts and sub district stores and from here the end users i.e. the consumers. Intermediate activities include gathering and using supply information, transportation and warehousing in the field.

Managing the inventory is the central activity on which all of other activities depend. Inventory management is the link between the consumer demand and organization’s manufacturing or procuring activity. Placement of orders according to the actual requirement of the target

population and timely transportation of commodities to the delivery outlets are important pillars of a strong and efficient logistics system.

Well managed monitoring system of the program enables the managers to identify the bottlenecks and take necessary remedial actions.

For an effective logistics system every activity depends on the other. If these activities are well managed the logistics system will work in an efficient manner. Otherwise the system may be weak and poorly managed resulting in stock outs and or over stocking.

Objectives of a Logistics System

Instructions for Trainers:

The trainer using interactive methodology will brief the aims and objectives of logistic system. Explain the “6 Rights” with the help of simple example of any household item like detergents, soft drinks etc.

The aim of a good logistics system is to store and supply the right quantity of goods to meet consumers demand at all program levels. In other words it may be said the basic theme of a good logistics system is to ensure uninterrupted supply commodities to the end users.

The objectives of a good logistics system are said to be comprised of “6 Rights”, these are:

- **Getting the Right Goods**
- **In the Right quantity**
- **At the Right places**
- **In the Right Condition**
- **At the Right Time**
- **For the Right cost**

Right cost does not mean that the logistics system can maximize services to the consumers and at the same time minimize the cost. High-quality logistics services require large inventories, more frequent transportation and many ware houses etc; all of which raise the cost. Low distribution cost often means cheap transportation, low stock levels and few warehouses, which hinders the smooth flow of commodities. Hence “Right” refers to an efficient system in which the ‘input’ (resources cost etc.) is balanced against ‘output’ (services, supplies etc.). Ideally all the logistics systems decisions should result in a level of service that meets the output needs. The key logistics factors that determine the level of quality services include:

- Availability of accurate and timely information on consumption and stock levels.
- Accurate forecasting of needs.
- Timely ordering and processing of supplies.
- Reliable delivery
- Organized and efficient warehousing.

Programs promoting the birth spacing desire uninterrupted supply of contraceptives to the clients which in turn require an efficient logistics system. Any stock outs in such program may lead to dis- satisfaction of clients and unwanted pregnancies.

What Does Contraceptive Logistics Mean?

Instructions for Trainers:

Allow the participants to try to answer. Give them a hint if needed. Then explain the term.

As they have just learnt the “6 RIGHTS” in above section so ask them to use “6 RIGHTS” in contraceptive Logistics as well.

Ask one of the participants to read the content given in the box below and explain what does it mean?

The contraceptive logistics system is a vitally important part of any program that provides family planning services. It is the system that is responsible for getting the contraceptives from the manufacturer to the family planning client. It encompasses a number of activities along the way, such as transporting and storing the contraceptives, maintaining adequate supply levels, and keeping records. If the logistics system is not working well, service delivery sites will not have the contraceptive supplies their clients need.

The purpose of a contraceptive logistics system is to get the:

- RIGHT quantities of the
- RIGHT contraceptives to the
- RIGHT places at the
- RIGHT time in the
- RIGHT condition at the
- RIGHT cost.

In other words, the staff who manage contraceptive supplies need to determine how much (quantity and cost) of what (contraceptive) needs to go where (what location) when and how to get it there in good condition

To provide family planning clients with good contraceptive services, you must make sure that you have:

- The right amount of supplies on hand (not too many, not too few).
- Contraceptives of good quality (not expired, not damaged).
- A full selection of the contraceptive methods that your program offers and clients request.

The goal of a logistics system is to ensure that every family planning client always receives the contraceptives she or he wants, and that they are in good condition and have not expired. To select, procure, and distribute the right quantities of the right contraceptives, managers of the logistics system must keep informed of the rates of use of each contraceptive and of the quantity of available supplies. This requires the following:

- Timely and accurate reporting.
- Proper storage.
- Close monitoring and managing quantities of contraceptives dispensed.

Quiz- Introduction to Logistics

Section 1: Fill in the Blanks:

- I. Logistics is the branch of _____ which deals with making commodities available to group of population or consumers.
- II. Well managed _____ enable the managers to identify the bottlenecks and take necessary remedial actions.
- III. _____ for the actual needs of the target population and _____ of commodities are two important pillars of strong and efficient logistics system.
- IV. Determining the quantity of each item required for the specified period is called _____.
- V. _____ is the link between the consumer demand and program's manufacturing or procuring activity

Section 2: Mark True or False:

Statement	True	False
Estimation of the quantities to be procured is the first step in the Logistics system.		
Inventory management is the link between the consumer demand and organization's manufacturing or procuring activity.		
Supply needs are usually based on the estimates of the population to be served.		
Low distribution cost always ensures a good logistics system.		
Programs promoting birth spacing desire an uninterrupted supply of the contraceptives to the clients.		

Answer Quiz Introduction to the logistics System

Section 1: Fill in the Blanks:

- I. Logistics is the branch of **Supply Chain Management** which deals with making commodities available to group of population or consumers.
- II. Well managed **monitoring systems** enable the managers to identify the bottlenecks and take necessary remedial actions.
- III. **Placement of ordering** for the actual needs of the target population and **timely transportation** of commodities are two important pillars of strong and efficient logistics system.
- IV. Determining the quantity of each item required for the specified period is called **forecasting**.
- V. **Inventory management** is the link between the consumer demand and program's manufacturing or procuring activity

Section 2: Mark True or False:

Estimation of the quantities to be procured is the first step in the Logistics system.	True	False (Selecting the items to be procured is the first step in the Logistics system.)
Inventory management is the link between the consumer demand and organization's manufacturing or procuring activity.	True	False
Supply needs are usually based on the estimates of the population to be served.	True	False
Low distribution cost always ensures a good logistics system.	True	False (An efficient distribution system may sometimes require high cost)
Programs promoting birth spacing desire an uninterrupted supply of the contraceptives to the clients.	True	False

Section-2- Introduction to Basic Statistics

Section-2- Introduction to Basic Statistics

Session Objectives:

The participants will:

- Identify Difference between Data and Information.
- Understands basic statistics.
- Develop skills in basic computation and descriptive statistics.

Session Time: 2 Hours

Methodology:

- Small Group Work
- Discussion on case studies.
- Presentation and discussion on group work
- Exercises.
- Participants 'manual (Pages 8- 13)

Material Required.

- Flip Charts and chart markers.
- White board and markers.
- Participants' manual
- Exercise on Basic Statistics.
- Calculator
- Lead pencil, eraser and sharpener

Trainer's Notes:

Basic Statistics

Instructions for Trainers:

Request the participants to keep their books closed and open only at the time of case studies or when asked.

- Begin the session with a discussion; ask the participants if they have any knowledge of basic statistics.
- Listen to their answers and make them read the definition from their guide.
- Explain the 4 essential techniques of statistics and provide examples. (these examples should be provided in the trainers notes)
- Get their views on uses of statistics in daily and professional life.

What are Statistics?

Statistics area combination of techniques and procedures dealing with the **Collection, Organization, Analysis, Interpretation** and **Presentation** of information that can be stated numerically.

Collection: Data is gathered on prescribed format e.g. example district receiving a monthly report from all FLCFS on a prescribed format regular basis.

Organization: Data is grouped or organized in an ascending or descending order processed and summarized e.g. MCH component of the DHIS contains data on mother and child health, the FP portion of report having data on FP users etc.

Analysis: Comparisons between the data variables and time period lead to analysis e.g. at FLCF analyses of monthly reports are carried out in which population coverage, EPI, ANC, CPR, etc are calculated.

Interpretation: Inferences about data are drawn e.g. if CPR is low then the percentage of either the supply of contraceptives is not regular or the staff is not sufficient to cater the population.

Presentation: It is reporting of a result in an honest and unambiguous way.

Data and Information

Instructions for Trainers:

Request the participants to keep their books closed and open only at the time of case studies or when asked.

- Ask the participants to use their background knowledge and experience and tell the definition of data and information and how they can differentiate between the two. Tell them to explain with examples. Afterwards clear their concept with the help of examples.
- Clear the concept with the help of case study 2.1 as well.
- Teach the rest of the session by adopting the same participatory approach

Definition

DATA	INFORMATION
Data consist of facts and figures that are not currently being used in a decision process. An example is one of the LHW Family Register. <u>OR</u> Data are collected facts that are generally not useful for decision making without further processing <u>OR</u> it is the raw material for information.	Information is a data that has been processed into a form that is meaningful. Information is directly useful in making decisions. Examples: <ul style="list-style-type: none">• Total number of CBAs in a Union council.• Total number of working community based workers.• %age of modern contraceptive users

Collection of Data

The most important ways of collection of data are:

- Survey.
- Census.

Statistical data are collected either by a complete survey of the whole population, called census, which involves a considerable expenditure and time, or by a sample survey which saves much time and money.

Types of Data

Primary data: Data that have been originally collected (raw data) and have not undergone any sort of analysis are called primary data.

Example: LHW Registers, survey data etc.

Secondary data: Data that have undergone any sort of analysis at least once, i.e. the data have been collected, classified, tabulated or presented in some form for a certain purpose, are called

Example: LHW Monthly Report, Facility Report, Feedback report, research report.

Case Study 2.1

Instructions for the trainer: Inform the participants that they will now do a case study and ask them to open the relevant page of participants' manual. Give 5 minutes to read the case study and remaining 5 minutes to answer the questions given below. Ask one of the participants to read the case study slowly, so that everyone can understand its concept. For the answer of 2nd question, draw 2 boxes on board/flip chart and write answers given by the participants in the boxes. In the end correct the answers with the help of trainer notes.

Case Study

The MO In-charge collected data from different sources and found that in 2004, population of the UC was 22,000, 51% are males and 49 % are females. CPR of the area is 42%. There are 20 LHWs, 01 MO, 01 MA, 01 LHV and 01 WMO working in the RHC. A total of 1980 children were under 3 years of age. The married CBAs population was 3520 and 4,620 of the population was 15-49 years females. Only 43% of children were fully vaccinated. Most of the women breast-fed their children while knowledge of basic hygiene, weaning diet etc was deficient among mothers. Last year 5000 births took place. In the same year, 19% children less than 3 year suffered from diarrhea and 14.5% children from ARI and 289 from other diseases.

Question: The facts and figures mentioned in case study are Data or Information?

Answer: Information but also may be secondary data.

Question: List down the Data and Information from the case study?

Answer:

Data	Information
<ul style="list-style-type: none">• 20 LHWs• Health staff, MO,WMO,LHVMA• Under 03 years children= 1980• Married CBAs= 3520• 15-49 yrs. Females= 4620• Births= 5000• Less than 03 Yrs. Children suffering from diarrhea= 289	<ul style="list-style-type: none">• 51% males & 49% females.• CPR= 42%• Children fully immunized= 43%• Less than 03 Yrs. Children suffering from diarrhea= 19%• Less than 03 Yrs. Children suffering from ARI= 14.5%

Instructions for Trainers:

- For rest of the session the trainer will ask participants the definition of different statistical terms given below and afterwards read the definition from the book, describe the concept in simple way with the help of examples.
- For case studies make pairs of participants and allot 5-7 minutes for completion of each case study.

Instructions for Case studies: Inform the participants that they will now do a case study and ask them to open the relevant pages 8 & 9 of participants' manual. Give 5 minutes to read the case study and remaining 5 minutes to do the calculations. When presenting, ask one of the participants to read the case study slowly, so that everyone can understand its substance. In the end correct the answers with the help of trainer notes.

Vital Statistics

There are some factors which cause changes in the size and composition of human population e.g. births and in migration (people coming into a population from other locations) add to the existing population where deaths and out migration (people migrating to some other place) decrease the existing population. Such factors are called vital events and they include births, deaths, and migration (factors that change the size of the population). This study is called **Vital Statistics**. E.g. the figures in deaths, births and total registered population in the DHIS monthly report shows the changes in population figures.

Variables

Variables are events that has different values OR a value, which changes during action. They can be quantitative (measurable or can be counted) or qualitative (does not take a numerical value i.e. gender, place of birth, color of eyes)

Examples:

Age, Sex, Marital Status, Time, Temperature, total number of working LHVS, total No. of children born etc. are some examples of variables.

Case Study 2.2

A Store keeper of RHC wants to collect the data of FP users in a population. What will be the most appropriate variables she includes in the questionnaire?

Answer:

Total Number of married woman of age 15-49 years

Total Number of new cases of FP users registered last month.

Total Number of FP users visited for follow-up.

Demographic Count

The absolute number of a population or any demographic event occurring in a specified area in a specified time period e.g. 44 health facilities in a district, 5 persons in a house etc. are called demographic count. Decimals are not included in Counts, so 4.5, 32%, and $\frac{2}{5}$ are not included in count. The raw quantities of demographic events are the basis of all other statistical analysis.

Example:

56 visits, 443 community based workers, 9236 FP users etc.

Case Study 2.3

In RHC Bhallan, CPR is 45%. Working community based workers are 23. In one month 35 women received contraceptive injections. List down the count and variables

Answer:

Working community based workers 23 (23 is count and working staff is variable)
Women received injection contraceptive: 35

Proportion / Percentage

The relation of one population subgroup to the entire population is called proportion. A percentage is simply another way to expressing a proportion. Percentage means per 100. A percent may be expressed as a decimal or a fraction by dividing it by 100.

Explanation: Percentage is the result of simple mathematical division

= Numerator / Denominator or $[x/y]$ but there has to be a relationship between x and y (i.e. x has to be a part of y) and the constant is always 100. Percentage is not time bound.

The percent sign (%) is a symbol used to indicate percentage.

1-To change a fraction or a mixed number to a percent.

- (a) Multiply the fraction or mixed number by 100
- (b) Reduce if possible
- (c) Add a % sign

Example: Change $\frac{1}{7}$ to a percent

Solution: $\frac{1}{7} \times 100 = \frac{100}{7}$
 $=14.2 \%$

Examples of Percentage:

- CPR 35%
- Method mix of contraceptive user = Condoms 30%, OC Pills 55%, Injections 8%, Sterilization 8%

2- To change percentage in to numbers

- a) Remove the percentage sign.
- b) Divide the mixed number by 100

c) Answer may or may not be in decimals.

Example: - 57 % = 57/100 = 0.57

9 % = 9/100 = .09

Case Study 2.4

In village A number of married women of 15-49 using contraceptives is 182 out of these 116 are using OC Pills. Calculate the percentage of OCP users.

Answer:

$$\begin{aligned} \text{\% Contraceptive users.} &= \frac{\text{No. of using OC Pills}}{\text{Total number of contraceptive users}} \times 100 \\ &= \frac{116}{182} \times 100 = \mathbf{63.7\% \text{ or } 64\%} \text{ of married women are contraceptive users.} \end{aligned}$$

Case Study 2.5:

The catchment population of a FLCF is 43,200. Of this population, 6048 are married CBAS. Out of which 2719 are using modern contraceptive methods. Calculate the CPR.

Answer:

$$\begin{array}{ll} \frac{\text{Total No. of FP users}}{\text{Total married CBAs or eligible couples}} \times 100 & \frac{2719}{6048} \times 100 = \mathbf{44.9\% \text{ or } 45\%} \end{array}$$

CPR =44.9% or 45%.

Rate

This is the occurrence of events over a given interval in time. It is a special form of proportion that includes specification of time.

Rate = Numerator / Denominator or [x/y] but there has to be a relationship between x and y (i.e. x has to be a part of y)

Example:

- 1. Infant Mortality Rate** $\frac{\text{No. of infant deaths in a specified year}}{\text{Total number of live births in that specified year}} \times 1000$
- 2. Contraceptive Prevalence Rate** $= \frac{\text{Total No. modern contraceptive users}}{\text{Total no. of married CBAs (age 15-49 yrs)}} \times 100$
- 3. Method Mix** $= \frac{\text{Total No. users of specific method}}{\text{Total number of contraceptive users}} \times 100$

Case Study 2.6

In a population of 30,000, during the year 2014, there is 900 married couple of reproductive age. Out of these 100 are using condoms, 120 OC Pills and 23 have got tubal ligation done.

Calculate the Contraceptive Prevalence Rate (CPR).

Answer:

$$\text{CPR} = \frac{\text{No. couples using contraceptive methods in a specified year}}{\text{Total married couples of Reproductive age in that specified year}} \times 100$$

$$\text{Infant deaths} = 100 + 120 + 23 = 243$$

$$\text{IMR} = 243 / 900 \times 100 = 27\%$$

Mean or Average

Mean is sum of all the observations and divided by total number of observations.

Characteristics:

- Also known as average.
- Most frequently used
- Applicable to all types of data.

Formula:

$$X_1, X_2, X_3, \dots, X_n = \text{Value of observations}$$

$$N = \text{Total number of observation}$$

$$\text{Average/Mean} = \frac{X_1 + X_2 + X_3 + \dots + X_n}{N}$$

Example:

If a community based Worker did home visits in the last six months as following. Find out her average home visits per month?

Month (X)	Home Visits
Jan	200
Feb	200
Mar	300
April	400
May	300
June	150

Answer:

Total Visits = 1550

Total Months = 6

Mean visits in one month = Total visits / Total months

$$\bar{X} = (200+200+300+400+300+150) / 6 = 1550 / 6 = 258$$

In one month she on the average visited **258** houses.

Case Study 2.7

The population of a village Munirabad was 5,000. A sample of 5 males and 5 females are taken from this population which has the following age structure in years.

Male Ages: 30, 20, 15, 20, 25

Female Ages: 35, 30, 25, 20, 35

Find the mean age of male and female?

Answer:

Mean age of Male = $(30+20+15+20+25) / 5 = 22$ years

Mean age for Female = $(35+30+25+20+35) / 5 = 29$ years

Case Study 2.8

FWC Ahmedabad distributed condoms to clients from January to June 2014 according to following details.

January 70, February 60, March 80, April 110, May 100, June 120

Calculate the average distribution for these 6 months

Answer:

Condoms distributed = $(70+60+80+110+ 100+ 120) = 540$

Number of months = 6

Mean distribution per month = $540 / 6 = 90$

Quiz: Introduction to Statistics

Section-1

Fill in the Blanks

1. The Data that have been originally collected (raw data) and have not undergone any sort of analysis are called-----data.
2. In Vital events three main factors are included -----, -----,-----.
3. The relation of one population subgroup to the entire population is called -----
4. The occurrence of events over a given interval in time is called -----
5. ----- are the events that have different values or a value which changes during action.

