



# Midwifery Level III

NTQF Level III

# Learning Guide -31

**Unit of Competence: Promoting and Providing Immunization and Managing Cold Chain**

**Module Title: Promoting and Providing Immunization and Managing Cold Chain**

**LG Code: HLT MDW3 M08 LO4-LG31**

**TTLM Code: HLT MDW3 TTLM 0919v1**

**LO 4: Conduct immunization for children**



## Instruction Sheet

## Learning Guide #04

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics –□

- ✓ Developing schedule
- ✓ Preparing EPI logistics
- ✓ Conducting Immunization
- ✓ Informing mother on adverse effects

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, you will be able to –

- develop EPI schedule
- Prepare EPI logistics
- Conduct immunization
- inform mothers on adverse effects

### Learning Instructions:

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described in number 3 to 16.
3. Read the information written in the “Information Sheets 1”. Try to understand what are being discussed. Ask your trainer for assistance if you have hard time understanding them.
4. Accomplish the “Self-check 1” in page 5.
5. Ask from your trainer the key to correction (key answers) or you can request your trainer to correct your work. (You are to get the key answer only after you finished answering the Self-check 1-4).
6. If you earned a satisfactory evaluation proceed to “Information Sheet 2”. However, if your rating is unsatisfactory, see your trainer for further instructions or go back to Information sheet 1.
7. Submit your accomplished Self-check. This will form part of your training portfolio.
8. Read the information written in the “Information Sheet 2”. Try to understand what are being discussed. Ask your trainer for assistance if you have hard time understanding them.
9. Accomplish the “Self-check 2” in page 7.
10. Ask from your trainer the key to correction (key answers) or you can request your trainer to correct your work. (You are to get the key answer only after you finished answering the Self-check 2).
11. Read the information written in the “Information Sheets 3”. Try to understand what are being discussed. Ask your trainer for assistance if you have hard time understanding them.
12. Accomplish the “Self-check 3” in page 10.
13. Ask your trainer the key to correction (key answers) or you can request your trainer to correct your work. (You are to get the key answer only after you finished answering the Self-check 3).
14. If you earned a satisfactory evaluation proceed to “Operation Sheet 1” in page 5; However, if your rating is unsatisfactory, see your trainer for further instructions or go back to Information sheet 3.



15. Read the “Operation Sheet 1 and try to understand the procedures discussed.

<b>Information Sheet-1</b>	<b>Developing schedule</b>
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### 1.1. Developing schedule

Recommended Adult Immunization Schedule for ages 19 years or older

- ✓ Haemophilus influenzae type b vaccination (HIB)
- ✓ Special situation

Anatomical or functional asplenia (including sickle cell disease): 1 dose Hib if previously did not receive Hib; if elective splenectomy, 1 dose Hib, preferably at least 14 days before splenectomy

Hematopoietic stem cell transplant (HSCT): 3-dose series Hib 4 weeks apart starting 6–12 months after successful transplant, regardless of Hib vaccination history

- ✓ Hepatitis A vaccination
- ✓ Routine vaccination

Not at risk but want protection from hepatitis A (identification of risk factor not required): 2-dose series HepA (Havrix 6–12 months apart or Vaqta 6–18 months apart [minimum interval: 6 months]) or 3-dose series HepA-HepB (Twinrix at 0, 1, 6 months [minimum intervals: 4 weeks between doses 1 and 2, 5 months between doses 2 and 3])

- ✓ At risk for hepatitis A virus infection: 2-dose series HepA as above

- Chronic liver disease
- Clotting factor disorders
- Men who have sex with men
- Injection or non-injection drug use
- Homelessness
- Work with hepatitis A virus in research laboratory or nonhuman primates with hepatitis A virus infection
- Travel in countries with high or intermediate endemic hepatitis A
- Close personal contact with international adoptee (e.g., household, regular babysitting) in first 60 days after arrival from country with high or intermediate endemic hepatitis A (administer dose 1 as soon as adoption is planned, at least 2 weeks before adoptee’s arrival)

- ✓ Hepatitis B vaccination



✓ Routine vaccination

Not at risk but want protection from hepatitis B (identification of risk factor not required): 2- or 3-dose series HepB (2-dose series Heplisav-B at least 4 weeks apart [2-dose series HepB only applies when 2 doses of Heplisav-B are used at least 4 weeks apart] or 3-dose series Engerix-B or Recombivax HB at 0, 1, 6 months [minimum intervals: 4 weeks between doses 1 and 2, 8 weeks between doses 2 and 3, 16 weeks between doses 1 and 3]) or 3-dose series HepA-HepB (Twinrix at 0, 1, 6 months [minimum intervals: 4 weeks between doses 1 and 2, 5 months between doses 2 and 3])

✓ Special situations

At risk for hepatitis B virus infection: 2-dose (Heplisav-B) or 3-dose (Engerix-B, Recombivax HB) series HepB, or 3-dose series HepA-HepB as above.

