



**National Immunization Program  
Effective Vaccine Management  
Standard Operating Procedure  
2015**

**Trainer's Guide**

**Nepal Government  
Ministry of Health and Population  
Department of Health Services  
Child Health Division, Logistics Management Division and National Health Training  
Center  
Teku Kathmandu  
2072**

## Forward

Immunization Service in Nepal was started in year 2035 B.S in the name of expanded programme on Immunization after elimination of epidemic smallpox. Currently immunization services had played a vital role in reducing morbidity rate, disability rate and mortality rate in both mother and children. On one hand maintaining the quality of immunization services is challenging work for us while on the other hand providing immunization services to hundred percent targeted children is also necessary. Likewise, there is necessity of completing the technical process in sequential manner from period of vaccine production to the availability of services to the consumers.

Quality of immunization service can be assured only after the completion of basic standard of Effective Vaccine Management. Every child has right to receive quality immunization services.

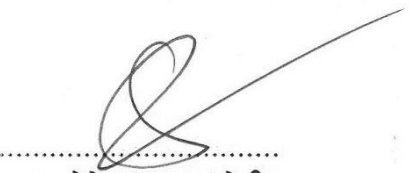
This Standard Operating Procedure Manual has been prepared with the objective to correctly implement Effective Vaccine Management at central, regional, district level as well as up to immunization center and to provide services by upgrading the quality of cold chain management and to trained the health workers.

Context book and handbook are prepared to help staffs of all levels involved in vaccine management in executing their work after training. This book is useful for those who wish to gain knowledge and information on effective vaccine management. I am hopeful that all the workers involved in vaccine management from central level vaccine store to immunization center will implement their respective work in accordance to this handbook and provide important contribution in quality immunization services.

The standard operating procedure by world health organization was translated in Nepali language for development of training package to health worker.

I heartily thank WHO, UNICEF and Lifeline Nepal for their great support in preparing this trainer's guide in leadership of Department of health service, Child Health Division, Logistic management Division and national training center.

Especially, my sincere gratitude goes to UNICEF for its technical and financial support for this work.



डा. सेनेन्द्र राज उप्रेती  
महानिर्देशक  
स्वास्थ्य सेवा विभाग

## Context

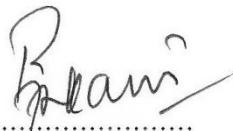
It is well recognized that how health service was delivered or made available effectively in ratio with investment among the general public country in Second Long term health Plan (1997AD to 2017 BS). Nepal Health Sector Implementation Plan (NHSP – IP 2004-2009) was prepared by Ministry of health and Population Government of Nepal based on SLTHP and has reduced the morbidity rate, disability rate and mortality rate.

Immunization Service in Nepal was started in year 2035 B.S in the name of expanded programme on Immunization after elimination of epidemic smallpox. Currently immunization services had played a vital role in reducing morbidity rate, disability rate and mortality rate in both mother and children.

Training Package (Trainer's Guide and Participant handbook) was developed on the basis of Standard Operating Procedure. The objective of this manual is to provide training to related staff according to the manual and to provide services strengthening cold chain management. In this context this curriculum was developed as first publication for EVM strengthening and simplification.

We heartly wants to thank Mr. Mukund Raj Gautam, Mr. Bade Babu Thpa, Cold chain Vaccine distribution section of LMD, Om Prasad Upadhyaya, Immunization Supervisor Officer, Mr. Bijaya Kranti Shkya from National Health Training Center, Life Line CEO Mr. Sushil Karki as well as those directly and indirectly supporting person involving in development of this manual.

We especially want to thank Dr. Jagat Narayan Giri, WHO, Mr. Shiva Subedi/UNICEF as well as Mr. Udev Maharjan from Lifeline Nepal for their great support in preparing this guide and hope it will be great help in Effective Vaccine Management.



डा. भिम सिंह तिकरी  
निर्देशक  
आपूर्ति व्यवस्था महाशाखा



अच्युत लामिछाने  
निर्देशक  
राष्ट्रिय स्वास्थ्य तालीम केन्द्र



डा. कृष्ण प्रसाद पौडेल  
निर्देशक  
बाल स्वास्थ्य महाशाखा

## **Publication/History**

With a view to make this SOP familiar it was structured in the following way. Central level, Regional Level and District level work, role and responsibilities as well as job description of staff were divided into different sections.

Sop amended by WHO in 2011 AD was translated from English to Nepali and main subject under it was maintained in English.

Annex and Checklist footnote were made available for English reader for their convenience. Likewise, for SOP related indicator, symbol and picture were tried to translate in Nepali so that there will be no change in main theme.

If there will be any new technology for new vaccine and cold chain equipment according to time, country's need and policy this manual will be revised and amended.

## **People Involved in Standard Operating Procedure**

- Dr. Tara Nath Pokharel
- Dr. Shyam Raj Upreti
- Dinesh Kumar Chapagain
- Giri Raj Subedi
- Dr. Jhalak Sharma Gautam
- Shambhu Gyawali
- Buddhi Raj Kafle
- Swatantra Raj Joshi
- Mohan Maharjan
- Santosh Mishra
- Thakur Basnet
- Chandraman Tamang
- Narayan K.C.
- Anil Kumar Singh
- Prem Shrestha
- Basant Bahadur Chand
- Ravi Kumar Mahato
- Kusuram Adhikari
- Krishna Bahadur Malla
- Krishna Prasad Subedi
- Sarada Neupane
- Chandrakant Thakur
- Hari Prasad Acharya
- Hari Bahadur Basnet
- Krishna Shrestha
- Anmol Narayan Chaudhari
- Mohan Shah
- Krishna Prasad Timilsina
- Bal Krishna Dhungel
- Dr. Sagar Sakya
- Anjana KC
- Dr. Mahendra Singh Thapa
- Mukunda Bistha
- Buddhi Bahadur Maharjan

## **People involve in development of Training Package for SOP**

1. Mukund Raj Gautam, Chief, Immunization Section, Coordinator
2. Bade Babu Thapa, Chief, Cold chain and Vaccine management, Member
3. Om Prasad Upadhyaya, Immunization Supervisor Officer, Member
4. Bijaya Kranti Sakya, Public Health Officer, Member
5. Shiva Subedi, UNICEF, Member
6. Sushil Karki, Lifeline, Member
7. Udev Maharjan, Lifeline, Member, Curriculum Development

## **Technical Advisor**

- Dr. Hendricus Rajamikar  
Dr. Rajendra Bohara, Coordinator, WHO  
Dr. Jagat Narayan Giri, Coordinator, Immunization Program, WHO  
Dr. Nurdin Kadrov, UNICEF  
Dr. Assish KC, UNICEF  
Mr. Jo Pet, UNICEF  
Dr. Janardan Raj Lamichhane

## **Specialist or Special Advisor**

- Dr. Bhim Singh Tinkari, Director, Logistic Management Division  
Mr. Mahendra Prasad Shrestha, Chief, Policy Planning and International De Division, Ministry of Health  
Dr. Krishna Prasad Poudel, Director, Child Health Division  
Mr. Achyut Lamichhane, Director National Training Center  
Dr. Yashvardhan Pradhan, Former Director General, Department of Health Service and Immunization Specialist, Lifeline Nepal

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## **Course Design**

### **Introduction:**

After the eradication of Small Pox, the Expanded Program on Immunization in Nepal started in 1979 (2035 B.C.). Immunization reduces maternal and child morbidity, mortality and disability occurring from vaccine preventable diseases. There is no doubt that we should continue to give vaccination services in effective way and maintain quality to make the programme more productive and successful. On one hand, it is necessary to vaccinate 100% targeted children while at the other hand quality of vaccine need to be maintained from the site of manufacture to the site of administration to the children.

We should follow the basic criteria of the effective vaccine management to ensure the quality in vaccination. Quality vaccine service is the right of every child. The Effective Vaccine Management initiative provides materials and tools needed in central, regional, district level to monitor and assess Cold Chain Management and helps to improve their supply chain performance through Standard Operating Procedure.

In this context, based on Standard Operating Procedure, to provide training to storekeeper and cold chain assistant of district Health/Public Health, those involved in vaccine management from Regional Medical Store as well as all those involved in central vaccine storage and management, this participant handbook is prepared with the objective to give training to the health workers.

### **Method/Process of training**

This competency based training is to be conducted on adult learning principles. This training has adopted participatory approach which enables the participants to become competent in knowledge, skills and practice. Participants get opportunities to learn skills through practice/exercise. Trainers observe and support them during practice/exercise with clear instructions, and correct them immediately. Trainers also observe and provide constructive feedback as the participants perform the skills according to the learning guide. To make learning process lively and to ensure active participation, participants will be encouraged to share their past experiences and knowledge and skills that they have. Appropriate and necessary training resources and materials in the training will be used in a proper and effective manner.

### **Parts of Training Package**

The parts of training package are mentioned below:

**Reference Manual:** Standard Operating Procedure includes the essential information needed to the trainers. These materials will be benefitted to trainers, participants or other relevant individuals.

**Participant's Hand Book:** It can be used at the time of training or in working place. It consists of course syllabus, daily schedule of skilled learning, guideline of exercises, different forms, notebook, and participant's form.

**Visual materials:** To make learning more effective materials such as: transparency, flipchart, Meta cards etc will be used by the trainers.

**Trainer's Guide:** This is a framework to the trainers to conduct training. It consists of course syllabus, daily work schedule, trainer's guide, learning, exercise practices, exercise forms, answer sheet of tables, midterm evaluation and answer schedule, objectives of every sessions, procedures and methods of sessions, evaluation process, training evaluation questionnaire.

**Evaluation:** Training evaluation is a work measure for how much knowledge, skill and attitude is gained by the participants according to the pre set objectives.

- **Knowledge-** Score at least 85% in the Mid Term Evaluation training questionnaire.
- **Skills-** Perform skills satisfactorily according to learning guide during exercise (observed and assessed by trainers using checklists)
- **Attitude-** Participant's active participation and involvement in training through observation and verbal commitment to apply the gained knowledge and skills at work area.

**Course Syllabus:** This 5 day workshop in central, regional and districts level on the effective vaccine management is to enhance the knowledge, skills and attitudes of responsible personnel. Course syllabus is divided into 28 parts.

1. Introductory activity
2. Introduction and overview of Effective Vaccine Management
3. Clearing vaccines and other products through customs
4. Vaccine arrival procedure
5. Products arrival procedure
6. Correct storage temperatures for vaccines and diluents at fixed locations
7. Monitoring vaccine storage temperatures at fixed storage locations
8. Checking the accuracy of temperature monitoring devices
9. Storing vaccines and water packs in cold rooms and freezer rooms
10. Safe working in cold rooms and freezer rooms
11. Looking after store buildings
12. Looking after cold rooms and freezer rooms
13. Looking after standby generators
14. Looking after voltage generators
15. Managing diluents in the supply chain
16. Conducting a physical count
17. Safe disposal of expired or damaged vaccine and diluents
18. Storing vaccine and water/cool packs in refrigerators and freezers
19. Loading and operating refrigerated vehicles

20. Monitoring temperature exposure during vaccine transport
21. Packing vaccine and dilutes for transport, using cold boxes
22. Using vaccine vial monitors
23. When and how to conduct the Shake test
24. Conditioning froze icepacks
25. Storing goods in the dry stores
26. Role and responsibility of persons working in Effective Vaccine Management
27. Mid Evaluation Term
28. Summary

### **Course Goal**

To provide quality and effective immunization services to the targeted group by following the basic standards of effective vaccine management and to increase the knowledge, skills and attitude of health workers involved in vaccine storage.

### **Learning Objectives:**

**By the end of the sessions, the participants will be able to perform on following activities:**

1. Describe the procedures for clearing vaccines and other products through customs.
2. How to check an incoming vaccine shipment so as to ensure that the vaccine is in good condition and has been supplied with all relevant paperwork before it is accepted into the national vaccine supply chain.
3. Describes how to check incoming shipments of syringes, safety boxes, refrigerators, cold boxes, vaccine carriers, temperature monitoring devices and other immunization-related products so as to ensure that the products are in good condition and have been supplied with all relevant paperwork before they are accepted into the national supply chain.
4. Document procedures for monitoring vaccine storage temperatures at fixed storage locations throughout the vaccine supply chain.
5. List out the responsible personnel to operate and interpret the temperature monitoring, carry out periodic temperature reviews, daily temperature records and summary.
6. Describes how to carry out an accuracy check and what action to take if the device is found to be inaccurate, how many times we need to check the vaccine stores and refrigerators and other temperature monitoring equipments.

7. Describes the correct procedures of storing vaccines in cold rooms and freezer rooms.
8. Sets out the safety rules by all personnels who have access to cold rooms or freezer rooms.
9. Daily, weekly, monthly, annual and five-yearly tasks needed to ensure that the store building(s) are kept fully operational. It also covers emergency maintenance procedures.
10. To install new vaccine refrigerators and freezers, temperature monitoring and alarm equipment that covers routine non-mechanical maintenance and responses to emergency maintenance.
11. Describes routine and emergency maintenance of fixed diesel standby generator sets.
12. How to carry out routine checks on the three-phase voltage regulators that are connected to the cold rooms and freezer rooms and also to check whether the single-phase voltage regulators connected to individual vaccine refrigerators and freezers are working or not.
13. Describes how diluent stocks should be managed throughout the supply chain to ensure vaccine and diluent stocks match and health workers are always able to reconstitute freeze-dried vaccine with the correct diluents.
14. How to carry out a systematic physical stock count and how to reconcile any errors found in the stock records of diluent.
15. To identify expired or damaged vaccines and diluents and separate them from others and correct procedures to be followed to account for the loss of the vaccines and the management and disposal of damaged and expired vaccine safely.
16. Procedures for storing vaccines in refrigerators and freezer rooms.
17. Describe precaution and procedures while loading and unloading refrigerated vehicles, during stops, overnight stops, transit or any other travel events.
18. Procedures for vaccine deliveries in cold boxes and vaccine carriers and to vaccine deliveries sent by refrigerated vehicle and how to read freeze indicators, how to pack them with a vaccine shipment and how to record freeze indicator and VVM status on the Requisition and Issue Voucher form.
19. Describes how vaccines should be packed into cold boxes in order to minimize the risk of damage during transport.
20. Responsible for handling vaccines at all levels of the supply chain must know how to read, interpret VVM colour changes and how to act correctly when a colour change is observed.
21. Explains when to do the Shake Test and what to do if vaccine has been damaged by freezing.

22. Describes how icepack conditioning should be carried out and the time when icepacks should be conditioned at the correct temperature throughout the journey. The time when frozen icepacks to be used to line cold boxes or vaccine carriers that contain freeze-sensitive vaccines, they must always be 'conditioned' beforehand to minimize the risk of damage to the vaccine.
23. Understand the procedures of all products safely stored within the temperature and humidity levels specified for the product type. Diluents, syringes and other products with a limited shelf life, such as electronic 30-day refrigerator temperature logger devices and electronic freeze indicators with non-replaceable batteries, can easily be located and distributed in Earliest-Expiry-First-Out (EEFO) order and products without an expiry date, such as safety boxes, can easily be located and distributed in First-In-First-Out (FIFO) order and expired or damaged products marked for disposal are kept separate from useable stock.

### **Learning Methods:**

- Interactions / Individual presentation
- Group Discussion
- Individual and group work
- Frame game
- Case study
- Demonstration
- Expose visit in different sites

### **Learning Materials:**

These materials are prepared for the training.

- Reference manual
- Participant's Handbook

### **Selection Criteria of Participants:**

The participants for the training are as follows:

- Regional, sub regional and district level employees involved in vaccine storage.

### **Resource person:**

- Director, Section Chief, related officers or specialists and regional or district level Chiefs.

**Evaluation Methods:**

- Mid- Term Questionnaire
- Participant's reflection on EVM training form for participants to evaluate training.

**Training Duration:**

- For regional level - 5 days with everyday 3-6 sessions, in total 23 sessions whereas for others training conduct according to training schedule.
- Participants and Trainers:
- Participant: 18-20 each batch
- Trainer: 3 in each batch.

### Daily Work Schedule (Central Level)

First Day		Second Day	
Time	Activity	Time	Activity
9:30-10:00	Registration and Opening Session (30 min)	9:30- 10:00	Registration, Review of the previous day (30 min)
10:00-10:45	Introduction Session (45 min)	10:00-10:30	Part 4 - Correct storage temperatures for vaccines and diluents at fixed locations. (30 min)
10:45-11:20	Purpose of the training /Review (35 min)	10:30-12:00	Part 5 - Monitoring vaccine storage temperatures at fixed storage locations (85 min) Tea (10 min)
11:20-11:30	Tea (10 min)	12:00-12:30	Part 6- Checking the accuracy of temperature monitoring devices (35min)
11:30-13:00	Part 1 - Process of separating vaccine with others materials (95min)	12:30-13:00	Refreshment (30 min)
13:00-13:30	Refreshment (30 min)	13:00-14:45	Part 7 - Storing vaccines and water packs in cold rooms and freezer (105 min)
13:30-15:30	Part 2 - Vaccine Arrival procedure (130 min)	14:45-16:15	Part 8 - Safe working in cold rooms and freezers rooms (85min)
15:30-15:45	Tea (10 min)	16:15-16:30	Tea (10 min)
15:45-17:30	Part 3 - Products arrival procedure (110 min)	16:30-17:15	Part 9 - Looking after store buildings (45 min)
17:30-	Facilitator's review and discussion (15 min)	17:15-	Facilitator's review and discussion(15 min)

<b>Third Day</b>		<b>Forth Day</b>	
<b>Time</b>	<b>Activity</b>	<b>Time</b>	<b>Activity</b>
9:30-10:00	Registration/ Review of the previous day (30 min)	9:30-10:00	Registration, Review of the previous day (30 min)
10:00-10:45	Part 10 - Looking after cold rooms and freezer rooms(45 min)	10:00-11:30	Part 17 - Loading and operating refrigerated vehicles. (90 min)
10:45-12:30	Part 11 - Looking after stand by generators (100 min) Tea (10min)	11:30-11:45	Tea (15 min)
12:30-13:00	Part 12 - Looking after voltage regulators (30min)	11:45-12:45	Part 18 - Monitoring temperature exposure during vaccine transport (60 min)
13:00-13:30	Refreshment(30 min)	12:45-13:15	Refreshment (30 min)
13:30-14:10	Part 13- Managing diluents in the supply chain (40 min)	13:15-14:30	Part 19 - Packing vaccine and diluents for transport, using cold boxes (75min)
14:10-15:15	Part 14 - Conducting the physical count (65min)	14:30-15:15	Part 20 - Using vaccine vial monitors (45 min)
15:15-16:15	Part 15- Safe disposal of expired or damaged vaccine and diluents (60 min)	15:55-15:30	Tea (15 min)
16:15-16:30	Tea (15 min)	15:30-17:00	Part 21 - When and how to conduct the Shake Test (90min)
16:30-17:30	Part 16 - Storing vaccine and water/cool packs in refrigerators and freezers (60 min)	17:00-	Facilitator's review and discussion(15 min)
17:30	Facilitator's review and discussion (15 min)		

<b>Fifth Day</b>	
<b>Time</b>	<b>Activity</b>
9:30-10:00	Registration/ Review of the previous day(30 min)
10:00-10:45	Part 22 - Conditioning froze icepacks (45 min)
10:30-11:00	Tea (15 min)
11:00-11:30	Part 23 - Storing goods in the dry stores (30 min)
11:30-12:45	Role and responsibility of persons working in effective vaccine management (45min)
12:45-13:15	Refreshment (30 min)
13:15-14:00	Mid-Term Evaluation Test (45 min)
14:00-14:15	Conclusion of the training (15min)
14:15-14:30	Closing and tea (15 min)
14:30-	Administrative work

### Daily Work Schedule (Regional Level)

First Day		Second Day	
Time	Activity	Time	Activity
9:30-10:00	Registration/ Opening session (30 min)	9:30-10:00	Attendance, Review of the previous day (30 min)
10:00-10:45	Introduction (45 min)	10:00-10:45	Part 9 Looking after store buildings (45 min)
11:20-11:30	Tea (10 min)	11:00-11:45	Part 10 Looking after cold rooms and freezer rooms (45 min)
11:30-12:00	Part 4 Correct storage temperatures for vaccines and diluents at fixed locations (30min)	11:45-13:30	Part 11 Looking after stand by generators (100min)
12:00-13:30	Part 5 Monitoring vaccine storage temperatures at fixed storage locations (90 min)	13:30-14:00	Refreshment (30 min)
13:30-14:00	Refreshment (30 min)	14:00-14:30	Part 12 Looking after voltage regulators (30min)
14:00-14:30	Part 6 Checking the accuracy of temperature monitoring devices (30 min)	14:30-15:20	Part 13 Managing diluents in the supply chain (50 min)
14:30-16:15	Part 7 Storing vaccines and water packs in cold rooms and freezer (105 min)	15:20-15:30	Tea (10 min)
16:15-17:00	Part 8 Safe working in cold rooms and freezers rooms (75min)	15:30-16:30	Part 14 Conducting the physical count (60min)
17:00	Review of the day , discussion (15 min)	16:30-	Review of the Day, discussion (15 min)

<b>Third Day</b>		<b>Forth Day</b>	
<b>Time</b>	<b>Activity</b>	<b>Time</b>	<b>Activity</b>
9:30-10:00	Attendance, Review of the previous day (30 min)	9:30-10:00	Attendance/ Review of the previous day (30 min)
10:00-11:00	Part 15 Safe disposal of expired or damaged vaccine and diluents (60 min)	10:00-10:45	Part 21 When and how to conduct the Shake Test (45 min)
11:00-11:10	Tea (10 min)	10:45-11:00	Tea (15 min)
11:15-12:15	Part 16 Storing vaccine and water/cool packs in refrigerators and freezers (60 min)	11:00-11:45	Part 22 Conditioning froze icepacks (45 min)
12:15-13:30	Part 17 Loading and operating refrigerated vehicles. (95 min)	11:45-12:15	Part 23 Storing goods in the dry stores (30 min)
13:30-14:00	Refreshment (30 min)	12:15-13:00	Responsibility of persons working in effective vaccine management (45min)
14:00-15:00	Part 18 Monitoring temperature exposure during vaccine transport (60 min)	13:00-13:30	Refreshment (30 min)
15:00-15:15	Tea (15 min)	13:30-14:15	Mid- term Evaluation Test (45 min)
15:15-16:00	Part 20 Using vaccine vial monitors (45 min)	14:15-14:30	Summary of training (15min)
16:00-17:00	Part 21 When and how to conduct the Shake Test (105min)	14:30-14:45	Closing and tea (15 min)
17:00	Facilitator's review and discussion (15 min)	14:45-	Administrative work

### Daily Work Schedule (District Level)

First Day		Second Day	
Time	Activity	Time	Activity
9:30-10:00	Registration/ Opening session (30 min)	9:30-10:30	Attendance, Review of the previous day (30 min)
10:00-10:45	Self Introduction (45 min)	10:00-10:45	Contd. Safe working in cold rooms and freezer rooms (45min)
10:45-11:20	Introduction of training and flashback review (35 min)	10:45-10:55	Tea (10 min)
11:20-11:30	Tea (10 min)	10:55-11:45	Part 9 Looking after store buildings (45 min)
11:30-12:00	Part 4 Correct storage temperatures for vaccines and diluents at fixed locations (30min)	11:45-12:30	Part 10 Looking after cold rooms and freezer rooms (45 min)
12:00-13:30	Part 5 Monitoring vaccine storage temperatures at fixed storage locations (95 min)	12:30-13:00	Part 11 Looking after stand by generators (30min)
13:30-14:00	Refreshment (30 min)	13:00-13:30	Refreshment (30 min)
14:00-14:30	Part 6 Checking the accuracy of temperature monitoring devices (30 min)	13:30-14:45	Part 11 Looking after stand by generators (45min)
14:30-16:15	Part 7 Storing vaccines and water packs in cold rooms and freezer (105 min)	14:45-15:15	Part 12 Looking after voltage regulators (30 min)
16:15-16:45	Part 8 Safe working in cold rooms and freezers rooms (30 min)	15:15-16:00	Part 13 Managing diluents in the supply chain (45 min)
16.45-17:00	Facilitator's review and discussion (15 min)	16:00-16:10	Tea (10 min)
		16:10-16:55	Part 14 conducting the physical count (45 min)
		16:55-17:00	Facilitator's review and discussion (15 min)