Section-2

Mark True/False

Statement	True	False
Information is the raw data that is directly collected from field		
The absolute number of a population or any demographic event occurring in a specified area in a specified time period		
Data that have undergone any sort of analysis at least once is called Primary data		
In proportion the numerator has no relationship with the denominator		
The statistical data collected from the whole population is called survey		

Answers of Quiz

Section-1

Fill in the Blanks

1. The Data that have been originally collected (raw data) and have not undergone any sort of analysis are called **Primary data**.
2. In Vital events three main factors are included **deaths, births and migration**
3. The relation of one population subgroup to the entire population is called **Proportion**
4. The occurrence of events over a given interval in time is called **Rate**
5. **Variables** are the events that have different value or a value which changes during action.

Section-2

Mark True/False

Statement	True	False
Information is the raw data that is directly collected from field		False (Information is a data that has been processed into a form that is meaningful.)

The absolute number of a population or any demographic event occurring in a specified area in a specified time period	True	
Data that have undergone any sort of analysis at least once is called Primary data		False (it is secondary Data)
In proportion the numerator has no relationship with the denominator		False (In proportion numerator is part of denominator)
The statistical data collected from the whole population is called survey		False (it is called census)

SECTION – 3- Contraceptives Logistic Management

Unit-3.1- Product Selection and Forecasting:

Session Objectives:

The participants will:

- Recognize the process of product selection and forecasting at different levels.
- Be aware of Advantages and disadvantages of different data sources:
- Make out the concept of contraceptive year protection factor.

Session Time: 45 Minutes

Methodology:

- Interactive discussion.
- Brain storming.
- Group Work
- Book reading.

Material Required.

- Flip Charts and chart markers.
- White board and markers.
- Participants' manual (Pages 16 - 21)

Trainer's Notes:

Introduction to Product Selection

Instructions for Trainers:

Commence the session by asking the participants what they understand by term Product selection. Ask one of the participants to write down the replies on the board. Once participants have given their inputs clarify the concept by explaining the various terms in this regards. In the end ask for any questions.

Product selection means choosing the items to be procured for any program or project. In the birth spacing programs the major products to be procured are the contraceptives. The types of contraceptives and their quantity depends on various factors such as the popularity of certain contraceptive in the population to be served, total population to be served and overall goals and objectives of the program/project.

After selecting the products to be procured and determining the quantity required the procurement process starts. Contraceptives are procured either from the local market or from international market. Various factors like availability of the items according to the required specifications, quality of the products, feedback from the previous user and last but not the least the price of items are kept in mind while making the decision. Usually an open bidding process is adopted for procurement.

The product selection is usually done at the national or provincial level, as this manual focuses on the district and sub district level managers the detail of the process are beyond its scope.

Introduction to Forecasting

Instructions for Trainers:

Ask participants what they understand by the term forecasting. Define it, ask one of the participants to write down the replies on the board. Once participants have given their inputs clarify the concept by explaining the various terms in this regards. In the end ask for any questions.

Forecasting may be defined as **“the process of estimating the quantity of commodities needed to serve a given population for specified period of time”**. In its simplest form forecasting occurs when a person or persons responsible for supplies of commodities in a given service area determine the quantities expected to be consumed and conveys this plan to the competent authorities.

This estimation helps to avoid shortages (stock out), ensures credible service delivery and prevents over stocking and wastage. The message delivered is, “we need such and such quantity of commodities to be supplied over the specified period of time to meet the need and demand of the intended beneficiaries.” Forecasting done on realistic calculations also contribute to efficient procurement, inventory management and distribution.

Process of Forecasting

A precise forecasting can be achieved by collecting, processing and analyzing data relevant to the future program needs. Person responsible for forecasting should be well versed of the future plans of the program. Middle and lower level managers responsible for forecasting should know about the expected number of new clients for each contraceptive method during the period for which forecasting is being done. However we get the estimates for our forecast by looking at past data. Usually three sources of data are used to estimate contraceptive needs, these are:

- a) Consumption (or Logistics) data
- b) Service data
- c) Population to be served (target) data

Every source has its own advantages and disadvantages. Hence in order to determine more accurate estimates it is recommended that program managers should use all the three sources and compare results. Ideally there should not be much difference between the results from different sources. If the results differ widely it means that either the policies are not being followed or the quality of data and/or its analysis is not good.

Advantages and disadvantages of different data sources

Instructions for Trainers:

Divide the participants in three groups, ask each group that by using their background knowledge and experience, discuss the advantages and disadvantages of one assigned data source used for forecasting. Give 10minutes for discussion and then ask representatives of every group to make a presentation (5minute) on their group work. Each presentation should be followed by discussion among participants.

In the end explain important points through discussion, Q&A and reading the participants' manual pages 17 – 18.

Consumption Based Estimates

In this method forecasting is done on the basis of the products distributed to the users at service delivery point (BHU or FWC etc.) or community based service outlets (LHWs) and non government/ private sector sales or distribution points. This is the most accurate method but requires a reasonably accurate information system that has tracked logistics data for at least one year

Table 3.1.1: Advantages and disadvantages of Consumption Based Estimates:

Advantages	Disadvantages
<ol style="list-style-type: none"> 1. It is one of the most accurate methods for forecasting. 2. It measures both the level and trends in quantities given to the clients, thereby eliminating the additional assumptions and calculations required by other forecasting methods. 	<ol style="list-style-type: none"> 1. If data at the lowest level are incomplete and/or inaccurate the forecasting may not be very accurate, in such cases the forecaster should use reliable data from the next level up in the distribution system- also called issue data. 2. It cannot predict the impact of pragmatic changes such as new clinics/ service openings or preference for a particular contraceptive method. 3. It will not reflect the true demand or distribution system capacity if stock-outs or over supply situation occurs during the period used for forecast. 4. It is more accurate and easy to forecast if the usage patterns are stable. For more accurate calculations the past data for a longer period may be required, if forecasting is to be done for a quarter then the data from last 3-4 quarters should be used, if it is on annual basis then data of past 3-4 years may be required.

Service Data Estimates

Services data recorded at the service delivery outlets such as BHU, FWC or Health House of LHWs etc. can be used to forecast the contraceptive requirement for a given period. Commonly reported data includes:

- New clients: The number of clients using the service outlet for the first time or were the user in the past but discontinued contraceptive use and have history of unprotected sex, and the quantity of contraceptive issued to them.
- Re- Visit (Follow up): the number of clients who have been regularly using the contraceptives (they may not have visited during the reporting period, depending on the method being used).
- Side effects: the number of cases of side effects associated with use of any contraceptive method or continuation/ discontinuation during the particular period can be determined during the reporting period by registration of new clients or drop outs.

When targets are expressed in terms of users or visits, estimates based on service data must take into account any planned growth or management directed changes. It is important to note that if there are interruptions in supplies during the reporting period, it will result in inaccurate forecast due to the inability to serve the clients. Sometimes the reporting staff may submit fake or false reports just to show their performance or to meet the target imposed by the management; in such cases the forecasting may be inaccurate.

Table 3.1.2: Advantages and Disadvantages of Service Data Estimates

Advantages	Disadvantages
<ol style="list-style-type: none"> 1. They automatically take the program limitations into account 2. When program targets are expressed in terms of users or visits, estimates based on same data take into account any planned growth or other management directed program changes. 	<ol style="list-style-type: none"> 1. Estimates are accurate if the supplies are regular; in case of interruptions in supplies the estimates may be distorted. 2. In case of false/ fake reporting the estimates may not be accurate, over reporting may lead to inaccurate estimation and over supply.

Couple Years Protection (CYP)

The term Couple Year Protection (CYP) is used to estimate the quantity or the number of a specific type of contraceptive required to protect a couple from pregnancy for one year. For example if a couple is using OC Pills as a method, then the number of OC pills Cycles required to protect this couple from contraception for one year will be the CYP for OC Pills. It may also be defined as the estimated protection provided by family planning (FP) services during a one-year period, based upon the volume of all contraceptives sold or distributed free of charge to clients during that period It can be calculated from the data routinely collected through programs or projects and thus minimizes the data collection burden

Purpose

CYP measures the volume of program activity. Program managers and donor agencies use it to monitor progress in the delivery of contraceptive services at the program and project levels. Because managers/ donors generally require the organizations they support to report CYP, this measure is currently one of the most widely used indicators of output in international FP programs.

Population Based Estimate

This method is used with new programs where there is little or no prior experience on which the estimates can be made. The contraceptives requirements are calculated on the basis of census results, surveys or some previous studies or reports on the population to be served.

Table 3.1.3: Advantages and Disadvantages of Population Based estimates

Advantages	Disadvantages
<ol style="list-style-type: none"> 1. It is independent of service delivery system, therefore can be used when historical program data is either not available or is inaccurate. 2. Provides estimates of maximum needs for services (or potential clients) verses the current users. 	<ol style="list-style-type: none"> 1. If the targets are set high (not realistic) the requirements is over estimated resulting in over supply and wastage. 2. If the same targets are used for a wider community (for example the whole country or province) there may be supply imbalances in various places due to different trends in different areas. 3. It is usually based on the assumption the program is the sole supplier of the commodities in the area, in fact there may

be other potential suppliers such as other programs/ departments/ NGOs and private sector. If these are not taken into account during forecasting the estimates may be inaccurate.

4. The data collection requires more time and resources.

Formula for forecasting by various methods

Instructions for Trainers:

Explain the formulae of calculating the requirements of contraceptives using different methods of forecasting given below. Explain every method by example given. In the end ask the participants to solve the case studies. If required the facilitator may develop more case studies. Once the participants have completed the work check the work done by each participant. In the end summarize the topic by Q&A session

a) Formula for forecasting contraceptives requirement using service data

Estimates Based on Visits	<p>Estimated total visits for this month x Number of units dispensed at each visit.</p> <p>Example: At FWC Kotli, 8 clients of condom user are expected to visit during the month of September 2014, the staff issues 10 pieces of condoms to every client. So the estimated number of condoms required at this center will be</p> $= 8 \times 10 = 80$
Estimate based on current users	<p>Estimated current users for this method x No. of units required to be served to a client a current use for the year (CYP)</p> <p>Example: At BHU Hyderabad the number of current OC Pills user for year 2015 is 32 The required number of OC pills for this centre for year 2015 will be</p> $= \text{Number of current clients} \times \text{CYP for OC Pills}$ $= 32 \times 15 = 480$

b) Formula for population based forecasting of contraceptive requirements:

Step 1: Estimate the number of contraceptive users	All married women of 15-49 years X Target Population for usage (Contraceptive prevalence rate or CPR)
Step 2: Estimate the of users of given method	Number of users x estimated proportion of users of a given method (Method Mix)
Step 3: Estimate requirement for given method	Number of users of given method x number of units required for 1 year (CYP)

Example:

In the district B the total number of married women of 15-49 years is 40,000, here the CPR is 25 %, 15% of the contraceptive users use condoms, calculate the number of condoms required for the district for one year

Step 1: Estimate the number of contraceptive users = All married women of 15-49 years x CPR

$$= 40,000 \times 25/100 = 10,000$$

Step 2: Estimate the number of condom users = Number of users x Est. No. of condom users

$$= 10,000 \times 15/100 = 1500$$

Step 3: Estimate requirement for given method = Number of users of condoms x CYP for condoms

$$= 1500 \times 120 = 180,000 \text{ pieces of}$$

condoms required

Case Studies:

Instructions for the trainer: Inform the participants that they will now do a case study. Give 5 minutes to read the case study and remaining 5 minutes to answer the questions given below. Ask one of the participants to read the case study slowly, so that everyone can understand its concept. For the answer of 2nd question, draw 2 boxes on board/flip chart and write answers given by the participants in the boxes. In the end correct the answers with the help of trainer notes.

Case Study 3.1.1:

At BHU Muladad, 22 new and 18 old clients of condom user are expected to visit during the month of December 2014, the staff issues 10 pieces of condoms to every client. Using this information calculate the number of condoms required for the said month?

Answer:

Total number of expected visits = 22+18= 40

Condoms required for each client = 10

Total condoms required = 40 x 10 = 400

Case Study 3.1.2:

At FWC Karimnagar the expected number Depo Provera injection user for year 2015 is 58, if the CYP for injection Depo Provera is 4, calculate the number of Depo Provera injection required to protect these couples for one year using this method.

Answer:

**Number of expected clients x CYP for Depo Provera injection
= 58 x 4= 232**

Case Study 3.1.3:

In the district of Shajowal the total number of married women of 15-49 years is 63,000, here the CPR is 30%, out of the contraceptive users 44% use OC Pills, the CYP for OC pills is 15 Cycles calculate the number of OC pills cycles required for the district for one year.

Answer:

Step 1: Estimate the number of contraceptive users = All married women of 15-49 years x CPR = 63,000 x 30/100 = 18,900

**Step 2: Estimate the number of OCP users = Number of users x Est. No. of OCP users
= 18,900 x 44 /100 = 8316**

Step 3: Estimate requirement for given method = Number of users of OCP x CYP for OCP = 8,316 x 15= 124,740.

Responsibilities of forecasters

a) Forecast

The forecaster has to predict the amount of product to be dispensed to clients while taking into account the expected losses or damages in the logistics process.

b) Validate

Since there are many data sources and different forecasting methodologies, it is necessary to compare the results to analyze inconsistencies. If there are substantial differences, there could be a number of reasons leading to the variations in the results. These reasons must be analyzed and validated with input from many stakeholders to ensure an accurate forecast.

c) Estimation of scarce commodities

There may be some products that are not available in the market in sufficient quantity; the forecaster must also look for multiple sources of supply as well as alternate products, if possible, to meet anticipated needs.

d) Monitor

The forecaster must keep a check on the validity assumptions used for forecasting by comparing the forecast with the actual consumption for adjustment and correction. This would provide a basis for further future forecasts.

Quiz- Product selection and forecasting

Section-1

Fill in the Blanks:

1. _____ means choosing the items to be procured for any program or project.
2. _____ is one of the most accurate methods for forecasting
3. The term _____ is used to estimate the quantity or the number of a specific type of contraceptive required to protect a couple from pregnancy for one year
4. The data recorded at the service delivery outlets such as BHU, FWC or Health House of LHWs etc. is called _____.
5. Calculation of contraceptives on the basis of census results, surveys or some previous studies or reports on the population to be served is called _____.

Section-2

Mark True or False

Statement	True	False
In order to determine more accurate estimates it is recommended that program managers should use all the three sources and compare results		
For accurate forecasting it is better to rely on one data source rather than to analyze and compare data from different		
CYP cannot be calculated from data routinely collected through programs or projects		
Interruption in supplies during the reporting period may lead to inaccurate forecasting		
Forecasting done on realistic calculations also contribute to efficient procurement, inventory management and distribution		

Answer Quiz Product selection and forecasting

Section-1

Fill in the Blanks:

1. **Product selection** means choosing the items to be procured for any program or project.
2. **Consumption based estimates** is one of the most accurate methods for forecasting
3. The term **Couple Year Protection (CYP)** is used to estimate the quantity or the number of a specific type of contraceptive required to protect a couple from pregnancy for one year
4. The data recorded at the service delivery out lets such as BHU, FWC or Health House of LHWs etc. is called **the service data**.
5. Calculation of contraceptives on the basis of census results, surveys or some previous studies or reports on the population to be served is called **Population Based Estimate**.

Section-2

Mark True or False

Statement	True	False
In order to determine more accurate estimates it is recommended that program managers should use all the three sources and compare results	True	
For accurate forecasting it is better to rely on one data source rather than to analyze and compare data from different		False (In order to determine more accurate estimates it is recommended that program managers should use all the three sources and compare results.)
CYP cannot be calculated from data routinely collected through programs or projects		False (It can be calculated from data routinely collected through programs or projects.)
Interruption in supplies during the reporting period may lead to inaccurate forecasting	True	
Forecasting done on realistic calculations also contribute to efficient procurement, inventory management and distribution	True	

INTRODUCTION

Instructions for Trainers:

Ask the participants to define the term “Requisition” in logistics. After clarifying the meaning, explain to them the past and current process and channels of requisitioning. Next introduce them to the CLR-6 form for the requisitioning of contraceptives by DoH and DoPW. Brief them about its purpose and explain its first portion.

Divide the participants in to 2 groups, Group-1 should consist of people working in DoH, LHWS, and MNCH programs, in Group-2 participants from the population welfare department will be included. Give both the groups a copy of CLR-6 form public sector and ask Group -1 to fill in section -1 and part A-D of section -2, while Group 2 will work on section -1 parts E-F of section -2 with the help of the filled relevant monthly reports of the past six months. They will then prepare a 10 minutes presentation on their relevant section. For filling the form read the instructions given in the manual.

Select a team leader who will guide the group and will present their work.

After presentation the trainer will explain the portions that were not answered properly with the help of the participants’ manual (Pages 23 - 25).

Requisition is a paper or electronic request form that may be used internally to request items from existing warehouse stores or to request new items. The form usually includes an item number and /or description, quantity needed, date required and e location or department making the request. A supply requisition must be approved by a competent authority before onwards submission.

The success of every logistics system lies in the efficient requisitioning mechanism. A carefully designed requisitioning system helps to avoid over/ under stocking.

Contraceptives Requisitioning (CLR-6)

Background

Pakistan’s Health and Population Departments had been using the CLR-6 and CLR-6(H) for contraceptives requisitioning from central warehouse, Karachi. Before devolution the CLR-6 was used by the former Ministry of Population Welfare (MoPW) and the CLR-6 (H) was used by the former Ministry of Health (MoH). Both of these forms had been generated by district offices of their respective departments. Now District officers of both the Population and Health Departments are required to prepare the prescribed Integrated CLR-6 jointly and send to the Central Warehouse, Karachi and to the respective provincial department on a quarterly basis.

The Central Warehouse& Supplies (CW&S), Karachi is the custodian of all public sector contraceptives and, with policy changes after devolution, CW&S stock is considered as ONE stock. Integrated requisitioning was introduced and all provinces and regions agreed on the new CLR-6 format.

There are two main stakeholders using the integrated CLR-6 i.e. the Department of Health (DoH) and Population Welfare Department (PWD) of each province and region.

This form is filled at district level in quarterly meetings and signed by district officers of both departments. The District Population Welfare Officer (DPWO) is the Secretary of the meeting while the Chairman is the Executive District Officer Health - EDO (H) / District Health Officer (DHO).

The EDO (H) / DHO are responsible for contraceptive requisitioning for:

- itself,
- The Lady Health Workers (LHW) Program,
- The Peoples Primary Health Care Initiative (PPHI)/Chief Minister's Initiative for Primary Health Care (CMIPHC), the Maternal, Neonatal & Child Health (MNCH) Program and the Tertiary Care Hospitals (TCH), located in an any of the districts vicinity.

The DOH demand in the CLR-6 will include TCH requirement which can be obtained manually through SDP/Health Facility.

The DPWO is responsible:

- for Family Welfare Centers (FWCs),
- Mobile Service Units (MSUs),
- Reproductive Health Centers (RHS).

