Facilitator's Guide
For Blood Bank Medical Officers (Non-BCSU)
Training Program

Ministry of Health and Family Welfare
Government of India
Foreword

Blood Transfusion Services in India have advanced significantly through the Blood Safety Program which has been an integral part of all phases of the National AIDS Control Programme since 1992. This has contributed immensely in improving access to safe and quality blood, and in promotion of Voluntary Blood Donation, and has also led to several advancements in terms of better policies, improved infrastructure and adoption of modern technologies.

Capacity building and training are a vital part of service delivery. Regular and standardized training leads to improvements in the knowledge, skills and standards of personnel providing blood transfusion services. The scope of a standardized training curriculum on Blood Transfusion Service is to train the Medical Officers, Staff Nurses, Counselors and Lab Technicians of the Blood Bank to become totally familiar with the basic techniques of Blood Banking, and to help them adopt techniques which comply with the regulatory framework in the field of Blood Transfusion.

The set of training modules is intended to emphasize Good Laboratory Practices (GLP) and Quality Management Systems (QMS) in Blood Transfusion Services. Training would be imparted through identified centres identified by National AIDS Control Organization, Ministry of Health and Family Welfare. These training centres will work towards capacity building for all cadres of the Blood bank staff across all facilities situated in different regions of the country.

I am confident that this training module would be very useful for all in the field of blood transfusion services.

(B.P. Sharma)
Preface

The goals and objectives of the Blood Safety Programme are to ensure the provision of safe and quality blood, even to remote areas of the country. National AIDS Control Organisation (NACO) supports a network of about 1200 Blood Banks in the Government and Charitable sectors through provision of equipment, consumables, manpower and capacity building. Nearly 70% of the country's blood requirement is met through this network. The scenario of blood banking in India owes much of its modernization due to the efforts made during various phases of the National AIDS Control Programme (NACP).

During NACP IV, NACO has identified specific areas for strengthening technical and service quality standards, management structures, partnership mechanisms, and monitoring and evaluation systems to achieve the objective of catering to the country's blood requirements through a nationally coordinated and well networked Blood Transfusion Service.

Blood Transfusion Services Division, NACO and the National Blood Transfusion Council are committed to improve all aspects of Blood Transfusion Services in coordination with State AIDS Control Societies and State Blood Transfusion Councils. With rapid technological advancement in transfusion medicine, there is a felt need for an elaborate and standardized training curriculum so as to comply with the Indian Health Policy Framework. The current training curriculum is based on changing needs of transfusion professionals.

This training module has been prepared with an objective of introducing uniform standards in all aspects of blood banking for medical officers, staff nurses, counselors and laboratory technicians working in the blood banks. The module is designed for the better understanding and comprehension of blood banking processes and procedures, in order to improve technical and managerial skills of the personnel.

Appropriate in-service training programmes will facilitate provision of trained manpower to enhance quality of transfusion services and to keep abreast with the latest developments in this fast changing field.

(N.S. Kang)
Acknowledgement

The Training Module for Blood Bank Medical Officers and Laboratory Technicians has been developed by Blood Transfusion Services Division, NACO and National Blood Transfusion Council, Ministry of Health and Family Welfare under the guidance and active leadership of Shri. Lov Verma, I.A.S, Ex-Secretary (Health) and Shri. B.P. Sharma, I.A.S, Secretary (Health).

The constant encouragement of Shri. N.S.Kang, Additional Secretary NACO and Shri. K.B. Agarwal, IAS, Joint Secretary, NACO have greatly helped in undertaking this important activity.

A special thanks to Dr. Shobini Rajan, Assistant Director General (BTS); Dr Harprit Singh, National Programme Officer (BTS) and Dr. Shanoor Mishra, Programme Officer Quality (BTS), NACO and other team members for their constant effort and hard work in preparing the module.

It is commendable to note that a comprehensive set of document has been reviewed with the coordinated and concerted efforts of various organizations and individuals from the Apex Training Institutes, PGI Chandigarh, KEM Mumbai and CMC Vellore. A detailed list of contributors is included within this document. My heartfelt thanks to all for their expertise and time spared towards technical review.

I extend my sincere thanks to the U.S. Centers for Disease Control and Prevention-Division of Global HIV/AIDS (CDC-DGHA), India and Christian Medical Association of India (CMAI) for providing technical assistance and support for the preparation of this set of modules.

(Dr. R.S Gupta)
Message

Ensuring the safety and availability of Blood and Blood products is an essential Public Health responsibility. Measures to ensure blood safety also play a major role in preventing the transmission of HIV, Hepatitis virus and other Blood borne pathogens in health care settings.

Access to sufficient and safe Blood and Blood products provided within a National Blood System is a vital component in achieving Universal health coverage. So far, Blood Transfusion Services were available only through established Blood Banks extending up to district level. In 2003, under National Health Mission these services were made available at sub-district level through Blood Storage Units at First Referral Units. These Centres were aimed at meeting the requirements of blood for pregnant women requiring blood transfusions during pregnancy or labour.

For quality, safety and efficacy of Blood and Blood products, well equipped Blood Centres with adequate infrastructure and trained manpower is an essential requirement. To ensure effective clinical use of Blood and to maintain quality standards in Blood Banking procedures, training of clinical staff is important.

18 Training Institutes are identified to enhance quality services in Blood Transfusion Services. These Training Institutes will work towards capacity building of the Blood Banks through standardized Training Curriculum for all cadres of staff in the Blood Banks.

These revised editions of training modules for Blood Bank staff will be a useful resource for standardizing Blood Transfusion services across blood banks situated in different regions of the country. My congratulations to, Dr. R.S. Gupta, DDG, the BTS team at NACO and other organizations who contributed in the development of these modules.

(Dr Jagdish Prasad)
Access to safe blood and maintaining standards in Blood Transfusion Services (BTS) is the predominant responsibility of NBTC. Currently, a network of 1161 blood banks is under the umbrella of NACO support and it is essential to provide regular Training to the Blood Bank staff, throughout the country.