Time	Third Day	Time	Forth Day
	Activity		Activity
9:30-10:00	Attendance, Review of the previous day (30 min)	9:30-10:00	Attendance, Review of the previous day (30 min)
10:00-11:00	Part 15 Safe disposal of expired or damaged vaccine and diluents (60 min)	10:00-10:45	Part 22 Conditioning froze icepacks (45 min)
11:00-11:30	Part 16 Storing vaccine and water/cool packs in refrigerators and freezers (30 min)	10:45-11:15	Part 23 Storing goods in the dry stores (30 min)
11:30-11:45	Tea (15 min)	11:15-11:30	Tea (15 min)
11:45-12:45	Part 18 Monitoring temperature exposure during vaccine transport (60 min)	11:30-12:45	Responsibility of persons working in effective vaccine management (45 min)
12:45-13:15	Refreshment (30 min)	12:45-13:15	Refreshment (30 min)
13:15-14:45	Part 19 Packing vaccine and diluents for transport, using cold boxes (80 min)	13:15-14:00	Mid-Term Evaluation Test (45 min)
14:45-15:30	Part 20 Using vaccine vial monitors (45 min)	14:00-14:15	Summary of training (15 min)
15:30-15:45	Tea (15 min)	14:15-14:30	Closing and tea (15 min)
15:45-17:15	Part 21 When and how to conduct the Shake Test (105 min)	14:30-	Administrative work
17:15	Facilitator doing review and discussion of the day (15 min)		

**Daily Work Schedule (below district)**

<b>First Day</b>		<b>Second Day</b>	
<b>Time</b>	<b>Activity</b>	<b>Time</b>	<b>Activity</b>
9:30-10:00	Registration/ Opening session (30 min)	9:30-10:00	Attendance, Review of the previous day (30 min)
10:00-10:45	Self Introduction (45 min)	10:00-10:45	Part 13 Managing diluents in the supply chain (40 min)
10:45-11:20	Introduction of training and flashback review (35 min)	10:45-11:00	Tea (10 min)
11:20-11:30	Tea (10 min)	11:00-12:00	Part 14 conducting the physical count (60 min)
11:30-12:00	Part 4 Correct storage temperatures for vaccines and diluents at fixed locations (30min)	12:00-13:00	Part 15 Safe disposal of expired or damaged vaccine and diluents (60 min)
12:00-13:30	Part 5 Monitoring vaccine storage temperatures at fixed storage locations (95 min)	13:00-13:30	Refreshment (30 min)
13:30-14:00	Refreshment (30 min)	13:30-14:30	Part 16 Storing vaccine and water/cool packs in refrigerators and freezers (60 min)
14:00-14:30	Part 6 Checking the accuracy of temperature monitoring devices (30 min)	14:30-15:30	Part 18 Monitoring temperature exposure during vaccine transport (60 min)
14:30-16:15	Part 11 Looking after stand by generators (100 min)	15:30-15:45	Tea (10 min)
16:15-16:45	Part 12 Looking after voltage regulators (30 min)	15:45-16:30	Part 22 Conditioning froze icepacks (45 min)
17:00	Facilitator's review and discussion (15 min)	16:30-	Facilitator's review and discussion (15 min)

<b>Third Day</b>	
<b>Time</b>	<b>Activity</b>
9:30-10:00	Attendance, Review of the previous day (30 min)
10:00-10:30	Part 23 Storing goods in the dry stores (30 min)
10:30-10:45	Tea (15 min)
10:45-11:30	Responsibility of persons working in effective vaccine management (45min)
11:30-12:00	Mid- Term Evaluation Test (45 min)
12:00-12:15	Summary of training (15min)
12:15-13:00	Closing and tea (45 min)
13:00-	Administrative work

**Training on Effective Vaccine Management  
Attendance Sheet**

Name of Training Centre: .....

Training Date:.....

Batch No.....

S.No	Name	Designation	District	Name of the Health Facility	Signature				
					Day 1	Day 2	Day 3	Day 4	Day 5
1.									
2.									
3.									
4.									
5.									
6.									
7.									
8.									
9.									
10.									

S.No	Name	Designation	District	Name of the Health Facility	Signature				
					Day 1	Day 2	Day 3	Day 4	Day 5
11.									
12.									
13.									
14.									
15.									
16.									
17.									
18.									
19.									
20.									

## Course Design for Effective Vaccine Management of Standard Operating Procedure

**Objectives:** By the end of the training participants will be able to apply their learning on Effective Vaccine Management of Standard Operating Procedure in their organization.

Session	Topic	Objective	Time	Subject matter	Training methods	Evaluation
1	<b>Introduction activity</b>	By the end of the session participants can: <ul style="list-style-type: none"> <li>• Logistics of training</li> <li>• Target, objectives and methods of training</li> <li>• Prepare group norms of training</li> </ul>	45 min	<ul style="list-style-type: none"> <li>• Welcome and introduction</li> <li>• Management of training</li> <li>• Objectives/ target of training</li> <li>• Daily time schedule</li> <li>• Training Methods</li> <li>• Group norms</li> </ul>	<ul style="list-style-type: none"> <li>• Mini lectures</li> <li>• Discussion</li> </ul>	Question/ Answer
2	<b>Introduction and review of effective vaccine management of Standard Operating Procedure</b>	By the end of the session participants can describe: <ul style="list-style-type: none"> <li>• Concept of effective vaccine management training</li> <li>• Major points of effective vaccine management training</li> </ul>	35 min	<ul style="list-style-type: none"> <li>• Short definition of effective vaccine management programme</li> <li>• Major points of training</li> </ul>	<ul style="list-style-type: none"> <li>• Mini lectures</li> <li>• Discussions</li> </ul>	Question/ Answer
3	<b>Part 1: Clearing Vaccines and other products through customs</b>	By the end of the session participants can: <ul style="list-style-type: none"> <li>• List out the responsible personnel or representative for custom clearance of vaccine and other products.</li> <li>• Describe about the policies and objectives.</li> <li>• Identify and list associated materials and equipments.</li> <li>• Describe the procedures for clearing vaccines and other products through customs.</li> </ul>	95 min	<ul style="list-style-type: none"> <li>• Preparatory task for vaccines customs clearance.</li> <li>• Administrative/ product management</li> <li>• Responsibility of vaccine handling personnel.</li> <li>• Custom clearance of syringe, safety boxes and other products</li> <li>• Supervision of shipment</li> <li>• Report the problems</li> <li>• Monitoring</li> <li>• Orientation Training</li> </ul>	<ul style="list-style-type: none"> <li>• Mini lectures</li> <li>• Brain Storming</li> <li>• Discussions</li> <li>• Presentation</li> </ul>	Question/ Answer List of related materials and equipments

Session	Topic	Objective	Time	Subject matter	Training methods	Evaluation
4	<b>Part 2: Vaccine arrival procedures</b>	By the end of the session participants will be able to describe how to: <ul style="list-style-type: none"> <li>• Check advance notice documentation and prepare for the arrival.</li> <li>• Collect vaccine from the Tribhuvan International Airport.</li> <li>• Inspect the shipment.</li> <li>• Stock the shipment.</li> <li>• Report problems.</li> <li>• Follow up action.</li> <li>• Procedures for vaccine purchased from other sources.</li> </ul>	130 min	<ul style="list-style-type: none"> <li>• Check advance notice documentation and prepare for the arrival.</li> <li>• Collect vaccine from the Tribhuvan International Airport.</li> <li>• Inspect the shipment.</li> <li>• Stock the shipment.</li> <li>• Report problems.</li> <li>• Follow up action.</li> </ul> <p><b>Procedures for vaccine purchased from other sources.</b></p> <ul style="list-style-type: none"> <li>• Check advance notice documentation and prepare for the arrival.</li> <li>• Collect vaccine from the Tribhuvan International Airport.</li> <li>• Inspect the shipment.</li> <li>• Stock the shipment.</li> <li>• Follow up actions</li> <li>• Record Keeping</li> </ul>	<ul style="list-style-type: none"> <li>• Mini lectures</li> <li>• Brain Storming</li> <li>• Discussions</li> <li>• Presentation</li> </ul>	Question/ Answer
5	<b>Part 3: Products Arrival Procedures</b>	By the end of the session participants will be able to describe: <ul style="list-style-type: none"> <li>• Responsible personnel to check advance documentation and prepare for the arrival, its procedures and methods.</li> <li>• Responsible personnel to collect shipment from the port, its procedures and methods.</li> <li>• Responsible personnel to inspect the</li> </ul>	110Min	<ul style="list-style-type: none"> <li>• Check advance notice documentation and prepare for the arrival</li> <li>• Collect the shipment from supply agency</li> <li>• Inspect the shipments</li> <li>• Stock and distribute the shipment</li> </ul>	<ul style="list-style-type: none"> <li>• Mini lectures</li> <li>• Brain Storming</li> <li>• Discussion</li> </ul>	Question/ Answer

Session	Topic	Objective	Time	Subject matter	Training methods	Evaluation
		shipment, its procedures and methods. <ul style="list-style-type: none"> <li>Responsible individual to stock and distribute the shipment, its procedures and methods.</li> <li>Responsible person to report the problems, how to identify the problems, its procedures and methods.</li> <li>Responsible person to implement the suggestions as well as its procedures and methods.</li> <li>Procedures for products purchased from other sources.</li> <li>Procedures for record keeping.</li> </ul>		<ul style="list-style-type: none"> <li>Report problems</li> <li>Follow up action</li> </ul> <b>Procedure for vaccine purchased from other sources</b> <ul style="list-style-type: none"> <li>Check advance notice documentation and prepare for the arrival</li> <li>collect the shipment from supply agency</li> <li>Inspect the shipments</li> <li>Stock and distribute the Shipment</li> <li>Report problems</li> <li>Follow up action</li> <li>Record keeping</li> </ul>		
6	<b>Part 4: Correct storage temperatures for vaccines and diluents at fixed location</b>	By the end of the session participants will be able to describe : <ul style="list-style-type: none"> <li>How to store vaccines in vaccine freezer at correct temperature by responsible person and its procedures.</li> </ul>	30 min	<ul style="list-style-type: none"> <li>Store vaccine in vaccine freezers</li> <li>Storing vaccine in emergency</li> <li>Storing diluents</li> </ul>	<ul style="list-style-type: none"> <li>Mini lectures</li> <li>Brain Storming</li> <li>Discussions</li> <li>Presentation</li> <li>Exercise</li> </ul>	<ul style="list-style-type: none"> <li>Question/ Answer</li> </ul>
7	<b>Part 5: Monitoring vaccine storage temperatures at fixed storage locations.</b>	By the end of the session participants will be able to describe <ul style="list-style-type: none"> <li>How to store vaccines in vaccine freezer by responsible person at right temperature and procedures.</li> </ul>	95 min	<ul style="list-style-type: none"> <li>Level wise temperature monitoring equipments</li> <li>Where to place temperature monitoring equipments</li> <li>Read a dial or stem thermometer</li> <li>How to maintain the temperature record charts and reports</li> <li>What to do if temperature is out of</li> </ul>	<ul style="list-style-type: none"> <li>Mini lectures</li> <li>Brain Storming</li> <li>Discussions</li> <li>Presentation</li> <li>Exercise</li> </ul>	<ul style="list-style-type: none"> <li>Question/ Answer</li> <li>Presentation</li> </ul>

Session	Topic	Objective	Time	Subject matter	Training methods	Evaluation
				range? <ul style="list-style-type: none"> <li>• Daily tasks</li> <li>• Weekly tasks</li> <li>• Monthly tasks</li> <li>• End of the year tasks</li> <li>• Record keeping</li> </ul>		
8	<b>Part 6: Checking the accuracy of Temperature monitoring devices</b>	By the end of the session participants will be able to describe: How to check the accuracy of the device and its required equipment and procedures	35 min	<ul style="list-style-type: none"> <li>• Calibrated Thermometer</li> <li>• MULTI log</li> <li>• Alcohol stem Thermometer and Bi-metallic dial thermometer</li> <li>• Disposable electronic temperature monitoring devices</li> </ul>	<ul style="list-style-type: none"> <li>• Mini lectures</li> <li>• Brain Storming</li> <li>• Discussions</li> <li>• Presentation</li> <li>• Exercise</li> </ul>	<ul style="list-style-type: none"> <li>• Question/</li> <li>• Answer</li> <li>• Presentation</li> </ul>
9	<b>Part 7: Storing vaccines and water packs in cold rooms and freezer rooms</b>	By the end of the session participants will be able to describe: <ul style="list-style-type: none"> <li>• Responsible person for inspection of safe storage area in cold room racks for vaccine storage, its procedures and methods.</li> <li>• Cold rooms: Responsible person for inspection of the safe storage areas in lower surface of cold rooms, required procedures and methods.</li> <li>• Cold rooms and freezer rooms: Responsible person, required procedures and methods to mark the pallets placed in cold rooms and freezers.</li> <li>• Responsible person, required procedures and methods for storing vaccines in the racks.</li> <li>• Responsible person, required procedures and methods for storing</li> </ul>	105 min	<ul style="list-style-type: none"> <li>• Generals procedures</li> <li>• Check the cold room racks for safe storage</li> <li>• Cold Room: Check the lower surface of cold room for safe storage</li> <li>• Cold rooms and freezer rooms: Mark the area where pallet is placed in cold room and freezer</li> <li>• Store vaccine in rack</li> <li>• Store vaccine in pallet.</li> <li>• Freezing ice pack and water pack.</li> <li>• Store vaccine in WIC (+2° to +8°C)</li> <li>• Store vaccine in WIF (-15° C to 25°C)</li> </ul>	<ul style="list-style-type: none"> <li>• Mini lectures</li> <li>• Brain Storming</li> <li>• Discussions</li> <li>• Presentation</li> <li>• Exercise</li> </ul>	<ul style="list-style-type: none"> <li>• Question/</li> <li>• Answer</li> <li>• Presentation</li> </ul>

Session	Topic	Objective	Time	Subject matter	Training methods	Evaluation
		vaccines in the pallets. <ul style="list-style-type: none"> <li>Responsible person, required procedures and methods for freezing ice packs/ water packs.</li> <li>Store vaccine in WIC (at +2°C to +8°C) and its procedures.</li> <li>Store vaccine in WIF (at -15°C to -25°C) and its procedures.</li> </ul>				
10	<b>Part 8: Safe working in cold rooms and freezer rooms</b>	By the end of the session participants will be able to describe:: <ul style="list-style-type: none"> <li>Daily, weekly tasks.</li> <li>Basic safety measures and required procedures.</li> <li>Procedures and methods required for Individual safety.</li> </ul>	85 min	<ul style="list-style-type: none"> <li>Training</li> <li>Basic safety measures</li> <li>Individual safety.</li> </ul>	<ul style="list-style-type: none"> <li>Mini lectures</li> <li>Role play</li> <li>Exercise: Group work</li> <li>Presentation</li> </ul>	<ul style="list-style-type: none"> <li>Question/ Answer</li> <li>Presentation</li> </ul>
11	<b>Part 9: Looking after store building</b>	By the end of the session participants will be able to describe:: <ul style="list-style-type: none"> <li>Daily, weekly, monthly and annual tasks of store building.</li> <li>Procedure for emergencies maintenance of the store building</li> </ul>	45 min	<ul style="list-style-type: none"> <li>Daily tasks</li> <li>Weekly tasks</li> <li>Monthly tasks</li> <li>Annual tasks</li> <li>Emergency maintenance</li> </ul>	<ul style="list-style-type: none"> <li>Individual exercise</li> <li>Group review</li> </ul>	<ul style="list-style-type: none"> <li>Question/ Answer</li> <li>Presentation</li> </ul>
12	<b>Part 10: Looking after cold rooms and freezer rooms</b>	By the end of the session participants will be able to describe: <ul style="list-style-type: none"> <li>Responsible personnel, required procedures and methods for daily, weekly, monthly and annual maintenance of cold rooms and freezer rooms.</li> <li>Procedures for emergency maintenance.</li> </ul>	45min	<ul style="list-style-type: none"> <li>Daily tasks</li> <li>Weekly tasks</li> <li>Monthly tasks</li> <li>Annual tasks</li> <li>Emergency maintenance</li> </ul>	<ul style="list-style-type: none"> <li>Mini lectures</li> <li>Exercise: Group work</li> <li>Presentation</li> </ul>	<ul style="list-style-type: none"> <li>Question/ Answer</li> <li>Presentation</li> </ul>
13	<b>Part 11: Looking after standby generators</b>	By the end of the session participants will be able to describe: <ul style="list-style-type: none"> <li>Responsible personnel, required procedures and methods for</li> </ul>	100 min	<ul style="list-style-type: none"> <li>Regular routine maintenance</li> <li>Weekly inspection</li> <li>Weekly/ monthly engine inspection</li> </ul>	<ul style="list-style-type: none"> <li>Mini lectures</li> <li>Exercise: Individual</li> </ul>	<ul style="list-style-type: none"> <li>Question/ Answer</li> </ul>

Session	Topic	Objective	Time	Subject matter	Training methods	Evaluation
		<p>mechanical inspections, routine servicing and emergency repairs of generator in daily, weekly, monthly, and yearly basis.</p> <ul style="list-style-type: none"> <li>The procedure to follow the specific guidance for troubleshooting checklists</li> </ul>		<ul style="list-style-type: none"> <li>Alternate inspection</li> <li>Monthly generator room cleaning</li> <li>After every 125 hours running</li> <li>After every 250 hours running</li> <li>After every 500 hours running</li> <li>Annual tasks</li> <li>After every 5 year(start from 2014)</li> <li>Emergency maintenance</li> <li>Trouble shooting: Electro guard unit</li> <li>Additional requirement for generator maintenance.</li> </ul>	and group	
14	<b>Part 12: Looking after voltage stabilizers</b>	<p>By the end of the session participants will be able to describe:</p> <ul style="list-style-type: none"> <li>Responsible personnel, required procedures and methods for routine checkup of the voltage stabilizer.</li> <li>How to carry out routine checks on the three phases voltage regulators that are connected to cold rooms and freezer rooms.</li> <li>How to check whether the single phase voltage regulators connected to individual vaccine refrigerators and freezers are working or not with its procedures and methods.</li> <li>Troubleshooting of Electro guard units</li> </ul>	30 min	<ul style="list-style-type: none"> <li>Training Manual</li> <li>Daily inspection</li> <li>Three phase voltage regulators for cold rooms and freezer rooms</li> <li>Single-phase refrigerator and freezer voltage regulators</li> <li>Troubleshooting voltage stabilizers unit</li> <li>Additional requirement for voltage stabilizer</li> </ul>	<ul style="list-style-type: none"> <li>Mini lectures</li> <li>Exercise: Individual and group</li> </ul>	<ul style="list-style-type: none"> <li>Question/ Answer</li> <li>Presentation</li> </ul>
15	<b>Part 13: Managing diluents in supply chain</b>	<p>By the end of the session participants will be able to describe:</p> <ul style="list-style-type: none"> <li>Procedure and methods for maintaining stock record of diluents received and proper distribution of</li> </ul>	40min	<ul style="list-style-type: none"> <li>Record the received diluents in the stock records.</li> <li>Record outgoing diluents in the dispatch records.</li> </ul>	<ul style="list-style-type: none"> <li>Mini lectures</li> <li>Exercise: Individual and group</li> </ul>	<ul style="list-style-type: none"> <li>Question/ Answer</li> <li>Presentation</li> </ul>

Session	Topic	Objective	Time	Subject matter	Training methods	Evaluation
		diluents. <ul style="list-style-type: none"> <li>Procedures for correct storage of diluents, at central, regional levels and health facility level.</li> </ul>		<ul style="list-style-type: none"> <li>Issue diluents correctly.</li> <li>Pack and transport diluents correctly.</li> <li>Store diluents correctly at central and regional levels.</li> <li>Store diluents correctly at health facility level.</li> </ul>		<ul style="list-style-type: none"> <li></li> </ul>
16	<b>Part14: Conducting a physical count</b>	By the end of the session participants will be able to describe: <ul style="list-style-type: none"> <li>Procedures and methods for systematic physical stock count.</li> <li>Regular physical check procedures for plan prepare and conduct the count.</li> </ul>	60 min	<ul style="list-style-type: none"> <li>Procedure to count</li> <li>Plan the count</li> <li>Prepare for the count</li> <li>Conduct the count</li> <li>First count</li> <li>Second count</li> <li>Reconciliation</li> <li>Ancillary supplies count</li> </ul>	<ul style="list-style-type: none"> <li>Mini lectures</li> <li>Exercise: Individual and group</li> </ul>	<ul style="list-style-type: none"> <li>Question/</li> <li>Answer</li> <li>Presentation</li> </ul>
17	<b>Part 15:Safe disposal of expired or damaged vaccine and diluents</b>	By the end of the session participants will be able to understand: <ul style="list-style-type: none"> <li>Procedure for disposal of expired vaccines and diluents.</li> </ul>	60 min	<ul style="list-style-type: none"> <li>Expired vaccines and diluents</li> <li>Central Vaccine store</li> <li>Management of physically damaged vaccine and diluents.</li> <li>Heat exposure</li> <li>Exposure to freezing</li> <li>Frozen Shake Test Control samples</li> <li>Final disposal procedures</li> </ul>	<ul style="list-style-type: none"> <li>Mini lectures</li> <li>Exercise: Individual and group</li> </ul>	<ul style="list-style-type: none"> <li>Question/</li> <li>Answer</li> <li>Presentation</li> </ul>
18	<b>Part 16: Storing vaccine and water/cool packs in refrigerators and freezers</b>	By the end of the session participants will be able to : <ul style="list-style-type: none"> <li>Clearly identify and access to Earliest Expiry-First-Out (EEFO) order of vaccines, its procedures and methods and distribute them</li> </ul>	60 min	<ul style="list-style-type: none"> <li>General procedures</li> <li>Storing vaccines and ice packs in ice-lined refrigerator</li> <li>Storing vaccine and ice packs in top opening refrigerator.</li> </ul>	<ul style="list-style-type: none"> <li>Mini lectures</li> <li>Exercise: Individual and group</li> </ul>	<ul style="list-style-type: none"> <li>Question/</li> <li>Answer</li> <li>Presentation</li> </ul>