NGOs i.e. Marie Stopes Society (MSS) & Family Planning Association of Pakistan (FPAP) will submit their CLR-6 separately by collecting information from the districts and submitting district wise and total demand to the CW&S. Deliveries against the demanded quantities will be made to their identified central point/stores. For the private sectors and NGOs, a separate CLR-6 form is designed to submit their requisition separately. Deliveries against the demanded quantities will be made to their identified central point/stores.

There are six data fields needed for each commodity requested i.e.

- Consumption during the last quarter,
- Stock at the end of last quarter at district Store,
- Stock at the end of last quarter at population and health facilities.
- Total Stock Available (sum of stock both field and district store),
- Desired stock level for 2 quarters (Calculated from consumption) and
- Replenishment Requested (calculated by subtracting "Total Available Stock" from "Desired Stock level for 2 quarters").

In addition to these indicators, DPWO has to submit their sales because PWD is not providing contraceptive free for cost to its clients.

Public Sector Integrated CLR-6 Form

This form is used by all district level public sector Family Planning Service Providers (DPWO, DOH & LHW, PPHI/CMIPHC, MNCH and TCH) for requesting contraceptives from Central Warehouse.

The Integrated CLR-6 was introduced in 2012 after a policy decision by the federal and provincial health and population departments. It compiles requests from district level. This form indicates the stock status and consumption during the past quarter and indicates the quantity requested for each contraceptive for the quarter.

Instructions to fill the public sector CLR-6 Form

Section-1

1. **To:** Insert the name of the person or position who the Requisition is intended for. For Example: Director, Central Warehouse.
2. **District Name:** Insert the name of the district. Name of the requesting district.
3. **Requisition No:** Insert the appropriate Requisition number. This is determined by each District. Consult with the In Charge.
4. **Requisition Date:** Write the date. The Requisition should be completed at the end of the reporting period. Example: 1 April 2014

Section-2

Part-A-D is for DoH

- **Part-A :** It give the information about department health including TCH
- **Part-B:** It deals with DoH and community based distribution(LHWs)
- **Part-C:** it deals with DOH, PPHI static facilities
- **Part-D:** MNCH health (CMWs)

Part-E-F is for Population Welfare Department

- **Part-E:** It deals with DPWO
- **Part-F:** RHS A centers
- **Part-G &H:** for Marie Stopes and FPAP.

Table 3.2.1: instructions for filling relevant columns of CLR-6 Form

Department of Health	
1. Sections A – D All steps are completed by following the instructions below. The only difference is who fills out sections A – D.	Section A is completed by the District Officer for the district, including Tertiary Care Hospital located in the relevant district vicinity. Section B is completed by the District Program Implementation Unit (DPIU) of LHW Program Section C is completed by PPHI/CMIPCH Section D is completed by MNCH
2. Section A A-D 1 Provide the consumption at your facility for the past quarter	Completed by Executive District Officer/ District Health Officer Provide this information for all products/columns on the form.
3. A-D 2 Provide the amount of stock on hand at the district store at the end of this quarter	Conduct a physical inventory and update your stock cards afterwards.
4. A-D 3 Provide total amount of stock at all health outlets in this district at the end of this quarter	Find this by reviewing all facility reports.

5.	A-D 4 Determine the desired stock amount for the next two quarters.	Multiply the figure in A1 by 2. (Double your consumption for the quarter that just ended)
6.	A-D 5 Determine your replenishment	(A5 - A4) subtract how much stock you have from the total you wish to have for the next period.
Population Welfare Department		
1	Sections E – H All sections are completed by following the steps below. The only difference is who fills out parts E – H.	Section E is completed by DPWO Section F is completed by Reproductive Health Centers (RHS) Each Section has two parts - an A and B. Each part A and B is the same for all Sections
2	Section E – H, Part A1 Avg. quarterly sale on the basis of last three months consumption	Calculate the average sale per month based on the last quarter consumption and write in Pak rupees. The condoms are sold at 0.5 Rs per unit while all other contraceptive at 3 Rs. / unit or cycle
3	E – H A2 Sale/Use Last Month	Indicate sale in Pak rupees for all contraceptives in this cell. The sale is calculated by multiplying the use/consumption by sale prices
5	E –H, A3 Amount of sales proceeds deposited in bank/treasury (Attach original paid challan)	Write amount that was deposited from these sales into the bank or treasury. Remember to keep track of your receipts or bank numbers
6	E – H, A4 Bank/Treasury challan no. & Date	Write the reference number of challan no. with date
7	E –H, B1 Consumption during the last quarter	Add up the total consumption for all products during the quarter that just ended. Find this information from the web-based LMIS if consumption data is regularly entered into it every month
8	E – H, B2 Stock at the end of last quarter at district Store	This should be done by conducting a physical count. Update the corresponding stock cards at the same time so your true balance is known.
9	E – H, B3 Stock at the end of last quarter at health facilities	Add the monthly reports from all the health facilities in the district. Make estimates for non-reporting facilities
10	E – H, B4 Total Stock Available	Add steps 2+3 above
11	E – H, B5 Desired stock level for 2 quarters	Multiply step 1 (Consumption during the last quarter) X 2
12	E – H, B6 Replenishment Requested	Subtract step 4 from step 5 desired stock level – total stock available

Exercise for filling the CLR-6

Consumption data for COC in xyz district to fill in the CLR-6 form to complete the requisition.
COC issued to clients from facilities during from 01 April to 30th June 2014.

Description	Facility-A	Facility-B	Facility-C	Facility-D	District	Total
Consumption	832	765	1,032	755	-	3384
Stock on hand (as of 30 th June 2014)	1,003	432	654	109	1200	2198

Example: Fill in CLR-6 as per data given above

S. No	Description	COC (No.)
1	2	3
PART - A (To be filled by Requester)		
A-1	Consumption during the last quarter	3,384
A-2	Stock at the end of last quarter at district Store	1,200
A-3	Stock at the end of last quarter at health outlets	2,198
A-4	Total Stock Available (A2+A3)	3,398
A-5	Desired stock level for 2 quarters (A1x2)	6,768
A-6	Replenishment Requested (A5-A4)	3,370

Contraceptive Reporting and Requisitioning by SDPs

Instructions for Trainers:

Introduce the SDP/Health facility Monthly Contraceptive Report and Requisition form to participants. Give them each a copy of the form. Explain each column in detail with the help of examples.

The service delivery points / health facilities of health and population welfare departments will use the following format for contraceptive reporting as well as requisitioning from the concerned District Offices on monthly basis as per inventory level defined for them. This will also include contraceptive stock positions in the respective service delivery points.

SDP/Health Facility Monthly Contraceptive Report and Requisition

Facility _____ District _____ Reporting Month _____

Item Name	Opening Balance	Received	Issued	Adjustments		Closing Balance	Next Month Requirement
				(+)	(-)		
Condoms							
COC							
POP							
ECP							
Copper-T							
Multiload							
2-Months Inj							
3-Months Inj							
Implanon							

Prepared by:
 Signature _____
 Name _____
 Designation _____
 Date _____

Verified by:
 Signature _____
 Name _____
 Designation _____
 Date _____

Instructions for Filling the SDP Report

1. **Facility:** write down the name of service delivery point sending the report e.g. BHU Mirpur or FWC Haripur.
2. **District:** Write down the name of relevant district e.g. district Peshawar
3. **Reporting Month:** Month along with year for which the report is being prepared e.g. April 2014.
4. **Opening Balance:** The stock of relevant contraceptive available is store at the start of relevant month.
5. **Received:** The total quantity of relevant contraceptive received (from all source) during the reporting month.
6. **Issued:** The total quantity of relevant contraceptives issues to clients during the reporting month.
7. **Adjustments (+)/ (-):** Any adjustments made in the stock during the month in light of physical verification or expiry destructions etc.
8. **Closing Balance:** The stock of relevant contraceptive at the end of the reporting month.
9. **Next Month's requirement:** The estimated requirement for next month (based on the estimates of number of visits or AMC), Subtracting the closing balance.
10. **Prepared By:** signatures, name and designation of the person preparing the form (store Keeper).
11. **Verified By:** Signatures, name and designation of person verifying the report (In charge of facility or MS of hospital etc.)

Case Study 3.2.1 Instructions for the trainer: Inform the participants that they will now do a case study. Give 5 minutes to read the case study and remaining 5 minutes to fill the form of the SDP. Ask one of the participants to read the case study slowly, so that everyone can understand its concepts. After filling the form, ask the participants turn by turn to tell how they have filled different columns using given data. In the end correct the answers with the help of trainer notes.

Case Study 3.2.1: SDP/Health Facility Monthly Contraceptive Report and Requisition:

Mr. Asif is the storekeeper of BHU Hatian, district Attock, this facility provides condoms, COC Pills, 2- Months and 3- Months injections and Copper-T, to the clients. On 1st April 2014 the stock position at the health facility was as under: Condoms 720 pieces, COC pills 45 cycles, 2- months injections 25 vials, 3 months injections 18 vials, and 5 pieces of Copper –T. The details of contraceptives issues from the facility during the month is Condoms 680 pieces, COC pills 33 cycles, 2- months injections 18 vials, 3 months injections 12 vials, and Copper –T 3 pieces . During the month the facility received 432 condoms, 20 cycles of COC, 10 vials each of 2-months and 3- month’s injection. No adjustments were made during the month. The AMC for different methods at this BHU is Condoms 700 pieces, COC pills 40 cycles, 2- months’ injections 24 vials, 3 months injections 20 vials, and Copper –T 4 pieces. Fill in the SDP/Health Facility Monthly Contraceptive report and Requisition form for the said month:

Answer Case Study:

SDP/ Health Facility Monthly Contraceptive Report and Requisition

Facility: BHU Hatian District: Attock Reporting Month: April 2014

Item Name	Opening Balance	Received	Issued	Adjustments		Closing Balance	Next Month's Requirement
				(+)	(-)		
Condoms	720	432	680	Nil	Nil	472	228
COC	45	20	33	Nil	Nil	32	08
POP	N.A	N.A	N.A	Nil	Nil	N.A	N.A
ECP	N.A	N.A	N.A	Nil	Nil	N.A	N.A
Copper-T	05	00	3	Nil	Nil	02	02
Multi Load	N.A	N.A	N.A	Nil	Nil	N.A	N.A
2- Months inj.	25	10	18	Nil	Nil	17	07
3- Months inj.	18	10	12	Nil	Nil	16	04
Implnon	N.A	N.A	N.A	Nil	Nil	N.A	N.A

Prepared By:

Signature _____

Name: Asif

Designation: Store Keeper

Date: 30.04. 2014

Verified By:

Signature _____

Name _____

Designation: MO In Charge

Date: 30.04.2014

Transportation

Instructions for Trainers:

Adopt interactive approach to teach the topic of transportation and mode selection criteria. Ask questions and encourage discussion. Ask them to share their experience if any. In the end explain them in detail with the help of manual (Pages 31 -32). Now ask them to read the relevant portion of participants' manual and answer queries.

Transportation is an important part of any supply chain, for making the commodities available to the end users. Transportation refers to movement of commodities from one level to other by using any mode keeping in view the weight, volume, storage temperature and terrain to destination. The modes of transport could be road, sea and air. In Pakistan, contraceptives are transported mostly by road.

Current transportation practices in Pakistan

In case of international consignments, contraceptive commodities are being imported in the country by public (health and population) and private sectors mostly through sea and air routes. The concerned public sector department is responsible for clearing of 81 consignments from the sea and airports. The services of a clearing agent are hired to get the shipment cleared from the ports. The clearing agent is also responsible to transport the commodities from port to the desired storage facility by using the truck trailers. The transportation cost along with loading / unloading is included in the contract amount of clearing agent. CW&S, Karachi, being a central repository for storage of contraceptives in Pakistan, is receiving consignments either received from within the country or outside sources.

The CW&S manages to transport the commodities directly to the public sector district stores by road through private goods forwarding agencies. The consignments are dispatched on quarterly basis.

Districts distribute contraceptives to the health facilities / SDPs on monthly basis. In Population Welfare Department, the service providers collect contraceptives from the District Population Welfare Office in the first week of each month and carry those as per their own arrangements. However, in the Department of Health, commodities are distributed to facilities using official transport.

In order to ensure commodity security and avoid stock outs at the concerned facilities, the transportation mechanism should be based on the following parameters:

Mode Selection Criteria

Four key criteria can be used when comparing different transport modes. These parameters are:

- The speed which the mode exhibits.
- The reliability that the mode demonstrates in its ability to fulfill service requirements.
- The comparative unit costs, which the modes incur.
- The flexibility that the mode exhibits.

Speed and reliability will have a major impact on the ability to deliver humanitarian aid effectively and efficiently to where it is needed.

a) Speed

The nature of a mode normally determines the speed at which goods can be moved. However, the nature of the modal infrastructure can have an impact on the relative speed of that mode. Environmental factors, such as congestion on roads and the impact of adverse weather conditions, can impact on the ability to move at the optimal modal speed.

b) Reliability

The reliability of a transport service to deliver the correct goods, in the right condition at the required time, every time, is a major aspect of customer expectation.

Unreliable service in terms of planned aid delivery can have a critical impact on the ability of a program team to meet its humanitarian objectives.

c) Cost

The cost of a mode will often be expressed in terms of the unit cost for transporting the goods or materials, rather than an absolute figure. This could be expressed as a cost per carton, sack, cost per ton and cost per pallet or similar. The distance the goods have to travel must also be considered. Therefore modal cost can also be expressed in terms of a value per ton kilo meter, for example.

Understanding costs at this level of detail allows a very precise comparison of modes to be made. However, if the goods are in the form of a full load and there is a choice of available modes for the consignment size, the absolute cost for transportation could be compared. For instance, transport could be quoted as a cost per 24 ton load from point A to point B.

d) Flexibility

Flexibility relates to the scope for variation, which exists in a mode.

The infrastructure within which a mode has to operate will affect the flexibility of that mode. Comparatively speaking road transport is a very flexible mode, due to the road infrastructure, which exists in most countries. Rail, for example, is less flexible, being constrained by the available fixed infrastructure.

The selection of mode of transport should be rational.

The following key factors should be kept in consideration during transportation:

- Proper packing of commodities
- Proper loading/ stacking of commodities i.e. right-side up especially in case of liquids.
- Proper shelter to save commodities from environmental and climatic conditions during transportation
- Proper documentation (Issue/ Receipt Voucher) of loaded commodities shall be complete and provided to transporter.
- Prior intimation to consignee.

INTRODUCTION

Instructions for Trainers:

Begin the session with the concept or definition of inventory management. Ask the participants if anyone has any experience with inventory management or working with an inventory control system. After listening to the replies clarify the definition given below.

Ask the participants to close the books and review with them the logistic glossary section by doing the following:

Draw 2 columns on board/chart in heading of column-1 write down the words and in the heading of column 2, the word "Definition". Fill column 2 by asking the participants the definitions of the given words. In the end clarify the definitions through participant's manual (Pages 33-34) reading and discussion.

Inventory management is required to maintain and store the right quantity of supplies to meet consumer (service providers and community based workers / Community) demand of medicines/ contraceptives at all levels (Province/district/ facility). Without proper inventory management and control, an undersupply or oversupply of medicines/ contraceptives can occur, which may adversely affect the activities of an organization.

Brief Logistics Glossary

The following logistics terms are used in this guide.

Table 3.3.1: Brief Logistics Glossary

S.#	Words	Definition
1.	Undersupply	means stock-outs or below the minimum level;
2.	Oversupply	means overstocking or above the maximum level
Both the situations are to be avoided by the managers while collecting data through LMIS for properly managing inventories of materials, to decide how much and when stock should be ordered or issued, and to maintain proper stock levels of all items.		
3.	Contraceptive method	A category of contraceptive, such as oral contraceptives, intrauterine devices (IUDs), inject able contraceptives, and condoms
4.	Contraceptive product	The method and brand name of a contraceptive. Different brands of the same contraceptive method are considered to be separate products. For example, Familla (OC Pills), Saathi (Condoms) are different brands of combined oral contraceptive pills, and condoms.
5.	Dispense (to user)	To provide a contraceptive or other item to its ultimate user (the client). A service provider dispenses contraceptives to a family planning user at a clinic or other outlet.

6.	Dispensed-to-user data	The number of units of a product (usually a specific brand or contraceptive method) provided to clients of family planning services (contraceptive users) over a specified time period.
7.	Issue	To provide a contraceptive or other item to a storage or service delivery facility. A storage facility issues supplies either to an outlet or to another storage facility (but not to a user).
8.	Service Delivery Point (SDP) or Outlet.	A clinic or other site where contraceptives are dispensed to users
9.	Stock out	When an SDP/outlet or storage facility has no stock on hand of a particular item.
10.	Shelf Life	Shelf life is the length of time a product may be stored under ideal conditions without affecting its usability, safety, purity, or potency. If a product is not stored correctly, the shelf life may be shortened

TYPES OF INVENTORY MANAGEMENT SYSTEM

Instructions for Trainers:

Introduce the participants to the types of inventory management system with the help of the diagram given in the participants' manual page 34 - 35 and ask what they think the diagram represents. After hearing their views explain the concept of push and pull systems. Ask them under what circumstances push and pull systems can be used? Next, introduce them to the Topping Up System using same methodology.

There are three types of inventory management system:

1. Push System

It is the system where supplies are allocated or provided by the HIGHER level without any demand/ requisition from the lower level.