This series of training modules is designed to train the blood bank staff on the basic techniques of Blood Banking which comply with worldwide standards in the field of Blood Transfusion.

The module is intended to incorporate Good Laboratory Practices (GLP), Good Manufacturing Practices (GMP) and quality systems for Blood Bank personnel.

18 Training Institutes have been indentified under NACP IV. These Training Institutes will work towards capacity building of the Blood bank staff through standardized training curriculum for all cadres of staff in Blood Banks.

I would like to place on record my appreciation to Dr. R.S. Gupta, DDG BTS Division, Dr. S. D. Kharade, ex- DDG, the BTS team at NACO and other organizations who contributed to the development of these guidelines.
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Facilitator's Guide
for Blood Bank Medical Officers

**Session 1: Introduction**

**Activity 1: Participant Introduction**

**Objective:**
- To help participants to get to know each other.

**Time:** 15 Minutes

**Material:** Soft ball – 1 No.

**Methodology**
- Ice Breaker

**Instructions to the Facilitator:**
  - Ask the participants to sit in a circle
  - The facilitator can introduce him/herself first
  - Throw the ball to one of the participants
  - The participant who holds the ball has to introduce him/herself to the group by saying out aloud their name, designation, workplace & hobby.
  - The participant holding the ball will now throw it to anyone in the group. The person who gets the ball now introduces him/herself.
  - The activity continues till all the participants have introduced themselves.

**Session 1: Introduction**

**Activity 2: Expectation of the Participants**

**Objective:**
- To understand the expectations of the participants from the training program.

**Time:** 5 minutes

**Materials:** Paste it slips, Pens

**Methodology**
- Individual Activity

**Instructions:**
  - The facilitator requests the participants to write down their expectations from the training sessions on the paste it slips provided to them.
  - The slips to be placed by the participants on the wall / white board.

**Note:** The expectations must be displayed till the end of the training.

**Summarize:**
- The facilitator has to list out core participant’s expectations.
### Session 1: Introduction (contd…)

**Activity 3: Pre Training Assessment**

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<td>To assess the knowledge of the participants.</td>
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<td>Material: Pre Structured Questionnaire</td>
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**Methodology**

- Individual activity

**Instructions:**

- The facilitator will circulate the questionnaire to the participants to be filled up and returned.
- No negative markings
- The pre training questions must be corrected and kept ready before the last day of training.

### Session 2: Introduction to National Blood Safety Program and National Blood Policy

**Activity 1: Overview of National Blood Safety Program.**

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<th>Objective:</th>
<th>Time: 15 minutes</th>
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<td>To provide an insight to the scenario of the National Blood Safety Program.</td>
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<td>Materials: Projector, Screen</td>
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**Methodology**

- Video show

**Instructions:**

- The facilitator needs to project the documentary video

**Summarize:**

- Quickly recap the evolution of the National Blood safety program.
- Clarify any questions by the participants.

**Reference:**

- Kindly refer to the video presentation of Day 1 - Session 2 - Activity 1
### Session 2: Introduction to National Blood Safety Program and National Blood Policy

#### Activity 2: National Blood Policy

**Objective:**
- To create awareness on the National Blood Policy

**Time:** 20 Minutes

**Material:** Projector, Screen, Pointer

**Methodology**
- Power Point Presentation

**Instructions:**
- Please try to explain the crux of the contents in each slide.
- Do not just read out the points. Please clarify the participant’s queries

**Summarize:**
1. What are the core points discussed in this presentation?
2. How does it relate to your work?

**Reference:**
- PPT No: Day 1 - Session 2 - Activity 2

### Session 3: Blood Donor Selection

#### Activity 1: Donor Recruitment, Retention

**Objective:**
- To describe methods of donor identification & selection
- To explain details about donor education
- To explain donor care & recall.

**Time:** 30 minutes

**Material:** Projector, Screen, Pointer

**Methodology**
- Power Point Presentation

**Instructions:**
- Please try to explain the crux of the contents in each slide. Do not just read out the points.
- Please clarify the participant’s queries

**Summarize:**
- What are the core points discussed in this presentation?
- How does it relate to your work?

**Reference:**
- Kindly refer Chapter No. 1, sub topic no. 1.1, of the MO & LT Module
- PPT No: Day 1 - Session 3 - Activity 1.
Session 3: Blood Donor Selection

Activity 2: Donor room procedure and adverse donor reaction

Objective:
- To address issues in blood collection to ensure safety of donor and the product.

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<td>Projector, Screen, Pointer</td>
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Methodology
- Power Point Presentation and Trigger video

Instructions:

Step 1: Power Point Presentation
- Please try to explain the crux of the contents in each slide. Do not just read out the points.
- Please clarify the participant's queries

Step 2: Trigger Video
- Facilitator should ensure necessary arrangements for Trigger video presentation.
- The following two topics to be covered.
  a) Haemoglobin Estimation
  b) Phlebotomy procedure
- Please instruct the participants that there would be questions at the middle of the video presentation, which the participants have to answer

Summarize:

1. Facilitator should ask about participant’s observation about the video.
2. What are the core points discussed in the trigger video?
3. What are the core points discussed in this presentation?
4. How does it relate to your work?

Reference:
- Kindly refer Chapter No. 1, sub topic no. 1.2, of the MO & LT Module
- PPT No: Day 1- Session 3- Activity 2 (a) and 2 (b)
Session 3: Blood Donor Selection  
Activity 3: Organisation of Blood Donation camp

**Objective:**
- To illustrate the list of procedures required to organize a blood donation camp.

**Time:** 30 Minutes  
**Material:** Paper, Pens

**Methodology**
- Group Activity

**Instructions:**
- Divide the participants into 4 groups
- Assign one of the following activities to each group.
- Each group should work as a team on the activity assigned to them
- A volunteer from each group should make a short presentation on their group activity.