Session	Topic	Objective	Time	Subject matter	Training methods	Evaluation
		<p>accordingly.</p> <ul style="list-style-type: none"> <li>How to store freeze-sensitive vaccines in areas where there is no risk of freezing.</li> <li>Describe the storage procedures that allow cold air to flow freely around the stock.</li> <li>Separate the labeled vaccine that cannot be used from refrigerator for disposal from remaining stock.</li> </ul>		<ul style="list-style-type: none"> <li>Storing vaccine and ice packs in front- opening refrigerator</li> <li>Store vaccine on chest freezer</li> <li>Freezing and storing ice packs</li> </ul>		
19	<b>Part 17: Loading and operating refrigerated vehicles</b>	<p>By the end of the session participants can do:</p> <ul style="list-style-type: none"> <li>Preparatory tasks for the refrigerated compartment.</li> <li>Procedures and methods to pre cool the refrigerated compartment.</li> <li>Procedures and methods for packing the vaccines and diluents.</li> <li>Procedures and methods for loading the vehicle at the supply store.</li> <li>Procedure to operate the vehicle.</li> <li>Describe how to unload the vehicle at the receiving store.</li> <li>Describe procedure during overnight stops.</li> <li>Review temperature records for each trip.</li> </ul>	100 min	<ul style="list-style-type: none"> <li>Plan the delivery schedule</li> <li>Prepare the refrigerated compartment</li> <li>Pre cool the refrigerated compartment</li> <li>Packing vaccines and diluents.</li> <li>Loading the vehicle at the supplying store.</li> <li>Operating the vehicle</li> <li>Procedures to unload the vehicle at the receiving store.</li> <li>Overnight stops</li> <li>Review temperature records for each trip.</li> </ul>	<ul style="list-style-type: none"> <li>Mini lectures</li> <li>Brain Storming</li> <li>Discussion</li> <li>Presentation</li> <li>Exercise</li> </ul>	<ul style="list-style-type: none"> <li>Question/ Answer</li> <li>Presentation</li> </ul>
20	<b>Part18: Monitoring temperature exposure during vaccine transport</b>	<p>By the end of the session participants will be able to describe:</p> <ul style="list-style-type: none"> <li>How to read and manage freeze indicators.</li> <li>Procedures and methods to place freeze indicators in cold box.</li> </ul>	60 min	<ul style="list-style-type: none"> <li>Read and manage freeze indicators</li> <li>Placing freeze indicators in cold box.</li> <li>Placing freeze indicators in refrigerated vehicles.</li> </ul>	<ul style="list-style-type: none"> <li>Mini lectures</li> <li>Brain Storming</li> <li>Discussion</li> <li>Presentation</li> </ul>	<ul style="list-style-type: none"> <li>Question/ Answer</li> <li>Presentation</li> </ul>

Session	Topic	Objective	Time	Subject matter	Training methods	Evaluation
		<ul style="list-style-type: none"> <li>How to place freeze indicators in refrigerated vehicles.</li> <li>How to monitor temperature in refrigerated vehicle.</li> <li>Arrivals checks and reporting procedures.</li> <li>Procedures for returning Requisition, Logistics and Issue form, Data Logger and freeze indicator.</li> </ul>		<ul style="list-style-type: none"> <li>Monitoring temperatures in refrigerated vehicles.</li> <li>Arrivals checks and reporting procedures.</li> <li>Returning Requisition, Logistics and Issue form, Data Logger and freeze indicator.</li> </ul>	<ul style="list-style-type: none"> <li>Exercises</li> </ul>	
21	<b>Part 19: Packing vaccine and diluents for transport, using cold boxes</b>	<p>By the end of the session participants can be able to describe:</p> <ul style="list-style-type: none"> <li>The preparatory activities of vaccine transport.</li> <li>How to prepare ice packs, cool water packs and its procedure.</li> <li>How to manage cold box where icepacks are kept.</li> <li>Hand hygiene and orient its need.</li> <li>List the name of vaccine that are not damaged by freezing.</li> <li>Why conditioned ice packs is used in packing freeze sensitive vaccines?</li> <li>Procedures for packing diluents.</li> </ul>	85 Min	<ul style="list-style-type: none"> <li>Preparatory activities</li> <li>Train temporary workers</li> <li>Prepare ice packs/cold water packs</li> <li>Manage ice box where ice packs are kept</li> <li>Observe hand hygiene</li> <li>Packing vaccines that are not damaged by freezing</li> <li>Use of conditioned ice packs for packing freeze sensitive vaccines.</li> <li>Packing diluents</li> </ul>	<ul style="list-style-type: none"> <li>Mini lectures</li> <li>Brain Storming</li> <li>Discussion</li> <li>Presentation</li> <li>Exercises</li> </ul>	<ul style="list-style-type: none"> <li>Question/ Answer</li> <li>Presentation</li> </ul>
22	<b>Part 20: Using vaccine vial monitors</b>	<p>By the end of the session participants can:</p> <ul style="list-style-type: none"> <li>Explain the use of vaccine vial monitors (VVM)</li> <li>Preparatory procedures for transporting vaccine from store.</li> </ul>	45 min	<ul style="list-style-type: none"> <li>Use of vaccine vial monitors</li> <li>Activity when vaccine issued by a store.</li> <li>Activity when vaccines are received by lower level store</li> <li>When vaccine are administered.</li> </ul>	<ul style="list-style-type: none"> <li>Mini lectures</li> <li>Brain Storming</li> <li>Discussion</li> <li>Presentation</li> <li>Exercises</li> </ul>	<ul style="list-style-type: none"> <li>Question/ Answer</li> <li>Presentation</li> </ul>

Session	Topic	Objective	Time	Subject matter	Training methods	Evaluation
		<ul style="list-style-type: none"> <li>Describe procedure required when vaccine are received by lower level store.</li> <li>Explain the activities to be done at the time of vaccine administered.</li> </ul>				
23	<b>Part 21: When and how to conduct the Shake Test</b>	<p>By the end of the session participants can:</p> <ul style="list-style-type: none"> <li>Explain when to do Shake Test.</li> <li>Procedure and methods to do Shake Test.(when and how)</li> <li>Explain procedures for sampling methodologies.</li> <li>Explain sampling procedures of incoming shipments from vaccine supplier.</li> <li>Explain sampling procedures of vaccine that is already in the supply chain.</li> <li>Explain activity for disposal of freeze damaged vaccine and frozen control samples.</li> </ul>	105 min	<ul style="list-style-type: none"> <li>Apply Shake Test</li> <li>When and how to do Shake Test</li> <li>Sample methodologies</li> <li>Sampling incoming shipments from vaccine supplier</li> <li>Sampling vaccine that is already in the supply chain</li> <li>Disposal of freeze damaged vaccine and frozen control samples</li> </ul>	<ul style="list-style-type: none"> <li>Mini lectures</li> <li>Brain Storming</li> <li>Discussion</li> <li>Presentation</li> </ul>	<ul style="list-style-type: none"> <li>Question/ Answer</li> <li>Presentation</li> </ul>
24	<b>Part 22: Conditioning froze icepacks</b>	<p>By the end of the session participants will be able to describe:</p> <ul style="list-style-type: none"> <li>What conditioned icepacks is?</li> <li>How to know when an ice pack is conditioned?</li> <li>When to use conditioned ice packs?</li> <li>How to condition ice packs.</li> </ul>	45 min	<ul style="list-style-type: none"> <li>What is conditioned ice pack?</li> <li>How to know when ice pack is conditioned?</li> <li>When to use condition icepacks?</li> <li>How to condition icepacks?</li> </ul>	<ul style="list-style-type: none"> <li>Mini lectures</li> <li>Brain Storming</li> <li>Discussion</li> <li>Presentation</li> </ul>	<ul style="list-style-type: none"> <li>Question/ Answer</li> <li>Presentation</li> </ul>

Session	Topic	Objective	Time	Subject matter	Training methods	Evaluation
25	<b>Part 23: Storing goods in the dry</b>	By the end of this session, the participants will be able to describe that: <ul style="list-style-type: none"> <li>All the products are safely stored within the temperature and humidity levels specified for the product type.</li> <li>Diluents, syringes and other products with a limited self life can easily be located and distributed in Earliest-Expiry-First-Out (EEFO) order.</li> <li>Expired or damaged products marked for disposal are kept separate from usable stock.</li> </ul>	30 min	<ul style="list-style-type: none"> <li>General procedures</li> <li>Storing diluents, syringes and safety boxes</li> <li>Storing expired or damaged vaccines, diluents and syringes</li> <li>Storing electronic devices with non replaceable batteries</li> <li>Storing spare parts, stationary and other items.</li> </ul>	<ul style="list-style-type: none"> <li>Mini lectures</li> <li>Brain Storming</li> <li>Discussion</li> <li>Presentation</li> </ul>	<ul style="list-style-type: none"> <li>Question/ Answer</li> <li>Presentation</li> </ul>
26	<b>Responsibility of persons working in EVM</b>	By the end of the session participants will be able to: <ul style="list-style-type: none"> <li>Identify personnel responsibility according to the post.</li> </ul>	45 min	<ul style="list-style-type: none"> <li>Introduction</li> <li>Training activity</li> </ul>	<ul style="list-style-type: none"> <li>Group game</li> <li>Question/ Answer</li> <li>Frame Game</li> </ul>	<ul style="list-style-type: none"> <li>Question/ Answer</li> </ul>
27	<b>Midterm Evaluation test</b>	By the end of the session participants will be able to <ul style="list-style-type: none"> <li>Specify the learning activity.</li> <li>Develop the knowledge and skills through Participant's hand book and reference manuals.</li> </ul>	45 min	<ul style="list-style-type: none"> <li>Guidelines for Midterm evaluation test.</li> <li>Training reflection</li> </ul>	<ul style="list-style-type: none"> <li>Individual exercise</li> <li>Group Review</li> </ul>	<ul style="list-style-type: none"> <li>Question/ Answer</li> <li>Observation</li> </ul>
28	<b>Training summary</b>	By the end of the session participants will be able to understand: <ul style="list-style-type: none"> <li>Concept of Effective Vaccine Management</li> <li>Major points of Effective Vaccine Management</li> </ul>	15min	<ul style="list-style-type: none"> <li>Review of the Effective vaccine management</li> <li>Objectives of training</li> <li>Goal of training</li> </ul>	<ul style="list-style-type: none"> <li>Mini lectures</li> </ul>	<ul style="list-style-type: none"> <li>Question/ Answer</li> </ul>
<b>Total time 17820 min /60 = 26.6 hour/6 = 5 day</b>			1780			

# **Introductory Activities**

## **Session I**

Time	Content	Objectives	Learning and Teaching activities	Required materials	Evaluation
45 min	<b>Introductory Activities</b>	<p><b>Primary objectives:</b> By the end of the session, the participants will understand about introductory activities.</p> <p><b>Enabling objectives:</b> By the end of the session the participants become capable on:</p> <ul style="list-style-type: none"> <li>• Logistics of training</li> <li>• Goals, objectives and methodologies of training</li> <li>• Prepare group norms</li> </ul>	<p>1. <b>Welcome and Introduction:</b> 10 min</p> <p>First of all welcome all the participants who have come for the training. Based on the slide no 1 a first introduce yourself and other trainers or trainers themselves accordingly.</p> <p>2 a. <b>Toilet facilities-</b> Inform the participant about the location of the toilet</p> <p>b. <b>Provision of daily allowance and travel allowance-</b> Inform that the provision of training allowances was already mentioned in the letter which was sent to the district but participants can again cleared their doubts with the finance person in their spare time.</p> <p>3 a. <b>Aim of training:</b> 5 mins <b>Display the "aim" in the newsprint ask one participant to read loudly.</b> Explain the participants that the aim of this training is to boost the knowledge, skills and concept of effective vaccine management to responsible personnels for vaccine storage to the target group and continue to manage vaccine services yearly for the improvement of health centres. Then underlined concept, effective, target group quality, vaccine services, knowledge, skills with a red marker pen.</p> <p>b. <b>Objective of the training:</b> 10 mins</p> <p><b>Display the objectives of training by using a slide no I 3 (1-6) and ask one by one to read the objectives loudly.</b></p>	<ul style="list-style-type: none"> <li>• Distribution of participant's handbook, reference manual</li> <li>• Marker pen</li> <li>• News print</li> <li>• laptop</li> </ul> <p><b>Power point presentation</b></p> <ul style="list-style-type: none"> <li>• Introductory I 1</li> <li>• I 2 Goal (1-1)</li> <li>• I 3 Objective (1-6)</li> <li>• I 4 Proposed Agenda (1-5)</li> </ul>	Question answer

Time	Content	Objectives	Learning and Teaching activities	Required materials	Evaluation
			<p><b>4. Training Schedule- 5 mins</b> Inform the participants that the training will start from 10 am every day. Also inform about the arrangement of tea and snacks during training period and share the "5-day training schedule" using slide no I 4(1-3) by reading out loud.</p> <p><b>5. Training Methodology: 5 mins</b></p> <ul style="list-style-type: none"> <li>• Make sure that everyone is aware that they have come from different places for this training.</li> <li>• Inform the participants that the contents included in the training have already been discussed. Tell the participants that some of them may have been serving in vaccine services for a long time and those are the precious experiences which will surely be utilized in this training.</li> <li>• Explain training methodologies such as grouping of participants for practice, group presentation, case study, participant demonstration, individual presentation, question and answer, collective games etc will be used during training.</li> <li>• Distribute Reference manual and participant handbook to each participant.</li> </ul> <p><b>6a. Prepare Group Norms: 5 mins</b></p> <ul style="list-style-type: none"> <li>• Explain that for conducting smooth and effective training it is very important to prepare collective Group Norms with consent from all the participants which should be followed during the entire training period by everyone.</li> <li>• Prepare to make Group Norms. Mention training start time and end time while making Group Norms as it is already</li> </ul>		

Time	Content	Objectives	Learning and Teaching activities	Required materials	Evaluation
			<p>mentioned in the training manual. Share that group norms could include points such as coming to class on time, asking questions one at a time, listening to others queries attentively and active participation during training.</p> <ul style="list-style-type: none"> <li>• Give not more than 5 mins to prepare group norms and afterwards <b>display them in a place where everyone can see</b>. Request everyone to follow the norms prepared. Thank all the participants for their help in preparing the group norms.</li> </ul> <p>b. <b>Nominate Officer of the day and Reviewer:</b> 5 mins</p> <ul style="list-style-type: none"> <li>• Make participants feel that their active participation can help the training to be successful and besides that, every day, their selection of one Officer for the day and one Reviewer who reviews traing from the previous day will surely help to run the training smoothly. Make clear that the selected Officer of a day will help the trainer to coordinate the training activities and the Reviewer will review the training activities and carry on for the next day. Make sure that each one gets a chance and avoid repetition of participants. Conclude this session and inform for the next.</li> </ul>		

# **Introduction and Overview of Effective Vaccine Management**

## **Session II**

Time	Content	Objectives	Learning and Teaching activities	Required materials	Evaluation
35 min	<b>Introduction and Overview of Effective Vaccine Management Training</b>	<p><b>Primary Objective:</b></p> <p>By the end of this session, the participants will be able to describe introduction and training content of effective vaccine management.</p> <p><b>Enabling Objectives:</b></p> <p>By the end of the session, the participants will be able to describe on</p> <p>Concept of effective vaccine management training.</p> <p>Basic points of effective vaccine management training.</p>	<p><b>Review and Revise:</b> 5 min</p> <ul style="list-style-type: none"> <li>Revise the participants the brief introduction of the recent session.</li> <li>Inform the importance of basic contents.</li> </ul> <p><b>Brief introduction of effective vaccine management and review of the training program:</b> 5 min</p> <ul style="list-style-type: none"> <li><b>Display effective vaccine management in newsprint</b> and ask what they understand by it. Listen the answers of 2-4 participants carefully. Appreciating them, <b>display slide no III</b> and ask one of the participants to read aloud.</li> <li>Inform the participants that the following contents will be discussed in detail in upcoming sessions.</li> </ul> <hr/> <p><b>Basic points of effective vaccine management training-</b> 20 min</p> <ul style="list-style-type: none"> <li><b>Display slide no B 2 and read aloud</b> the brief introduction of the contents of this 5-day training, in this session by one of the participants.</li> <li>Give brief description of each point.</li> </ul> <ol style="list-style-type: none"> <li>Clearing vaccines and other products through customs</li> <li>Vaccine arrival Procedure</li> <li>Products Arrival Procedure</li> <li>Correct storage temperatures for vaccines and diluents at fixed locations</li> <li>Monitoring vaccine storage Temperatures at fixed storage locations</li> </ol>	<p>Marker, Pen</p> <p>News Print</p> <p>Laptop</p> <p>Via: slide:</p> <ol style="list-style-type: none"> <li>Goal of EVM</li> <li>Main points in training</li> </ol>	

Time	Content	Objectives	Learning and Teaching activities	Required materials	Evaluation
			<ol style="list-style-type: none"> <li>6. Checking the accuracy of temperature monitoring devices)</li> <li>7. Storing vaccines and water packs in cold rooms and freezer rooms)</li> <li>8. Safe working in cold rooms and freezer rooms)</li> <li>9. Looking after store buildings)</li> <li>10. Looking after cold rooms and freezer rooms)</li> <li>11. Looking after standby generators)</li> <li>12. Looking after voltage regulators)</li> <li>13. Managing diluents in the supply chain)</li> <li>14. Conducting a physical count)</li> <li>15. Safe disposal of expired or damaged vaccine and diluents)</li> <li>16. Storing vaccine and water/cool packs in refrigerators and freezers)</li> <li>17. Loading and operating refrigerated vehicles)</li> <li>18. Monitoring temperature exposure during vaccine transport)</li> <li>19. Packing vaccine and diluents for transport, using cold boxes)</li> <li>20. Using Vaccine Vial Monitors)</li> <li>21. When and how to conduct the Shake Test)</li> <li>22. Conditioning froze icepacks)</li> <li>23. Storing goods in the dry stores)</li> </ol> <p><b>Last Session- 5 min</b></p> <p>Ask questions about the points discussed and summarize the session.</p>		

## **Clearing Vaccines and Other Products through Customs**

# **Session III**

Time	Content	Objectives	Learning and teaching methodologies	Required materials	Evaluation
95 min	<b>Clearing vaccines and other products through customs</b>	<p><b>Primary Objective:</b></p> <p>By the end of the session, the participants are able to describe the procedures of clearing vaccines and other products through customs.</p> <p><b>Enabling Objectives:</b></p> <p>By the end of the session the participants will be able to:</p> <ul style="list-style-type: none"> <li>List out the responsible personnel or representatives for clearance vaccines and other products through customs.</li> <li>Describes about the policies and objectives.</li> <li>List out associated materials and equipments.</li> <li>Describe the procedures for vaccine and other immunization supplies</li> </ul>	<p><b>Review and Revise: 5 min</b></p> <ul style="list-style-type: none"> <li>Ask the participants what we discussed in the previous session and considering their responses. Inform the participants about the importance of active participation during this session.</li> </ul> <p><b>Preparatory task for vaccine customs: 15 min</b></p> <ul style="list-style-type: none"> <li>Tell the participants that after brief introduction of the contents of this 5-day training, in this session, we will be discussing about clearing vaccines and other products through customs.</li> <li>Ask participants and note down their answers on the newsprint, thanks to all participants for their valuable points. <b>Display the slide no C1 and explain it.</b></li> <li>Ask participants about the responsible personnel for clearing vaccines customs. After listening to their responses <b>explain the newsprint prepared beforehand according to the Participant's hand book of Session III page 34 by reading aloud " whom?"</b></li> </ul> <p><b>Administrative / Product management: 15 min</b></p> <ul style="list-style-type: none"> <li>Ask participants the role of administrative and product management for clearing vaccines customs. Ask participants and note down their answers on the newsprint, thanks to all participants for their valuable points. <b>Display the slide no C2 and explain it.</b></li> <li>After discussion ask about the responsible personnel to</li> </ul>	<ul style="list-style-type: none"> <li>Marker pens</li> <li>News print</li> </ul> <p><b>Power point presentation</b></p> <p>c1 Preparatory task for customs clearance of vaccines.</p> <p>c2 Administrative/ product management</p> <p>c3 Look after by responsible personnel for vaccine handling</p> <p>c4 Separate syringe, safety boxes and other immunization supplies</p> <p>c5 Monitoring shipments</p> <p>c6 Reporting problem submission</p> <p>c7 Monitoring</p>	Question answer

Time	Content	Objectives	Learning and teaching methodologies	Required materials	Evaluation
		customs.	<p>the participants. The trainer should consider their responses positively, <b>request to look at page no 35 of participant's handbook and make one of the participants to read aloud "who will do" and explain accordingly.</b></p> <p><b>Work to be done by vaccine handling person: 15 min</b></p> <ul style="list-style-type: none"> <li>• Ask the participants and note down in newsprints about the duties of responsible personnel to handle the vaccine, thank to all participants for their valuable points. <b>Display the slide no C3 and explain it.</b></li> <li>• After discussion, ask to participants who are the responsible personnel for performing duties. The trainer should consider their responses positively and explain the responsibilities of the personnel further.</li> </ul> <p><b>Separate syringe, safety boxes and other immunization supplies:15 min</b></p> <ul style="list-style-type: none"> <li>• Ask the participants what are the process for separating syringe, safety boxes and other immunization supplies. Note their points in the news print. Thank them for their valuable points and <b>display slide no C4 and explain it.</b></li> <li>• After discussion, ask participants about who are the responsible personnel for this work. Responding their answer positively, <b>display page no 36 session III of participant's handbook, and request to read aloud "whom" by one of the participants and further explain as needed.</b></li> </ul>		

Time	Content	Objectives	Learning and teaching methodologies	Required materials	Evaluation
			<p><b>Process of separating syringe, safety boxes and other immunization supplies: 5 min</b></p> <ul style="list-style-type: none"> <li>• Ask participants what are the process of separating syringes, safety boxes and other immunization supplies. Note the points in the newsprints. <b>Thank them for their valuable points and display slide no C5 and explain it.</b></li> <li>• After discussion, ask who are involved for conducting these duties to the participants. Responding positively, <b>request them to read loudly by one of the participants from the participant's handbook page no37, session III.</b></li> </ul> <p><b>Monitoring Shipment: 5 min</b></p> <ul style="list-style-type: none"> <li>• Ask few participants the procedures for monitoring shipments. Note the points in the newsprints. Thank the participants for the valuable points and <b>display the slide no C6 and explain it.</b></li> <li>• After discussion, ask who are the responsible personnel to conduct these activities? After responding positively, <b>request to read from participant handbook, page no 37 session III.</b> Choose one of the participants to read loudly "Whom" and explain as needed.</li> </ul> <p><b>Recommendation for the problems: 5 min</b></p> <ul style="list-style-type: none"> <li>• Ask a few participants about the recommendations for the problems. Note the points in the newsprints. Thank the participants for their valuable points and <b>display slide no</b></li> </ul>		

Time	Content	Objectives	Learning and teaching methodologies	Required materials	Evaluation
			<p><b>C7 and explain accordingly.</b></p> <ul style="list-style-type: none"> <li>• After discussion, ask who are the responsible personnel for these tasks. Responding positively, <b>request to read the participant handbook page no 37, session III. Choose one of the participants to read loudly "by whom" and explain as needed.</b></li> </ul> <p><b>Monitoring activity: 5 min</b></p> <ul style="list-style-type: none"> <li>• Ask few participants about the monitoring activity. Note the points in the newsprints. Thank the participants for their valuable points and <b>display slide no C8 and explain accordingly.</b></li> <li>• After discussion, ask who are the responsible personnel for these tasks. Responding positively, <b>request to read the participant handbook page no 37, session III. Choose one of the participants to read loudly "by whom" and explain as needed.</b></li> </ul> <p><b>Interactive training: 5 min</b></p> <ul style="list-style-type: none"> <li>• Ask a few participants about the Interactive training. Note the points in the newsprints. Thank the participants for their valuable points and <b>display slide no III 9 and explain it.</b></li> <li>• After discussion, ask who the responsible personals for these tasks are. Responding positively, <b>request to read the participant handbook page no 37, session III Choose one of the participants to read loudly "by whom" and explain as needed.</b></li> </ul> <p><b>Summary: 5 min</b></p> <ul style="list-style-type: none"> <li>• Summarize this session by asking questions to the participants about the contents discussed in this session.</li> </ul>		