The system is used under the following circumstances:

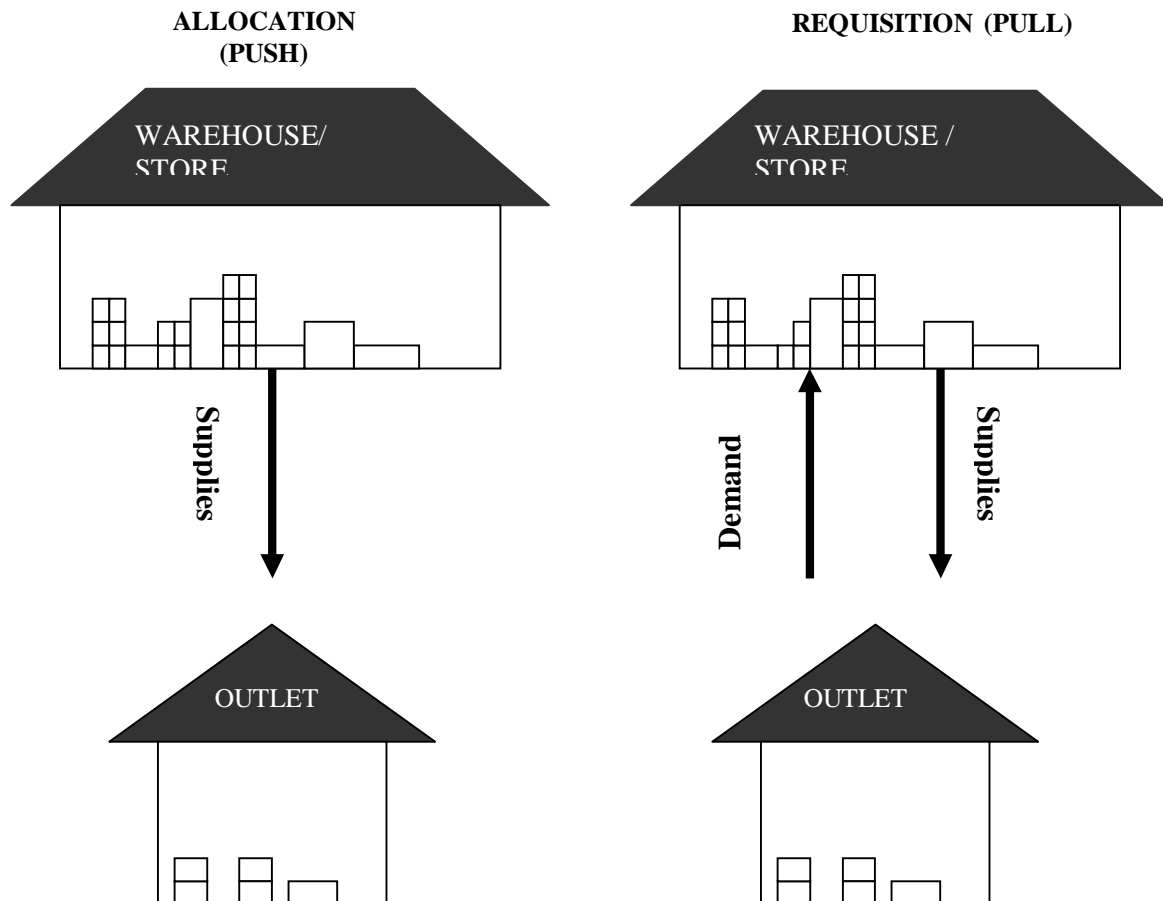
- When the requisition is not submitted in time from the lower level.
- Stores have accumulated beyond their capacity to properly store their goods/commodities.
- When new workers are inducted at community or service delivery point
- In any case of emergency.

2. Pull System

It is the system where supplies are provided to the lower level according to their actual demand. The recommended procedure for DoH and DPWD is that the service outlets submit their requisitions on a quarterly basis to their District office. The main factor is to consider as to whether the facility has established its Average Monthly Consumption (AMC) for each commodity and has determined its min/max levels. The district office

prepares its integrated requested on CLR-6 form and sends it to CW&S which in turn issues contraceptives to the districts

Fig. 3.3.1: PUSH and PULL illustration



3. THE TOPPING UP SYSTEM

This is a combination of push/pull in which the supervisor staff draws supplies from the higher level store before making supervisory and/ or monitoring visits. They inspect the stocks and records of the lower level visited and in consultation with the relevant staff determine the quantity needed to “top up” specific commodities to their **maximum** levels. An Issue Receipt Voucher (IRV) is prepared on the spot and commodities are re-supplied to the outlets or individuals directly. The topping up system has the advantages of eliminating a stock-out and involving local facility staff in inventory decisions. The main consideration is that supervisory and monitoring visits must be regularly scheduled and any lack of transportation or unavailability of supervisory staff will disrupt the flow of supplies.

NOTE: It is pointed out here that the topping up system is not a replacement of regular Push or Pull system. It just supplements the normal supply system. In the public sector it is desirable that the normal supply should be through Pull system and supplemented by Topping Up system.

Using a MIN/MAX System

Instructions for Trainers:

Inform the participants that some new principles of inventory management will be taught in this session using interactive discussion method. The trainer needs to introduce and describe different terms mentioned in the unit with the help of examples and case studies. Use simple language. Give ample time for the participants to understand these terms and encourage them to ask questions to clear any ambiguity.

In order to avoid under/overstocking and/or stock-outs, the following Min/Max definitions and principles must be observed by all organizations.

- **Average Monthly Consumption (AMC):** Average Monthly Consumption (AMC) may be defined as the average number of the units of a specific contraceptive that is dispensed in a month.

For calculation of the AMC it is necessary that facilities have received supplies for at least three consecutive months and they have had no stock outs. The average is usually based on the quantities dispensed during the last 6 months. In the situation where demand is changing rapidly, the average should be based on shorter period say 2-3 months. AMC can be calculated at every level i.e. Community outlet (e.g. CMW/LHWs), SDP/Outlet or FWC, district level and provincial level. The calculation at the community outlet is more rational as it is the point where actual consumption takes place.

Case Study 3.3.1:

If at a SDP or other facility 80 cycles of oral contraceptive pills are distributed to clients in one month, the outlet will demand 80 cycles for the next month., If we want to calculate the AMC we have to look into the demand for the last six (or 3) months, if the consumption is as followed:

Month	Consumption
Jan	80
Feb	67
Mar	72
April	54
May	90
Jun	73
	Total: 436

If the supply was regular then its average monthly consumption will be

AMC = $436 \div 6 = 72.6$ i.e. 73 cycles of OCP

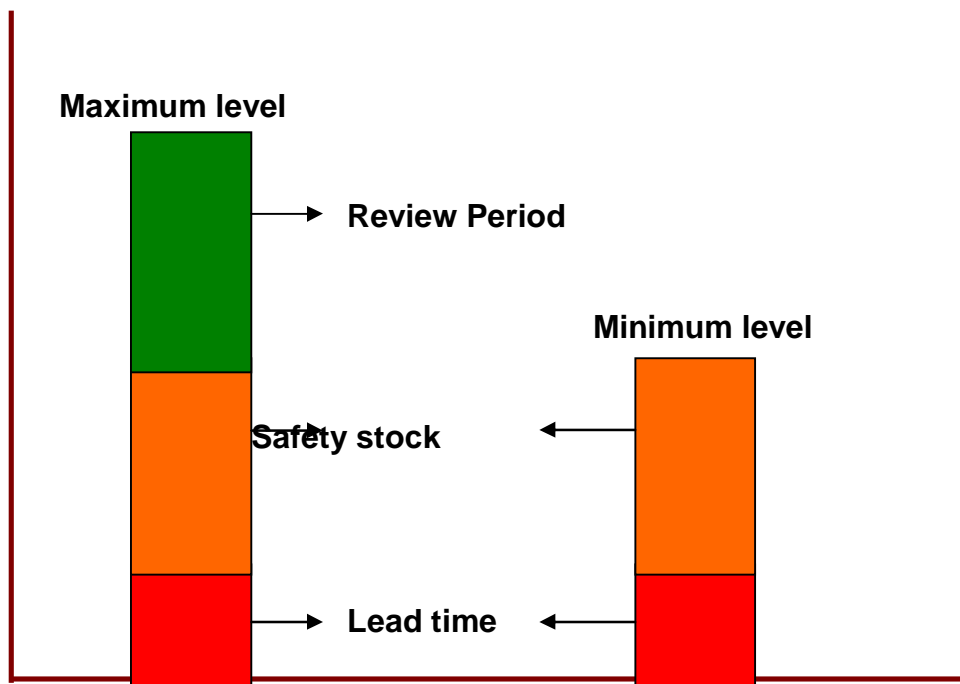
The average monthly consumption of this service outlet is 73 cycles of OCP per month.

- **Review Period (also known as order interval)**-The routine interval of time between the two demands/ orders of stock levels is called Review period>under the current practice the review period for public sector is - is 3 months.
- **Lead time**- The time interval between when supplies are ordered and when they are received and available for use. Usually the lead time from district to SDP is 15 days and from CW&S to Districts is 01 month
- **Safety Stock**- The buffer, or reserve stock (expressed in months of supply) kept on hand to protect against stock-outs caused by delayed deliveries or unexpected increases in demand. Safety stock is half of the Review period that is calculated for District/SDP/service outlet as 1.5 months.
- **Maximum Quantity**- The stock level, expressed in months of supply, above which the inventory level should not rise under normal conditions. It is a sum of review period, lead time and safety stock. In case of District it is 5.5(6 months) and for SDP/service outlet the maximum quantity is 5 months.
- **Minimum Quantity**: the stock level (in months of supply) below, which the inventory level should not fall under normal conditions. It is desired that requisition may be sent when the stock touches this level, It is a sum of lead time and safety stock. For the District it is 2.5 months while for service outlets the minimum quantity is 2 months of stock.

Table 3.3.2: MIN/MAX Levels for District /Service outlet level

1	2	3	4	5	6
Level	Lead Time	Review Period	Safety Stock (½ of Col.3)	Min. Level (Cols.2+4)	Max. Level (Cols.2+3+4)
District	1 month	3 months	1.5 months	2.5 months	5.5 months
SDP Service outlet	0.5 month	3 months	1.5 months	2 months	5 months

Fig. 3.3.2: Bar Graph showing maximum/ minimum stocks level



ASSESSING STOCK STATUS

The level of stock at any level is calculated on the basis of months of stock available instead of quantity of commodities available (balance on hand). It can be calculated by dividing the available quantity (balance on hand) by AMC

$$\text{Months of Supply on Hand} = \frac{\text{Balance on Hand}}{\text{AMC (Avg. Monthly Consumption)}}$$

Case Study 3.3.2 (Assessing the supply status of SDP)

RHC Shahwali had 130 cycles of Oral Contraceptive Pills (OC Pill) in the balance at the beginning of the January 2014 and 155 cycles were received during the month. 75 cycles were distributed to clients during the month. Average Monthly Consumption (AMC) of the facility is 70 cycles. Assess the supply status of RHC Shahwali at the end of January 2014.

Total OC in balance = 130

No. of OC received = 155

Total OC = 285

No. of OC distributed = 75

Total Balance in hand OC pills = 285 – 75 = 210

$$\text{Months of Supply on hand} = \frac{\text{Balance in hand}}{\text{Average Monthly Consumption}}$$

$$\frac{210}{75} = 2.8 \text{ or } 3 \text{ months}$$

It means that 3 months supply is on hand.

QUIZ- Inventory Management

Section –1

Fill in the Blanks

1. _____ is the status when stocks are above the maximum level
2. _____ is the system where supplies are provided to the lower level according to actual demand
3. The interval of time between two demands is called -----
4. The stock kept on hand to protect against stock outs caused by delayed deliveries or unexpected increase in demand is called -----
5. AMC stands for _____

Section-2:

Mark True or False

Statement	True	False
Under supply is the situation when SDP/or storage facility has no stock on hand of a particular item or it is below the minimum level		
Pull system is recommended to be followed during emergency situation.		
Provision of contraceptives from storage point to SDP/service delivery is called dispensing		
The length of time for which a product may be stored under ideal conditions without affecting its usability, safety, purity or potency is called shelf life		
Inventory management is done to avoid under supply or over supply of medicines/contraceptives		

Answers of Quiz

Section – 1

Fill in the Blanks

1. **Overstocking** is the status when stocks are above the maximum level
2. **Pull System** is the system where supplies are allocated and provided to the lower level according to actual demand/requisition
3. The interval of time between two demands is called **Review period.**
4. The stock kept on hand to protect against stock outs caused by delayed deliveries or unexpected increase in demand is called **Safety Stock**
5. AMC stands for **Average Monthly Consumption**

Section-2**Mark True or False**

Statement	True	False
Under supply is the situation when SDP/or storage facility has no stock on hand of a particular item or it is below the minimum level	True	
Pull system is recommended to be followed during emergency situation.		False (Under emergency situation Push system is recommended)
Provision of contraceptives from storage point to SDP/service delivery is called dispensing		False (Dispensing is provision of contraceptive or other item to its ultimate user or the client).
The length of time for which a product may be stored under ideal conditions without affecting its usability, safety, purity or potency is called shelf life	True	
Inventory management is done to avoid under supply or over supply of medicines/contraceptives	True	

Unit-3.4- LOGISTICS MANAGEMENT INFORMATION SYSTEM (LMIS)

Session Objectives:

The participants will:

- Explain the significance of the logistics management and information system.
- Identify different recording and reporting formats of LMIS.
- Understand the use and filling of various recording and reporting formats of the logistic system.

Session Time: 4 Hours

Methodology:

- Interactive sessions
- Clear the concept of LMIS with examples.
- Question answering and brain storming.
- Discussion on case studies.
- Book reading.

Material Required.

- Flip Charts and chart markers.
- White board and markers.
- Slide show to present case studies on LMIS tools(If feasible)
- Recording and reporting formats.
- Participants' manual (Pages 40 -58)
- Copies of case studies.
- Calculator
- Lead pencil, eraser and sharpener

Trainer's Notes:

INTRODUCTION

Instructions for Trainers:

Start the session with the objectives and ask them the concept or definition of LMIS. Ask the participants if one of them can explain this terminology and can explain its significance in a logistic system. After listening to their answers explain them in simple words the concept of LMIS.

Draw on flip chart/board the flow of logistics channel and describe the importance of two ways arrows.

With the help of the participants' manual teach them the elements required to track the information.

Now for teaching the recording /reporting formats, ask the participants to open the relevant page of participants' manual (Pages 40-58). At first introduce them with the relevant format and its columns, tell its relevance in logistic system. Ask them to read the instructions of how to fill from participants' manual turn by turn and explain it to the rest of the class what is meant by a relevant column and when and how to fill it. The trainer will side by side make corrections in the replies given by participants in a simple and interactive manner. After finishing one format, show them the example /sample of the formats given in the participants 'manual. Encourage them to ask questions if they have any doubts.

For conduction of Case studies display ask them to open relevant page of participants' manual, read the case study and fill the relevant format provided. After completion call one or two volunteers to share their completed formats with the class. The trainer will make corrections if any with the help of the book.

Converting data to information, portraying it in a manner useful for decision making, and interfacing the information with decision-assisting methods are considered to be at the heart of an information system. Logistics information systems are a subset of the organization's total information system, and it is directed to the particular problems of logistics decision making.

In any organization, data from all periodic inventory reports is summarized to identify how many commodities are moving through all levels. During the monthly reporting period, it is essential that reports containing data on quantities of contraceptives received, distributed from the lowest level reach the top level. This data is used to determine the national inventory level needed in order to enable senior management to maintain a sufficient national supply, prevent supply imbalances, and estimate future requirements. These decisions can be made correctly only if they are based on accurate distribution/ consumption data.

The actual management of logistics system is supported by information and record's sub-system that monitors the flow of commodities and assures accountability for commodities within the system. This information and record system tracks:

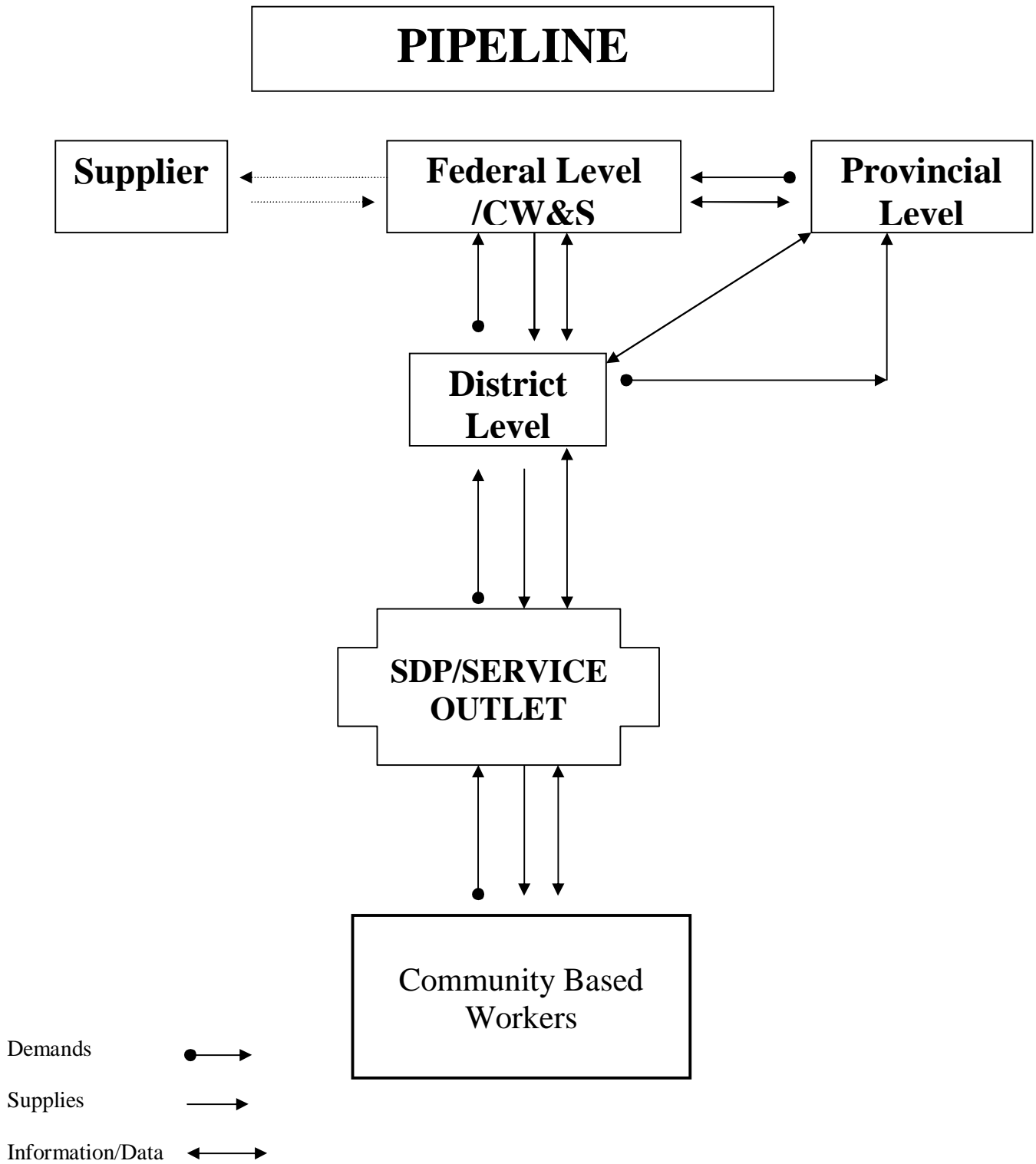
- Stock on hand – the quantity of usable stock available at all levels at a particular point in time, normally monthly.
- Rate of consumption – the average quantity of commodities dispensed to consumers during a particular period, normally monthly.

- o Losses/adjustments – the quantity of commodities removed from the distribution system for any reason other than consumption by clients.

FLOW OF COMMODITIES AND LMIS DATA

As commodities move down through the Logistics System, information flows up through the system. This chapter includes reporting requirements and standardized forms.

Fig. 3.4.1



INFORMATION AND RECORDING SYSTEM

Commodities move in the logistics system in five ways:

- Through the service delivery system
- Through transfers or loans to other sister organizations.
- Through loss or theft
- Through damage or deterioration
- Through disposal due to executive order

Tracking the movement of commodities involves a variety of records:

1. Stock Register
2. Issue and Receipt Voucher (IRV)
3. Bin Card
4. SDP/Health Facility Consumption Record
5. Physical verification of stocks
6. Logistics Monitoring Reports (Logistics Monitoring Checklist)

1. STOCK REGISTER

The basic stock-keeping record is the Stock Register. The purpose of the stock register is to provide an up-to-date record of all transactions of warehouse/storerooms of the commodities received, issued and discarded.