**Note:**
- Time for group discussion: 10 minutes
- Time for presentation by each group: 5 minutes (Total time: 20 minutes)
- Ask other groups to comment on any missed out points.

**List of Activities to be assigned to each group for this session are:**
1. Pre Camp activities & Challenges faced
2. Camp site activities & Challenges faced
3. Equipment required during camp & Challenges faced
4. Records, Storage & Transportation of collected Blood units & Challenges faced

**Summarize:**
- What are the core points discussed by groups?

**Reference:**
- Kindly refer to Chapter No. 1, sub topic no. 1.3, of the MO & LT Module

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Session 4: Immunohaematology  
Activity 1: Basic Red Cell Serology

**Objective:**
- To describe the basic red cell serology
- To explain antigen antibody reaction.

**Time:** 30 Minutes  
**Material:** Projector, Screen, Pointer

**Methodology**
- Power Point Presentation

**Instructions:**
- Please try to explain the crux of the contents in each slide.
- Do not just read out the points. Please clarify the participant’s queries

**Summarize:**
1. What are the core points discussed in this presentation?
2. How does it relate to your work?

**Reference:**
- Kindly refer Chapter No. 2, sub topic no. 2.1, of the MO & LT Module
- PPT No: Day 1 - Session 4 - Activity 1
Session 4: Immunohaematology

Activity 2: ABO, Rh Grouping and Typing

Objective:
- To enumerate types of blood groups
- To explain blood group principles
- To explain general precautions followed during blood grouping

Time: 60 minutes (Video- 20 minutes, PPT- 40 minutes)

Material: Projector, Screen, Pointer, Lab facilities

Methodology
- Power Point Presentation and Trigger Video

Instructions:

Step 1: Power Point Presentation
- Please try to explain the crux of the contents in each slide. Do not just read out the points.
- Please clarify the participant’s queries

Step 2: Trigger Video
- Facilitator should ensure necessary arrangements for Trigger video presentation.
- The following topic is to be covered.
  *ABO grouping and RH typing
- Please instruct the participants that there would be questions at the middle of the video presentation, which the participants have to answer.

Summarize:

1. What are the core points discussed in this presentation?
2. How does it relate to your work?

Reference:
- Kindly refer Chapter No. 2, sub topic no. 2.2, of the MO & LT Module
- PPT No: Day 1 - Session 4 - Activity 2.
### Session 4: Immunohaematology

#### Activity 3: ABO Grouping Discrepancies

**Objective:**
- To explain discrepancies in ABO grouping

**Time:** 15 Minutes

**Material:** Projector, Screen, Pointer.

**Methodology**
- Power Point Presentation

**Instructions:**
- Please try to explain the crux of the contents in each slide.
- Do not just read out the points. Please clarify the participant's queries

**Summarize:**
1. What are the core points discussed in this presentation?
2. How does it relate to your work?

**Reference:**
- Kindly refer Chapter No. 2, sub topic no. 2.3, of the MO & LT Module
- PPT No: Day 1 - Session 4 - Activity 3.

### Session 4: Immunohaematology

#### Activity 4: Lab demonstration - HB estimation, ABO, RH Grouping and Typing

**Objective:**
- To provide hands on exposure to HB estimation, ABO, RH Grouping and Typing.

**Time:** 60 Minutes

**Material:** Samples for demo

**Methodology**
- Lab Demonstration

**Instructions:**
1. Facilitator should ensure that necessary arrangements for demonstration have been made at the lab.
2. Accompany participants to the concerned lab.
3. Participants need to be divided into 2 groups. The following topics would be demonstrated for each group.
   a. HB estimation
   b. ABO, RH Grouping and Typing
4. The groups then swap to do the other procedure

**Summarize:**
- Ask participants on the key learnings from this session

**Reference:**
- Kindly refer Chapter No. 2, of the MO & LT Module
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<tbody>
<tr>
<td>9.00am -9.30am</td>
<td>Warming Up</td>
<td>Recap of DAY 1 Session</td>
<td>Presentation</td>
<td>30 minutes</td>
<td>Rapporteur &amp; time keeper</td>
</tr>
<tr>
<td>9.30am -10.00am</td>
<td><strong>Session 1:</strong> Immunohematology (contd)</td>
<td><strong>Activity 1:</strong> Antiglobulin test</td>
<td>Power point presentation</td>
<td>30 minutes</td>
<td>Senior Doctor/MO blood bank, Senior lab technician</td>
</tr>
<tr>
<td>10.00am -10.30am</td>
<td></td>
<td><strong>Activity 2:</strong> Compatibility testing</td>
<td>Power point presentation</td>
<td>30 minutes</td>
<td></td>
</tr>
<tr>
<td><strong>10.30.am - 10.45am</strong></td>
<td><strong>TEA BREAK</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.45am -11.45am</td>
<td><strong>Session 1:</strong> Immunohematology (contd)</td>
<td><strong>Activity 3:</strong> Group Activity on Compatibility testing</td>
<td>Group activity</td>
<td>60 minutes</td>
<td>Participants</td>
</tr>
<tr>
<td>11.45am - 1.00 pm</td>
<td></td>
<td><strong>Activity 4:</strong> Q C in Immunohematology</td>
<td>Power point presentation</td>
<td>75 minutes</td>
<td>Senior Doctor/MO blood bank</td>
</tr>
<tr>
<td><strong>1.00pm -1.45pm</strong></td>
<td><strong>LUNCH</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.45pm-2.30pm</td>
<td><strong>Session 2:</strong> Transfusion Transmissible Infection</td>
<td><strong>Activity 1:</strong> Basics of TTI</td>
<td>Group activity</td>
<td>45 minutes</td>
<td>Senior Doctor/MO blood bank</td>
</tr>
<tr>
<td>2.30pm -3.30pm</td>
<td></td>
<td><strong>Activity 2:</strong> Screening of TTI</td>
<td>Power point presentation &amp; Trigger video</td>
<td>60 minutes (Video- 20 minutes, PPT- 40 minutes)</td>
<td>Senior Doctor/MO blood bank, Senior lab technician</td>
</tr>
<tr>
<td><strong>3.30pm -3.45pm</strong></td>
<td><strong>TEA BREAK</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.45pm -4.30pm</td>
<td><strong>Session 2:</strong> Transfusion Transmissible Infection (contd)</td>
<td><strong>Activity 3:</strong> Laboratory Demonstration (Antiglobulin test, Compatibility testing &amp; TTI screening)</td>
<td>Lab demo</td>
<td>45 minutes</td>
<td>Senior lab technician</td>
</tr>
</tbody>
</table>
### Session 1: Immunohaematology (contd…)