## **Vaccine Arrival Procedure**

# **Session IV**

Time	Content	Objective	Learning and teaching activity	Required materials	Evaluation
130 min	Vaccine arrival procedure	<p><b>Primary Objective:</b> By the end of the session, the participants will be able to understand the procedure for checking advance notice documentation and prepare for the arrival.</p> <p><b>Enabling Objectives:</b> By the end of the participants are able to do:</p> <ul style="list-style-type: none"> <li>• Check advance notice documentation and prepare for the arrival</li> <li>• Collect vaccines from Tribhuvan International airport.</li> <li>• Inspect the shipment</li> <li>• Stock the shipment</li> </ul>	<p><b>Review and Revise:</b> 5 min</p> <ul style="list-style-type: none"> <li>• Revise brief introduction of the recent session to the participants.</li> <li>• Inform the participants about the importance of active participation during this session.</li> </ul> <p><b>Vaccine arrival procedures:</b> 10 min</p> <ul style="list-style-type: none"> <li>• Ask a few participants what they understand by the word "Vaccine arrival procedure" written on newsprint or the top of slide. Listen to their definition carefully for 3-4 min. Inform that we are now in the session of vaccine arrival procedures. Responding positively, ask what are the essential equipments needed at the time of vaccine arrivals. Note the important points under the newsprint/ below the slide topic. <b>Display slide no IV 1</b> where the equipments for vaccine arrivals equipments are mentioned. Request to read loudly the points one by one by the participants and explain as needed.</li> </ul> <p><b>Check advance notice documentation and prepare for the arrival :</b> 20 min</p> <ul style="list-style-type: none"> <li>• Ask a few participants about the advance notice documentation and prepare for the arrival. Note the points in the newsprints. Thank the participants for their valuable points and <b>display slide no IV 2</b> and explain accordingly.</li> </ul>	<ul style="list-style-type: none"> <li>• Marker pens</li> <li>• News print</li> </ul> <p><b>Power point presentation</b></p> <ul style="list-style-type: none"> <li>• IV 1 Required materials for vaccine arrival procedures</li> <li>• IV 2 Advance notice documentation, and prepare for the arrival.</li> <li>• IV 3 Collect vaccines from TIA</li> <li>• IV 4 Inspect the shipment</li> <li>• IV 5 Stock the shipment</li> <li>• IV 6 Problem reporting</li> </ul> <p><b>Video clips</b></p> <ul style="list-style-type: none"> <li>• Vaccine Arrival-B</li> <li>• Vaccine Arrival-A</li> </ul>	<p>Question answer Discussion</p>

Time	Content	Objective	Learning and teaching activity	Required materials	Evaluation
		<ul style="list-style-type: none"> <li>• Report problems</li> <li>• Follow up action</li> <li>• Procedures for vaccines purchased from other sources.</li> </ul>	<ul style="list-style-type: none"> <li>• After discussion, ask who are the responsible personnel for these tasks? Responding positively, <b>request to read the participant handbook page no 40, session IV.</b> Choose one of the participants to read loudly "by whom" and explain as needed</li> </ul> <p><b>Collect vaccine from the Tribhuvan International Airport:</b> 10 min</p> <ul style="list-style-type: none"> <li>• Ask few participants about "the procedures for collecting vaccine from Tribhuvan International" Note the points in the newsprints. Thank the participants for their valuable points and <b>display slide no IV 3</b> and explain it.</li> <li>• After discussion, ask who are the responsible personnel for these tasks. Responding positively, <b>request to read the participant handbook page no 40, session IV.</b> Choose one of the participants to read loudly "by whom" and explain as needed.</li> </ul> <p><b>Inspect the shipment:</b> 15 min</p> <ul style="list-style-type: none"> <li>• Ask few participants about "Inspect the shipment", note the points in the newsprints. Thank the participants for their valuable points and <b>display slide no IV 4 and explain it.</b></li> <li>• <b>Play the video clips of, arrival-b, ask the major points displayed in the video.</b> Responding positively, <b>display slide IV 4</b> "monitoring shipments" and further explain it. Next <b>show video "vaccine arrivals- a"</b>, ask questions related to the clips.</li> </ul>		

Time	Content	Objective	Learning and teaching activity	Required materials	Evaluation
			<ul style="list-style-type: none"> <li>• After discussion, ask who are responsible personnel for these tasks. Responding positively, <b>request to read the participant handbook page no 41, session IV</b>. Choose one of the participants to read loudly "by whom" and explain as needed</li> </ul> <p><b>Stock the shipment:10 min</b></p> <ul style="list-style-type: none"> <li>• Ask few participants about "the procedures for stocking the shipment". Note the points in the newsprints. Thank the participants for their valuable points and <b>display slide no IV 5</b> and explain it.</li> <li>• After discussion, ask who are the responsible personnel for these tasks. Responding positively, <b>request to read the participant handbook page no 42, session IV</b>. Choose one of the participants to read loudly "by whom" and explain as needed.</li> </ul> <p><b>Report problems:15 min</b></p> <ul style="list-style-type: none"> <li>• Ask few participants about "the procedures for reporting problems". Note the points in the newsprints. Thank the participants for their valuable points and <b>display slide no IV 6</b> and explain it.</li> <li>• After discussion, ask who are the responsible personnel for these tasks. Responding positively, <b>request to read the participant handbook page no 43, session IV</b>. Choose one of the participants to read loudly "by whom" and explain as needed.</li> </ul>		

Time	Content	Objective	Learning and teaching activity	Required materials	Evaluation
			<ul style="list-style-type: none"> <li>• After that clarify, if any problem arises with proper coordination through UNICEF, and the follow up action is done.</li> </ul> <p><b>Procedures for vaccines purchased from other source: 20 min</b></p> <ul style="list-style-type: none"> <li>• Ask few participants about "the procedures for vaccines purchased through UNICEF". Note the points in the newsprints. Responding positively, describe the common procedures for vaccine arrival and dissimilarities if present.</li> <li>• Request to read the <b>participant handbook page no 44, session IV</b>. Choose one of the participants to read loudly "<b>by whom</b>" and explain as needed.</li> </ul> <p><b>Vaccine Arrival Report: 20 min</b></p> <ul style="list-style-type: none"> <li>• Ask a few participants about "the procedures for UNICEF vaccine arrival". Note the points in the newsprints. Thank the participants for their valuable points and <b>request to read the participant handbook page no 48, session D</b>.</li> <li>• Request every point to read loudly from the participants one by one and explain as needed.</li> </ul> <p><b>Summary: 5 min</b></p> <ul style="list-style-type: none"> <li>• Ask the participants if they have any questions regarding vaccine arrival session, explain if they have questions and end this session.</li> </ul>		

## **Products Arrival Procedure**

# **Session V**

Time	Content	Objectives	Learning and teaching activity	Required materials	Evaluation
110 min	<b>Product arrival procedure</b>	<p><b>Primary Objective</b> By the end of the session, the participants are able to describe the all the required details for each products in the shipment on the product arrival procedures.</p> <p><b>Enabling Objectives</b> By the end of the sessions the participants are able to do:</p> <ul style="list-style-type: none"> <li>List the responsible personnel to check advance documentation and prepare for the arrival.</li> <li>List the responsible personnel to collect shipment from the port, its procedures and process.</li> <li>List the personnel responsible to inspect the shipment with procedures and process.</li> </ul>	<p><b>Review and Revise: 5 min</b></p> <ul style="list-style-type: none"> <li>Revise the participants the brief introduction of the recent session.</li> <li>Inform the participants about the importance of active participation during this session.</li> </ul> <p><b>Required materials for product arrival procedures: 5 min</b></p> <ul style="list-style-type: none"> <li>Ask few participants what they understand by the word "Product arrival procedure" written on newsprint or the top of slide. Ask what are the essentials equipments required for the product arrival procedures. Note the important points below the slides or newsprint under product arrival procedures. <b>Display slide no V1</b> where the equipments for product arrivals equipments are mentioned. . Read loudly the points one by one by the participants and explain as needed.</li> </ul> <p><b>Check advance notice documentation and prepare for the arrival: 20 min</b></p> <ul style="list-style-type: none"> <li>Ask a few participants what they are the activities for "Checking advance notice documentation and prepare for the arrival. Note the major points in the newsprint. Thank the participants for their valuable points and <b>display slide V 2</b> and explain it.</li> <li>After discussion ask who are responsible personnel for these tasks. Responding positively, <b>request to read participant handbook page no 52, session V.</b> Choose one of the participants to read loudly" by whom" and explain as needed.</li> </ul> <p><b>Inspect the shipment: 20 min</b></p> <ul style="list-style-type: none"> <li>Ask a few participants how and when to monitor the shipments. Note the important points on newsprint. Thank the participants</li> </ul>	<ul style="list-style-type: none"> <li>Marker pen</li> <li>Newsprint</li> </ul> <p><b>Power point presentation</b></p> <ul style="list-style-type: none"> <li>V 1 Essential materials for product arrival procedure</li> <li>V 2 Advance checking documents and prepare for arrival</li> <li>V 3 Collect the shipment from the distribution</li> <li>V 4 Inspect the shipment</li> <li>V 5 Stock and distribution of the product</li> <li>V 6 Reporting the problems</li> <li>V 7 Follow up action</li> </ul>	Answer / questions

Time	Content	Objectives	Learning and teaching activity	Required materials	Evaluation
		<ul style="list-style-type: none"> <li>• List the responsible individual to stock and distribute the shipment.</li> <li>• Identify the person to report the problems.</li> <li>• Make the arrangement to apply the suggestions into actions, how to implement with its procedures and methods.</li> <li>• Describe about the procedures to apply for purchasing the products from other sources.</li> <li>• Orient how to keep records</li> </ul>	<p>for their valuable points. <b>Display slide no V4</b> and explain "things to remember for monitoring the shipments"</p> <ul style="list-style-type: none"> <li>• After discussion ask who are responsible personnel for these tasks. Responding positively, <b>request to read participant handbook page no 54, session V</b>. Choose one of the participants to read loudly" by whom" and explain as needed.</li> </ul> <p><b>Stock and distribution of products: 20 min</b></p> <ul style="list-style-type: none"> <li>• Ask a few participants how and when to stock and distribute products. Note the important points on newsprint. Thank the participants for their valuable points. <b>Display slide no V5</b> and explain it.</li> <li>• After discussion ask who are responsible personnel for these tasks. Responding positively, <b>request to read participant handbook page no 55, session V</b>. Choose one of the participants to read loudly" by whom" and explain as needed.</li> </ul> <p><b>Report problems: 5 min</b></p> <ul style="list-style-type: none"> <li>• Ask few participants about how and when to report the problems. Note the important points on newsprint. Thank the participants for their valuable points. <b>Display slide no V6</b> and explain it.</li> <li>• After discussion ask who are responsible personnel for these tasks. Responding positively, <b>request to read participant handbook page no 56, session V</b>. Choose one of the participants to read loudly" by whom" and explain as needed.</li> </ul> <p><b>Follow up action: 20 min</b></p> <ul style="list-style-type: none"> <li>• Ask a few participants how and when to do follow up action. Note the important points on newsprint. Thank the participants</li> </ul>		

Time	Content	Objectives	Learning and teaching activity	Required materials	Evaluation
			<p>for their valuable points. <b>Display slide no V7</b> and explain it.</p> <ul style="list-style-type: none"> <li>• After discussion ask who are responsible personnel for these tasks. Responding positively, <b>request to read participant handbook page no 57, session V.</b> Choose one of the participants to read loudly" by whom" and explain as needed.</li> </ul> <p><b>Procedures for products purchased from other sources: 20 min</b></p> <ul style="list-style-type: none"> <li>• Ask a few participants what are the products purchased from other sources. Responding positively, there is very little difference between vaccine and products arrivals procedures. Explain the differences.</li> <li>• <b>Request participants to read handbook page no 57, session V.</b> Read loudly every point one by one and explain as needed.</li> </ul> <p><b>Last part: 5 min</b> Ask few questions from the recent session to the participants for inquiry:</p> <ul style="list-style-type: none"> <li>• Make arrangement for product arrival procedures</li> <li>• Preparation to check advance notice documentation and prepare for the arrival.</li> <li>• Collect shipment from the port of entry</li> <li>• Inspect the shipment</li> <li>• Stock and distribute the products</li> <li>• Report the problems</li> <li>• Follow up actions(clear all the queries)</li> </ul>		

**Correct storage temperatures for vaccines and diluents at fixed locations**

# **Session VI**

Time	Content	Objectives	Learning and teaching activities	Required materials	Evaluation
30 min	<p><b>Correct storage temperatures for vaccines and diluents at fixed locations</b></p>	<p><b>Primary Objective:</b></p> <p>By the end of the session, the participants are able to describe on the correct storage temperatures for vaccines and diluents at fixed locations.</p> <p><b>Enabling Objectives:</b></p> <p>By the end of the session participants are able to do:</p> <ul style="list-style-type: none"> <li>• List responsible personal for ensuring vaccine and diluents that are stores at the correct temperatures.</li> </ul>	<p><b>Review and Revising: 5 min</b></p> <ul style="list-style-type: none"> <li>• Ask the participants what we discussed in the previous session and considering their responses.</li> <li>• Inform the participants about the importance of active participation during this session.</li> </ul> <p><b>Procedures for correct storage temperatures for vaccines and diluents at fixed locations: 25 min</b></p> <ul style="list-style-type: none"> <li>• Ask few participants what are the procedures for correct storage temperatures for vaccines and diluents at fixed locations. Note the important points on newsprint. In agreement with the answers, <b>display slide no VI 1</b> that shows the temperature recommendation for vaccine storage by WHO and explain it.</li> <li>• After that, <b>display slide no VI 2</b>, and do explanation for the precaution of vaccine storage as needed.</li> </ul> <p><b>Last Session: 3 min</b></p> <ul style="list-style-type: none"> <li>• Ask few questions from the recent session to the participants for evaluation and discuss for more clarity.</li> <li>• Request to read the reference book thoroughly for more information.</li> <li>• Conclude the session encouraging the participants to apply their learning in their working place.</li> </ul>	<ul style="list-style-type: none"> <li>• Marker pen</li> <li>• Newsprint</li> </ul> <p><b>Power point presentation</b></p> <ul style="list-style-type: none"> <li>• VI 1 Store temperature</li> <li>• VI 2 Things to be careful on</li> </ul>	<ul style="list-style-type: none"> <li>• Question answer</li> <li>• Evaluation</li> </ul>

**Instruction for Monitoring Vaccine Storage Temperatures at Fixed Storage Locations**

**Session VII**

Time	Content	Objectives	Learning and teaching activity	Required materials	Evaluation
95 min	Monitoring Vaccine Storage Temperatures	<p><b>Primary Objective:</b></p> <p>By the end of the session the participants are able to operate and interpret the temperature monitoring and carry out the periodic temperatures reviews.</p> <p><b>Enabling Objectives):</b></p> <p>By the end of the session the participants are able to understand:</p> <p>List out the responsible personnel for monitoring vaccine storage and temperature records charts and reports.</p>	<p><b>Beginning session:</b> 5 min</p> <ul style="list-style-type: none"> <li>Review participants' knowledge about the previous session through question and answer.</li> <li>Brief the content, objectives, and learning activity of the session and importance of participation.</li> </ul> <p><b>Define cold chain:</b> 15 min</p> <ul style="list-style-type: none"> <li>Ask the participants about the equipments of cold chain and note the points in the newsprint. Thank them for their valuable points. <b>Display slide VII 1, and explain it.</b></li> <li>Interact with participants about the equipments required for monitoring vaccine. Listen their answers, accepting their views <b>display slide VII 2 and make them read.</b> Further show the clips of Fridge Tag a, ask the participants questions related to the clips. Responding positively, give additional explanation and clarify it.</li> </ul> <p><b>Where to place temperatures monitoring devices:</b> 15 min</p> <p>Ask the participants where to place temperatures monitoring devices. Note the points in the newsprint. Thank the participants for their valuable points and display <b>slide VII 3 and explain it.</b></p> <p>After discussion ask the participants about the responsible personnel for these tasks. Acknowledge the answers, <b>request the participants to look at page no 69 of session VII from Participants handbook. Further read aloud "by whom" loudly by one of the participants and explain as needed.</b></p>	<ul style="list-style-type: none"> <li>Marker pen</li> <li>News print</li> <li>Daily entry forms of WIC and WIF</li> <li>Temperature charts for electronic recording devices</li> </ul> <p><b>Power point presentation</b></p> <ul style="list-style-type: none"> <li>VI 1 Equipments of cold chain</li> <li>VI 2 Reference equipments and its least requirements</li> <li>VI 3 Where to store temperature monitoring equipments?</li> <li>VI 4 Read the dial and stem thermometer</li> <li>VI 5 How to read the details of each day's recording?</li> <li>VI 6 Monthly temperature</li> </ul>	<p>Question/answer</p> <p>Demonstration</p> <p>Group work evaluation</p>

Time	Content	Objectives	Learning and teaching activity	Required materials	Evaluation
				reporting <u>Video Clips</u> <ul style="list-style-type: none"> <li>• Fridge Tag-A</li> <li>• Fridge Tag Set -B</li> <li>• Fridge Tag Temp Violation-C</li> <li>• Fridge Tag how to read each days recording-D</li> </ul>	
			<p><b>How to read dial and stem thermometer:</b> 10 min</p> <ul style="list-style-type: none"> <li>• Put your views that the participants know how to read the dial and stem thermometer, and listen to their views and note the points in the newsprint. <b>Display slide VII 4 and explain</b> clearly that when you read the temperature on a dial or stem thermometer you must look at the device with your eyes at right angles to the instrument. If you read the instrument at an acute angle, the temperature you observe on the scale will be incorrect by as much as <math>\pm 1^{\circ}\text{C}</math>. Practice with few participants and <b>display the clips Fridge Tag Set -b</b> that show 30 days temperature log procedures. Ask the participants questions related to the clips. Agreeing with their views describe as needed.</li> <li>• After discussion ask participants about the responsible personnel to perform such activity. Accept their points, <b>request to read the participant</b></li> </ul>		

Time	Content	Objectives	Learning and teaching activity	Required materials	Evaluation
			<p><b>handbook session VII page no 70. Request one of the participants to read loudly "by whom" and illustrate as required.</b></p> <p><b>How to maintain the temperature record charts/reports:15 min</b></p> <ul style="list-style-type: none"> <li>• As the participants know how to maintain the temperature record charts and reporting earlier, listen to their views and note them in newsprint. <b>Display prepared slide VII 5</b> that shows the procedures of maintaining temperature record charts and clear the content. Follow the steps mentioned below for the participants to experience and understand perfectly.</li> <li>• Request one of the participants to come in front of the class room.</li> <li>• Request other participants to turn <b>Participant hand book, Session VII page 70.</b></li> <li>• Request to present in front of the class room, <b>Annex 1 "temperature chart for electronic recording devices"</b> and <b>"monthly temperature review report"</b> After recording, thank the participants for their efforts and request them to return to their own place.</li> </ul> <p><b>What to do if temperatures are out of range?: 15 min</b></p> <ul style="list-style-type: none"> <li>• Ask the participants what to do if temperature are out of range? Note the points in the newsprint. Thank the participants for their valuable points. Now <b>display the video "Temperature Violation –c",</b></li> </ul>		

Time	Content	Objectives	Learning and teaching activity	Required materials	Evaluation
			<p>interact with the participant related to the clips. Agree with their views and explain as needed.</p> <ul style="list-style-type: none"> <li>• Request to go through page no <b>70 of session VII</b> from participant's handbook and read aloud all the points one by one from the participants and describe as needed.</li> </ul> <p><b>Monitoring temperature:</b> 15 min</p> <ul style="list-style-type: none"> <li>• Ask the participants when and how they monitor temperature? The points need to be noted in newsprint. Agree to the points and <b>display the video clips of " Fridge tag how to read each days recording- d"</b>. Interact with the participants about the video, respond positively and explain as needed.</li> <li>• <b>Request to look at page no 72-73, session VII</b> from participant hand book and further request to read loudly all the points one by one from the participants.</li> </ul> <p><b>Last session:</b> 5 min</p> <ul style="list-style-type: none"> <li>• Interact with the participants about the recent session.</li> <li>• Encourage the participants to utilize their learning in workplace. Inform about the upcoming sessions and end this session.</li> </ul>		

**Checking the accuracy of temperature monitoring devices**

# **Session VIII**

Time	Content	Objectives	Learning and teaching activity	Required materials	Evaluation
35 min	<b>Checking the accuracy of temperature monitoring devices</b>	<p><b>Primary Objective:</b> By the end of the session the participants are able to describe on accuracy checking of temperature monitoring devices, describes how to carry out an accuracy check and what action to take if the device is found to be inaccurate.</p> <p><b>Enabling Objectives:</b> By the end of the session the participants become capable on: how to check accuracy of temperature monitoring devices, and procedures.</p>	<p><b>Review and Revise:</b> 5 min</p> <ul style="list-style-type: none"> <li>Revise participants' knowledge about the previous session.</li> <li>Inform the participants about the importance of active participation during this session.</li> </ul> <p><b>Procedures for checking the accuracy of temperature monitoring devices:</b> 25 min</p> <ul style="list-style-type: none"> <li>Ask few participants what are the procedures for checking the accuracy of temperature monitoring devices? Jot them in the newsprint. Thank the participants for their points. Request to read the participant handbook, <b>session VIII pages 83-84</b>. Request turn by turn to read all the points loudly by the participants and describe as needed.</li> </ul> <p><b>Demonstration</b></p> <ul style="list-style-type: none"> <li>Thermo stand</li> <li>MULTi Log</li> <li>Thermometer</li> <li>Freeze Tag</li> </ul> <p>Display and describe each equipment thoroughly.</p> <p><b>Present the annex 1 "Generic temperature accuracy chart form" and annex 2 "MULTi Log temperature accuracy chart form" from participant handbook Session VIII , page 4-5 and describe how to fill the form</b></p> <p><b>Last session:</b> 5 min</p> <ul style="list-style-type: none"> <li>Ask few questions from the recent session to confirm that the participants understand clearly about the content.</li> <li>Conclude the session encouraging the participants to apply their learning in their workplace.</li> </ul>	<ul style="list-style-type: none"> <li>Marker pen</li> <li>Newsprint</li> <li>Meta card</li> <li>Thermo stand</li> <li>MULTI Log</li> <li>Thermometer</li> <li>Freeze tag</li> </ul>	<p>Question answer</p> <p>Observation Demonstration</p>