The Stock Register has to be maintained by the Storekeeper and entries have to be verified by the In-charge/logistics manager at each level.

GENERAL INSTRUCTIONS: STOCK REGISTER

- Name of the warehouse/store will be written only on the cover page of the register;
- Stock Register must be certified by the Officer In-charge as mentioned above, specimen of the certificate is as under:
- An Index of Content, which serves as a quick reference guide, is prepared in the beginning of the Stock Register. In this index, the page numbers of the Stock Register, which are allotted to the specific items, will be mentioned against each item's name. Separate pages will be used for each commodity. A sufficient number of pages in the stock register must be reserved for each commodity.

"It is certified that this register is maintained for commodities of the _____ facility, Contains _____ pages (from Page No. _____ to Page No. _____)". All the pages have been checked and found intact, accurate, duly stamped and initialed by the undersigned.

***Seal & Signatures
Date: Officer In charge***

Example No. 1

Transaction of OCP is recorded at page No. 005 of the Stock Register. In the index, "005" will be written in the column as the page number against which OCP will be recorded.

INDEX

S.No	Name Item/ Article	Page No.
1.	OCP	005
2.	Condoms	012
3.	Injection Depo provera	020
4.		
5.		
6.		
7.		
8.		

Specimen Stock Register

Page No. Contraceptives

Name of item/ Article: Unit:

1	2	3	4		5	6	7
Date	Received from/ Issue to and Reference	QUANTITY IN UNITS			Balance	Name & Signature	Remarks
		Received	Issued				
			For Care	Discarded			

How to fill Stock Register

Name of Item/ Article (Top of the page)

Name of the item along with specifications will be written as shown in the example. All the items must be written using their Generic names instead of brand names; however, the brand names can be mentioned in the description column (Column no. 2 of the stock register).

Unit

Unit is the basic accounting unit. It is the number of individual pieces contained in the standard packing for a product, it is very important to note that supplies must always be requested, issued and reported by number of individual pieces and not large units such as packing/ cartons.

Date (Column No.1)

In this column the on which the transaction (issue/receipt) took place is written.

Received from/ Issued to and Reference (Column No.2)

This column is meant to identify the source from which any quantity is received and the consignee to whom any quantity has been issued from the warehouse/store. Different colored ink must be used for quantities received and issued (preferably red for receipt and blue for issues).

Received (Column No. 3)

In this column, quantity of the item received is recorded.

Issued (Column No. 4 & 5)

FOR CARE In this column the quantity of the item issued for use or onward distribution to the lower levels is recorded.

Discarded

In this column, quantity of the expired/ damaged/ broken/ unusable item will be recorded. The Storekeeper must certify entries and the Officer in-Charge concerned.

Balance (Column No. 6)

In this column, the balance quantity of items available in the warehouse/store after receipt or issuance is recorded.

Name and Signature (Column No. 7)

In this column, Storekeeper must sign and the Officer-in-Charge must initial against each transaction.

Remarks (Column 8)

In this column, remarks may be given, e.g. expiry date/expired quantities of the item, physical conditions or any notation concerning any unusual condition or specific situation may be made.

Note: when there is no place left on the page for further entries, then; on the bottom of the same page mention the next allotted page number of the stock register using red ink, e.g. Balance Carried Forward (BCF) to page number..... The next page of the stock register for the item so carried forward will start by referencing the previous page number, e.g. Balance Brought Forward (BBF) from page number..... In case the stock register is finished, mention the following statement at the end of every item.

* Balance Carried forward to Stock Register No.....page No.

* New Stock Register must contain the following statement at the start of every page: "Balance Brought Forward from stock register No..... Page No...."

Example

**Stock Register
Medicines/ Supplies**

Page No. 005

Name of item/ Article: OCP

Unit: Tablet

1	2	3	4		5	6	7
Date	Received from/ Issue to and Reference	QUANTITY IN UNITS			Balance	Name & Signature	Remarks
		Received	Issued				
			For Care	Discarded			
15/1/2014	Received from CWH vide Receipt Voucher No. 1162/ dated 15/1/2014	50,000			50,000		
30/1/2014	Issued to RHC xyz		20,000		30,000		
2/2/2014	Issued to RHC abs		20,000		10,000		
10/3/2014	Received from province vide Receipt Voucher No. 1180/ dated 20/02/2014	40,000			50,000		

Case Study 3.4.1

Mr. Saif Ullah is the store keeper of district store Hayatabad, on **1st July 2014**, he had following items at the store:

Condoms: 72,000 Pieces, OC Pills: 3256 Cycles, Injection Depo Provera: 2225 Vials

On 6th July 2014, he received fresh supplies from the provincial ware house vide voucher number XYZ, dated 3rd July 2014, it contains following items:

- Condoms: 100800 pieces
- OC Pills: 5000 cycles

On 10th July, he issues contraceptives to 5 service delivery out lets according to following details:

1. BHU Rajanpur: vide IRV 2314, Condoms 4320 pieces, OC Pills 300 cycles, DepoProvera injection 120
2. BHU Mithi: vide IRV 2315, Condoms 3600 pieces, OC Pills 105 cycles, Depo Provera injection 75
3. RHC Kalat: vide IRV 2316, Condoms 21600 pieces, OC Pills 550 cycles, Depo Provera injection 350
4. FWC Pubbi: vide IRV 2317, Condoms 3600 pieces, OC Pills 55 cycles, Depo Provera injection 12
5. FWC Mariabad: vide IRV 2317, Condoms 2880 pieces, OC Pills 40 cycles, Depo Provera injection 10

On 16th July he received another supply from the provincial warehouse under IRV #LMQ , dated **11 July 2014**, containing 1500 vials of injections Depo Provera,

There was no further receipt/ issue during the month. Make entries in the stock register and update it.

Name of item/ Article: Condoms

Unit: Pieces

1	2	3	4		5	6	7
Date	Received from/ Issue to and Reference	QUANTITY IN UNITS			Balance	Name & Signatur e	Remarks
		Received	Issued				
			For Care	Discarde d			
1.7.14	O/B				3256		
6.7.14	Provincial warehouse IRV XYZ dated 3.7.14	5000			8256		
10.7.14	BHU Rajanpur: IRV 2314		300		7956		
10.7.14	BHU Mithi: IRV 2315		105		7851		
10.7.14	RHC Kalat: IRV 2316		550		7301		
10.7.14	FWC Pubbi: IRV 2317		55		7246		
10.7.14	FWC Mariabad: IRV 2317		40		7206		

Transaction Records

Transaction records are used to record information about the movement of stock from one storage facility to another. It is frequently desirable to include the current stock on hand as well as losses, adjustments, and consumption data. The issuing facility may use the additional data to evaluate the reasonableness of the quantities requested or to ration the quantities to deliver if supplies are limited. Warehouse personnel at both issuing and receiving facilities complete transaction records.

Transaction records are initiated any time a facility requests or issues supplies. They are completed when the receiving facility confirms receipt of the items shipped.

Transaction records are organized by date, which helps identify the transaction. It can then serve as ticklers, reminders that a request was made and not yet received or that an item was issued, but confirmation of receipt is still pending.

The most common formats are Issue/Receipt Voucher (CLR-7). A preprinted voucher number on each transaction record helps track individual shipments.

2. Contraceptives Issue & Receipt Voucher (IRV) For Warehouse

No: _____ Date: _____

Name of Consignee: _____

Designation and Address: _____

Requisition No: _____ Date: _____

Mode of Dispatch (Truck, Program vehicle etc) _____

Dispatch document (Challan/Bilty No. _____ Program Vehicle No) _____

Contraceptives		quantities			Quantities Verification (if any) in		Remarks
Name of Contraceptive	Unit	Requisitioned	Dispatched	Received by consignee	Dispatched Requisitioned and	Dispatched and Received	

Issuer
Signature _____
Name _____
Title _____

Receiver
Signature _____
Name _____
Title _____

How to use Issue/Receipt Voucher (CLR-7)

An IRV (CLR-7) is used for any supplies issued from, or received by, the Central and Provincial Warehouse and Stores. IRVs are pre-numbered and prepared in four copies, the original plus three which are sent to the consignee (along with the supplies) who then returns the copy to the issuing warehouse/store after indicating net receipt of the supplies in appropriate columns.

- **Lines 1-5** at the top of the form are self-explanatory and are filled by the storekeeper of the issuing warehouse.
- **Columns 1-4** are filled by the storekeeper of issuing warehouse.
- **Column 5** Received by consignee is filled by the storekeeper of the receiving warehouse.
- **Column 6** Requisitioned and Dispatched is filled by the storekeeper of issuing warehouse.
- If the quantity dispatched is more than the quantity requisitioned, the difference will have a + sign and if it is less it will be indicated with – sign.
- **Column 7** Dispatched and Received is filled by the storekeeper of the receiving warehouse and the quantities over or under received will be shown as + or – as the case may be e.g. +30.
- **Column 8** Remarks is used for explaining variations or any other matter that may be necessary e.g. damaged container or receipt of commodities after the expiry date or with short expiry etc.

Case Study 3.4.2

Mr. Abdullah is store keeper of a Provincial Ware house, during the month of September 2014 he received the requisition number 2084/EDOH/ 14 dated 5.9.14, from Dr. Allah Nawaz Executive District Officer Health (EDOH), Qadirpur for supply of contraceptives for the district for next quarter according to the following details:

1. Condoms..... 2,880,000 Pieces
2. OC Pills.....20000 Cycles
3. Injection Depo Provera..... 5000 Vials
4. Injection Noregest 2000 Vials
5. Cu-T..... 500 Pieces

On reviewing the stock position of the said items he found the he has sufficient quantity of OC Pills, Injection Depo-Provera and Cu- T to meet the demand however injection Norigest are out of stock and 2304000 pieces of condoms are available to be issued. After approval from the store manager he issued the items accordingly vide IRV number 1810/14/PW dated 29.9.2014. The consignment was sent to the EDOH through Hired Truck number GB 973, through consignment number 004397 dated 29.9 2014. The consignment was received Mr. Bilal Ali, store keeper of district Qadirpur on 1st October 2014, who found all the supplies according to the IRV except Depo Provera which were 5100 vials. He made the necessary entries on the IRV and after counter signatures from the EDOH returned one copy of the IRV to the provincial ware house.

Fill in the above data in the IRV.

Answer Case Study 3.4.2 Contraceptives Issue & Receipt Voucher (IRV)

No: 1810/14/PW

Date: 29.9.14

Name of Consignee: Dr. Allah Nawaz

Designation and Address: EDOH, District QadirPur

Requisition No: 2084/EDOH/14 Date: 5.9.14

Mode of Dispatch (Truck, Program vehicle etc): GB 973

Dispatch document (Challan/Bilty No. 004397 dt. 29.9.14 Program Vehicle No)

Contraceptives		quantities			Quantities Verification (if any) in		Remarks
Name of Contraceptive	Unit	Requisitioned	Dispatched	Received by consignee	Dispatched and Received	Requisitioned and Dispatched	
Condoms	pieces	2880000	2304000			(-)57600	
OC Pills	Cycles	20000	20000				
Inj. Depo Provera	Vials	5000	5000			(+) 100	
Inj. Noregest	Vials	2000	00			(-)2000	
Cu- T	Pieces	500	500				

Issuer

Signature _____

Name: Abdullah Khan

Title: Store Keeper

Provincial Warehouse

Receiver

Signature _____

Name: Bilal Ali

Title: District store keeper Qadirpur

3. BIN CARD

The Bin Card tracks the up-dated balance of an item available in stock; must be used for all levels of storage facilities.

BIN CARD

Name of Article

Accounting Unit:

Batch No.

Mfg Date

Exp. Date

Date	Description	Quantity		Balance	Initials
		Receipt	Issued		

Bin Cards must show all required information

- Name of commodity
- Accounting Unit
- Batch No. of commodity (if applicable)
- Manufacturing date
- Expiry Date
- Date received/ issued
- Description
- Quantity of commodity received/ issued
- Balance
- Initials of storekeeper.

HOW TO USE THE BIN CARD

- One card must be used for each stack of commodity.
- For each type of commodity, the Storekeeper of the warehouse / store must prepare the card.

Name of Item/ Article

Name of the item along with specifications must be written as shown in the example.

Accounting Unit

It is the individual piece contained in the standard packing of a product. It is very important to note that supplies must always be requisitioned, issued and reported in terms of their fundamental accounting unit.

Batch No.

Batch No. of the commodities, if any, (written on the packing by manufacturers) must be clearly mentioned.

Mfg. / Exp. Date

In specified columns, manufacturing/ expiry dates on the medicines/ contraceptives (written on the packing by manufacturers) must be mentioned.

Date

In this column, date must be mentioned on which date transactions (issued/ receipt) are made.

Description

In this column, it must be mentioned from where the material has been received or to whom it is issued on a particular date.

Signature

Initials of storekeeper must appear against all entries on the Bin Card.

Note: It is important that entries on the Bin Card must be recorded on the same date on which the transaction is actually made.

Case Study 3.4.3: 300 injections DepoProvera having batch No 123 were in the stock at the service outlet XYZ store on 3-3-14. 150 injections of the same batch No were received on 12-04-2014 from District and 270 were distributed from service outlet store to 15 Community based workers on 3-05-2014.

Make entries in the bin card.

BIN CARD

Name of Article Depo Provera **Accounting Unit** Injection

Batch No. 123

Mfg. Date: 08-2013

Exp.Date: 07-2018

Date	Description	Quantity		Balance	Signature
		Receipt	Issued		
03/03/14	Opening balance			300	
12/04.14	Received from DPIU	150		450	
03/05/14	Issued to Community based workers		270	180	

CONSUMPTION RECORD

As the name of the record implies, consumption records contain dispensed to user data, to record the quantity of each item dispensed to a customer. Consumption records are filled out whenever supplies are dispensed to clients. They are totaled at the end of the reporting period, usually monthly or as required. Consumption records generally do not move. They usually remain at the service delivery facility. The logistics data generated by the SDPs/health facilities is received on prescribed format and consolidated at the district level and entered into the web-based Logistics Management Information System (LMIS).

Below is the specimen of the most commonly used consumption data reporting form used at health facilities. Information from such forms are consolidated at the district level and entered in the web-based LMIS.

SDP/Health Facility Monthly Contraceptive Report and Requisition

Facility _____ District _____ Reporting Month _____

Item Name	Opening Balance	Received	Issued	Adjustments		Closing Balance	Next Month Requirement
				(+)	(-)		
Condoms							
COC							
POP							
ECP							
Copper-T							
Multiload							
2-Months Inj							
3-Months Inj							
Implanon							

Prepared by:

Signature _____

Name _____

Designation _____

Date _____

Verified by:

Signature _____

Name _____

Designation _____

Date _____

Instructions for Filling the SDP Report:

1. **Facility:** write down the name of service delivery point sending the report e.g. BHU Mirpur or FWC Haripur.
2. **District:** Write down the name of relevant district e.g. district Peshawar
3. **Reporting Month:** Month along with year for which the report is being prepared e.g. April 2014.
4. **Opening Balance:** The stock of relevant contraceptive available is store at the start of relevant month.
5. **Received:** The total quantity of relevant contraceptive received (from all source) during the reporting month.
6. **Issued:** The total quantity of relevant contraceptives issues to clients during the reporting month.
7. **Adjustments (+) / (-):** Any adjustments made in the stock during the month in light of physical verification or expiry destructions etc.
8. **Closing Balance:** The stock of relevant contraceptive at the end of the reporting month.
9. **Next month's requirement:** The estimated requirement for next month (based on the estimates of number of visits or AMC), Subtracting the closing balance.
10. **Prepared By:** signatures, name and designation of the person preparing the form (store Keeper).
11. **Verified By:** Signatures, name and designation of person verifying the report (In charge of facility or MS of hospital etc.)

Case Study 3.4.4: SDP/Health Facility Monthly Contraceptive Report and Requisition:

Mr. Asif is the storekeeper of BHU Hatian, district Attock, this facility provides condoms, COC Pills, 2- Months and 3- Months injections and Copper-T, to the clients. On 1st April 2014 the stock position at the health facility was as under: Condoms 720 pieces, COC pills 45 cycles, 2- months injections 25 vials, 3 months injections 18 vials, and 5 pieces of Copper –T. The details of contraceptives issues from the facility during the month is Condoms 680 pieces, COC pills 33 cycles, 2- months injections 18 vials, 3 months injections 12 vials, and Copper –T 3 pieces . During the month the facility received 432 condoms, 20 cycles of COC, 10 vials each of 2-months and 3- month's injection. No adjustments were made during the month. The AMC for different methods at this BHU is Condoms 700 pieces, COC pills 40 cycles, 2-months' injections 24 vials, 3 months injections 20 vials, and Copper –T 4 pieces. Fill in the SDP/Health Facility Monthly Contraceptive report and Requisition form for the said month:

Answer Case Study:**SDP/ Health Facility Monthly Contraceptive Report and Requisition**Facility: BHU HatianDistrict: AttockReporting Month: April 2014

Item Name	Opening Balance	Received	Issued	Adjustments		Closing Balance	Next Month's Requirement
				(+)	(-)		
Condoms	720	432	680	Nil	Nil	472	228
COC	45	20	33	Nil	Nil	32	08
POP	N.A	N.A	N.A	Nil	Nil	N.A	N.A
ECP	N.A	N.A	N.A	Nil	Nil	N.A	N.A
Copper-T	05	00	3	Nil	Nil	02	02
Multi Load	N.A	N.A	N.A	Nil	Nil	N.A	N.A
2- Months inj.	25	10	18	Nil	Nil	17	07
3- Months inj.	18	10	12	Nil	Nil	16	04
Implnon	N.A	N.A	N.A	Nil	Nil	N.A	N.A

Prepared By:

Signature _____

Name: AsifDesignation: Store KeeperDate: 30.04.2014

Verified By:

Signature _____

Name _____

Designation: MO In ChargeDate: 30.04.2014

PHYSICAL VERIFICATION OF STOCKS

Instructions for Trainers:

Explain the term physical verification in simple words with the help of daily examples. Ask one of the participants to read the paragraph that explains the purpose of a physical verification from page 56 of participants' manual. After reading ask different participants to describe what do they understand in this paragraph. In the end explain them if not clear

Distribute copies of physical verification forms and teach them with examples.

Now for teaching the physical verification formats, ask the participants to open the relevant page 56 of participants' manual. At first ask them to look at the format and tell what the different columns mean

After wards tell them to read turn by turn each and every column of the format from the participants' manual and side by side you explain to them in detail when and how to use these format and also how to fill these format in a simple and interactive manner. After finishing one format, show them the example /sample of the format given in the participants 'manual (Page 57). Encourage them to ask questions if they have any doubts.