#### Activity 1: Anti Globulin Test (AGT)

**Objective:**
- To understand the principles of AGT
- To learn the techniques of AGT and the reagents used.

**Time:** 30 Minutes

**Material:** Projector, Screen, Pointer

**Methodology**
- Power Point Presentation

**Instructions to the Facilitator:**
- Please try to explain the crux of the contents in each slide. Do not just read out the points.
- Please clarify the participant’s queries

**Summarize:**
- What are the core points discussed in this presentation?
- How does it relate to your work?

**Reference:**
- Kindly refer Chapter No. 2, sub topic no. 2.4, of the MO & LT Module
- PPT No: Day 2 - Session 1 - Activity 1.

---

#### Activity 2: Compatibility Testing (Cross Matching)

**Objective:**
- To understand principles & procedures of cross matching
- To recognize the significance of compatibility testing.

**Time:** 30 Minutes

**Material:** Projector, Screen, Pointer

**Methodology**
- Power Point Presentation

**Instructions to the Facilitator:**
- Please try to explain the crux of the contents in each slide. Do not just read out the points.
- Please clarify the participant’s queries

**Summarize:**
- What are the core points discussed in this presentation?
- How does it relate to your work?

**Reference:**
- Kindly refer Chapter No. 2, sub topic no. 2.5, of the MO & LT Module
- PPT No: Day 2 - Session 1 - Activity 2.
Session 1: Immunohaematology (contd…)

Activity 3: Group Activity on Compatibility Test

Objective:
- To understand principles & procedures of cross matching
- To recognize the significance of compatibility testing.

Time: 60 Minutes

Material: Projector, Screen, Pointer

Methodology
- Group Activity

Instructions:
- Divide the participants into 3 groups
- Assign one of the following activities to each group.
- Each group should work as a team on the activity assigned to them
- A volunteer from each group should make a short presentation on their group activity.

Note:
- Time for group discussion: 10 minutes
- Time for presentation by each group: 5 minutes (Total time: 20 minutes)
- Ask other groups to comment on any missed out points.

List of Activities to be assigned to each group for this session are:
1. Compatibility for packed blood cell
2. Selection of appropriate components for all the ABO
3. Selection of appropriate components for all the RH blood group

The topic matrix needs to be developed by each group and presented. The challenges faced in testing should be mentioned by the members.

Summarize:
- What are the core points discussed by groups?

Reference:
- Kindly refer Chapter No. 2, sub topic no. 2.5, of the MO & LT Module
### Session 1: Immunohaematology (contd...)
#### Activity 3: Quality Control in Immunohaematology

**Objective:**
- To emphasize the importance of quality control in Immunohaematology.

**Time:** 75 Minutes

**Material:** Projector, Screen, Pointer

**Methodology**
- Power Point Presentation

**Instructions:**
- Please try to explain the crux of the contents in each slide. Do not just read out the points.
- Please clarify the participant’s queries

**Summarize:**
- What are the core points discussed in this presentation?
- How does it relate to your work?

**Reference:**
- Kindly refer Chapter No. 2, sub topic no. 2.6, of the MO & LT Module
- PPT No: Day 2 - Session 1 - Activity 3

### Session 2: Transfusion Transmissible Infection
#### Activity 1: Basics of Transfusion Transmissible Infection

**Objective:**
- To recognize Transfusion Transmissible Infections
- To understand the characteristics of TTIs.

**Time:** 45 Minutes

**Material:** Charts, Sketch pens, Marker pens

**Methodology**
- Group Activity

**Instructions:**
- Divide the participants into 4 groups
- Assign one of the following activities to each group.
- Each group should work as a team on the activity assigned to them
- A volunteer from each group should make a short presentation on their group activity.

**List of Activities to be assigned to each group for this session are:**
1. Epidemiology & Screening of Hepatitis B & Hepatitis C
2. Epidemiology & Screening of HIV
3. Epidemiology & Screening of Malaria
4. Epidemiology & Screening of Syphilis

Each group needs to list down the following with respect to the TTI Agent, Host, Modes of Transmission and Screening tests.

**Note:**
- Time for group discussion: 10 minutes
- Time for presentation by each group: 5 minutes (Total time: 20 minutes)
- Ask other groups to comment on any missed out points.

**Summarize:**
- What are the core points discussed by groups?

**Reference:**
- PPT No: Day 2 - Session 2 - Activity 1
### Session 2: Transfusion Transmissible Infections

#### Activity 2: Screening of TTI

<table>
<thead>
<tr>
<th>Objective</th>
<th>Time: 60 minutes (Video- 20 minutes, PPT- 40 minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>· Describe the blood screening process</td>
<td>Material: Projector, Screen, Pointer</td>
</tr>
<tr>
<td>· Explain Preventive strategies for TTIs.</td>
<td></td>
</tr>
</tbody>
</table>

#### Methodology

- Trigger Video and Power Point Presentation

#### Instructions:

**Step 1: Trigger Video**
- Facilitator should ensure necessary arrangements for Trigger video presentation.
- The following topic is to be covered.
  - TTI screening.
- Please instruct the participants that there would be questions at the middle of the video presentation, which the participants have to answer.