**Storing vaccines and water packs in cold rooms and freezer rooms**

# **Session IX**

Time	Content	Objectives	Learning and teaching activity	Required materials	Evaluation
105 min	Storing vaccines and water packs in cold rooms and freezer rooms	<p><b>Primary Objective:</b> By the end of the session the participants are able describe for storing vaccines and water packs in cold rooms and freezer rooms.</p> <p><b>Enabling Objectives:</b> By the end of the session participants become capable on:</p> <ul style="list-style-type: none"> <li>Listing responsible person for monitoring and procedures for storing vaccine safely.</li> <li>List the responsible person to identify the safe storage areas in cold rooms, store vaccine on shelves and on</li> </ul>	<p><b>Beginning session: 5 min</b></p> <ul style="list-style-type: none"> <li>Revise the previous session and introduce the new session, objectives and importance to the participants.</li> </ul> <p><b>Storing vaccines and water packs in cold rooms and freezer rooms: discuss: 5 min</b></p> <ul style="list-style-type: none"> <li>Ask what can be done for storing vaccines and water packs in cold rooms and freezer rooms to the participants. Responding positively lead the session.</li> </ul> <p><b>General installation instructions for cold rooms: 5 min</b></p> <ul style="list-style-type: none"> <li>Discuss the general installation instructions for safety storage areas of cold rooms with reference with <b>slide IX 1 and explain it</b>. And further illustrate on checking temperature, electronic 30 days refrigerated data logger and other equipments.</li> </ul> <p><b>Checking safe storage of cold rooms areas :15 min</b></p> <ul style="list-style-type: none"> <li>Ask the participants about the safe storage of cold rooms areas, note the answers in newsprint. Acknowledge the participants for their views, <b>display slide IX 2 and request to read loudly by</b> all the participants turn by turn and explain as needed.</li> </ul> <p><b>Inspect the lower level of cold rooms for storage:</b></p> <ul style="list-style-type: none"> <li>Ask the participants about the Inspecting the lower level of cold rooms for storage, note the answers in newsprint. Acknowledge the participants for their views, <b>display slide IX 3 and request to read loudly by</b> all the participants turn by turn and explain as needed by</li> </ul>	<ul style="list-style-type: none"> <li>Marker pen</li> <li>Newsprint</li> <li>Meta card</li> <li>MULTi Log</li> <li>30 days freeze tag</li> <li>Digital thermometer</li> <li>Plastic Pallet</li> <li>Tapes</li> <li>Temperature ...</li> </ul> <p><b>Power point presentation</b> IX 1 General procedures IX 2 Inspect the cold room racks for storage IX 3 Inspect the lower level of cold rooms for storage IX 4 How to record in census data IX 5 How to mark storing vaccine in pallets? IX 6 Storing vaccine in racks IX 7 Storing vaccine in pallets IX 8 Freezing ice packs and water packs.</p>	<p>Question answer Group work Group presentation Demonstration</p>

Time	Content	Objectives	Learning and teaching activity	Required materials	Evaluation
		<p>pallets.</p> <ul style="list-style-type: none"> <li>• List the responsible person to mark the pallets placed in cold rooms and freezers.</li> <li>• List the responsible person for storing vaccines in the rack with correct procedures.</li> <li>• List the responsible person how to do storing vaccine in the pallets.</li> <li>• List the responsible person the procedures for freezing ice packs/ water packs.</li> <li>• Store vaccine in WIC (at +2°C to +8°C) in cold rooms or vaccine</li> </ul>	<p>displaying the items. <b>Display slide IX 4 and explain</b> how to record in census data according to the Session IX- Annex- 1</p> <p><b>Marking for the storing vaccine in pallets:</b> 10 min</p> <p><b>Display slide IX 5</b> marking for the storing vaccine in pallets and request to read loudly by all the participants turn by turn and explain as needed</p> <p><b>Storing vaccine in racks :</b> 10 min</p> <ul style="list-style-type: none"> <li>• Ask the participants how to store vaccine in racks? Note the answers in newsprint. Acknowledge the participants for their views, <b>display slide IX 6 and explain as needed.</b></li> </ul> <p><b>Storing vaccine in pallets :</b>10 min</p> <ul style="list-style-type: none"> <li>• Ask the participants how to store vaccine in pallets? Note the answers in newsprint. Acknowledge the participants for their views, <b>display slide IX 7 and explain as needed.</b></li> </ul> <p><b>Storing and freezing water packs / ice packs :</b>10 min</p> <ul style="list-style-type: none"> <li>• Inquire the participants how to store and freeze water packs/ ice packs? Note the answers in newsprint. Thank the participants for their views, <b>display slide IX 8 and explain as needed.</b></li> </ul> <p><b>Storing vaccine in WIC (at +2°C to +8°C) :</b> 10 min</p> <ul style="list-style-type: none"> <li>• Question few participants how to store vaccine in WIC (at +2°C to +8°C)? Note the answers in the newsprint. Praise the participants for their points and <b>display the slide no IX 9 and describe as needed.</b></li> </ul>	<p>IX 9 Storing vaccine in WIC (+2 to 8°)</p> <p>IX 10 Storing vaccine in WIF (-15° to -25°C)</p>	

Time	Content	Objectives	Learning and teaching activity	Required materials	Evaluation
		refrigerators and its procedures. <ul style="list-style-type: none"> <li>• Store vaccine in WIF (at -15°C to -25°C) in freezer rooms or vaccine freezers and its procedures.</li> </ul>	<p><b>Storing vaccine in WIF (at -15°C to -25°C) :10 min</b></p> <ul style="list-style-type: none"> <li>• Question few participants how to store vaccine in WIF (at +2°C to +8°C)? Note the answers in the newsprint. Thank the participants for their points and <b>display the slide no IX 10 and describe as needed.</b></li> <li>• After the discussion, ask the participants who are responsible persons for carrying these activities? Respond positively to their points and <b>request to go through the participant handbook session IX page no 88-91. Further request one of the participants to read "by whom" and explain accordingly.</b></li> </ul> <p><b>Demonstration</b></p> <ul style="list-style-type: none"> <li>• 30 days freeze tag</li> <li>• Digital thermo meter</li> <li>• MULTi LOG</li> <li>• Temperature data recording sets</li> <li>• Plastic pallets</li> <li>• Duct Tape</li> </ul> <p>Give explanation to the above things with demonstration.</p> <ul style="list-style-type: none"> <li>• Raise question to the participants about the responsible personnel for conducting the duties with reference from the participants handbook and illustrate as required.</li> </ul> <p><b>Last session: Summary and motivation :5 min</b></p> <ul style="list-style-type: none"> <li>• To assess whether the participants understand the recent session or not ask few questions related to the content and discuss among the participants clearing all the doubts.</li> <li>• Encourage to utilize their skills and knowledge in their working areas and introduce the new session.</li> </ul>		

**Safe working in cold rooms and freezer rooms**

# **Session X**

Time	Content	Objectives	Learning and teaching activity	Required materials	Evaluation
85 min	Safe working in cold rooms and freezer rooms	<p>Primary Objective: By the end of the session, the participants are able to understand the correct storage procedures for vaccines in freezer and cold rooms.</p> <p>Enabling Objectives: By the end of the session participants become capable on: Daily, weekly, monthly and annual tasks Basic safety policies and procedures Individual safety approaches and procedures</p>	<p><b>Beginning of the sessions: 5 min</b></p> <ul style="list-style-type: none"> <li>Relate to the previous session, inquire about the experience of the present session, and highlight the objectives, importance and active participation of the participants in the present sessions.</li> </ul> <p><b>Safety measures for working in cold rooms and freezer rooms: 5 min</b></p> <ul style="list-style-type: none"> <li>Ask few participants about the activity to be done while working in cold rooms and freezer rooms? Respond positively and <b>show slide no X 1 and explain as needed.</b></li> </ul> <p><b>General safety rules: 10 min</b></p> <ul style="list-style-type: none"> <li>Raise the question to the participants about the general safety rules while working in freezer and cold rooms. React positively and <b>display the slide X2 on general safety rules to the participants.</b> Give description about it and discuss as required.</li> </ul> <p><b>Individual safety: 10 min</b></p> <ul style="list-style-type: none"> <li>Ask few participants what are the individual safety measures while working in cold rooms and freezer rooms? Respond positively and <b>display the slide X3 and explain as needed.</b></li> <li>Inform all the participants that we are now going to do group exercise.</li> </ul> <p><b>For role play act group division and direction: 10 min</b> Steps to follow in the exercise:</p> <ul style="list-style-type: none"> <li>Inform all the participants about the time limit that is 20 minutes each</li> <li>Divide the participants into two groups. Trainers ask the</li> </ul>	<ul style="list-style-type: none"> <li>Marker pen</li> <li>Newsprint</li> <li>Meta card</li> <li>Thermal trousers</li> <li>Gloves</li> <li>Mask</li> <li>Thermal trousers with caps</li> </ul> <p>Power point presentation X 1 Safe working in cold room and freezer rooms. X 2 General safety policies. X 3 Personal security</p>	<ul style="list-style-type: none"> <li>Question answer</li> <li>Demonstration</li> <li>Group work</li> <li>Observation</li> </ul>

Time	Content	Objectives	Learning and teaching activity	Required materials	Evaluation
			<p>participants to speak ½, ½ and request to be in first group with the participants telling no 1 and the rest to other group.</p> <ul style="list-style-type: none"> <li>• The activity of the first group should be observed by the second group.</li> <li>• Participants are not allowed to speak or tell anything in between the exercise.</li> <li>• The observer team must carefully note the good and improvements points of the next group.</li> </ul> <p><b>Exercise: Individual, Group presentation, Discussion : 40 min</b></p> <ul style="list-style-type: none"> <li>• Inform the participants about starting the exercise with the first group.</li> <li>• Trainers should actively involve with the participants and observe the role of the both groups.</li> <li>• After finishing the exercise of the first group, discuss the points noted by the second group. Note in the newsprint, the improvements to be done by the trainers.</li> </ul> <p>Now, the second team will do the exercise.....</p> <p><b>Last session: 5 min</b></p> <ul style="list-style-type: none"> <li>• To give more clarification, request to <b>look at the participants hand book session X, page 94-95</b> and ask few questions related to the content and discuss among the participants clearing all the doubts.</li> <li>• Encourage to utilize their skills and knowledge in their working areas and introduce the new session.</li> </ul>		

## **Looking after Store Building**

# **Session XI**

Time	Content	Objectives	Learning and teaching activity	Required materials	Evaluation
45 min	Looking after store building	<p><b>Primary Objective:</b></p> <p>By the end of the session the participants are able to conduct daily, weekly, monthly and yearly tasks and procedures for emergencies maintenance to look after the store building</p> <p><b>Enabling Objectives:</b></p> <p>By the end of the session the participants are able to explain:</p> <ul style="list-style-type: none"> <li>• Daily, weekly, monthly and yearly tasks.</li> <li>• Procedures for emergencies maintenance.</li> </ul>	<p><b>Beginning of the sessions:</b> 5 min</p> <ul style="list-style-type: none"> <li>• Review the previous session. Define the new content , understand their experiences, objectives and importance of the session.</li> </ul> <p><b>Daily tasks:</b> 5 min</p> <ul style="list-style-type: none"> <li>• Ask few participants the daily tasks in their workplace. Agreeing to them, <b>display the slide XI 1, request to read loudly and give explanation as required.</b></li> </ul> <p><b>Weekly tasks:</b> 5 min</p> <ul style="list-style-type: none"> <li>• Interact with the participants about the monthly tasks and act positively. <b>Show the slide XI 2 and choose one of the participant to read loudly" by whom "and describe as needed.</b></li> </ul> <p><b>Monthly Tasks:</b> 5 min</p> <ul style="list-style-type: none"> <li>• Ask the participants the monthly tasks of the responsible personnel. Accept their views and <b>display slide XI 3 and explain the monthly tasks.</b> Choose one participant to read loudly "by whom" and describe it.</li> </ul> <p><b>Annual Tasks:</b> 15 Min</p> <ul style="list-style-type: none"> <li>• Ask the participants about the annual tasks of the responsible personnel. Accept their views <b>and display slide XI 4 and explain the tasks.</b> Choose one participant to read loudly "by whom" and describe as required.</li> </ul> <p><b>Emergency maintenance:</b> 5 min</p> <ul style="list-style-type: none"> <li>• Ask the participants about the emergency maintenance procedures. Listen their views positively and <b>display slide XI 5 and explain prompt action to be taken.</b> Choose one</li> </ul>	<ul style="list-style-type: none"> <li>• Marker pen</li> <li>• Newsprint</li> <li>• Meta card</li> <li>• Cleaning materials</li> <li>• Ladder</li> <li>• Equipments of easy accessibility</li> </ul> <p><b>Power point presentation</b></p> <p>XI 1 Daily duties  XI 2 Weekly duties  XI 3 Monthly duties  XI 4 Yearly duties  XI5 Emergency maintenance  XI 6 Observation of fire extinguish techniques</p>	<ul style="list-style-type: none"> <li>• Question Answer</li> <li>• Observation</li> </ul>

Time	Content	Objectives	Learning and teaching activity	Required materials	Evaluation
			<p>participant to read loudly "by whom" and describe it.</p> <p><b>Fire extinguish techniques:</b> 15 min</p> <ul style="list-style-type: none"> <li>• Inquire to the participants about the fire extinguish techniques, react positively and <b>display slide XI 6</b>. Request to read loudly "by whom" and explain as needed.</li> </ul> <p><b>Last session:</b> 5 min</p> <ul style="list-style-type: none"> <li>• Give the explanation of the tasks by responsible personnel for conducting these activity based on participant handbook.</li> <li>• Raise few questions to the participants to assess their knowledge regarding this session. Clear the confusion by interactive approach among the participants.</li> <li>• Motivate to apply these knowledge in their workplace and end this session.</li> </ul>		

**Looking after cold rooms and freezer rooms**

# **Session XII**

Time	Content	Objectives	Learning and teaching activity	Required materials	Evaluation
45 min	<b>Looking after cold rooms and freezer rooms</b>	<p><b>Primary Objective:</b> By the end of the session, the participants understand how to operate the refrigeration, temperature monitoring and alarm equipment, know when routine maintenance is required, and know how to recognize common fault. Runtime and emergency maintenance of the cold rooms and freezer rooms.</p> <p><b>Enabling Objectives:</b> By the end of the session, the participants are capable of doing:</p> <ul style="list-style-type: none"> <li>List out the responsible personnel for the routine maintenance (daily, weekly, monthly, yearly) of the freezer and cold rooms.</li> <li>Procedures for emergency maintenance of freezer and cold rooms.</li> </ul>	<p><b>Beginning of the session:</b> 5 min</p> <ul style="list-style-type: none"> <li>Review the previous session and relate with new session. Listen to the experience of the participants about the recent session; define the new session, its objectives, importance and active participation in the session.</li> </ul> <p><b>Daily tasks:</b> 5 min</p> <ul style="list-style-type: none"> <li>Ask few participants about their daily tasks. Responding positively, <b>display slide XII 1 and request to read it</b> by one of the participant and describe accordingly. Inform about the check list from the <b>participant hand book page 101, session XII</b> and continue the session.</li> </ul> <p><b>Weekly tasks:</b> 5 min</p> <ul style="list-style-type: none"> <li>Ask few participants about their weekly tasks. Agree with them positively, <b>display slide XII 2</b> and request to read it by one of the participant loudly "by whom "and interpret it.</li> </ul> <p><b>Monthly tasks:</b> 15 min</p> <ul style="list-style-type: none"> <li>Raise the questions to the participants about their monthly tasks. Responding positively, <b>display slide XII 3</b> and request to read it by one of the participant loudly "by whom "and explain as needed.</li> </ul>	<ul style="list-style-type: none"> <li>Marker pen</li> <li>Newsprint</li> </ul> <p><b>Power point presentation</b> XII 1 Daily duties XII 2 Weekly duties XII 3 Monthly duties XII 4 Yearly duties XII 5 Emergency maintenance</p>	<ul style="list-style-type: none"> <li>Question answer</li> <li>Observation</li> </ul>

Time	Content	Objectives	Learning and teaching activity	Required materials	Evaluation
			<p><b>Annual tasks: 5 min</b></p> <ul style="list-style-type: none"> <li>• Ask the questions to the participants about their annual tasks. Agreed with them positively, <b>display slide XII 4 and request to read it by one of the participants hand book page no 103 loudly "by whom "and explain as required.</b></li> </ul> <p><b>Emergency maintenance: 5 min</b></p> <ul style="list-style-type: none"> <li>• Raise the questions to the participants about emergency maintenance activity. Accept their views, <b>display slide XII 5 and request to read it by one of the participant participants hand book page no 103 loudly "by whom" and explain as needed.</b></li> </ul> <p><b>Last session:5 min</b></p> <ul style="list-style-type: none"> <li>• After discussion, explain the tasks of responsible personnel for performing their duties based on participant's handbook.</li> <li>• Ask few questions to the participants to assess their knowledge regarding this session. Clear the confusion by interactive approach among the participants.</li> <li>• Highly encourage applying these knowledge in their workplace, ending this session.</li> </ul>		

## **Instruction on Looking after Standby Generators**

# **Session XIII**

Time	Content	Objective	Learning and teaching activity	Required materials	Evaluation
100 min	Looking after stand by generators	<p><b>Primary Objective:</b> By the end of the session the participants understand how to operate the refrigeration, temperature monitoring and alarm equipment, know when routine maintenance is required, and know how to recognize common fault, when to do routine and emergency maintenance of the cold rooms and freezer rooms.</p> <p><b>Enabling objectives:</b> By the end of the session, the participants are able to conduct:</p> <ul style="list-style-type: none"> <li>List out the responsible personnel to look after the cold rooms and freezer rooms daily, weekly, monthly and yearly.</li> <li>Procedures for emergencies maintenance.</li> </ul>	<p><b>Beginning of the session: 5 min</b></p> <ul style="list-style-type: none"> <li>Activity to begin the session (relate to previous session, listen to the experience from present session, highlight and inform the objectives, importance of this content)</li> </ul> <p><b>Routine maintenance and record keeping: 5 min</b></p> <ul style="list-style-type: none"> <li>Ask few participants about their regular routine maintenance/ record keeping of generators. Listen carefully to the answers given by the participants and acknowledge their answers. <b>Display the slide XIII 1; ask one of the participants to read out loudly. Inform about the annex," Generator run-time form" Session XIII page 112</b> given in participant handbook and continue the session.</li> </ul> <p><b>Weekly testing: 5 min</b></p> <ul style="list-style-type: none"> <li>Ask few participants what are the weekly activity of the participants? React positively, <b>show prepared slide XIII 2 and question "by whom" among</b> one of the participants and describe as needed.</li> </ul> <p><b>Weekly/monthly engine inspection: 5 min</b></p> <ul style="list-style-type: none"> <li>Inquiry what are the weekly and monthly activity for engine inspection? Agreeing with them, <b>display the slide XIII 3 that clarify to do inspection of the engine weekly/ monthly.</b> Request to read aloud "by whom" and give explanation as required.</li> </ul>	<ul style="list-style-type: none"> <li>Marker pen</li> <li>Newsprint</li> <li>Equipments</li> <li>Spare parts</li> <li>Voltage stabilizer</li> <li>Filterer Mobil</li> <li>Diesel filterer</li> <li>Wind</li> <li>Fan belt</li> <li>Air filter</li> <li>Generator run-time form</li> <li>Generic guidelines</li> <li>Troubleshooting checklists</li> <li>Possible defect caused by diesel and its precaution.</li> </ul> <p><b>PowerPoint presentation</b></p> <p>XIII 1 Record Keeping XIII 2 Weekly testing XIII 3 Weekly engine inspection III 4 Alternate inspection XIII 5 Monthly generator room cleaning XIII 6 After every 125</p>	Question answer

Time	Content	Objective	Learning and teaching activity	Required materials	Evaluation
			<p><b>Alternator inspection: 5 min</b></p> <ul style="list-style-type: none"> <li>Ask what are alternate activities for engine inspection? Respond positively, <b>display the slide XIII 4</b> that clarify to do engine inspection alternate wise. Request to read aloud "by whom" and give explanation as required.</li> </ul> <p><b>Cleaning generator room monthly: 5 min</b></p> <ul style="list-style-type: none"> <li>Question what are monthly activities for cleaning generator room? Agreeing with them, <b>display the slide XIII 5</b> that clarify to clean generator room monthly. Request to read aloud "by who" from one of the participants and give explanation as required.</li> </ul> <p><b>After every 125 hours running: 5 min</b></p> <ul style="list-style-type: none"> <li>Ask the participants about the tasks to be done after every 125 hours running of generator. Agreeing with them, <b>display the slide XIII 6</b> that clarify how to look after generator after every 125 hours running. Request to read aloud "by whom" from one of the participants and describe it.</li> </ul> <p><b>After every 250 hours running: 5 min</b></p> <ul style="list-style-type: none"> <li>Raise question to the participants about the tasks to be done after every 250 hours running of generator. Agreeing with them, <b>display the slide XIII 7</b> that clarify how to look after generator after every 250 hours running. Request to read aloud "by whom" from one of the participants and describe it.</li> </ul> <p><b>After every 500 hours running: 5 min</b></p> <ul style="list-style-type: none"> <li>Ask the participants about the tasks to be done after</li> </ul>	<p>hours running XIII 7 After every 250 hours running XIII 8 After every 500 hours running XIII 9 Emergency maintenance XIII 10 Tooubleshooting checklists.</p>	

Time	Content	Objective	Learning and teaching activity	Required materials	Evaluation
			<p>every 500 hours running of generator. Respond positively; <b>display the slides XIII 8</b> that clarify how to look after generator after every 500 hours running. Request to read aloud "by whom" from one of the participants and describe it.</p> <p><b>Every five years starting in 2014: 15 min</b></p> <ul style="list-style-type: none"> <li>• Inform the participants to carry out a full safety inspection of the electrical system in the generator room, repair any defects and re-certify the system for the next five years and continue the next session.</li> </ul> <p><b>Emergency maintenance: 15 min</b></p> <ul style="list-style-type: none"> <li>• Raise question to the participants about the tasks to be in emergency maintenance of generator. Praise their answers; <b>display the slides XIII 9 that clarify how to look after generator in emergency</b>. Request to read aloud "by whom" from one of the participants and describe it.</li> </ul> <p><b>Troubleshooting: 25 min</b></p> <ul style="list-style-type: none"> <li>• Ask the participants about the tasks to be done in trouble shooting. Acknowledge their points; <b>display the prepared slide XIII 10 that clarify how to look after generator in troubleshooting</b>. Request to read aloud "by whom" from one of the participants and describe it. <b>Ask to open the participant handbook of session XIII, page 117 of annex 2</b> troubleshooting checklists and go thoroughly to understand it. Follow according to the checklists in order to overcome from troubleshooting.</li> </ul>		

Time	Content	Objective	Learning and teaching activity	Required materials	Evaluation
			<p><b>Additional support needed for repairs and maintenance of generator: 5min</b></p> <ul style="list-style-type: none"> <li>• Inform the participants that they might need expertise support and supervision for mechanical inspections, servicing and emergency repairs in and inform to the centre.</li> </ul> <p><b>Last sessions: 5 min</b></p> <ul style="list-style-type: none"> <li>• After discussion, the trainer should inform the participants about the responsible personnel to conduct their duties based from participant handbook and explain as needed.</li> <li>• Ask few questions to the participants regarding the previous session to assess their knowledge. Interact with the participants for clarity.</li> <li>• Motivate the participants to utilize their knowledge and skills in their workplace and end the session.</li> </ul>		