For conducting the Case studies ask them to open page 58 on participants' manual and ask them to fill the said format. After completion call one or two volunteers to share their completed format with the class. The trainer will make corrections if any with the help of the participants' manual.

Purpose of Physical Verification

This is a process where available stocks are counted and compared with the balances found in the various stock registers. The In-charge of the store can him or herself takes initiative to conduct the physical verification of the store.

The purpose of a physical verification (at each level) is to determine whether there is any discrepancy between the documentation of the stock or bin card and the actual physical stock situation. It helps managers to establish accountability and evaluate the work of the storekeepers. It also enables managers to determine the need for distribution of soon-to-expire stock and disposal of outdated stocks.

The sample form shown below must be used to record the results of physical inventories taken in the field. This form should be signed and dated by both the persons who performed the inventory and the Manager in-Charge of the store or warehouse.

It is desirable that physical verification of every service outlet store should be done at least once in a year. For this purpose a Committee has to be notified and organized to do this by the relevant authority.

Sample of filled Physical Verification Form

Service outlet _____RHC Bahadurabad_____Store Location _____EDO Office Jehlum_____

Date of Physical Verification 21/ 5/14

#	Item Name	Physical Balance	Balance on Stock Register	Discrepancy		Remarks
				Excess	Shortage	
1.	Condoms	143000 pieces	123750 pieces	19250 pieces	-----	Excess pieces on physical verification observed
2.	OCP	20,000 cycles	20,000 cycles	-----	-----	No discrepancy noted
3.						
4.						
5.						
6.						
7.						
8.						
9.						

Comments: Discrepancy in quantity of condoms noted. Incomplete record and IRVs seen.

Signature:

Signature:

Signature:

Designation:

Designation:

Designation:

Date:

Case Study 3.4.4:

In December 2013, the EDO Health of district Karim Nager constituted a committee for physical verification of contraceptives in the district ware house, Mr. Ahsan Ali, DPWO of the district was nominated as the chairman of the committee while Mr. Abdul Latif, DOH and Haji Saghir Ahmed district coordinator of the RH program were designated as the members. The committee conducted the physical verification of the district store on 28th December, 2013. The findings of the verification are as under:

Item	Quantity mentioned in stock register	Quantities available in the store
Condoms (Pieces)	3600000	3599280
OC Pills (Cycles)	130000	13100
Injection Depo provera (Vials)	50000	49880
Injection Noregest (Vials)	35400	35400
Cu- T (Pieces)	12600	12600

The committee found that the stock register was not properly updated and 720 pieces of condoms and 120 vials of injections Depo Provera issued to FWC Mandra vide IRV No. 2011/DS/ 13 dated 27.12.13, were not entered in it. Prepare the physical verification report on the form.

Answer Case Study

Sample of Physical Verification Form

Service outlet: District Store, Karim Nagar Store Location: Office of EDOH

Date of Physical Verification: 28.12 2013

#	Item Name	Physical Balance	Balance on Stock Register	Discrepancy		Remarks
				Excess	Shortage	
1	Condoms	3,600,000	3599280		720	Entry of 720 condoms issues to BHU Mandra, IRV No. 2011/DS/ 13 dated 27.12.13 not made in stock register
2	OC Pills (Cycles)	13,000	13,100	100		
3	Injection Depo Provera (Vials)	50,000	49880		120	Entry of 120 vials of inj. Depo Provera issues to BHU Mandra, IRV No. 2011/DS/ 13 dated 27.12.13 not made in stock register
4	Injection Noregest (Vials)	35400	35400			
5	Cu- T (Pieces)	12600	12600			

Comments: 1. Maintenance of stock register not proper and needs improvement.
2. The matter of 100 cycles of OC pills in excess needs explanation.

Signature: _____
DOH
Designation:
Date: 28.12.13

Signature: _____
DCO (RH)
Designation:

Signature: _____
DPWO
Designation:

Quiz: LMIS

Section 1: Fill in the Blanks:

1. The _____ must be certified by the Officer In-charge of the warehouse/store
2. As _____ move down through the Logistics System, _____ flows up through the system.
3. IRV stands for _____
4. The Stock Register is one of the basic tools for _____.
5. _____ is a process where available stocks are counted and tallied with the balances of stock register.

Section 2: Mark True or False:

Statements	True	False
Bin Card should always be kept in the safe custody under lock and key.		
It is desirable that physical verification of every service outlet store should be done at least once in a year.		
Different colored ink must be used for quantities received and issued		
It is important that entries on the Bin Card must be recorded at end of every week.		
In the stock register items should be written using their brand name instead of generic names		

Answer Quiz LMIS

Section 1: Fill in the Blanks:

1. The **stock Register** must be certified by the Officer In-charge of the warehouse/store
2. As **commodities** move down through the Logistics System, **information/data** flows up through the system.
3. IRV stands for **Issue Receipt Voucher**
4. The Stock Register is one of the basic tools for **Record keeping.**
5. **Physical Verification** is a process where available stocks are counted and tallied with the balances of stock register.

Section 2 Mark True or False:

Statements	True	False
Bin Cards should always be kept in the safe custody under lock and key.		False (Bin Card is to be displayed over the stacks)
It is desirable that physical verification of every service outlet store should be done at least once in a year.	True	
Different colored ink must be used for quantities received and issued	True	False

It is important that entries on the Bin Card must be recorded at end of every week. Explain when it should be recorded.	True	False (It should be updated after every transaction)
In the stock register items should be written using their brand name instead of generic names	True	False (Generic names should be written)

INTRODUCTION

Instructions for Trainers:

Introduce the session by asking the meaning of term “warehousing” or “Store room”
Tell them to explain this concept with household examples.

Ask them about different levels of warehousing and call a volunteer to draw flow diagram of various levels of ware housing and flow of logistics

Explain them the warehousing sizes and how to calculate with the help of a simple example.

Ask them to read the tasks carried out at different levels of processes of ware housing. After wards with the help of book reading (Pages 63- 64), teach them the topic of policies and procedures of warehousing. After reading ask questions about different procedures and policies to clear their concept.

Display the list of tools and equipment required in a store.

Warehousing is the system of storage of goods or commodities so that they are always available/ accessible in good condition.

Warehouse is a building specifically designed for the storage of large quantities of commodities, whereas a “store” is a room(s) which may be a part of building used for other purposes. The type, location, and size of warehouses/ stores within the logistic system, all play vital roles in meeting an organization’s goals and requirements.

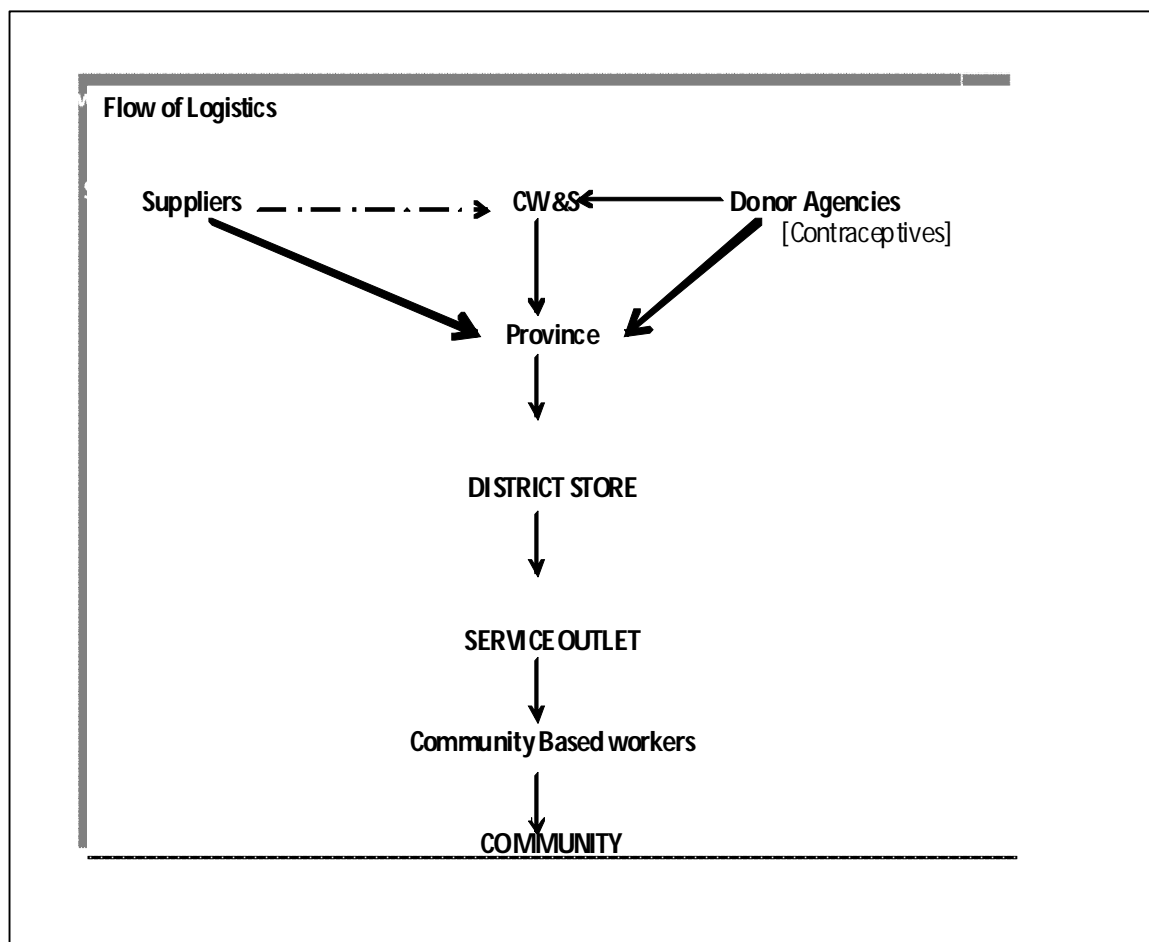
Warehouse Types and Locations

Following four levels of warehouses/ stores are in practice

- | | |
|----------------------|-----------------------|
| ❖ Central level | Central Warehouse |
| ❖ Regional level | Provincial warehouses |
| ❖ Intermediate level | District store |
| ❖ Outlet level | service outlets store |

Central warehouse receives contraceptives from the donors and issues to the Provincial warehouses.

Fig. 3.5.1: Logistic Channel



Warehouse/Store size

Each storage facility has unique requirement in terms of their size. The size of the warehouse/ store depends on the maximum amount of stocks to be stored. Space is used differently at different levels.

While calculating the available and/or required space at the district or lower levels, it should be considered that normally the commodities could not be stacked higher than eight (08) feet unless a pallet rack system is available. Another important factor to be kept in mind in this regard is that space has to be allowed for corridors between stacks, for movement of stocks into and out of storage area and for ventilation. It is recognized that currently the adequacy of the district stores, in terms of environment, conditions and size, is varying. It is recommended that alternative storage space be acquired and refurbished subject to availability of funds

Storage Space Calculations

The managers at provincial/ district level must determine the required storage space and undertake efforts to acquire suitable space in accordance with the storage guidelines. Many other factors have to be taken into account for establishing provincial, regional and central level warehouse. Following is the simple formula to calculate the space required at the district and/or lower level storage facility.

- **Number of cartons to be stored**

Number of cartons = Number of units to be stored/ Number of units per cartons.

- **Calculate the space required**

Storage space required in cubic feet (volume) = Number of cartons X carton size

- **Floor space required**

Floor space (sqft) = storage space required/8 feet (max stack height)

- **Total Space Required**

Floor space x 4 (factor used for aisles, corridors and handling) = Total space

Note: Multiplying factor could be adjusted according to the level, size of the store and availability of the space.

Warehousing processes

Instructions for Trainers:

Start the discussion by introducing different warehousing processes (Given below), discuss different activities under these processes. Write down the topic on the board e.g. "Receiving/ unloading" ask the participants to describe various activities under this process, write down the replies under the heading on the board. Once every participant has given reply ask them to open their manual (Page 61-62) and read, after completing one process then move to next process in the similar way.

Following basic warehousing processes are performed in a warehouse.

- a. Receiving/unloading
- b. Inspection
- c. Inventory control
- d. Storage
- e. Replenishment
- f. Order picking
- g. Checking
- h. Packing
- i. Shipping/loading.

Each activity has one or more tasks. Though the number of tasks will vary from situation to situation, there is a common set of tasks for all warehouses. Following are the typical activities involved in goods receipt are:

1. Establish the correct unloading area and ensure it is safe and suitable for the operation.
2. Record the arrival of the vehicle and note the seal number (if applicable).
3. Break the seal with the driver present wherever possible.
4. Check the documentation and record each item against the consignment note.
5. Ensure that the vehicle is safe before unloading.
6. Assemble the goods if necessary in a goods receipt assembly area.
7. If necessary, transfer from delivery pallets and cages to internal means of moving and handling the goods.
8. Check the goods for condition, possible damage and where appropriate carry out required quality checks.

9. Report discrepancies and condition/quality problems at once.
10. Determine the location in which the goods are to be stored and move them out of the goods receipt area as quickly as possible.

The tasks concerned with the bulk storage operation include the following:

- Obtain instructions on where to put the goods.
- Move to that location.
- Place materials/goods in that location.
- Record the location used.
- Consolidate partly filled locations by moving cartons/bags from one location to another.
- Obtain instructions for replenishing goods to the picking areas.
- Replenish the picking areas.
- Report/remove damaged goods.
- Return to the pickup point.
- Report actions.

The tasks concerned with consignment picking include the following:

- Collect picking documents.
- Collect equipment for transporting.
- Locate picking face.
- Check and pick appropriate quantity.
- Travel to subsequent picking faces.
- Advise discrepancies/damaged goods.
- Travel to sorting, consolidation, packing, dispatch area.
- Prepare kits and repack.
- Advise replenishment requirements.
- Complete and pass on documentation.

The tasks to be undertaken in the dispatch area include the following:

- Check notes/goods picked.
- Re-pack/re-pallets.
- Record batch/serial numbers.
- Prepare documentation.
- Label consignments.
- Compile load.
- Confirm load/documentation.
- Load vehicle in sequence.
- Seal vehicle/obtain signature.
- Arrange vehicle movement.
- Open/close shutters or doors.

Warehouse procedures and policies

To operate a warehouse with any degree of efficiency and consistency, it is necessary to define the procedures that will be used in all activities and the policies that will govern these procedures. These procedures and policies will normally be documented by the humanitarian organization and it is the responsibility of the warehouse/inventory manager to make sure that these are adhered to.

Procedures

The advantages of creating and using a procedures document are as follows:

- The effectiveness and efficiency of all warehouse operations across the organization can be controlled.
- By reasons of standardization, staff can be trained more quickly and efficiently.
- The performance of warehouse operations across the organization can be compared.
- The procedures can be agreed and aligned with other functions in order to optimize the performance of the whole department.
- The procedures provide visibility of the operations for department.

The procedures will normally cover the following activities:

- The method of stock checking.
- How to deal with stock losses.
- How receipts will be controlled.
- How inspection will be undertaken.
- How rejected material will be controlled.
- How issues will be controlled.
- How to deal with unwanted material and scrap.
- Stock recording.

The document will also typically contain copies of standard documents and forms to be used in the warehouse activities such as stock register and an IRV vouchers.

Policies define the general conduct of the warehouse operation. Examples of the types of policies that organizations will define are as follows:

- Health and safety.
- Human resources management.
- Security.
- Pest control.
- Warehouse maintenance and cleaning.
- Quality control.
- Record keeping and reporting.

As with procedures, policies are generally documented and copies are kept at each facility.

Tools and equipment required for stores

The following tools and equipment are required for the district stores for purpose of day to day management and repair and maintenance of the store.

Table 3.5.1: Tools and Equipment Required for Store

S.#	Items	S.#	Items
1	Saw	16	Mop & bucket
2	Hammer	17	Spare bulbs
3	Nails/screws	18	Wheel Barrow
4	Chisel	19	Hand strapping tool with strapping material
5	Scissors	20	First aid box
6	Thread	21	Thermometers/humidity meter
7	Pliers	22	Liquid quantity measures (beakers, flasks etc)
8	Screw Drivers	23	Measuring tape
9	Insulation and strapping tape	24	Electronic measuring scale
10	Rope & twine	25	Rat traps
11	Plastic bags	26	Insecticidal spray pumps
12	Wooden pallets	27	Insecticidal sprays
13	Aluminum Ladder 8-12 feet	28	White Board with markers
14	Broom & Wiper	29	Wooden planks
15	Cobweb brush	30	Firefighting equipment

Storage Layout Principles

Following are some storage layout principles:

- a. Allocate an easily accessible place for fast moving items.
- b. Allocate separate space for slow moving items.
- c. Allocate a space at a corner of the store for storing unusable separately from useable.
- d. Allocate a separate space for storing chemicals and insecticides etc.

Guidelines and best practices for Proper storage and Managing Materials

Instructions for Trainers:

This topic will be taught by adopting the methodology of book reading. Ask the participants to read one paragraph of each topic from relevant pages of participants' manual (Pages 64-65) and explain it to the rest of the class what do they understand. In case of any ambiguity you will explain the topic with the help of simple examples.

Taking account of local legislation

It is the responsibility of the warehouse manager to ensure that the operation complies with local rules and regulations. As ignorance is no defense, the manager must proactively identify those regulations that apply to the operation and take steps to ensure that the operation and all its employees comply with these regulations.

The following is a list of regulations that are often encountered:

- Employment regulations.
- Health and safety rules.
- Rules which govern the operation of forklift trucks.
- Food hygiene.
- Storage of dangerous materials.
- Storage of drugs.
- Building regulations.
- Financial accounting rules.

Regulations on these and other subjects vary around the world and the warehouse manager must not assume that rules in one location also apply in others.

The Storage Environment

- Clean and disinfect store room regularly, take precautions to discourage harmful insects and rodents from entering the storage area.
- Store health commodities in a dry, well lit room.
- Store must be cross-ventilated and, if needed, should be installed ceiling and exhaust fans.
- Keeping in view the weather conditions, the ceiling fans must be turned on during daylight hours.
- Exhaust fans must be turned on at all, times when temperatures exceed 25 degrees C.
- Cold chain must be maintained for sensitive items and be used as required.
- Thermometer must be displayed on wall(s) and two readings per day must be recorded in a separate register preferably at 9:00 a.m. and 2:30 p.m.
- Incandescent lighting fixtures (no tube lights) to be positioned at suitable intervals.
- Store walls must be painted with a lime-based substance annually (Whitewashed)
- Roofs must not leak; rain/floodwater must be managed by proper drainage arrangements installed externally.
- The sun must not shine directly on stored commodities.
- Floor must be raised at least 6 inches above the plinth and must be flat and cemented (Pukka).
- The walls and under-ceilings must be disinfected periodically with a mild commonly available household spray.
- Storerooms must be equipped with pallets, racks, shelves and lockable Almirah.
- Storerooms must be equipped with functional (up-to date) fire extinguishers.
- Physical security must be ensured by the presence of designated security guards (at-least three in numbers).
- Visitors' book is to be maintained for signature and comments of authorized personnel who visit storeroom/ warehouse.