**Table 2. Tetanus Toxoid Immunization Schedule for Women of Childbearing Age and Pregnant Women**

Tetanus Toxoid Vaccine	When to Give	Expected Duration of Protection
TT 1	At first contact	None
TT 2	At least 4 weeks after TT 1	1–3 years
TT 3	At least 6 months after TT 2 or during subsequent pregnancy	At least 5 years
TT 4	At least one year after TT 3 or during subsequent pregnancy	At least 10 years
TT 5	At least one year after TT 4 or during subsequent pregnancy	For all childbearing age



**Equipment required for administering TT vaccine for pregnant women**

- ✓ glove
- ✓ vaccines
- ✓ immunization card
- ✓ swab
- ✓ model arm pit
- ✓ AD -syringe

<b>Self-Check -1</b>	<b>Written Test</b>
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**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. Duration of protection of TT 4 vaccine is (3 points)
  - A. 3 years
  - B. 5 years
  - C. 10 years
  - D. life long

**Note: Satisfactory rating - 3 points**

**Unsatisfactory - below 3 points**

**Answer Sheet**

Score = \_\_\_\_\_

Rating: \_\_\_\_\_

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

Date: \_\_\_\_\_

**MCQ**

1.\_\_\_\_



## Information Sheet-2

### Preparing EPI logistics

#### 2.1 . Preparing EPI logistics

Logistics: - includes delivery of vaccines and necessary equipment to the sites of use transport, management of the 'cold chain' and safe waste disposal.

##### □ Objectives of an Efficient Logistics System

The primary objective of a good logistics system is to procure, store, and supply the right quantities of goods to meet consumer demand at all levels of the program. The Six "Rights" is a commonly used term to describe the objectives of an efficient logistics system.

##### Right materials

: Required vaccines, diluents, syringes, etc.

##### Right quantities

: Requisite amounts of vaccines, diluents, syringes, etc., to meet the targets.

##### Right quality

: Within the expiry date, useable vaccine vial monitor (VVM), no frozen freeze-sensitive vaccines, with proper and dry wrapper.

##### Right place

: As determined in the micro plan, at an acceptable site that is accessible to all beneficiaries.

##### Right time

: Ensure availability of vaccine for the end-user, when required.

##### Right cost

: Quality products at a competitive price ; reduced distribution and storage costs to maintain the cold chain.



<b>Self-Check -2</b>	<b>Written Test</b>
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**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. EPI logistic describe (3 points)
  - A. transport facility
  - B. management of the cold chain
  - C. safe waste disposal
  - D. All of the above

**Note: Satisfactory rating - 3 points**

**Unsatisfactory - below 3 points**

**Answer Sheet**

Score = \_\_\_\_\_

Rating: \_\_\_\_\_

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

Date: \_\_\_\_\_

**MCQ**

1.\_\_\_\_



<b>Information Sheet-3</b>	<b>Conducting Immunization</b>
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### 3.1. Conducting Immunization

The health worker conducting immunization session has a special responsibility to take care of the vaccine and to maintain the last and most important link of the cold chain.

- At the beginning of the working day
  - ✓ Check refrigerator temperature , enter detail on the record sheet. If temp needs adjustment , take necessary steps
  - ✓ Check the stock register and estimate how many vials of each vaccine will be needed for the planned immunization session at fixed facilities /out reach
  - ✓ Prepare a vaccine carrier for this number of vials ,add enough icepacks to last for the entire planned session.
  - ✓ place new , unfrozen icepacks , on their edge in the freezer for the next working days
  - ✓ Take the required quantity vaccine and diluent from the refrigerator and place them in the vaccine carrier , make sure that the diluent exactly match the vaccine it came with
- During Immunization session at fixed health facility
  - ✓ Take vial from the vaccine carrier and open or reconstitute them only after calling the first child for immunization.
  - ✓ Remove a fresh vial from the vaccine carrier only after the previous one is empty
  - ✓ Administer the vaccine ,put the vial with the remaining vaccine back in to the vaccine carrier as quickly as possible.
  - ✓ Shake vial containing absorbed vaccines(TT) well before use.