**Looking after Voltage Regulators**

# **Session XIV**

Time	Content	Objectives	Learning and teaching activity	Required materials	Evaluation
30 min	Looking after voltage stabilizers	<p><b>Primary Objective:</b> By the end of the session, the participants become capable to describe how to carry out routine checks on three phase voltage regulators, and to check whether the single phase voltage regulators connected or not</p> <p><b>Enabling Objectives:</b> List the responsible personnel for runtime check up of the voltage regulators to adapt the procedures</p> <ul style="list-style-type: none"> <li>• How to carry out runtime checks on the three phase voltage regulators that are connected to cold rooms and freezer rooms by responsible personnel.</li> <li>• How to check whether the single phase voltage regulators connected to individual vaccine refrigerators and freezers are working.</li> <li>• Prepare Electro guard troubleshooting checklists.</li> </ul>	<p><b>Review and revise:</b> 2 min</p> <ul style="list-style-type: none"> <li>• Review participant's knowledge about the previous session through question and answer.</li> <li>• Explain the content of the session and importance of participation</li> </ul> <p><b>Looking after voltage stabilizers:</b> 25 min</p> <ul style="list-style-type: none"> <li>• Ask few participants about their tasks of looking after voltage stabilizers. <b>Note the points in the newsprint</b>, and acknowledge for their answers. <b>Look at the participant handbook session XIV page 122-123, and request to read</b> the given points turn wise from all the participants with explanation.</li> </ul> <p><b>Demonstration</b></p> <ul style="list-style-type: none"> <li>• Voltage regulator equipments</li> <li>• Manufacturer's operating instructions</li> <li>• Electro guard troubleshooting checklists</li> <li>• <b>Request to read and follow the instruction given in participant handbook session XIV, page 124 annex 1 "electrogard troubleshooting checklist".</b></li> </ul> <p><b>Last session:</b> 3 min</p> <ul style="list-style-type: none"> <li>• After discussion, the facilitator should explain about the responsible personnel for carrying these duties with reference from the participant handbook.</li> <li>• To know whether the participants are clear about the session, ask few questions related to the session, make discussions and give clarity.</li> <li>• Encourage the participants to apply their knowledge and skills in the field and end the session.</li> </ul>	<ul style="list-style-type: none"> <li>• Marker pen</li> <li>• Newsprint</li> <li>• Equipments or spare parts</li> <li>• Voltage stabilizers and maintenance guide</li> <li>• Electro guard troubleshooting checklist</li> </ul> <p><b>No power point presentation</b></p>	<ul style="list-style-type: none"> <li>• Question answer</li> <li>• Observation</li> </ul>

## **Managing diluents in the Supply Chain**

# **Session XV**

Time	Content	Objectives	Learning and teaching activity	Required materials	Evaluation
40 min	<b>Managing diluents in the supply chain</b>	<p><b>Primary Objective:</b> By the end of the session the participants are able to understand how to manage the vaccines and other diluents together at health facility, the procedures to pack and transport diluents correctly.</p> <p><b>Enabling Objectives:</b> By the end of the session the participants understand  Procedure for recording vaccine diluents arrival and dispatch records. Pack and transport diluents correctly at primarily, sub national levels and health</p>	<p><b>Beginning session: 5 min</b></p> <ul style="list-style-type: none"> <li>Activity to begin the session (relate to previous session, listen to the experience from present session, highlight and inform the objectives, importance of this content)</li> </ul> <p><b>Record diluents arrivals in the stock records: 5 min</b></p> <ul style="list-style-type: none"> <li>Ask few participants what they do about the recording diluents arrivals in the stock records? Agree with them, note the points in the newsprint, acknowledge for their effort. <b>Display the prepared slide XV1</b> and request them to read loudly in turn, explain as needed.</li> </ul> <p><b>Record outgoing diluents in the dispatch records: 5 min</b></p> <ul style="list-style-type: none"> <li>Ask few participants what they do about the recording outgoing diluents in the dispatch records? Note the points in the newsprint, thank them for their points. <b>Display the prepared slide XV2 and explain</b> as required.</li> </ul> <p><b>Issue diluents correctly: 5 min</b></p> <ul style="list-style-type: none"> <li>Ask few participants what they do to issue diluents correctly? Agree with them, note the points in the newsprint, acknowledge for their effort. <b>Display the prepared slide XV3 and illustrate as needed.</b></li> </ul> <p><b>Pack and transport diluents correctly: 5 min</b></p> <ul style="list-style-type: none"> <li>Question few participants how do they pack and transport diluents correctly? Note in the newsprint, thank them for their participation. <b>Display the prepared slide XV 4 and request them to read loudly in turn</b>, explain as needed.</li> </ul>	<ul style="list-style-type: none"> <li>Marker pen</li> <li>Newsprint</li> <li>Packing materials</li> <li>Entry form</li> <li>Issued form</li> <li>Logistic, received and distribution form</li> </ul> <p><b>Power point presentation</b> XV 1 Record diluents arrivals in the stock records XV 2 Record outgoing diluents in the dispatch records XV 3 Issue diluents correctly XV 4 Store diluents correctly at primary and sub-national levels XV 5 Store diluents correctly at health facility level</p>	Question answer

Time	Content	Objectives	Learning and teaching activity	Required materials	Evaluation
			<p><b>Store diluents correctly at primary and sub national levels: 5 min</b></p> <ul style="list-style-type: none"> <li>Ask few participants how they store diluents correctly at primary and sub national levels? Note the points in the newsprint, acknowledge for their effort. <b>Display the prepared slide XV 5 and request them to read loudly in turn</b>, explain as needed.</li> </ul> <p><b>NOTE:</b> This session is for central and district level only.</p> <p><b>Store diluents correctly at health facility level: 5 min</b></p> <ul style="list-style-type: none"> <li>Ask few participants how they store diluents correctly at health facility level? Note the points in the news print, thank them for their valuable points. Display the prepared <b>slide XV6</b> and request them to read loudly in turn, explain as needed.</li> </ul> <p><b>Last session: 5 min</b></p> <ul style="list-style-type: none"> <li>After discussion, the facilitator should explain about the responsible personnel for carrying these duties with reference from the <b>participant handbook</b>.</li> <li>To assess whether the participants are clear about the session, ask few questions related to the session, make discussions and give clarity.</li> <li>Motivate the participants to apply their knowledge and skills in the field and end the session.</li> </ul>		

## **Conducting Physical Count**

# **Session XVI**

Time	Content	Objectives	Learning and teaching activity	Required materials	Evaluation
60 min	Physical count	<p><b>Primary Objective:</b> By the end of the session the participants Will know how to carry out a systematic physical conduct stock, reconcile any errors found in the stock and procedures for plan, count and conduct the physical stock count.</p> <p><b>Enabling Objectives:</b> By the end of the session participants become capable:</p> <ul style="list-style-type: none"> <li>• Procedure for systematic physical stock count.</li> <li>• Regular physical check procedures for plan prepare and conduct the count.</li> </ul>	<p><b>Beginning session:</b> 5 min</p> <ul style="list-style-type: none"> <li>• Activity to begin the session (relate to previous session, listen to the experience from present session, highlight and inform the objectives, importance of this content)</li> </ul> <p><b>Procedure for physical count:</b> 5 min</p> <ul style="list-style-type: none"> <li>• Ask few participants what can be the procedures of conducting physical count? Note the points in the newsprint, acknowledge for their effort. <b>Display the prepared slide XVI 1 and request them to read loudly in turn,</b> explain as needed.</li> </ul> <p><b>Plan the count:</b> 5 min</p> <ul style="list-style-type: none"> <li>• Question few participants about the tasks to be done to plan the count? Note the points in the newsprint, praise for their effort. <b>Display the prepared slide XVI 2</b> and explain as needed.</li> </ul> <p><b>Prepare for the count:</b> 5 min</p> <ul style="list-style-type: none"> <li>• Ask few participants how they prepare for the count? Note the points in the newsprint, accept for their effort positively. <b>Display the prepared slide XV3</b> and request them to read loudly in turn, explain as needed.</li> </ul> <p><b>Conduct the count:</b> 5 min</p> <ul style="list-style-type: none"> <li>• Inquire few participants their activity to conduct for the count: before preparatory, first and second? Note the points</li> </ul>	<ul style="list-style-type: none"> <li>• Marker pen</li> <li>• Newsprint</li> <li>• Stock control registration</li> <li>• Digital/ electronic calculator</li> <li>• Products recording</li> <li>• Requisition form</li> <li>• Loss and adjustment form</li> <li>• Batch card</li> <li>• Monitoring products form</li> </ul> <p><b>Power point presentation</b></p> <ul style="list-style-type: none"> <li>• XVI 1 Procedure</li> <li>• XVI 2 Plan the count</li> <li>• XVI 3 Prepare for the count</li> <li>• XVI 4 Conduct the count</li> <li>• XVI 5 First count</li> <li>• XVI 6 Second count</li> <li>• XVI 7 Reconciliation</li> </ul>	Question answer

Time	Content	Objectives	Learning and teaching activity	Required materials	Evaluation
			<p>in the newsprint, acknowledge for their effort. <b>Display the prepared slide XVI 4</b> and request them to read loudly in turn, describe as required.</p> <p><b>First count:</b> 5 min</p> <ul style="list-style-type: none"> <li>Ask few participants what are the activity to conduct in first count? Note the points in the newsprint, thank for their effort. <b>Display the prepared slide XVI 5</b> and request them to read loudly in turn, illustrate as needed.</li> </ul> <p><b>Second count:</b> 5min</p> <ul style="list-style-type: none"> <li>Ask few participants what are the tasks to conduct for the second count. Note the points in the newsprint, acknowledge for their effort. <b>Display the prepared slide XVI 6</b> and request them to read loudly turn by turn, explain as needed.</li> </ul> <p><b>Reconciliation:</b> 5 min</p> <ul style="list-style-type: none"> <li>Inquire few participants what are the activity for reconciliation? Note the points in the newsprint, react positively for their effort. <b>Display the prepared slide XVI 7</b> and request them to read loudly in turn, explain as needed.</li> </ul> <p><b>Ancillary supplies count:</b> 5 min</p> <ul style="list-style-type: none"> <li>Ask few participants what are the tasks related to ancillary supplies? Respond positively and inform the participants to follow the procedures according to mentioned process. Identifying the incoming products is necessary. These includes syringe and onetime used electronic monitoring</li> </ul>		

Time	Content	Objectives	Learning and teaching activity	Required materials	Evaluation
			<p>evaluation equipments such as freeze tag, data logger and further explain as required.</p> <p><b>Last session: 5 min</b></p> <ul style="list-style-type: none"> <li>• After discussion, the facilitator should explain about the responsible personnel for carrying these duties with reference from the participant handbook.</li> <li>• To assess whether the participants are clear about the session, ask few questions related to the session, make discussions and give clarity.</li> <li>• Motivate the participants to apply their knowledge and skills in the field and end the session.</li> </ul>		

**Safe disposal of expired or damaged vaccine and diluents**

# **Session XVII**

Time	Content	Objectives	Learning and Teaching activity	Required materials	Evaluation
60 min	Safe disposal of expired or damaged vaccine and diluents	<p><b>Primary Objective:</b> By the end of the session the participants are able to identify the affected vaccine and any associated diluents and isolated from other vaccines and diluents. Correct procedures to be followed to account for the loss of the vaccines and to make sure that they are disposed of safely.</p>	<p><b>Beginning of session:</b> 5 min</p> <ul style="list-style-type: none"> <li>Start with the activity that need to be done in beginning session (relate with the previous session, listen inquiry the experience from the present session, highlight about the introducing session with its objectives, importance, participant's participation)</li> </ul> <p><b>Managing expired vaccines and diluents:</b>5 min</p> <ul style="list-style-type: none"> <li>Ask few participants what are the procedures for managing expired vaccines and diluents? Acknowledge for their effort; note the points in the newsprint. <b>Display the prepared slide XVIII1</b> and request them to read loudly turn by turn, explain as needed.</li> </ul> <p><b>Central Vaccine Centre (Teku):</b> 5 min</p> <ul style="list-style-type: none"> <li>Enquire few participants what are the procedures for managing expired vaccines and diluents by Central Vaccine Centre? Note the points in the newsprint, thanks for their active participation. <b>Display the prepared slide XVII 2</b> and describe it.</li> </ul> <p><b>Managing damaged vaccines and diluents (physical damage):</b>5 min</p> <ul style="list-style-type: none"> <li>Ask few participants what are the procedures for physical damage of the vaccines and diluents? Note the points in the newsprint, acknowledge for their effort. <b>Display the prepared slide XVII 3</b> and request them to read loudly turn by turn, explain as needed.</li> </ul>	<ul style="list-style-type: none"> <li>Marker pen</li> <li>Newsprint</li> <li>Stock control register</li> <li>Batch Card</li> <li>Report of product disposal</li> <li>Form of product monitoring</li> <li>Loss and adjustment form (WHO form)</li> <li>Gloves and Antibiotics disaffected if ampoule is broken.</li> </ul> <p><b>Power point presentation</b></p> <ul style="list-style-type: none"> <li>XVII 1 Expired vaccine and diluents</li> <li>XVII 2 Activity by Central Vaccine Centre</li> <li>for expired vaccine and diluents</li> <li>XVII 3 Managing damaged vaccines and diluents physical damage</li> <li>XVII 4 Heat exposure (VVM color change)</li> <li>XVII 5 Exposure to freezing</li> <li>XVII 6 Frozen Shake Test control samples</li> <li>XVII 7 Final disposal procedures</li> </ul>	<ul style="list-style-type: none"> <li>Question answer</li> </ul>

Time	Content	Objectives	Learning and Teaching activity	Required materials	Evaluation
		<p><b>Enabling Objectives:</b></p> <p>By the end of the session the participants are to understand:</p> <ul style="list-style-type: none"> <li>How to eliminate the expired or damaged vaccines and diluents with final disposal procedures.</li> </ul>	<p><b>Heat exposure (VVM colour change): 15 min</b></p> <ul style="list-style-type: none"> <li>Question the participants about the procedures to deal with for heat exposure, VVM colour change .Note the points in the newsprint. Acknowledge for their effort. <b>Display the prepared slide XVII 4</b> of Heat exposure, VVM colour change and request them to read loudly in their turn and explain as needed.</li> </ul> <p><b>Exposure to freezing: 5 min</b></p> <ul style="list-style-type: none"> <li>Ask few participants what are the tasks to be done in freezing condition? Thank the participants for their views and note the points in the newsprint. <b>Display the prepared slide XVII 5</b> that describe how and when to do Frozen Shake Test and request them to read loudly turn by turn and illustrate as needed.</li> </ul> <p><b>Frozen Shake Test control samples: 5 min</b></p> <ul style="list-style-type: none"> <li>Question few participants how they take samples of Frozen Shake test controls? Note their points in the newsprint. Praise for their effort and <b>show the prepared slide XVII 6</b> and request them to read loudly in their turn and explain as required.</li> </ul> <p><b>Final disposal procedures: 5 min</b></p> <ul style="list-style-type: none"> <li>Enquire few participants what are the final disposal procedures for expired or damaged vaccines and diluents? Note the points in the newsprint and acknowledge for their effort. <b>Display the prepared slide XVII 7</b> and request them to read loudly turn by turn, explain as needed with reference of Annex Loss and adjustment report.</li> </ul>		

Time	Content	Objectives	Learning and Teaching activity	Required materials	Evaluation
			<p><b>Last session: (Summary and motivation):10 min</b></p> <ul style="list-style-type: none"> <li>• After discussion, the facilitator should explain about the responsible personnel for carrying these duties with reference from the participant handbook.</li> <li>• To assess whether the participants are clear about the session, ask few questions related to the session, make discussions and give clarity.</li> <li>• Motivate the participants to apply their knowledge and skills in the field and end the session.</li> </ul>		

**Storing vaccine and water/cool packs in refrigerators and freezers**

# **Session XVIII**

Time	Content	Objectives	Learning and teaching activity	Required materials	Evaluation
60 min	Storing vaccine and water/cool packs in refrigerators and freezers	<p><b>Primary Objective:</b> By the end of the session the participants are able to understand how to store vaccine and water/cool packs in refrigerators and freezers.</p> <p><b>Enabling Objectives:</b> By the end of the session participants become capable:</p> <ul style="list-style-type: none"> <li>Clearly identify and access to Earliest Expiry-First-Out (EEFO) order of vaccines procedures.</li> <li>Store freeze-sensitive vaccines in areas where no risk of freezing.</li> </ul>	<p><b>Beginning of the session: 5 min</b></p> <ul style="list-style-type: none"> <li>Start with the activity that need to be done in beginning session (relate with the previous session, listen to the experience from the present session, highlight about the introducing session with its objectives, importance, participant's participation)</li> </ul> <p><b>General procedures:15 min</b></p> <ul style="list-style-type: none"> <li>Ask few participants what are the procedures of storing vaccines and water packs in cold rooms and freezer rooms? Respond positively for their views and note the points in the newsprint. <b>Display the prepared slide XVIII 1</b> and request them to read loudly turn by turn and illustrate as needed.</li> </ul> <p><b>Storing vaccines and ice packs in ice-lined refrigerator: 5 min</b></p> <ul style="list-style-type: none"> <li>Inquiry few participants what are the procedures of storing vaccines and water packs in ice-lined refrigerators? Note the points in the newsprint. Thank them for their views and <b>display the prepared slide XVIII 2</b> and describe it.</li> </ul> <p><b>Storing vaccines and ice packs in top opening refrigerator: 5 min</b></p> <ul style="list-style-type: none"> <li>Question few participants what are the procedures of storing vaccines and water packs in top opening refrigerator. Note the points in the newsprint. Acknowledge them for their views. <b>Display the prepared slide XVIII 3</b> and explain it.</li> </ul>	<ul style="list-style-type: none"> <li>Marker pen</li> <li>Newsprint</li> <li>Thermometer</li> <li>Freeze tag</li> </ul> <p><b>Power point presentation</b></p> <ul style="list-style-type: none"> <li>XVIII 1 General procedures for checking safe storage areas on the refrigerator and freezer</li> <li>XVIII 2 Storing vaccine and ice packs in ice refrigerator</li> <li>XVIII 3 Storing vaccine and ice packs in upmost refrigerators.</li> <li>XVIII 4 Storing vaccine and icepacks in front door refrigerator</li> <li>XVIII 5 Storing vaccine in chest freezer</li> <li>XVIII 6 Freezing and storing ice packs</li> </ul>	Question answer

Time	Content	Objectives	Learning and teaching activity	Required materials	Evaluation
		<ul style="list-style-type: none"> <li>• Procedures to allow cold air to flow freely around the stock.</li> <li>• Separate the vaccine marked for disposal to keep separately from remaining stock.</li> </ul>	<p><b>Storing vaccines and ice packs in front opening refrigerator: 5 min</b></p> <ul style="list-style-type: none"> <li>• Ask few participants what are the procedures of storing vaccines and water packs in front opening refrigerator. Note the points in the newsprint and thank them for their views. <b>Display the prepared slide XVIII 4 and illustrate it.</b></li> </ul> <p><b>Store vaccine in chest freezer: 5 min</b></p> <ul style="list-style-type: none"> <li>• Question few participants what are the procedures of storing vaccines in chest freezer? Note the points in the newsprint. Acknowledge them for their views. <b>Display the prepared slide XVIII 5 and explain it.</b></li> </ul> <p><b>Freezing or cooling icepacks: 5 min</b></p> <ul style="list-style-type: none"> <li>• Question few participants what are the procedures of freezing or cooling icepacks? Note the points in the newsprint. Agreeing with their views, <b>display the prepared slide XVIII 6 and explain it.</b></li> </ul> <p><b>Last session: 5 min</b></p> <ul style="list-style-type: none"> <li>• After discussion, the facilitator should explain about the responsible personnel for carrying these duties with reference from the participant handbook.</li> <li>• To assess whether the participants are clear about the session, ask few questions related to the session, make discussions and give clarity.</li> <li>• Motivate the participants to apply their knowledge and skills in the field and end the session.</li> </ul>		

**Loading and operating refrigerated vehicles**

# **Session: XIX**

Time	Content	Objectives	Learning and teaching activity	Required materials	Evaluation
100 min	Loading and operation refrigerated vehicles	<p><b>Primary Objective:</b> By the end of the session, the participants are able to clarify responsibility for operating and checking the vehicle in roadworthy before and after and for the correct operation of the vehicle during transit.</p> <p><b>Enabling Objectives:</b> By the end of the session participants become capable:</p> <ul style="list-style-type: none"> <li>• Preparatory tasks for the refrigerated compartment and shipping containers.</li> <li>• Procedures to pre cool the refrigerated</li> </ul>	<p><b>Beginning of the session:</b> 5 min</p> <ul style="list-style-type: none"> <li>• Start with the activity that need to be done in beginning session (relate with the previous session, listen about the experience from the present session, highlight about the introducing session with its objectives, importance, participant's participation)</li> </ul> <p><b>Plan the delivery schedule:</b>15 min</p> <ul style="list-style-type: none"> <li>• Ask few participants what are the preparatory tasks for planning the delivery schedule? Respond positively for their views and note the points in the newsprint. <b>Display the prepared slide XIX 1 and request them to read loudly turn by turn and illustrate as needed.</b></li> </ul> <p><b>Prepare the refrigerated compartment and shipping containers:</b> 10 min</p> <ul style="list-style-type: none"> <li>• Question few participants about the refrigerated compartment and shipping containers preparation? Note the points in the newsprint. Acknowledge for their participation, <b>display the prepared slide XIX 2 and explain as required.</b></li> </ul> <p><b>Pre-cool the refrigerated compartment:</b> 5 min</p> <ul style="list-style-type: none"> <li>• Ask few participants what are the preparatory tasks for pre cooling the refrigerated compartment? Note the points in the newsprint and respond positively for their views. <b>Display the prepared slide XIX 3 and describe as needed.</b></li> </ul> <p><b>Packing vaccines and diluents:</b> 10 min</p> <ul style="list-style-type: none"> <li>• Ask few participants what are the preparatory tasks for packing vaccines and diluents? Note the points in the newsprint. Respond positively for their views and <b>display the prepared slide XIX 4 and illustrate as needed.</b></li> </ul>	<ul style="list-style-type: none"> <li>• Marker pen</li> <li>• Newsprint</li> <li>• Packing materials</li> <li>• Transportation log book</li> <li>• Zip locked packet</li> <li>• Container</li> <li>• Attached lid container</li> <li>• Folding container</li> <li>• Stacking/nesting container</li> <li>• Collapsible pallet box</li> <li>• Guidance on loading refrigerated vehicles</li> <li>• Trip record form</li> <li>• Refrigerated vehicle trip record form</li> </ul> <p><b>Power point presentation</b></p> <ul style="list-style-type: none"> <li>• XIX 1 Delivery plan</li> <li>• XIX 2 Prepare the refrigerated compartment</li> <li>• XIX 3 Pre-cool the refrigerated compartment</li> <li>• XIX 4 Packing vaccine and diluents</li> <li>• XIX 5 Loading the vehicle at the supplying store</li> <li>• XIX 6 Operating the vehicle</li> <li>• XIX 7 Unloading the vehicle at the receiving store</li> <li>• XIX 8 Overnight stops</li> <li>• XIX 9 Review temperature records for each trip</li> </ul>	Question answer

Time	Content	Objectives	Learning and teaching activity	Required materials	Evaluation
		<p>compartment.</p> <ul style="list-style-type: none"> <li>• Procedures for packing the vaccines and diluents.</li> <li>• Procedures for loading the vehicle at the supplying store.</li> <li>• How to operate the vehicle.</li> <li>• Unloading the vehicle at the receiving store.</li> <li>• Overnight stops.</li> <li>• Review temperature records for each trip.</li> </ul>	<p><b>Loading the vehicle at the supplying store: 15 min</b></p> <ul style="list-style-type: none"> <li>• Inquiry few participants what are procedure for loading the vehicle at the supplying store? Note the points in the newsprint. Agree positively for their views and <b>display the prepared slide XIX 5</b> and explain according to the annex 1 and 2.</li> </ul> <p><b>Operating the vehicle:5 min</b></p> <ul style="list-style-type: none"> <li>• Question few participants what are the procedure for operating the vehicles? Note the points in the newsprint. Respond positively for their views and <b>display the prepared slide XIX 6 and illustrate as needed.</b></li> </ul> <p><b>Unloading the vehicle at the receiving store: 10 min</b></p> <ul style="list-style-type: none"> <li>• Ask few participants what are the procedure for unloading the vehicle at the receiving store? Note the points in the newsprint. Respond positively for their views and <b>display the prepared slide XIX 7 and explain as needed.</b></li> </ul> <p><b>Overnight stops:10 min</b></p> <ul style="list-style-type: none"> <li>• Ask few participants what are the procedure in overnight stops? Note the points in the newsprint. Respond positively for their views and <b>display the prepared slide XIX 8 and explain as needed.</b></li> </ul> <p><b>Review temperature records for each trip: 5 min</b></p> <ul style="list-style-type: none"> <li>• Enquire few participants how to review temperature records for each trips. Note the points in the newsprint. Acknowledge for their views and <b>display the prepared slide XIX 9 and illustrate as required.</b></li> </ul>		