Managing Materials: The Arrangement of Stock

- Cartons must be stacked on pallets with minimum of 4 inches (9-10cms) of space between floor and bottom of cartons.
- Carton labels must be visible and right side up.
- Bin Cards, containing up-to-date information, must be positioned/affixed on stacks, on shelves, almirahs (outside) and/or on racks.
- Space between stacks and walls must be 12 inches (33cms).
- Stacks must not be higher than 8 feet (2.5meters). If at that height the lower cartons show squashing/buckling/compression, etc. then this rule has to be amended.
- Stacks must be vertically aligned/straight, and must not lean to left or right.
- At least 3 feet, or one-meter space, between stacks must be maintained.
- Medicines, drugs and contraceptives must not be stored in same room with
 - Insecticides, volatile chemicals and fluids (like alcohol, kerosene, diesel and petrol).
 - Non-usable equipment, machinery, spare parts, expired drugs, obsolete materials, old files, obsolete stationary and other printed materials.
- FIFO & FEFO: While issuing commodities, First In/First Out & First Expiry/First Out methods must be adopted and practiced.

Table- 3.5.2: Contraceptive Shelf Life and Storage Conditions

Type of Contraceptive	Required Storage Conditions	Shelf Life
Oral Contraceptives	Store away from direct sunlight in a cool, dry location (below 40° C).	5 years (3 years for some manufacturers)
Condoms	Below 40°C. No long-term exposure to high humidity, direct sunlight, fluorescent light, or ozone. Don't store near chemicals.	4 years (for USAID-donated; may vary according to national policy)
Inject able	Below 40°C. Away from direct sunlight. Store vials upright.	3–5 years, depending on manufacturer
IUDs	Below 40°C. Protect from direct sunlight and excessive moisture.	7 years (for USAID-donated; varies by IUD type)
Norplant/Implants	Below 30°C. Dry location.	3 or 5 years

MONITORING AND SUPERVISION OF LOGISTICS SYSTEM

Instructions for Trainers:

Ask the participants the definition and significance of monitoring and supervision in a logistic system

This topic will be taught by adopting the methodology of book reading. Ask the participants to read one paragraph of each topic and explain it to the rest of the class in simple manner. In case of any ambiguity the trainer will explain the topic with the help of simple examples.

Tell the participants to find copies of the checklists and describe every portion of the checklist of various levels.

Continuous monitoring of logistics system is required to indicate/ analyze how well the system is functioning and identifies areas that require further investigation. Each level of warehouse needs to be visited periodically to determine whether sufficient quantities of Program commodities are available and to evaluate the storage conditions and logistics related record.

Sufficiency of the available indicates that the system is working well. Finding insufficient commodities or if the commodities are not stored properly, the monitor should analyze where the problem lies.

Monitoring the logistics activities at district and health and population facilities is an important part of the duties of health managers. One of the prime objectives of the monitoring visit conducted by each level officer will be to rectify the problems, which could be solved on spot without involving the upper level management. The officers are also required to provide on job training to the staff dealing with logistics if needed.

The monitoring has to be supportive and it should provide a chance to the lower level employees to learn from the monitoring officers. The Web-based LMIS reports are an essential and routine first stop for all supervisors monitoring performance, and therefore supervisors should plan their visits based on the performance of the facilities (or districts) as reported/presented in the Web-based LMIS.

Checklist for District (Store) Monitoring

Name of District

Visit Date

Monitoring Officer

1. Name of In charge
2. In charge store and Logistics
3. Is the separate space for the storage of drug/ medicine and contraceptives provided? **Yes/No**
4. Available space in square feet -----
5. Is the present storage space adequate? **Yes/No**
6. If no what is the requested space in square feet-----

7. STORAGE CONDITION

1.	Cleanliness	Yes/No
2.	Whitewashed	Yes/No
3.	Direct sunlight observed	Yes/No
4.	Pallets available	Yes/No
5.	Ventilation practice	Yes/No
6.	Supplies properly stacked	Yes/No
7.	FEFO and FIFO methods followed	Yes/No

8. LOGISTICS RECORD KEEPING

1.	Are bin card used?	Yes/No
2.	If yes? Entries proper?	Yes/No
3.	Whether a staff is specially charged with looking after stores?	Yes/No
4.	If yes? Whether staff has had any formal training in stock/inventory management?	Yes/No
5.	Is the stock register maintained according to prescribed procedure and current?	Yes/No
6.	Is issue/receipt voucher file maintained?	Yes/No
7.	Are these supplies matches with the quantities receipt from province/donor?	Yes/No
8.	Whether physical stock count confirms quantity in inventory record	Yes/No

9.	Are the monthly reports being prepared and submitted regularly	Yes/No
10	Is the LMIS section filled properly	Yes/No
11	Has store been visited by other levels	Yes/No

9. DISTRIBUTION

- 9.1 Are medicines and drugs being distributed regularly **Yes/No**
- 9.2 What is the average lead time (time between the request for supplies and receipt against request) -----
- 9.3 Does the district store keeper know how to calculate? **Yes/No**
Issue quantities to the service outlet/health facility

10. SUPPLY SIDE

10.1 Quantities of stock of contraceptives observed on the date of visit.

s.#	Name of product	Quantity available in the stock	Average Monthly Consumption	Sufficiency in number of months
1.	Condom			
2.	POP			
3.	COC			
4.	ECP			
5.	Cu- T			
6.	Multiload			
7.	2 Month Injection			
8.	3 Month Injection			
9.	Implant			

10.2 Stock outs observed in no. or% of SDP/Health Facilities while analyzing monthly reports.

10.3 Reasons for stock outs or low stocks-----

11 . PROBLEMS AND RECOMMENDATIONS.

Checklist for Health Outlet (Store) Monitoring

Name of Health outlet

Visit Date

Monitoring Officer

1. Name of In charge
2. In charge store and Logistics
3. Is the separate space for the storage of drug/ medicine and contraceptives provided? **Yes/No**
4. Is the present storage space adequate? **Yes/No**

5. STORAGE CONDITION

- Cleanliness **Yes/No**
- Whitewashed **Yes/No**
- Direct sunlight observed **Yes/No**
- Pallets available **Yes/No**
- Ventilation practice **Yes/No**
- Supplies properly stacked **Yes/No**
- FEFO and FIFO methods followed. **Yes/No**

6. LOGISTICS RECORD KEEPING

- 6.1 Are bin card used? **Yes/No**
- 6.2 If yes? Entries proper? **Yes/No**
- 6.3 Whether a staff is specially charged with looking after stores? **Yes/No**
- 6.4 If yes? Whether staff has had any formal training in stock/inventory management? **Yes/No**
- 6.5 Is the stock register maintained according to prescribed procedure and current? **Yes/No**
- 6.6 Is issue/receipt voucher file maintained? **Yes/No**
- 6.7 Are the district supplies matches with the quantities? receipt at outlet? Is there any discrepancy? **Yes/No**
- 6.8 Whether physical stock count confirms quantity in inventory record?
- 6.9 Whether quantities mentioned in the Daily Client/Patient Register match with the quantities issued from the store? **Yes/No**
- 6.10 Are the monthly reports being prepared and submitted regularly **Yes/No**
- 6.11 Is the LMIS section filled properly **Yes/No**
- 6.12 Has store been visited by other levels **Yes/No**

7. SUPPLY SIDE

7.1 Quantities of stock of contraceptives observed on the date of visit.

s.#	Name of product	Quantity available in the stock	Average Monthly Consumption	Sufficiency in number of months
1.	Condom			
2.	POP			
3.	COC			
4.	ECP			
5.	Cu- T			
6.	Multiload			
7.	2 Month Injection			
8.	3 Month Injection			
9.	Implant			

8. PROBLEMS AND RECOMMENDATIONS.

Case Study 3.5.1:

Mr. Safdar Abbasi is the DPWO of district Tando Jam, on the monitoring visit to district store in the district he verified the available stock at the store and average monthly consumption of various methods during the last 6 months the findings are as under:

S.#	Item	Available Stock	AMC	Sufficiency in Months
1	Condoms (Pieces)	1440000	12000	
2	OC Pills (Cycles)	70000	1500	
3	Inj. Depo-Provera (vials)	35700	540	
4	Inj. Norgest (Vials)	24800	275	
5	Cu-T Pieces	20000	400	

Calculate the sufficiency in months for each item and fill the relevant column.

Answer: Case Study Sufficiency in Months:

S. #	Item	Available Stock	AMC	Sufficiency in Months
1	Condoms (Pieces)	1440000	12000	12
2	OC Pills (Cycles)	70000	1500	46.6
3	Inj. Depo-Provera (vials)	35700	540	65.5
4	Inj. Norgest (Vials)	24800	275	90.1
5	Cu-T Pieces	20000	400	50

Quiz- Warehousing

Section 1: Fill in the Blanks:

1. While calculating the available and/or required space at the district or lower levels, it should be considered that normally the commodities could not be stacked higher than _____ unless a pallet rack system is available.
2. It is the responsibility of the warehouse manager to ensure that the operation complies _____.
3. Exhaust fans must be turned on at all, times when _____.
4. FEFO stands for _____.
5. The monitoring has to be _____ and it should provide a chance to the lower level employees the _____.

Section 2: Mark True or False:

Statements	True	False
“Store” is a building specifically designed for the storage of large quantities of commodities, whereas a “warehouse” is a room(s) which may be a part of building used for other purposes	<input type="checkbox"/>	<input type="checkbox"/>
To operate a warehouse with any degree of efficiency and consistency, it is necessary to define the procedures that will be used in all activities and the policies that will govern these procedures.	<input type="checkbox"/>	<input type="checkbox"/>
Space between stacks and walls must be at least 3 feet.	<input type="checkbox"/>	<input type="checkbox"/>
For distribution of contraceptives the principle of FIFO must be followed	<input type="checkbox"/>	<input type="checkbox"/>
Monitoring the logistics activities at district and health and population facilities is not part of the duties of health manages.	<input type="checkbox"/>	<input type="checkbox"/>

Answer Quiz Warehousing

Section 1: Fill in the Blanks:

1. While calculating the available and/or required space at the district or lower levels, it should be considered that normally the commodities could not be stacked higher than eight (08) feet unless a pallet rack system is available.
2. It is the responsibility of the warehouse manager to ensure that the operation complies with local rules and regulations.
3. Exhaust fans must be turned on at all, times when temperatures exceed 25 degrees C
4. FEFO stands for First Expiry First Out
5. The monitoring has to be supportive and it should provide a chance to the lower level employees to learn from the monitoring officers.

Section 2: Mark True or False:

Statements	True	False
“Store” is a building specifically designed for the storage of large quantities of commodities, whereas a “warehouse” is a room(s) which may be a part of building used for other purposes.	<input type="checkbox"/>	False (“Warehouse” is a building specifically designed for the storage of large quantities of

		commodities, whereas a “store” is a room(s) which may be a part of building used for other purposes
To operate a warehouse with any degree of efficiency and consistency, it is necessary to define the procedures that will be used in all activities and the policies that will govern these procedures.	True	
Space between stacks and walls must be at least 3 feet.		False (Space between stacks and walls must be 12 inches (33cms).
For distribution of contraceptives the principle of FIFO must be followed		False (Principle of FEFO should be followed)
Monitoring the logistics activities at district and health and population facilities is not part of the duties of health manages.		False (It is one of the duties of Health Managers)

INTRODUCTION

Instructions for Trainers:

Commence the session by asking main reasons/causes of commodities becoming unusable. Write down the replies on board or flip chart. Afterwards add the missing answers from book.

Teach the topic of “Some other reasons” by using book reading methodology.

Ask the participants:

- If any one of them has ever got the chance of disposing off any unusable commodities and how?
- What guidelines they followed for disposal?

Encourage them to share their experiences and then explain them in detail the guidelines given in book.

With the help of Q&A and book reading (Page 74-77) teach them the topic of “Major steps of safe disposal”

There are many reasons for the supplies becoming unusable. The supplies may arrive past or near expiry date or may be inappropriate for the needs. There may be inadequate space and staff may be not sufficiently trained for taking proper care of the supplies due to which the supplies even with long shelf life may be mismanaged and eventually become expired or damaged.

The main reasons for commodities becoming unusable are as under;

1. Damaged by insects
2. Damaged by water penetration
3. Extreme heat inside the store room
4. Direct sunlight falls on the products
5. Color changes
6. Excessive humidity inside the store room.
7. Improper Stacking

Apart from above following are **some other reasons** which caused wastage/expiry of contraceptives, medicines and other such items.

- **Relevancy**

Supplies are not relevant to the needs of clients. This situation is usually faced when donations are received which do not comply with local policies and standard treatment guidelines. In case of imported items, sometimes the items are not properly registered in the country and are not allowed to use and get expired before the issue is resolved.

- **Quality**

The quality of supplies sometimes does not comply with the standards.

- **Quantity**

Sometimes the quantity procured is excessive than the needs because of the unrealistic forecasting and other factors and could not be consumed before expiration.

- **Improper handling**

Due to improper storage environment or conditions, careless handling of commodities at various levels of storage, distribution and transportation cause damage.

- **Safe disposal of expired or damaged commodities**

- Usually disposal of these items in a safe manner often becomes challenging. Improperly discarded medications can pollute our water supply and affect fish and wildlife.
- The sanction of competent authority should be obtained to the writing off of all losses, deficiencies or depreciation in the value of commodities

Guidelines to be followed immediately if supplies become unusable

Following are some guidelines to be followed immediately if supplies become unusable due to any reason.

- Stop the distribution of supplies immediately.
- Furnish a report to the immediate Supervisor e.g. Health Facility In charge, EDO or Director General indicating the name of the items, quantity, manufacturing date and the period of storage. Also mention the circumstances under which these items were considered unusable, outdated, expired or spoiled.
- Upon receipt of the report the Supervisor will review the circumstances which led to the spoilage of commodities and make a decision whether to accept the reported stock as unusable, or have it inspected or lab tested.
- After determining that the reported stock is unusable, the Supervisor, in consultation with the relevant expert, will specify a place and will lay down the procedure to be followed for the destruction/disposal of the spoiled stock.
- For this purpose the Supervisor will constitute a committee which will make necessary arrangements and will also witness the destruction/disposal process.

Major steps of safe disposal

Sorting and Categorization

The first stage of sorting is to separate out the commodities which are classed as controlled substance, toxic or hazardous products and then uncontrolled products.

Most often the supplies are found to be a mixture of non-pharmaceutical materials and larger quantities of packing. The second step, therefore, is to sort the materials by form i.e. type such as tablets, injections etc. This is necessary so that the flammable and/or water reactive chemical must only be destroyed in a chemical waste disposal facility trained pharmacist should supervise the sorting activities. Decision regarding method of disposing the commodities will then be determined.

In-Date and Useful Materials

Near expiry material, left with 25% of shelf life, should be identified and list of items should be circulated to all those entities that have the capacity to utilize them before the expiry date

Expired Contraceptives

Solids: Tablets, latex condoms, devices etc.

Semi-solid: Creams, lotions, gels etc.

Liquids: vial and ampoules etc.

Process

Sorting should ideally be done by the staff trained on the sorting criteria and must be aware of health and safety risks associated with handling the materials before beginning the work. It should be carried out in open or in a well-ventilated building as close as possible to the stockpiles and should be done in orderly manner.

Staff should be supplied with protective equipment such as gloves, boots, overalls, dust masks etc. Once the commodities are sorted out, they should be carefully packed in the steel drums or containers such as sturdy cardboard boxes and the contents clearly indicated on the outside of containers. The materials should be kept in a dry and secure room, preferably in a separate room to avoid being confused with in-date commodities until disposal is performed.

Safe Disposal

Firstly the possibility of returning unusable commodities to the manufacturers for safe disposal should be explored. If this is not possible, any of the following processes, as suitable to the situation, is to be carried out.

Landfill

Landfill is the oldest and the most widely practiced method of disposing the solid waste. An appropriate landfill will consist of an excavated pit away from water courses and above the water table. Uncontrolled dumping which is harmful for the environment should not be used. Materials disposed of to a landfill should be covered immediately by the fresh municipal waste at the base of working face of the landfill.

Encapsulation

It involves placing the commodities in plastic or steel drums. When the containers is filled up to about 90%, fill the remaining space with a media such as cement, lime mortar, plastic foam, or bituminous sand. Seal the drum and place it at the base of working face of landfill. For cytotoxic materials, use the 40% cement, 30% water and 30% waste by weight well mixed and allow settling for between 7 and 28 days prior to landfill. This will form a firm immobile solid block in which the wastes are relatively securely isolated. The most cost-effective ratio to achieve a minimum permeability of the blocks could be determined by experiment.

Inertization

It involves firstly the removal of all packaging materials from the waste commodities and grinding the waste by adding a mixture of water, cement and lime to form a homogeneous paste which is then transported in the liquid state by concrete mixer truck to a landfill and decanted into normal urban waste. The paste then sets into a hard harmless substance dispersed amongst the urban waste.

The process is relatively inexpensive and can be done in a relatively unsophisticated manner. The main requirement is a grinder or a road roller to crush the supplies, a concrete mixer, labor force, supplies of cement, lime and water. The approximate ratio by weight used is as follows; Waste commodities 65%, Lime 15%, cement 15% and water 5%.

Sewer

Some liquid can be diluted with water and flushed into the sewers in small quantities over a period of time without any serious public health or environmental effect. If there are no sewer or no well-functioning sewage treatment plant, liquids, other than cytotoxic products, can be first

diluted with large volume of water and poured into large water courses, provided they are immediately diluted and dispersed by the flowing water.

Medium Temperature incineration

Two chambered incinerators need to be used that operates at the minimum temperature of 850 C with a combustion retention time of at least 2 seconds in the second chamber and open burning at low temperatures should not be used particularly for contraceptives and similar materials as this will cause aerosol forms to be released in the open air.

High Temperature incineration

Some industries have furnaces operated at above 850 C with long combustion retention time and disperse exhaust gases via tall chimneys to high altitude. While selecting this method, it should be kept in mind that it may not be cost effective. A thumb rule could be no more than 5% of the value of the commodities should be used as fuel in such furnaces.

Chemical Decomposition

If an appropriate incinerator is not available, chemical decomposition could be done. This is a tedious and time consuming method and another drawback is that treatment chemicals have to be made available all times and also disposal of large quantities e.g. over 50 kg is not feasible at a time.

INTRODUCTION

Instructions for Trainers:

Describe the objectives of the session and present introduction to the participants with emphasis on importance of logistic staff working at various levels.