**Step 2: Power Point Presentation**
- Please try to explain the crux of the contents in each slide. Do not just read out the points.
- Please clarify the participant’s queries.

#### Summarize:

- What are the core points discussed in the trigger video?
- What are the core points discussed in this presentation?
- How does it relate to your work?

#### Reference:

- Kindly refer Chapter No. 3, of the MO & LT Module
- PPT No: Day 2 - Session 2 - Activity 2.
### Session 2: Transfusion Transmissible Infections

**Activity 3: Laboratory Demonstration (Antiglobulin test, Compatibility test and TTI screening)**

<table>
<thead>
<tr>
<th>Objective:</th>
</tr>
</thead>
<tbody>
<tr>
<td>To help participants in better understanding of the session on Antiglobulin test, Compatibility test and TTI screening.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Time: 45 Minutes</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Material:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Samples for demo</td>
</tr>
</tbody>
</table>

#### Methodology

- Laboratory Demonstration

#### Instructions:

1. Facilitator should ensure that necessary arrangements for demonstration have been made at the lab.
2. Accompany participants to the concerned lab.
3. Participants need to be divided into 3 groups. The following topics would be demonstrated for each group.
   - Antiglobulin test
   - Cross matching (Compatibility test)
   - TTI screening
4. The groups then swap to do the other procedure

#### Summarize:

- Ask participants on the key learnings from this session
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Activity</th>
<th>Methodology</th>
<th>Duration</th>
<th>Resource Person</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.00am - 9.30am</td>
<td>Warming Up</td>
<td>Recap of DAY 2 Session</td>
<td>Presentation</td>
<td>30 minutes</td>
<td>Rapporteur &amp; time keeper</td>
</tr>
<tr>
<td>9.30am - 10.30am</td>
<td><strong>Session 1: Bio safety &amp; BMWM</strong></td>
<td><strong>Activity 1: Bio safety</strong></td>
<td>Power point presentation &amp; video</td>
<td>60 minutes (Video: 20 minutes, PPT: 40 minutes)</td>
<td>Senior Doctor/MO blood bank</td>
</tr>
<tr>
<td>10.30am - 10.45am</td>
<td><strong>TEA BREAK</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.45am - 11.00am</td>
<td><strong>Session 1: Bio safety &amp; BMWM (contd)</strong></td>
<td><strong>Activity 2: “Bin it in a minute” Game</strong></td>
<td>Individual activity</td>
<td>15 minutes</td>
<td>Participants</td>
</tr>
<tr>
<td>11.00am - 12 Noon</td>
<td><strong>Activity 3: Bio medical waste management</strong></td>
<td></td>
<td>Power point presentation</td>
<td>60 minutes</td>
<td>Senior Doctor/MO blood bank</td>
</tr>
<tr>
<td>12 Noon - 1.00pm</td>
<td><strong>Session 2: Equipment management</strong></td>
<td><strong>Activity 1: Equipment management &amp; calibration</strong></td>
<td>Power point presentation</td>
<td>60 minutes</td>
<td>Senior Doctor/ MO blood bank, Senior lab technician</td>
</tr>
<tr>
<td>1.00pm - 1.45pm</td>
<td><strong>LUNCH</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.45pm - 2.45pm</td>
<td><strong>Session 3: Blood components</strong></td>
<td><strong>Activity 1: Blood components</strong></td>
<td>Trigger video &amp; Power point presentation</td>
<td>60 minutes (Trigger video: 20 minutes, PPT: 40 minutes)</td>
<td>Senior Doctor/ MO blood bank</td>
</tr>
<tr>
<td>2.45pm - 3.30pm</td>
<td></td>
<td><strong>Activity 2: QC for components</strong></td>
<td>Power point presentation</td>
<td>45 minutes</td>
<td>Senior Doctor/ MO blood bank</td>
</tr>
<tr>
<td>3.30pm - 3.45pm</td>
<td><strong>TEA BREAK</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.45pm - 4.00pm</td>
<td><strong>Session 3: Blood components (contd)</strong></td>
<td><strong>Activity 3: Storage &amp; Transportation</strong></td>
<td>Power point presentation</td>
<td>15 minutes</td>
<td>Senior Doctor/ MO blood bank, Senior lab technician</td>
</tr>
<tr>
<td>4.00pm - 4.30pm</td>
<td></td>
<td><strong>Activity 4: Administration of blood components</strong></td>
<td>Power point presentation</td>
<td>30 minutes</td>
<td>Senior Doctor/ MO blood bank, Senior lab technician</td>
</tr>
<tr>
<td>4.30pm - 5.30pm</td>
<td></td>
<td><strong>Activity 5: Laboratory demonstration (blood components)</strong></td>
<td>Lab demo</td>
<td>60 minutes</td>
<td>Senior lab technician</td>
</tr>
</tbody>
</table>
### Session 1: Biosafety and Bio Medical Waste Management

#### Activity 1: Biosafety

**Objective:**
- Describe the modes of exposure to blood borne pathogens in the laboratory.
- Explain General Lab hygiene and Universal precautions.
- Safe handling of specimens & Sharps
- Management of blood spills
- Vaccination for lab personnel
- PEP for Hepatitis B, Hepatitis C & HIV.

<table>
<thead>
<tr>
<th>Time: 60 Minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 minutes Video Show</td>
</tr>
<tr>
<td>40 minutes PPT</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Material:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projector, Screen &amp; Pointer</td>
</tr>
</tbody>
</table>

#### Methodology
- Video Show and Power Point Presentation

#### Instructions:

**Step 1: Video show:**
- Facilitator should ensure necessary arrangements for Trigger video presentation.
- The following topic is to be covered.
  - *Bio Safety.*
- Please instruct the participants that there would be questions at the middle of the video presentation, which the participants have to answer.