Time	Content	Objectives	Learning and teaching activity	Required materials	Evaluation
			<p><b>Last session: ( Summary and motivation ): 5 min</b></p> <ul style="list-style-type: none"> <li>• After discussion, the facilitator should explain about the responsible personnel for carrying these duties with reference from the participant handbook.</li> <li>• To assess whether the participants are clear about the session, ask few questions related to the session, make discussions and give clarity.</li> <li>• Motivate the participants to apply their knowledge and skills in the field and end the session.</li> </ul>		

## **Monitoring temperature exposure during vaccine transport**

# **Session XX**

Time	Content	Objectives	Learning and teaching activity	Required materials	Evaluation
60 min	<b>Monitoring temperature exposure during vaccine transport</b>	<p><b>Primary Objective:</b> By the end of the session, the participants are able to describe the procedures to read freeze indicators, pack them with a vaccine shipment and record freeze indicator and VVM status on the Requisition and Issue Voucher form.</p> <p><b>Enabling Objectives:</b> By the end of the session participants become capable:</p> <ul style="list-style-type: none"> <li>• How to read and manage freeze indicators and procedures.</li> <li>• How to place freeze indicators in refrigerated vehicles.</li> <li>• Placing freeze indicators in refrigerated vehicles.</li> <li>• Explanation on arrivals checks and reporting procedures.</li> <li>• Procedures for issue</li> </ul>	<p><b>Beginning of the session: 5 min</b></p> <ul style="list-style-type: none"> <li>• Start with the activity that need to be done in beginning session (relate with the previous session, listen to the experience from the present session, highlight about the introducing session with its objectives, importance, participation's participation)</li> </ul> <p><b>Reading and managing freeze indicators:15min</b></p> <ul style="list-style-type: none"> <li>• Ask few participants what are the procedure for reading and managing freezing indicators? Respond positively for their views and note the points in the newsprint. <b>Display the prepared slide XX 1 and request them to read loudly turn by turn and illustrate as needed.</b></li> </ul> <p><b>Placing freeze indicators in cold boxes:5 min</b></p> <ul style="list-style-type: none"> <li>• Question few participants how do they place freeze indicators in cold boxes? Note the points in the newsprint. Thank the participants for their views and <b>display the prepared slide XX 2 and explain as needed.</b></li> </ul> <p><b>Placing freeze indicators in refrigerated vehicles: 5 min</b></p> <ul style="list-style-type: none"> <li>• Ask few participants how do they place freeze indicators in refrigerated vehicles? Note the points in the newsprint. Thank the participants for their views and <b>display the prepared slide XX 3</b> and describe as required.</li> </ul> <p><b>Monitoring temperatures in refrigerated vehicles:5 min</b></p> <ul style="list-style-type: none"> <li>• Question few participants how do they monitor temperatures in refrigerated vehicles? Note the points in the newsprint and acknowledge the participants for their</li> </ul>	<ul style="list-style-type: none"> <li>• Marker pen</li> <li>• Newsprint</li> <li>• Thermo stand</li> <li>• Vaccine Vial Monitors</li> <li>• Data Logger</li> <li>• ISR form</li> </ul> <p><b>Power point presentation</b></p> <ul style="list-style-type: none"> <li>• XX 1 Reading and managing freeze indicators</li> <li>• XX 2 Placing freeze indicators in cold boxes</li> <li>• XX 3 Placing freeze indicators in refrigerated vehicles</li> <li>• XX 4 Monitoring temperature in refrigerated vehicles</li> <li>• XX 5 Arrival checks and reporting procedures</li> <li>• XX 6 Returning the Requisition and Issue Voucher and the freeze indicators.</li> </ul>	Question answer

Time	Content	Objectives	Learning and teaching activity	Required materials	Evaluation
		voucher, logistics form, returning the requisition and freeze indicators.	<p>views. <b>Display the prepared slide XX 4 and explain as needed.</b></p> <p><b>Arrival checks and reporting procedures:</b>5 min</p> <ul style="list-style-type: none"> <li>• Inquiry few participants what are the activity to be done for arrivals checks and reporting procedures? Note the points in the newsprint. Thank the participants for their views <b>and display the prepared slide XX 5 and explain with reference from annex 1 and 2.</b></li> </ul> <p><b>Requisition and Issue voucher:</b> 15 min</p> <ul style="list-style-type: none"> <li>• Question few participants what are the procedure for filling requisition and issue voucher? Note the points in the newsprint. Thank the participants for their views and <b>display the prepared slide XX 6 and illustrate as needed.</b></li> </ul> <p><b>Last session: ( Summary and motivation):</b> 5 min</p> <ul style="list-style-type: none"> <li>• After discussion, the facilitator should explain about the responsible personnel for carrying these duties with reference from the participant handbook.</li> <li>• To assess whether the participants are clear about the session, ask few questions related to the session, make discussions and give clarity.</li> <li>• Motivate the participants to apply their knowledge and skills in the field and end the session.</li> </ul>		

**Packing vaccine and diluents for transport, using cold boxes**

# **Session XXI**

Time	Content	Objectives	Learning and teaching activity	Required materials	Evaluation
85 min	<b>Packing vaccine and diluents for transport, using cold boxes</b>	<p><b>Primary Objective:</b> By the end of the session, the participants are able to describe how vaccines should be packed into cold boxes in order to minimize the risk of damage during transport.</p> <p><b>Enabling Objectives:</b></p> <p>By the end of the session participants become capable to:</p> <p>Describe on the preparatory activities of vaccine transport.</p> <p>How to prepare ice packs, cool water packs. Orient on the management of icebox where icepacks are kept.</p>	<p><b>Beginning of the session: 5 min</b></p> <ul style="list-style-type: none"> <li>Start with the activity that need to be done in beginning session (relate with the previous session, listen inquiry the experience from the present session, highlight about the introducing session with its objectives, importance, participant's participation)</li> </ul> <p><b>Preparatory activities: 10 min</b></p> <ul style="list-style-type: none"> <li>Ask few participants what are the preparatory activity for packing vaccine and diluents for transport, using cold boxes? Note the points in the newsprint .Thank the participants for their views and <b>display the prepared slide XXI 1 and request them to read loudly turn by turn and illustrate as needed.</b></li> </ul> <p><b>Train temporary workers: 5 min</b></p> <ul style="list-style-type: none"> <li>Question few participants why do we need to train workers in packing vaccine and diluents for transport, using cold boxes? Note the points in the newsprint .Thank the participants for their views and <b>display the prepared slide XXI 2 and give explanation as needed.</b></li> </ul> <p><b>Prepare ice packs/cool water packs/warm water packs: 10 min</b></p> <ul style="list-style-type: none"> <li>Inquiry few participants what are the preparatory activity to prepare ice packs? Note the points in the newsprint. Acknowledge the participants for their views and <b>display the prepared slide XXI 3 and illustrate as needed</b></li> </ul> <p><b>Pre-condition cold boxes for cool water or warm water packs: 10 min</b></p>	<ul style="list-style-type: none"> <li>Marker pen</li> <li>Newsprint</li> <li>Requisition form</li> <li>Issued form</li> <li>Indent supply form</li> <li>Cold box</li> <li>Water box</li> <li>Packing materials</li> </ul> <p><b>Power point presentation</b></p> <ul style="list-style-type: none"> <li>XXI 1 Preparatory activities</li> <li>XXI 2train temporary workers</li> <li>XXI 3 Prepare ice packs/cool water packs</li> <li>XXI 4 Pre condition cold boxes for cool water</li> <li>XXI 5 observe hand hygiene</li> <li>XXI 6 Packing vaccines that are not damaged by freezing</li> <li>XXI 7 Packing freeze-sensitive vaccines using conditioned ice packs</li> <li>XXI 8 Packing diluents</li> </ul>	Question answer

Time	Content	Objectives	Learning and teaching activity	Required materials	Evaluation
		<p>Observe hand hygiene and orient its need.</p> <p>List the name of vaccine that are not damaged by freezing.</p> <p>Packing freeze sensitive vaccines using conditioned ice packs.</p> <p>Procedures for packing diluents.</p>	<ul style="list-style-type: none"> <li>• Ask few participants what are the procedures for pre condition cold boxes for cool water or warm water packs? Note the points in the newsprint .Thank the participants for their views and <b>display the prepared slide XXI 4 and illustrate as needed.</b></li> </ul> <p><b>Observe hand hygiene: 5 min</b></p> <ul style="list-style-type: none"> <li>• Question few participants what are the activity to carry in hand hygiene observation? Note the points in the newsprint. Acknowledge the participants for their views and <b>display the prepared slide XXI 5 and describe as needed.</b></li> </ul> <p><b>Packing vaccines that are not damaged by freezing: 5 min</b></p> <ul style="list-style-type: none"> <li>• Ask few participants what are the procedure for packing vaccine that are not damaged by freezing? Note the points in the newsprint .Thank the participants for their views and <b>display the prepared slide XXI 6 and explain as required.</b></li> </ul> <p><b>Packing freeze-sensitive vaccines using conditioned ice packs: 15 min</b></p> <ul style="list-style-type: none"> <li>• Enquire few participants what are procedures for packing freeze sensitive vaccine using conditioned ice packs? Note the points in the newsprint .Thank the participants for their views and <b>display the prepared slide XXI 7 and illustrate as needed.</b></li> </ul> <p><b>Packing diluents: 15 min</b></p> <ul style="list-style-type: none"> <li>• Ask few participants what are the procedures for packing diluents? Note the points in the newsprint .Thank the participants for their views and <b>display the prepared slide</b></li> </ul>		

Time	Content	Objectives	Learning and teaching activity	Required materials	Evaluation
			<p><b>XXI 8 and describe</b> if diluents are frozen, the glass ampoule is likely to break, so must never exposes to temperature below 0°C. In cold climates they should therefore be packed in cold boxes with cool water or warm water packs in the same way as freeze- sensitive vaccines.</p> <p><b>Last session: (Summary and motivation): 5 min</b></p> <ul style="list-style-type: none"> <li>• After discussion, the facilitator should explain about the responsible personnel for carrying these duties with reference from the participant handbook.</li> <li>• To assess whether the participants are clear about the session, ask few questions related to the session, make discussions and give clarity.</li> <li>• Motivate the participants to apply their knowledge and skills in the field and end the session.</li> </ul>		

## **Using Vaccine Vial Monitors**

# **Session XXII**

Time	Content	Objectives	Learning and teaching activity	Required materials	Evaluation
45 min	Using Vaccine Vial Monitors	<p><b>Primary Objective:</b> By the end of the session, the participants become responsible for handling vaccines at all levels of the supply chain how to read, interpret VVM colour changes and how to act correctly when a colour change is observed.</p> <p><b>Enabling Objectives:</b></p> <ul style="list-style-type: none"> <li>• By the end of the session participants become capable:</li> <li>• Explain the use of vaccine vial monitors</li> <li>• Preparatory procedures for transporting vaccine from store.</li> </ul>	<p><b>Beginning of session: 5 min</b></p> <ul style="list-style-type: none"> <li>• Start with the activity that need to be done in beginning session (relate with the previous session, listen inquiry the experience from the present session, highlight about the introducing session with its objectives, importance, participant's participation)</li> </ul> <p><b>Using VVMs: 10 min</b></p> <ul style="list-style-type: none"> <li>• Ask few participants how and when to use Vaccine Vial monitors? Note the points in the newsprint .Acknowledge the participants for their views and <b>display the prepared slide XXII 1 and request them to read loudly turn by turn and illustrate as needed.</b></li> </ul> <p><b>When vaccines are issued by the store: 5 min</b></p> <ul style="list-style-type: none"> <li>• Question few participants what are the activity to be done when vaccines are issued by the store? Note the points in the newsprint .Praise the participants for their views and <b>display the prepared slide XXII 2 and describe as required.</b></li> </ul> <p><b>When vaccines are received by lower level store: 10 min</b></p> <ul style="list-style-type: none"> <li>• Ask few participants what do they do when vaccines are received by lower level store? Note the points in the newsprint .Thank the participants for their views and <b>display the prepared slide XXII 3 and illustrate as needed.</b></li> </ul> <p><b>When vaccines are administered : 10 min</b></p> <ul style="list-style-type: none"> <li>• Ask few participants what activity they do for vaccines administered? Note the points in the newsprint .Thank the participants for their views and <b>display the prepared slide</b></li> </ul>	<ul style="list-style-type: none"> <li>• Marker pen</li> <li>• Newsprint</li> <li>• Vaccine Vials Monitors Poster</li> <li>• Requisition form</li> <li>• Logistics and supply form</li> <li>• ISR</li> <li>• Issued form</li> <li>• Received form</li> </ul> <p><b>Power point presentation</b></p> <ul style="list-style-type: none"> <li>• XXII 1 Using VVMs</li> <li>• XXII 2 When vaccines are issued by a store</li> <li>• XXII 3 When vaccines are received by a lower level store</li> <li>• XXII 4 When vaccines are administered.</li> </ul>	Question answer

Time	Content	Objectives	Learning and teaching activity	Required materials	Evaluation
		<ul style="list-style-type: none"> <li>• How to manage when vaccines are received at primary store.</li> <li>• Explain the activities to be done</li> </ul>	<p><b>XXII 4 and describe as required.</b></p> <ul style="list-style-type: none"> <li>• For more information of VVM, request to <b>go through the participant handbook, Session XXII, page 173-174 and explain as needed.</b></li> </ul> <p><b>Last session: (Summary and motivation): 5 min</b></p> <ul style="list-style-type: none"> <li>• After discussion, the facilitator should explain about the responsible personnel for carrying these duties with reference from the participant handbook.</li> <li>• To assess whether the participants are clear about the session, ask few questions related to the session, make discussions and give clarity.</li> <li>• Motivate the participants to apply their knowledge and skills in the field and end the session.</li> </ul>		

**When and how to conduct the Shake Test?**

# **Session XXIII**

Time	Content	Objectives	Learning and teaching activity	Required materials	Evaluation
105 min	When and how to conduct the Shake Test	<p><b>Primary Objective:</b> By the end of the session, the participants are able to explain when to do the Shake Test and procedure what to do if vaccine is damaged by freezing.</p> <p><b>Enabling Objectives:</b> By the end of the session participants become capable:</p> <ul style="list-style-type: none"> <li>• Explain when to do Shake Test.</li> <li>• Procedure to do Shake Test.(when, how)</li> <li>• Procedure for sampling methodologies.</li> <li>• How to do sampling incoming shipments from vaccine supplier.</li> <li>• How to do sampling vaccine that is already in the supply chain.</li> <li>• Activity for disposal of freeze</li> </ul>	<p><b>Beginning of session: 5 min</b></p> <ul style="list-style-type: none"> <li>• Start with the activity that need to be done in beginning session (relate with the previous session, listen inquiry the experience from the present session, highlight about the introducing session with its objectives, importance, participant's participation)</li> </ul> <p><b>Applicability of Shake Test: 5 min</b></p> <ul style="list-style-type: none"> <li>• Ask few participants applicability of Shake Test? Respond positively to their views and note their points in the newsprint. <b>Display the prepared slide XXIII 1 and request them to read loudly turn by turn and illustrate as needed.</b> Further <b>display the video clips of Shake Test a.</b> Ask the questions related to the video and explain as required.</li> </ul> <p><b>When and how to do Shake Test: 10 min</b></p> <ul style="list-style-type: none"> <li>• Inquiry few participants when and how to do Shake Test? Note their points in the newsprint. Thank the participants for their views. <b>Display the prepared slide XXIII 2 and illustrate as needed.</b> Further <b>display the video clips of Shake Test b.</b> Ask the questions related to the video and explain as required.</li> </ul> <p><b>Sampling methodologies: 20 min</b></p> <ul style="list-style-type: none"> <li>• Ask few participants what are the activity for sampling methodologies? Note their points in the newsprint. Respond positively to their views <b>and display the prepared slide XXIII 3 and describe as needed.</b> Further request to <b>go through the participant handbook session XXIII, page 179, annex 1 Shake test protocol and page 15 annex 2 Sampling methods and give explanation as required.</b></li> </ul>	<ul style="list-style-type: none"> <li>• Marker pen</li> <li>• Newsprint</li> </ul> <p><b>Power point presentation</b></p> <ul style="list-style-type: none"> <li>• XXIII 1 Vaccines that need a Shake Test</li> <li>• XXIII 2 When and how to do a Shake Test?</li> <li>• XXIII 3 Sampling methodologies</li> <li>• XXIII 4 Sampling incoming shipments from vaccine supplier</li> <li>• XXIII 5 Sampling vaccine that is already in the supply chain</li> <li>• XXIII 6 Disposal of freeze damaged vaccine and frozen control samples.</li> </ul> <p><b>Video Clips</b></p> <ul style="list-style-type: none"> <li>• Shake Test A</li> <li>• Shake Test B</li> <li>• Shake Test C&amp;D</li> <li>• Shake Test-E</li> </ul>	Question Answer

Time	Content	Objectives	Learning and teaching activity	Required materials	Evaluation
		damaged vaccine and frozen control samples.	<p><b>Sampling incoming shipments from the vaccine supplier: 20 min</b></p> <ul style="list-style-type: none"> <li>• Question few participants about the procedures in sampling incoming shipments from the vaccine supplier? Note their points in the newsprint. Respond positively to their views and <b>display the prepared slide XXIII 4 and explain as required.</b></li> </ul> <p><b>Sampling vaccine that is already in the supply chain: 20 min</b></p> <ul style="list-style-type: none"> <li>• Ask few participants about the procedure for sampling vaccine that is already in the supply chain? Note their points in the newsprint. Acknowledge the participants for their participations. <b>Display the prepared slide XXIII 5 and describe as needed.</b></li> </ul> <p><b>Disposal of freeze-damaged vaccine and frozen control samples: 20 min</b></p> <ul style="list-style-type: none"> <li>• Inquiry few participants about the procedure for disposal of freeze-damaged vaccine and frozen control samples. Note their points in the newsprint. Acknowledge the participants for their views and <b>display the prepared slide XXIII 6 and describe as needed.</b> Further <b>display the video clips of Shake test –e</b> to the participants. Ask questions related to the videos and explain as needed.</li> </ul> <p><b>Last session: (Summary and motivation): 5 min</b></p> <ul style="list-style-type: none"> <li>• After discussion, the facilitator should explain about the responsible personnel for carrying these duties with reference from the participant handbook.</li> <li>• To assess whether the participants are clear about the session, ask few questions related to the session, make discussions and give clarity.</li> <li>• Motivate the participants to apply their knowledge and skills in the field and end the session.</li> </ul>		

**Conditioning Froze Icepacks**

**Session XXIV**

Time	Content	Objectives	Learning and teaching materials	Required materials	Evaluation
45 min	Conditioning froze icepacks	<p><b>Primary Objective:</b> By the end of the session, the participants are able to understand how to pack vaccine for transport and the importance of keeping vaccines at the correct temperature throughout the journey and the procedures when frozen icepacks are used to line cold boxes or vaccine carriers that contain freeze-sensitive vaccines, they must always be 'conditioned' beforehand to minimize the risk of damage to the vaccine.</p> <p><b>Enabling Objectives:</b> By the end of the session participants become capable:</p> <ul style="list-style-type: none"> <li>• Explain what conditioned icepacks is.</li> <li>• How to know when an ice pack is conditioned.</li> </ul>	<p><b>Beginning of session: 5 min</b></p> <ul style="list-style-type: none"> <li>• Start with the activity that need to be done in beginning session (relate with the previous session, listen inquiry the experience from the present session, highlight about the introducing session with its objectives, importance, participant's participation)</li> </ul> <p><b>What is a conditioned icepacks?: 5 min</b></p> <ul style="list-style-type: none"> <li>• Ask few participants what is a conditioned icepacks? Respond positively to their views and note their points in the newsprint. <b>Display the prepared slide XXIV 1 and request them to read loudly turn by turn and illustrate as needed.</b></li> </ul> <p><b>How do I know when an icepacks is conditioned?: 5 min</b></p> <ul style="list-style-type: none"> <li>• Question few participants how do I know when an icepacks is conditioned? Note their points in the newsprint. Acknowledge the participants for their views and <b>display the prepared slide XXIV 2 and give explanation as required.</b></li> </ul> <p><b>When to use conditioned icepacks?: 5 min</b></p> <ul style="list-style-type: none"> <li>• Inquiry few participants when to use conditioned icepacks? Note their points in the newsprint. Thanks the participants for their views and <b>display the prepared slide XXIV 3 and describe as needed.</b></li> </ul>	<ul style="list-style-type: none"> <li>• Marker pen</li> <li>• Newsprint</li> <li>• Frozen ice packs</li> <li>• Big table/ surface to keep ice packs.</li> </ul> <p><b>Power point presentation</b></p> <ul style="list-style-type: none"> <li>• XXIV 1 What is conditioned ice packs?</li> <li>• XXIV 2 How to I know icepack is conditioned?</li> <li>• XXIV 3 When to use ice packs?</li> <li>• XXIV 4 How to condition icepacks?</li> </ul>	Question answer

Time	Content	Objectives	Learning and teaching materials	Required materials	Evaluation
		<ul style="list-style-type: none"> <li>• Orient when to use conditioned ice packs</li> <li>• Describe how to condition ice packs.</li> </ul>	<p><b>How to condition icepacks?:</b> 20 min</p> <ul style="list-style-type: none"> <li>• Question few participants how to condition icepacks? Note their points in the newsprint. Acknowledge the participants for their views and <b>display the prepared slide XXIV 4 and give explanation as required.</b> Further demonstrate how to condition icepacks and briefly describe it.</li> </ul> <p><b>Last session: ( Summary and motivation):</b> 5 min</p> <ul style="list-style-type: none"> <li>• After discussion, the facilitator should explain about the responsible personnel for carrying these duties with reference from the participant handbook.</li> <li>• To assess whether the participants are clear about the session, ask few questions related to the session, make discussions and give clarity.</li> <li>• Motivate the participants to apply their knowledge and skills in the field and end the session.</li> </ul>		