Draw 2 columns on board/chart, on right side write down various levels and on left side names of staff involved in logistic management. Leave the 2nd column empty and invite different participants to come forward and write down the names of various cadres/officials involved at different levels.

In the end with the help of book reading explain the topic (Pages 78-84).

In a logistics management system, the relevant staff plays a vital role in making the system successful. In Pakistan, there are a number of operational tiers that manage the contraceptive logistic system at central and provincial warehouse, district, and health facility levels. The following table shows various tiers and staffing in the logistics management system:

Table 3.7: Key Logistics Staff at Various Levels

LEVELS/ TIERS	OFFICIALS
At central warehouse, Karachi level	Director Central Warehouse Store Supervisor Store Keeper (SK)
At Provincial level	Provincial Logistics Officer / Store In-charge Storekeeper
At District level	DPWO EDO/DHO Health Supervisor Lady Health Workers' Program Store Keeper
At facility level	Family Welfare Workers Lady Health Visitor / Lady Health Supervisor

Logistics Management Staff, Role and Responsibilities

Instructions for Trainers:

Describe the objectives of the session and present introduction to the participants with emphasis on importance of logistic staff working at various levels.

Draw 2 columns on board/chart, on right side write down various levels and on left side names of staff involved in logistic management. Leave the 2nd column empty and invite different participants to come forward and write down the names of various cadres/officials involved at different levels.

In the end with the help of book reading from participants' manual, explain the topic.

The roles and responsibilities at various levels to manage the logistics system are given in the tables below.

Table 3.7.2: The Roles and responsibilities at various levels

Task	Responsibilities
Receiving	<ul style="list-style-type: none"> • Ensure that the Store Keeper(s) (SK) receive all commodities according to the quantity mentioned in the invoice/ IRV/CLR-7. • Ensure that all commodities received are in good condition. • Ensure that the commodities received from the suppliers have adequate shelf life. • Ensure that the invoice/CLR-7/IRV is properly signed by the SK and duly countersigned by the designated authority.
Storing	<ul style="list-style-type: none"> • Ensure that storage space is allocated according to efficient store layout principles. • Ensure that the storage racks/cabinets/shelves and equipment are placed according to the layout plan. • Ensure that all commodities are stored on/in the proper specified racks/cabinet/shelf Ensure that the SKs follow the storage guidelines strictly in running the warehouse. • Ensure that commodities are arranged following the FEFO principle.
Issuing	<ul style="list-style-type: none"> • Ensure that the SK uses the Stock Register properly. • Ensure that the SK determines issue quantity so the recipients can maintain inventory at the max-min MOS level. • Ensure that the SK prepares the CLR-7/IRV Ensure that the SK issues commodities following the FEFO principle. • Ensure that the SK follows the supply scheduling in supplying commodities. • Ensure that SK correctly maintains the copies of CLR-7/IRV.
Recording	<ul style="list-style-type: none"> • Ensure that the SK maintains the Stock Register for recording transactions. • Ensure that the SK records commodities in bin cards and

	<p>Stock Register.</p> <ul style="list-style-type: none"> • Ensure that bin cards and Stock Register are up-to-date. • From time to time, check the bin cards and Stock Register to ensure that these are maintained correctly and properly
Disposing Unusable	<ul style="list-style-type: none"> • Ensure that the SK prepares a list of unusable commodities of his warehouse and informs the Supervisor in time. • As Member-Secretary of the condemnation committee, place the file to the authorities for their consent to convene a meeting of the condemnation committee. • Issue notice of meeting to the condemnation committee members at least one week before the meeting. Prepare the proceedings of the meeting, obtain signatures of the members present in the meeting and send proposal in the prescribed form to the competent authority to get his approval for condemnation. • Condemn all the approved unusable commodities of his warehouse in the presence of the condemnation committee members. • Ensure that the SK has recorded all the condemned commodities properly in the stock register and bin cards and reported them correctly in the monthly report
Monitoring and Supervision	<p>As head of the warehouse, the Director CW&S/ DPWO/ EDO Health/ DHO/ District Coordinator, LHW will;</p> <ul style="list-style-type: none"> • Routinely monitor the activities of the warehouse staff to ensure that each individual staff completes his assignment as per schedule. • Supervise the employees to ensure that they have the correct knowledge and skills required to perform their assignments. • Provide on-job training if any knowledge and skill deficiency is identified. • Provide supportive supervision to the staff.
Reporting	<ul style="list-style-type: none"> • Regularly review reports received from the lower level and send feedback if there are any mistakes, or give suggestions for improvement. • Ensure that the SK prepares all reports on time and submits for review and approval. • Review and approve reports prepared by the SK and ensure that reports are mailed to the appropriate authorities on time.
Conducting Physical Verification	<p>As Member –Secretary of annual physical verification committee,</p> <ul style="list-style-type: none"> • Convene meeting of the committee to conduct annual physical verification of warehouse. • Ensure that the members receive notice at least one week prior to conducting the physical verification. • Notify the facilities that receive commodities from the warehouse that during physical verification, there will be no transaction of commodities. • If a discrepancy is identified during physical verification, make the necessary adjustment following the prescribed

	<p>procedures.</p> <ul style="list-style-type: none"> • If any new unusable commodity is identified during the physical verification, segregate the unusable from the usable and store them at a place marked for unusable. • Properly record the unusable in stock register and other relevant forms. • Use physical verification instrument to record finding of physical inventory and obtain signatures of committee members. • Report findings of physical verification to the appropriate authorities. • Preserve a signed copy of physical verification instrument in the file for record. • Ensure that the SK regularly conducts sample physical verification and keeps the authorities informed on the findings.
--	--

Responsibilities of Store Keeper/ Family Welfare Worker/ Lady Health Worker/ Lady Health Visitor

Instructions for Trainers:

Inform the participants that this section is to orient you about the roles and responsibilities of various officials and the given tasks will be elaborated in coming sections. Ask the participants to read one task and its related responsibility turn by turn. After reading one responsibility the trainer will ask questions to measure the level of understanding

Table 3.7.3: The Roles and responsibilities SK/FWW/LHW/LHV

Task	Responsibilities
Receiving	<ul style="list-style-type: none"> • Receive all commodities and ensuring that the quantity mentioned in invoice/IRV is delivered. • Make sure that all commodities received are in good condition • Bring to the notice of the designated officer-in-charge if any commodity is found broken or damaged, or if there is any shortage or excess. • Make sure that the commodities received from the received have adequate shelf life. • Sign copies of invoice/IRV that are sent with commodities and bring them to the designated officer-in-charge for counter signatures. • Return the countersigned copies of invoice/IRV to the supply source. • Preserve the first copy of invoice/IRV in the warehouse.

Storing	<ul style="list-style-type: none"> • Allocate and mark the storage space according to efficient store layout principles. • Place storage cabinet/shelves and equipment at the marked places for different commodities. • Arrange commodities following FEFO principle. • Mark boxes and cartons with manufacturing and expiry dates. • Operate the warehouse following the storage guidelines. • From time to time conduct sample physical verification and complete physical verification once a year to be sure that book balance and physical balance matches each other. • Adjust discrepancies, if any, with the approval of the designated officer following procedures and update records
Issuing	<ul style="list-style-type: none"> • Review contraceptive requisition forms received from District/ Health Facility to examine and determine the issue quantity to the district store/ facility store. • Take the distribution plan to the designated officer for review and approval. • Prepare invoice/IRV according to the approved quantity. • Present the invoice/IRV to the designated officer-in-charge for review and approval. • Supply commodities through private carrier or departmental vehicle or through other means as per the established schedule. • Supply commodities following FEFO principle. • Preserve the acknowledged copies of invoice/IRV in the warehouse
Recording	<ul style="list-style-type: none"> • Maintain stock registers to record all transactions for all commodities. • Use computer codes given for each items, if any. • Maintain separate bin cards for each item. • Update stock register and bin cards after every transaction. • Record transferor disposal of unusable commodities in the remarks column of the contraceptive stock register. • Use different ink while recording transfer or destroying of unusable commodities in the relevant columns of the stock register. • Use separate bin cards for recording transactions of unusable commodities. • Periodically take the stock register to the designated officer-in-charge for review and making necessary comments.

Handling Unusable	<ul style="list-style-type: none"> • Report immediately to the designated officer-in-charge if any commodity in the warehouse is identified as unusable. • Using issue voucher, separate unusable from the usable stock with the approval of the designated officer-in-charge. • Store the unusable stock at a place marked for unusable according to store layout plan. • Use different ink to record transactions of unusable commodities in relevant columns of stock register. • Use separate bin cards for unusable. <ul style="list-style-type: none"> • Assist the designated officer to condemn unusable. • Report condemnation of unusable through monthly report forms.
Reporting	<ul style="list-style-type: none"> • Collect contraceptive consumption data from the concerned health facilities / SDPs on monthly basis (in case of district SK). • Review Monthly report, submitted by the facilities/districts and provide feedback through the designated officer-in-charge, if any corrective action is required by them. • Prepare monthly report on the prescribed form at the beginning of the month. • Submit the completed report to the designated officer-in-charge for review and approval. • Send the approved report to the appropriate authority by 5th working day of each month to the district and by 10th to the provincial headquarter and by 15th to the CW&S. • Upload the contraceptive consumption data into Web-based LMIS by 10th of each month.
Requisitioning	<ul style="list-style-type: none"> • Prepare quarterly requisition, using integrated CLR-6 format, at end of each quarter. • Obtain the approval of DPWO/ DHO on integrated CLR-6 for quarterly contraceptive requisitioning for the district. • Coordinate with offices of DPWO / DHO for timely submission of integrated CLR-6 to the CW&S. • In case of health facility / SDP, prepare monthly requisition on the prescribed format for submission to the concerned district office

<p>Conducting Physical Verification</p>	<ul style="list-style-type: none"> • Regularly conduct sample physical inventory so that all the items are covered within the year. • Reorganize store, if needed, to ensure FEFO. • If a discrepancy is identified, adjust records with prior approval of the Designated Officer-In-Charge. • If any new unusable item is identified during physical verifications, immediately segregate it from usable items and store it at the place marked for unusable • Update Stock Registers and Bin Cards.
<p>Maintaining Quality Assurance</p>	<ul style="list-style-type: none"> • Follow the storage guidelines in operating the store. • Stack commodities following FEFO. • Record manufacturing and expiry date in stock register. • Issue commodities following FEFO principle. • Prepare list of short date commodities and with approval of the designated Officer-In-Charge and supply source, supply the commodities to departmental and governmental facilities before the expiry of shelf life. • Return to supply source commodities that cannot be used with the shelf life period locally. • Keep the store always clean so that it will be free from insects, bugs, etc. • Regularly disinfect the store.(It needs to be done as recommended by the experts)

Annexure

Measures to be taken before, during and after training

Planning Before training

- Prepare training plan with all relevant people.
- Arrange venue and all logistic material required.
 - Training booklets.
 - Black/white board
 - Markers/chalk
 - Audiovisual aids
 - Stationary.
 - Registration form and attendance sheets.
- Decide date of training.
- Inform all participants well before time.
- Inform trainers and hold a preliminary meeting with them about agenda and distribute topics among trainers.

During Training

- Training venue and sitting arrangements are as per protocols.
- Trained Trainers available.
- All training material available with the participants.
- Attendance sheet maintained.
- Agenda being followed.
- Logistics for practical trainings, demonstration and visits has been arranged.

After Training

- Feedback taken from participants and trainers.
- Evaluation of training and assessment of trainees done

Public Sector Requisitioning Contraceptive Requisitioning Form (Integrate CLR-6)

For: _____ Requisition No: _____ Requisition Date: _____

Department of Health											
A- Executive District Officer - EDO Health (Static Facilities including Tertiary Care Hospital)											
S.No	Description	Condom (No.)	Oral Pills(M.Cycles)			IUD (Pieces)		Injectables(Vials)		Implant	Remarks
			POP	COC	EC	Multiload	Copper-T	Norigest (NET-EN)	Megestron (DMPA)		
1	2	3	4	5	6	7	8	9	10	11	12
PART - A (To be filled by Requester)											
A-1	Consumption during the last quarter										
A-2	Stock at the end of last quarter at district Store										
A-3	Stock at the end of last quarter at health outlets										
A-4	Total Stock Available (A2+A3)	0	0	0	0	0	0	0	0	0	
A-5	Desired stock level for 2 quarters (A1x2)	0	0	0	0	0	0	0	0	0	
A-6	Replenishment Requested (A5-A4)	0	0	0	0	0	0	0	0	0	
B - District Program Implementation Unit - DPIU (Community based distribution - LHW Programme)											
PART - A (To be filled by Requester)											
B-1	Consumption during the last quarter										
B-2	Stock at the end of last quarter at district Store										
B-3	Stock at the end of last quarter at health outlets										
B-4	Total Stock Available (B2+B3)	0	0	0	0	0	0	0	0	0	
B-5	Desired stock level for 2 quarters (B1x2)	0	0	0	0	0	0	0	0	0	
B-6	Replenishment Requested (B5-B4)	0	0	0	0	0	0	0	0	0	
C- PPHI/CMIPHC (Static facilities)											

PART - A (To be filled by Requester)											
C-1	Consumption during the last quarter										
C-2	Stock at the end of last quarter at district Store										
C-3	Stock at the end of last quarter at health outlets										
C-4	Total Stock Available (C2+C3)	0	0	0	0	0	0	0	0	0	
C-5	Desired stock level for 2 quarters (C1x2)	0	0	0	0	0	0	0	0	0	
C-6	Replenishment Requested (C5-C4)	0	0	0	0	0	0	0	0	0	
D - Maternal Neonatal & Child Health (MNCH)											
PART - A (To be filled by Requester)											
D-1	Consumption during the last quarter										
D-2	Stock at the end of last quarter at district Store										
D-3	Stock at the end of last quarter at health outlets										
D-4	Total Stock Available (D2+D3)	0	0	0	0	0	0	0	0	0	
D-5	Desired stock level for 2 quarters (D1x2)	0	0	0	0	0	0	0	0	0	
D-6	Replenishment Requested (D5-D4)	0	0	0	0	0	0	0	0	0	
Total Replenishment for DOH		0	0	0	0	0	0	0	0	0	

S.No	Description	Condom (No.)	Oral Pills(M.Cycles)			IUD (Pieces)		Injectables(Vials)		Implant	Remarks
			POP	COC	EC	Multiload	Copper-T	Norigest (NET-EN)	Megestron (DMPA)		
1	2	3	4	5	6	7	8	9	10	11	12
Population Welfare Department											
E - District Population Welfare Office – DPWO											
PART - A & B (To be filled by Requester) - Part –A											
1	Avg. quarterly sale on the basis of last three months consumption										
2	Sale/Use Last Month										
3	Amount of sales proceeds deposited in bank/treasury (Attach original paid challan)										
4	Bank/Treasury challan no. & Date										
PART – B											
E-1	Consumption during the last quarter										
E-2	Stock at the end of last quarter at district Store										
E-3	Stock at the end of last quarter at population outlets										
E-4	Total Stock Available (E2+E3)	0	0	0	0	0	0	0	0	0	
E-5	Desired stock level for 2 quarters (E1x2)	0	0	0	0	0	0	0	0	0	
E-6	Replenishment Requested (E5-E4)	0	0	0	0	0	0	0	0	0	
F - Reproductive Health Centers (RHS-A)											
PART - A & B (To be filled by Requester) - Part –A											
1	Avg. quarterly sale on the basis of last three months consumption										
2	Sale/Use Last Month										
3	Amount of sales proceeds deposited in bank/treasury (Attach original paid challan)										
4	Bank/Treasury challan no. & Date										

PART – B											
F-1	Consumption during the last quarter										
F-2	Stock at the end of last quarter at district Store										
F-3	Stock at the end of last quarter at health outlets										
F-4	Total Stock Available (F2+F3)	0	0	0	0	0	0	0	0	0	0
F-5	Desired stock level for 2 quarters (F1x2)	0	0	0	0	0	0	0	0	0	0
F-6	Replenishment Requested (F5-F4)	0	0	0	0	0	0	0	0	0	0
G – Mariestopes International (MSI)											
PART - A & B (To be filled by Requester) - Part –A											
1	Avg. quarterly sale on the basis of last three months consumption										
2	Sale/Use Last Month										
3	Amount of sales proceeds deposited in bank/treasury (Attach original paid challan)										
4	Bank/Treasury challan no. & Date										
PART – B											
G-1	Consumption during the last quarter										
G-2	Stock at the end of last quarter at district Store										
G-3	Stock at the end of last quarter at health outlets										
G-4	Total Stock Available (G2+G3)	0	0	0	0	0	0	0	0	0	0
G-5	Desired stock level for 2 quarters (G1x2)	0	0	0	0	0	0	0	0	0	0
G-6	Replenishment Requested (G5-G4)	0	0	0	0	0	0	0	0	0	0
H - Family Planning Association of Pakistan (FPAP)											
PART - A & B (To be filled by Requester) - Part –A											
1	Avg. quarterly sale on the basis of last three months consumption										
2	Sale/Use Last Month										
3	Amount of sales proceeds deposited in bank/treasury (Attach original paid challan)										

4	Bank/Treasury challan no. & Date										
PART - B											
H-1	Consumption during the last quarter										
H-2	Stock at the end of last quarter at district Store										
H-3	Stock at the end of last quarter at health outlets										
H-4	Total Stock Available (H2+H3)	0	0	0	0	0	0	0	0	0	
H-5	Desired stock level for 2 quarters (H1x2)	0	0	0	0	0	0	0	0	0	
H-6	Replenishment Requested (H5-H4)	0	0	0	0	0	0	0	0	0	
Total Replenishment for PWD		0	0	0	0	0	0	0	0	0	
Grand Total		0	0	0	0	0	0	0	0	0	
PART - B (To be filled at warehouse)											
7	Quantity Approved										
8	Relevant Issue Voucher										

CYP Conversion Factors

S. No	Method	CYP	S. No	Method	CYP
1	IUD (Copper-T 380-A)	4.6 CYP	10	Monthly Vaginal Ring/Patch	15 units
2	3 year implant	2.5 CYP	11	Multiload	3.5 CYP
3	4 year implant	3.2 CYP	12	Noristerat (NET-En) Injectable	6 doses
4	5 year implant	3.8 CYP	13	Oral Contraceptives	15 cycles
5	5 year IUD (e.g. LNG-IUS)	3.3 CYP	14	Vaginal Foaming Tablets	120 units
6	Condoms (Male and Female)	120 units	15	Fertility Awareness Methods	1.5 CYP/ trained adopter
7	Cyclofem Monthly Injectable	13 doses	16	LAM	.25 CYP/ user
8	DMPA Injectable (3 months)	4 doses	17	Standard Days Method	1.5 CYP/ trained adopter
9	Emergency Contraception	20 doses	18	Sterilization	10 for Pakistan