**Step 2: Power Point Presentation**
- Please try to explain the crux of the contents in each slide. Do not just read out the points.
- Please clarify the participant’s queries

#### Summarize:
- What was the core points discussed in the video?
- What are the core points discussed in this presentation?
- How does it relate to your work?

#### Reference
- Kindly refer Chapter No. 4, sub topic no. 4.1 & 4.2, of the MO & LT Module
- PPT No: Day 3 - Session 1 - Activity 1
## Session 1: Biosafety and Bio Medical Waste Management

### Activity 2 & 3: Game - Bin it in a Minute and Bio Medical Waste Management.

**Objective:**
- Explain categories of Bio medical waste
- Explain the different color codes & types of containers for waste disposal
- Describe the process of Disinfection & Autoclaving.

**Time:** 75 Minutes
- Game: 15 minutes
- PPT: 60 minutes

**Material:**
- **Game** - Colour coded bins, 15 Yellow colored balls with names of lab consumables / waste to be pasted on it (Gloves, Used syringe, test tubes, etc.),
- **PPT** - Projector, Screen and Pointer

**Methodology**
- Game: Bin it in a Minute and Power Point Presentation

**Instructions:**
- **Game: Bin It In a Minute**
  - Arrange the colour coded bins. Ask participants to come in batches of 5.
  - Hand over three balls to each of the participants.
  - Ask the participants to come forward and throw the balls in the appropriate coloured bins.
  - Ensure all participants participate. Rectify the mistakes if participants throw the ball in the wrong bin.

- **Power Point Presentation**
  - Please try to explain the crux of the contents in each slide. Do not just read out the points.
  - Please clarify the participant's queries

**Summarize:**
- Was the game on waste segregation useful?
- What are the core points discussed in this presentation?
- How does it relate to your work?

**Reference**
- Kindly refer Chapter No. 4, sub topic no. 4.3, of the MO & LT Module
- PPT No: Day 3 - Session 1 - Activity 2 & 3
### Session 2: Equipment Management

**Activity 1: Equipment Management and Calibration**

<table>
<thead>
<tr>
<th>Objective:</th>
<th>Time: 60 Minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>- To understand the concept of equipment management.</td>
<td></td>
</tr>
<tr>
<td>- To understand the equipment calibration techniques and frequency of calibration.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Material:</td>
</tr>
<tr>
<td></td>
<td>Projector, Screen and Pointer</td>
</tr>
</tbody>
</table>

**Methodology**
- Power Point Presentation

**Instructions:**
- Please try to explain the crux of the contents in each slide. Do not just read out the points.
- Please clarify the participant’s queries

**Summarize:**
- What are the core points discussed in this presentation?
- How does it relate to your work?

**Reference:**
- PPT No: Day 3 - Session 2 - Activity 1

### Session 3: Blood Components

**Activity 1: Blood Components**

<table>
<thead>
<tr>
<th>Objective:</th>
<th>Time: 60 Minutes (Trigger video 20 minutes &amp; PPT 40 minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Describe the process of component separation</td>
<td>Material: Projector, Screen and Pointer</td>
</tr>
<tr>
<td>- Explain storage &amp; shelf life of components</td>
<td></td>
</tr>
</tbody>
</table>

**Methodology**
- Trigger video & Power Point Presentation

**Step 1: Trigger Video**
- Facilitator should ensure necessary arrangements for Trigger video presentation.
- The following topic is to be covered.
  - Component separation
- Please instruct the participants that there would be questions at the middle of the video presentation, which the participants have to answer.

**Step 2: Power Point Presentation**
- Please try to explain the crux of the contents in each slide. Do not just read out the points.
- Please clarify the participant’s queries
# Day 3

## Session 3: Blood Components

### Activity 2: QC for Blood Components

<table>
<thead>
<tr>
<th>Objective:</th>
<th>Time: 45 Minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Describe the quality control of components separation</td>
<td><strong>Material:</strong> Projector, Screen and Pointer</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Methodology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Point Presentation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please try to explain the crux of the contents in each slide. Do not just read out the points.</td>
</tr>
<tr>
<td>Please clarify the participant’s queries</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Summarize:</th>
</tr>
</thead>
<tbody>
<tr>
<td>What are the core points discussed in this presentation?</td>
</tr>
<tr>
<td>How does it relate to your work?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kindly refer Chapter No. 5, of the MO &amp; LT Module</td>
</tr>
<tr>
<td>PPT No: Day 3 - Session 3 - Activity 1</td>
</tr>
<tr>
<td>Kindly refer Chapter No. 5, of the MO &amp; LT Module</td>
</tr>
<tr>
<td>PPT No: Day 3 - Session 3 - Activity 1</td>
</tr>
<tr>
<td>Kindly refer Chapter No. 5, of the MO &amp; LT Module</td>
</tr>
<tr>
<td>PPT No: Day 3 - Session 3 - Activity 1</td>
</tr>
</tbody>
</table>
**Session 3: Blood Components**

### Activity 3: Storage and Transportation

**Objective:**
- Explain Storage and Transportation

**Time:** 15 Minutes

**Material:** Projector, Screen and Pointer

**Methodology**
- Power Point Presentation

**Instructions**
- Please try to explain the crux of the contents in each slide. Do not just read out the points.
- Please clarify the participant’s queries

**Summarize:**
- What are the core points discussed in this presentation?
- How does it relate to your work?

**Reference**
- Kindly refer Chapter No.5, sub topic no. 5.4 & 5.5, of the Nurses Module
- PPT No: Day 3 - Session 3 - Activity 3

---

**Session 3: Blood Components**

### Activity 4: Administration of Blood Components

**Objective:**
- Understanding about Administration of Blood Components

**Time:** 30 Minutes

**Material:** Projector, Screen and Pointer

**Methodology**
- Power Point Presentation

**Instructions**
- Please try to explain the crux of the contents in each slide.
- Do not just read out the points. Please clarify the participant’s queries