**Storing goods in the dry stores**

# **Session XXV**

Time	Content	Objectives	Learning and teaching activity	Required materials	Evaluation
30 min	Storing goods in the dry stores	<p><b>Primary Objective:</b></p> <p>By the end of the session, the participants are able to describe the procedure for storing goods in the dry stores.</p> <p><b>Enabling Objectives:</b></p> <p>By the end of the session participants clearly understand the procedures of:</p> <ul style="list-style-type: none"> <li>All products are safely stored within the temperature and humidity levels specified for the product type.</li> <li>Diluents, syringes and other products with a limited shelf life, such as electronic 30-day refrigerator temperature logger devices and electronic freeze indicators with non-replaceable batteries, can easily be located and distributed in</li> </ul>	<p><b>Beginning of session: 5 min</b></p> <ul style="list-style-type: none"> <li>Start with the activity that need to be done in beginning session (relate with the previous session, listen inquiry the experience from the present session, highlight about the introducing session with its objectives, importance, participant's participation)</li> </ul> <p><b>General procedures of storing goods in the dry stores: 5 min</b></p> <ul style="list-style-type: none"> <li>Ask few participants what are the general procedures of storing goods in the dry stores? Respond positively to their views and note their points in the newsprint. Thank the participants for their points and <b>display the prepared slide XXV 1 and request them to read loudly turn by turn and illustrate as needed.</b></li> </ul> <p><b>Storing diluents, syringes and safety boxes: 5 min</b></p> <ul style="list-style-type: none"> <li>Inquiry few participants how do they store diluents, syringes and safety boxes? Note their points in the newsprint. Praise the participants for their points and <b>display the prepared slide XXV 2 and explain as required.</b></li> </ul> <p><b>Storing expired or damaged vaccines, diluents and syringes: 5 min</b></p> <ul style="list-style-type: none"> <li>Ask few participants what are the activity for storing expired or damaged vaccines, diluents and syringes? Note their points in the newsprint. Thanks the participants for their support and <b>display the prepared slide XXV 3 and illustrate as needed.</b></li> </ul>	<ul style="list-style-type: none"> <li>Marker pen</li> <li>Newsprint</li> <li>Pallet</li> <li>Duct tape</li> <li>Colour to mark on floor</li> </ul> <p><b>Power point presentation</b></p> <ul style="list-style-type: none"> <li>XXV 1 General procedures for storing things in dry store</li> <li>XXV 2 Storing of diluents, syringe, and safety box</li> <li>XXV 3 Storing of expired and damaged vaccines, diluents and syringe.</li> <li>XXV 4 Storing of electronic equipments (without battery)</li> <li>XXV 5 Storing of spare parts, stationary and other things</li> </ul>	<ul style="list-style-type: none"> <li>Question answer</li> </ul>

Time	Content	Objectives	Learning and teaching activity	Required materials	Evaluation
		<p>Earliest-Expiry-First-Out (EEFO) order.</p> <ul style="list-style-type: none"> <li>Expired or damaged products marked for disposal are kept separate from useable stock.</li> </ul>	<p><b>Storing electronic devices with non replaceable batteries:</b> 5 min</p> <ul style="list-style-type: none"> <li>Question few participants what are the activity for storing electronic devices with non replaceable batteries? Note their points in the newsprint. Thank the participants for their points and <b>display the prepared slide XXV 4 and give explanation as needed.</b></li> </ul> <p><b>Storing spare parts, stationary and other items:</b>5 min</p> <ul style="list-style-type: none"> <li>Ask few participants what are the procedures for storing spare parts, stationary and other items? Note their points in the newsprint. Praise the participants for their efforts and <b>display the prepared slide XXV 5 and describe as required.</b></li> </ul> <p><b>Last session: ( Summary and motivation ):5 min</b></p> <ul style="list-style-type: none"> <li>After discussion, the facilitator should explain about the responsible personnel for carrying these duties with reference from the participant handbook.</li> <li>To assess whether the participants are clear about the session, ask few questions related to the session, make discussions and give clarity.</li> <li>Motivate the participants to apply their knowledge and skills in the field and end the session.</li> </ul>		

# **Responsibility of Persons working in Effective Vaccine Management**

## **Session XVI**

Time	Content	Objectives	Learning and teaching activity	Required materials	Evaluation
35 min	<b>Responsibility of persons working in Effective Vaccine Management</b>	<p><b>Primary Objective:</b> By the end of the session, the participants are able to identify the responsibility of persons working in Effective Vaccine management.</p> <p><b>Enabling Objectives:</b> By the end of the session, the participants are conduct or explain</p> <ul style="list-style-type: none"> <li>Identify the role and duties of responsible persons in their own respective working area.</li> </ul>	<p><b>Beginning of session: 5 min</b></p> <ul style="list-style-type: none"> <li>Start with the activity that need to be done in beginning session (relate with the previous session, listen inquiry the experience from the present session, highlight about the introducing session with its objectives, importance, participant's participation)</li> </ul> <p><b>Introduction/ Group game/Question Answer/ Group discussion: 5 min</b></p> <ul style="list-style-type: none"> <li>Review all the previous sessions and briefly describe the content of 5 days training sessions of Effective Vaccine Management. The content of the training might be new to the participants.</li> <li>Inform the participants that now we are going to play the entertaining frame game based on the responsibility of persons working in Effective Vaccine management.</li> </ul> <p><b>Trainer's activity: 25 min</b> <b>Note:</b> Follow the give points for conducting the activity:</p> <ol style="list-style-type: none"> <li>Divide the participants into three different groups.</li> <li>Inform the rules to follow as given below: <ul style="list-style-type: none"> <li>Ask questions to every individual participant.</li> <li>30 seconds time for the answer to the first question asked.</li> <li>If the answer is incorrect, an individual can discuss with their group participants within 20 seconds.</li> <li>The question will be passed to another group and answer should come within 10 seconds.</li> <li>If none of the group participants answer the question then trainer answers it.</li> </ul> </li> </ol>	<ul style="list-style-type: none"> <li>Marker pen</li> <li>Newsprint</li> <li>Frame game question</li> </ul> <p>Transparency: no</p>	Question/ Answer

Time	Content	Objectives	Learning and teaching activity	Required materials	Evaluation
			<ul style="list-style-type: none"> <li>• If the individual cannot answer the question then s/he should get permission to discuss the question within the group.</li> <li>• Correct answer within the time bound will get 2 points and if from the group discussion then 1 point.</li> <li>• Within the frame game the participants are not allowed to make noise, give logics and request to remain silent. The answer from unrelated individual/group will get penalty as 1 mark deduction for the first time and if it repeats 2 marks deduction.</li> </ul> <ol style="list-style-type: none"> <li>3. One of the trainers should play the role of judgment team for controlling the participants from making noise, answer from related person or not, time constraints etc.</li> <li>4. Ask the questions in quiz way.</li> <li>5. If the answer for the question is in options (right/wrong) then the question will not pass to anyone.</li> <li>6. The participants are informed to take out the question from the question/answer box and give to the trainers but not to read by him/her.</li> <li>7. Note the marks secured by the group in newsprint clearly.</li> <li>8. Announce the result: first, second, third according to the marks scored. Thank the participants for their active participation and congratulate the winners.</li> </ol> <p><b>Closing session: 3 min</b></p> <ul style="list-style-type: none"> <li>• At the end of the session, trainers will highlight the responsibility of persons working in Effective Vaccine Management through the interesting game. And through the game we revise the content of the sessions and finally end the session.</li> </ul>		

## FRAME GAME

- Q.1** There is cold room in Tribhuvan International Airport for vaccine storage?  
A. False
- Q.2** Ensure that baggage handlers and customs personnel are adequately trained to handle vaccines and similar temperature-sensitive products.  
A. True
- Q.3** Memorandum of Understand between Logistic Management Division and custom authorities is must.  
A. False
- Q.4** Who is the focal person from .....Management Division for collecting vaccines from Tribhuvan International Airport through UNICEF?  
A. Expanded Program Immunization officer
- Q.5** All vaccines arrived from.....  
A. Air transport
- Q.6** The most important activity after received essentials documents from vaccine arrival procedures is to empty/ make arrangement of the place in.  
A. Cold room
- Q.7** Who do you consult when there is a problem or mistaken in vaccine shipments?  
A. Supply division/...
- Q.8** For how many years do we have to keep the report of vaccine safely?  
A. 3years
- Q.9** All the necessary information need to be recorded in..... during transportation or any vaccine relate information.  
A. Vaccine arrival
- Q.10** Diluents solutions are keep in diluents cold rooms.  
A. False
- Q.11** After identifying the problems with vaccine and vaccine relate cold box, vaccine is ice packed.  
A. False

- Q.12 Supply chain management is very sensitive to the product arrival procedures.**  
A. True
- Q.13 All the vaccine products in Nepal are obtain from UNICEF.**  
A. False
- Q. 14 Responsible person must always follow Earliest-Expiry-First- Out distribution while storing vaccine.**  
A. True
- Q.15 Prepare ..... notice and documentation.**  
A. Advance
- Q.16 A separate ..... must be completed for every shipment of immunization-related products such as syringe, safety box etc.**  
A. Product Arrival Report
- Q. 19 Oral polio vaccine is not store at -15°C to -25°C in freezer rooms or vaccine freezers.**  
A. False
- Q.20 20 T.T vaccine is store at +2°C to +8°C in cold rooms or vaccine refrigerators .**  
A. True
- Q.21 Only in.....all the unmanageable vaccines are keep in normal room temperature.**  
A. Health organization
- Q.22 Name the vaccine store at +2°C to +8°C in cold rooms or vaccine refrigerators.**  
A. BCG, MMR, DPT+Heb-B+Hib, TT
- Q.23 Store at..... in cold rooms or vaccine refrigerators.**  
A. +2°C to +8°C
- Q.24 Store at .....in freezer rooms or freezers.**  
A. -15°C to -25°C
- Q.25 Read the temperature of bi-dialed and digital thermometer .....in a day and.... in a week.**  
A. 2 times and 7 days
- Q.26 Check the temperatures accuracy of vaccine store and refrigerated vehicles or vaccine storage related equipments at least .....**  
A. Once in a year

- Q.27 All vaccines are clearly identifiable and accessible and can easily be located and distributed in..... order.**
- A. Earliest – Expiry - First – Out
- Q.28 Do not wash your hands before handling vaccine cartons and vaccine vials.**
- A. False
- Q.29 There is risk to work in cold room and freezer room, without training and warm clothes the responsible person suffer from.....**
- A. hypothermia
- Q.30 You can wear thin clothes during summer while working in cold room and freezer rooms.**
- A. False
- Q.31 Rules and regulations of Standard Operating Procedures should be followed by ..... working in cold room and freezer rooms.**
- A. All employees
- Q.32 Stand by Generators used in Central vaccine store, Regional Health Division/medical stores and District Vaccine stores are very sensitive equipments.**
- A. True
- Q.33 It is not necessary to prepare plan, monitoring and regular entry for routine check or maintenance of generators operation.**
- A. False
- Q.34 Who is responsible to look after the cold room and freezer room daily?**
- A. Cold Chain Officer
- Q.35 Regular routine check of temperature monitoring process is necessary.**
- A. True
- Q.36 Daily checks and monitors for servicing the 3-phase units is required.**
- A. True
- Q.37 If regulators are not fitted, the refrigeration equipment will suffer permanent damage and ..... may be lost.**
- A. Vaccines
- Q.38 All diluents must be store in -2°C to +8°C in cold rooms of Health Division/ Cold chain**
- A. False

- Q.39** Always check.....before using diluents.  
A. Expired date
- Q.40** When do we need to check the vaccines, diluents and safety box from the present stock in central storage stock?  
A. Every three months
- Q.41** Identify damaged vaccines that are expired and isolate them from other vaccines and diluents.  
A True
- Q.42** Lyophilized vaccines and their associated diluents may not have the same expiry dates.  
A. False
- Q.43** The practice of immediately placing unconditioned ice packs in well-insulated cold boxes places freeze-sensitive vaccines at the greatest risk.  
• True
- Q.44** Who is responsible for packing vaccines and diluents using cold box for regular work?  
A. Cold Chain Officer
- Q.45** Refrigerated vehicles are not fitted with an in-cab thermometer.  
A. False
- Q.46** The responsible person of refrigerated van must check all the details and recorded on the Requisition and Issue Voucher form throughout the entire field trip.  
A. True
- Q.47** Place the required number of water packs in a dedicated refrigerator which is kept at a temperature between +2°C and +8°C.  
A True
- Q.48** Data logger can be disconnected in between the travelling times.  
A ....
- Q.49** We can print out the data from data logger and check the temperature record.  
A True
- Q.50** Vaccines are store in correct temperatures, both exposures to heating and freezing damage vaccines.  
A True
- Q.51** Store cool water packs in a refrigerator that contains vaccine.  
A False

- Q.52** Freezing does not damage T.T vaccines.  
A False
- Q.53** The VVM registers information about freezing.  
A False
- Q.54** VVM is a ..... sensitive label which is placed on a vaccine vial to register cumulative heat exposure over time.  
A Heat
- Q.55** The Shake Test is designed to determine whether aluminum adsorbed vaccines have been frozen.  
A True
- Q.56** Whenever it is suspected that vaccine has been frozen, at least one member of the duty personnel in every facility that stores vaccine should know how to perform and interpret the test reliably and correctly through Shake Test.  
A True
- Q.57** If a freeze indicator or other temperature monitoring device shows a freeze alarm, or if you suspect that freezing has occurred, then ..... must be done to confirm the status of the vaccine.  
A shake test
- Q.58** Deep-frozen ice packs can reach temperatures as low as -20°C. The practice of immediately placing unconditioned ice packs in well-insulated cold boxes places freeze-sensitive vaccines at the greatest risk.  
A True
- Q.59** Products without an expiry date, such as safety boxes, can easily be located and distributed in ..... order.  
A First –In – First - Out
- Q.60** Expired or damaged products marked for disposal are kept separate from useable stock.  
A True

**Mid-Term Evaluation**

**Session XVII**

Time	Content	Objectives	Learning and teaching activity	Required materials	Evaluation
30 min	Midterm evaluation	<p><b>Primary Objective:</b> By the end of the session, the participants are able to understand the content of Standard Operating Procedures.</p> <p><b>Enabling Objectives:</b> By the end of the session, the participants will be able to:</p> <ul style="list-style-type: none"> <li>• Identify the standard learning procedures</li> <li>• Develop the knowledge and skills through the participant handbook and related books.</li> </ul>	<p><b>Instruction to follow for the trainers for Mid Term Evaluation Test.</b></p> <p>By the end of the training, inform all the participants that Mid –term Evaluation Test will be conducted to assess their knowledge about the content. <b>Request them to do the exercise from the participant handbook Session XXII, page 1 "Mid- Term Evaluation "</b>. Below instructions are prepared for trainers to follow:</p> <ol style="list-style-type: none"> <li>1. Inform the participants that we allocated 20 minutes for the test.</li> <li>2. Jot the answers in their participants' handbook.</li> <li>3. Inform the participants that we have only 5 minutes left in advance.</li> <li>4. Announce the time constraint, and request to keep the answers sheet themselves.</li> <li>5. <b>Checking answers: 5 min</b> <ol style="list-style-type: none"> <li>a. To check whether the answer they have written is correct or not, ask the questions to the participants and collect their answers. If anybody chooses different, give opportunity to clarify.</li> </ol> </li> <li>6. After the correction, request to keep the participant handbook as reference materials in future and utilize it.</li> <li>7. We introduced the new methodologies for Effective Vaccine Management in order to utilize the participant's handbook to develop the skills and knowledge. Explain the participants that we have come to the end of the 5-days training program and active participation is required to fill the evaluation test.</li> <li>8. <b>Training summary: 5 min</b> <ol style="list-style-type: none"> <li>a. Request to fill participant's reflection on EVM training to all participants from participant handbook Session XXVI, page ..... Give them 10 minutes to fill in the form. Trainers should collect the forms from all the participants and discuss.</li> </ol> </li> <li>9. After this, prepare for closing ceremony.</li> </ol>	<ul style="list-style-type: none"> <li>• Question Answer</li> </ul> <p>No power points</p>	Evaluation form

# Mid-Term Evaluation

Name: \_\_\_\_\_ Designation : \_\_\_\_\_

Health Facility \_\_\_\_\_ District : \_\_\_\_\_ Time : 30m

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You can use training manual of Effective Vaccine Management participant's handbook or related book to answer the following questions.

1. Which of these options have no relation with Vaccine Clearance?
    - a. Representative of Aviation
    - b. **Electronic Engineer**
    - c. Representative of Cargo
    - d. Immunization Officer
  2. Which of these documents (advance prepared document) is not required in pre-shipment?
    - a. Shipment Airway Bill
    - b. Commercial Invoice
    - c. Lot release certificate
    - d. **Letter from Child Health Division**
  3. After receiving vaccine, which of these options do not need checking and approval.
    - a. Size of the vaccine vials
    - b. Expired Date
    - c. **Size of van and truck used for transportation**
    - d. Numbers of vaccine vials
  4. Which of these documents is not related with the vaccine shipment?
    - a. Invoice
    - b. Packing list
    - c. Release certificate
    - d. **List of vaccine with price rate**
  5. How many days earlier do we need to inform about vaccine arrival to cold chain or vaccine distribution division?
    - a. 3
    - b. 5
    - c. **7**
    - d. 12
  6. When do we have to reach Tribhuvan International Airport before vaccine arrival for vaccine collection?
    - a. 1 hour
    - b. 2 hours
    - c. **3hours**
    - d. 4 hours
  7. Which one of this information is not necessary to mentioned for vaccine arrival report?
    - a. Batch Number
    - b. No. of transported carton with every batch
    - c. Every batch with Vial result
    - d. **Source of vaccine**
  8. Which one of this process is not related to product arrival procedures?
    - a. Advance check of information document
    - b. Collection of shipment
    - c. Monitoring of transportation mode and storage
    - d. **Send VAR report to MoH**
-

9. **It is not necessary to email or fax the documents for product arrival procedures?**
- a. **Photocopy of distributor's passport**      c. Photocopy of packing lists  
 b. Photocopy of airway bills      d. Photocopy of invoice
10. **Which of these have no connection with products?**
- a. Electronic materials      c. Syringe  
 b. Safety box      d. **Vaccine**
11. **Who is responsible for checking accuracy of equipments yearly?**
- a. **Mechanical engineer or cold chain staffs**      c. Staffs of cold chain section  
 b. Directors      d. Loader and packer
12. **Which of these things do not relate to personal security policies?**
- a. Briefing work deities to another friend of office      c. Checking the key  
 b. Checking the door      d. **Checking the torch**
13. **How do you maintain/ manage to solve with unexpected problems while generator functioning?**
- a. **Procedures for emergency maintenance and care**      c. Carrying generators to the cool place for 2 hours  
 b. Immediate call to police office      d. Make a call to the generator production company and ask for solutions
14. **Which of these activities do not come under regular routine maintenance of cold room and freezer rooms?**
- a. Listening to cooling unit      c. Checking the bulb and door daily  
 b. Observation of cool room      d. **Checking the expire date of all vaccines**
15. **Beside looking after cold room and freezer room daily which of these is essential?**
- a. Placing vaccine correctly      c. Confirming the floor, walls or racks of freezer room not iced  
 b. Managing vaccine and diluents properly      d. **All above**
16. **What is the exact temperature for all diluents while outreach or health division session?**
- a. **+2 to 8Degree**      c. -8 to-10Degree  
 b. -2 to -8Degree      d. +25 to +40Degree
17. **Which one of this information is included in conducting physical stock count?**
- a. **Incoming stock**      c. Present stock  
 b. Distribution stock      d. All above

18. **How many employees are required for conducting physical stock count?**
- a. 1  
b. 2  
c. 3  
d. 4
19. **The ampoules are likely to break in vaccines and diluents. Which of these options will be applying first if it breaks?**
- a. Thermal jacket  
b. Use gloves  
c. Wear glasses  
d. Wear boots
20. **What is the first thing to do before handling with vaccine vials and vaccine carton?**
- a. Wash your face properly  
b. Wear clean clothes  
c. **Wash your hands properly**  
d. Wear jacket
21. **Which is the most important activity done before using refrigerated van?**
- a. **Preparing vehicle log book**  
b. Preparing refrigerator compartment  
c. Cooling refrigerated compartment  
d. All from above
22. **Who is responsible to distribute packed vaccine and diluents?**
- a. Vaccine Distribution Division  
b. **Cold chain Officer**  
c. Refrigerator Technician  
d. Office Assistance
23. **After vaccine arrival from refrigerated van, reached to the store what do we need to recheck from these options?**
- a. **Quantity**  
b. Expiry date  
c. VVM  
d. All from above
24. **Which information is missing in Requisition, Logistic and Issue form?**
- a. VVM  
b. Expiry date  
c. Vaccine received from UNICEF and other source  
d. **Quantity**
25. **Which vaccine will be damaged by freezing or cooling?**
- a. BCG  
b. OPV  
c. MMR  
d. **TT**
26. **Which vaccine needs Shake Test?**
- a. TT  
b. MR  
c. **DPT-HepB+Hib, TT/Td, Heb B PCV+**  
d. JE
27. **Why do we use conditioned icepacks for?**
- a. heat sensitive vaccine  
b. **freeze sensitive vaccine**  
c. diluents  
d. Syringe

**28. How do I know when ice packs are conditioned?**

- a. Dropping the ice packs
- b. **Shaking the icepacks**
- c. Smelling the icepacks
- d. Feeling

**29. Which goods cannot be store in dry stores?**

- a. Syringe
- b. Safety box
- c. **Vaccine**
- d. Vaccine equipments and other immune supplies'

**30. Diluents, syringes, and safety boxes must be stored correctly stacked on .....in the dry storage area.**

- a. **Pallets**
- b. Mat
- c. Plastic
- d. Table

## Participants Reflection on EVM Training

Training Centre: \_\_\_\_\_

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**A. Please Rank using the following scale by circle (1= Poor, 2= Fair, 3= Good, 4= Very good, 5= Excellent)**

1. Overall process of the training	1	2	3	4	5
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2. Overall Logistical Management	1	2	3	4	5
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**B. Please suggest the following by circle (1= Poor, 2= Fair, 3= Good, 4= Very good, 5= Excellent)**  
**Group work**

1. Overall Time for	Presentation					Discussion					Group exercise				
	1.	2.	3.	4.	5.	1.	2.	3.	4.	5.	1.	2.	3.	4.	5.

**C. Please rank the following by circle (1= Poor, 2= Fair, 3= Good, 4= Very good, 5= Excellent)**

1. Behavior of the facilitators	1    2    3    4    5
2. Methodology of the training	1    2    3    4    5
3. Better understanding of the Cold Chain	1    2    3    4    5
4. Updated knowledge	1    2    3    4    5
5. Updated skill	1    2    3    4    5
6. Any other (please specify)	1    2    3    4    5

**D. Do you have any suggestions to make the training better? Please write in bullet form.**

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## **Training Summary**

# **Session XXVIII**

Time	Content	Objectives	Learning and Teaching Activity	Required materials	Evaluation
15 min	Training summary	<p><b>Primary Objective:</b> Revise the main content of the sessions</p>	<p><b>Review of Effective Vaccine Management training:</b> 15 min</p> <ul style="list-style-type: none"> <li>• <b>Display the slide XXVIII 1,</b>"Introduction and overview of Effective Vaccine Management Training".</li> <li>• With the help of power points, explain the points and inform the participants that all the contents have been covered during the training period and ensure by asking questions to some participants. Then <b>display power point of XXVIII 2</b> and explain each point and tell the participants that if they are able to perform the task, then objectives of the training have been accomplished.</li> <li>• Tell that, if participants have achieves the objectives of the training, it means that this training has accomplished its training goals.</li> <li>• Reinforce the important roles of all the participants in Effective Vaccine Management.</li> <li>• Inform that now we have come to the closing session of this 5-day training.</li> <li>• Tell the participants that they are the ones who have made this training successful.</li> <li>• Reference manual and participant's handbooks used in this training are very important. They can refer these materials when they have any questions regarding the content while providing services.</li> <li>• At the end, wish them good luck to meet the objective of this training and achieve success. Ask one of the participants to give remarks on the methodology of training, on behalf of all the participants.</li> <li>• Trainers should note all the comments, suggestions in a diary as necessary.</li> <li>• The important remarks can be included in the training report as suggestion for improvement of the training.</li> </ul>	<ul style="list-style-type: none"> <li>• Marker pen</li> <li>• Newsprint,</li> </ul> <p><b>Power point presentation</b></p> <ul style="list-style-type: none"> <li>• XXVIII 1 Goal of Effective Vaccine Management</li> <li>• XXVIII 2 Objectives of training</li> </ul>	Question answer