- ✓ For measles and BCG vaccine , using the entire volume of the cooled diluent supplied when reconstituting
- ✓ always keep the dropper for OPV attached to the vial
- ✓ while vaccines are outside the vaccine carrier , keep them all away from direct sunlight and other source of heat.
  - At the end of working Day
- ✓ Return opened vials of OPV , TT , IPV and hepatitis B to the refrigerator for use during the next session. Discard opened vials of measles , PCV and BCG.
- ✓ discard all used syringes and needles safely , in accordance with the standard operating procedure
- ✓ clearly identify all unopened vials and put them back into the refrigerator , use them first during the next session
- ✓ record the quantity of vaccine used during the session
- ✓ Check the refrigerator temperature and enter the details on the record sheet
  - During outreach immunization session
- ✓ plan the session carefully , especially check that you take a sufficient stock of vaccine and diluent
- ✓ take sufficient icepacks
- ✓ for long outreach sessions where you need to travel for several days in areas where there is no electric power supply or refrigerator , take an extra cold box that contains extra ice packs.

if out reach immunization sessions are out doors , choose a cool site , shaded from the sun throughout the day , wherever possible

<b>Self-Check -3</b>	<b>Written Test</b>
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**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

1.Which opened vaccine vial discarded at the end of working Day of immunization program ---(3 points)

A. OPV

B. TT

C. IPV

D. BCG

**Note: Satisfactory rating - 3 points**

**Unsatisfactory - below 3 points**

### Answer Sheet

Score = \_\_\_\_\_

Rating: \_\_\_\_\_



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

Date: \_\_\_\_\_

**MCQ**

1.\_\_\_\_

<b>Information Sheet-4</b>	<b>Informing mother on adverse effects</b>
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#### 4.1. Informing mother on adverse effects

##### Vaccine Side Effects

Most people don't have any serious side effects from vaccines. The most common side effects — like soreness where the shot was given — are usually mild and go away quickly on their own.

What are common side effects of vaccines?

- ✓ The most common side effects after vaccination are mild. They include:
- ✓ Pain, swelling, or redness where the shot was given
- ✓ Mild fever
- ✓ Chills



- ✓ Feeling tired
- ✓ Headache
- ✓ Muscle and joint aches

Most common side effects are a sign that your body is starting to build immunity (protection) against a disease. Learn more about how vaccines provide immunity.

What about serious side effects?

Serious side effects from vaccines are extremely rare. For example, if 1 million doses of a vaccine are given, 1 to 2 people may have a severe allergic reaction.

Keep in mind that getting vaccinated is much safer than getting the diseases vaccines prevent

<b>Self-Check -4</b>	<b>Written Test</b>
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**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. Most people don't have any serious side effects from vaccines (3 points)  
A. True      B. False



**Note: Satisfactory rating - 3 points**

**Unsatisfactory - below 3 points**

**Answer Sheet**

Score = \_\_\_\_\_

Rating: \_\_\_\_\_

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

Date: \_\_\_\_\_

**MCQ**

1. \_\_\_\_\_

**Operation Sheet 1**

**Plan and organize EPI program**

Procedure for delivering TT vaccine for pregnant women:

step 1.wash your hands

step 2.collect the necessary equipment

step 3.explain the procedure

step 4.Positioning the women

step 5.wear PPD

step 6.withdraw the vaccine from the vial



- step 7. Holding the muscle of the administered site with the non-dominant hand
- step 8. administer the vaccine
- step 9. Discard the syringe in safety box
- step 10. document the procedure

<b>LAP Test</b>	<b>Practical Demonstration</b>
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Name: \_\_\_\_\_ Date: \_\_\_\_\_

Time allowed for procedure one -15min

You are required to :

Task 1: Administer TT vaccines for pregnant mothers

<b>Operation Sheet 2</b>	<b>Provide immunization for children and mothers</b>	
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**Procedure for conducting vaccine delivery during Immunization session at fixed health facility :**



Step 1: Take vial from the vaccine carrier and open or reconstitute them only after calling the first child for immunization.

Step 2: Remove a fresh vial from the vaccine carrier only after the previous one is empty

Step 3: Administer the vaccine, put the vial with the remaining vaccine back in to the vaccine carrier as quickly as possible.

Step 4: Shake vial containing absorbed vaccines (TT) well before use.

Step 5: For measles and BCG vaccine, using the entire volume of the cooled diluent supplied when reconstituting

Step 6: always keep the dropper for OPV attached to the vial

Step 7: while vaccines are outside the vaccine carrier, keep them all away from direct sunlight and other source of heat

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