**Summarize:**
- What are the core points discussed in this presentation?
- How does it relate to your work?

**Reference**
- Kindly refer Chapter No.5, of the Nurses Module
- PPT No: Day 3 - Session 3 - Activity 4
### Session 3: Blood Components

**Activity 5: Laboratory Demonstration (Blood Components)**

<table>
<thead>
<tr>
<th>Objective:</th>
<th>Time: 60 Minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>To help participants in better understanding of the session on Blood Components.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Material:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Samples for demo</td>
</tr>
</tbody>
</table>

#### Methodology

- Lab Demonstration

#### Instructions:

1. Facilitator should ensure that necessary arrangements for demonstration have been made at the lab.
2. Accompany participants to the concerned lab.
3. Participants need to be divided into 2 groups. The following topic would be demonstrated for each group.
   - Component separation
4. The groups then swap to do the other procedure

#### Feedback on quality of training

- The facilitator circulates a feedback form with information on the following areas:
  a) Quality of training
  b) Facility & logistics
  c) Suggestions

The feedback form needs to be filled up by the participants and handed over the next day

#### Summarize:

- Ask participants on the key learnings from this session
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Activity</th>
<th>Methodology</th>
<th>Duration</th>
<th>Resource Person</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.00am - 9.30am</td>
<td>Warming Up</td>
<td>Recap of DAY 3 Session</td>
<td>Presentation</td>
<td>30 minutes</td>
<td>Rapporteur &amp; time keeper</td>
</tr>
<tr>
<td>9.30 am - 10.30 am</td>
<td>Session 1: Pre transfusion issues &amp; Bed side practices &amp; Transfusion reaction</td>
<td><strong>Activity 1:</strong> Pre transfusion issues &amp; bedside practices&lt;br&gt;&lt;br&gt;<strong>Activity 2:</strong> Transfusion reaction</td>
<td>Power point presentation</td>
<td>30 minutes</td>
<td>Senior Doctor/MO blood bank</td>
</tr>
<tr>
<td>10.30am - 10.45am</td>
<td>TEA BREAK</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.45am - 11.45am</td>
<td>Session 2: Roles &amp; responsibilities of MO</td>
<td><strong>Activity 1:</strong> Roles &amp; responsibilities of MO</td>
<td>Power point presentation</td>
<td>60 minutes</td>
<td>Senior Doctor/MO blood bank</td>
</tr>
<tr>
<td>11.45am - 1.00 pm</td>
<td>Session 3: QMS in BTS</td>
<td><strong>Activity 1:</strong> “Simon Says” Game&lt;br&gt;&lt;br&gt;<strong>Activity 2:</strong> Quality Management &amp; Haemovigilance</td>
<td>Group activity</td>
<td>15 minutes</td>
<td>By Participants</td>
</tr>
<tr>
<td>1.00pm-1.45pm</td>
<td>LUNCH</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.45pm - 3.15pm</td>
<td>Session 4: Record keeping, documentation &amp; legal aspects</td>
<td><strong>Activity 1:</strong> Record keeping &amp; documentation&lt;br&gt;&lt;br&gt;<strong>Activity 2:</strong> Legal aspects of Blood bank</td>
<td>Power point presentation</td>
<td>45 minutes</td>
<td>Senior Doctor/MO blood bank</td>
</tr>
<tr>
<td>3.15pm-3.30pm</td>
<td>TEA BREAK</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.30pm-4.00pm</td>
<td>Session 5: Licensing and Regulation, Drugs and Cosmetic Act</td>
<td><strong>Activity 1:</strong> Licensing and Regulation, Drugs and Cosmetic Act</td>
<td>Power point presentation</td>
<td>30 minutes</td>
<td>Senior Doctor/MO blood bank</td>
</tr>
<tr>
<td>4.00pm-4.30pm</td>
<td>Session 6: Data analysis, computer use and reporting</td>
<td><strong>Activity 1:</strong> Data analysis, computer use and reporting</td>
<td>Power point presentation</td>
<td>30 minutes</td>
<td>Training Coordinator</td>
</tr>
<tr>
<td>4.30pm-5.30pm</td>
<td>Session 7: Post training assessment &amp; wrap up</td>
<td><strong>Activity 1:</strong> Post training assessment &amp; feedback on quality of training&lt;br&gt;&lt;br&gt;<strong>Activity 2:</strong> Valedictory &amp; certificate distribution</td>
<td>Pre Structured questionnaire</td>
<td>30 minutes</td>
<td>Training Coordinator</td>
</tr>
</tbody>
</table>
### Session 1: Pre Transfusion Issues, Bed side practices and Transfusion Reactions.

#### Activity 1: Pre Transfusion Issues & Bed side practices.

**Objective:**
- Describe the procedure for blood sample collection from patient for Pre transfusion.

**Time:** 30 minutes

**Material:** Projector, Screen and Pointer

**Methodology**
- Power Point Presentation

**Instructions**
- Please try to explain the crux of the contents in each slide.
- Do not just read out the points. Please clarify the participant’s queries

**Summarize:**
- What are the core points discussed in this presentation?
- How does it relate to your work?

**Reference**
- Kindly refer chapter no.7 of the MO & LT Module
- PPT No: Day 4 - Session 1- Activity 1 (a) and 1 (b)

### Session 1: Pre Transfusion Issues & Bed side practices, Transfusion Reactions.

#### Activity 2: Transfusion Reactions.

**Objective:**
- Explain the classification, signs & symptoms of transfusion reactions
- Describe Haemolytic transfusion reactions.

**Time:** 30 minutes

**Material:** Projector, Screen and Pointer

**Methodology**
- Power Point Presentation
- Discussion

**Instructions**
- Please try to explain the crux of the contents in each slide. Do not just read out the points.
- Please clarify the participant’s queries

**Summarize:**
- What are the core points discussed in this presentation?
- How does it relate to your work?

**Reference**
- Kindly refer chapter no 8 of the MO & LT Module
- PPT No: Day 4 - Session 1 - Activity 2
### Session 2: Roles & Responsibilities of MOs

#### Activity 1: Roles & Responsibilities of MOs.

**Objective:**
- Describe Administrative role & co-ordination
- Donor Camp & Management
- Component Management
- Clinical Services.

**Time:** 60 Minutes

**Material:** Projector, Screen and Pointer

**Methodology:** Power Point Presentation

**Instructions**
- Please try to explain the crux of the contents in each slide. Do not just read out the points.
- Please clarify the participant’s queries

**Summarize:**
- What are the core points discussed in this presentation?
- How does it relate to your work?

**Reference:**
- Kindly refer the annexure of the MO & LT Module
- PPT No : Day 4 - Session 2 - Activity 1

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### Session 3: QMS in BTS

#### Activity 1: “Simon Says” Game

**Objective:**
- To energize the group

**Time:** 15 Minutes

**Material:** Nil

**Methodology**
- Group activity

**Instructions:**
- The facilitator tells the group that they should follow instructions when the facilitator starts the instruction by saying ‘Simon Says’.
- If the facilitator does not begin the instructions with the words ‘Simon Says’, then the group should not follow the instructions!
- The facilitator begins by saying something like “Simon says clap your hands” while clapping their hands.
- The facilitator speeds up the actions, always saying ‘Simon says’ first. After a short while, the ‘Simon says’ is omitted.
- Those participants who do follow the instructions anyway are ‘out’ of the game.
## Session 3: QMS in BTS
### Activity 2: Quality Management & Haemovigilance

**Objective:**
- Discuss the policy & procedures for lab supplies
- Explain about the quality Assurance and Quality control in BTS.
- Explain about the Haemovigilance program of India

**Time:** 60 Minutes  
**Materials:** Projector, Screen and Pointer

**Methodology:**
- Power Point Presentation

**Instructions**
- Please try to explain the crux of the contents in each slide. Do not just read out the points.
- Please clarify the participant’s queries

**Summarize:**
- What are the core points discussed in this presentation?
- How does it relate to your work?

**Reference:**
- Kindly refer Chapter No. 8, of the MO & LT Module  
- PPT No : Day 4 - Session 3 - Activity 1 & 2

## Session 4: Record keeping, Documentation and Legal Aspects
### Activity 1: Record keeping & documentation

**Objective:**
- Emphasize the importance of record keeping & documentation

**Time:** 45 Minutes  
**Material:** Projector, Screen and Pointer

**Methodology**
- Power Point Presentation

**Instructions**
- Please try to explain the crux of the contents in each slide. Do not just read out the points.
- Please clarify the participant’s queries

**Summarize:**
- What are the core points discussed in this presentation?
- How does it relate to your work?

**Reference:**
- PPT No : Day 4 - Session 4 - Activity 1
**Session 4: Record keeping, Documentation and Legal Aspects**

**Activity 2: Legal Aspects in Blood Banking**

<table>
<thead>
<tr>
<th>Objective:</th>
<th>Time: 45 minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>To provide an understanding of the legal aspects associated with Blood Banking.</td>
<td></td>
</tr>
</tbody>
</table>

**Methodology**

- Power Point Presentation

**Instructions**

- Please try to explain the crux of the contents in each slide. Do not just read out the points.
- Please clarify the participant’s queries

**Summarize:**

- What are the core points discussed in this presentation?
- How does it relate to your work?

**Reference:**

- PPT No : Day 4 - Session 4 - Activity 2

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**Session 5: Licensing & Regulation, Drugs and Cosmetic Act**

**Activity 1: Licensing & Regulation, Drugs and Cosmetic Act**

<table>
<thead>
<tr>
<th>Objective:</th>
<th>Time: 30 Minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>To provide an insight of licensing, regulation &amp; Drugs &amp; Cosmetic Act.</td>
<td></td>
</tr>
</tbody>
</table>

**Methodology**

- Power Point Presentation

**Instructions**

- Please try to explain the crux of the contents in each slide.
- Do not just read out the points. Please clarify the participant’s queries

**Summarize:**

- What are the core points discussed in this presentation?
- How does it relate to your work?

**Reference:**

- PPT No : Day 4 - Session 5 - Activity 1
## Session 6: Data Analysis, Computer use and Reporting

### Activity 1: Data Analysis, Computer use & Reporting

<table>
<thead>
<tr>
<th><strong>Objective:</strong></th>
<th><strong>Time:</strong> 30 Minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>To provide an insight of licensing, regulation &amp; Drugs &amp; Cosmetic Act.</td>
<td><strong>Material:</strong> Projector, Screen and Pointer</td>
</tr>
</tbody>
</table>

### Methodology

- Power Point Presentation

### Instructions

- Please try to explain the crux of the contents in each slide.
- Do not just read out the points. Please clarify the participant’s queries

### Summarize:

- What are the core points discussed in this presentation?
- How does it relate to your work?

### Reference:

- PPT No : Day 4 - Session 6 - Activity 1
Session 7: Post Training Assessment and Wrap Up

**Activity 1: Post Training Assessment & feedback on the quality of the training**

**Objective:**
- To have an insight on the participants understanding and their knowledge level after the training program.
- To get the participants feedback on quality of training.

**Time:** 30 Minutes

**Material:** Questionnaire, and Paste it Slips.

**Methodology**
- **Individual Activity**

**Instructions:**

**Post training Assessment**
- The facilitator will circulate the questionnaire to the participants to be filled up and returned.
- No negative markings
- The post training questions must be filled up and handed over to the facilitator.
- The filled in questionnaires to be randomly distributed back to the participants and corrected by the participants

**Feedback on quality of training**
- The facilitator randomly picks out the feedback form and reads aloud the suggestions provided by the participants
- Randomly pick few slips of participants expectation pasted on the wall and read it aloud. Just ask participants whether expectations were met.

**Summarize:**
- Thank participants for active participation. Provide contact details of resource persons & training centre for future technical support.